UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended May 29, 2020

OR

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

Commission File Number: 001-38102

SMART GLOBAL HOLDINGS, INC.
(Exact Name of Registrant as Specified in its Charter)

Cayman Islands **(State or other jurisdiction of incorporation or organization)**	**98-1013909** **(I.R.S. Employer Identification No.)**
c/o Maples Corporate Services Limited **P.O. Box 309** **Ugland House** **Grand Cayman, Cayman Islands** **(Address of principal executive offices)**	**KY1-1104** **(Zip Code)**

Registrant's telephone number, including area code: (510) 623-1231

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Ordinary shares, $0.03 par value per share	SGH	The NASDAQ Stock Market LLC (NASDAQ Global Select Market)

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

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

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐	Smaller reporting company	☐
Emerging growth company	☐		

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

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

As of June 24, 2020, the registrant had 24,159,314 ordinary shares outstanding.

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Cautionary Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q includes a number of forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, that involve many risks and uncertainties. Forward-looking statements are identified by the use of the words “would,” “could,” “will,” “may,” “expect,” “believe,” “should,” “anticipate,” “if,” “future,” “intend,” “plan,” “estimate,” “potential,” “target,” “seek,” or “continue” and similar words and phrases, including the negatives of these terms, or other variations of these terms, that denote future events. These statements reflect our current views with respect to future events and our potential financial performance and are subject to risks and uncertainties that could cause our actual results and financial position to differ materially and adversely from what is projected or implied in any forward-looking statements included in this report. These factors include, but are not limited to, the risks described under the caption “Risk Factors” in the documents we file from time to time with the Securities and Exchange Commission, including in our Annual Report on Form 10-K for our fiscal year ended August 30, 2019, and in this report, and in Item 2 of Part I – “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere in this report. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. We make these forward-looking statements based upon information available on the date of this report, and we expressly disclaim any obligation to update or alter any forward-looking statements, whether as a result of new information or otherwise, except as required by law.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

SMART Global Holdings, Inc.
and Subsidiaries
Condensed Consolidated Balance Sheets
(In thousands, except per share data)
(Unaudited)

	May 29, 2020	August 30, 2019
Assets		
Current assets:		
Cash and cash equivalents	$ 131,845	$ 98,139
Accounts receivable, net of allowances of $217 and $184 as of May 29, 2020 and August 30, 2019, respectively	223,211	217,433
Inventories	180,554	118,738
Prepaid expenses and other current assets	31,496	37,950
Total current assets	567,106	472,260
Property and equipment, net	53,760	68,345
Operating lease right-of-use assets	26,289	—
Other noncurrent assets	12,609	12,784
Intangible assets, net	59,085	69,325
Goodwill	73,451	81,423
Total assets	$ 792,300	$ 704,137
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	$ 245,774	$ 164,866
Accrued liabilities	59,878	48,980
Current portion of long-term debt	608	24,054
Total current liabilities	306,260	237,900
Long-term debt	193,547	182,450
Long-term operating lease liabilities	21,847	—
Other long-term liabilities	6,127	10,327
Total liabilities	$ 527,781	$ 430,677
Commitments and contingencies (see Note 10)		
Shareholders' equity:		
Ordinary shares, $0.03 par value. Authorized 200,000 shares; issued and outstanding 24,144 and 23,617 as of May 29, 2020 and August 30, 2019, respectively	728	712
Additional paid-in capital	342,476	285,994
Accumulated other comprehensive loss	(234,634)	(177,866)
Retained earnings	155,949	164,620
Total shareholders' equity	264,519	273,460
Total liabilities and shareholders' equity	$ 792,300	$ 704,137

See accompanying notes to unaudited condensed consolidated financial statements.

SMART Global Holdings, Inc. and Subsidiaries
Condensed Consolidated Income Statements
(In thousands, except per share data)
(Unaudited)

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Net sales (1)	$ 281,287	$ 235,657	$ 825,347	$ 933,599
Cost of sales	227,054	192,622	665,288	748,364
Gross profit	54,233	43,035	160,059	185,235
Operating expenses:				
Research and development	14,436	11,330	44,023	34,384
Selling, general, and administrative	29,733	24,306	91,935	73,202
Total operating expenses	44,169	35,636	135,958	107,586
Income from operations	10,064	7,399	24,101	77,649
Interest expense, net	(3,094)	(5,001)	(11,736)	(16,149)
Other income (expense), net	(3,445)	97	(16,671)	(2,980)
Total other expense	(6,539)	(4,904)	(28,407)	(19,129)
Income (loss) before income taxes	3,525	2,495	(4,306)	58,520
Provision for income taxes	2,700	550	4,365	12,813
Net income (loss)	$ 825	$ 1,945	$ (8,671)	$ 45,707
Earnings per share:				
Basic	$ 0.03	$ 0.08	$ (0.36)	$ 2.00
Diluted	$ 0.03	$ 0.08	$ (0.36)	$ 1.96
Shares used in computing earnings per share:				
Basic	24,066	23,005	23,895	22,824
Diluted	24,431	23,330	23,895	23,374

(1) Includes sales to affiliates of $24,139 and $59,691 in the three and nine months ended May 29, 2020, respectively, and $26,427 and $94,641 for the same periods ended May 31, 2019, respectively (see Note 3).

See accompanying notes to unaudited condensed consolidated financial statements.

SMART Global Holdings, Inc. and Subsidiaries
Condensed Consolidated Statements of Comprehensive Income (Loss)
(In thousands)
(Unaudited)

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Net income (loss)	$ 825	$ 1,945	$ (8,671)	$ 45,707
Other comprehensive income (loss):				
Foreign currency translation	(35,752)	(16,209)	(56,768)	(10,268)
Comprehensive income (loss)	$ (34,927)	$ (14,264)	$ (65,439)	$ 35,439

See accompanying notes to unaudited condensed consolidated financial statements.

SMART Global Holdings, Inc. and Subsidiaries
Condensed Consolidated Statements of Equity
(In thousands)
(Unaudited)

	Ordinary shares		Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
	Shares	Amount				
Balances as of August 31, 2018	22,480	$ 678	$ 250,191	$ (175,995)	$ 112,254	$ 187,128
Share-based compensation expense	—	—	4,055	—	—	4,055
Issuance of ordinary shares from exercises	210	6	2,396	—	—	2,402
Issuance of ordinary shares from release of restricted stock units (RSUs)	55	2	(2)	—	—	—
Issuance of ordinary shares from employee share purchase plan (ESPP)	36	1	967	—	—	968
Effect of adopting ASC 606	—	—	—	—	1,034	1,034
Foreign currency translation	—	—	—	3,102	—	3,102
Net income	—	—	—	—	30,976	30,976
Balances as of November 30, 2018	22,781	687	257,607	(172,893)	144,264	229,665
Share-based compensation expense	—	—	4,148	—	—	4,148
Issuance of ordinary shares from exercises	87	3	1,068	—	—	1,071
Issuance of ordinary shares from release of RSUs	67	1	(1)	—	—	—
Withholding tax on RSUs	(8)	—	(219)	—	—	(219)
Foreign currency translation	—	—	—	2,839	—	2,839
Net income	—	—	—	—	12,786	12,786
Balances as of March 1, 2019	22,927	691	262,603	(170,054)	157,050	250,290
Share-based compensation expense	—	—	4,433	—	—	4,433
Issuance of ordinary shares from exercises	28	1	296	—	—	297
Issuance of ordinary shares from release of RSUs	52	2	(2)	—	—	—
Withholding tax on RSUs	—	—	(11)	—	—	(11)
Issuance of ordinary shares from ESPP	74	2	1,333	—	—	1,335
Foreign currency translation	—	—	—	(16,209)	—	(16,209)
Net income	—	—	—	—	1,945	1,945
Balances as of May 31, 2019	23,081	$ 696	$ 268,652	$ (186,263)	$ 158,995	$ 242,080

	Ordinary shares		Additional paid-in capital	Accumulated other comprehensive loss	Retained earnings	Total shareholders' equity
	Shares	Amount				
Balances as of August 30, 2019	23,617	$ 712	$ 285,994	$ (177,866)	$ 164,620	$ 273,460
Share-based compensation expense	—	—	5,956	—	—	5,956
Issuance of ordinary shares from exercises	86	2	1,164	—	—	1,166
Issuance of ordinary shares from release of RSUs	69	2	(2)	—	—	—
Issuance of ordinary shares from ESPP	67	2	1,240	—	—	1,242
Withholding tax on RSUs	(1)	—	(20)	—	—	(20)
Foreign currency translation	—	—	—	(10,244)	—	(10,244)
Net income	—	—	—	—	224	224
Balances as of November 29, 2019	23,838	718	294,332	(188,110)	164,844	271,784
Share-based compensation expense	—	—	4,647	—	—	4,647
Issuance of ordinary shares from exercises	49	1	640	—	—	641
Issuance of ordinary shares from release of RSUs	117	4	(4)	—	—	—
Withholding tax on RSUs	(11)	—	(351)	—	—	(351)
Equity component of convertible notes due 2026, net	—	—	50,822	—	—	50,822
Foreign currency translation	—	—	—	(10,772)	—	(10,772)
Net loss	—	—	—	—	(9,720)	(9,720)
Balances as of February 28, 2020	23,993	723	350,086	(198,882)	155,124	307,051
Share-based compensation expense	—	—	4,907	—	—	4,907
Issuance of ordinary shares from exercises	9	—	134	—	—	134
Issuance of ordinary shares from release of RSUs	64	2	(2)	—	—	—
Withholding tax on RSUs	(12)	—	(282)	—	—	(282)
Issuance of ordinary shares from ESPP	90	3	1,739	—	—	1,742
Reclassification of capped call upon modification of articles of association (See Note 7)	—	—	(14,106)	—	—	(14,106)
Foreign currency translation	—	—	—	(35,752)	—	(35,752)
Net income	—	—	—	—	825	825
Balances as of May 29, 2020	24,144	$ 728	$ 342,476	$ (234,634)	$ 155,949	$ 264,519

See accompanying notes to unaudited condensed consolidated financial statements.

SMART Global Holdings, Inc. and Subsidiaries
Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Nine Months Ended	
	May 29, 2020	May 31, 2019
Cash flows from operating activities:		
Net income (loss)	$ (8,671)	$ 45,707
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation and amortization	27,797	20,152
Share-based compensation	15,510	12,636
Provision for doubtful accounts receivable and sales returns	47	(24)
Deferred income tax benefit	65	430
(Gain) Loss on disposal of property and equipment	(19)	21
Loss on mark-to-market adjustment of the capped call	7,719	—
Loss on extinguishment of debt / revolver	6,822	—
Amortization of debt discounts and issuance costs	3,786	2,085
Amortization of operating lease right-of-use assets	3,569	—
Changes in operating assets and liabilities:		
Accounts receivable	(17,885)	7,658
Inventories	(72,481)	82,771
Prepaid expenses and other assets	(1,119)	1,787
Accounts payable	95,687	(44,885)
Operating lease liabilities	(3,503)	—
Accrued expenses and other liabilities	4,903	(7,622)
Net cash provided by operating activities	62,227	120,716
Cash flows from investing activities:		
Capital expenditures and deposits on equipment	(16,889)	(30,112)
Proceeds from sale of property and equipment	154	71
Acquisition of business, net of cash acquired	—	(148)
Net cash used in investing activities	(16,735)	(30,189)
Cash flows from financing activities:		
Long-term debt payments - Term Loan	(5,625)	—
Long-term debt payments - BNDES	(2,292)	(5,073)
Purchase of capped call	(21,825)	—
Proceeds from convertible notes due 2026, net of discount	243,125	—
Payment for extinguishment of long-term debt	(204,904)	—
Proceeds from borrowings under revolving line of credit	60,500	235,500
Repayments of borrowings under revolving line of credit	(60,500)	(235,500)
Proceeds from issuance of ordinary shares from share option exercises	1,941	3,770
Proceeds from issuance of ordinary shares from ESPP	2,984	2,303
Tax payments due upon issuance of ordinary shares for release of RSUs	(653)	(230)
Net cash provided by financing activities	12,751	770
Effect of exchange rate changes on cash and cash equivalents	(24,537)	(2,432)
Net increase in cash and cash equivalents	33,706	88,865
Cash and cash equivalents at beginning of period	98,139	37,234
Cash and cash equivalents at end of period	$ 131,845	$ 126,099
Supplemental disclosures of cash flow information:		
Cash paid during the period:		
Cash paid for interest	$ 9,939	$ 14,888
Cash paid for income taxes, net of refunds	6,146	13,817
Noncash activities information:		
Capital expenditures included in accounts payable at period end	3,720	2,455
Unpaid debt fees related to convertible notes due 2026	1,990	—

See accompanying notes to unaudited condensed consolidated financial statements.

Note 1. Basis of Presentation and Principles of Consolidation

(a) Overview

On August 26, 2011, SMART Global Holdings, Inc., formerly known as Saleen Holdings, Inc., a Cayman Islands exempted company (SMART Global Holdings, and together with its subsidiaries, the Company), consummated a transaction with SMART Worldwide Holdings, Inc., formerly known as SMART Modular Technologies (WWH), Inc. (SMART Worldwide), pursuant to an Agreement and Plan of Merger whereby, through a series of transactions, SMART Global Holdings acquired substantially all of the equity interests of SMART Worldwide with SMART Worldwide surviving as an indirect wholly owned subsidiary of SMART Global Holdings (the Acquisition). SMART Global Holdings is an entity that was formed by investment funds affiliated with Silver Lake Partners and Silver Lake Sumeru (collectively Silver Lake). As a result of the Acquisition, since there was a change of control resulting in Silver Lake as the controlling shareholder group, the Company applied the acquisition method of accounting and established a new basis of accounting.

The Company, through its subsidiaries, is a leading designer and manufacturer of electronic products focused on memory and computing technology areas. The Company specializes in application specific product development and support for customers in enterprise, government and original equipment manufacturer, or OEM, markets. Customers rely on SMART as a strategic supplier with top tier customer service, product quality, and technical support with engineering, sales, manufacturing, supply chain and logistics capabilities worldwide. The Company targets customers in markets such as communications, storage, networking, mobile, industrial automation, industrial internet of things, government, military, edge computing and high performance computing. The Company operates in three segments: Specialty Memory Products, Brazil Products and Specialty Compute and Storage Solutions, or SCSS.

SMART Global Holdings is domiciled in the Cayman Islands and has U.S. headquarters in Newark, California. The Company has operations in the United States, Brazil, Malaysia, Taiwan, Hong Kong, Scotland, Singapore, India, Netherlands and South Korea.

(b) Basis of Presentation

The accompanying condensed consolidated financial statements comprise SMART Global Holdings and its wholly owned subsidiaries. Intercompany transactions have been eliminated in the condensed consolidated financial statements.

The Company uses a 52- to 53-week fiscal year ending on the last Friday in August. The three and nine months ended May 29, 2020 and May 31, 2019 were both 13-week and 39-week fiscal periods, respectively.

The accompanying unaudited condensed consolidated financial statements and related notes have been prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP) and in conformity with the rules and regulations of the Securities and Exchange Commission (SEC) applicable to interim financial information. As such, certain information and footnote disclosures normally included in complete annual financial statements prepared in accordance with U.S. GAAP have been omitted in accordance with the rules and regulations of the SEC. In the opinion of management, the accompanying unaudited condensed consolidated financial statements contain all adjustments, consisting of normal recurring accruals, necessary to present fairly the financial position of the Company and its results of operations and cash flows for the interim periods presented. The financial data and other information disclosed in these notes to the condensed consolidated financial statements related to the interim periods are unaudited.

All financial information for two of the Company’s subsidiaries, SMART Modular Technologies Indústria de Componentes Eletrônicos Ltda. (SMART Brazil) and SMART Modular Technologies do Brasil Indústria e Comércio de Componentes Ltda. (SMART do Brazil), is included in the Company’s condensed consolidated financial statements on a one-month lag because their fiscal years begin August 1 and end July 31.

(c) Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods presented. Actual results could differ from the estimates made by management. Significant items subject to such estimates and assumptions include the useful lives of long-lived assets, the valuation of deferred tax assets and inventory, share-based compensation, the estimated net realizable value of Brazilian tax credits, income tax uncertainties and other contingencies.

(d) Revenue

The Company's revenues include products and services. The Company's product revenues are predominantly derived from the sale of memory modules, flash memory cards, compute products and storage products, which the Company designs and manufactures. The Company's service revenues are derived from procurement, logistics, inventory management, temporary warehousing, kitting and packaging services. Also, a small portion of the Company's product sales include extended warranty and on-site services, subscriptions to the Company's high performance computing environment, professional services, software and related support.

The Company determines revenue recognition through the following steps: (1) identification of the contract with a customer; (2) identification of the performance obligations in the contract; (3) determination of the transaction price; (4) allocation of the transaction price to the performance obligations in the contract; and (5) recognition of revenue when, or as, a performance obligation is satisfied.

The Company's contracts are executed through a combination of written agreements along with purchase orders with all customers including certain general terms and conditions. Generally, purchase orders entail products, quantities and prices, which define the performance obligations of each party and are approved and accepted by the Company. The Company's contracts with customers do not include extended payment terms. Payment terms vary by contract type and type of customer and generally range from 30 to 45 days from invoice. Additionally, taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, that are collected by the Company from a customer and deposited with the relevant government authority, are excluded from revenue.

The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring goods or services to the customer adjusted for estimated variable consideration. Variable consideration may include discounts, rights of return, refunds, and other similar obligations. The Company allocates the transaction price to each distinct product and service based on its relative standalone selling price. The standalone selling price for products primarily involves the cost to produce the deliverable plus the anticipated margin and for services is estimated based on the Company's approved list price.

In the normal course of business, the Company does not accept product returns unless the items are defective as manufactured. The Company establishes provisions for estimated returns and warranties. In addition, the Company does not typically provide customers with the right to a refund and does not transact for noncash consideration.

Standard Products

The Company's main performance obligations are to deliver the requested goods to customers according to the agreed-upon shipping terms. The Company recognizes revenue when control transfers to the customer (i.e., when the Company's performance obligation is satisfied). The Company invoices the customer and recognizes revenues for such delivery when control has transferred based on shipping terms.

Customized Products

For customized product sales with terms that require the customer to purchase 100% of all parts built to fulfill the customers forecast, the Company recognizes revenue when control of the underlying assets passes to the customer, as the customer is able to both direct the use of, and obtain substantially all of the remaining benefit from the assets; the customer has the significant risks and rewards associated with ownership of the assets; and the Company has a present right to payment. For these sales, control passes when the Company has made these products available to the customer and under the terms of the agreement cannot repurpose them without the customer's express consent. Accordingly, the Company will recognize revenue at the point in time when products made to the customer's forecast are completed and made available to the customer.

Non-cancellable nonrefundable, or NCNR, customized product sales are recognized over time on a cost incurred basis. The customer obtains control and benefits from the services as they are performed over the period based on the cost input measure in the production process for the NCNR customized product. The terms within the NCNR sales orders provide the Company with a legally enforceable right to receive payment including a reasonable profit margin upon customer cancellation for performance completed to date. Accordingly, the Company recognizes revenue over time as customized products listed within the NCNR orders are completed.

Computing Products and Services

A small portion of the Company's product sales includes extended warranty and on-site services, subscriptions to the Company's high performance computing environment, professional consulting services including installation and other services, and hardware and software related support. Each contract may contain multiple performance obligations, which requires the transaction price to be allocated to each performance obligation. The Company allocates the consideration to each performance obligation based on the relative selling price. The Company uses best-estimated selling price, determined as the best estimate of the price at which the Company would transact if it sold the deliverable regularly on a stand-alone basis.

For services provided to the customers over a period of time, such revenues are recognized over time in line with when the customer receives and consumes the benefit of the services. Extended warranty and on-site services, hardware support, software support, and subscription revenue for access to the Company's high performance computing environment is deferred and recognized ratably over the contractual period as the Company transfers control as it satisfies its performance obligations over time as the services are rendered. These services contracts are typically one to three years in length. Subscription revenue for certain customers is recognized based on the contractual fee to use the high-performance-computing environment. Professional consulting services revenue is recognized as the service is performed and the customer obtains control and benefits from the services as they are performed over the period. The methods of recognizing revenue for each of these products and services were selected because they reflect a faithful depiction of the transfer of control.

Agency Services

The Company has service performance obligations for agency related services such as procurement, logistics, inventory management, temporary warehousing, kitting and packaging services for certain agency basis customers. The agency services are also known as supply chain services and the performance obligations for these services consist of customized, integrated supply chain services management to assist customers in the planning, execution and overall management of the procurement processes.

For these customers that are accounted for on an agency basis, the Company recognizes as revenue the amount billed less the material procurement costs of products serviced as an agent with the cost of providing these services embedded with the cost of sales. The Company has separate agent performance obligations as follows: (a) procurement, logistics, and inventory management, (b) temporary warehousing, and (c) kitting and packaging services for these customers. Revenue from these arrangements is recognized as service revenue and is determined by a fee for services based on material procurement costs (i.e. fee as a percentage of the associated material being procured, warehoused, kitted or packaged). The Company recognizes revenue for procurement, logistics and inventory management upon the completion of the services or performance obligation, typically upon shipment of the product, as the criteria for over time recognition is not met. For temporary warehousing, kitting and packaging services, revenue is recognized over time, but the period of performance is typically very short in duration. There are no obligations subsequent to shipment of the product under the agency arrangements.

