

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 10-Q

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

For the quarterly period ended **June 30, 2020**

OR

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

For the transition period from _____ To _____

Commission file number: 1-3247

CORNING INCORPORATED

(Exact name of registrant as specified in its charter)

New York

(State or other jurisdiction of incorporation or organization)

16-0393470

(I.R.S. Employer Identification No.)

One Riverfront Plaza, Corning, New York

(Address of principal executive offices)

14831

(Zip Code)

607-974-9000

(Registrant's telephone number, including area code)

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

Title of each class

Common Stock

Trading Symbol(s)

GLW

Name of each exchange on which registered

New York Stock Exchange (NYSE)

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 and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit 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, indicated 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 pursuant to Section 13(a) of the Exchange Act.

Yes ☐

No ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐

No ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class

Corning's Common Stock, \$0.50 par value per share

Outstanding as of July 24, 2020

761,776,310 shares

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CORNING INCORPORATED AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF (LOSS) INCOME
(Unaudited; in millions, except per share amounts)

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Net sales	\$ 2,561	\$ 2,940	\$ 4,952	\$ 5,752
Cost of sales	1,805	1,875	3,635	3,588
Gross margin	756	1,065	1,317	2,164
Operating expenses:				
Selling, general and administrative expenses	401	414	796	815
Research, development and engineering expenses	430	249	691	498
Amortization of purchased intangibles	28	28	54	57
Operating (loss) income	(103)	374	(224)	794
Equity in earnings of affiliated companies	79	33	93	58
Interest income	3	5	9	12
Interest expense	(67)	(54)	(131)	(106)
Translated earnings contract gain (loss), net	37	(107)	105	77
Other income (expense), net	2	(35)	(9)	(44)
(Loss) income before income taxes	(49)	216	(157)	791
Provision for income taxes (Note 6)	(22)	(124)	(10)	(200)
Net (loss) income attributable to Corning Incorporated	<u>\$ (71)</u>	<u>\$ 92</u>	<u>\$ (167)</u>	<u>\$ 591</u>
(Loss) earnings per common share attributable to				
Corning Incorporated:				
Basic (Note 8)	<u>\$ (0.13)</u>	<u>\$ 0.09</u>	<u>\$ (0.28)</u>	<u>\$ 0.69</u>
Diluted (Note 8)	<u>\$ (0.13)</u>	<u>\$ 0.09</u>	<u>\$ (0.28)</u>	<u>\$ 0.65</u>

The accompanying notes are an integral part of these consolidated financial statements.

CORNING INCORPORATED AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS) INCOME
(Unaudited; in millions)

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Net (loss) income attributable to Corning Incorporated	\$ (71)	\$ 92	\$ (167)	\$ 591
Foreign currency translation adjustments and other	58	38	(207)	(72)
Net unrealized gains on investments		1		2
Unamortized losses and prior service costs				
for postretirement benefit plans	(12)		(12)	(52)
Net unrealized gains (losses) on designated hedges	19	(3)	(42)	2
Other comprehensive income (loss), net of tax (Note 14)	65	36	(261)	(120)
Comprehensive (loss) income attributable to				
Corning Incorporated	<u>\$ (6)</u>	<u>\$ 128</u>	<u>\$ (428)</u>	<u>\$ 471</u>

The accompanying notes are an integral part of these consolidated financial statements.

CORNING INCORPORATED AND SUBSIDIARY COMPANIES
CONSOLIDATED BALANCE SHEETS
(Unaudited; in millions, except share and per share amounts)

	June 30, 2020	December 31, 2019
Assets		
Current assets:		
Cash and cash equivalents	\$ 2,158	\$ 2,434
Trade accounts receivable, net of doubtful accounts and allowances - \$43 and \$41	1,712	1,836
Inventories, net of inventory reserves - \$214 and \$201 (Note 9)	2,235	2,320
Other current assets	741	873
Total current assets	6,846	7,463
Investments	329	334
Property, plant and equipment, net of accumulated depreciation - \$13,476 and \$12,995	14,691	15,337
Goodwill, net	1,925	1,935
Other intangible assets, net	1,072	1,185
Deferred income taxes (Note 6)	1,266	1,157
Other assets	1,417	1,487
Total Assets	\$ 27,546	\$ 28,898
Liabilities and Equity		
Current liabilities:		
Current portion of long-term debt and short-term borrowings	\$ 12	\$ 11
Accounts payable	1,109	1,587
Other accrued liabilities (Note 4 and Note 11)	1,899	1,923
Total current liabilities	3,020	3,521
Long-term debt (Note 10)	7,797	7,729
Postretirement benefits other than pensions	668	671
Other liabilities (Note 4 and Note 11)	3,928	3,980
Total liabilities	15,413	15,901
Commitments, contingencies and guarantees (Note 4)		
Shareholders' equity (Note 14):		
Convertible preferred stock, Series A – Par value \$100 per share;		
Shares authorized 3,100; Shares issued: 2,300	2,300	2,300
Common stock – Par value \$0.50 per share; Shares authorized 3.8 billion;		
Shares issued: 1,720 million and 1,718 million	860	859
Additional paid-in capital – common stock	14,398	14,323
Retained earnings	15,847	16,408
Treasury stock, at cost; Shares held: 961 million and 956 million	(19,924)	(19,812)
Accumulated other comprehensive loss	(1,432)	(1,171)
Total Corning Incorporated shareholders' equity	12,049	12,907
Noncontrolling interests	84	90
Total equity	12,133	12,997
Total Liabilities and Equity	\$ 27,546	\$ 28,898

The accompanying notes are an integral part of these consolidated financial statements.

CORNING INCORPORATED AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited; in millions)

	Six months ended June 30,	
	2020	2019
Cash Flows from Operating Activities:		
Net (loss) income	\$ (167)	\$ 591
Adjustments to reconcile net (loss) income to net cash provided by operating activities:		
Depreciation	680	658
Amortization of purchased intangibles	54	57
Loss on disposal of assets	75	12
Severance charges	135	7
Severance payments	(97)	(5)
Stock compensation charges	65	30
Equity in earnings of affiliated companies	(93)	(58)
Deferred tax benefit	(130)	(34)
Customer deposits and incentives	125	2
Translated earnings contract gain	(105)	(77)
Unrealized translation losses on transactions	11	34
Tax assessment refunds	101	
Asset impairment	195	
Changes in certain working capital items:		
Trade accounts receivable	27	(201)
Inventories	53	(257)
Other current assets	20	(164)
Accounts payable and other current liabilities	(235)	(365)
Other, net	84	(106)
Net cash provided by operating activities	798	124
Cash Flows from Investing Activities:		
Capital expenditures	(833)	(1,094)
Proceeds from sale or disposal of assets	27	
Realized gains on translated earnings contracts	12	38
Other, net	10	22
Net cash used in investing activities	(784)	(1,034)
Cash Flows from Financing Activities:		
Proceeds from issuance of long-term debt, net	209	
Proceeds from issuance of commercial paper		446
Proceeds from the exercise of stock options	13	36
Repurchases of common stock for treasury	(105)	(407)
Dividends paid	(383)	(362)
Other, net	(6)	25
Net cash used in financing activities	(272)	(262)
Effect of exchange rates on cash	(18)	(5)
Net decrease in cash and cash equivalents	(276)	(1,177)
Cash and cash equivalents at beginning of period	2,434	2,355
Cash and cash equivalents at end of period	\$ 2,158	\$ 1,178

The accompanying notes are an integral part of these consolidated financial statements.

CORNING INCORPORATED AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(Unaudited; in millions)

(In millions)	Convertible preferred stock	Common stock	Additional paid-in capital common	Retained earnings	Treasury stock	Accumulated other comprehensive loss	Total Corning Incorporated shareholders' equity	Non- controlling interests	Total
Balance, December 31, 2019	\$ 2,300	\$ 859	\$ 14,323	\$ 16,408	\$ (19,812)	\$ (1,171)	\$ 12,907	\$ 90	\$ 12,997
Net loss				(96)			(96)		(96)
Other comprehensive loss						(326)	(326)	(1)	(327)
Purchase of common stock									
for treasury					(105)		(105)		(105)
Shares issued to benefit plans									
and for option exercises			17				17		17
Common dividends									
(\$0.22 per share)				(168)			(168)		(168)
Preferred dividends									
(\$10,625 per share)				(24)			(24)		(24)
Other, net				(6)	(1)		(7)		(7)
Balance, March 31, 2020	\$ 2,300	\$ 859	\$ 14,340	\$ 16,114	\$ (19,918)	\$ (1,497)	\$ 12,198	\$ 89	\$ 12,287
Net (loss) income				(71)			(71)	6	(65)
Other comprehensive income						65	65		65
Purchase of common stock									
for treasury					(6)		(6)		(6)
Shares issued to benefit plans									
and for option exercises		1	58				59		59
Common dividends									
(\$0.22 per share)				(171)			(171)		(171)
Preferred dividends									
(\$10,625 per share)				(25)			(25)		(25)
Other, net							—	(11)	(11)
Balance, June 30, 2020	\$ 2,300	\$ 860	\$ 14,398	\$ 15,847	\$ (19,924)	\$ (1,432)	\$ 12,049	\$ 84	\$ 12,133

CORNING INCORPORATED AND SUBSIDIARY COMPANIES
CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
(Unaudited; in millions)

(In millions)	Convertible preferred stock	Common stock	Additional paid-in capital common	Retained earnings	Treasury stock	Accumulated other comprehensive loss	Total Corning Incorporated shareholders' equity	Non- controlling interests	Total
Balance, December 31, 2018	\$ 2,300	\$ 857	\$ 14,212	\$ 16,303	\$ (18,870)	\$ (1,010)	\$ 13,792	\$ 94	\$ 13,886
Net income				499			499	6	505
Other comprehensive loss						(156)	(156)		(156)
Purchase of common stock									
for treasury					(244)		(244)		(244)
Shares issued to benefit plans									
and for option exercises			31				31		31
Common dividends									
(\$0.20 per share)				(158)			(158)		(158)
Preferred dividends									
(\$10,625 per share)				(24)			(24)		(24)
Other, net (1)				(131)	(2)		(133)	(1)	(134)
Balance, March 31, 2019	\$ 2,300	\$ 857	\$ 14,243	\$ 16,489	\$ (19,116)	\$ (1,166)	\$ 13,607	\$ 99	\$ 13,706
Net income				92			92	13	105
Other comprehensive income						36	36		36
Purchase of common stock									
for treasury					(151)		(151)		(151)
Shares issued to benefit plans									
and for option exercises		1	34				35		35
Common dividends									
(\$0.20 per share)				(157)			(157)		(157)
Preferred dividends									
(\$10,625 per share)				(25)			(25)		(25)
Other, net					(12)		(12)	(16)	(28)
Balance, June 30, 2019	\$ 2,300	\$ 858	\$ 14,277	\$ 16,399	\$ (19,279)	\$ (1,130)	\$ 13,425	\$ 96	\$ 13,521

(1) Adjustments to beginning retained earnings include the effect of the accounting change we recorded upon adoption of the new standard for reclassification of stranded tax effects in accumulated other comprehensive income in the amount of \$53 million, and a \$(186) million, net of tax, effect from an equity affiliate's adoption of the new revenue standard.

The accompanying notes are an integral part of these consolidated financial statements.

CORNING INCORPORATED AND SUBSIDIARY COMPANIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. Significant Accounting Policies

Basis of Presentation

In these notes, the terms “Corning,” “Company,” “we,” “us,” or “our” mean Corning Incorporated and its subsidiary companies.

The accompanying unaudited consolidated financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”) and in accordance with U.S. Generally Accepted Accounting Principles (“GAAP”) for interim financial information. Certain information and note disclosures normally included in financial statements prepared in accordance with GAAP have been omitted or condensed. These interim consolidated financial statements should be read in conjunction with Corning’s consolidated financial statements and notes thereto included in its Annual Report on Form 10-K for the year ended December 31, 2019 (“2019 Form 10-K”).

The unaudited consolidated financial statements reflect all adjustments which, in the opinion of management, are necessary for a fair statement of the results of operations, financial position and cash flows for the interim periods presented. All such adjustments are of a normal recurring nature. The results for interim periods are not necessarily indicative of results which may be expected for any other interim period or for the full year.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses and the disclosure of contingent assets and liabilities. Actual results could differ from those estimates. The novel coronavirus (“COVID-19”) pandemic and the resulting adverse impacts to global economic conditions, as well as our operations, may impact future estimates including, but not limited to, our inventory valuations, fair value measurements, goodwill and long-lived asset impairments, the effectiveness of the Company’s hedging instruments, deferred tax valuation allowances, actuarial losses on our retirement benefit plans and discount rate assumptions.

Certain prior year amounts have been reclassified to conform to the current-year presentation. These reclassifications had no impact on our results of operations, financial position, or changes in shareholders’ equity.

New Accounting Standards

On January 1, 2020, we adopted Accounting Standards Update (“ASU”) No. 2016-13 ASC (Topic 326), Financial Instruments - Credit Losses. The ASU introduces a new accounting model, the Current Expected Credit Losses model (CECL), which requires earlier recognition of credit losses and additional disclosures related to credit risk. The CECL model utilizes a lifetime expected credit loss measurement objective for the recognition of credit losses at the time the financial asset is originated or acquired. We adopted the CECL model to recognize credit losses of financial assets using a modified retrospective method of accounting as of January 1, 2020. The impact of adopting the new standard to our financial statements was a nominal reduction to beginning retained earnings.

Other Accounting Standards

No other accounting standards newly issued or adopted as of June 30, 2020, had a material impact on Corning’s financial statements or disclosures.

2. Restructuring, Impairment and Other Charges and Credits

In the first half of 2020, and in response to uncertain global economic conditions, Corning undertook actions to transform the Company’s cost structure and improve operational efficiency. These actions included a corporate-wide workforce reduction program, disposals of certain assets and accelerated depreciation associated with the capacity realignment of certain manufacturing facilities as well as other exit charges and credits.

During the three and six months ended June 30, 2020 and 2019, we recorded the following restructuring, impairment and other charges and credits (in millions):

	Three months ended		Six months ended	
	June 30,		June 30,	
	2020	2019	2020	2019
Severance	\$ 58	\$ 7	\$ 135	\$ 7
Asset impairment	195		195	
Capacity realignment	60	61	149	61
Other charges and credits	24	(1)	83	6
Total restructuring, impairment and other charges and credits	\$ 337	\$ 67	\$ 562	\$ 74

Severance

During the second quarter of 2020, the Company implemented a corporate-wide workforce reduction program. Severance charges for the three and six months ended June 30, 2020, were primarily incurred to facilitate realignment of capacity in the Asia regions for our Display Technologies segment, optimize our Optical Communications segment and contain corporate costs. For the three months and six months ended June 30, 2019, severance charges were primarily related to a reduction in force program to facilitate realignment of capacity in the Asia regions for our Optical Communications segment. Severance paid to employees for the three and six months ending June 30, 2020 was \$22 million and \$97 million, respectively. As of June 30, 2020 and December 31, 2019, the unpaid severance liabilities of \$82 million and \$44 million are expected to be substantially completed within the next twelve months.

Asset Impairment

For the three months ended June 30, 2020, Corning incurred a long-lived asset impairment loss for an asset group related to the reassessment and reprioritization of research and development programs within our All Other segment. Given the current economic environment and market opportunities, Corning has rescoped and significantly reduced its investment in these research and development programs. Accordingly, Corning performed an impairment analysis for the long-lived asset group. Based on the recoverability test, the undiscounted cash flow of the asset group is significantly lower than its carrying values. Corning further assessed the fair value of the asset group using discounted cash flow projections, which resulted in a total pre-tax asset impairment loss of \$195 million, which was substantially all the carrying value of this asset group.

Capacity Realignment

Capacity realignment for the three and six months ended June 30, 2020, primarily includes accelerated depreciation and asset disposals associated with the exit of certain facilities and other exit activities in our Display Technologies and Specialty Materials business segments. Capacity realignment for the three and six months ended June 30, 2019, is primarily comprised of accelerated depreciation associated with the exit of certain facilities in our Display Technologies segment.

