



A satellite image of the Earth is centered within a circular compass scale. The scale has degree markings from 0 to 360. The text 'SETTING THE COURSE FOR ONE TWO-SIX' is overlaid on the Earth. The circular text around the scale reads: 'A WORLD TRANSFORMED THROUGH INNOVATIVE MATERIALS VITAL TO A BETTER LIFE TODAY AND THE SUSTAINABILITY OF FUTURE GENERATIONS' at the top and 'ENABLING THE WORLD TO BE SAFER, HEALTHIER, CLOSER, AND MORE EFFICIENT' at the bottom.

**2020
ANNUAL
REPORT**

About II-VI

II-VI Incorporated, a global leader in engineered materials and optoelectronic components, is a vertically integrated manufacturing company that develops innovative products for diversified applications in communications, materials processing, aerospace and defense, semiconductor capital equipment, life sciences, consumer electronics, and automotive markets. Headquartered in Saxonburg, Pennsylvania, the Company has research and development, manufacturing, sales, service, and distribution facilities worldwide. The Company produces a wide variety of application-specific photonic and electronic materials and components, and deploys them in various forms, including integrated with advanced software to support our customers. For more information, please visit us at www.ii-vi.com.

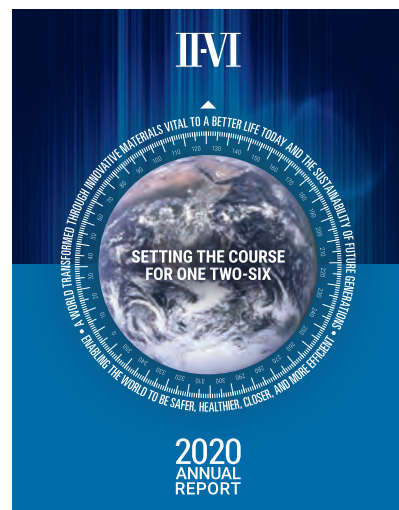
About the cover: The Blue Marble is an image of Earth taken by the crew of Apollo 17 on December 7, 1972, from 18,000 miles (29,000 km) away. It shows the Mediterranean Sea to Antarctica, the Arabian Peninsula, and Madagascar, while the entire coastline of Africa is clearly visible, and the Asian mainland is on the horizon. It is one of the most widely distributed photographic images in existence. With the sun behind the astronauts, the Earth appeared to them to be the size of a glass marble.

To us, the Blue Marble reveals a remarkable view of our Earth and a complex ecosystem of diminishing resources, driving the need for a delicate and respectful balance of all the remaining elements of our environment.

The compass pointing to 126 degrees symbolizes our employees coming together as ONE TWO-SIX with our strong sense of purpose, revealed in **our mission of enabling the world to be safer, healthier, closer, and more efficient.**

II-VI's investments and innovations underpin many of the transformations that the world is experiencing today — becoming more connected, intelligent, mobile, and electric. Fifty years ago, at the time of our founding, our course was set to change the world consistent with **our vision of a world transformed through innovative materials vital to a better life today and the sustainability of future generations.**

Sincere thanks to all of our stakeholders as well as those who have gone before us and those who will come after us to meet this highest calling to transform the world.