Contract Costs

As a practical expedient, the Company recognizes the incremental costs of obtaining a contract, specifically commission expenses that have an amortization period of less than twelve months, as an expense when incurred. Additionally, the Company has adopted an accounting policy to recognize shipping costs that occur after control transfers, if any, to the customer as a fulfillment activity. The Company records shipping and handling costs related to revenue transactions within cost of sales as a period cost.

Gross Billings and Net Sales

The following is a summary of the Company's gross billings to customers and net sales for services and products (in thousands):

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Service revenue, net	$ 8,815	$ 9,692	$ 25,173	$ 35,343
Cost of purchased materials - service (1)	168,638	206,097	463,527	802,630
Gross billings for services	177,453	215,789	488,700	837,973
Product net sales	272,472	225,965	800,174	898,256
Gross billings to customers	$ 449,925	$ 441,754	$ 1,288,874	$ 1,736,229
Product net sales	$ 272,472	$ 225,965	$ 800,174	$ 898,256
Service revenue, net	8,815	9,692	25,173	35,343
Net sales	$ 281,287	$ 235,657	$ 825,347	$ 933,599

(1) Represents material procurement costs of products provided as an agent reported on a net basis.

Contract Balances

The Company records accounts receivable when it has an unconditional right to consideration. Contract assets represent amounts recognized as revenue for which the Company does not have the unconditional right to consideration. All contract assets represent amounts related to invoices expected to be issued during the next 12-month period and are recorded as prepaid expenses and other current assets. Contract liabilities are recorded when cash payments are received or due in advance of performance. Contract liabilities consist of advance payments and deferred revenue, where the Company has unsatisfied performance obligations. Contract liabilities are classified as deferred revenue and are allocated between accrued liabilities and other long-term liabilities of our condensed consolidated balance sheet based on the timing of when the customer takes control of the asset or receives the benefit of the service. Payment terms vary by customer. The time between invoicing and when payment is due is not significant. Changes in the accounts receivable, contract assets and the deferred revenues balances during the nine months ended May 29, 2020 are as follows (in thousands):

	May 29, 2020	August 30, 2019	$ Change
Accounts receivable	$ 223,211	$ 217,433	$ 5,778
Contract assets	$ 5,823	$ 4,606	$ 1,217
Deferred revenue	$ 23,946	$ 24,219	$ (273)

The increase in contract assets from $4.6 million as of August 30, 2019 to $5.8 million as of May 29, 2020 was primarily driven by the recognition of revenue that had not yet been billed. The decrease in deferred revenue from $24.2 million to $23.9 million was due to more revenue recognition during the period. During the nine months ended May 29, 2020, $13.0 million of revenue recognized was included in the deferred revenue balance at the beginning of the period, which was offset by additional deferrals during the period.

Disaggregation of Revenue

The Company disaggregates revenue by source of revenue and geography; no other level of disaggregation is required considering the type of products, customer, markets, contracts, duration of contracts, timing of transfer of control, and sales channels. The revenue by source and geography is disclosed in Note 11.

Revenue Allocated to Remaining Performance Obligations

The Company’s performance obligations related to product sales have a contractual duration of less than one year. The Company elected to apply the optional exemption practical expedient provided in ASC 606 and, therefore, is not required to disclose the aggregate amount of the transaction price allocated to those performance obligations that are unsatisfied or partially unsatisfied at the end of the reporting period.

Remaining performance obligations represent contracted revenue related to support services that have not yet been recognized. The Company expects to recognize revenue on the remaining performance obligations as follows (in thousands):

	May 29, 2020
Within 1 year	$ 20,972
2-3 years	2,549
Thereafter	425
	$ 23,946

(e) Cash and Cash Equivalents

All highly liquid investments with maturities of 90 days or less from original dates of purchase are carried at cost, which approximates fair value, and are considered to be cash. Cash and cash equivalents include cash on hand, cash deposited in checking and saving accounts, money market accounts, and securities with maturities of less than 90 days at the time of purchase.

(f) Allowance for Doubtful Accounts

The Company evaluates the collectability of accounts receivable based on a combination of factors. In cases where the Company is aware of circumstances that may impair a specific customer's ability to meet its financial obligations, the Company records a specific allowance against amounts due and, thereby, reduces the net recognized receivable to the amount management reasonably believes will be collected. For all other customers, the Company recognizes allowances for doubtful accounts based on a combination of factors including the length of time the receivables are outstanding, industry and geographic concentrations, the current business environment and historical experience.

(g) Derivative Financial Instrument

The Company records the assets or liabilities associated with derivative instruments at fair value based on Level 2 inputs in other current assets or other current liabilities, respectively, in the condensed consolidated balance sheets. The accounting for gains and losses resulting from changes in fair value depends on the use of the derivative and whether it is designated and qualifies for hedge accounting. See Note 4 for further details.

(h) Inventories

Inventories are valued at the lower of actual cost or net realizable value. Inventory value is determined on a specific identification basis for material and an allocation of labor and manufacturing overhead. At each balance sheet date, the Company evaluates the ending inventories for excess quantities and obsolescence. This evaluation includes an analysis of sales levels by product family and considers historical demand and forecasted demand in relation to the inventory on hand, competitiveness of product offerings, market conditions and product life cycles. The Company adjusts carrying value to the lower of its cost or net realizable value. Inventory write-downs are not reversed and create a new cost basis.

(i) Prepaid State Value-Added Taxes (ICMS)

Since 2004, the Sao Paulo State tax authorities have granted SMART Brazil a tax benefit to defer and eventually eliminate the payment of ICMS levied on certain imports from independent suppliers. This benefit, known as an ICMS Special Regime, is subject to renewal every two years. When the then current ICMS Special Tax Regime expired on March 31, 2010, SMART Brazil timely applied for a renewal of the benefit, however, the renewal was not granted until August 4, 2010.

On June 22, 2010, the Sao Paulo authorities published a regulation allowing companies that applied for a timely renewal of an ICMS Special Regime to continue utilizing the benefit until a final conclusion on the renewal request was rendered. As a result of this publication, SMART Brazil was temporarily allowed to utilize the benefit while it waited for its renewal. From April 1, 2010, when the ICMS benefit lapsed, through June 22, 2010 when the regulation referred to above was published, SMART Brazil was required to pay the ICMS taxes on imports, which payments result in ICMS credits that may be used to offset ICMS obligations generated from sales by SMART Brazil of its products; however, the vast majority of SMART Brazil's sales in Sao Paulo were either subject to a lower ICMS rate or were made to customers that were entitled to other ICMS benefits that enabled them to eliminate the ICMS levied on their purchases of products from SMART Brazil. As a result, from April 1, 2010 through June 22, 2010, SMART Brazil did not have sufficient ICMS collections against which to apply the credits and the credit balance increased significantly.

Effective February 1, 2011, in connection with its participation in a Brazilian government incentive program known as Support Program for the Technological Development of the Semiconductor and Display Industries Laws, or PADIS, SMART Brazil spun off the module manufacturing operations into SMART do Brazil, a separate subsidiary of the Company. In connection with this spin off, SMART do Brazil applied for a tax benefit from the State of Sao Paulo in order to obtain a deferral of state ICMS. This tax benefit is referred to as State PPB, or CAT 14. The CAT 14 approval was not obtained until July 21, 2011, and from February 1, 2011 until the CAT 14 approval was granted, SMART do Brazil did not have sufficient ICMS collections against which to apply the credits accrued upon payment of the ICMS on SMART do Brazil's imports and inputs locally acquired, and therefore, it generated additional excess ICMS credits.

As of May 29, 2020, the total ICMS tax credits reported on the Company's accompanying condensed consolidated balance sheet are R$27.8 million (or $5.1 million), of which (i) R$1.6 million (or $0.3 million) are fully vested ICMS credits, classified as prepaid and other current assets and R$24.5 million (or $4.5 million) are fully vested ICMS credits, classified as other noncurrent assets, and (ii) R$1.8 million (or $0.3 million) are ICMS credits subject to vesting in 48 equal monthly amounts, classified as prepaid expenses and other current assets (R$0.7 million or $0.1 million) and other noncurrent assets (R$1.1 million or $0.2 million). As of August 30, 2019, the total ICMS tax credits reported on the Company's accompanying condensed consolidated balance sheet are R$32.3 million (or $8.6 million), of which (i) R$7.2 million (or $1.9 million) are fully vested ICMS credits, classified as prepaid and other current assets and R$23.2 million (or $6.2 million) are fully vested ICMS credits, classified as other noncurrent assets, and (ii) R$1.9 million (or $0.5 million) are ICMS credits subject to vesting in 48 equal monthly amounts, classified as prepaid expenses and other current assets (R$0.6 million or $0.2 million) and other noncurrent assets (R$1.3 million or $0.3 million). It is expected that the excess ICMS credits will continue to be recovered in fiscal 2020 through fiscal 2023. The Company updates its forecast of the recoverability of the ICMS credits quarterly, considering the following key variables in Brazil: timing of government approvals of automated credit utilization, the total amount of sales, the product mix and the inter and intra state mix of sales. If these estimates or the mix of products or regions vary, it could take longer or shorter than expected to recover the accumulated ICMS credits, resulting in a reclassification of ICMS credits from current to noncurrent, or vice versa.

In April and June 2016, the Company filed cases with the State of Sao Paulo tax authorities to seek approval to sell excess ICMS credits. In December 2017, the Company obtained approval to sell R$31.6 million (or $5.8 million) of its ICMS credits. Once approved, sales of ICMS credits usually take three to six months to complete and typically incur a discount to the face amount of the credits sold, as well as fees for the arrangers of these sales which together aggregate 10% to 15% of the face amount of the credits being sold. Once the sale agreement is complete, the tax authorities usually approve the transfer of credits in monthly installments and the proceeds resulting from the sale of the aforementioned credits shall be received by the Company accordingly. The Company has recorded valuation adjustments for the estimated discount and fees that the Company will need to offer in order to sell the ICMS credits to other companies.

In the first quarter of fiscal 2019, the Company received the approval to sell R$17.7 million (or $3.3 million) of its ICMS credits. The payments are to be received in 22 installments starting in the second quarter of fiscal 2019 through fiscal 2020. The Company received a total of R$6.0 million (or $1.1 million) and R$10.0 million (or $1.8 million) of the monthly installments during nine months ended May 29, 2020 and fiscal 2019, respectively.

(j) Property and Equipment

Property and equipment are recorded at cost. Depreciation and amortization are computed based on the shorter of the estimated useful lives or the related lease terms, using the straight-line method. Estimated useful lives are presented below:

	Period
Asset:	
Manufacturing equipment	2 to 5 years
Office furniture, software, computers and equipment	2 to 5 years
Leasehold improvements*	2 to 60 years

* Includes the land lease for the Penang facility with a term expiring in 2070.

(k) Goodwill

The Company performs a goodwill impairment test annually during the fourth quarter of its fiscal year and more frequently if events or circumstances indicate that impairment may have occurred. Such events or circumstances may, among others, include significant adverse changes in the general business climate. There were no events which required additional impairment in the three and nine months ended May 29, 2020. As of May 29, 2020 and August 30, 2019, the carrying value of goodwill on the Company's condensed consolidated balance sheet was $73.5 million and $81.4 million, respectively.

When conducting the annual impairment test for goodwill, the Company compares the estimated fair value of a reporting unit containing goodwill to its carrying value. If the fair value of the reporting unit is determined to be more than its carrying value, no goodwill impairment is recognized.

All of the $73.5 million carrying value of goodwill on the Company's condensed consolidated balance sheet as of May 29, 2020 is associated with the Company's three reporting segments (Specialty Memory Products, Brazil Products and SCSS). No impairment of goodwill was recognized through May 29, 2020.

The changes in the carrying amount of goodwill during the nine months ended May 29, 2020 and fiscal 2019 are as follows (in thousands):

	Specialty Memory Products	Brazil Products	SCSS	Total
Balance as of August 31, 2018	$ 14,720	$ 26,099	$ 4,575	$ 45,394
Provisional adjustment from business acquisition (see Note 2)	—	—	671	671
Addition from business acquisition (see Note 2)	—	—	35,428	35,428
Translation adjustments	—	(70)	—	(70)
Balance as of August 30, 2019	14,720	26,029	40,674	81,423
Translation adjustments	—	(7,972)	—	(7,972)
Balance as of May 29, 2020	$ 14,720	$ 18,057	$ 40,674	$ 73,451

(l) Intangible Assets, Net

The following table summarizes the gross amounts and accumulated amortization of intangible assets by type as of May 29, 2020 and August 30, 2019 (dollars in thousands):

		May 29, 2020			August 30, 2019		
	Weighted avg. life (yrs)	Gross Carrying amount	Accumulated amortization	Net	Gross Carrying amount	Accumulated amortization	Net
Customer relationships	4 - 7	$ 52,300	$ (10,613)	$ 41,687	$ 52,300	$ (3,755)	$ 48,545
Trademarks/tradename	5 - 7	13,100	(3,614)	9,486	13,100	(2,172)	10,928
Technology	4	10,350	(2,438)	7,912	10,350	(498)	9,852
Backlog	< 1	400	(400)	—	400	(400)	—
Total		$ 76,150	$ (17,065)	$ 59,085	$ 76,150	$ (6,825)	$ 69,325

Amortization expense related to intangible assets is detailed in the table below. Acquired intangibles are amortized on a straight-line basis over the remaining estimated economic life of the underlying intangible assets.

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Amortization of intangible assets classification (in thousands):				
Cost of sales	$ 647	$ 16	1,941	130
Selling, general and administrative	2,767	960	8,299	2,882
Total	$ 3,414	$ 976	$ 10,240	$ 3,012

Estimated amortization expense of these intangible assets for the next five fiscal years and all years thereafter are as follows (in thousands):

	Amount
Fiscal year ending August:	
Remainder of fiscal 2020	$ 3,414
2021	13,654
2022	13,639
2023	12,879
2024	9,093
2025 and thereafter	6,406
Total	$ 59,085

(m) Long-Lived Assets

Long-lived assets, excluding goodwill, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset group to the future undiscounted cash flows expected to be generated by the asset group. If such assets are considered to be impaired, the impairment is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed are reported at the lower of the carrying amount or fair value, less cost to sell. No impairment of long-lived assets was recognized during the three and nine months ended May 29, 2020.

(n) Research and Development Expense

Research and development expenditures are expensed in the period incurred.

(o) Income Taxes

The Company uses the asset and liability method of accounting for income taxes. Deferred tax assets and liabilities are recognized for the future consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis and net operating loss and credit carryforwards. When necessary, a valuation allowance is recorded to reduce tax assets to amounts expected to be realized. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income (or loss) in the period that includes the enactment date. The Company recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. The Company records interest and penalties related to unrecognized tax benefits in tax expense.

(p) Foreign Currency Translation

For foreign subsidiaries using the local currency as their functional currency, assets and liabilities are translated at exchange rates in effect at the balance sheet date and income and expenses are translated at average exchange rates during the period. The effect of this translation is reported in other comprehensive income (loss). Exchange gains and losses arising from transactions denominated in a currency other than the functional currency of the respective foreign subsidiaries are included in results of operations.

For foreign subsidiaries using the U.S. dollar as their functional currency, the financial statements of these foreign subsidiaries are remeasured into U.S. dollars using the historical exchange rate for property and equipment and certain other nonmonetary assets and liabilities and related depreciation and amortization on these assets and liabilities. The Company uses the exchange rate at the balance sheet date for the remaining assets and liabilities, including deferred taxes. A weighted average exchange rate is used for each period for revenues and expenses.

All foreign subsidiaries and branch offices, except those in Brazil and South Korea, use the U.S. dollar as their functional currency. The gains or losses resulting from the remeasurement process are recorded in other income (expense) in the accompanying condensed consolidated income statements.

During the three and nine months ended May 29, 2020, the Company recorded $0.5 million and $2.6 million, respectively, and $0.1 million and $3.5 million, respectively for the corresponding periods of 2019, of foreign exchange losses primarily related to its Brazilian operating subsidiaries.

(q) Share-Based Compensation

The Company accounts for share-based compensation under ASC 718, *Compensation—Stock Compensation*, which requires companies to recognize in their income statement all share-based payments, including grants of share options and other types of equity awards, based on the grant-date fair value of such share-based awards.

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Share-based compensation expense by category (in thousands):				
Cost of sales	$ 699	$ 651	$ 2,161	$ 1,803
Research and development	780	673	2,306	1,967
Selling, general and administrative	3,428	3,109	11,043	8,866
Total	$ 4,907	$ 4,433	$ 15,510	$ 12,636

(r) Loss Contingencies

The Company is subject to the possibility of various loss contingencies arising in the ordinary course of business. The Company considers the likelihood of a loss and the ability to reasonably estimate the amount of loss in determining the necessity for and amount of any loss contingencies. Estimated loss contingencies are accrued when it is probable that a liability has been incurred or an asset impaired and the amount of loss can be reasonably estimated. The Company regularly evaluates the most current information available to determine whether any such accruals should be recorded or adjusted.

(s) Comprehensive Income (Loss)

Comprehensive income (loss) consists of net income (loss) and other gains and losses affecting shareholders’ equity that, under U.S. GAAP are excluded from net income (loss). The Company’s other comprehensive income (loss) generally consists of foreign currency translation adjustments.

(t) Concentration of Credit and Supplier Risk

The Company’s concentration of credit risk consists principally of cash and cash equivalents and accounts receivable. The Company’s revenue and related accounts receivable reflect a concentration of activity with certain customers (see Note 12). The Company does not require collateral or other security to support accounts receivable. The Company performs periodic credit evaluations of its customers to minimize collection risk on accounts receivable and maintains allowances for potentially uncollectible accounts.

The Company relies on three suppliers for the majority of its raw materials. At May 29, 2020 and August 30, 2019, the Company owed these three suppliers $149.3 million and $91.5 million, respectively, which was recorded as accounts payable and accrued liabilities. The inventory purchases from these suppliers during the three and nine months ended May 29, 2020 were $0.3 billion and $0.7 billion, respectively, and $0.2 billion and $1.0 billion, respectively for the corresponding periods of fiscal 2019.

(u) New Accounting Pronouncements

In December 2019, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes*. The amendments will be effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. Early adoption of the amendments is permitted. Depending on the amendment, adoption may be applied on a retrospective, modified retrospective or prospective basis. The Company is currently evaluating the impacts of adoption of the new guidance to its consolidated financial statements.

In October 2018, the FASB issued ASU No. 2018-16, *Derivatives and Hedging (Topic 815) Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes*. This standard amends ASC 815, *Derivatives and Hedges*, and permits the SOFR OIS rate as an approved rate to be used in valuing derivative instruments. ASU 2018-16 is effective for fiscal years, including interim periods within those fiscal years, beginning after December 15, 2018, on a prospective basis. The Company adopted this ASU 2018-16 effective August 31, 2019 with no impact to its condensed consolidated financial statements.

In February 2018, the FASB issued ASU No. 2018-02, *Income Statement-Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Comprehensive Income*. The new guidance allows companies to reclassify standard tax effects resulting from the Tax Act, from accumulated other comprehensive income to retained earnings. The guidance also requires certain new disclosures regardless of the election. The Company was required to adopt the guidance in the first quarter of fiscal 2020. The Company adopted this ASU 2018-02 effective August 31, 2019 with no impact to its condensed consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, "*Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*," which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASU 2016-13 replaces the existing incurred loss impairment model with a forward-looking expected credit loss model which will result in earlier recognition of credit losses. The Company is required to adopt the new standards in the first quarter of fiscal 2021, with early adoption permitted. The Company does not expect the adoption of this guidance to have a material impact on its financial statements upon adoption.

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)*, which modified lease accounting for both lessees and lessors to increase transparency and comparability by recognizing lease assets and lease liabilities by lessees for those leases classified as operating leases under previous accounting standards and disclosing key information about leasing arrangements, among other things. ASU 2016-02 is effective for annual reporting periods and interim periods within those years, beginning after December 15, 2018. Effective August 31, 2019, the Company adopted Topic 842, using the modified retrospective transition approach. The Company applied the new guidance to all leases existing as of the date of adoption. The Company's reported results for fiscal 2020 reflect the application of Topic 842, while prior period amounts have not been adjusted and continue to be reported in accordance with its historical accounting under Topic 840.

The Company elected the practical expedient package permitted under the transition approach. As such, the Company did not reassess whether any expired or existing contracts are or contain leases, the Company did not reassess its historical lease classification, and the Company did not reassess its initial direct costs for any leases that existed prior to August 31, 2019. The Company did not elect the use-of-hindsight. The new standard also provides practical expedients for an entity's ongoing accounting. The Company elected the short-term lease recognition exemption. This means, for those leases that qualify, the Company will not recognize a right-of-use asset or lease liability. The Company also elected the practical expedient to not separate lease and non-lease components for all its leases.

As of the date of adoption, the Company recognized operating lease right-of-use assets of $24.3 million, with corresponding operating lease liabilities of $25.0 million on the condensed consolidated balance sheets. The difference between the operating lease right-of-use assets and operating lease liabilities primarily relates to deferred rent.

For further information regarding leases, see Note 5 Balance Sheet Details.