The following tables present the impact and respective location of total restructuring, impairment, and other charges and credits on the consolidated statements of (loss) income (in millions):

	Three months ended June 30, 2020					Three months ended June 30, 2019				
	Gross margin (1)	Selling, general and admin. expenses	Research, development and engineering expenses	Other	Total	Gross margin (1)	Selling, general and admin. expenses	Research, development and engineering expenses	Other	Total
Severance	\$ 24	\$ 18	\$ 16		\$ 58	\$ 1	\$ 6			\$ 7
Asset impairment			195		195					
Capacity realignment	60				60	61				61
Other charges and credits	14	4	1	\$ 5	24	33			\$ (34)	(1)
Total restructuring, impairment and other charges and credits	\$ 98	\$ 22	\$ 212	\$ 5	\$ 337	\$ 95	\$ 6	\$ —	\$ (34)	\$ 67

(1) Activity reflected in cost of goods sold.

	Six months ended June 30, 2020					Six months ended June 30, 2019				
	Gross margin (1)	Selling, general and admin. expenses	Research, development and engineering expenses	Other	Total	Gross margin (1)	Selling, general and admin. expenses	Research, development and engineering expenses	Other	Total
Severance	\$ 76	\$ 31	\$ 28		\$ 135	\$ 1	\$ 6			\$ 7
Asset impairment			195		195					
Capacity realignment	148		1		149	61				61
Other charges and credits	35	39	1	\$ 8	83	33			\$ (27)	6
Total restructuring, impairment and other charges and credits	\$ 259	\$ 70	\$ 225	\$ 8	\$ 562	\$ 95	\$ 6	\$ —	\$ (27)	\$ 74

(1) Activity reflected in cost of goods sold.

3. Revenue

Revenue Disaggregation Table

The following table shows revenues by major product categories, similar to our reportable segment disclosure. Within each product category, contract terms, conditions and economic factors affecting the nature, amount, timing and uncertainty of revenue recognition and cash flows are substantially similar. The commercial markets and selling channels are also similar. Except for an inconsequential amount of revenue for Telecommunications products, our product category revenues are recognized at point in time when control transfers to the customer.

Revenues by product category are as follows (in millions):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Display products	\$ 744	\$ 820	\$ 1,377	\$ 1,615
Telecommunication products	887	1,090	1,678	2,154
Specialty glass products	417	369	769	678
Environmental substrate and filter products	215	353	522	704
Life science products	236	255	487	494
All Other	62	53	119	107
Total revenue	\$ 2,561	\$ 2,940	\$ 4,952	\$ 5,752
Impact of foreign currency movements (1)	27	46	60	84
Cumulative adjustment related to customer contract			105	
Net sales of reportable segments and All Other	\$ 2,588	\$ 2,986	\$ 5,117	\$ 5,836

(1) This amount primarily represents the impact of foreign currency adjustments in the Display Technologies and Environmental Technologies segments.

At the end of 2015, Corning entered into an agreement with a customer pursuant to which Corning exchanged contingent consideration, for the incremental fair value associated with several commercial agreements, including the amendment of the customer's long-term supply agreement. The net present fair value (\$212 million) of the commercial benefit asset related to the long-term supply agreement was reclassified to the other asset line of the consolidated balance sheets and amortized over the term of agreement as a reduction in revenue. During March 2020, this customer announced its decision to exit its production of LCD panels by the end of 2020. Based on this announcement, Corning recorded a cumulative adjustment of \$105 million during the first quarter of 2020 as a reduction to revenue and will reflect the remaining balance as a reduction to revenue over the remainder of the current year. Due to the one-time nature of this cumulative adjustment, we have excluded it from segment results. However, it is included in our reconciliation from segment net income (loss) to consolidated net (loss) income.

Refer to Note 16 (Reportable Segments) to the consolidated financial statements for additional information.

Contract Assets and Liabilities

Contract assets, such as incremental costs to obtain or fulfill contracts, are an insignificant component of Corning's revenue recognition process. Most of Corning's cost of fulfillment as a manufacturer of products is classified as inventory, fixed assets and intangible assets, which are accounted for under the respective guidance for those asset types. Other costs of contract fulfillment are immaterial due to the nature of our products and their respective manufacturing processes.

Contract liabilities include deferred revenues, other advanced payments and customer deposits. Deferred revenue and other advanced payments are not significant to our operations and are classified as part of other accrued liabilities in our financial statements. Customer deposits are predominately related to Display products, and are classified as part of other accrued liabilities and other liabilities, as appropriate, and are disclosed below.

We treat shipping and handling fees as a fulfillment cost and not as a separate performance obligation under the terms of our revenue contracts due to the perfunctory nature of the shipping and handling obligations.

Customer Deposits

As of June 30, 2020, and December 31, 2019, Corning had customer deposits of approximately \$1.1 billion and \$1.0 billion, respectively. The majority of these were non-refundable cash deposits for customers to secure rights to an amount of glass produced by Corning under long-term supply agreements. The duration of these long-term supply agreements ranges up to 10 years. As glass is shipped to customers, Corning will recognize revenue and reduce the amount of the customer deposit liability. In the six months ended June 30, 2020 and 2019, customer deposits used were \$73 million and \$37 million, respectively. As of June 30, 2020, and December 31, 2019, \$876 million and \$927 million were recorded as other long-term liabilities, respectively. The remaining \$192 million and \$104 million, respectively, were classified as other current liabilities.

4. Commitments, Contingencies and Guarantees

Corning is a defendant in various lawsuits and is subject to various claims that arise in the normal course of business, the most significant of which are summarized below. In the opinion of management, the likelihood that the ultimate disposition of these matters will have a material adverse effect on Corning's consolidated financial position, liquidity, or results of operations, is remote.

Asbestos Claims

Corning and PPG Industries, Inc. each owned 50% of the capital stock of Pittsburgh Corning Corporation ("PCC"). PCC filed for Chapter 11 reorganization in 2000, and the Modified Third Amended Plan of Reorganization for PCC (the "Plan") became effective in April 2016. At December 31, 2016, the Company's liability under the Plan was \$290 million, which is required to be paid through a series of fixed payments that began in the second quarter of 2017. Payments of \$35 million and \$50 million were made in June 2020 and June 2019, respectively. The total amount of remaining payments due in years 2021 through 2022 is \$100 million, of which \$50 million will be paid in the second quarter of 2021 and is classified as a current liability. The remaining \$50 million is classified as a non-current liability.

Non-PCC Asbestos Claims

Corning is a defendant in certain cases alleging injuries from asbestos unrelated to PCC (the "non-PCC asbestos claims") which had been stayed pending the confirmation of the Plan. The stay was lifted on August 25, 2016. At June 30, 2020 and December 31, 2019, the amount of the reserve for these non-PCC asbestos claims was estimated to be \$97 million and \$98 million, respectively. The reserve balance as of June 30, 2020 represents the undiscounted projection of claims and related legal fees for the estimated life of the litigation.

Dow Corning Chapter 11 Related Matters

Until June 1, 2016, Corning and The Dow Chemical Company ("Dow") each owned 50% of the common stock of Dow Corning Corporation ("Dow Corning"). On May 31, 2016, Corning and Dow realigned their ownership interest in Dow Corning. Following the realignment, Corning no longer owned any interest in Dow Corning. With the realignment, Corning agreed to indemnify Dow Corning for 50% of Dow Corning's non-ordinary course, pre-closing liabilities to the extent such liabilities exceed the amounts reserved for them by Dow Corning as of May 31, 2016, subject to certain conditions and limits.

Dow Corning Breast Implant Litigation

In May 1995, Dow Corning filed for bankruptcy protection to address pending and claimed liabilities arising from many thousands of breast implant product lawsuits. On June 1, 2004, Dow Corning emerged from Chapter 11 with a Plan of Reorganization (the "Plan") which provided for the settlement or other resolution of implant claims. The Plan also includes releases for Corning and Dow as shareholders in exchange for contributions to the Plan.

Under the terms of the Plan, Dow Corning has established and funded a Settlement Trust and a Litigation Facility, referred to above, to provide a means for tort claimants to settle or litigate their claims. Inclusive of insurance, Dow Corning has paid approximately \$1.8 billion to the Settlement Trust. As of May 31, 2016, Dow Corning had recorded a reserve for breast implant litigation of \$290 million. In the event Dow Corning's total liability for these claims exceeds such amount, Corning may be required to indemnify Dow Corning for up to 50% of the excess liability, subject to certain conditions and limits. As of June 30, 2020, Dow Corning had recorded a reserve for breast implant litigation of \$160 million. As a result, Corning does not believe its indemnity obligation for Dow Corning's breast implant litigation liability, if any, will be material.

Dow Corning Bankruptcy Pendency Interest Claims

As a separate matter arising from the bankruptcy proceedings, Dow Corning has been defending claims asserted by commercial creditors who claimed additional compounded interest at default and state statutory judgment rates as well as attorneys' fees and other enforcement costs, during the period from May 1995 through June 2004. As of May 31, 2016, Dow Corning had recorded a reserve for these claims of \$107 million. Dow Corning settled those claims as of September 30, 2019 and received approval of the settlement from the bankruptcy court. Corning does not believe its indemnity obligation, if any, for Dow Corning's liability to be material.

Dow Corning Environmental Claims

In September 2019, Dow Corning formally notified Corning of certain environmental matters for which Dow Corning asserts that it has, or will, experience losses arising from remediation and response at a number of sites. In the event Dow Corning incurs a liability for these claims, Corning may be required to indemnify Dow Corning for up to 50% of that liability, subject to certain conditions and limits. As of June 30, 2020, Corning has estimated the potential liability for one of these environmental matters to be probable, and the amount recorded was not material. For the remaining environmental claims, the Company cannot reasonably estimate the indemnification liability owed to Dow Corning.

Environmental Litigation

Corning has been named by the Environmental Protection Agency ("the Agency") under the Superfund Act, or by state governments under similar state laws, as a potentially responsible party for 15 active hazardous waste sites. Under the Superfund Act, all parties who may have contributed any waste to a hazardous waste site, identified by the Agency, are jointly and severally liable for the cost of cleanup unless the Agency agrees otherwise. It is Corning's policy to accrue for its estimated liability related to Superfund sites and other environmental liabilities related to property owned by Corning based on expert analysis and continual monitoring by both internal and external consultants. At June 30, 2020 and December 31, 2019, Corning had accrued approximately \$47 million and \$41 million, respectively, for the undiscounted estimated liability for environmental cleanup and related litigation. Based upon the information developed to date, management believes that the accrued reserve is a reasonable estimate of the Company's liability and that the risk of an additional loss in an amount materially higher than that accrued is remote.

5. Employee Retirement Plans

We have defined benefit pension plans covering certain domestic and international employees. Our funding policy is to contribute, over time, an amount exceeding the minimum requirements to achieve the Company's long-term funding targets. During the second quarter of 2020, Corning contributed \$20 million in cash to our U.S. pension plans. We plan to contribute \$60 million and \$53 million in cash to our U.S. and international plans, respectively, during the second half of 2020.

The following table summarizes the components of net periodic benefit cost for Corning's defined benefit pension and postretirement health care and life insurance plans (in millions):

	Pension benefits				Postretirement benefits			
	Three months ended		Six months ended		Three months ended		Six months ended	
	June 30,		June 30,		June 30,		June 30,	
	2020	2019	2020	2019	2020	2019	2020	2019
Service cost	\$ 29	\$ 26	\$ 58	\$ 51	\$ 3	\$ 2	\$ 5	\$ 4
Interest cost	31	37	62	74	5	7	10	14
Expected return on plan assets	(49)	(43)	(98)	(86)				
Amortization of prior service cost (credit)	2	1	3	3	(2)	(2)	(3)	(4)
Recognition of actuarial (gain) loss	(2)	23	(2)	23				
Total pension and postretirement benefit expense	\$ 11	\$ 44	\$ 23	\$ 65	\$ 6	\$ 7	\$ 12	\$ 14

The components of net periodic benefit cost other than the service cost component are included in the line item other income (expense), net, in the consolidated statements of (loss) income.

6. Income Taxes

Our provision for income taxes and the related effective income tax rates are as follows (in millions):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Provision for income taxes	\$ (22)	\$ (124)	\$ (10)	\$ (200)
Effective tax rate	(44.9%)	57.4%	(6.4%)	25.3%

For the three months ended June 30, 2020, the effective income tax rate differed from the United States (“U.S.”) statutory rate of 21% primarily due to changes in income tax reserves of approximately \$40 million. For the six months ended June 30, 2020, the effective income tax rate differed from the U.S. statutory rate of 21% primarily due to changes in income tax reserves of approximately \$40 million, an adjustment to our permanently reinvested foreign income position, foreign valuation allowances on deferred tax assets, and certain non-deductible expenses for tax purposes.

For the three and six months ended June 30, 2019, the effective income tax rate differed from the U.S. statutory rate of 21% primarily due to additional net tax expense of \$86 million driven by changes to our tax reserves, rate differences on income (loss) of consolidated foreign companies, estimated impact of base erosion and anti-deferral tax (“BEAT”) offset by the expected benefits related to foreign derived intangible income (“FDII”) and the release of foreign valuation allowances on deferred tax assets.

Corning Precision Materials is currently appealing certain tax assessments and tax refund claims for tax years 2010 through 2018. The Company is required to deposit the disputed tax amounts with the South Korean government as a condition of its appeal of any tax assessments. We believe that it is more likely than not we will prevail in the appeal process. During the first six months of 2020, we received refunds of \$101 million related to these claims. As of June 30, 2020, we had recorded a non-current receivable of \$340 million related to the appeals. As of December 31, 2019, we had recorded a current and non-current receivable of \$33 million and \$415 million, respectively.

7. Investments

Investments are comprised of the following (in millions):

	Ownership interest	June 30, 2020	December 31, 2019
Affiliated companies accounted for by the equity method (1)	20% to 50%	\$ 275	\$ 291
Other investments		54	43
Subtotal investment assets		\$ 329	\$ 334
Affiliated companies accounted for by the equity method			
HSG (1)(2)	50%	\$ 171	\$ 270
Subtotal investment liabilities		\$ 171	\$ 270

(1) Amounts reflect Corning’s direct ownership interest in the affiliated companies at June 30, 2020 and December 31, 2019.

(2) Hemlock Semiconductor LLC and Hemlock Semiconductor Operations LLC, of which Corning has 49.9% and 40.25% ownership, respectively, are recorded as equity method investments and are affiliated companies of HSG. At June 30, 2020 and December 31, 2019, the negative carrying value of Corning’s investment in HSG was \$171 million and \$270 million, respectively, recorded in other liabilities.

Hemlock Semiconductor Group (“HSG”)

In 2016, Corning realigned its ownership interest in Dow Corning, exchanging its 50% interest in the joint venture between Corning and Dow Chemical for a newly formed company that holds a 49.9% interest in Hemlock Semiconductor LLC and a 40.25% interest in Hemlock Semiconductor Operations LLC which are recorded as equity method investments of Corning and are affiliated companies of HSG. HSG manufactures polysilicon products for the semiconductor and solar industries. HSG’s solar business primarily serves the solar power panel industry.

HSG's results of operations follow (in millions):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Statement of Operations:				
Net sales	\$ 160	\$ 181	\$ 345	\$ 366
Gross profit	\$ 7	\$ 64	\$ 66	\$ 144
Net income	\$ 163	\$ 76	\$ 203	\$ 139
Net income attributable to HSG (1)	\$ 163	\$ 71	\$ 198	\$ 123
Corning's equity in earnings of affiliated companies	\$ 82	\$ 35	\$ 99	\$ 60
Related party transactions:				
Intercompany sales within HSG (included in net sales)	\$ 20	\$ 33	\$ 43	\$ 54

(1) HSG's net income for the three months ended June 30, 2020, includes a pre-tax gain on settlement of a long-term sales agreement of approximately \$165 million, partially offsetting this gain was an inventory provision of approximately \$44 million associated with the settlement of this contract. Corning's share of the net settlement impact to equity earnings was approximately \$62 million.