Financial Summary

For the year ended June 30

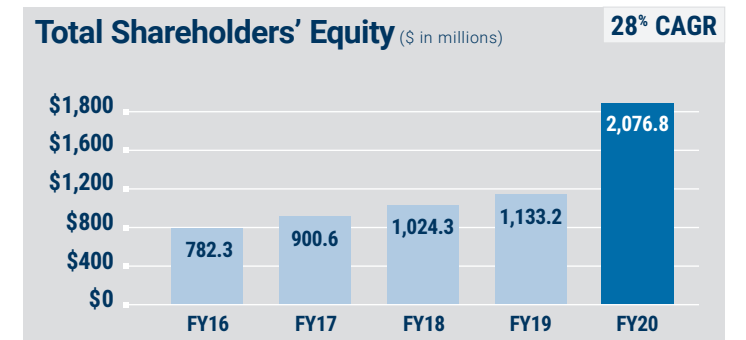
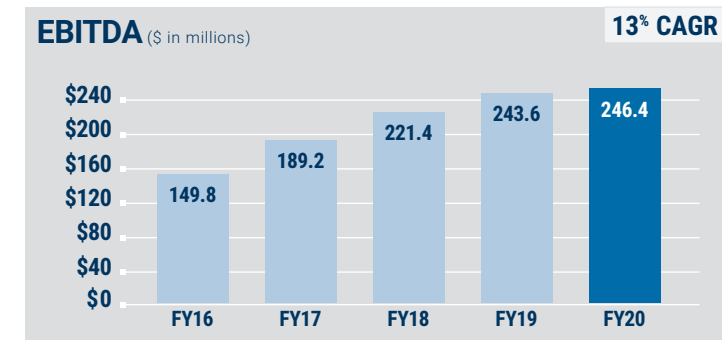
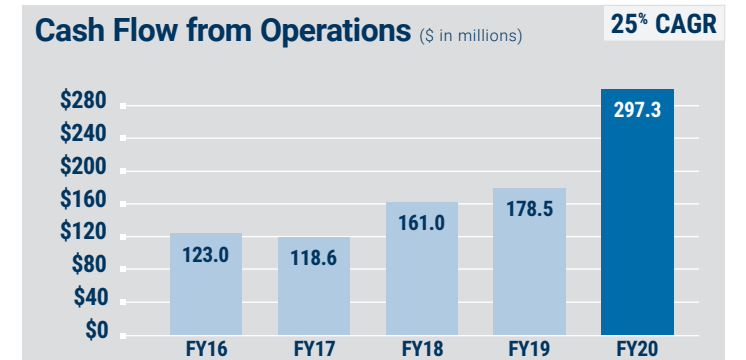
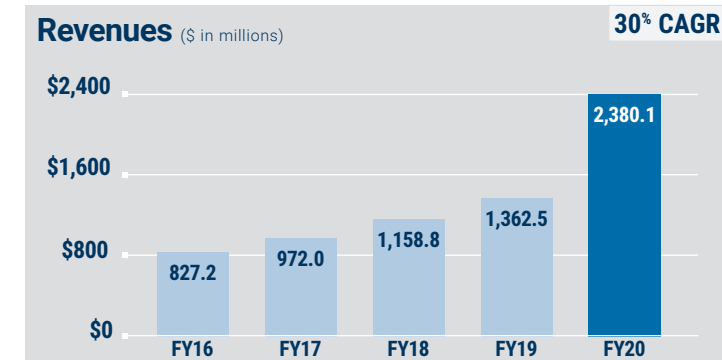
(\$000's except per share data)

| | | |
|---------------------------------------|--------------|--------------|
| Revenues | \$ 2,380,071 | \$ 1,362,496 |
| Net Earnings - GAAP | \$ (67,029) | \$ 107,517 |
| Net Earnings - Non-GAAP | \$ 258,616 | \$ 158,218 |
| Diluted earnings per share - GAAP | \$ (0.79) | \$ 1.63 |
| Diluted earnings per share - Non-GAAP | \$ 2.85 | \$ 2.40 |

As of June 30

(\$000)

| | | |
|----------------------------|--------------|--------------|
| Total assets | \$ 5,234,714 | \$ 1,953,773 |
| Total shareholders' equity | \$ 2,076,803 | \$ 1,133,209 |
| Working capital | \$ 1,116,076 | \$ 542,348 |



Non-GAAP Reconciliation Tables

Reconciliation of Net Earnings to EBITDA (\$ in millions)

| | 2020 | 2019 | 2018 | 2017 | 2016 |
|-------------------------------|--------|-------|-------|-------|-------|
| Net earnings | (67.0) | 107.5 | 88.0 | 95.3 | 65.5 |
| Depreciation and amortization | 220.9 | 92.4 | 80.8 | 63.6 | 56.7 |
| Interest expense | 89.4 | 22.4 | 18.4 | 6.8 | 3.1 |
| Income tax expense (benefit) | 3.1 | 21.3 | 34.2 | 23.5 | 24.5 |
| EBITDA | 246.4 | 243.6 | 221.4 | 189.2 | 149.8 |

CAGR – Compound Annual Growth Rate

EBITDA – Earnings before interest, income taxes, depreciation, and amortization

Non-GAAP amounts exclude certain adjustments for share-based compensation, acquired intangible amortization expense, certain one-time transaction expenses, fair value measurement period adjustments and restructuring and related items. The non-GAAP financial measures for the comparative periods presented above have been adjusted to conform to the current period presentation.