In May 2014, the FASB issued a new standard, ASU No. 2014-09, *Revenue from Contracts with Customers, as amended*, which supersedes nearly all existing revenue recognition guidance. The FASB has issued several amendments to the new standard, including clarification on identifying performance obligations. The amendments include ASU No. 2016-08, *Revenue from Contracts with Customers (Topic 606)—Principal versus Agent Considerations*, which was issued in March 2016, and clarifies the implementation guidance for principal versus agent considerations in ASU 2014-09. The new standard permits adoption either by using (i) a full retrospective approach for all periods presented in the period of adoption or (ii) a modified retrospective approach with the cumulative effect of initially applying the new standard recognized at the date of initial application and providing certain additional disclosures. The new standard is effective for annual reporting periods beginning after December 15, 2017. The Company adopted the new standard effective September 1, 2018 using the modified retrospective approach applied to all contracts that are not completed contracts at the date of initial adoption (i.e. September 1, 2018).

(2) Business Acquisitions

Fiscal Year 2019

SMART Embedded Computing, Inc. (SMART EC)

On July 8, 2019, SMART Global Holdings entered into a Stock Purchase Agreement (the Artesyn SPA), by and among SMART Global Holdings, Artesyn Embedded Computing, Inc., a Wisconsin corporation (AEC), Pontus Intermediate Holdings II, LLC, a Delaware limited liability company, and Pontus Holdings LLC, a Delaware limited liability company. Pursuant to the Artesyn SPA, on July 8, 2019, the Company agreed to purchase all of the shares of AEC, a private company based in Tempe, Arizona and Artesyn Netherlands B.V., a company with limited liability organized under the laws of the Netherlands (AEC and Artesyn Netherlands B.V., collectively Artesyn), both entities being subsidiaries of Artesyn Embedded Technologies, Inc. SMART Global Holdings through one or more subsidiaries, paid the Artesyn equityholders a base purchase price of approximately $75 million at closing using cash on hand. Pursuant to the Artesyn SPA, the former equityholders of Artesyn were entitled to earn-out payments of up to $10 million based on Artesyn's achievement of specific gross revenue levels through December 31, 2019 plus additional earn-out payments of $0.10 for each dollar of gross revenue through December 31, 2019 over an agreed upon achievement level. The earn-out was not achieved and nothing was paid. SMART Global Holdings deposited $0.8 million of the purchase price into escrow as security for sellers' indemnification obligations during the escrow period of one year. The Company changed the name of AEC to SMART Embedded Computing, Inc., or SMART EC.

Under the acquisition method of accounting, the assets acquired and liabilities assumed of SMART EC were recorded as of the acquisition date at their respective fair values. The reported consolidated financial condition after completion of the acquisition reflects these fair values. SMART EC's results of operations are included in the consolidated financial statements from the date of acquisition.

The initial fair value of contingent consideration was estimated at the date of acquisition to be $2.7 million, which was recorded as a current liability. The Company determined the fair value of the obligations to pay contingent consideration using a real options technique which incorporates various estimates, including projected gross revenue for the period, a volatility factor applied to gross revenue based on year-on-year growth in gross revenue of comparable companies, discount rates and the estimated amount of time until final payment is made. This fair value measurement is based on significant inputs not observable in the market, which ASU 820-10-35 refers to as Level 3 inputs. The resulting probability-weighted cash flows were discounted using the Company's estimated cost of debt of 8.50% derived from the Company's interest rates from the existing line of credit (2.75% plus US Prime Rate) and its term loan (6.25% plus 3-month LIBOR).

Subsequent to the acquisition date, the Company adjusted the contingent consideration to its current fair value with such changes recognized in income from operations. Changes in fair values reflect new information about the probability and timing of meeting the conditions of the gross revenue target. As of May 29, 2020 and August 30, 2019, the fair value of the contingent consideration was $0.

A reconciliation of net cash exchanged in accordance with the Artesyn SPA to the total purchase price as of the closing date of the transaction, July 8, 2019, is presented below (in thousands):

Net cash for merger	$	74,358
Cash and cash equivalents acquired		37
Upfront payment in accordance with agreement		74,395
Post-closing adjustments in accordance with agreement		558
Total consideration		74,953
Estimated fair value of contingent consideration		2,700
Total purchase price	$	77,653

The total purchase consideration has been allocated to the tangible and intangible assets acquired and liabilities assumed. The assets acquired and liabilities assumed at the acquisition date are based upon their respective fair values summarized below (in thousands):

Tangible assets acquired	$	16,482
Liabilities assumed		(7,840)
Identifiable intangible assets		41,900
Goodwill		27,111
Total net assets acquired	$	77,653

Asset categories acquired included working capital, fixed assets, and identified intangible assets. The intangible assets are as follows (in thousands):

		Amount	Estimated Useful Life (in years)
Customer relationships	$	31,800	4-6 years
Technology		10,100	4 years
	$	41,900	

The excess of purchase price over the fair value amounts assigned to the assets acquired and liabilities assumed represents the goodwill amount resulting from the acquisition. The Company does not expect any portion of this goodwill to be deductible for tax purposes. The goodwill attributable to the SMART EC acquisition has been recorded as a noncurrent asset and is not amortized but is subject to an annual review for impairment. Factors that contributed to the recognition of goodwill include the broader reach and capabilities of the Company into new technologies, markets and channels that leverage its existing products and services. SMART EC brings an outstanding customer base, solid products and strong supplier relationships to the Company in the defense, industrial IoT (IIoT), edge computing, and communications OEM markets. SMART EC will have substantially improved access to capital to drive additional investment in, and further development and growth of its products and services.

Due to the timing of acquisition, the total purchase consideration has been allocated to the tangible and intangible assets acquired and liabilities assumed based on a preliminary valuation analysis. These preliminary values may change in future reporting periods upon finalization of the valuation and net working capital adjustment, which will occur no later than the fourth quarter of fiscal 2020. During the nine months ended May 29, 2020 and fiscal 2019, the Company incurred certain costs related to the acquisition, which are included in selling, general and administrative expense in the condensed consolidated statement of operations. Acquisition-related costs include the following (in thousands).

	Nine Months Ended May 29, 2020	Year-Ended August 30, 2019	Total
Professional fees	$ 556	$ 1,045	$ 1,601

SMART Wireless Computing, Inc. (SMART Wireless)

On July 9, 2019, SMART Global Holdings entered into an Agreement and Plan of Merger (the Inforce Merger Agreement), by and among SMART Global Holdings, Thor Acquisition Sub I, Inc., a California corporation and a wholly-owned indirect subsidiary of the SMART Global Holdings (Merger Sub I), Thor Acquisition Sub II, Inc., a Delaware corporation and a wholly-owned indirect subsidiary of the SMART Global Holdings (Merger Sub II), and Inforce Computing, Inc., a California corporation (Former Inforce). Pursuant to the Inforce Merger Agreement, on July 9, 2019, Merger Sub I was merged with and into Former Inforce, with Former Inforce continuing as the surviving corporation (the First Merger) and, immediately following the effectiveness of the First Merger, the surviving corporation of the First Merger was merged with and into Merger Sub II, with Merger Sub II surviving as a wholly-owned indirect subsidiary of SMART Global Holdings (the Inforce Merger). SMART Global Holdings through one or more subsidiaries, paid the Former Inforce equityholders approximately $14.6 million including amounts paid at closing composed of $3.2 million in cash and 382,788 of ordinary shares of SMART Global Holdings valued at $9.1 million, and amounts retained by the Company as security for the sellers' indemnification obligations as well as any post-closing adjustments to the purchase price (the Holdback) composed of $0.7 million in cash and 67,550 of ordinary shares of SMART Global Holdings valued at $1.6 million. The Company changed the name of Inforce Computing to SMART Wireless Computing, Inc., or SMART Wireless.

Under the acquisition method of accounting, the assets acquired and liabilities assumed of SMART Wireless were recorded as of the acquisition date at their respective fair values. The reported consolidated financial condition after completion of the acquisition reflects these fair values. SMART Wireless' results of operations are included in the consolidated financial statements from the date of acquisition.

A reconciliation of net cash exchanged in accordance with the Inforce Merger Agreement to the total purchase price as of the closing date of the transaction, July 9, 2019, is presented below (in thousands):

Net cash for merger	$ 1,581
Cash and cash equivalents acquired	1,576
Upfront cash payment	3,157
Upfront shares issued	9,167
Upfront consideration in accordance with agreement	12,324
Purchase price holdback - cash due to pre-closing holders	413
Purchase price holdback - shares due to pre-closing holders	1,618
Post-closing adjustments in accordance with agreement (as of May 29, 2020)	285
Total purchase price	$ 14,640

The total purchase consideration has been allocated to the tangible and intangible assets acquired and liabilities assumed. The assets acquired and liabilities assumed at the acquisition date are based upon their respective fair values summarized below (in thousands):

Tangible assets acquired	$ 5,266
Liabilities assumed	(5,643)
Identifiable intangible assets	6,700
Goodwill	8,317
Total net assets acquired	$ 14,640

Asset categories acquired included working capital, fixed assets, and identified intangible assets. The intangible assets are as follows (in thousands):

	Amount	Estimated Useful Life (in years)
Customer relationships	$ 5,800	5 years
Technology	900	5 years
	$ 6,700	

The excess of purchase price over the fair value amounts assigned to the assets acquired and liabilities assumed represents the goodwill amount resulting from the acquisition. The Company does not expect any portion of this goodwill to be deductible for tax purposes. The goodwill attributable to the SMART Wireless acquisition has been recorded as a noncurrent asset and is not amortized, but is subject to an annual review for impairment. Factors that contributed to the recognition of goodwill include the broader reach and capabilities of the Company into new technologies, markets and channels that leverage its existing products and services. SMART Wireless is a fast growing developer of high-performance production-ready ARM ISA-based embedded computing platforms for IoT applications enabling the next generation of connected devices. SMART Wireless brings an outstanding customer base, solid products and strong supplier relationships to the Company in the medical imaging, video conferencing, AR/VR computing, IIoT, commercial drones and robotics markets. SMART Wireless will have substantially improved access to capital to drive additional investment in, and further development and growth of its products and services.

Due to the timing of acquisition, the total purchase consideration has been allocated to the tangible and intangible assets acquired and liabilities assumed based on a preliminary valuation analysis. These preliminary values may change in future reporting periods upon finalization of the valuation of net working capital adjustment, which will occur no later than the fourth quarter of fiscal 2020. During the nine months ended May 29, 2020 and fiscal 2019, the Company incurred certain costs related to the acquisition, which are included in selling, general and administrative expense in the condensed consolidated statement of operations. Merger-related costs include the following (in thousands):

	Nine Months Ended May 29, 2020	Year Ended August 30, 2019	Total
Professional fees	$ 204	$ 462	$ 666

Premiere Logistics

In February 2019, the Company acquired all of the outstanding shares of Premiere Customs Brokers, Inc. and Premiere Logistics, Inc., both privately-held California corporations (collectively Premiere Logistics). The primary purpose of this acquisition is to provide the Company with cost savings solutions in support of its own freight and logistics requirements. In connection with the acquisition, the Company paid upfront cash consideration of $0.2 million.

The assets acquired and liabilities assumed at the acquisition date are based on their respective fair values summarized below (in thousands):

Tangible assets acquired	$ 277
Liabilities assumed	(168)
Identifiable intangible assets	83
Total net assets acquired	$ 192

Results of operations of the businesses acquired have been included in the Company’s consolidated financial statements subsequent to the date of acquisition. The revenue and net income earned by the businesses acquired following the acquisition are not material to our consolidated results of operations.

No pro forma financial information is presented for any of the acquisitions in fiscal 2019 as the impact is not material, individually or in the aggregate, to the Company’s consolidated statements of operations.

Fiscal Year 2018

Penguin Computing

On June 8, 2018, SMART Global Holdings entered into an Agreement and Plan of Merger (the Penguin Merger Agreement), by and among SMART Global Holdings, Glacier Acquisition Sub, Inc., a Delaware corporation and a wholly-owned indirect subsidiary of the SMART Global Holdings (Merger Sub), Penguin Computing, Inc., a California corporation (Penguin) and Fortis Advisors LLC, a Delaware limited liability company, solely in its capacity as the representative of the holders of the securities of Penguin. Pursuant to the Penguin Merger Agreement, on June 8, 2018, Merger Sub was merged with and into Penguin, with Penguin surviving as a wholly-owned indirect subsidiary of SMART Global Holdings (the Penguin Merger). SMART Global Holdings through one or more subsidiaries, paid the Penguin equityholders approximately $45 million at closing and assumed approximately $32.3 million of Penguin's outstanding indebtedness. SMART Global Holdings financed the acquisition with net proceeds of $60.0 million from the Incremental Amendment (as defined in Note 7). Pursuant to the Penguin Merger Agreement, the former equityholders of Penguin were also entitled to cash earn-out payments of up to $25.0 million based on Penguin's achievement of specified gross profit levels through December 31, 2018. No earn-out amounts were achieved.

After closing of the Penguin Merger, SMART Global Holdings deposited $6.0 million of the purchase price into escrow as security for Penguin's indemnification obligations during the escrow period of one year. SMART Global Holdings also deposited $2.0 million of the purchase price into escrow as security for customary post-closing adjustments to the purchase price. SMART Global Holdings notified the sellers of various disputes with respect to the closing balance sheet and other indemnity claims aggregating $4.9 million. While the escrow claims have not been resolved, on July 23, 2019, the parties agreed to release $3.2 million of these funds to the former equityholders and $1.8 million of the escrow funds to SMART Global Holdings. The balance of $3.0 million remains in escrow.

Under the acquisition method of accounting, the assets acquired and liabilities assumed of Penguin were recorded as of the acquisition date at their respective fair values. The reported consolidated financial condition after completion of the acquisition reflects these fair values. Penguin's results of operations are included in the consolidated financial statements from the date of acquisition.

The initial fair value of contingent consideration was estimated at the date of acquisition to be $3.0 million, which was recorded as a current liability. The Company determined the fair value of the obligations to pay contingent consideration using a real options technique which incorporates various estimates, including projected gross profit for the period, a volatility factor applied to gross profit based on year-on-year growth in gross profit of comparable companies, discount rates and the estimated amount of time until final payment is made. This fair value measurement is based on significant inputs not observable in the market, which ASU 820-10-35 refers to as Level 3 inputs. The resulting probability-weighted cash flows were discounted using the US Information Technology B Corporate Bond Yields of 4.06%, which is representative of a market participant assumption.

Subsequent to the acquisition date, the Company adjusted the contingent consideration to its current fair value with such changes recognized in income from operations. Changes in fair values reflect new information about the probability and timing of meeting the conditions of the gross profit target. As of August 30, 2019, the fair value of the contingent consideration was $0.

A reconciliation of net cash exchanged in accordance with the purchase agreement to the total purchase price as of the closing date of the merger, June 8, 2018, is presented below (in thousands):

Net cash for merger	$ 42,316
Cash and cash equivalents acquired	2,769
Upfront payment in accordance with agreement	45,085
Post-closing adjustments in accordance with agreement	(3,479)
Total consideration	41,606
Estimated fair value of contingent consideration	3,000
Total purchase price	$ 44,606

The total purchase consideration has been allocated to the tangible and intangible assets acquired and liabilities assumed. The assets acquired and liabilities assumed at the acquisition date are based upon their respective fair values summarized below (in thousands):

	Previous Reported	Purchase Price Allocation Measurement period adjustment	As Adjusted
Tangible assets acquired	$ 84,707	$ (671)	$ 84,036
Liabilities assumed	(72,226)	—	(72,226)
Identifiable intangible assets	27,550	—	27,550
Goodwill	4,575	671	5,246
Total net assets acquired	$ 44,606	$ —	$ 44,606

The provisional amounts presented in the table above pertained to the preliminary purchase price allocation reported in our Form 10-K for the fiscal year ended August 31, 2018. The measurement period adjustment, as recognized in the third quarter of fiscal 2019, is related to the reduction of inventory originally represented by the sellers as held by vendors for repairs. Upon further analysis, the Company confirmed with the vendors that the stated inventory or an obligation by the vendors to refund the Company did not exist as of June 8, 2018, the acquisition date.

We do not believe that the measurement period adjustments had a material impact on our consolidated statements of operations, balance sheets or cash flows in any periods previously reported. The final determination of the fair values were completed within the measurement period of up to one year from the acquisition date, and adjustments to provisional amounts that were identified during the measurement period were recorded in the reporting period in which the adjustment was determined.

Asset categories acquired included working capital, fixed assets, and identified intangible assets. The intangible assets are as follows (in thousands):

	Amount	Estimated Useful Life (in years)
Customer relationships	$ 14,700	7 years
Trade name	12,200	7 years
Technology	250	4 years
Existing order backlog	400	< 1 year
	$ 27,550	

The excess of purchase price over the fair value amounts assigned to the assets acquired and liabilities assumed represents the goodwill amount resulting from the acquisition. The Company does not expect any portion of this goodwill to be deductible for tax purposes. The goodwill attributable to the Penguin Merger has been recorded as a noncurrent asset and is not amortized, but is subject to an annual review for impairment. Factors that contributed to the recognition of goodwill include the broader reach and capabilities of the Company into new technologies, markets and channels that leverage its existing products and services. Penguin brings an outstanding customer base, solid products and strong supplier relationships to the Company in the specialty compute, storage and networking markets. Conversely, Penguin will have substantially improved access to capital to drive additional investment in, and further development and growth of its product and services.

As part of the Penguin Merger, the Company recorded a net deferred tax liability of $1.6 million. This amount was primarily comprised of $7.9 million related to non-goodwill intangible assets and other fair market value adjustments, offset by net deferred tax assets including acquired net operating losses and research credit carryovers totaling $6.3 million.

(3) Related Party Transactions

In the normal course of business, the Company had transactions with its affiliates as follows (in thousands):

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Affiliates:				
Net sales	$ 24,139	$ 26,427	$ 59,691	$ 94,641

As of May 29, 2020 and August 30, 2019, amounts due from these affiliates were $8.9 million and $8.2 million, respectively.

On July 9, 2019, SMART Wireless became a wholly-owned subsidiary of the Company (see Note 2). Included in the selling shareholders of this acquisition were the Company's CEO and two members of the Company's Board of Directors, who became entitled to receive in the aggregate 397,407 in SGH common shares valued at $9.5 million (consisting of 337,692 shares issued upon closing and 59,715 shares that are subject to the Holdback).

(4) Foreign Currency Exchange Contracts

The Company transacts business in various foreign currencies and has international sales and expenses denominated in foreign currencies, subjecting the Company to foreign currency risk. The Company utilizes foreign exchange forward contracts to mitigate foreign currency exchange rate risk associated with foreign-currency-denominated assets and liabilities, primarily third party payables. The Company does not use foreign currency contracts for speculative or trading purposes.

Foreign exchange forward contracts outstanding at May 29, 2020 are not designated as hedging instruments for hedge accounting purposes. Accordingly, any gains or losses resulting from changes in the fair value of the non-designated forward contracts are reported in other income (expense) in the condensed consolidated income statements. The gains and losses on these forward contracts generally offset the gains and losses associated with the underlying foreign-currency-denominated balances, which are also reported in other income (expense).

As of May 29, 2020, the Company's non-designated forward contacts resulted in a $2.9 million derivative asset and a $0.4 million derivative liability. As of August 30, 2019, the Company's non-designated forward contracts resulted in a $36 thousand derivative asset and a $0.2 million derivative liability. For the three and nine months ended May 29, 2020, the Company recognized realized gains in the amount of $8.8 million and $9.5 million, respectively, and net unrealized gains on the change in the fair value of the non-designated forward contracts in the amount of $2.1 million and $3.3 million, respectively. For the three and nine months ended May 31, 2019, the Company recognized realized losses in the amount of $0.5 million and $2.5 million, respectively, and net unrealized losses on the change in the fair value of the non-designated forward contracts in the amount of $2.1 million and $0.6 million, respectively.

(5) Balance Sheet Details

Inventories

Inventories consisted of the following (in thousands):

	May 29, 2020	August 30, 2019
Raw materials	$ 101,518	$ 67,629
Work in process	14,986	10,546
Finished goods	64,050	40,563
Total inventories*	$ 180,554	$ 118,738

* As of May 29, 2020 and August 30, 2019, 16% and 25%, respectively, of total inventories represented inventory held under the Company's supply chain services.

Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following (in thousands):

	May 29, 2020	August 30, 2019
Contract assets*	$ 5,823	$ 4,606
Prepaid income taxes	5,014	2,555
Unbilled service receivables	3,955	9,665
Indemnification claims receivable**	3,044	3,044
Derivative assets	2,949	36
Prepayment for VAT and other transaction taxes	1,648	963
Prepaid R&D expenses	694	3,949
Prepaid ICMS taxes in Brazil***	421	2,140
Other prepaid expenses and other current assets	7,948	10,992
Total prepaid expenses and other current assets	$ 31,496	$ 37,950

* See Note 1(d).
** See Note 2.
*** See Note 1(i).

Property and Equipment, Net

Property and equipment consisted of the following (in thousands):

	May 29, 2020	August 30, 2019
Office furniture, software, computers and equipment	$ 20,003	$ 21,476
Manufacturing equipment	105,213	124,706
Leasehold improvements*	26,259	29,255
	151,475	175,437
Less accumulated depreciation and amortization	97,715	107,092
Net property and equipment	$ 53,760	$ 68,345

* Includes Penang facility, which is situated on leased land.

Depreciation and amortization expense for property and equipment during the three and nine months ended May 29, 2020 was approximately $5.4 million and $17.6 million, respectively, and $5.8 million and $17.1 million, respectively for the corresponding periods of fiscal 2019.

Other Noncurrent Assets

Other noncurrent assets consisted of the following (in thousands):

	May 29, 2020	August 30, 2019
Prepaid ICMS taxes in Brazil*	$ 4,709	$ 6,513
Deferred tax asset	2,861	1,933
Prepaid R&D expense	1,441	1,584
Other	3,598	2,754
Total other noncurrent assets	$ 12,609	$ 12,784

* See Note 1(i).

Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	May 29, 2020	August 30, 2019
Deferred revenue	$ 20,972	$ 16,680
Accrued employee compensation	13,439	15,424
Customer deposits	5,843	2,683
Current portion of lease liabilities	5,364	—
VAT and other transaction taxes payable	3,980	3,009
Indemnification claims liability*	1,373	1,369
Accrued warranty reserve	1,337	1,770
Income taxes payable	983	1,151
Other accrued liabilities	6,587	6,894
Total accrued liabilities	$ 59,878	$ 48,980

* See Note 2.

Leases

The Company determines if an arrangement is a lease as well as the classification of the lease at inception for arrangements with an initial term of more than 12 months, and classifies it as either finance or operating.

Operating leases are recorded in operating lease right-of-use assets, net, and operating lease liabilities, current and non-current on the Company's condensed consolidated balance sheets. For operating leases of buildings, the Company accounts for non-lease components, such as common area maintenance, as a component of the lease, and include it in the initial measurement of the Company's operating lease assets and corresponding liabilities. Operating lease assets are amortized on a straight-line basis in operating expenses over the lease term.

The Company does not have financing leases as of May 29, 2020.

The Company's lease liabilities are recognized based on the present value of the remaining fixed lease payments, over the lease term, using a discount rate of similarly secured borrowings available to us. For the purpose of lease liability measurement, the Company considers only payments that are fixed and determinable at the time of commencement. Any variable payments that depend on an index or rate are expensed as incurred. The Company's lease terms may include options to extend when it is reasonably certain that it will exercise that option. The Company's lease assets also include any lease payments made and exclude any lease incentives received prior to commencement. The Company's lease assets are tested for impairment in the same manner as long-lived assets used in operations. The Company generally recognizes sublease income on a straight-line basis over the sublease term.

The weighted-average remaining lease term for the Company's operating leases was 7.5 years at May 29, 2020 and the weighted-average discount rate was 7.9%.

The components of lease costs are as follows (in thousands):

	Three Months Ended May 29, 2020	Nine Months Ended May 29, 2020
Operating lease cost	$ 1,832	$ 4,955
Variable lease cost	221	576
Short-term lease cost	36	252
Total lease costs	$ 2,089	$ 5,783

Future minimum undiscounted payments under the Company's non-cancelable operating leases were as follows as of May 29, 2020 (in thousands):

Fiscal year ending August:	Amount
Remainder of 2020	$ 1,719
2021	7,076
2022	4,685
2023	3,956
2024	3,486
2025 and thereafter	17,061
Total	37,983
Less Short-term lease commitments	(64)
Less imputed interest	(10,708)
Present value of total lease liabilities	$ 27,211

Right-of-use assets obtained in exchange for new operating lease liabilities for the three and nine months ended May 29, 2020 amounted to $0.9 million and $8.9 million, respectively.

(6) Income Taxes

Provision for income taxes for the three and nine month periods presented consisted of the following (in thousands):

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Provision for income taxes	$ 2,700	$ 550	$ 4,365	$ 12,813

Income tax expense includes a provision for federal, state and foreign taxes based on the annual estimated effective tax rate applicable to the Company and its subsidiaries, adjusted for certain discrete items which are fully recognized in the period they occur.

Provision for income taxes increased by $2.2 million and decreased by $8.4 million for the three and nine months ended May 29, 2020, as compared to the same periods in the prior year, primarily due to the profits and related taxes in non-U.S. jurisdictions.

As of May 29, 2020, the Company has a full valuation allowance for its net deferred tax assets associated with its U.S. operations. The amount of the deferred tax asset considered realizable could be adjusted if significant positive evidence increases.

Determining the consolidated provision for income tax expense, income tax liabilities, and deferred tax assets and liabilities involves judgment. The Company calculates and provides for income taxes in each of the tax jurisdictions in which it operates, which involves estimating current tax exposures, as well as making judgments regarding the recoverability of deferred tax assets in each jurisdiction. The estimates used could differ from actual results, which may have a significant impact on operating results in future periods.

(7) Long-Term Debt

Convertible Senior Notes due 2026

In February 2020, the Company issued $250.0 million in aggregate principal amount of 2.25% convertible senior notes due 2026 (the Notes) in a private placement, including $30.0 million in aggregate principal amount of the Notes that the Company issued resulting from initial purchasers fully exercising their option to purchase additional notes.

The Notes are general unsecured obligations and bear interest at an annual rate of 2.25% per year, payable semi-annually on February 15 and August 15 of each year, beginning on August 15, 2020. The Notes are governed by an indenture (the Indenture) between the Company and U.S. Bank National Association, as trustee. The Notes will mature on February 15, 2026, unless earlier converted, redeemed or repurchased. No sinking fund is provided for the Notes.

The initial conversion rate of the Notes is 24.6252 ordinary shares per $1,000 principal amount of Notes, which represents an initial conversion price of approximately $40.61 per ordinary share. The conversion rate is subject to adjustment upon the occurrence of certain specified events as set forth in the Indenture.

The holders of the Notes may convert their Notes at their option in the following circumstances:

- during any fiscal quarter commencing after the fiscal quarter ending on May 29, 2020 (and only during such fiscal quarter), if the last reported sale price per ordinary share exceeds 130% of the conversion price for each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding fiscal quarter;
- during the five consecutive business days immediately after any 10 consecutive trading day period (such 10 consecutive trading day period, the measurement period) in which the trading price per $1,000 principal amount of Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price per ordinary share on such trading day and the conversion rate on such trading day;
- upon the occurrence of certain corporate events or distributions on the Company’s ordinary shares, as provided in the Indenture;
- if the Company calls such Notes for redemption; and
- on or after August 15, 2025 until the close of business on the second scheduled trading day immediately before the maturity date.

Upon conversion, the Company will pay or deliver, as applicable, cash, ordinary shares or a combination of cash and ordinary shares at the Company's election. The Company’s intent is to settle conversions through combination settlement with a specified dollar amount of $1,000 per $1,000 principal amount of Notes, which involves repayment of the principal portion of such Notes in cash and any excess of the conversion value over the principal amount in ordinary shares, with cash in lieu of any fractional ordinary shares.

Upon the occurrence of a “make-whole fundamental change” (as defined in the Indenture), the Company will in certain circumstances increase the conversion rate for a specified period of time. In addition, upon the occurrence of a “fundamental change” (as defined in the Indenture), holders of the Notes may require the Company to repurchase their Notes at a cash repurchase price equal to the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any.

If any taxes imposed or levied by or on behalf of the Cayman Islands (or certain other jurisdictions described in the Indenture) are required to be withheld or deducted from any payments or deliveries made under or with respect to the Notes, then, subject to certain exceptions, the Company will pay or deliver to the holder of each Note such additional amounts as may be necessary to ensure that the net amount received by the beneficial owner of such Note after such withholding or deduction (and after withholding or deducting any taxes on the additional amounts) will equal the amounts that would have been received by such beneficial owner had no such withholding or deduction been required.

The Company has a right to redeem the Notes, in whole or in part, at its option at any time, and from time to time, from February 21, 2023 through the 40th scheduled trading day immediately before the maturity date, at a cash redemption price equal to the principal amount of the Notes to be redeemed, plus accrued and unpaid interest. However, the repurchase right is only applicable if the last reported per share sale price of ordinary share exceeds 130% of the conversion price on each of at least twenty trading days during the thirty consecutive trading days ending on, and including, the trading day immediately before the redemption notice date for such redemption.

In accounting for the issuance of the Notes, the Company separated the Notes into liability and equity components. The carrying amount of the liability component of approximately $197.5 million was calculated by using a discount rate of 6.53%, which was the Company's borrowing rate on the date of the issuance of the Notes for a similar debt instrument without the conversion feature. The carrying amount of the equity component of approximately $52.5 million, representing the conversion option, was determined by deducting the fair value of the liability component from the par value of the Notes. The equity component of the Notes is included in additional paid-in capital in the condensed consolidated balance sheet and is not remeasured as long as it continues to meet the conditions for equity classification, which the Company will reassess every reporting period. The difference between the principal amount of the Notes and the liability component (the debt discount) is amortized to interest expense using the effective interest method over the term of the Notes.

Debt issuance costs for the issuance of the Notes were approximately $8.0 million, consisting of initial purchasers' discount and other issuance costs. In accounting for the transaction costs, the Company allocated the total amount incurred to the liability and equity components using the same proportions as the proceeds from the Notes. Transaction costs attributable to the liability component were approximately $6.3 million, were recorded as debt issuance cost (presented as contra debt in the condensed consolidated balance sheet) and are being amortized to interest expense over the term of the Notes using the effective interest method. The transaction costs attributable to the equity component were approximately $1.7 million and were netted with the equity component in stockholders' equity.

The carrying value of the Notes is as follows (in thousands):

	May 29, 2020
Principal	$ 250,000
Unamortized debt discount	50,394
Unamortized issuance costs	6,059
Net carrying amount	$ 193,547

As of May 29, 2020, the remaining life of the Notes was approximately 69 months. The unamortized debt discounts and unamortized debt issuance cost are amortized over the remaining useful life, using an effective interest rate of 7.06%.

As of May 29, 2020, the carrying value of the equity component was $50.8 million, net of the issuance costs of $1.7 million.

The following table sets forth the total interest expense recognized related to the Notes (in thousands):

	Three Months Ended May 29, 2020	Nine Months Ended May 29, 2020
Contractual interest expenses	$ 1,391	$ 1,688
Amortization of debt discount	1,707	2,106
Amortization of debt issuance costs	247	253
Total interest cost recognized	$ 3,345	$ 4,047

The total estimated fair value for the Notes was determined to be $219.7 million based on the closing trading price per $100 of the Notes as of the last day of trading for the period. The Company considers the fair value of the Notes to be a Level 2 measurement due to the limited trading activity.

Capped Calls

In connection with the offering of the Notes, the Company entered into privately-negotiated capped call transactions, at arms-length, with certain counterparties (the "capped calls"). The capped calls each have an initial strike price of approximately $40.61 per share, subject to certain adjustments, which corresponds to the initial conversion price of the Notes. The capped calls have initial cap prices of $54.145 per share, which are subject to certain adjustments. The capped calls cover, subject to anti-dilution adjustments, approximately 6.2 million of the Company's ordinary shares. The capped calls are generally intended to reduce the potential economic dilution to the Company's ordinary shares upon any conversion of Notes and/or offset any potential cash payments the Company is required to make in excess of the principal amount of converted Notes, as the case may be, with such reduction and/or offset subject to a cap based on the cap price. The capped calls expire February 15, 2026 (the maturity date of the Notes), subject to earlier exercise. The capped calls are subject to either adjustment or termination upon the occurrence of specified extraordinary events affecting the Company, including mergers, tender offers and delistings involving the Company. In addition, the capped calls are subject to certain specified additional disruption events that may give rise to a termination of the capped calls, including insolvency filings and hedging disruptions.

The capped calls were originally classified as noncurrent derivative assets due to the capped calls only being settleable in cash until the Company has obtained shareholder approval for repurchasing its ordinary shares. The capped calls were initially recognized at fair value of $21.8 million, reflecting the premium paid by the Company to the capped call counterparties. The related noncurrent derivative assets were classified as a Level 3 measurement as the Company used stock price volatility implied from options traded with a substantially shorter term, which made this an unobservable input that is significant to the valuation.

In a meeting of the Company's shareholders held on March 30, 2020, the holders of the Company's ordinary shares voted in favor of a proposal to amend and restate the Company's memorandum and articles of association to permit the Company to purchase or otherwise acquire its ordinary shares in such amounts and at such prices and at such time and from time to time as the Company's board of directors may approve in the future. This amendment and restatement also enables the Company to utilize shares or cash, or any combination thereof, in order to settle the capped call transactions, which resulted in the reclassification of the related non-current derivative asset to additional paid in capital within Shareholders' Equity in an amount equal to the fair value of the capped calls as of March 30, 2020. The fair value of the capped calls on March 30, 2020 was approximately $14.1 million. The Company recognized a loss of approximately $2.9 million and $7.7 million for the three and nine months ended on May 29, 2020, respectively, due to remeasurement of the capped calls at fair value. These losses are included in the condensed consolidated income statement within Other income (expense), net.

Amended Credit Agreement

On August 9, 2017, SMART Worldwide, SMART Modular Technologies (Global), Inc. (Global), and SMART Modular Technologies, Inc. (SMART Modular) entered into a Second Amended and Restated Credit Agreement (together with all related loan documents, as amended from time to time including as amended by the Incremental Amendment as defined below, the Amended Credit Agreement) with certain lenders which amended and restated that certain Amended and Restated Credit Agreement dated as of November 5, 2016 (the ARCA), which had amended and restated that certain Credit Agreement dated as of August 26, 2011 (the Original Credit Agreement). The Company's subsidiaries named as borrowers in the Amended Credit Agreement and certain other subsidiaries that entered into a guarantee with respect to the Amended Credit Agreement including Penguin, SMART EC and SMART Wireless, are collectively referred to as the Loan Parties and together with SMART Modular Technologies Sdn. Bhd. (SMART Malaysia), the Credit Group. The Amended Credit Agreement provided for a $165 million of initial term loans (the Initial Term Loan) with a maturity date of August 9, 2022, and $50 million of revolving loans with a maturity date of February 9, 2021 (the Initial Revolver Maturity Date) which revolving loan maturity date would have automatically extended to February 9, 2022 if the total leverage ratio of the Credit Group was less than 3.0:1.0 on the Initial Revolver Maturity Date. SMART Global Holding is not a party to the Amended Credit Agreement.

On June 8, 2018, SMART Worldwide, Global and SMART Modular entered into an Incremental Facility Agreement (the Incremental Amendment) which provided for incremental term loans under the Amended Credit Agreement in the aggregate amount of $60 million (the Incremental Term Loans) which Incremental Term Loans were on substantially identical terms as the Initial Term Loans. Pursuant to the Incremental Amendment, the borrowers agreed to pay the structuring advisor a $0.6 million fee pursuant to a separate agreement.

On October 2, 2018, SMART Worldwide, SMART Worldwide, Global and SMART Modular entered into the Second Amendment to the Amended Credit Agreement (the Second Amendment) which did not become effective until October 25, 2018. As a result of the Second Amendment, the borrowers were granted a holiday from the obligation to make quarterly repayments of principal under the Initial Term Loans and the Incremental Term Loans at any time with respect to fiscal 2019. In addition, the borrowers were granted a holiday from the obligation to repay any loans as a result of excess cash flow that would otherwise be due with respect to any period of fiscal 2019.

The Amended Credit Agreement was jointly and severally guaranteed on a senior basis by certain subsidiaries of Global (excluding, among other subsidiaries, SMART Malaysia). In addition, the Amended Credit Agreement was secured by a pledge of the capital stock of, or equity interests in, most of the subsidiaries of SMART Worldwide (including, without limitation, SMART Malaysia, Penguin, SMART EC and SMART Wireless) and by substantially all of the assets of the subsidiaries of SMART Worldwide, excluding the assets of SMART Malaysia and certain other subsidiaries.

Covenants. The Amended Credit Agreement contained various representations and warranties and affirmative and negative covenants that are usual and customary for loans of this nature including, among other things, limitations on the Credit Group's ability to engage in certain transactions, incur debt, pay dividends, and make investments. The Amended Credit Agreement also required that the Credit Group maintain a Secured Leverage Ratio not in excess of 3.5:1.0 as of the end of each fiscal quarter (commencing with the fiscal quarter ending November 24, 2017) and puts restrictions on the Credit Group's ability to retain cash proceeds from the sale of certain assets with net proceeds in excess of $2 million, subject to customary six-month reinvestment rights. The Incremental Amendment required the Credit Group to repay the Penguin Credit Facility, as defined below, and to pledge as collateral, all of the capital stock of and substantially all of the assets of Penguin within 60 days after the closing of the Penguin acquisition.

Interest and Interest Rates. Loans under the Amended Credit Agreement accrued interest at a rate per annum equal to an applicable margin plus, at the borrowers' option, either a LIBOR rate, or a base rate. The applicable margin for term loans with respect to LIBOR borrowings was 6.25% and with respect to base rate borrowings was 5.25%. The interest rate on the Initial Term Loans and Incremental Term Loans was 8.16% and 8.14% through May 29, 2020, respectively.

The applicable margin for revolving loans adjusted every quarter based on the Secured Leverage Ratio for the most recent fiscal quarter with the applicable margin for revolving loans with respect to LIBOR borrowings ranging from 3.75% to 4.00% and the applicable margin for revolving loans with respect to base rate borrowings ranging from 2.75% to 3.00%.

Interest on base rate loans is payable on the last day of each calendar quarter. Interest on LIBOR-based loans is payable every one, two, three, six or twelve months after the date of each borrowing, depending on the particular interest rate period selected with respect to such borrowing.

Principal Payments. The Amended Credit Agreement required quarterly repayments of principal under the Initial Term Loans equal to 2.5% of $165 million, or $4.1 million per fiscal quarter and, commencing on November 30, 2018, quarterly repayments of principal under the Incremental Term Loans equal to 2.5% of $60 million, or $1.5 million per fiscal quarter. As a result of the Second Amendment, the borrowers were granted a holiday in fiscal 2019 from the obligation to make repayments of principal under the Initial Term Loans and the Incremental Term Loans. During the three and nine months ended May 29, 2020, the borrowers made scheduled principal payments of $0 and $5.6 million, respectively and $0 for the corresponding periods in fiscal 2019.

Prepayments. The borrowers had the right at any time to make optional prepayments of the principal amounts outstanding under the Amended Credit Agreement provided that prepayments of principal which were voluntary or were made in connection with certain transactions were subject to prepayment premiums of 3%, 2%, and 1% during the first, second and third years, respectively, after the effective date of the Amended Credit Agreement.

The Amended Credit Agreement also required certain mandatory prepayments of principal whereby the borrowers were required to prepay outstanding loans, subject to certain exceptions, which includes, among other things:

- (i) 75% of excess cash flow on a semi-annual basis if the total leverage ratio was greater than 1.5:1.0, (ii) 50% of excess cash flow on a semi-annual basis if the total leverage ratio was greater than 1.0:1.0 but less than or equal to 1.5:1.0 and (iii) 25% of excess cash flow on an annual basis if the secured leverage ratio was less than or equal to 1.0:1.0, which amounts would have been reduced by any voluntary prepayments of principal made in the applicable period;
- 100% of the net proceeds of certain asset sales or other dispositions of property of Global or any of its restricted subsidiaries, subject to customary rights to reinvest the proceeds within six months; and
- 100% of the net cash proceeds of incurrence of certain debt by Global or any of its restricted subsidiaries, other than proceeds from certain debt permitted to be incurred under the Amended Credit Agreement.

As a result of the Second Amendment, the borrowers were granted a holiday from the obligation to repay any loans as a result of excess cash flow that would otherwise have been due with respect to any period of fiscal 2019. No mandatory prepayments were required for the three and nine months ended May 29, 2020 or for fiscal 2019.

On June 2, 2017, SMART Global Holdings contributed $61.0 million from the proceeds of the IPO closed in May 2017. Global in turn used the proceeds to pay down the original term loans under the Original Credit Agreement, as required under the ARCA, which resulted in a $6.7 million loss on early repayment of long-term debt. As of August 9, 2017, prior to the one year anniversary of the ARCA, the Credit Group entered into the Amended Credit Agreement with new term loans in the aggregate principal amount of $165 million with different lenders. The proceeds from the Amended Credit Agreement were used to fully repay and refinance the term loans under the ARCA in the principal amount of $151.0 million, which resulted in a write off of $15.2 million of original issue discount and debt issuance costs as an extinguishment loss.

Term loans under the Amended Credit Agreement were issued at a discount of 2.0% of the then outstanding principal amount of $165 million, for a discount of $3.3 million. The Company incurred $8.7 million in debt issuance costs upon entering into the Amended Credit Agreement, of which $5.3 million was attributable to the term loans and recorded as a direct reduction to the face amount of the term loans, and $3.4 million was allocated to the revolving line of credit and recorded as a separate asset on the balance sheet. Debt issuance costs and debt discount related to term loans were amortized to interest expense based on the effective interest rate method over the life of the term loans. Those fees allocated to the revolving line of credit were amortized to interest expense ratably over the life of the revolving line of credit.

In February 2020, the Company used net proceeds from the offering of the Notes to repay in full all outstanding principal balances, and to pay the associated prepayment premiums, accrued and unpaid interest and related fees and expenses, of the term loans under the Second Amended and Restated Credit Agreement, dated as of August 9, 2017, among certain of the Company's subsidiaries. The Company paid $208.7 million toward the full repayment of the outstanding debt including $202.9 million of principal, $3.8 million of accrued interest and $2.0 million of prepayment premiums. Unamortized debt discounts and issuance costs as of February 11, 2020 amounted to $4.6 million. As a result of the early repayment of the term loans the Company recognized a loss on extinguishment of debt in other income (expense), net of $6.6 million.

As of May 29, 2020 and August 30, 2019, the outstanding principal balance of all term loans under the Amended Credit Agreement was $0 and $208.5 million, respectively, and there were no outstanding revolving loans. The fair value of the term loans as of August 30, 2019 was estimated to be approximately $210.6 million. Since the Company used broker quotes from inactive markets and there were no unobservable inputs, this was treated as a Level 2 financial instrument.