8. (Loss) Earnings per Common Share

The following table sets forth the computation of basic and diluted (loss) earnings per common share (in millions, except per share amounts):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Net (loss) income attributable to Corning Incorporated	\$ (71)	\$ 92	\$ (167)	\$ 591
Less: Series A convertible preferred stock dividend	25	24	49	49
Net (loss) income available to common stockholders – basic	(96)	68	(216)	542
Plus: Series A convertible preferred stock dividend				49
Net (loss) income available to common stockholders – diluted	\$ (96)	\$ 68	\$ (216)	\$ 591
Weighted-average common shares outstanding – basic	759	781	760	782
Effect of dilutive securities:				
Employee stock options and other dilutive securities		8		9
Series A convertible preferred stock (1)				115
Weighted-average common shares outstanding – diluted	759	789	760	906
Basic (loss) earnings per common share	\$ (0.13)	\$ 0.09	\$ (0.28)	\$ 0.69
Diluted (loss) earnings per common share	\$ (0.13)	\$ 0.09	\$ (0.28)	\$ 0.65
Anti-dilutive potential shares excluded from				
diluted (loss) earnings per common share:				
Series A convertible preferred stock (1)	115	115	115	
Employee stock options and awards	38	2	38	2
Total	153	117	153	2

(1) For the three months ended June 30, 2020 and 2019, and the six months ended June 30, 2020, the Series A preferred stock was anti-dilutive; therefore, it was excluded from the calculation of diluted (loss) earnings per share.

9. Inventories, Net of Inventory Reserves

Inventories, net of inventory reserves comprise the following (in millions):

	June 30, 2020	December 31, 2019
Finished goods	\$ 944	\$ 973
Work in process	408	421
Raw materials and accessories	436	481
Supplies and packing materials	447	445
Total inventories, net of inventory reserves	\$ 2,235	\$ 2,320

10. Debt

Based on borrowing rates currently available to us for loans with similar terms and maturities, the fair value of long-term debt was \$8.9 billion and \$8.5 billion at June 30, 2020 and December 31, 2019, respectively, compared to recorded book values of \$7.8 billion and \$7.7 billion at June 30, 2020 and December 31, 2019, respectively. The Company measures the fair value of its long-term debt using Level 2 inputs based primarily on current market yields for its existing debt traded in the secondary market.

Corning had no outstanding commercial paper at June 30, 2020 and December 31, 2019.

Debt Issuances

2020

During the second quarter of 2020, Corning established an incremental liquidity facility for 25 billion Japanese yen, equivalent to \$232 million U.S. dollars (“USD”), with a maturity of three years. As of June 30, 2020, the facility has not been drawn upon.

In the first quarter of 2020, Corning established two unsecured variable rate loan facilities for 1,050 million Chinese yuan, equivalent to \$150 million USD, and 749 million Chinese yuan, equivalent to \$105 million USD, each with a maturity of five years.

Borrowings under these loan facilities through the end of the second quarter totaled 1,466 million Chinese yuan, equivalent to \$209 million USD. These Chinese yuan-denominated proceeds will not be converted into USD and will be used for capital projects. Payments of principal and interest on the Notes will be in Chinese yuan, or should yuan be unavailable due to circumstances beyond Corning’s control, a USD equivalent.

2019

There was no material debt activity in the first half of 2019.

On a quarterly basis, Corning will recognize the foreign currency translation gains and losses resulting from changes in exchange rates within accumulated other comprehensive (loss) income in shareholders’ equity. Cash proceeds from loans and debt issuances are disclosed as financing activities, and cash payments for interest will be disclosed as operating activities, in the consolidated statements of cash flows.

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11. Other Liabilities

Other liabilities follow (in millions):

	June 30, 2020	December 31, 2019
Current liabilities:		
Wages and employee benefits	\$ 468	\$ 565
Income taxes	116	182
Derivative instruments (Note 13)	91	100
Asbestos and other litigation (Note 4)	64	57
Customer deposits (Note 3)	192	104
Short-term leases	79	62
Other current liabilities	889	853
Other accrued liabilities	\$ 1,899	\$ 1,923
Non-current liabilities:		
Defined benefit pension plan liabilities	\$ 973	\$ 980
Derivative instruments (Note 13)	85	165
Asbestos and other litigation (Note 4)	145	196
Investment in Hemlock Semiconductor Group (1)	171	270
Customer deposits (Note 3)	876	927
Deferred tax liabilities	273	325
Long-term leases	611	450
Other non-current liabilities	794	667
Other liabilities	\$ 3,928	\$ 3,980

(1) The negative carrying value resulted from a one-time charge to this entity in 2019 for the impairment of certain assets.

12. Hedging Activities

Cash Flow Hedges

Our cash flow hedging activities utilize over-the-counter (“OTC”) foreign exchange forward contracts to reduce the risk that movements in exchange rates will adversely affect the net cash flows resulting from the sale of products to customers and purchases from suppliers. The total gross notional values for foreign currency cash flow hedges are \$1.0 billion and \$2.1 billion at June 30, 2020 and December 31, 2019, respectively, with maturities spanning the years 2020 through 2023. Corning defers gains and losses related to the cash flow hedges into accumulated other comprehensive loss on the consolidated balance sheets until the hedged item impacts earnings. At June 30, 2020, the amount expected to be reclassified into earnings within the next 12 months is not material.

As of March 31, 2020, a loss of \$14 million was reclassified from accumulated other comprehensive loss into other expense, net, due to the de-designation of certain cash flow hedges related to our Japanese yen-denominated sales.

The effect of cash flow hedges on Corning’s consolidated statements of (loss) income and comprehensive (loss) income is not material for the six months ended June 30, 2020 and 2019.

Undesignated Hedges

Corning also uses OTC foreign exchange forward and option contracts that are not designated as hedging instruments for accounting purposes. The undesignated hedges limit exposure to foreign functional currency fluctuations related to certain subsidiaries’ monetary assets, monetary liabilities and net earnings in foreign currencies.

The table below includes a total gross notional value for translated earnings contracts of \$11.1 billion and \$12.2 billion at June 30, 2020 and December 31, 2019, respectively. These include gross notional value for average rate forward contracts of \$8.4 billion and \$9.7 billion, zero-cost collars and purchased put or call options of \$2.7 billion and \$2.5 billion at June 30, 2020 and December 31, 2019, respectively. The majority of our average rate forward contracts hedge a significant portion of the Company's exposure to the Japanese yen with maturities spanning the years 2020-2023 and with gross notional values of \$6.8 billion and \$7.7 billion at June 30, 2020 and December 31, 2019, respectively. The average rate forward contracts also partially hedge the impacts of the South Korean won, Chinese yuan, euro, new Taiwan dollar and British pound translation on the Company's projected net income. With respect to the zero-cost collars, the gross notional amount includes the value of both the put and call options. However, due to the nature of the zero-cost collars, only the put or the call option can be exercised at maturity.

The following table summarizes the notional amounts and respective fair values of Corning's derivative financial instruments on a gross basis for June 30, 2020 and December 31, 2019 (in millions):

			Asset derivatives				Liability derivatives			
			Notional amount		Balance sheet location	Fair value		Balance sheet location	Fair value	
			June 30, 2020	Dec. 31, 2019		June 30, 2020	Dec. 31, 2019		June 30, 2020	Dec. 31, 2019
Derivatives designated as hedging instruments										
Foreign exchange contracts			\$ 974	\$ 2,123	Other current assets	\$ 18	\$ 38	Other accrued liabilities	\$ (17)	\$ (7)
					Other assets	15	37	Other liabilities	(7)	(4)
Derivatives not designated as hedging instruments										
Foreign exchange and other contracts			7,169	1,815	assets	18	5	liabilities	(15)	(19)
Translated earnings contracts			11,087	12,166	assets	87	114	liabilities	(59)	(74)
					Other assets	50	34	Other liabilities	(38)	(161)
Total derivatives			\$ 19,230	\$ 16,104		\$ 202	\$ 249		\$ (176)	\$ (265)

The following tables summarize the effect on the consolidated financial statements relating to Corning's derivative financial instruments (in millions):

Derivatives in hedging relationships for cash flow hedges	Effect of derivative instruments on the consolidated financial statements for the three months ended June 30,				
	Gain (loss) recognized in other comprehensive income (OCI)		Location of gain (loss) reclassified from accumulated OCI into income		Gain (loss) reclassified from accumulated OCI into income
	2020	2019	effective (ineffective)		2020 2019
			Net sales	\$	(3)
Foreign exchange contracts	\$ 22	\$ (3)	Cost of sales		\$ 3
Total cash flow hedges	\$ 22	\$ (3)		\$ (3)	\$ 3

Derivatives in hedging relationships for cash flow hedges	Effect of derivative instruments on the consolidated financial statements for the six months ended June 30,				
	Gain (loss) recognized in other comprehensive income (OCI)		Location of gain (loss) reclassified from accumulated OCI into income		Gain (loss) reclassified from accumulated OCI into income
	2020	2019	effective (ineffective)		2020 2019
			Net sales	\$	(2)
			Cost of sales	5	\$ 5
Foreign exchange contracts	\$ (67)	\$ 6	Other expense, net (1)	(14)	
Total cash flow hedges	\$ (67)	\$ 6		\$ (11)	\$ 5

Undesignated derivatives	Location of gains recognized in income	Gain (loss) recognized in income			
		Three months ended June 30,		Six months ended June 30,	
		2020	2019	2020	2019
Foreign exchange and other contracts					
– balance sheet, loans and other	Other income (expense), net (1)	\$ (15)	\$ 21	\$ (14)	\$ 19
	Translated earnings				
Translated earnings contracts	contract gain, net	37	(107)	105	77
Total undesignated		\$ 22	\$ (86)	\$ 91	\$ 96

(1) A loss of \$14 million was reclassified from accumulated other comprehensive loss into other expense, net, resulting from the de-designation of certain cash flow hedges.

13. Fair Value Measurements

Fair value standards under GAAP define fair value, establish a framework for measuring fair value in applying generally accepted accounting principles, and require disclosures about fair value measurements. The standards also identify two kinds of inputs that are used to determine the fair value of assets and liabilities: observable and unobservable. Observable inputs are based on market data or independent sources, while unobservable inputs are based on the Company's own market assumptions. Once inputs have been characterized, the inputs are prioritized into one of three broad levels (provided in the table below) used to measure fair value. Fair value standards apply whenever an entity is measuring fair value under other accounting pronouncements that require or permit fair value measurement and require the use of observable market data when available.

The following tables provide fair value measurement information for the Company's major categories of financial assets and liabilities measured on a recurring basis (in millions):

	June 30, 2020	Fair value measurements at reporting date using		
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Current assets:				
Other current assets (1)	\$ 123		\$ 123	
Non-current assets:				
Other assets (1)	\$ 79		\$ 79	
Current liabilities:				
Other accrued liabilities (1)	\$ 91		\$ 91	
Non-current liabilities:				
Other liabilities (1)	\$ 85		\$ 85	

(1) Derivative assets and liabilities include foreign exchange contracts which are measured using observable inputs for similar assets and liabilities.

	December 31, 2019	Fair value measurements at reporting date using		
		Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Current assets:				
Other current assets (1)	\$ 157		\$ 157	
Non-current assets:				
Other assets (1)(2)	\$ 92		\$ 71	\$ 21
Current liabilities:				
Other accrued liabilities (1)	\$ 100		\$ 100	
Non-current liabilities:				
Other liabilities (1)	\$ 165		\$ 165	

(1) Derivative assets and liabilities include foreign exchange contracts which are measured using observable inputs for similar assets and liabilities.

(2) Other assets include one of the Company's renewable energy derivative contracts that was measured using unobservable (Level 3) inputs, in the amount of \$21 million.

For the six months ended June 30, 2020, assets and liabilities that were measured using unobservable (Level 3) inputs resulted in a loss recognized in earnings of \$21 million for a renewable energy derivative contract. For the year ended December 31, 2019, assets and liabilities that were measured using unobservable (Level 3) inputs resulted in unrealized gains recognized in earnings of \$21 million for a renewable energy derivative contract and the reversal of a liability for contingent consideration of \$20 million.

Assets and Liabilities Measured on a Non-Recurring Basis

For the three months ended June 30, 2020, Corning incurred a long-lived asset impairment loss for an asset group related to the reassessment and reprioritization of research and development programs within our All Other segment. Given the current economic environment and market opportunities, Corning has rescope and significantly reduced its investment in these research and development programs. The impairment analysis resulted in a total pre-tax asset impairment loss of \$195 million, which was substantially all the carrying value. The fair value of the asset group was measured using unobservable (Level 3) inputs. Refer to Note 2 (Restructuring, Impairment and Other Charges and Credits) to the consolidated financial statements for additional information on restructuring activities and impairment.

At December 31, 2019, Hemlock Semiconductor Group (“HSG”), one of the Company’s equity method affiliates, wrote down its long-lived assets to fair value on a nonrecurring basis. HSG engaged a third-party appraiser to assist in determining the fair value of its long-lived assets using unobservable (Level 3) inputs based on the highest and best use of the asset group. As a result, HSG recognized pre-tax asset impairment losses of \$916 million for the year ended December 31, 2019. Corning’s share of the pre-tax impairment loss was \$369 million. For the six months ended June 30, 2020, no material asset impairment losses were recognized on a nonrecurring basis by HSG.

There were no other significant financial assets and liabilities measured on a nonrecurring basis as of June 30, 2020 and December 31, 2019.

14. Shareholders’ Equity

Fixed Rate Cumulative Convertible Preferred Stock, Series A

Corning has 2,300 outstanding shares of Fixed Rate Cumulative Convertible Preferred Stock, Series A. The Preferred Stock is convertible at the option of the holder and the Company upon certain events, at a conversion rate of 50,000 shares of Corning’s common stock per one share of Preferred Stock, subject to certain anti-dilution provisions. As of June 30, 2020, the Preferred Stock has not been converted, and none of the anti-dilution provisions have been triggered.

Share Repurchases

On April 26, 2018, Corning’s Board of Directors approved a \$2 billion share repurchase program with no expiration date (the “2018 Repurchase Program”). On July 17, 2019, Corning’s Board of Directors authorized \$5 billion in share repurchases with no expiration date (the “2019 Repurchase Program”).

The Company suspended share buybacks during the first quarter of 2020 and made no share repurchases for the three months ended June 30, 2020. For the six months ended June 30, 2020, the Company repurchased 4.1 million shares of common stock on the open market for approximately \$105 million, as part of its 2018 Repurchase Program.

In the three and six months ended June 30, 2019, the Company repurchased 4.8 million and 12.6 million shares of common stock on the open market for approximately \$151 million and \$395 million, respectively, as part of its 2018 Repurchase Program.

Accumulated Other Comprehensive Loss

In the three and six months ended June 30, 2020 and 2019, the change in accumulated other comprehensive loss was primarily related to the foreign currency translation adjustment and the net unrealized gains (losses) on designated hedges components.

A summary of changes in the foreign currency translation adjustment component of accumulated other comprehensive loss is as follows (in millions) (1):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Beginning balance	\$ (1,122)	\$ (824)	\$ (857)	\$ (714)
Other comprehensive income (loss) (2)	55	39	(198)	(59)
Equity method affiliates (3)	3	(1)	(9)	(13)
Net current-period other comprehensive income (loss)	58	38	(207)	(72)
Ending balance	\$ (1,064)	\$ (786)	\$ (1,064)	\$ (786)

(1) All amounts are after tax. Amounts in parentheses indicate debits to accumulated other comprehensive loss.

(2) For the three and six months ended June 30, 2020, amounts are net of tax expense of \$18 million and tax benefit of \$10 million, respectively. For the three and six months ended June 30, 2019, amounts are net of tax benefit of \$10 million and \$23 million, respectively.

(3) Tax effects are not significant.

A summary of changes in the net unrealized gains (losses) on designated hedges component of accumulated other comprehensive loss is as follows (in millions) (1):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Beginning balance	\$ (10)	\$ 10	\$ 51	\$ 6
Other comprehensive income (loss) before				
reclassifications (2)	17		(50)	5
Amounts reclassified from accumulated other				
comprehensive income (loss) (3)	2	(2)	8	(3)
Net current-period other comprehensive income (loss)	19	(2)	(42)	2
Ending balance	\$ 9	\$ 8	\$ 9	\$ 8

(1) All amounts are after tax. Amounts in parentheses indicate debits to accumulated other comprehensive loss.

(2) For the three and six months ended June 30, 2020, amounts are net of tax expense of \$5 million and tax benefit of \$17 million, respectively. For the three and six months ended June 30, 2019, tax effects are not significant.

(3) Tax effects are not significant.