On March 6, 2020, SMART Worldwide, Global and SMART Modular entered into a third amended and restated credit agreement (the Third Amended and Restated Credit Agreement) which amended and restated the Amended Credit Agreement and the Second Amendment.

The Third Amended and Restated Credit Agreement provides for an extension of the maturity on the $50 million revolving credit facility from February 9, 2021, to March 6, 2025.

The Third Amended and Restated Credit Agreement also reduces the applicable margin on revolving loans incurred thereunder. Under the Third Amended and Restated Credit Agreement, loans bear interest at a rate per annum equal to either, at the borrowers' option, a LIBOR rate or a base rate, in each case plus an applicable margin. The applicable margin was reduced by 25 basis points and will now be (i) 3.75% per annum with respect to LIBOR borrowings, and 2.75% per annum with respect to base rate borrowings when the First Lien Leverage Ratio, as defined in the Third Amended and Restated Credit Agreement, is greater than 2.25 to 1.00 and (ii) 3.50% per annum with respect to LIBOR borrowings, and 2.50% per annum with respect to base rate borrowings when the First Lien Leverage Ratio is less than or equal to 2.25 to 1.00.

The Third Amended and Restated Credit Agreement also modifies the financial maintenance covenant included therein to be set at a First Lien Leverage Ratio of 3.50 to 1.00 and to be applicable only if drawn revolving loans (plus issued letters of credit in excess of $10 million) outstanding as of the last day of any quarter exceed 30% of the aggregate revolving commitments available under the Third Amended and Restated Credit Agreement.

The Third Amended and Restated Credit Agreement also increases the cap on the run rate cost savings add-back to the definition of Consolidated EBITDA to 35%, from 20% in the Amended Credit Agreement and extends the time period for run rate cost savings actions to 24 months, from 12 months in the Amended Credit Agreement.

The Third Amended and Restated Credit Agreement also makes certain changes and/or improvements to the covenants and other terms in the Amended Credit Agreement, including, among other things, (i) the elimination of the quarterly/annual lender call requirements, (ii) the expansion of the provisions for "Limited Conditionality Transactions" to include dividend declarations and irrevocable prepayment notices, (iii) the addition of debt and lien baskets permitting the incurrence of up to $150 million of "asset-based" revolving facilities, (iv) the addition of certain debt and lien baskets permitting the incurrence of additional debt and liens based on compliance with certain specified leverage and/or interest coverage ratios and (v) adjustments to threshold amounts and baskets under certain other covenants.

The Third Amended and Restated Credit Agreement is jointly and severally guaranteed on a senior basis by certain subsidiaries of Global (excluding, among other subsidiaries, SMART Malaysia). In addition, the Third Amended and Restated Credit Agreement is secured by a pledge of the capital stock of, or equity interests in, most of the subsidiaries of SMART Worldwide (including, without limitation, SMART Malaysia, Penguin, SMART EC. and SMART Wireless) and by substantially all of the assets of the subsidiaries of Holdings, excluding the assets of SMART Malaysia and certain other subsidiaries.

As a result of the Third Amendment and Restated Credit Agreement, approximately $0.2 million was recognized as loss on extinguishment which relates to costs from replacing one of the banks participating in the new credit agreement.

BNDES Credit Agreements

In December 2013, SMART Brazil, entered into a credit facility with the Brazilian Development Bank, or BNDES (such loan the BNDES 2013 Credit Agreement). Under the BNDES 2013 Credit Agreement, a total of R$50.6 million (or $9.3 million) was made available to SMART Brazil for investments in infrastructure, research and development conducted in Brazil and acquisitions of equipment not otherwise available in the Brazilian domestic market. SMART Brazil's obligations under the BNDES 2013 Credit Agreement were guaranteed by Banco Itaú BBA S.A., or Itaú Bank, which guarantee was in turn secured by a guarantee from SMART Brazil and SMART do Brazil in favor of Itaú Bank and a commitment by SMART Brazil to maintain minimum cash balances with Itaú Bank equal to 11.85% of the maximum aggregate balance of principal, interest and fees outstanding under the BNDES 2013 Credit Agreement.

Approximately half of the available debt under the BNDES 2013 Credit Agreement accrued interest at a fixed rate while the other half accrued interest at a floating rate. The facility under the BNDES 2013 Credit Agreement was a term loan fully amortizing in 48 equal monthly installments beginning on August 15, 2015 with the final principal payment made on July 15, 2019.

As of May 29, 2020 and August 30, 2019, SMART Brazil had no outstanding debt under the BNDES 2013 Credit Agreement.

In December 2014, SMART Brazil, entered into a second credit facility with BNDES, referred to as the BNDES 2014 Credit Agreement. The BNDES 2013 Credit Agreement and the BNDES 2014 Credit Agreement are collectively referred to as the BNDES Credit Agreements. Under the BNDES 2014 Credit Agreement, a total of R$52.8 million (or $9.7 million) was made available to SMART Brazil for research and development conducted in Brazil related to integrated circuit (IC) packaging and for acquisitions of equipment not otherwise available in the Brazilian domestic market.

Prior to July 2018, SMART Brazil's obligations under the BNDES 2014 Credit Agreement was also guaranteed by Itaú Bank, which guarantee was in turn secured by a guarantee from SMART Brazil and SMART do Brazil in favor of Itaú Bank and a commitment by SMART Brazil to maintain minimum cash balances with Itaú Bank equal to 30.31% of the maximum aggregate balance of principal, interest and fees outstanding under the BNDES 2014 Credit Agreement, or approximately R$16.0 million (or $4.3 million) of required cash balances.

In July 2018, SMART Brazil entered into guarantee arrangements with Banco Votorantim S.A. which bank in turn replaced the guarantees of the BNDES Credit Agreements previously issued by Itaú Bank. As a result, the guarantees with Itaú Bank were cancelled and Itaú Bank returned R$22.0 million (or $5.9 million) of committed balances to SMART Brazil in the first quarter of fiscal 2019. As such, the Company no longer has any restricted cash on its condensed consolidated balance sheets as of February 28, 2020.

The available debt under the BNDES 2014 Credit Agreement accrues interest at a fixed rate of 4% per annum. The BNDES 2014 Credit Agreement is a term loan fully amortizing in 48 equal monthly installments beginning on August 15, 2016 with the final principal payment being due on July 15, 2020.

As of May 29, 2020 and August 30, 2019, SMART Brazil's outstanding debt under the BNDES 2014 Credit Agreement was R$3.3 million (or $0.6 million) and R$13.2 million (or $3.5 million), respectively.

While the BNDES Credit Agreements do not include any financial covenants, they contain affirmative and negative covenants customary for loans of this nature, including, among other things, an obligation to comply with all laws and regulations; a right for BNDES to terminate the loan in the event of a change of effective control; and a prohibition against the disposition or encumbrance, without BNDES consent, of intellectual property developed with the funds from the loans. The BNDES 2013 Credit Agreement included an obligation to draw down the entire loan within specified periods of time or pay unused commitment fees of 0.1%. The BNDES 2014 Credit Agreement required a loan fee of 0.3% of the total face amount of the loan facility.

The fair value of amounts outstanding under the BNDES Credit Agreements as of May 29, 2020 and August 30, 2019 were estimated to be approximately $0.6 million and $3.3 million, respectively. Since the Company used broker quotes from inactive markets and there were no unobservable inputs, this was treated as a Level 2 financial instrument.

The Convertible Senior Notes, due 2026, Amended Credit Agreement and the BNDES 2014 Agreement are classified as follows in the accompanying consolidating balance sheets (in thousands):

	May 29, 2020	August 30, 2019
Notes	$ 250,000	$ —
Term loans	—	208,500
BNDES 2014 principal balance	608	3,506
Unamortized debt discount	(50,394)	(1,885)
Unamortized debt issuance costs	(6,059)	(3,617)
Net amount	194,155	206,504
Current portion of long-term debt	(608)	(24,054)
Long-term debt	$ 193,547	$ 182,450

The future minimum principal payments under the Notes and the BNDES 2014 Agreement as of May 29, 2020 are (in thousands):

	Notes	BNDES	TOTAL
Fiscal year ending August:			
Remainder of fiscal 2020	$ —	$ 608	$ 608
2021	—	—	—
2022	—	—	—
2023	—	—	—
2024	—	—	—
2025	—	—	—
2026	250,000	—	250,000
Total	$ 250,000	$ 608	$ 250,608

(8) Financial Instruments

Fair Value of Financial Instruments

The fair value of the Company's cash, cash equivalents, accounts receivable and accounts payable approximates the carrying amount due to the relatively short maturity of these items. Cash and cash equivalents consist of funds held in general checking and savings accounts, money market accounts, and securities with maturities of less than 90 days at the time of purchase. The Company does not have investments in variable rate demand notes or auction rate securities.

The FASB guidance establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets to identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

- Level 1. Valuations based on quoted prices in active markets for identical assets or liabilities that an entity has the ability to access. The Company's Level 1 assets include funds held in general checking accounts, savings accounts and money market funds that are classified as cash equivalents and restricted cash which is classified under long-term assets.
- Level 2. Valuations based on quoted prices for similar assets or liabilities, quoted prices for identical assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable data for substantially the full term of the assets and liabilities. The Company's Level 2 liabilities include the Notes, term loans under the Amended Credit Agreement, BNDES Credit Agreements and derivative financial instruments.
- Level 3. Valuations based on inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities. The Company's Level 3 assets and liabilities include the contingent consideration related to the SMART EC acquisition (see Note 2), which had a fair value of $0 as of May 29, 2020 and August 30, 2019. Additionally, the capped calls (see Note 7) were financial instruments up until they were reclassified to shareholders' equity on March 30, 2020.

Assets and liabilities measured at fair value on a recurring basis include the following (in millions):

	Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1)	Observable/ Unobservable Inputs Corroborated by Market Data (Level 2)	Significant Unobservable Inputs (Level 3)	Total
Balances as of May 29, 2020:				
Assets				
Cash and cash equivalents	$ 131.8	$ —	$ —	$ 131.8
Derivative financial instruments(1)	—	2.9	—	2.9
Total assets measured at fair value	$ 131.8	$ 2.9	$ —	$ 134.7
Liabilities				
Notes(2)	$ —	$ 219.7	$ —	$ 219.7
Derivative financial instruments(3)	—	0.4	—	0.4
BNDES Credit Agreements(4)	—	0.6	—	0.6
Total liabilities measured at fair value	$ —	$ 220.7	$ —	$ 220.7
Balances as of August 30, 2019:				
Assets				
Cash and cash equivalents	$ 98.1	$ —	$ —	$ 98.1
Total assets measured at fair value	$ 98.1	$ —	$ —	$ 98.1
Liabilities				
Term loans	$ —	$ 210.6	$ —	$ 210.6
BNDES Credit Agreement(4)	—	3.3	—	3.3
Derivative financial instruments(3)	—	0.2	—	0.2
Acquisition-related contingent consideration	—	—	—	—
Total liabilities measured at fair value	$ —	$ 214.1	$ —	$ 214.1

(1) Included in prepaid expenses and other current assets on the Company's condensed consolidated balance sheets - see Note 4.
(2) Included under long-term debt on the Company's condensed consolidated balance sheets - see Note 7.
(3) Included in accrued liabilities on the Company's condensed consolidated balance sheets - see Note 4.
(4) Included in current portion of long-term debt on the Company's condensed consolidated balance sheets – see Note 7.

(9) Share-Based Compensation and Employee Benefit Plans

(a) Share-Based Compensation

Equity Awards

On August 26, 2011, the board of directors adopted the Saleen Holdings, Inc. 2011 Stock Incentive Plan which was amended and restated as of May 18, 2017 to be known as the SMART Global Holdings, Inc. Amended and Restated 2017 Share Incentive Plan. On January 29, 2019, the shareholders approved an amendment to the SMART Global Holdings, Inc. Amended and Restated 2017 Share Incentive Plan (as amended, the SGH Plan) which amendment increased the reserve under the SGH Plan by 1,500,000 shares effective as of February 1, 2019. The SGH Plan provides for grants of equity awards to employees, directors and consultants of SMART Global Holdings and its subsidiaries. Options granted under the SGH Plan provide the option to purchase SMART Global Holdings' ordinary shares at the fair value of such shares on the grant date. The options and RSUs generally vest over a four-year period beginning on the grant date and generally have a ten-year term. Options granted after August 26, 2011 and before September 23, 2014 have an eight year term. As of May 29, 2020, there were 4,753,443 ordinary shares reserved for issuance under the SGH Plan, of which 1,472,199 ordinary shares were available for grant. As of August 30, 2019, there were 4,803,315 ordinary shares reserved for issuance under the SGH Plan, of which 1,427,339 ordinary shares were available for grant.

Summary of Assumptions and Activity

The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model that uses the assumptions noted in the following table.

The expected volatility is based on the historical volatilities of the common stock of comparable publicly traded companies. The expected term of options granted represents the weighted average period of time that options granted are expected to be outstanding giving consideration to vesting schedules and the historical exercise patterns. The risk-free interest rate for the expected term of the option is based on the average U.S. Treasury yield curve at the end of the quarter in which the option was granted.

The following assumptions were used to value the Company's stock options:

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Stock options:				
Expected term (years)	6.25	—	6.25	6.25
Expected volatility	57.10%	—	46.10% - 57.10%	41.68% - 45.76%
Risk-free interest rate	0.40%	—	0.40% - 1.68%	2.62% - 2.88%
Expected dividends	—	—	—	—

SGH Plan—Options

A summary of option activity for the SGH Plan is presented below (dollars and shares in thousands, except per share data):

	Shares	Weighted average per share exercise price	Weighted average remaining contractual term (years)	Aggregate intrinsic value
Options outstanding at August 30, 2019	2,298	$ 30.65	7.39	$ 10,916
Options granted	288	18.83		
Options exercised	(144)	13.44		
Options cancelled	(299)	37.55		
Options outstanding at May 29, 2020	2,143	$ 29.26	7.16	$ 9,462
Options exercisable at May 29, 2020	906	$ 27.67	6.51	$ 5,084
Options vested and expected to vest at May 29, 2020	2,143	$ 29.26	7.16	$ 9,462

In March 2018, the Company granted two performance-based stock options that contained a stock market index as a benchmark for performance (Market-Based Options). The share-based compensation expense for these options is recognized over the requisite service period by tranche. The exercisability of Market-Based Options will depend upon the 30-trading day rolling average closing price of Company's ordinary shares. If the target price is not achieved by the end of 4th or 7th anniversary of the respective grant date, the options will expire. One of the performance-based stock options was cancelled in November 2019, resulting in an additional $2.0 million share-based compensation expense recorded in the first quarter of fiscal 2020. The fair value of Market-Based Options is determined by using a Monte Carlo valuation model, using the following assumptions:

	Three Months Ended
	May 25, 2018
Stock options:	
Expected term (years)	1.10 - 4.00
Expected volatility	46.29%
Risk-free interest rate	2.75%
Expected dividends	—

The Black-Scholes weighted average fair value of options granted under the SGH Plan during the three and nine months ended May 29, 2020 was $9.76 and $9.89 per share, respectively, and $0 and $9.83 per share, respectively for the corresponding periods of fiscal 2019. The total intrinsic value of employee stock options exercised in the three and nine months ended May 29, 2020 was $0.1 million and $2.6 million, respectively, and $0.3 million and $6.1 million, respectively for the corresponding periods of fiscal 2019. As of May 29, 2020, there was approximately $13.1 million of unrecognized compensation costs related to stock options under the SGH Plan, which will be recognized over a weighted average period of 2.36 years.

SGH Plan—Restricted Stock Awards (RSAs), Restricted Stock Units (RSUs) and Performance Stock Units (PSUs)

A summary of the changes in RSAs and RSUs outstanding is presented below (dollars and shares in thousands, except per share data):

	Shares	Weighted average grant date fair value per share	Aggregate intrinsic value
Awards outstanding at August 30, 2019	1,078	$ 27.03	$ 30,632
Awards granted	791	24.31	
Awards vested and paid out	(250)	20.76	
Awards forfeited and cancelled	(210)	24.82	
Awards outstanding at May 29, 2020	1,409	$ 26.94	$ 37,718

In May 2020, the Company granted a performance-based restricted share award (RSA) which has both service and performance conditions. As of May 29, 2020, the Company has deemed it probable that the service condition will be met, and the attainment of the performance condition for this award is probable. As such, there was $0.1 million of share-based compensation expense recognized for this award in the three and nine months ended May 29, 2020.

In May 2019, the Company granted a performance-based restricted share unit award (PSU) which has both service and performance conditions. As of November 29, 2019, the Company deemed it probable that the service condition would be met, however, since the attainment of the performance condition for this award changed to not probable, there was $0.8 million of share-based compensation expense reversed for this award in the three months ended November 29, 2019.

The share-based compensation expense related to RSAs, RSUs and PSUs during the three and nine months ended May 29, 2020 was approximately $2.9 million and $7.3 million, respectively, and $1.8 million and $4.9 million, respectively for the corresponding periods of fiscal 2019. The total fair value of shares vested during the three and nine months ended May 29, 2020 was approximately $1.5 million and $7.4 million, respectively, and $1.2 million and $4.5 million, respectively, for the corresponding periods of fiscal 2019. As of May 29, 2020, there was approximately $30.9 million of unrecognized compensation costs related to awards under the SGH Plan, which will be recognized over a weighted average period of 2.66 years.

Employee Share Purchase Plan

In January 2018, the Company's shareholders approved the SGH 2018 Employee Share Purchase Plan (the Purchase Plan) under which an aggregate of 650,000 of ordinary shares have been approved for issuance to eligible employees. The Purchase Plan generally permits employees to purchase ordinary shares at 85% of the lower of the fair market value of the ordinary shares at the beginning or at the end of each purchase period, which is generally six months. Rights to purchase ordinary shares are granted during the first and third quarter of each fiscal year. The Purchase Plan terminates in January 2028. As of May 29, 2020, 266,816 ordinary shares have been purchased under the Purchase Plan and 683,184 ordinary shares are reserved for future purchases by eligible employees. As of August 30, 2019, 109,910 ordinary shares have been purchased under the Purchase Plan and 540,090 ordinary shares are reserved for future purchases by eligible employees.

Equity Rights and Restrictions

The holders of ordinary shares of SMART Global Holdings are entitled to such dividends and other distributions as may be declared by the board of directors of SMART Global Holdings from time-to-time, out of the funds of SMART Global Holdings lawfully available therefor.

Substantially all SMART Global Holdings shares owned by employees, by certain former lenders of the Company, and all shares underlying the SMART Global Holdings options, PSUs and RSUs are subject to either the Employee Investors Shareholders Agreement dated August 26, 2011 (the Employee Investors Shareholders Agreement), the Amended and Restated Investors Shareholders Agreement dated as of November 5, 2016 (as amended by Amendment No. 5, Amendment No. 4, Amendment No. 3, Amendment No. 2 and subsequent amendments, the Amended and Restated Investors Shareholders Agreement) and the Amended and Restated Sponsors Shareholders Agreement dated May 30 2017 (as amended, the Sponsor Shareholder Agreement; the Employee Investors Shareholders Agreement, the Amended and Restated Investors Shareholders Agreement and the Sponsor Shareholder Agreement are collectively referred to as the Shareholders Agreements). Under the terms of the Shareholders Agreements, such shares are subject to certain restrictions on sale and could become subject to lock-up restrictions in the event of any future registered public offerings by the Company.

(b) Savings and Retirement Program

The Company offers a 401(k) Plan to U.S. employees, which provides for tax-deferred salary deductions for eligible U.S. employees. Employees may contribute up to 60% of their annual eligible compensation to this plan, limited by an annual maximum amount determined by the U.S. Internal Revenue Service. The Company may also make discretionary matching contributions, which vest immediately, as periodically determined by management. The matching contributions made by the Company during the three and nine months ended May 29, 2020 were approximately \$0.7 million and \$1.8 million, respectively, and \$0.6 million and \$1.4 million, respectively for the corresponding periods of fiscal 2019.

(10) Commitments and Contingencies

(a) Commitments

Minimum rent payments under operating leases are recognized on a straight-line basis over the term of the lease including any periods of free rent. Rent expense for operating leases during the three and nine months ended May 29, 2020 was \$2.1 million and \$5.8 million, respectively, and \$1.2 million and \$3.5 million, respectively, for the corresponding periods of fiscal 2019.

Future minimum lease payments under all leases as of August 30, 2019 are as follows (in thousands):

	Amount
Fiscal year ending August:	
2020	$ 6,327
2021	5,922
2022	3,795
2023	3,454
2024	3,326
Thereafter	19,303
Total	$ 42,127

Refer to Note 5 for related fiscal 2020 information on leases.

(b) Product Warranty and Indemnities

Product warranty reserves are established in the same period that revenue from the sale of the related products is recognized, or in the period that a specific issue arises as to the functionality of a Company's product. The amounts of the reserves are based on established terms and the Company's best estimate of the amounts necessary to settle future and existing claims on products sold as of the balance sheet date.

The following table reconciles the changes in the Company's accrued warranty (in thousands):

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Beginning accrued warranty reserve	$ 1,608	$ 1,194	$ 1,770	$ 856
Warranty claims	(452)	(224)	(1,588)	(930)
Provision for product warranties	181	726	1,155	1,770
Ending accrued warranty reserve	$ 1,337	$ 1,696	$ 1,337	$ 1,696

Product warranty reserves are recorded in accrued liabilities in the accompanying condensed consolidated balance sheets.

In addition to potential liability for warranties related to defective products, the Company currently has in effect a number of agreements in which it has agreed to defend, indemnify and hold harmless its customers and suppliers from damages and costs, which may arise from product defects as well as from any alleged infringement by its products on third-party patents, trademarks or other proprietary rights. The Company believes its internal development processes and other policies and practices limit its exposure related to such indemnities. Maximum potential future payments cannot be estimated because many of these agreements do not have a maximum stated liability. However, to date, the Company has not had to reimburse any of its customers or suppliers for any losses related to these indemnities. The Company has not recorded any liability in its financial statements for such indemnities.

(c) Legal Matters

From time to time, the Company is involved in legal matters that arise in the normal course of business. Litigation in general and intellectual property, employment and shareholder litigation in particular, can be expensive and disruptive to normal business operations. Moreover, the results of complex legal proceedings are difficult to predict. The Company believes that it has defenses to the cases pending, including those set forth below. Except as noted below, the Company is not currently able to estimate, with reasonable certainty, the possible loss, or range of loss, if any, from such legal matters, and accordingly, no provision for any potential loss, which may result from the resolution of these matters, has been recorded in the accompanying condensed consolidated financial statements.

Indemnification Claims by SanDisk

In August 2013, the Company completed the sale (the Sale) of substantially all of the business unit which was focused on solid state drives, to SanDisk Corporation (now a part of Western Digital). In connection with the Sale the sale agreement (Sale Agreement) contained certain indemnification obligations, including, among others, for losses arising from breaches of representations and warranties relating to the Sale. These indemnification obligations are subject to a number of limitations, including certain deductibles and caps and limited time periods for making indemnification claims. On August 21, 2014, SanDisk made a claim against the Company under the indemnification provisions of the Sale Agreement in connection with a lawsuit filed by Netlist, Inc. (Netlist) against SanDisk alleging that certain products sold in the Sale infringe various Netlist patents, which SanDisk in turn alleges would, if true, constitute a breach of representations and warranties under the Sale Agreement. Under the Sale Agreement, the Company’s indemnification obligation in respect of intellectual property matters, such as those claimed by SanDisk, is subject to a deductible of approximately $1.8 million and a cap of $60.9 million. As required in the Sale Agreement, the SanDisk claim purported to include a preliminary good faith estimate of SanDisk’s alleged indemnifiable losses, which estimate was greater than the Sale Agreement cap for intellectual property matters. The Company believes that the allegations giving rise to the indemnification claim are without merit and the Company is disputing SanDisk’s claim for indemnification. In addition, there may be other grounds for the Company to dispute the indemnification claim and/or the amounts of any indemnifiable losses of SanDisk. On May 19, 2020 the court entered an order granting a joint stipulation of dismissal filed by Netlist and SanDisk.

(d) Contingencies

Import Duty Tax assessment in Brazil

On February 23, 2012, SMART Brazil was served with a notice of a tax assessment for approximately R$117 million (or $21.6 million) (the First Assessment). The First Assessment was from the federal tax authorities of Brazil and related to four taxes in connection with importation processes. The tax authorities claimed that SMART Brazil categorized its imports of unmounted integrated circuits in the format of wafers under an incorrect product classification code, which carries an import duty of 0%. The authorities alleged that a different classification code should have been used that would require an 8% import duty and the authorities were seeking to recover these duties, as well as other related taxes, for the five calendar years of 2007 through and including 2011. Subsequent to the initial assessment, SMART Brazil received a second notice of an additional administrative penalty of approximately R$6.0 million (or $1.1 million) directly related to the same issue and which has been imposed exclusively for the alleged usage of an inappropriate import tax code (the Second Assessment).

In March 2012, SMART Brazil filed defenses to the First Assessment and the Second Assessment. On May 2, 2013, the first level administrative tax court issued a ruling in favor of the tax assessor and against SMART Brazil on the First Assessment. On May 31, 2013, SMART Brazil filed an appeal to the second level tax court known as CARF. The appeal was heard on November 26, 2013 and SMART Brazil received a unanimous favorable ruling rejecting the position of the tax authorities. Subsequently, the tax authorities filed a request for clarification and on September 17, 2014, SMART Brazil received a unanimous ruling rejecting the request from the tax authorities for clarification. On November 7, 2014, the tax authorities notified CARF that they would not be appealing the CARF decision, and the First Assessment has been extinguished. On February 6, 2018, the first level administrative court unanimously ruled in favor of SMART Brazil with respect to the Second Assessment. Due to the size of the Second Assessment, Brazil law required that the tax authorities appeal the decision to CARF. The appeal on the Second Assessment was heard on December 11, 2018 and SMART Brazil received a unanimous favorable ruling rejecting the position of the tax authorities. The tax authorities did not file any request for clarification or appeal and, as a result, the Second Assessment was extinguished in May 2019.

On December 12, 2013, SMART Brazil received another notice of assessment in the amount of R$3.6 million (or $0.7 million) with respect to the same import-related tax issues and penalties discussed above for 2012 and 2013 (the Third Assessment). The Third Assessment does not seek import duties and related taxes on Dynamic Random Access Memory (DRAM) products and only seeks import duties and related taxes on Flash unmounted components with respect to the months of January 2012 to June 2012. This is because SMART Brazil’s imports of DRAM unmounted components were subject to 0%, and, after June 2012, SMART Brazil’s imports of Flash unmounted components also became subject to 0% import duties and related taxes, both as a result of PADIS. Even with this 0%, if SMART Brazil is found to have used the incorrect product classification code, SMART Brazil will be subject to an administrative penalty equal to 1% of the value of the imports. SMART Brazil has filed defenses to the Third Assessment. The Company believes that SMART Brazil used the correct product code on its imports and that the Third Assessment is incorrect. SMART Brazil intends to vigorously fight this matter. Although SMART Brazil did not receive the Third Assessment until December 12, 2013, the Third Assessment was issued before the CARF decisions in favor of SMART Brazil on the First Assessment and the Second Assessment were published.

The amounts claimed by the tax authorities on the Third Assessment are subject to increases for interest and other charges, which resulted in a combined assessment balance of approximately R$5.7 million (or $1.1 million) as of May 29, 2020.

As a result of the CARF decisions in favor of SMART Brazil on the First Assessment and the Second Assessment, the Company believes that the probability of any material charges as a result of the Third Assessment is remote and the Company does not expect the resolution of these disputed assessments to have a material impact on its consolidated financial position, results of operations or cash flows. While the Company believes that the Third Assessment is incorrect, there can be no assurance that SMART Brazil will prevail in the disputes.

(11) Segment and Geographic Information

The Company’s chief operating decision-maker (CODM), the President and CEO, evaluates operating results to make decisions about allocating resources and assessing performance of the Company. Prior to the start of fiscal 2020, the Company operated in one segment. During the first quarter of fiscal year 2020, management further reevaluated and refined its segment reporting to align with the Company's broader strategy and how it manages business operations, driven in part by the Company’s recent business acquisitions. The Company now operates in three segments consisting of Specialty Memory Products, Brazil Products and SCSS. These segments are determined based on source of revenue and geography. The Company's CODM evaluates the operating results and performance of the segments based on gross profit and gross margin. The accompanying prior year disclosures have been revised to reflect this change. The accounting policies and basis of presentation of the reportable segments are the same as those described in Note 1 – “Basis of Presentation and Principals of Consolidation.”

The following table shows operating results net of inter-segment revenues, which, for the respective three and nine months ended, are not material to the financial statements (dollars in thousands):

	Three Months Ended May 29, 2020				Nine Months Ended May 29, 2020			
	Specialty Memory Products	Brazil Products	SCSS	Total	Specialty Memory Products	Brazil Products	SCSS	Total
Net Revenue	$ 127,700	$ 92,701	$ 60,886	$ 281,287	$ 342,685	$ 284,400	$ 198,262	$ 825,347
Adjusted Gross Profit	$ 21,047	$ 19,685	$ 14,907	$ 55,639	$ 61,166	$ 50,840	$ 52,312	$ 164,318
Adjusted Gross Margin	16%	21%	24%	20%	18%	18%	26%	20%

Adjusted Gross Profit and Adjusted Gross Margin excludes share-based compensation (see Note 1(s)), intangible amortization (see Note 1(l)) and corporate expenses ($0.1 million and $0.2 million, respectively).

	Three Months Ended May 31, 2019				Nine Months Ended May 31, 2019			
	Specialty Memory Products	Brazil Products	SCSS	Total	Specialty Memory Products	Brazil Products	SCSS	Total
Net Revenue	$ 98,755	$ 100,982	$ 35,920	$ 235,657	$ 354,312	$ 447,373	$ 131,914	$ 933,599
Adjusted Gross Profit	$ 23,992	$ 13,908	$ 6,023	$ 43,923	$ 87,137	$ 80,676	$ 19,575	$ 187,388
Adjusted Gross Margin	24%	14%	17%	19%	25%	18%	15%	20%

Adjusted Gross Profit and Adjusted Gross Margin excludes share-based compensation (see Note 1(s)) and intangible amortization (see Note 1(l) and corporate expenses ($0.2 million and $0.2 million, respectively).

A summary of the Company's net sales by geographic area, based on the ship-to location of the customer, property and equipment by geographic area is as follows (in thousands):

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Geographic Net Sales:				
U.S.	$ 131,596	$ 79,483	$ 362,215	$ 250,140
Brazil	92,687	101,035	285,059	447,549
Asia	42,072	37,136	126,080	176,208
Europe	8,575	9,001	29,917	32,524
Other Americas	6,357	9,002	22,076	27,178
Total	$ 281,287	$ 235,657	$ 825,347	$ 933,599

	May 29, 2020	August 30, 2019
Property and Equipment, Net:		
U.S.	$ 11,349	$ 8,801
Brazil	30,945	49,221
Malaysia	9,234	8,186
Other	2,232	2,137
Total	$ 53,760	$ 68,345

(12) Major Customers

A majority of the Company's net sales are attributable to customers operating in the information technology industry. Net sales to significant end user customers, including sales to their manufacturing subcontractors, defined as net sales in excess of 10% of total net sales, are as follows (dollars in thousands):

	Three Months Ended				Nine Months Ended			
	May 29, 2020		May 31, 2019		May 29, 2020		May 31, 2019	
	Amount	Percentage of net sales	Amount	Percentage of net sales	Amount	Percentage of net sales	Amount	Percentage of net sales
Customer A(1)	$ 38,778	14%	$ 47,889	20%	$ 144,847	18%	$ 186,315	20%
Customer B(2)	35,087	12%	—	—	89,834	11%	—	—
Customer C(1)	—	—	26,154	11%	—	—	—	—
Customer D(2)	—	—	23,917	10%	—	—	112,149	12%
Customer E(2)	—	—	—	—	—	—	137,414	15%
	$ 73,865	26%	$ 97,960	41%	$ 234,681	29%	$ 435,878	47%

(1) Brazil Products customer
(2) Specialty Memory Products customer

As of May 29, 2020, two direct customers that represented less than 10% of net sales, Customers F and G, accounted for approximately 18% and 10% of accounts receivable, respectively. As of August 30, 2019, three direct customers that represented less than 10% of net sales, Customers F, G and H, accounted for approximately 12%, 15% and 15% of accounts receivable, respectively.

(13) Earnings Per Share

Basic earnings per share is calculated by dividing net income (loss) by the weighted average of ordinary shares outstanding during the period. Diluted earnings per share is calculated by dividing the net income (loss) by the weighted average of ordinary shares and dilutive potential ordinary shares outstanding during the period. Dilutive potential ordinary shares consist of dilutive shares issuable upon the exercise of outstanding stock options, vesting of RSUs and the Notes computed using the treasury stock method. The dilutive weighted shares are excluded from the computation of diluted net loss per share when a net loss is recorded for the period as their effect would be anti-dilutive.

As the Company has the intent and ability to settle the aggregate principal amount of the Notes plus any in accrued and unpaid interest in cash and any excess in the Company's ordinary shares, the Company uses the treasury stock method for calculating any potential dilutive effect of the conversion spread on diluted net income per share, if applicable. In order to compute the dilutive effect, the number of shares included in the denominator of diluted net income per share is determined by dividing the conversion spread value of the "in-the-money" Notes by the Company's average share price during the period and including the resulting share amount in the diluted net income per share denominator. The conversion spread will have a dilutive impact on net income per ordinary share when the average market price of the Company's ordinary shares for a given period exceeds the conversion price of $40.61 per share for the Notes.

The Company's weighted average ordinary share price since the issuance of the Notes has been below the conversion price. Therefore, the Notes would have been anti-dilutive and have been excluded from dilutive shares.

The following table sets forth for all periods presented the computation of basic and diluted earnings per share, including the reconciliation of the numerator and denominator used in the calculation of basic and diluted earnings per share (dollars and shares in thousands, except per share data):

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Numerator:				
Net income (loss)	$ 825	$ 1,945	$ (8,671)	$ 45,707
Denominator:				
Weighted average shares outstanding:				
Basic	24,066	23,005	23,895	22,824
Diluted	24,431	23,330	23,895	23,374
Earnings per share:				
Basic	$ 0.03	$ 0.08	$ (0.36)	$ 2.00
Diluted	$ 0.03	$ 0.08	$ (0.36)	$ 1.96
Anti-dilutive weighted shares excluded from the computation of diluted earnings per share	7,892	1,775	7,236	1,510

(14) Other Income (Expense), Net

The following table provides the detail of other income (expense), net as follows (in thousands):

	Three Months Ended		Nine Months Ended	
	May 29, 2020	May 31, 2019	May 29, 2020	May 31, 2019
Foreign currency gains (losses)	$ (484)	$ (144)	$ (2,586)	$ (3,481)
Loss on capped call mark-to-market adjustment	(2,924)	—	(7,719)	—
Loss on early extinguishment of debt/revolver	(192)	—	(6,822)	—
Other	155	241	456	501
Total other income (expense), net	$ (3,445)	$ 97	$ (16,671)	$ (2,980)

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the condensed consolidated financial statements and the notes to those statements included elsewhere in this Quarterly Report on Form 10-Q, and with the condensed consolidated financial statements and management's discussion and analysis of our financial condition and results of operations in our Annual Report on Form 10-K for our fiscal year ended August 30, 2019 (our "Annual Report"). This discussion contains forward looking statements that involve risks and uncertainties. Our actual results could differ materially from those contained in these forward-looking statements due to a number of factors, including those discussed under the caption "Risk Factors" in our Annual Report and elsewhere in this report. See also "Cautionary Note Regarding Forward-Looking Statements" at the beginning of this report.

Overview

The SMART lines of business are leading designers and manufacturers of electronic products focused on memory and computing technology areas. The company specializes in application specific product development and support for customers in enterprise, government and OEM sales channels. Customers rely on SMART as a strategic supplier with top tier customer service, product quality, and technical support with engineering, sales, manufacturing, supply chain and logistics capabilities worldwide. The company targets customers in markets such as communications, storage, networking, mobile, industrial automation, industrial internet of things, government, military, edge computing and high performance computing. SMART operates in three segments: Specialty Memory products, Brazil products and Specialty Compute and Storage Solutions, or SCSS.

Recent Developments – COVID 19

The outbreak of coronavirus disease 2019 ("COVID-19") has resulted in millions of infections and hundreds of thousands of deaths worldwide, as of the date of filing of this Quarterly Report, and continues to spread in the United States, Asia, Europe and Brazil, the major markets in which we operate. The COVID-19 pandemic has resulted in significant governmental measures being implemented to control the spread of the virus, including, among others, restrictions on travel and the imposition of stay-at-home or work remote or from home conditions and has otherwise caused consumers and businesses to reduce their activities and their spending. These restrictions and reductions in activities have caused a slowdown in the economy and may have a negative impact on our sales and marketing, and our product development activities. While we have not yet experienced a significant disruption of our operations as a result of the COVID-19 pandemic, the pandemic has resulted in reduced sales volumes of certain product lines within our SCSS business during the three months ended May 29, 2020 and if these conditions continue for an extended period of time, or if we have an outbreak in any of our facilities, such reduced sales volumes may continue or worsen and we may, among other issues, experience, in any or all product lines, delays in product development, a decreased ability to support our customers, disruptions in sales and manufacturing activities and an overall lack of productivity. Similarly, while we have not yet experienced a major disruption in our supply chain as a result of the COVID-19 pandemic, if there is a significant outbreak or if travel restrictions or stay-at-home or work remote or from home conditions or other governmental or voluntary restrictions relating to the COVID-19 pandemic significantly impact our suppliers' ability to manufacture or deliver raw materials or provide key components or services, we could experience delays or reductions in our ability to manufacture and ship products to our customers. The pandemic may also impact the demand for our customers' products or our customers' ability to manufacture their products, which could reduce their demand for our products or services. While we do not know and cannot quantify specific impacts, we expect we may be negatively affected if we encounter manufacturing or supply chain problems, reductions in demand due to disruptions in the operations of our customers or their end customers, disruptions in local and global economies, volatility in the global financial markets, overall reductions in demand, restrictions on the export or shipment of our products or other COVID-19 ramifications. For a further discussion of the uncertainties and business risks associated with the COVID-19 pandemic, see the section entitled "Risk Factors" in this Quarterly Report.

Results of Operations

The following is a summary of our results of operations for the three and nine months ended May 29, 2020 and May 31, 2019:

	Three Months Ended				Nine Months Ended			
	May 29, 2020	% of sales*	May 31, 2019	% of sales*	May 29, 2020	% of sales*	May 31, 2019	% of sales*
	(in thousands, other than percentages and per share data)							
Consolidated Income Statements:								
Net sales	$ 281,287	100%	$ 235,657	100%	$ 825,347	100%	$ 933,599	100%
Cost of sales (1)	227,054	81%	192,622	82%	665,288	81%	748,364	80%
Gross profit	54,233	19%	43,035	18%	160,059	19%	185,235	20%
Operating expenses:								
Research and development (1)	14,436	5%	11,330	5%	44,023	5%	34,384	4%
Selling, general and administrative (1) (2)	29,733	11%	24,306	10%	91,935	11%	73,202	8%
Total operating expenses	44,169	16%	35,636	15%	135,958	16%	107,586	12%
Income from operations	10,064	4%	7,399	3%	24,101	3%	77,649	8%
Other income (expense):								
Interest expense, net	(3,094)	(1%)	(5,001)	(2%)	(11,736)	(1%)	(16,149)	(2%)
Other expense, net	(3,445)	(1%)	97	0%	(16,671)	(2%)	(2,980)	0%
Total other expense	(6,539)	(2%)	(4,904)	(2%)	(28,407)	(3%)	(19,129)	(2%)
Income (loss) before income taxes	3,525	1%	2,495	1%	(4,306)	(1%)	58,520	6%
Provision for income taxes	2,700	1%	550	0%	4,365	1%	12,813	1%
Net income (loss)	$ 825	0%	$ 1,945	1%	$ (8,671)	(1%)	$ 45,707	5%
Earnings per share:								
Basic	$ 0.03		$ 0.08		$ (0.36)		$ 2.00	
Diluted	$ 0.03		$ 0.08		$ (0.36)		$ 1.96	
Shares used in computing earnings per share:								
Basic	24,066		23,005		23,895		22,824	
Diluted	24,431		23,330		23,895		23,374	

* Summations may not compute precisely due to rounding.

(1) Includes share-based compensation expense as follows:				
Cost of sales	$ 699	$ 651	$ 2,161	$ 1,803
Research and development	780	673	2,306	1,967
Selling, general and administrative	3,428	3,109	11,043	8,866
(2) Includes amortization of intangible assets expense as follows:				
Cost of sales	$ 647	$ 16	$ 1,941	$ 130
Selling, general and administrative	2,767	960	8,299	2,882

Three and Nine Months Ended May 29, 2020 as Compared to the Three and Nine Months Ended May 31, 2019

Net Sales

Net sales increased by $45.6 million, or 19.4%, during the three months ended May 29, 2020 compared to the same period in the prior year, and decreased by $108.3 million, or 11.6% during the nine months ended May 29, 2020 compared to the same period in the prior year. Net sales were positively impacted by higher overall revenue from SCSS of $25.0 million, or an increase of 69.5%, and $66.3 million, or an increase of 50.3%, for the three and nine-month periods, respectively, primarily driven by our two acquisitions in July 2019 which contributed $19.9 million and $67.0 million of revenue for the three and nine-month periods, respectively. In addition, our sales of Specialty products had an increase of $28.9 million, or 29.3%, for the three-month period, primarily due to higher revenue from Specialty Flash and DRAM products resulting from 80% higher Flash average selling prices due to a change in product mix, as well as sales of new products and increased customer penetration. In both the three and nine-month periods, net sales were negatively impacted by a decrease in Brazil product sales of $8.3 million, or a decline of 8.2%, and $163.0 million, or a decline of 36.4%, respectively. The Brazil product sales decrease was primarily due to lower average selling prices for both DRAM products, having declines of 13% and 57%, respectively, and mobile memory having declines of 7% and 50%, respectively, for the three and nine-month periods.

Cost of Sales

Cost of sales increased by $34.4 million, or 17.9%, during the three months ended May 29, 2020 compared to the same period in the prior year, and decreased by $83.1 million, or 11.1%, during the nine months ended May 29, 2020. The increase for the three-month period was primarily due to higher cost of materials of $28.1 million (or 16.9%) due to the higher level of sales of Specialty and SCSS products, as well as additional production costs in Brazil and from our SCSS acquisitions. The decrease for the nine-month period was primarily due to lower cost of materials of $90.8 million (or 13.8%) due to the lower level of sales, partially offset by higher production costs related to the increased revenue and additional costs from the SCSS acquisitions. Included in the cost of sales changes were favorable foreign exchange impacts of $2.0 million and $3.4 million for the three and nine-month periods, respectively, due to locally sourced cost of sales in Brazil.