15. Share-Based Compensation

Corning maintains long-term incentive plans (the “Plans”) for key employees and non-employee members of our Board of Directors. The Plans allow us to grant equity-based compensation awards, including stock options, stock appreciation rights, performance share units, restricted stock units, restricted stock awards or a combination of awards (collectively, share-based awards). At June 30, 2020, there were approximately 39 million unissued common shares available for future grants authorized under the Plans.

Beginning in 2020, Corning increased the equity component in our Long-Term Incentive (“LTI”) Plan from 40% to 75% of an executive’s annual targeted compensation opportunity.

On May 20, 2020, Corning Incorporated (the “Company”) announced temporary compensation actions in response to the impact of the global COVID-19 pandemic on the Company. Effective June 1, 2020, the base salary of the Company’s CEO was reduced by 40% and each of the other named executive officers’ salaries were reduced by 30%. Each non-employee director’s cash compensation was reduced by 40%. Additionally, the Company reduced salaries, from 5% to 30%, for all other salaried employees in the United States from June 1, 2020 through December 31, 2020. The Company has taken similar actions outside the United States based on local regulations and mutual consent requirements. The Company has taken these and other actions to preserve cash in 2020, and has issued equity to each employee, including the named executive officers, in the form of restricted stock units and stock options, in an amount equivalent to the employee’s salary reduction on the grant date, which vest over a period of three years. Similarly, each non-employee director received restricted stock units in an amount equivalent to the director’s fee reduction.

Share-based compensation expense is allocated to the selling, general and administrative and research, development and engineering expenses lines in the consolidated statements of (loss) income.

Stock Compensation Plans

The Company measures and recognizes compensation cost for all share-based payment awards made to employees and directors based on estimated fair values.

Total share-based compensation expense was approximately \$55 million and \$21 million, respectively, and \$65 million and \$30 million, respectively, for the three and six months ended June 30, 2020 and 2019. The incremental change in expense was approximately \$35 million for both periods, primarily driven by a larger equity component for Director and Executive compensation and issuance of employee share-based compensation awards, as discussed above.

The income tax benefit realized from share-based compensation was not significant for the three and six months ended June 30, 2020 and 2019. Refer to Note 6 (Income Taxes) to the consolidated financial statements for additional information.

Stock Options

Corning's stock option plans provide non-qualified and incentive stock options to purchase authorized but unissued common shares, or treasury shares, at the market price on the grant date and generally become exercisable in installments from one year to five years from the grant date. The maximum term of non-qualified and incentive stock options is 10 years from the grant date. An award is considered vested when the employee's retention of the award is no longer contingent on providing subsequent service (the "non-substantive vesting period approach").

The following table summarizes information concerning stock options outstanding, including the related transactions under the stock option plans for the six months ended June 30, 2020:

	Number of shares (in thousands)	Weighted- average exercise price	Weighted- average remaining contractual term in years	Aggregate intrinsic value (in thousands)
Options outstanding as of December 31, 2019	13,172	\$ 21.94		
Granted	10,653	19.65		
Exercised	(681)	17.99		
Forfeited and expired	(69)	20.41		
Options outstanding as of June 30, 2020	23,075	21.00	7.12	\$ 128,954
Options expected to vest as of June 30, 2020	22,612	21.02	7.06	126,208
Options exercisable as of June 30, 2020	9,273	19.34	3.59	62,467

Corning uses a multiple-point Black-Scholes valuation model to estimate the fair value of stock option grants. Corning utilizes a blended approach for calculating the volatility assumption used in the multiple-point Black-Scholes valuation model defined as the weighted average of the short-term implied volatility, the most recent volatility for the period equal to the expected term, and the most recent 15-year historical volatility. The expected term is the period the options are expected to be outstanding and is calculated using a combination of historical exercise experience adjusted to reflect the current vesting period of options being valued, and partial life cycles of outstanding options. The risk-free rates used in the multiple-point Black-Scholes valuation model are the implied rates for a zero-coupon U.S. Treasury bond with a term equal to the option's expected term. The ranges given below reflect results from separate groups of employees exhibiting different exercise behavior.

The following inputs were used for the valuation of option grants under our stock option plans (1):

	Three months ended June 30,	
	2020	2019
Expected volatility	32.9%	29.9%
Weighted-average volatility	32.9%	29.9%
Expected dividends	4.48%	2.36%
Risk-free rate	0.5%	2.4%
Average risk-free rate	0.5%	2.4%
Expected term (in years)	7.4	7.4
Pre-vesting executive departure rate	0.6%	0.6%
Pre-vesting non-executive departure rate	2.5%	

(1) Stock options were granted during the three months ended June 30, 2020 and 2019. There were no stock options granted during the three months ended March 31, 2020 and 2019.

The Corning Incentive Stock Plan permits restricted stock and restricted stock unit grants, either determined by specific performance goals or issued directly, in most instances, subject to the possibility of forfeiture and without cash consideration. Restricted stock and restricted stock units under the Incentive Stock Plan are granted at the closing market price on the grant date, contingently vest over a period of generally one year to ten years, and generally have contractual lives of one year to ten years. The fair value of each restricted stock grant or restricted stock unit awarded under the Incentive Stock Plan is based on the grant date closing price of the Company's stock.

The following table represents a summary of the status of the Company's non-vested time-based restricted stock and restricted stock units as of December 31, 2019 and changes which occurred during the six months ended June 30, 2020:

	Number of shares (in thousands)	Weighted average grant-date fair value
Non-vested shares and share units at December 31, 2019	5,189	\$ 27.58
Granted	9,104	20.54
Vested	(1,025)	27.58
Forfeited	(93)	27.57
Non-vested shares and share units at June 30, 2020	13,175	\$ 22.72

16. Reportable Segments

Our reportable segments are as follows:

- Display Technologies – manufactures glass substrates for flat panel liquid crystal displays and other high-performance display panels.
- Optical Communications – manufactures carrier network and enterprise network components for the telecommunications industry.
- Specialty Materials – manufactures products that provide more than 150 material formulations for glass, glass ceramics and fluoride crystals to meet demand for unique customer needs.
- Environmental Technologies – manufactures ceramic substrates and filters for automotive and diesel applications.
- Life Sciences – manufactures glass and plastic labware, equipment, media, serum and reagents enabling workflow solutions for drug discovery and bioproduction.

All other segments that do not meet the quantitative threshold for separate reporting have been grouped as "All Other." This group is primarily comprised of the results of the pharmaceutical technologies, auto glass and new product lines and development projects, as well as certain corporate investments.

We prepared the financial results for our reportable segments on a basis consistent with our internal disaggregation of financial information to assist our chief operating decision maker (“CODM”) in making internal operating decisions. The impact of changes in the Japanese yen, South Korean won, Chinese yuan and new Taiwan dollar are excluded from segment sales and segment net income for the Display Technologies and Specialty Materials segments. The impact of changes in the euro, Chinese yuan and Japanese yen are excluded from segment sales and segment net income for our Environmental Technologies and Life Sciences segments. Certain income and expenses are included in the unallocated amounts in the reconciliation of reportable segment net income (loss) to consolidated net (loss) income. These include items that are not used by our CODM in evaluating the results of or in allocating resources to our segments and include the following items: the impact of our translated earnings contracts; acquisition-related costs; discrete tax items and other tax-related adjustments; certain litigation, regulatory and other legal matters; restructuring, impairment losses and other charges and credits; adjustments relating to acquisitions; and other non-recurring non-operational items. Although we exclude these amounts from segment results, they are included in reported consolidated results.

We included the earnings of equity affiliates that are closely associated with our reportable segments in the respective segment’s net income (loss). We have allocated certain common expenses among reportable segments differently than we would for stand-alone financial information. Segment net income (loss) may not be consistent with measures used by other companies.

Reportable Segments (in millions):

	Display Technologies	Optical Communications	Specialty Materials	Environmental Technologies	Life Sciences	All Other	Total
Three months ended							
June 30, 2020							
Segment net sales	\$ 753	\$ 887	\$ 417	\$ 226	\$ 243	\$ 62	\$ 2,588
Depreciation (1)	\$ 133	\$ 62	\$ 38	\$ 33	\$ 13	\$ 14	\$ 293
Research, development and							
engineering expenses (2)	\$ 25	\$ 52	\$ 33	\$ 22	\$ 6	\$ 43	\$ 181
Income tax (provision)							
benefit (3)	\$ (41)	\$ (23)	\$ (24)	\$ —	\$ (8)	\$ 19	\$ (77)
Segment net income (loss) (4)	\$ 152	\$ 81	\$ 90	\$ —	\$ 31	\$ (66)	\$ 288

	Display Technologies	Optical Communications	Specialty Materials	Environmental Technologies	Life Sciences	All Other	Total
Three months ended							
June 30, 2019							
Segment net sales	\$ 848	\$ 1,090	\$ 369	\$ 366	\$ 260	\$ 53	\$ 2,986
Depreciation (1)	\$ 149	\$ 60	\$ 35	\$ 32	\$ 12	\$ 12	\$ 300
Research, development and							
engineering expenses (2)	\$ 29	\$ 54	\$ 41	\$ 28	\$ 5	\$ 57	\$ 214
Income tax (provision)							
benefit (3)	\$ (55)	\$ (43)	\$ (18)	\$ (17)	\$ (11)	\$ 18	\$ (126)
Segment net income (loss) (4)	\$ 213	\$ 158	\$ 67	\$ 65	\$ 40	\$ (68)	\$ 475

	Display Technologies	Optical Communications	Specialty Materials	Environmental Technologies	Life Sciences	All Other	Total
Six months ended							
June 30, 2020							
Segment net sales	\$ 1,504	\$ 1,678	\$ 769	\$ 546	\$ 501	\$ 119	\$ 5,117
Depreciation (1)	\$ 266	\$ 124	\$ 80	\$ 67	\$ 25	\$ 27	\$ 589
Research, development and							
engineering expenses (2)	\$ 55	\$ 107	\$ 74	\$ 50	\$ 13	\$ 91	\$ 390
Income tax (provision)							
benefit (3)	\$ (81)	\$ (31)	\$ (38)	\$ (9)	\$ (18)	\$ 38	\$ (139)
Segment net income (loss) (4)	\$ 304	\$ 110	\$ 141	\$ 35	\$ 69	\$ (135)	\$ 524

	Display Technologies	Optical Communications	Specialty Materials	Environmental Technologies	Life Sciences	All Other	Total
Six months ended June 30, 2019							
Segment net sales	\$ 1,666	\$ 2,154	\$ 678	\$ 728	\$ 503	\$ 107	\$ 5,836
Depreciation (1)	\$ 301	\$ 119	\$ 72	\$ 63	\$ 25	\$ 23	\$ 603
Research, development and engineering expenses (2)	\$ 55	\$ 110	\$ 82	\$ 58	\$ 10	\$ 112	\$ 427
Income tax (provision) benefit (3)	\$ (110)	\$ (82)	\$ (31)	\$ (32)	\$ (19)	\$ 37	\$ (237)
Segment net income (loss) (4)	\$ 421	\$ 300	\$ 116	\$ 120	\$ 71	\$ (140)	\$ 888

- (1) Depreciation expense for Corning's reportable segments includes an allocation of depreciation of corporate property not specifically identifiable to a segment.
- (2) Research, development and engineering expenses include direct project spending that is identifiable to a segment.
- (3) Income tax (provision) benefit reflects a tax rate of 21%.
- (4) Many of Corning's administrative and staff functions are performed on a centralized basis. Where practicable, Corning charges these expenses to segments based upon the extent to which each business uses a centralized function. Other staff functions, such as corporate finance, human resources and legal, are allocated to segments, primarily as a percentage of sales. Expenses that are not allocated to the segments are included in the reconciliation of reportable segment net income (loss) to consolidated net (loss) income.

A reconciliation of reportable segment and All Other net sales to consolidated net sales follows (in millions):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Net sales of reportable segments and All Other	\$ 2,588	\$ 2,986	\$ 5,117	\$ 5,836
Impact of foreign currency movements (1)	(27)	(46)	(60)	(84)
Cumulative adjustment related to customer contract (2)			(105)	
Consolidated net sales	\$ 2,561	\$ 2,940	\$ 4,952	\$ 5,752

- (1) This amount primarily represents the impact of foreign currency adjustments in the Display Technologies and Environmental Technologies segments.
- (2) Amount represents the negative impact of a cumulative adjustment to reduce revenue in the amount of \$105 million recorded during the first quarter of 2020. The adjustment was associated with a previously recorded commercial benefit asset, reflected as a prepayment, to a customer with a long-term supply agreement that is exiting its production of LCD panels. Refer to Note 3 (Revenue) to the consolidated financial statements for additional information.

A reconciliation of reportable segment net income (loss) to consolidated net (loss) income follows (in millions):

	Three months ended				Six months ended			
	June 30,		June 30,		June 30,		June 30,	
	2020	2019	2020	2019	2020	2019	2020	2019
Net income of reportable segments	\$ 354	\$ 543	\$ 659	\$ 1,028				
Net loss of All Other	(66)	(68)	(135)	(140)				
Unallocated amounts:								
Impact of foreign currency movements not								
included in segment net income (loss)	(6)	(36)	(25)	(73)				
Gain (loss) on foreign currency hedges								
related to translated earnings	35	(107)	93	77				
Translation gain (loss) on Japanese yen-denominated debt	3	(36)	(11)	(21)				
Research, development, and engineering expenses	(37)	(35)	(76)	(71)				
Equity in earnings of affiliated companies (1)	81	34	99	60				
Amortization of intangibles	(28)	(28)	(54)	(57)				
Interest expense, net	(64)	(49)	(122)	(94)				
Income tax benefit	55	2	129	37				
Cumulative adjustment related to customer contract (2)			(105)					
Severance charges (3)	(58)	(7)	(135)	(7)				
Asset impairment (3)	(195)		(195)					
Capacity realignment and other charges and credits (3)	(84)	(60)	(232)	(67)				
Other corporate items	(61)	(61)	(57)	(81)				
Net (loss) income	\$ (71)	\$ 92	\$ (167)	\$ 591				

(1) Primarily represents the equity earnings of HSG.

(2) Amount represents the negative impact of a cumulative adjustment to reduce revenue in the amount of \$105 million recorded during the first quarter of 2020. The adjustment was associated with a previously recorded commercial benefit asset, reflected as a prepayment, to a customer with a long-term supply agreement that is exiting its production of LCD panels. Refer to Note 3 (Revenue) to the consolidated financial statements for additional information.

(3) Refer to Note 2 (Restructuring, Impairment and Other Charges and Credits) to the consolidated financial statements for additional information on restructuring activities and impairment.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

ORGANIZATION OF INFORMATION

Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") provides a historical and prospective narrative on the Company's financial condition and results of operations. This interim MD&A should be read in conjunction with the MD&A in our 2019 Form 10-K. The various sections of this MD&A contain forward-looking statements that involve risks and uncertainties. Words such as "anticipates," "expects," "intends," "plans," "goals," "believes," "seeks," "estimates," "continues," "may," "will," "should," and variations of such words and similar expressions are intended to identify such forward-looking statements. In addition, any statements that refer to projections of our future financial performance, our anticipated growth and trends in our businesses, uncertain events or assumptions, and other characterizations of future events or circumstances are forward-looking statements. Such statements are based on our current expectations and could be affected by the uncertainties and risk factors described throughout this filing and particularly in "Risk Factors" in Part I, Item 1A of our 2019 Form 10-K, and as may be updated in our Forms 10-Q. Our actual results may differ materially, and these forward-looking statements do not reflect the potential impact of any divestitures, mergers, acquisitions, or other business combinations that had not been completed as of June 30, 2020.

Our MD&A includes the following sections:

- Overview
- Results of Operations
- Core Performance Measures
- Reportable Segments
- Capital Resources and Liquidity
- Critical Accounting Estimates
- Environment
- Forward-Looking Statements

OVERVIEW

In response to the COVID-19 pandemic and the ensuing economic uncertainty, including changing market conditions, the Company has and will continue to focus on three core priorities: preserving the financial health of the Company; protecting employees and communities; and delivering on customer commitments.

Summary of results for the three and six months ended June 30, 2020

In the second quarter, net sales were \$2,561 million, compared to \$2,940 million during the same period in 2019, a net decrease of \$379 million, or 13%. Changes in net sales were as follows:

- Display Technologies net sales decreased by \$95 million, with volume decreases and display glass price declines in the mid-single digits in percentage terms;
- Optical Communications net sales declined \$203 million, as sales volumes declined for carrier products by \$77 million and enterprise products by \$126 million, due to general market weakness and capital spending reductions by several major customers;
- Net sales for Environmental Technologies decreased \$140 million, as production facilities of vehicle manufacturers were temporarily shut down in key markets; and
- Net sales for Life Sciences declined by \$17 million, as continued research lab closures in Europe, the Middle East, and Africa ("EMEA") and North America related to the COVID-19 pandemic more than offset strong demand for test kit consumables and other products to address the pandemic.

The negative impacts to sales, outlined above, were partially offset by sales increases of \$48 million in the Specialty Materials segment, primarily driven by strong demand for premium glasses in support of second-half customer launches, growth in IT products due to work and study from home trends, as well as demand for semiconductor equipment products.

Net sales for the six months ended June 30, 2020 were \$4,952 million, compared to \$5,752 million, during the same period in 2019, a net decrease of \$800 million, or 14%. Changes in net sales were as follows:

- Display Technologies net sales decreased by \$162 million, with volume decreases and display glass price declines in the low-single and mid-single digits in percentage terms, respectively;
- The negative impact of a cumulative adjustment recorded during the first quarter of 2020 to reduce revenue in the amount of \$105 million. The adjustment was associated with a previously recorded commercial benefit asset, reflected as a prepayment, to a customer with a long-term supply agreement that is exiting its production of LCD panels;

- Optical Communications net sales declined \$476 million, as sales volumes declined for carrier products by \$284 million and enterprise products by \$192 million, due to general market weakness and capital spending reductions by several major customers;
- Net sales for Environmental Technologies decreased \$182 million, as production facilities of vehicle manufacturers were temporarily shut down in key markets; and
- Net sales for Life Sciences were approximately flat.

The negative impacts to sales, outlined above, were partially offset by sales increases in the Specialty Materials segment in the amount of \$91 million, primarily driven by strong demand for premium glasses in support of second-half customer launches, growth in IT products due to work and study from home trends, as well as demand for semiconductor equipment products.

In the second quarter of 2020, we generated a net loss of \$71 million, or \$0.13 per share, compared to net income of \$92 million, or \$0.09 per share, for the same period in 2019. The decrease in net income of \$163 million, was primarily driven by the following items (amounts presented after-tax):

- Higher costs of \$152 million for an after-tax asset impairment loss related to investments in research and development programs within our All Other segment;
- Higher costs of \$49 million, primarily driven by severance and capacity realignment costs for our Display Technologies and Specialty Materials segments; and
- Lower segment net income of \$61 million, \$77 million and \$65 million for the Display Technologies, Optical Communications and Environmental Technologies segments, respectively.

The negative impacts to net income, outlined above, were partially offset by the following items:

- Translated earnings contract gains in the current period were \$111 million higher than prior year gains;
- The positive impact of discrete tax items and other tax adjustments of \$34 million, primarily due to changes in our income tax reserves;
- Translation gains on Japanese-yen denominated debt in the current period were \$31 million higher than prior period losses;
- Higher segment net income of \$23 million for our Specialty Materials segment; and
- Pension mark-to-market adjustment was \$20 million lower than the comparative period expense.

Diluted earnings per share decreased by \$0.22 per share when compared to the second quarter of 2019, driven by the decrease in net income described above, partially offset by the repurchase of 23 million shares of common stock over the last twelve months.

In the first half of 2020, we generated a net loss of \$167 million, or \$0.28 per share, compared to a net income of \$591 million, or \$0.65 per share, for the same period in 2019. The decrease in net income of \$758 million, was primarily driven by the following items (amounts presented after-tax):

- Higher costs of \$152 million for an after-tax asset impairment loss related to investments in research and development programs within our All Other segment;
- Higher costs of \$210 million, primarily driven by severance and capacity realignment costs for our Display Technologies, Optical Communications and Specialty Materials segments;
- Lower segment net income of \$117 million, \$190 million and \$85 million for the Display Technologies, Optical Communications and Environmental Technologies segments, respectively;
- The negative impact of discrete tax items and other tax adjustments of \$45 million, primarily due to changes in our income tax reserves and foreign valuation allowances on deferred tax assets; and
- The negative impact of a cumulative adjustment recorded during the first quarter of 2020 to reduce revenue in the amount of \$105 million. The adjustment was associated with a previously recorded commercial benefit asset, reflected as a prepayment, to a customer with a long-term supply agreement that is exiting its production of LCD panels.

The negative impacts to net income, outlined above, were partially offset by the following items:

- Higher segment net income of \$25 million for our Specialty Materials segment;
- Pension mark-to-market adjustment was \$20 million lower than the comparative period expense; and
- Larger gains on translated earnings contracts and lower losses on Japanese yen-denominated debt of \$12 million and \$9 million, respectively.

Diluted earnings per share decreased by \$0.93 per share when compared to the six months ended June 30, 2019, driven by the decrease in net income described above, partially offset by the repurchase of 23 million shares of common stock over the last twelve months.

The translation impact of fluctuations in foreign currency exchange rates, including the impact of hedges realized in the current quarter, did not materially impact Corning's consolidated net loss in the three and six months ended June 30, 2020, when compared to the same periods in 2019.

2020 Corporate Outlook

Given the economic uncertainty and disruption created by COVID-19, the Company withdrew its full-year 2020 guidance during the first quarter of this year. In response to the pandemic, the Company has and will continue to focus its actions on three core priorities: preserving the financial strength of the Company, protecting employees and communities, and delivering on customer commitments. The Company has taken, and will continue to take, aggressive actions to mitigate the economic impact of the pandemic.

During the second quarter of 2020, the Company positioned itself to emerge even stronger from the global health crisis. In anticipation of lower sales, we adjusted our operating plan to further reduce costs and capital spending. We have no debt due this year, and we expect to maintain a strong cash balance and generate positive free cash flow. We plan to maintain our dividend payments and have suspended share repurchases. The Company expects that third-quarter sales and profits will increase sequentially, with the amount of growth dependent upon end-market demand and economic activity during August and September. We are committed to preserving the financial strength of the Company and remain confident in our long-term growth prospects.

RESULTS OF OPERATIONS

Selected highlights from our operations follow (in millions):

	Three months ended		%	Six months ended		%
	June 30,		change	June 30,		change
	2020	2019	20 vs. 19	2020	2019	20 vs. 19
Net sales	\$ 2,561	\$ 2,940	(13)	\$ 4,952	\$ 5,752	(14)
Gross margin	\$ 756	\$ 1,065	(29)	\$ 1,317	\$ 2,164	(39)
(gross margin %)	30%	36%		27%	38%	
Selling, general and						
administrative expenses	\$ 401	\$ 414	(3)	\$ 796	\$ 815	(2)
(as a % of net sales)	16%	14%		16%	14%	
Research, development and						
engineering expenses	\$ 430	\$ 249	73	\$ 691	\$ 498	39
(as a % of net sales)	17%	8%		14%	9%	
Translated earnings contract						
gain (loss), net	\$ 37	\$ (107)	*	\$ 105	\$ 77	36
(as a % of net sales)	1%	(4%)		2%	1%	
(Loss) income before income taxes	\$ (49)	\$ 216	*	\$ (157)	\$ 791	*
(as a % of net sales)	(2%)	7%		(3%)	14%	
Provision for income taxes	\$ (22)	\$ (124)	82	\$ (10)	\$ (200)	95
(as a % of net sales)	(1%)	(4%)		(0%)	(3%)	
Net (loss) income attributable to						
Corning Incorporated	\$ (71)	\$ 92	*	\$ (167)	\$ 591	*
(as a % of net sales)	(3%)	3%		(3%)	10%	

* Not meaningful

Segment Net Sales

The following table presents segment net sales by reportable segment and All Other (in millions):

	Three months ended		%	Six months ended		%
	June 30,		change	June 30,		change
	2020	2019	20 vs. 19	2020	2019	20 vs. 19
Display Technologies	\$ 753	\$ 848	(11%)	\$ 1,504	\$ 1,666	(10%)
Optical Communications	887	1,090	(19%)	1,678	2,154	(22%)
Specialty Materials	417	369	13%	769	678	13%
Environmental Technologies	226	366	(38%)	546	728	(25%)
Life Sciences	243	260	(7%)	501	503	(0%)
All Other	62	53	17%	119	107	11%
Net sales of reportable segments and All Other	2,588	2,986	(13%)	5,117	5,836	(12%)
Impact of foreign currency movements (1)	(27)	(46)	41%	(60)	(84)	29%
Cumulative adjustment related to customer contract (2)				(105)		*
Consolidated net sales	\$ 2,561	\$ 2,940	(13%)	\$ 4,952	\$ 5,752	(14%)

(1) This amount primarily represents the impact of foreign currency adjustments in the Display Technologies and Environmental Technologies segments.

(2) Amount represents the negative impact of a cumulative adjustment recorded during the first quarter of 2020 to reduce revenue in the amount of \$105 million. The adjustment was associated with a previously recorded commercial benefit asset, reflected as a prepayment, to a customer with a long-term supply agreement that is exiting its production of LCD panels.

* Not meaningful

For the three months ended June 30, 2020, net sales of operating segments decreased by \$398 million, or 13%, when compared to the same period in 2019. The primary sales drivers by segment were as follows:

- Display Technologies net sales decreased by \$95 million, with volume decreases and display glass price declines in the mid-single digits in percentage terms;
- Optical Communications net sales declined \$203 million, as sales volumes declined for carrier and enterprise products by \$77 million and \$126 million, respectively, due to general market weakness and capital spending reductions by several major customers;
- Net sales for Environmental Technologies decreased \$140 million as production facilities of vehicle manufacturers were temporarily shut down in key markets; and
- Life Sciences net sales decreased by \$17 million, as continued research lab closures in EMEA and North America related to the COVID-19 pandemic more than offset strong demand for test kit consumables and other products to address the pandemic.

Specialty Materials segment net sales increased by \$48 million, primarily driven by strong demand for premium glasses in support of second-half customer launches, growth in IT products due to work and study from home trends, as well as demand for semiconductor equipment products.

For the six months ended June 30, 2020, net sales of operating segments decreased by \$719 million, or 12%, when compared to the same period in 2019. The primary sales drivers by segment were as follows:

- Display Technologies net sales decreased by \$162 million, with volume decreases and display glass price declines in the low-single and mid-single digits in percentage terms, respectively;
- Optical Communications net sales declined \$476 million, as sales volumes declined for carrier and enterprise products by \$284 million and \$192 million, respectively, due to general market weakness and capital spending reductions by several major customers;
- Net sales for Environmental Technologies decreased \$182 million as production facilities of vehicle manufacturers were temporarily shut down in key markets; and
- Net sales for Life Sciences were approximately flat.

Specialty Materials segment net sales increased by \$91 million, primarily driven by strong demand for premium glasses in support of second-half customer launches, growth in IT products due to work and study from home trends, as well as demand for semiconductor equipment products.

Movements in foreign exchange rates did not materially impact Corning's consolidated net sales in the three and six months ended June 30, 2020, when compared to the same periods in 2019.

Cost of Sales

The types of expenses included in the cost of sales line item are: raw materials consumption, including direct and indirect materials; salaries, wages and benefits; depreciation and amortization; production utilities; production-related purchasing; warehousing (including receiving and inspection); repairs and maintenance; inter-location inventory transfer costs; production and warehousing facility property insurance; rent for production facilities; and other production overhead.

Gross Margin

In the three and six months ended June 30, 2020, gross margin decreased by \$309 million, or 29% and \$847 million, or 39%, respectively. Gross margin as a percentage of sales declined by 6% and 11% for the three and six months ended June 30, 2020, respectively. Negative impacts to gross margin were primarily driven by accelerated depreciation for the Display Technologies segment, severance charges primarily incurred by our Display Technologies and Optical Communications segments, asset write-offs in our Display Technologies and Special Materials segments, and lower volumes in Display Technologies, Optical Communications and Environmental Technologies.

Movements in foreign exchange rates had a positive impact of \$30 million and \$45 million on Corning's consolidated gross margin in the three and six months ended June 30, 2020, when compared to the same periods in 2019.

Selling, General and Administrative Expenses

In the three and six months ended June 30, 2020, selling, general and administrative expenses declined by \$13 million, or 3%, and \$19 million, or 2%, respectively.

The types of expenses included in the selling, general and administrative expenses line item are: salaries, wages and benefits; stock-based compensation expense; travel; sales commissions; professional fees; and depreciation and amortization, utilities and rent for administrative facilities.

Research, Development and Engineering Expenses

For the three and six months ended June 30, 2020, research, development and engineering expenses increased by \$181 million, or 73%, and \$193 million, or 39%, respectively, when compared to the same periods last year, primarily driven by a pre-tax asset impairment loss of \$195 million related to the reassessment and reprioritization of research and development programs within our All Other segment. Given the current economic environment and market opportunities, Corning has rescoped and significantly reduced its investment in these research and development programs. As a percentage of sales, these expenses were 9% and 5% higher when compared to the same periods last year.

Restructuring, Impairment, and Other Charges and Credits

In the first half of 2020, and in response to uncertain global economic conditions, Corning undertook actions to transform the Company's cost structure and improve operational efficiency. During the three and six months ended June 30, 2020, Corning recorded restructuring, impairment, and other charges and credits of \$337 million and \$562 million, respectively.

During the second quarter of 2020, the Company implemented a corporate-wide workforce reduction program. Severance charges for the three and six months ended June 30, 2020, were primarily incurred to facilitate realignment of capacity in the Asia regions for our Display Technologies segment, optimize our Optical Communications segment and contain corporate costs. For the three and six months ended June 30, 2019, severance charges were primarily related to a reduction in force program to facilitate realignment of capacity in the Asia regions for our Optical Communications segment. Severance paid to employees for the three and six months ending June 30, 2020, was \$22 million and \$97 million, respectively. As of June 30, 2020 and December 31, 2019, the unpaid severance liabilities of \$82 million and \$44 million are expected to be substantially completed within the next twelve months.

Capacity realignment charges of \$60 million and \$149 million, respectively, including accelerated depreciation and asset disposals, were related to the exit of certain facilities and other exit activities in our Display Technologies and Specialty materials segments. A pre-tax asset impairment loss of \$195 million related to the rescoping and reduction of investment in research and development programs within our All Other segment was recorded in the second quarter of 2020, and was substantially all the carrying value of this asset group. Other charges and credits of \$24 million and \$83 million, respectively, were related to other exit activities.

Refer to Note 2 (Restructuring, Impairment and Other Charges and Credits) to the consolidated financial statements for additional information on restructuring activities and impairment.

Equity in Earnings of Affiliated Companies

The following provides a summary of equity in earnings of affiliated companies (in millions):

	Three months ended June 30,				Six months ended June 30,			
	2020		2019		2020		2019	
Hemlock Semiconductor Group	\$	82	\$	35	\$	99	\$	60
All other		(3)		(2)		(6)		(2)
Total equity earnings	\$	79	\$	33	\$	93	\$	58

HSG's net income for the three months ended June 30, 2020, included a pre-tax gain on settlement of a long-term sales agreement of approximately \$165 million, partially offsetting this gain was an inventory provision of approximately \$44 million associated with the settlement of this contract. Corning's share of the net settlement impact to equity earnings was approximately \$62 million.

Translated earnings contract gain (loss), net

Included in the line item translated earnings contract gain (loss), net, is the impact of foreign currency hedges which hedge our translation exposure arising from movements in the Japanese yen, South Korean won, new Taiwan dollar, euro, Chinese yuan and British pound and its impact on our net (loss) income. The following table provides detailed information on the impact of our translated earnings contract gains and losses:

	Three months ended June 30, 2020		Three months ended June 30, 2019		Change 2020 vs. 2019	
	Income before taxes	Net income	Loss before taxes	Net loss	Income before taxes	Net income
(in millions)						
Hedges related to translated earnings:						
Realized (loss) gain, net (1)	\$ (5)	\$ (4)	\$ 8	\$ 6	\$ (13)	\$ (10)
Unrealized gain (loss), net (2)	42	33	(115)	(90)	157	123
Total translated earnings contract gain (loss), net	\$ 37	\$ 29	\$ (107)	\$ (84)	\$ 144	\$ 113

	Six months ended June 30, 2020		Six months ended June 30, 2019		Change 2020 vs. 2019	
	Income before taxes	Net income	Income before taxes	Net income	Income before taxes	Net income
(in millions)						
Hedges related to translated earnings:						
Realized (loss) gain, net (1)	\$ (2)	\$ (1)	\$ 15	\$ 12	\$ (17)	\$ (13)
Unrealized gain, net (2)	107	83	62	48	45	35
Total translated earnings contract gain, net	\$ 105	\$ 82	\$ 77	\$ 60	\$ 28	\$ 22

(1) Includes before tax realized losses related to the expiration of option contracts for the three and six months ended June 30, 2020 and 2019 of \$6 million and \$14 million, respectively, and \$10 million and \$23 million, respectively. Activity reflected in operating activities in the consolidated statements of cash flows.