Gross Profit

Gross margin increased to 19.3% in the three months ended May 29, 2020 compared to 18.3% in the same period in the prior year, and was relatively flat for both nine-month periods. The increase in the three-month periods was primarily due to higher gross margin on the products from our SCSS acquisitions and lower manufacturing costs in Brazil due to favorable foreign exchange impact.

Research and Development Expense

Research and development ("R&D") expense increased by $3.1 million, or 27.4%, during the three months ended May 29, 2020 compared to the same period in the prior year, and by $9.6 million, or 28.0%, during the nine months ended May 29, 2020 compared to the same period in the prior year. The increase was primarily due to $3.4 million and $8.7 million in the three and nine-month periods, respectively, of higher costs from the addition of our SCSS acquisitions. Included in the R&D expense increases were favorable foreign exchange impacts of $0.8 million and $1.2 million for the three and nine-month periods, respectively.

Selling, General and Administrative Expense

Selling, general and administrative ("SG&A") expense increased by $5.4 million, or 22.3%, during the three months ended May 29, 2020 compared to the same period in the prior year, and by $18.6 million, or 25.4%, during the nine months ended May 29, 2020 compared to the same period in the prior year. The increases were primarily due to $6.0 million and $17.6 million in the three and nine-month periods, respectively, of higher costs from the addition of our SCSS acquisitions, as well as integration expenses associated with the acquisitions and additional facilities expense. Included in the SG&A expense increase were favorable foreign exchange impacts of $0.5 million and $0.8 million for the three and nine-month periods, respectively.

Other Income (Expense)

Interest expense, net decreased $1.9 million, or 38.1%, during the three months ended May 29, 2020 compared to the same period in the prior year, and by $4.4 million, or 27.3%, during the nine months ended May 29, 2020 compared to the same period in the prior year, primarily due to lower interest expense resulting from the issuance of our convertible Notes and the extinguishment of the term loans in the second quarter of fiscal 2020. See Note 7 for additional information.

Other expense, net increased by $3.5 million during the three months ended May 29, 2020 compared to the same period in the prior year primarily due to $2.9 million mark-to-market losses on the capped calls, and increased by $13.7 million during the nine months ended May 29, 2020 compared to the same period in the prior year, primarily due to $7.7 million mark-to-market losses on the capped calls and $6.8 million extinguishment loss of long-term debt, as well as foreign currency losses.

Provision for Income Taxes

Income tax expense includes a provision for federal, state and foreign taxes based on the annual estimated effective tax rate applicable to SMART, adjusted for certain discrete items which are fully recognized in the period they occur.

Provision for income taxes increased by $2.2 million and decreased by $8.4 million for the three and nine months ended May 29, 2020, respectively, as compared to the same periods in the prior year, primarily due to the profits and related taxes in non-U.S. jurisdictions.

As of May 29, 2020, SMART has a full valuation allowance for our net deferred tax assets associated with our U.S. operations. The amount of the deferred tax asset considered realizable could be adjusted if significant positive evidence increases.

Determining the consolidated provision for income tax expense, income tax liabilities and deferred tax assets and liabilities involves judgment. SMART calculates and provides for income taxes in each of the tax jurisdictions in which it operates, which involves estimating current tax exposures as well as making judgments regarding the recoverability of deferred tax assets in each jurisdiction. The estimates used could differ from actual results, which may have a significant impact on operating results in future periods.

Liquidity and Capital Resources

	Nine Months Ended	
	May 29, 2020	May 31, 2019
	(in thousands)	
Cash provided by operating activities	$ 62,227	$ 120,716
Cash used in investing activities	(16,735)	(30,189)
Cash provided by financing activities	12,751	770
Effect of exchange rate changes on cash and cash equivalents	(24,537)	(2,432)
Net increase in cash and cash equivalents	$ 33,706	$ 88,865

At May 29, 2020, we had cash and cash equivalents of $131.8 million, of which approximately $106.6 million was held outside of the United States.

In February 2020, we issued $250.0 million in aggregate principal amount of 2.25% convertible senior notes due 2026 for which we received proceeds of $243.1 million, net of issuance costs. We used $204.9 million for extinguishment of long-term debt and $21.8 million for purchasing privately-negotiated capped calls. See Note 7 for additional information.

In July 2019, we acquired SMART EC and SMART Wireless for purchase prices of approximately $78 million and $15 million, respectively. We financed these acquisitions using cash from operations, as well as approximately $11 million in SGH ordinary shares issued in connection with the SMART Wireless acquisition. See Note 2 for additional information.

In June 2018, we acquired Penguin for a purchase price of approximately $45 million and assumed approximately $32.3 million of Penguin's outstanding indebtedness. We financed the acquisition with net proceeds from the $60 million Incremental Amendment. See Notes 2 and 7 for additional information.

We expect that our existing cash and cash equivalents, revolving line of credit and cash generated by operating activities will be sufficient to fund our operations for at least the next twelve months. Our principal uses of cash and capital resources are acquisitions, debt service requirements as described below, capital expenditures, R&D expenditures and working capital requirements. We expect that future capital expenditures will focus on expanding capacity of our operations, expanding our R&D activities, manufacturing equipment upgrades, acquisitions and IT infrastructure and software upgrades. Cash and cash equivalents consist of funds held in demand deposit accounts and money market funds. We do not enter into investments for trading or speculative purposes.

During the nine months ended May 29, 2020, cash provided by operating activities was $62.2 million. The primary factors affecting our cash flows during this period were $65.3 million of non-cash related expenses and $5.6 million change in our net operating assets and liabilities, partially offset by $8.7 million of net loss. The $5.6 million change in net operating assets and liabilities consisted of increases of $17.9 million in accounts receivable, $72.5 million in inventory and $1.1 million in prepaid expenses and other assets, and a decrease of $3.5 million of operating lease liabilities, offset by increases of $95.7 million of accounts payable and $4.9 million in accrued expense and other liabilities. The increase in accounts receivable was primarily due to timing of sales, while the increases in inventory and accounts payable were primarily due to the transition of inventory from contract manufacturers to the company due to our recent acquisitions, as well as higher purchases for certain programs.

During the nine months ended May 31, 2019, cash provided by operating activities was $120.7 million. The primary factors affecting our cash flows during this period were $45.7 million of net income, $36.2 million of non-cash related expenses and a $38.8 million change in our net operating assets and liabilities. The $38.8 million change in net operating assets and liabilities consisted of decreases of $7.7 million in accounts receivable, $82.8 million inventory and $1.8 million in prepaid expenses and other assets, offset by decreases of $44.9 million in accounts payable, $7.6 million in accrued expense and other liabilities. The decreases in inventory and accounts payable were primarily due to the reduction of inventory along all business areas as product lead times and average selling prices reduced.

Net cash used in investing activities during the nine months ended May 29, 2020 was $16.7 million consisting primarily of purchases of property and equipment. Net cash used in investing activities during the nine months ended May 31, 2019 was $30.2 million consisting primarily of purchases of property and equipment.

Net cash provided by financing activities during the nine months ended May 29, 2020 was $12.8 million, consisting primarily of $243.1 million proceeds from issuance of convertible notes and $4.9 million proceeds from issuance of ordinary shares from share option exercises and employee share purchase plans, partially offset by $204.9 million payment for extinguishment of long-term debt, $21.8 million purchase of capped calls, $7.9 million long-term debt payments for both the Amended Credit Agreement and the BNDES Credit Agreement and $0.6 million for withholding tax on restricted stock units. Net cash provided by financing activities during the nine months ended May 31, 2019 was $0.8 million, consisting primarily of $6.1 million proceeds from issuance of ordinary shares from share option exercises and employee share purchase plans, partially offset by $5.1 million long-term debt payments for the BNDES Credit Agreements and $0.2 million for withholding tax on restricted stock units.

There have been no material changes to contractual obligations previously disclosed in our Annual Report.

Off-Balance Sheet Arrangements

We do not have 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 have any undisclosed borrowings or debt, and we have not entered into any synthetic leases. We are, therefore, not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in such relationships.

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial conditions, net sales or expenses, results of operations, liquidity, capital expenditures or capital resources that is material to investors.

Recent Accounting Pronouncements

See Note 1 of our Notes to Unaudited Condensed Consolidated Financial Statements for information regarding the effect of recent accounting pronouncements on our financial statements.

Critical Accounting Policies

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. On an ongoing basis, we evaluate our estimates, including those listed below. We base our estimates on historical facts and various other assumptions that we believe to be reasonable at the time the estimates are made. Actual results could differ from those estimates.

Our critical accounting policies are as follows:

- Revenue recognition;
- Inventory valuation;
- Income taxes;
- Impairment of long-lived assets and long-lived assets to be disposed; and
- Share-based compensation.

Our critical accounting policies are important to the portrayal of our financial condition and results of operations, and require us to make judgments and estimates about matters that are inherently uncertain. There have been no material changes to our critical accounting policies and estimates disclosed in "Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies and Estimates" and Note 1, Overview, Basis of Presentation and Significant Accounting Policies, in each case in our Annual Report.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

Our exposure to market rate risk includes risk of foreign currency exchange rate fluctuations, changes in interest rates and translation risk.

Foreign Exchange Risks

We are subject to inherent risks attributed to operating in a global economy. Our international sales and our operations in foreign countries subject us to risks associated with fluctuating currency values and exchange rates. Because a portion of our sales are denominated in U.S. dollars, increases in the value of the U.S. dollar could increase the price of our products so that they become relatively more expensive to customers in a particular country, possibly leading to a reduction in sales and profitability in that country. A significant portion of the sales of our products are denominated in Brazil reais. In addition, we have certain costs that are denominated in foreign currencies, and increases in the value of the U.S. dollar could result in increases in such costs that could have a material adverse effect on our results of operations. Beginning in the first quarter of fiscal 2019, we entered into forward contracts to hedge a portion of our foreign exchange risk in Brazil.

As a result of our international operations, we generate a portion of our net sales and incur a portion of our expenses in currencies other than the U.S. dollar, particularly the Brazil reais. Approximately 35% and 48% of our net sales during the nine months ended May 29, 2020 and May 31, 2019, respectively, originated in reais. We present our combined financial statements in U.S. dollars, and we must translate the assets, liabilities, net sales and expenses of a substantial portion of our foreign operations into U.S. dollars at applicable exchange rates. Consequently, increases or decreases in the value of the U.S. dollar may affect the value of these items with respect to our non-U.S. dollar businesses in our consolidated financial statements, even if their value has not changed in their local currency. Our customer pricing and material cost of sales are based on U.S. dollars, as is the global market for memory products. Accordingly, the impact of currency fluctuations to our consolidated income statements is primarily to our other costs of sales (i.e., non-material components) and our operating expenses as those items are typically denominated in local currency. Our consolidated income statements are also impacted by foreign currency gains and losses recorded in Other Expense arising from transactions denominated in a currency other than the functional currency of the respective subsidiary. These translations could significantly affect the comparability of our results between financial periods or result in significant changes to the carrying value of our assets, liabilities and equity. As a result, changes in foreign currency exchange rates impact our reported results.

During the nine months ended May 29, 2020 and May 31, 2019, we recorded $2.6 million and $3.5 million, respectively, of foreign exchange losses.

Interest Rate Risk

We are subject to interest rate risk in connection with our short-term debt under the Amended Credit Agreement as of May 29, 2020. Although we did not have any revolving balances outstanding as of May 29, 2020, the revolving facility under the Amended Credit Agreement provides for borrowings of up to $50 million that would also bear interest at variable rates. Assuming that we will satisfy the financial covenants required to borrow and that the revolving loans under the Amended Credit Agreement were fully drawn and other variables are held constant, each 1.0% increase in interest rates on our variable rate borrowings would result in an increase in annual interest expense and a decrease in our cash flow and income before taxes of $0.5 million per year.

Item 4. Controls and Procedures

Limitation on Effectiveness of Controls

Any control system, no matter how well designed and operated, can provide only reasonable assurance as to the tested objectives. The design of any control system is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, regardless of how remote. The inherent limitations in any control system include the realities that judgments related to decision-making can be faulty, and that reduced effectiveness in controls can occur because of simple errors or mistakes. Due to the inherent limitations in a cost-effective control system, misstatements due to error may occur and may not be detected.

Evaluation of Disclosure Controls and Procedures

Management is required to evaluate our disclosure controls and procedures, as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934 (the “Exchange Act”). Disclosure controls and procedures are controls and other procedures designed to provide reasonable assurance that information required to be disclosed in our reports filed under the Exchange Act, such as this Quarterly Report on Form 10-Q, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms. Disclosure controls and procedures include controls and procedures designed to provide reasonable assurance that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer as appropriate to allow timely decisions regarding required disclosure. Based on our management’s evaluation (with the participation of our principal executive officer and principal financial officer), our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) were effective at a reasonable assurance level as of the end of the period covered by this report.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended May 29, 2020, which were identified in connection with management’s evaluation required by paragraph (d) of Rules 13a-15 and 15d-15 under the Exchange Act, 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

Information with respect to this item may be found in Note 10, Commitments and Contingencies, in our Notes to Unaudited Condensed Consolidated Financial Statements included in Part I, Item 1, of this Quarterly Report on Form 10-Q, which information is incorporated herein by reference.

Item 1A. Risk Factors

Other than as described below, there have been no material changes to the risks described in Part I, Item 1A, "Risk Factors," in our Annual Report on Form 10-K for our fiscal year ended August 30, 2019. These risk factors could materially and adversely affect our business, financial condition and results of operations, and the market price of our ordinary shares could decline. These risk factors do not identify all risks that we face – our operations could also be affected by factors that are not presently known to us or that we currently consider to be immaterial to our operations. Due to risks and uncertainties, known and unknown, our past financial results may not be a reliable indicator of future performance and historical trends should not be used to anticipate results or trends in future periods.

We face risks related to Novel Coronavirus (COVID-19), which could significantly disrupt our operations, including our manufacturing, research and development, and sales and marketing activities, and which could have a material adverse impact on our business, financial condition, operating results and cash flows.

Our business may be more adversely impacted by the effects of COVID-19 in the future. We source our materials from different parts of the world that have been affected by the virus which could have an adverse impact on our supply chain and our ability to get the materials we need to build our products. Our operations as well as the operations of our suppliers, customers and third-party sales representatives and distributors have been and will continue to be disrupted by varying individual and governmental responses to COVID-19 around the world such as business shutdowns, stay-at-home directives, travel restrictions, border closures, and other travel or health-related restrictions as well as by absenteeism, quarantines, self-isolations, office and factory closures, delays on deliveries, and disruptions to ports and other freight infrastructure. The COVID-19 pandemic has negatively impacted sales of certain product lines in our SCSS business and, depending on the magnitude and duration of pandemic-related disruptions, such reduced sales volumes may continue or worsen and we may, among other issues, experience, in any or all product lines, delays in product development, a decreased ability to support our customers, disruptions in manufacturing and in sales and marketing activities, and an overall lack of productivity, each of which could have a negative impact on our ability to meet customer commitments and have a negative impact on our revenue and profitability in subsequent periods.

Government shutdown orders or stay-at-home directives or individual decisions, or an outbreak among or quarantine of the employees in any of our facilities, could cause significant interruptions to, or temporary closures of our operations. Since a large percentage of our production is done in a small number of facilities, a disruption to operations in any one facility could have a material impact on our business.

In addition, COVID-19 has in the short-term, and, together with other disease outbreaks, may over the longer term, adversely affect the economies and financial markets within many countries and regions, including in the United States, Brazil, Asia and Europe, which are the primary geographic areas in which we conduct business, resulting in a significant economic downturn.

Moreover, to the extent the COVID-19 pandemic or any worsening of the global business and economic environment as a result thereof, continues to adversely affect our business and financial results, it may also have the effect of heightening or exacerbating many of the other risks described in Part I, Item 1A, “Risk Factors,” in our Annual Report on Form 10-K for our fiscal year ended August 30, 2019, such as those relating to factors affecting fluctuations in our operating results from quarter to quarter, worldwide economic and political conditions, changes in the political or economic environments in Brazil, Malaysia or other international geographies in which we do business, reliance on a limited number of customers for a significant portion of our net sales, inventory write-downs or write-offs, our dependence on a small number of sole or limited source suppliers, our ability to maintain manufacturing efficiency, disruption of our operations at our manufacturing facilities, our reliance on third-party sales representatives to assist in selling our products, risks generally associated with international business operations, risks related to foreign currency exchange rates, our high level of indebtedness, including our need to generate sufficient cash flows to service our indebtedness and our ability to comply with the covenants contained in the agreements that govern our indebtedness and our ability raise additional funds when and as needed.

There can be no assurance that decreases in sales resulting from the wide-ranging effects of COVID-19 will be offset by increased sales in subsequent periods.

We are unable to accurately predict the impact that COVID-19 will have on future periods due to various uncertainties and future developments, including the ultimate geographic spread of the virus, the severity of the disease, the duration of the outbreak, the occurrence of other epidemics, the imposition of related public health measures and travel and business restrictions or other actions that may be taken by governmental authorities in an effort to contain or treat the virus, all of which, together with the disruptions and other factors discussed above could have a material adverse effect on our customer relationships, operating results, cash flows, financial condition and have a negative impact on our stock price.

We may be unable to raise the funds necessary to repurchase our convertible senior notes for cash following a fundamental change, or to pay any cash amounts due upon conversion, and our other indebtedness may limit our ability to repurchase the Notes or pay cash upon their conversion.

Holders of our 2.25% convertible senior notes due 2026, or the Notes, may, subject to a limited exception, require us to repurchase their Notes following a "fundamental change" (as defined in the indenture governing the Notes, or the Indenture) before the maturity date at a cash repurchase price generally equal to the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any. In addition, upon conversion, we will satisfy part or all of our conversion obligation in cash unless we elect to settle conversions solely in ordinary shares (other than paying cash in lieu of delivering any fractional share). We may not have enough available cash or be able to obtain financing at the time we are required to repurchase the Notes or pay the cash amounts due upon conversion. In addition, applicable law, regulatory authorities and the agreements governing our other indebtedness, including our Amended and Restated Credit Agreement, may restrict our ability to repurchase the Notes or pay the cash amounts due upon conversion. Our failure to repurchase Notes or to pay the cash amounts due upon conversion when required will constitute a default under the Indenture. A default under the Indenture or the fundamental change itself could also lead to a default under agreements governing our other indebtedness, which may result in that other indebtedness becoming immediately payable in full. We may not have sufficient funds to satisfy all amounts due under the other indebtedness and the Notes.

Provisions in the Notes and the Indenture could delay or prevent an otherwise beneficial takeover of us.

Certain provisions in the Notes and the Indenture could make a third-party attempt to acquire us more difficult or expensive. For example, if a takeover constitutes a "fundamental change", then noteholders will have the right to require us to repurchase their Notes for cash. In addition, if a takeover constitutes a "make-whole fundamental change" (as defined in the Indenture), then we may be required to temporarily increase the conversion rate. In either case, and in other cases, our obligations under the Notes and the Indenture could increase the cost of acquiring us or otherwise discourage a third party from acquiring us, including in a transaction that noteholders or holders of our ordinary shares may view as favorable.

The accounting method for the Notes could adversely affect our reported financial condition and results.

The accounting method for reflecting the Notes on our balance sheet, accruing interest expense for the Notes and reflecting the underlying ordinary shares in our reported diluted earnings per share may adversely affect our reported earnings and financial condition.

In accounting for the issuance of the Notes, we separated the Notes into liability and equity components. Under applicable accounting principles, the initial liability carrying amount of the Notes is the fair value of a similar debt instrument that does not have a conversion feature, valued using our cost of capital for straight, non-convertible debt. We reflected the difference between the net proceeds from the issuance of the Notes and the initial carrying amount as a debt discount for accounting purposes, which will be amortized into interest expense over the term of the Notes. As a result of this amortization, the interest expense that we expect to recognize for the Notes for accounting purposes will be greater than the cash interest payments we will pay on the Notes, which will result in lower reported income or higher reported losses. The lower reported income or higher reported loss resulting from this accounting treatment could depress the trading price of our ordinary shares and the Notes.

In addition, because we intend to settle conversions by paying the conversion value in cash up to the principal amount being converted and any excess in shares, we expect to be eligible to use the treasury stock method to reflect the shares underlying the Notes in our diluted earnings per share. Under this method, if the conversion value of the Notes exceeds their principal amount for a reporting period, then we will calculate our diluted earnings per share assuming that all the Notes were converted and that we issued ordinary shares to settle the excess. However, if reflecting the Notes in diluted earnings per share in this manner is anti-dilutive, or if the conversion value of the Notes does not exceed their principal amount for a reporting period, then the shares underlying the Notes will not be reflected in our diluted earnings per share. In addition, if accounting standards change in the future and we are not permitted to use the treasury stock method, then our diluted earnings per share may decline. For example, in July 2019, the Financial Accounting Standards Board published an exposure draft proposing to amend these accounting standards to eliminate the treasury stock method for convertible instruments and instead require application of the "if-converted" method. Under that method, if it is adopted, diluted earnings per share would generally be calculated assuming that all the Notes were converted solely into ordinary shares at the beginning of the reporting period, unless the result would be anti-dilutive. The application of the if-converted method may reduce our reported diluted earnings per share.

Furthermore, if any of the conditions to the convertibility of the Notes is satisfied, then we may be required under applicable accounting standards to reclassify the liability carrying value of the Notes as a current, rather than a long-term, liability. This reclassification could be required even if no noteholders convert their Notes and could materially reduce our reported working capital.

The conditional conversion feature of the Notes, if triggered, may adversely affect our financial condition and operating results.

In the event the conditional conversion feature of the Notes is triggered, holders of Notes will be entitled to convert the Notes at any time during specified periods at their option. If one or more holders elect to convert their Notes, unless we elect to satisfy our conversion obligation by delivering solely ordinary shares (other than paying cash in lieu of delivering any fractional ordinary share), we would be required to settle a portion or all of our conversion obligation through the payment of cash, which could adversely affect our liquidity.

The capped call transactions may affect the value of the Notes and our ordinary shares.

In connection with the pricing of the Notes, we have entered into privately negotiated capped call transactions, or Capped Calls, with certain financial institutions. The Capped Calls are expected generally to reduce the potential economic dilution to holders of our ordinary shares upon any conversion of the Notes, with such reduction and/or offset subject to a cap.

At the time of the issuance of the Notes, we were not permitted under the terms of our amended and restated memorandum and articles of association to repurchase our ordinary shares. As such, until we notified the counterparties to the Capped Calls that we have obtained shareholder approval to receive shares in connection with the Capped Calls, we were only entitled to receive cash upon settlement, cancellation or termination of the Capped Calls. On March 30, 2020 we received such shareholder approval and on March 31, 2020 we notified the counterparties to the Capped Calls of this approval.

In connection with establishing their initial hedges of the Capped Calls, the Capped Call counterparties or their respective affiliates likely entered into various derivative transactions with respect to our ordinary shares and/or purchased ordinary shares concurrently with or shortly after the pricing of the Notes. In addition, the Capped Call counterparties and/or their respective affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our ordinary shares and/or purchasing or selling our ordinary shares or other securities of ours in secondary market transactions prior to the maturity of the Notes (and are likely to do so during any Observation Period (as defined in the Indenture) related to a conversion of Notes). This activity could also cause or avoid an increase or a decrease in the market price of our ordinary shares or the Notes.

The potential effect, if any, of these transactions and activities on the trading price of our ordinary shares or the Notes will depend in part on market conditions. Any of these activities could adversely affect the trading price of our ordinary shares or the Notes.

Our success in Brazil depends in part on Brazilian laws establishing incentives for local manufacturing of electronics products. The elimination of or a reduction in the incentives for local manufacturing, or our inability to secure the benefits of these regulations, could significantly reduce the demand for, and the profit margins on, our products in Brazil.

Successive Brazilian governmental administrations have adopted economic policies intended to foster innovation and investment in local production, stimulate job growth, provide stimulus to exports and defend local manufacturers in various industries. In recent decades, the Brazilian government identified the design and manufacture of ICs as a priority and established tax incentives and local content requirements intended to promote the development of the local IT industry. These incentives include the PPB/IT Program, PADIS and Lei do Bem. The law that provides the PPB/IT Program benefits is currently legislated to remain in force through the end of 2029. The PPB/IT Program is intended to promote local manufacturing by allowing qualified companies to receive incentives when they sell specified IT products, including desktops, notebooks, servers, SmartTVs and mobile products that contain components that are manufactured in Brazil. The PPB/IT Program, through the enactment of several ordinances, provided for reduced Brazilian federal excise tax rate, or the IPI, for qualified parties as compared to the rate that is required to be collected by non-qualified parties. The PPB/IT Program provided an incentive for certain customers to purchase products from us because they were not required to pay the regular level of IPI on their purchases. Under the PPB/IT Program, the percentage of local content required in specified IT products increased significantly from 2006 to 2019. For example, under the PPB/IT Program, from 2006 to 2019, the total requirement of DRAM modules made with locally packaged DRAM ICs for notebook computers increased from 0% to 80%. In order to receive the intended treatment as a PPB/IT Program supplier, our subsidiary, SMART do Brazil, was required to invest in research and development activities in an amount equal to 4% of its gross annual sales revenues reduced by the following: the cost of raw materials qualified as products eligible for the PPB/IT Program, including the ICs that were purchased from our other Brazilian subsidiary, SMART Brazil, and that were used to make memory modules; applicable sales taxes; the value of products exported out of Brazil; and the value of products shipped to the Manaus Free Trade Zone.

Brazil’s local content requirements for the IT industry have been subject to criticism by other governments and international organizations. In 2013, the European Union, or the EU, later joined by Japan, requested the establishment of a panel within the World Trade Organization, or the WTO, to determine whether the structure of certain programs enacted by the Brazilian government concerning incentives and local content requirements for the automotive and several other industries (including the IT industry and including portions of Lei do Bem that do not relate to our business, PADIS and the PPB/IT Program), are inconsistent with WTO rules. On August 30, 2017, the WTO panel released a report and on December 13, 2018, after hearing appeals, the appellate body of the WTO released its decision in which it upheld some of the panel’s findings that, among other things, the tax exemptions, reductions and suspensions granted for the automotive, IT and other industries amount to subsidies that are inconsistent with the principles of the various WTO agreements, while also rejecting some of the complaints by the EU and Japan. The WTO’s decision included a recommendation that Brazil withdraw certain of the subsidies, however, it does not impact the benefits that we receive under Lei do Bem. The appellate body also noted that it would not contravene the principles of the WTO agreements for Brazil to establish local manufacturing processes as a condition to benefit from incentives granted by the government provided that certain conditions are met.

In response to the WTO report, government authorities in Brazil revoked several ordinances that established local content requirements under the PPB/IT Program, many of which were related to our local business. The revocation became effective June 30, 2019. Government officials in Brazil have continued to express their intent to restructure the incentives to be consistent with the WTO principles while still continuing to support local industry. In June 2019, the authorities in Brazil published the first of a series of new ordinances, effective as of July 1, 2019, that provided a structure for revised support for local manufacturing utilizing a score-based point system for eligibility for incentives. In this system, each manufacturing process within an electronic device is assigned a different number of points. Our manufacturing processes related to memory products are a valuable part of the electronics manufacturing chain and, as such, are expected to provide our customers the opportunity to accomplish a significant number of the overall points required if they purchase products manufactured by us in Brazil.

As part of making the local regulation compatible with the WTO principles, the government of Brazil also enacted a new law that, effective April 1, 2020, provides for changes in the mechanism of tax incentives granted to the IT sector that impacts SMART Brazil and SMART do Brazil as well as their customers. While participants in the PPB/IT Program will no longer be allowed the benefits of reduced IPI as of April 1, 2020, these participants will be granted financial credits based on varying multipliers of their annual R&D investments subject to varying caps related to certain percentages of the sales revenue within the country. These financial credits can be used by participants either as a credit against certain taxes, or to request a refund in cash.

While we believe that this score-based system will continue to incentivize our Brazilian customers to purchase products from us in Brazil, there can be no assurance that the replacement programs will ultimately provide the same or a similar level of support and benefit for our customers and our business as was previously in place. There can also be no assurance that the WTO, the EU and Japan will agree that this new program structure is compliant with the WTO agreements. Any adverse change in legislation or in the impact and effectiveness of the local incentives programs, or our failure to meet the requirements of any of the regulations, could significantly reduce the demand for, the profit margins on, and the competitiveness of our products in Brazil, and would have a material adverse effect on our business, results of operations and financial condition.

In addition, we benefit from various other tax incentives extended to us in Brazil to promote the development of the local IT industry, and are subject to related risks, as described below.

If the tax incentive or tax holiday arrangements from which we benefit in Brazil or Malaysia change or cease to be in effect or applicable in part or in whole, for any reason, or if our assumptions and interpretations regarding tax laws and incentive or holiday arrangements prove to be incorrect, the amount of corporate income, excise, import and contribution taxes we have to pay could increase significantly.

We have structured our operations in a manner designed to maximize our benefit from various tax incentives and/or tax holidays extended to manufacturers in Brazil and Malaysia to encourage investment and employment. In Brazil, we participate in the following government investment incentive programs, among others:

- *Support Program for the Technological Development of the Semiconductor and Display Industries (PADIS), 2007.* PADIS is designed to promote the development of the local semiconductor industry. We began operations under the PADIS rules in February 2011 and have been qualified for beneficial tax treatment in connection with several products that we manufacture in Brazil. The PADIS benefits include: (i) relief from Brazil's corporate income tax, resulting in a reduction in the Brazilian statutory income tax rate from 34% to 9% on taxable income from the semiconductor IC portion of our operations, (ii) relief from the PIS and COFINS Contributions, the IPI, and Brazil's import tax, on both the import and domestic acquisition of fixed assets, inputs, software and sale of final products eligible for PADIS, and (iii) relief from Brazil's tax on outbound royalties, or CIDE. Effective April 1, 2020, the reduction of the IPI, PIS and COFINS rates to zero percent on our sales is no longer available as a result of a December 2019 amendment to the PADIS Program intended at making PADIS compatible with the principles of the WTO. Instead, participants in the PADIS program are entitled to financial credits based on varying multipliers of their annual R&D investments subject to caps related to certain percentages of the sales revenue within the country. These financial credits can be used by participants either as a credit against certain taxes, or to request a refund in cash. To realize these benefits, our subsidiary, SMART Brazil, is required to invest a percentage of its gross annual semiconductor sales revenues (reduced by certain permitted deductions) in research and development activities conducted in Brazil each calendar year. The applicable percentage was 3% for 2015, increasing to 4% for 2016 through 2018, and increasing to 5% for 2019 and beyond. As part of the amendment effective on April 1, 2020, the amount of permitted deductions from gross revenues has decreased. Furthermore, SMART Brazil is not permitted to distribute to shareholders (through dividends, capital reductions or otherwise) the amount of corporate income taxes not paid as a result of the PADIS benefits. Failure to comply with our obligations under the PADIS could result in significant penalties and could also result in the suspension of our participation in PADIS and ultimate termination of PADIS should SMART Brazil fail to repair the infraction within 90 days or should SMART Brazil have PADIS suspended twice in the period of two years. If SMART Brazil's participation in PADIS were terminated, it would be permitted to reapply for the program only after a two-year period.

- *Lei da Informática—Processo Produtivo Básico (PPB/IT Program), 1991, extended through 2029.* Brazil's PPB/IT Program, in which we also began to participate in February 2011, is intended to promote local manufacturing by allowing qualified PPB/IT Program companies to sell certain IT products with a reduced rate of IPI as compared to the rate that is required to be collected by non-qualified suppliers. Effective April 1, 2020, the reduction of the IPI is no longer available as a result of an amendment to the PPB/IT Program which was intended at making the PPB/IT Program compatible with the principles of the WTO. Instead, PPB/IT Program participants are entitled to financial credits calculated based on the R&D investments made under PPB/IT Program, that can be used by the participants either as a credit against certain taxes, or for a request of a refund in cash. The multipliers of the financial credits range from 2.7 to 3.4 times the R&D invested, limited to 10.92% to 13.65% of the gross sales revenues, until December 31, 2024, depending on the location of participant and on what products it manufactures and sells. The financial credits will be gradually reduced over time to a range of 2.39 to 3.07 times the R&D invested, limited to 9.56% to 12.29% of the gross annual sales revenues by December 31, 2029 when the PPB/IT Program is scheduled to expire. The PPB/IT Program provided an incentive for certain customers to purchase from us because our sales were not subject to the regular level of IPI before March 31, 2020, and effective April 1, 2020, our customers will benefit from the PPB/IT Program as they will be allowed to purchase qualified products from us with the suspension of IPI. In order to receive the intended treatment as a PPB/IT Program supplier, our subsidiary SMART do Brazil is required to invest in research and development activities conducted in Brazil in an amount equal to 4% of its gross annual sales revenues reduced by the following prior to March 31, 2020: the cost of raw materials qualified as products eligible for the PPB/IT Program, including the ICs that are purchased from our other Brazilian subsidiary, SMART Brazil, and that are used to make memory modules; applicable sales taxes; the value of products exported out of Brazil; and the value of products shipped to the Manaus Free Trade Zone. Effective April 1, 2020, the annual R&D investment is calculated over the gross annual sales of qualified products made by SMART do Brazil to customers that do not benefit from the PPB/IT Law (and, therefore, will be subject to the ordinary IPI rate), reduced by sales to the Manaus Free Trade Zone, cancelations of sales, devolution of products, IPI and ICMS-ST, plus PIS, COFINS and statutory ICMS. Failure to comply with our obligations under the PPB/IT Program would result in significant penalties and could also result in the suspension of our participation in the PPB/IT Program and ultimate termination should SMART do Brazil fail to cure the infraction within 180 days.

Compliance with these programs is measured annually, on a calendar year basis. We believe that we have fulfilled these research and development investment requirements through calendar 2019, however, for certain years the authorities in Brazil have not yet completed the relevant review. For calendar years 2011 to 2016, the authorities have requested additional information in order to review whether certain of our reported research and development investments as required for SMART do Brazil qualify for the PPB/IT Program. We believe that all of our research and development investments do qualify and we have provided the additional information. While we believe that all of our reported investments qualify for the research and development requirements, we cannot provide assurance that the Brazilian authorities will agree with our classification in which case we may be required to make incremental payments to the authorities or to make incremental research and development investments in the future. If we fail to make the additional payments or additional investments if required, we may lose the anticipated benefits of these programs and could be penalized for failing to make the research and development investments when required, or, where applicable, for failing to pay required statutory income taxes, or to collect the required PIS/COFINS and IPI upon our sales, or ultimately to return either partially or in total, the financial credits granted to us after April 1, 2020 plus significant penalties. In addition, there is a risk that modifications to laws may prohibit, interrupt, limit, terminate early or change the use of these existing tax incentives. Additionally, we cannot provide assurance that we will be able to make the required investments in the future.

In 2013, the EU, later joined by Japan, requested the establishment of a panel within the WTO to determine whether the structure of certain programs enacted by the Brazilian government concerning incentives and local content requirements for the automotive and several other industries (including the IT industry and including portions of Lei do Bem that do not relate to our business, as well as PADIS and the PPB/IT Program), were inconsistent with WTO rules. See "Risks Related to our International Operations—Our success in Brazil depends in part on Brazilian laws establishing incentives for local manufacturing of electronics products. The elimination of or a reduction in the incentives for local manufacturing, or our inability to secure the benefits of these regulations, could significantly reduce the demand for, and the profit margins on, our products in Brazil."

In addition, we have obtained tax incentives from Malaysia, which provide that certain classes of income we earn in Malaysia are subject to tax holidays. Each tax incentive is separate and distinct from the others and may be granted, withheld, extended, modified, truncated, complied with or terminated independently without any effect on the other incentives. To retain these tax benefits in Malaysia, we must continue to meet certain operating conditions specific to each incentive relating to, among other things, investments in fixed assets, research and development expenditures, minimum operating expenditures, required ratio of staff with degrees in science and technology, local purchasing programs, minimum numbers of patents with local involvement and registration and segregated accounting for the covered products or businesses. If we cannot or elect not to comply with the operating conditions included in any particular tax incentive, we will lose the related tax benefits. In such event, we could be required to refund material tax benefits previously realized by us with respect to that incentive and, depending on the incentive at issue, could likely be required to modify our operational structure and tax strategy. Any such modified structure or strategy may not be as beneficial to us from an income tax expense or operational perspective as the benefits provided under the present tax incentive arrangements. We have received approvals for these tax incentives for up to ten years beginning September 2019, subject to certain operating conditions. The impact of these tax incentives will be recorded in the period in which they are realized.

Our interpretations and conclusions regarding the tax incentives are not binding on any taxing authority. If our assumptions about tax and other laws are incorrect, if these tax incentives are substantially modified or rescinded or if we fail to meet the conditions of any of the tax incentives, we could suffer material adverse tax and other financial consequences including owing significant amounts of taxes and penalties that would increase our expenses, reduce our profitability and adversely affect our cash flows, results of operations and financial condition.

Unfavorable currency exchange rate fluctuations could cause currency exchange losses, result in our products becoming relatively more expensive to our overseas customers and increase our manufacturing costs, each of which could adversely affect our business and our profitability.

Our international sales and our operations in foreign countries expose us to certain risks associated with fluctuating currency values and exchange rates. Because some of our sales are denominated in U.S. dollars, increases in the value of the U.S. dollar could increase the price of our products so that they become relatively more expensive to customers in a particular country, possibly leading to a reduction in sales and profitability in that country. Some of the sales of our products, including sales in Brazil, are denominated in foreign currencies. Gains and losses on the conversion to U.S. dollars of such revenues and of other associated monetary assets and liabilities, as well as profits and losses incurred in certain countries, may contribute to fluctuations in the value of our assets and our results of operations. We also have costs and expenses that are denominated in foreign currencies, and decreases in the value of the U.S. dollar could result in increases in such costs that could have a significant negative impact on our results of operations. In addition, fluctuating values between the U.S. dollar and other currencies can result in currency gains which are used in the computation of foreign taxes and can increase foreign taxable income.

In fiscal 2019, we began using foreign exchange forward contracts in Brazil to mitigate foreign currency exchange rate risk associated with foreign-currency-denominated assets and liabilities, primarily third party payables. We do not use foreign currency contracts for speculative or trading purposes. Foreign exchange forward contracts outstanding at August 30, 2019 are not designated as hedging instruments for hedge accounting purposes.

As a result of the COVID-19 pandemic, the exchange rate of the Brazilian Reais has experienced wide fluctuations and increased from 4.0307 on December 31, 2019 to as high as 5.427 as of April 30, 2020. This substantial increase could have a significant negative impact on the economy in Brazil and on the cost of and demand for our products.

Inflation and certain measures by the Brazilian government to curb inflation have historically adversely affected the Brazilian economy and Brazilian securities market, and high levels of inflation in the future would adversely affect our business, results of operations and financial condition.

In the past, Brazil has experienced extremely high rates of inflation. Inflation and some of the measures taken by the Brazilian government in an attempt to curb inflation have had significant negative effects on the Brazilian economy generally. Inflation, policies adopted to curb inflationary pressures and uncertainties regarding possible future governmental intervention have contributed to economic uncertainty and heightened volatility in the Brazilian securities market.

Since the introduction of the real in 1994, Brazil’s inflation rate has been substantially lower than in previous periods. According to the Extended National Consumer Price Index (Índice Nacional de Preços ao Consumidor Amplo), Brazilian inflation rates were 4.3%, 3.7%, 2.9%, 6.3%, 10.7%, 6.4%, 5.9%, 5.8% and 6.5% in 2019, 2018, 2017, 2016, 2015, 2014, 2013, 2012 and 2011, respectively. However, the Brazilian government’s measures to control inflation have often included maintaining a tight monetary policy with high interest rates, thereby restricting the availability of credit and reducing economic growth. The Central Bank of Brazil has frequently adjusted the interest rate in situations of economic uncertainty and to achieve objectives under the economic policy of the Brazilian government. Inflation, along with government measures to curb inflation and public speculation about possible future government measures, have had significant negative effects on the Brazilian economy and contributed to economic uncertainty in Brazil and heightened volatility in the Brazilian securities market, which may have an adverse effect on us.

If Brazil experiences substantial inflation or deflation in the future, our business may be adversely affected. In addition, we may not be able to adjust the prices we charge our customers to offset the impact of inflation on our expenses, leading to an increase in our expenses and a reduction in our net operating margin. This could have a material negative impact on our business, results of operations and financial condition.

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

Amended Credit Agreement

We are subject to certain restrictions with respect to the use of our working capital and our ability to pay dividends under our Amended Credit Agreement, as described in Note 7, Long-Term Debt—Amended Credit Agreement, in our Notes to Unaudited Condensed Consolidated Financial Statements included in Part I, Item 1, of this Quarterly Report on Form 10-Q, which information is incorporated herein by reference.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 6. Exhibits

Exhibit No.	Exhibit Title
3.1	Second Amended and Restated Memorandum and Articles of Association of the Company (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed with the SEC on March 11, 2020).
31.1*	Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as adopted pursuant to Section 302(a) of the Sarbanes-Oxley Act of 2002.
32.1**	Certification of Principal Executive Officer pursuant 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Principal Financial Officer pursuant 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document

* Filed herewith.

** Furnished herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

SMART GLOBAL HOLDINGS, INC.

Date: July 7, 2020	By:	/s/ AJAY SHAH
		Name: Ajay Shah
		Title: Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)
Date: July 7, 2020	By:	/s/ JACK PACHECO
		Name: Jack Pacheco
		Title: Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Ajay Shah, certify that:

1. I have reviewed this quarterly report on Form 10-Q of SMART Global Holdings, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 7, 2020

By: /s/ AJAY SHAH
Name: Ajay Shah
Title: Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)

Exhibit 31.2

CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Jack Pacheco, certify that:

1. I have reviewed this quarterly report on Form 10-Q of SMART Global Holdings, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: July 7, 2020

By: /s/ JACK PACHECO
Name: Jack Pacheco
Title: Executive Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of SMART Global Holdings, Inc. (the “Company”) on Form 10-Q for the period ending May 29, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Ajay Shah, Chairman of the Board, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: July 7, 2020	By: /s/ AJAY SHAH
	Name: Ajay Shah
	Title: Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of SMART Global Holdings, Inc. (the “Company”) on Form 10-Q for the period ending May 29, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Jack Pacheco, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: July 7, 2020

By: /s/ JACK PACHECO
Name: Jack Pacheco
Title: Executive Vice President and Chief Financial Officer
(Principal Financial and Accounting Officer)