(2) The impact to income was primarily driven by yen-denominated hedges of translated earnings.

The gross notional value outstanding on our translated earnings contracts and foreign currency cash flow hedges were as follows (in billions):

	June 30, 2020	December 31, 2019
Japanese yen-denominated translated earnings contracts	\$ 9.5	\$ 10.2
South Korean won-denominated translated earnings contracts	0.6	0.4
Euro-denominated translated earnings contracts	0.9	1.3
Other translated earnings contracts	0.1	0.3
Total gross notional value outstanding for translated earnings contracts	11.1	12.2
Japanese yen-denominated foreign currency cash flow hedges	0.7	1.5
Other foreign currency cash flow hedges	0.3	0.6
Total gross notional value for foreign currency cash flow hedges	1.0	2.1
Total gross notional value outstanding	\$ 12.1	\$ 14.3

(Loss) Income Before Income Taxes

The translation impact of fluctuations in foreign currency exchange rates, including the impact of hedges realized in the current quarter, did not materially impact Corning's consolidated (loss) income before income taxes in the three and six months ended June 30, 2020, when compared to the same periods in 2019.

Provision for Income Taxes

Our provision for income taxes and the related effective income tax rates are as follows (in millions):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Provision for income taxes	\$ (22)	\$ (124)	\$ (10)	\$ (200)
Effective tax rate	(44.9%)	57.4%	(6.4%)	25.3%

For the three months ended June 30, 2020, the effective income tax rate differed from the U.S. statutory rate of 21% primarily due to changes in income tax reserves of approximately \$40 million. For the six months ended June 30, 2020, the effective income tax rate differed from the U.S. statutory rate of 21% primarily due to changes in income tax reserves of approximately \$40 million, an adjustment to our permanently reinvested foreign income position, foreign valuation allowances on deferred tax assets, and certain non-deductible expenses for tax purposes.

For the three and six months ended June 30, 2019, the effective income tax rate differed from the U.S. statutory rate of 21% primarily due to additional net tax expense of \$86 million driven by changes to our tax reserves, rate differences on income (loss) of consolidated foreign companies, estimated impact of base erosion and BEAT offset by the expected benefits related to FDII and the release of foreign valuation allowances on deferred tax assets.

Refer to Note 6 (Income Taxes) to the consolidated financial statements for additional information.

Net (Loss) Income Attributable to Corning Incorporated

Our net (loss) income and per share data is as follows (in millions, except per share amounts):

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
Net (loss) income attributable to Corning Incorporated	\$ (71)	\$ 92	\$ (167)	\$ 591
Net (loss) income attributable to Corning Incorporated used in				
basic (loss) earnings per common share calculation (1)	\$ (96)	\$ 68	\$ (216)	\$ 542
Net (loss) income attributable to Corning Incorporated used in				
diluted (loss) earnings per common share calculation (1)	\$ (96)	\$ 68	\$ (216)	\$ 591
Basic (loss) earnings per common share	\$ (0.13)	\$ 0.09	\$ (0.28)	\$ 0.69
Diluted (loss) earnings per common share	\$ (0.13)	\$ 0.09	\$ (0.28)	\$ 0.65
Weighted-average common shares outstanding - basic	759	781	760	782
Weighted-average common shares outstanding - diluted	759	789	760	906

(1) Refer to Note 8 ((Loss) Earnings per Common Share) to the consolidated financial statements for additional information.

Comprehensive (Loss) Income

For the three months ended June 30, 2020, comprehensive income decreased by \$134 million when compared to the same period in 2019, primarily due to the following:

- A decrease in net income of \$163 million; and
- An increase in the unamortized losses and prior service costs for postretirement benefit plans of \$12 million.

These losses were partially offset by the following:

- An increase in the gain on foreign currency translation adjustments in the amount of \$20 million, primarily driven by the South Korean won, Chinese yuan and partially offset by the Japanese yen; and
- The positive impact of a change to net unrealized gains on designated hedges of \$22 million.

For the six months ended June 30, 2020, comprehensive income decreased by \$899 million when compared to the same period in 2019, primarily due to the following:

- A decrease in net income of \$758 million;
- An increase in the loss on foreign currency translation adjustments in the amount of \$135 million, primarily driven by the Japanese yen, Chinese yuan and Brazilian real; and
- The negative impact of a change to net unrealized losses on designated hedges of \$44 million.

These losses were partially offset by the absence of \$53 million prior period unamortized actuarial losses related to the adoption of the new standard for reclassification of stranded tax effects in accumulated other comprehensive income.

Refer to Note 14 (Shareholders' Equity) to the consolidated financial statements for additional information.

CORE PERFORMANCE MEASURES

In managing the Company and assessing our financial performance, we adjust certain measures provided by our consolidated financial statements to exclude specific items to report core performance measures. These items include gains and losses on our translated earnings contracts, acquisition-related costs, certain discrete tax items and other tax-related adjustments, restructuring, impairment losses, and other charges and credits, certain litigation-related expenses, pension mark-to-market adjustments and other items which do not reflect on-going operating results of the Company or our equity affiliates. Corning utilizes constant-currency reporting for our Display Technologies, Environmental Technologies, Specialty Materials and Life Sciences segments for the Japanese yen, South Korean won, Chinese yuan, new Taiwan dollar and the euro. The Company believes that the use of constant-currency reporting allows investors to understand our results without the volatility of currency fluctuations and reflects the underlying economics of the translated earnings contracts used to mitigate the impact of changes in currency exchange rates on our earnings and cash flows. Corning also believes that reporting core performance measures provides investors greater transparency to the information used by our management team to make financial and operational decisions.

Core performance measures are not prepared in accordance with Generally Accepted Accounting Principles in the United States (“GAAP”). We believe investors should consider these non-GAAP measures in evaluating our results as they are more indicative of our core operating performance and how management evaluates our operational results and trends. These measures are not, and should not be viewed as a substitute for, GAAP reporting measures. With respect to the Company’s outlook for future periods, it is not possible to provide reconciliations for these non-GAAP measures because the Company does not forecast the movement of foreign currencies against the U.S. dollar, or other items that do not reflect ongoing operations, nor does it forecast items that have not yet occurred or are out of the Company’s control. As a result, the Company is unable to provide outlook information on a GAAP basis.

For a reconciliation of non-GAAP performance measures to their most directly comparable GAAP financial measure, please see “Reconciliation of Non-GAAP Measures”.

RESULTS OF OPERATIONS – CORE PERFORMANCE MEASURES

Selected highlights from our continuing operations, excluding certain items, follow (in millions):

	Three months ended June 30,		% change	Six months ended June 30,		% change
	2020	2019	20 vs. 19	2020	2019	20 vs. 19
Core net sales	\$ 2,588	\$ 2,986	(13)%	\$ 5,117	\$ 5,836	(12)%
Core equity in earnings of affiliated companies	\$ 55	\$ 28	96%	\$ 69	\$ 54	28%
Core net income	\$ 218	\$ 410	(47)%	\$ 395	\$ 775	(49)%

Core Net Sales

Core net sales are consistent with net sales by reportable segment. Net sales by reportable segment are presented below (in millions):

	Three months ended June 30,		% change	Six months ended June 30,		% change
	2020	2019	20 vs. 19	2020	2019	20 vs. 19
Display Technologies	\$ 753	\$ 848	(11)%	\$ 1,504	\$ 1,666	(10)%
Optical Communications	887	1,090	(19)%	1,678	2,154	(22)%
Specialty Materials	417	369	13%	769	678	13%
Environmental Technologies	226	366	(38)%	546	728	(25)%
Life Sciences	243	260	(7)%	501	503	(0)%
All Other	62	53	17%	119	107	11%
Net sales of reportable segments and All Other	2,588	2,986	(13)%	5,117	5,836	(12)%
Impact of foreign currency movements (1)	(27)	(46)	41%	(60)	(84)	29%
Cumulative adjustment related to customer contract (2)				(105)		*
Consolidated net sales	\$ 2,561	\$ 2,940	(13)%	\$ 4,952	\$ 5,752	(14)%

(1) This amount primarily represents the impact of foreign currency adjustments in the Display Technologies and Environmental Technologies segments.

(2) Amount represents the negative impact of a cumulative adjustment recorded during the first quarter of 2020 to reduce revenue in the amount of \$105 million. The adjustment was associated with a previously recorded commercial benefit asset, reflected as a prepayment, to a customer with a long-term supply agreement that is exiting its production of LCD panels.

* Not meaningful

Core Equity in Earnings of Affiliated Companies

The following provides a summary of core equity in earnings of affiliated companies (in millions):

	Three months ended		Six months ended	
	June 30,		June 30,	
	2020	2019	2020	2019
Hemlock Semiconductor Group	\$ 58	\$ 24	\$ 75	\$ 50
All other	(3)	4	(6)	4
Total core equity earnings	\$ 55	\$ 28	\$ 69	\$ 54

Core Net Income

In the three months ended June 30, 2020, we generated core net income of \$218 million, or \$0.25 per share, compared to core net income generated in the three months ended June 30, 2019, of \$410 million, or \$0.45 per share. The decrease of \$192 million was due to lower earnings across Display Technologies, Optical Communications and Environmental Technologies segments of \$61 million, \$77 million and \$65 million, respectively, partially offset by higher earnings in Specialty Materials of \$23 million, when compared to the same period in 2019.

In the six months ended June 30, 2020, we generated core net income of \$395 million, or \$0.45 per share, compared to core net income generated in the six months ended June 30, 2019, of \$775 million, or \$0.86 per share. The decrease of \$380 million was due to lower earnings across Display Technologies, Optical Communications and Environmental Technologies segments of \$117 million, \$190 million and \$85 million, respectively, partially offset by higher earnings in Specialty Materials of \$25 million, when compared to the same period in 2019.

Included in core net income for the three and six months ended June 30, 2020 and 2019, is net periodic pension expense in the amounts of \$13 million and \$25 million, respectively, and \$21 million and \$42 million, respectively.

Core Earnings per Common Share

The following table sets forth the computation of core basic and core diluted earnings per common share (in millions, except per share amounts):

	Three months ended		Six months ended	
	June 30,		June 30,	
	2020	2019	2020	2019
Core net income attributable to Corning Incorporated	\$ 218	\$ 410	\$ 395	\$ 775
Less: Series A convertible preferred stock dividend	25	24	49	49
Core net income available to common stockholders - basic	193	386	346	726
Add: Series A convertible preferred stock dividend	25	24	49	49
Core net income available to common stockholders - diluted	\$ 218	\$ 410	\$ 395	\$ 775
Weighted-average common shares outstanding - basic	759	781	760	782
Effect of dilutive securities:				
Stock options and other dilutive securities	6	8	6	9
Series A convertible preferred stock	115	115	115	115
Weighted-average common shares outstanding - diluted	880	904	881	906
Core basic earnings per common share	\$ 0.25	\$ 0.49	\$ 0.46	\$ 0.93
Core diluted earnings per common share	\$ 0.25	\$ 0.45	\$ 0.45	\$ 0.86

Reconciliation of Non-GAAP Measures

We utilize certain financial measures and key performance indicators that are not calculated in accordance with GAAP to assess our financial and operating performance. A non-GAAP financial measure is defined as a numerical measure of a company's financial performance that (i) excludes amounts, or is subject to adjustments that have the effect of excluding amounts, that are included in the comparable measure calculated and presented in accordance with GAAP in the consolidated statements of (loss) income or statements of cash flows, or (ii) includes amounts, or is subject to adjustments that have the effect of including amounts, that are excluded from the comparable measure as calculated and presented in accordance with GAAP in the consolidated statements of (loss) income or statements of cash flows.

Core net sales, core equity in earnings of affiliated companies and core net income are non-GAAP financial measures utilized by our management to analyze financial performance without the impact of items that are driven by general economic conditions and events that do not reflect the underlying fundamentals and trends in the Company's operations.

The following tables reconcile our non-GAAP financial measures to their most directly comparable GAAP financial measure (amounts in millions except percentages and per share amounts):

	Three months ended June 30, 2020					
	Net sales	Equity earnings	(Loss) income before income taxes	Net (loss) income	Effective tax rate (a)	Per share
As reported - GAAP	\$ 2,561	\$ 79	\$ (49)	\$ (71)	(44.9%)	\$ (0.13)
Constant-currency adjustment (1)	27		6	3		0.00
Translation gain on Japanese yen-denominated debt (2)			(3)	(3)		(0.00)
Translated earnings contract gain (3)			(35)	(27)		(0.04)
Acquisition-related costs (4)			29	21		0.03
Discrete tax items and other tax-related adjustments (5)				40		0.05
Litigation, regulatory and other legal matters (6)			25	20		0.03
Restructuring, impairment and other charges and credits (7)			337	254		0.33
Equity in earnings of affiliated companies (9)		(24)	(24)	(18)		(0.02)
Pension mark-to-market adjustment (10)			(2)	(1)		(0.00)
Core performance measures	\$ 2,588	\$ 55	\$ 284	\$ 218	23.2%	\$ 0.25

(a) Based upon statutory tax rates in the specific jurisdiction for each event.

	Three months ended June 30, 2019					
	Net sales	Equity earnings	Income before income taxes	Net income	Effective tax rate (a)	Per share
As reported - GAAP	\$ 2,940	\$ 33	\$ 216	\$ 92	57.4%	\$ 0.09
Constant-currency adjustment (1)	46		36	43		0.05
Translation loss on Japanese yen-denominated debt (2)			36	28		0.04
Translated earnings contract loss (3)			107	84		0.11
Acquisition-related costs (4)			34	26		0.03
Discrete tax items and other tax-related adjustments (5)				74		0.09
Restructuring, impairment and other charges and credits (7)		6	67	53		0.07
Equity in earnings of affiliated companies (9)		(11)	(11)	(9)		(0.01)
Pension mark-to-market adjustment (10)			24	19		0.02
Core performance measures	\$ 2,986	\$ 28	\$ 509	\$ 410	19.4%	\$ 0.45

(a) Based upon statutory tax rates in the specific jurisdiction for each event.

See Part 1, Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, Results of Operations – Core Performance Measures, Reconciliation of Non-GAAP Measures, "Items which we exclude from GAAP measures to report core performance measures" for the descriptions of the footnoted reconciling items.

	Six months ended June 30, 2020					
	Net sales	Equity earnings	(Loss) income before income taxes	Net (loss) income	Effective tax rate (a)	Per share
As reported – GAAP	\$ 4,952	\$ 93	\$ (157)	\$ (167)	(6.4%)	\$ (0.28)
Constant-currency adjustment (1)	60		25	(19)		(0.03)
Translation loss on Japanese yen-denominated debt (2)			11	8		0.01
Translated earnings contract gain (3)			(93)	(72)		(0.09)
Acquisition-related costs (4)			57	42		0.06
Discrete tax items and other tax-related adjustments (5)				77		0.10
Litigation, regulatory and other legal matters (6)			25	20		0.03
Restructuring, impairment and other charges and credits (7)			562	420		0.55
Cumulative adjustment related to customer contract (8)	105		105	105		0.14
Equity in earnings of affiliated companies (9)		(24)	(24)	(18)		(0.02)
Pension mark-to-market adjustment (10)			(2)	(1)		(0.00)
Core performance measures	\$ 5,117	\$ 69	\$ 509	\$ 395	22.4%	\$ 0.45

(a) Based upon statutory tax rates in the specific jurisdiction for each event.

	Six months ended June 30, 2019					
	Net sales	Equity earnings	Income before income taxes	Net income	Effective tax rate (a)	Per share
As reported - GAAP	\$ 5,752	\$ 58	\$ 791	\$ 591	25.3%	\$ 0.65
Constant-currency adjustment (1)	84	1	73	74		0.08
Translation loss on Japanese yen-denominated debt (2)			21	17		0.02
Translated earnings contract gain (3)			(77)	(60)		(0.07)
Acquisition-related costs (4)			71	54		0.06
Discrete tax items and other tax-related adjustments (5)				31		0.03
Restructuring, impairment and other charges and credits (7)		6	74	58		0.06
Equity in earnings of affiliated companies (9)		(11)	(11)	(9)		(0.01)
Pension mark-to-market adjustment (10)			24	19		0.02
Core performance measures	\$ 5,836	\$ 54	\$ 966	\$ 775	19.8%	\$ 0.86

(a) Based upon statutory tax rates in the specific jurisdiction for each event.

See Part 1, Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations, Results of Operations – Core Performance Measures, Reconciliation of Non-GAAP Measures, "Items which we exclude from GAAP measures to report core performance measures" for the descriptions of the footnoted reconciling items.

Items which we exclude from GAAP measures to arrive at core performance measures are as follows:

- (1) Constant-currency adjustment: Because a significant portion of segment revenues and expenses are denominated in currencies other than the U.S. dollar, management believes it is important to understand the impact on core net income of translating these currencies into U.S. dollars. Our Display Technologies segment sales and net income are primarily denominated in Japanese yen, but also impacted by the South Korean won, Chinese yuan, and new Taiwan dollar. Environmental Technologies and Life Science segments sales and net income are impacted by the euro, Chinese yuan and Japanese yen. Presenting results on a constant-currency basis mitigates the translation impact and allows management to evaluate performance period over period, analyze underlying trends in our businesses, and establish operational goals and forecasts. We establish constant-currency rates based on internally derived management estimates which are closely aligned with the currencies we have hedged.

Constant-currency rates are as follows:

Currency	Japanese yen	Korean won	Chinese yuan	New Taiwan dollar	Euro
Rate	¥107	₩1,175	¥6.7	NT\$31	€81

- (2) Translation (gain) loss on Japanese yen-denominated debt: We have excluded the gain or loss on the translation of our yen-denominated debt to U.S. dollars.
- (3) Translated earnings contract (gain) loss: We have excluded the impact of the realized and unrealized gains and losses of our Japanese yen, South Korean won, Chinese yuan, euro and new Taiwan dollar-denominated foreign currency hedges related to translated earnings, as well as the unrealized gains and losses of our British pound-denominated foreign currency hedges related to translated earnings.
- (4) Acquisition-related costs: These expenses include intangible amortization, inventory valuation adjustments and external acquisition-related deal costs.
- (5) Discrete tax items and other tax-related adjustments: These include discrete period tax items such as changes in tax law, the impact of tax audits, changes in judgement about the realizability of certain deferred tax assets and other tax-related adjustments.
- (6) Litigation, regulatory and other legal matters: Includes amounts that reflect developments in commercial litigation, intellectual property disputes, adjustments to our estimated liability for environmental-related items and other legal matters.
- (7) Restructuring, impairment and other charges and credits: This amount includes restructuring, impairment losses and other charges and credits, as well as other expenses, primarily accelerated depreciation and asset write-offs, which are not related to continuing operations and are not classified as restructuring expense.
- (8) Cumulative adjustment related to customer contract: The negative impact of a cumulative adjustment recorded during the first quarter of 2020 to reduce revenue in the amount of \$105 million. The adjustment was associated with a previously recorded commercial benefit asset, reflected as a prepayment, to a customer with a long-term supply agreement that is exiting its production of LCD panels.
- (9) Equity in earnings of affiliated companies: These adjustments relate to costs not related to continuing operations of our affiliated companies, such as restructuring, impairment losses, inventory adjustments, other charges and credits and settlements under “take-or-pay” contracts.
- (10) Pension mark-to-market adjustment: Defined benefit pension mark-to-market gains and losses, which arise from changes in actuarial assumptions and the difference between actual and expected returns on plan assets and discount rates.

REPORTABLE SEGMENTS

Our reportable segments are as follows:

- Display Technologies – manufactures glass substrates for flat panel liquid crystal displays and other high-performance display panels.
- Optical Communications – manufactures carrier network and enterprise network components for the telecommunications industry.
- Specialty Materials – manufactures products that provide more than 150 material formulations for glass, glass ceramics and fluoride crystals to meet demand for unique customer needs.
- Environmental Technologies – manufactures ceramic substrates and filters for automotive and diesel applications.
- Life Sciences – manufactures glass and plastic labware, equipment, media, serum and reagents enabling workflow solutions for drug discovery and bioproduction.

All other segments that do not meet the quantitative threshold for separate reporting have been grouped as “All Other.” This group is primarily comprised of the results of the pharmaceutical technologies, auto glass and new product lines and development projects, as well as certain corporate investments.

We prepared the financial results for our reportable segments on a basis consistent with our internal disaggregation of financial information to assist our chief operating decision maker (“CODM”) in making internal operating decisions. The impact of changes in the Japanese yen, South Korean won, Chinese yuan and new Taiwan dollar are excluded from segment sales and segment net income for the Display Technologies and Specialty Materials segments. The impact of changes in the euro, Chinese yuan and Japanese yen are excluded from segment sales and segment net income for our Environmental Technologies and Life Sciences segments. Certain income and expenses are included in the unallocated amounts in the reconciliation of reportable segment net income (loss) to consolidated net (loss) income. These include items that are not used by our CODM in evaluating the results of or in allocating resources to our segments and include the following items: the impact of our translated earnings contracts; acquisition-related costs; discrete tax items and other tax-related adjustments; certain litigation, regulatory and other legal matters; restructuring, impairment losses and other charges and credits; adjustments relating to acquisitions; and other non-recurring non-operational items. Although we exclude these amounts from segment results, they are included in reported consolidated results.

We included the earnings of equity affiliates that are closely associated with our reportable segments in the respective segment’s net income (loss). We have allocated certain common expenses among reportable segments differently than we would for stand-alone financial information. Segment net income (loss) may not be consistent with measures used by other companies.

Display Technologies

The following table provides net sales and net income for the Display Technologies segment (in millions):

	Three months ended June 30,		% change	Six months ended June 30,		% change
	2020	2019	20 vs. 19	2020	2019	20 vs. 19
Segment net sales	\$ 753	\$ 848	(11%)	\$ 1,504	\$ 1,666	(10%)
Segment net income	\$ 152	\$ 213	(29%)	\$ 304	\$ 421	(28%)

Net sales in the Display Technologies segment decreased by \$95 million and \$162 million in the three and six months ended June 30, 2020, respectively. Volume decreases and display glass price declines in the mid-single digits in percentage terms drove the change for the current quarter when compared to the three months ended June 30, 2019. Volume and display glass price declines in the low-single digits and mid-single digits in percentage terms, respectively, drove the change compared to the six months ended June 30, 2019.

Net income in the Display Technologies segment decreased by \$61 million and \$117 million during the three and six months ended June 30, 2020, respectively, primarily driven by the changes in sales outlined above. Profitability was impacted by lower sales and production volumes.

Optical Communications

The following table provides net sales and net income for the Optical Communications segment (in millions):

	Three months ended June 30,		% change 20 vs. 19	Six months ended June 30,		% change 20 vs. 19
	2020	2019		2020	2019	
Segment net sales	\$ 887	\$ 1,090	(19%)	\$ 1,678	\$ 2,154	(22%)
Segment net income	\$ 81	\$ 158	(49%)	\$ 110	\$ 300	(63%)

Optical Communications net sales declined \$203 million and \$476 million in the three and six months ended June 30, 2020, respectively. Net sales of carrier products were \$77 million and \$284 million lower, respectively, and enterprise products were \$126 million and \$192 million lower, respectively, due to general market weakness and capital spending reductions by several major customers. The year-over-year decline in sales was in-line with the passive optical market decline.

Net income decreased by \$77 million and \$190 million for the three and six months ended June 30, 2020, respectively, primarily driven by the changes in sales, outlined above. Profitability was impacted by lower sales and production volumes.

Specialty Materials

The following table provides net sales and net income for the Specialty Materials segment (in millions):

	Three months ended June 30,		% change 20 vs. 19	Six months ended June 30,		% change 20 vs. 19
	2020	2019		2020	2019	
Segment net sales	\$ 417	\$ 369	13%	\$ 769	\$ 678	13%
Segment net income	\$ 90	\$ 67	34%	\$ 141	\$ 116	22%

Net sales in the Specialty Materials segment increased by \$48 million and \$91 million for the three and six months ended June 30, 2020, respectively, primarily driven by strong demand for premium glasses in support of second-half customer launches, growth in IT products due to work and study from home trends, as well as demand for semiconductor equipment products.

Net income increased by \$23 million and \$25 million for the three and six months ended June 30, 2020, respectively, primarily driven by the sales increases outlined above.

Environmental Technologies

The following table provides net sales and net income for the Environmental Technologies segment (in millions):

	Three months ended June 30,		% change 20 vs. 19	Six months ended June 30,		% change 20 vs. 19
	2020	2019		2020	2019	
Segment net sales	\$ 226	\$ 366	(38%)	\$ 546	\$ 728	(25%)
Segment net income	\$ —	\$ 65	*	\$ 35	\$ 120	(71%)

* Not meaningful

Net sales in the Environmental Technologies segment declined by \$140 million and \$182 million for the three and six months ended June 30, 2020, respectively. Sales were negatively impacted by the temporary shutdown of vehicle manufacturing facilities in key markets that began in the first quarter and continued for much of the second quarter.

Net income decreased by \$65 million and \$85 million for the three and six months ended June 30, 2020, respectively, primarily driven by decreases in sales outlined above. Profitability was impacted by lower sales and production volumes.

Life Sciences

The following table provides net sales and net income for the Life Sciences segment (in millions):

	Three months ended June 30,			% change	Six months ended June 30,			% change		
	2020		2019	20 vs. 19	2020		2019	20 vs. 19		
Segment net sales	\$	243	\$	260	(7%)	\$	501	\$	503	(0%)
Segment net income	\$	31	\$	40	(23%)	\$	69	\$	71	(3%)

Net sales in the Life Sciences segment decreased by \$17 million and \$2 million for the three and six months ended June 30, 2020. Life Sciences second-quarter sales were down 7% year over year as continued research lab closures in EMEA and North America related to the COVID-19 pandemic more than offset strong demand for test kit consumables and other products to address the pandemic.

Net income decreased by \$9 million and \$2 million for the three and six months ended June 30, 2020, respectively, driven by the lower sales volume, outlined above.

All Other

All other segments that do not meet the quantitative threshold for separate reporting have been grouped as “All Other.” This group is primarily comprised of the results of the pharmaceutical technologies, auto glass and new product lines and development projects, as well as certain corporate investments.

The following table provides net sales and net loss for All Other (in millions):

	Three months ended June 30,			% change	Six months ended June 30,			% change
	2020		2019	20 vs. 19	2020		2019	20 vs. 19
Segment net sales	\$	62	\$ 53	17%	\$ 119	\$ 107		11%
Segment net loss	\$	(66)	\$ (68)	3%	\$ (135)	\$ (140)		4%

Net sales of this segment increased by \$9 million and \$12 million for the three and six months ended June 30, 2020, respectively, when compared to the same periods in 2019, driven primarily by sales changes in our emerging businesses. Net loss decreased by \$2 million and \$5 million, respectively, primarily driven by the change in sales when compared to the same periods in 2019.

CAPITAL RESOURCES AND LIQUIDITY

Financing and Capital Resources

Debt Issuances

2020

During the second quarter of 2020, Corning established an incremental liquidity facility for 25 billion Japanese yen, equivalent to \$232 million USD, with a maturity of three years. As of June 30, 2020, the facility has not been drawn upon.

In the first quarter of 2020, Corning established two unsecured variable rate loan facilities for 1,050 million Chinese yuan, equivalent to \$150 million USD, and 749 million Chinese yuan, equivalent to \$105 million USD, each with a maturity of five years.

Borrowings under these loan facilities through the end of the second quarter totaled 1,466 million Chinese yuan, equivalent to \$209 million USD. These Chinese yuan-denominated proceeds will not be converted into USD and will be used for capital projects. Payments of principal and interest on the Notes will be in Chinese yuan, or should yuan be unavailable due to circumstances beyond Corning’s control, a USD equivalent.

2019

There was no material debt activity in the first half of 2019.

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Share Repurchase Program

On April 26, 2018, Corning's Board of Directors approved a \$2 billion share repurchase program with no expiration date (the "2018 Repurchase Program"). On July 17, 2019, Corning's Board of Directors authorized \$5 billion in share repurchases with no expiration date (the "2019 Repurchase Program").

The Company suspended share buybacks during the first quarter of 2020 and made no share repurchases for the three months ended June 30, 2020. For the six months ended June 30, 2020, the Company repurchased 4.1 million shares of common stock on the open market for approximately \$105 million, as part of its 2018 Repurchase Program.

In the three and six months ended June 30, 2019, the Company repurchased 4.8 million and 12.6 million shares of common stock on the open market for approximately \$151 million and \$395 million, respectively, as part of its 2018 Repurchase Program.

Capital Spending

In response to the COVID-19 pandemic and the ensuing economic uncertainty, during the second quarter of 2020 the Company reduced planned annual capital expenditures to approximately \$1.4 billion. Capital spending totaled \$833 million for the six months ended June 30, 2020.

Cash Flow

Summary of cash flow data (in millions):

	Six months ended June 30,	
	2020	2019
Net cash provided by operating activities	\$ 798	\$ 124
Net cash used in investing activities	\$ (784)	\$ (1,034)
Net cash used in financing activities	\$ (272)	\$ (262)

Net cash provided by operating activities increased by \$674 million in the six months ended June 30, 2020, when compared to the same period in the prior year. The change was primarily driven by increased collection of accounts receivable, inventory reductions, receipt of a customer deposit and refund of tax assessments from the South Korean government in the amounts of \$228 million, \$310 million, \$125 million and \$101 million, respectively.

Net cash used in investing activities decreased by \$250 million in the six months ended June 30, 2020, when compared to the same period last year, primarily driven by a reduction in capital expenditures.

Net cash used in financing activities in the six months ended June 30, 2020 increased by \$10 million, when compared to the same period last year. We received \$209 million in proceeds from long-term debt and reduced repurchases of treasury stock by \$302 million, offset by the absence of commercial paper in the amount of \$446 million, for the six months ended June 30, 2020.

Defined Benefit Pension Plans

We have defined benefit pension plans covering certain domestic and international employees. Our funding policy is to contribute, over time, an amount exceeding the minimum requirements to achieve the Company's long-term funding targets. During the second quarter of 2020, Corning contributed \$20 million in cash to our U.S. pension plans. We plan to contribute \$60 million and \$53 million in cash to our U.S. and international plans, respectively, during the second half of 2020.

Key Balance Sheet Data

Balance sheet and working capital measures are provided in the following table (in millions):

	June 30, 2020	December 31, 2019
Working capital	\$ 3,826	\$ 3,942
Current ratio	2.3:1	2.1:1
Trade accounts receivable, net of allowances	\$ 1,712	\$ 1,836
Days sales outstanding	60	59
Inventories	\$ 2,235	\$ 2,320
Inventory turns	3.3	3.3
Days payable outstanding (1)	40	48
Long-term debt	\$ 7,797	\$ 7,729
Total debt to total capital	39%	37%

(1) Includes trade payables only.

Management Assessment of Liquidity

Corning is committed to strong financial stewardship. We have no debt due over the next twelve months, and we expect to maintain a strong cash balance. We expect to generate positive free cash flow for the year.

We ended the first half of 2020 with approximately \$2.2 billion of cash and cash equivalents. Our cash and cash equivalents are held in various locations throughout the world, with approximately 68% held outside of the United States, and are generally unrestricted. We utilize a variety of strategies to ensure that our worldwide cash is available in the locations in which it is needed.

Corning also has a commercial paper program pursuant to which we may issue short-term, unsecured commercial paper up to a maximum aggregate principal amount outstanding at any one time of \$1.5 billion. Under this program, the Company may issue the paper from time to time and will use the proceeds for general corporate purposes. Corning had no outstanding commercial paper at June 30, 2020 and December 31, 2019.

The Company's Revolving Credit Agreement is available to support its commercial paper program and for general corporate purposes.

The continued spread of COVID-19 has led to disruption and volatility in the global capital markets, including the commercial paper markets, which, depending on future developments, could impact liquidity in the future should we require access to the capital markets during a period of significant disruption. Corning's other sources of liquidity, including its Revolving Credit Agreement and Japanese yen-denominated liquidity facility, are available in case of market disruption when liquidity is needed.

Other

We complete comprehensive reviews of our significant customers and their creditworthiness by analyzing their financial strength at least annually, or more frequently for customers where we have identified an increased measure of risk. We closely monitor payments and developments which may signal possible customer credit issues. From time to time, we factor or sell accounts receivable. During the three months ended June 30, 2020, we sold accounts receivable, accelerating collections for the period of \$196 million. Sales of accounts receivable during the first quarter of 2020 were \$78 million, which we believe would have been collected during the normal course of business during the second quarter of 2020. We currently have not identified any potential material impact on our liquidity resulting from customer credit issues.

Our major sources of funding for 2020 and beyond will be our operating cash flow and proceeds from any issuances of debt. We believe we have sufficient liquidity to fund operations, acquisitions, capital expenditures, scheduled debt repayments and dividend payments.

Our Revolving Credit Agreement includes affirmative and negative covenants with which we must comply, including a leverage (debt to capital ratio) financial covenant. The required leverage ratio is a maximum of 60%. At June 30, 2020, our leverage using this measure was approximately 39%. As of June 30, 2020, we were in compliance and no amounts were outstanding under the Company's Revolving Credit Agreement.

Our debt instruments contain customary event of default provisions, which allow the lenders the option of accelerating all obligations upon the occurrence of certain events. In addition, some of our debt instruments contain a cross default provision, whereby an uncured default of a specified amount on one debt obligation of the Company, also would be considered a default under the terms of another debt instrument. As of June 30, 2020, we were in compliance with all such provisions.

Other than discussed, management is not aware of any known trends or any known demands, commitments, events or uncertainties that will, or are reasonably likely to, result in insufficient liquidity. There are no known trends, favorable or unfavorable, that would have a material change in the overall cost of our liquidity.

Off Balance Sheet Arrangements

There have been no material changes outside the ordinary course of business in our off-balance sheet arrangements as disclosed in our 2019 Form 10-K under the caption “Off Balance Sheet Arrangements.”

Contractual Obligations

There have been no material changes outside the ordinary course of business in the contractual obligations disclosed in our 2019 Form 10-K under the caption “Contractual Obligations.”

CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements requires management to make estimates and assumptions that affect amounts reported therein. The estimates that require management’s most difficult, subjective or complex judgments are described in our 2019 Form 10-K and remain unchanged through the first six months of 2020. For certain items, additional details are provided below.

Impairment of Assets Held for Use

We are required to assess the recoverability of the carrying value of long-lived assets when an indicator of impairment has been identified. We review our long-lived assets in each quarter in which impairment indicators are present. We must exercise judgment in assessing whether an event of impairment has occurred. In the second quarter and in consideration of the economic risks and uncertainties associated with COVID-19, we evaluated the fair value and recoverability of our long-lived assets and determined that there were no impairments at the segment level as of June 30, 2020, except for an asset group related to the reassessment and reprioritization of research and development programs within our All Other segment. Based on the recoverability test of this asset group, the undiscounted cash flows were significantly lower than its carrying values, resulting in a pre-tax impairment loss of \$195 million.

Refer to Note 2 (Restructuring, Impairment and Other Charges and Credits) to the consolidated financial statements for additional information on restructuring activities and impairment.

Manufacturing equipment includes certain components of production equipment that are constructed of precious metals, primarily platinum and rhodium. These metals are not depreciated because they have very low physical losses and are repeatedly reclaimed and reused in our manufacturing process and have a very long useful life. Precious metals are reviewed for impairment as part of our assessment of long-lived assets. This review considers all the Company’s precious metals that are either in place in the production process; in reclamation, fabrication, or refinement in anticipation of re-use; or awaiting use to support increased capacity. Precious metals are only acquired to support our manufacturing operations and are not held for trading or other purposes.

At June 30, 2020 and December 31, 2019, the carrying value of precious metals was lower than the fair market value by \$1.2 billion and \$849 million, respectively. These precious metals are utilized by the Display Technologies and Specialty Materials segments. The potential for impairment exists in the future if negative events significantly decrease the cash flow of these segments. Such events include, but are not limited to, a significant decrease in demand for products or a significant decrease in profitability in our Display Technologies or Specialty Materials segments.

Impairment of Goodwill

We are required to make certain subjective and complex judgments in assessing whether an event of impairment of goodwill has occurred, including assumptions and estimates used to determine the fair value of our reporting units. Goodwill is tested for impairment at the reporting unit level. A reporting unit is equivalent to an operating segment or a component of an operating segment which constitutes a business and for which discrete financial information is regularly reviewed by segment management. An impairment loss generally would be recognized when the carrying amount of a reporting unit’s net assets exceeds the estimated fair value of the reporting unit.

Corning has recorded goodwill in the Display Technologies, Optical Communications, Specialty Materials, Life Sciences and All Other operating segments. Each of these operating segments is a separate reporting unit; however, Specialty Materials and All Other are each made up of two separate reporting units. On a quarterly basis, or if an event occurs or circumstances change that indicate the carrying amount may be impaired, management performs a qualitative assessment of factors in each reporting unit within these operating segments to determine if there have been any triggering events. Considering the economic risks and uncertainties associated with COVID-19, we performed a quantitative test of goodwill during the three months ended March 31, 2020, and determined that the fair values significantly exceeded the carrying values for all our reporting units. During the three months ended June 30, 2020, we performed an assessment to identify potential impairment indicators, however no indicators of impairment were present.

The quantitative assessment is performed by assessing various factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. These factors include, but are not limited to, changes in macroeconomic conditions, industry and market considerations, cost factors, overall financial performance, other relevant entity-specific events, or a sustained decrease in share price.

NEW ACCOUNTING STANDARDS

Refer to Note 1 (Significant Accounting Policies) to the consolidated financial statements.

ENVIRONMENT

Corning has been named by the Environmental Protection Agency (“the Agency”) under the Superfund Act, or by state governments under similar state laws, as a potentially responsible party for 15 active hazardous waste sites. Under the Superfund Act, all parties who may have contributed any waste to a hazardous waste site, identified by the Agency, are jointly and severally liable for the cost of cleanup unless the Agency agrees otherwise. It is Corning’s policy to accrue for its estimated liability related to Superfund sites and other environmental liabilities related to property owned by Corning based on expert analysis and continual monitoring by both internal and external consultants. At June 30, 2020 and December 31, 2019, Corning had accrued approximately \$47 million and \$41 million, respectively, for the undiscounted estimated liability for environmental cleanup and related litigation. Based upon the information developed to date, management believes that the accrued reserve is a reasonable estimate of the Company’s liability and that the risk of an additional loss in an amount materially higher than that accrued is remote.

FORWARD-LOOKING STATEMENTS

The statements in this Quarterly Report on Form 10-Q, in reports subsequently filed by Corning with the SEC on Forms 8-K, and related comments by management that are not historical facts or information and contain words such as “will,” “believe,” “anticipate,” “expect,” “intend,” “plan,” “seek,” “see,” “would,” and “target” and similar expressions are forward-looking statements. Such statements relate to future events that by their nature address matters that are, to different degrees, uncertain. These forward-looking statements relate to, among other things, the Company’s future operating performance, the Company’s share of new and existing markets, the Company’s revenue and earnings growth rates, the Company’s ability to innovate and commercialize new products, and the Company’s implementation of cost-reduction initiatives and measures to improve pricing, including the optimization of the Company’s manufacturing capacity.

Although the Company believes that these forward-looking statements are based upon reasonable assumptions regarding, among other things, current estimates and forecasts, general economic conditions, its knowledge of its business, and key performance indicators that impact the Company, actual results could differ materially. The Company does not undertake to update forward-looking statements. Some of the risks, uncertainties and other factors that could cause actual results to differ materially from those expressed in or implied by the forward-looking statements include, but are not limited to:

- the duration and severity of the recent COVID-19 pandemic, and its ultimate impact across our businesses on demand, operations and our global supply chains;
- the effects of acquisitions, dispositions and other similar transactions;
- global business, financial, economic and political conditions;
- tariffs and import duties;
- currency fluctuations between the U.S. dollar and other currencies, primarily the Japanese yen, new Taiwan dollar, euro, Chinese yuan and South Korean won;
- product demand and industry capacity;
- competitive products and pricing;
- availability and costs of critical components and materials;
- new product development and commercialization;
- order activity and demand from major customers;
- the amount and timing of our cash flows and earnings and other conditions, which may affect our ability to pay our quarterly dividend at the planned level or to repurchase shares at planned levels;
- possible disruption in commercial activities due to terrorist activity, cyber-attack, armed conflict, political or financial instability, natural disasters, or major health concerns;
- loss of intellectual property due to theft, cyber-attack, or disruption to our information technology infrastructure;
- unanticipated disruption to equipment, facilities, IT systems or operations;
- effect of regulatory and legal developments;
- ability to pace capital spending to anticipated levels of customer demand;
- rate of technology change;
- ability to enforce patents and protect intellectual property and trade secrets;
- adverse litigation;
- product and components performance issues;
- retention of key personnel;
- customer ability, most notably in the Display Technologies segment, to maintain profitable operations and obtain financing to fund ongoing operations and manufacturing expansions and pay receivables when due;
- loss of significant customers;
- changes in tax laws and regulations including the 2017 Tax Cuts and Jobs Act;
- the impacts of audits by taxing authorities;
- the potential impact of legislation, government regulations, and other government action and investigations; and
- other risks detailed in Corning’s SEC filings.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market Risk Disclosures

As noted in our 2019 Form 10-K, we operate and conduct business in many foreign countries and as a result are exposed to fluctuations between the U.S. dollar and other currencies. Volatility in the global financial markets could increase the volatility of foreign currency exchange rates which would, in turn, impact our sales and net (loss) income. For a discussion of our exposure to market risk and how we mitigate that risk, refer to Part II, Item 1A, Risk Factors in this Quarterly Report on Form 10-Q and Part II, Item 7A, Quantitative and Qualitative Disclosures About Market Risks, contained in our 2019 Form 10-K.

ITEM 4. CONTROLS AND PROCEDURES

Under the supervision of and with the participation of Corning's management, including our chief executive officer and chief financial officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended), as of June 30, 2020, the end of the period covered by this report. Based on that evaluation, we have concluded that the Company's disclosure controls and procedures were effective as of that date. Corning's disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by Corning in the reports that it files or submits under the Exchange Act is accumulated and communicated to Corning's management, including Corning's principal executive and principal financial officers, or other persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

An evaluation of our internal controls over financial reporting was also performed to determine whether any changes have occurred during the period covered by this Report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. The chief executive officer and chief financial officer concluded that there was no change in Corning's internal control over financial reporting that materially affected, or is reasonably likely to materially affect, internal control over financial reporting.

Part II – Other Information

ITEM 1. LEGAL PROCEEDINGS

Environmental Litigation. See our 2019 Form 10-K, Part I, Item 3. For additional information and updates to estimated liabilities as of June 30, 2020, see Part I, Item 1, Financial Statements, Note 4 (Commitments, Contingencies and Guarantees) of the notes to the consolidated financial statements included under Item 1 of this quarterly report, which is incorporated herein by reference.

ITEM 1A. RISK FACTORS

The COVID-19 pandemic is adversely affecting, and is expected to continue to adversely affect, our operations and supply chains, and we have experienced and expect to continue to experience unpredictable reductions in demand for certain of our products.

COVID-19 has impacted and may further impact the global economy, including negatively impacting economic growth, the proper functioning of financial and capital markets, foreign currency exchange rates, and interest rates. We currently are unable to predict with certainty the duration and severity of the spread of the coronavirus, and responses thereto, which are highly uncertain and will, to a large degree, be a function of factors beyond our control, such as the continued spread or recurrence of contagion, the implementation of effective preventative and containment measures, the development of effective medical solutions, the extent to which governmental restrictions on travel, public gatherings, mobility and other activities remain in place or are augmented, financial and other market reactions to the foregoing, and reactions and responses of communities and societies.

While we expect the impacts of COVID-19 to have an adverse effect on our business, financial condition and results of operations, we are unable to predict with certainty the extent or nature of these impacts. The severity of the impact will depend on our ability to adjust to this uncertainty as well as a number of other factors, including, but not limited to, the duration and severity of the pandemic and the extent and severity of the impact on the Company's customers, disruptions and restrictions on availability of labor, as well as temporary disruptions to our supply chain, all of which are uncertain and cannot be predicted. The Company's future results of operations and liquidity could be adversely impacted by reduced revenues, delays in payments of outstanding receivable amounts beyond normal payment terms, supply chain disruptions and uncertain demand, and the impact of any initiatives or programs that the Company may undertake to address financial and operations challenges faced by its customers.

In addition to other information set forth in this report, you should carefully consider the factors discussed in Part I, Item 1A. Risk Factors in our 2019 Form 10-K, which could materially impact our business, financial condition or future results. Risks disclosed in our 2019 Form 10-K are not the only risks facing our Company. Additional risks and uncertainties not currently known to us or that we currently deem immaterial may materially adversely impact our business, financial condition or operating results. There have been no material changes to Part I, Item 1A. Risk Factors in our 2019 Form 10-K, other than the addition of the preceding risk factor related to COVID-19.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

This table provides information about our purchases of our common stock during the second quarter of 2020:

Issuer Purchases of Equity Securities

Period	Total number of shares purchased (1)	Average price paid per share	Number of shares purchased as part of publicly announced programs (2)	Approximate dollar value of shares that may yet be purchased under the programs
April 1 - 30, 2020	333,031	\$ 20.79		
May 1 - 31, 2020	7,511	20.58		
June 1 - 30, 2020	337	26.01		
Total	340,879	\$ 20.79	—	\$ 5,318,357,637

(1) This column reflects the following transactions during the second quarter of 2020: (i) the deemed surrender to us of 265,766 shares of common stock to satisfy tax withholding obligations in connection with the vesting of employee restricted stock units; (ii) the deemed surrender to us of 74,971 shares of common stock to satisfy tax withholding obligations in connection with the vesting of restricted stock issued to employees; and (iii) the deemed surrender to us of 142 shares of common stock to pay the exercise price and to satisfy tax withholding obligations in connection with the exercise of employee stock options.

(2) The Company has suspended share repurchases.

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ITEM 6. EXHIBITS

(a) Exhibits

Exhibit Number	Exhibit Name
31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) under the Exchange Act
31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) under the Exchange Act
32	Certification Pursuant to 18 U.S.C. Section 1350
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Calculation Linkbase Document
101.LAB	XBRL Taxonomy Label Linkbase Document
101.PRE	XBRL Taxonomy Presentation Linkbase Document
101.DEF	XBRL Taxonomy Definition Document

SIGNATURES

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

Corning Incorporated
(Registrant)

July 30, 2020

/s/ Edward A. Schlesinger

CHIEF EXECUTIVE OFFICER CERTIFICATION

I, Wendell P. Weeks, certify that:

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

July 30, 2020

/s/ Wendell P. Weeks

Wendell P. Weeks
Chairman and Chief Executive Officer
(Principal Executive Officer)

CHIEF FINANCIAL OFFICER CERTIFICATION

I, R. Tony Tripeny, certify that:

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

July 30, 2020

/s/ R. Tony Tripeny

R. Tony Tripeny
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

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 Corning Incorporated (the Company) on Form 10-Q for the period ended June 30, 2020 as filed with the Securities and Exchange Commission on the date hereof (the Report), we, Wendell P. Weeks, Chairman and Chief Executive Officer and R. Tony Tripeny, Executive Vice President and Chief Financial Officer, of the Company, certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: July 30, 2020

/s/ Wendell P. Weeks

Wendell P. Weeks
Chairman and Chief Executive Officer

/s/ R. Tony Tripeny

R. Tony Tripeny
Executive Vice President and Chief Financial Officer