Reconciliation of Net Earnings to Non-GAAP Net Earnings (\$ in millions)

| | 2020 | 2019 |
|--|--------|--------|
| Net Earnings | (67.0) | 107.5 |
| Preliminary fair value adjustment on acquired inventory | 87.7 | - |
| Amortization of acquired intangibles | 64.2 | 16.6 |
| Stock based compensation | 63.1 | 25.0 |
| Transaction expenses related to acquisitions | 44.6 | 19.4 |
| Severance, restructuring and related costs | 27.6 | - |
| Foreign currency exchange (gains) losses | 14.4 | 3.2 |
| Impairment of investment | 5.0 | - |
| Debt extinguishment expense | 3.9 | - |
| Additional interest expense related to the Finisar acquisition | 1.7 | - |
| Finisar results | (1.6) | - |
| Tax impact of Non-GAAP measures and fair value adjustments | 15.1 | (13.5) |
| Net Earnings - Non-GAAP | 258.6 | 158.2 |

Shareholder Letter



Fiscal Year 2020 was my fourth year as the third CEO of II-VI, and it was one of the most exciting of my career. I am humbled to lead our Company and grateful for having you and over 22,000 employees among our stakeholders.

We began the fiscal year by completing the largest acquisition in our history, our fourth platform acquisition, the acquisition of Finisar. Like the other transformative acquisitions we have completed, it heralded a new chapter in our history.

We announced this acquisition in November 2018 and immediately began developing an extensive plan to merge the companies. The success of this planning translated into the most compelling showcase thus far of II-VI's ability to execute acquisitions.

The following are some of the highlights:

- We are ahead in our plans to achieve synergies of \$150M in three years.
- Our commercialization of indium phosphide optoelectronic components is taking off as envisioned, validating II-VI's signature approach of serving customers at various levels of the value chain to fully address market needs.
- We leveraged our 150 mm VCSEL array manufacturing expertise in Warren, New Jersey, to get the VCSEL production lines in Sherman, Texas, qualified, positioning us for significant growth in 3D sensing.

As a result of the acquisition, we are seeing customers increasingly relying on us, since we possess the broadest product portfolio, applications expertise, and scalable manufacturing capabilities in the optical communications industry. We offer one of the most complete portfolios of products for terrestrial and submarine optical networks, as well as for the 5G optical infrastructure. We now have an industry-leading transceiver business that adds around \$1B to our top line. Our manufacturing locations in the United States, Europe, China, and greater Asia provide customers with a diversified supply chain and automation capabilities for high-volume assemblies. Achieving time to market and scale is among the objectives of our customers, who realize that our business is built on technology platforms of materials that matter, an extensive portfolio of intellectual property, and experienced people who can take on the toughest challenges and emerge with differentiated products.

Throughout this enormous integration, we still managed to keep our focus on nurturing other rapidly growing areas of our business. Aerospace and defense increasingly is turning into a new growth market for us. In addition

to our proud support for the contributions we make to the F-35 aircraft and to platforms that support vital intelligence, surveillance, and reconnaissance applications, we are also further positioning II-VI to address exciting new opportunities in hypersonics and directed energy, as well as satellites and contested space.

At the same time, we remained mindful of the world's need for clean energy. With profound changes in the climate and in the regulatory environment, we have continued to double our capacity of silicon carbide (SiC) substrates every 18 months and are making plans to increase our capacity another 5-10x within the next five years. As if that was not exciting enough, we entered into a strategic arrangement with General Electric (GE) on SiC devices and modules. GE has long been an innovator in the technology that we are now licensing to accelerate our participation in the adoption of SiC in high-value power electronic applications to advance green and clean solutions.

We accomplished all this in the face of COVID-19. The gravity of this virus will require a global effort to overcome its effects and eradicate its causes, and our endeavors are having an important effect on the world around us, providing us with a reminder that our mission to **enable the world to be safer, healthier, closer, and more efficient** has never been more important. We have institutionalized our procedures to ensure that our employees are safe, our facilities are secure and hygienic, we are compliant with the laws, and we have adequate cybersecurity, all while serving rapidly growing markets.

We capped our exciting year with an equity raise of approximately \$920M, as attractive market conditions presented us a unique opportunity to strengthen our balance sheet.

Sometimes our actions seem counterintuitive or are misunderstood by some. I believe that our agility has helped us build one of the largest photonics and compound semiconductor companies in the world founded on advanced materials. This has set us apart and allows us to

assess and address large and growing markets. As much as we have accomplished, we are still in the early stages of a long cycle of technological revolutions, including the proliferation of cloud-based services, the deployment of 5G and 3D sensing, and the increasing adoption of SiC technology in the electric vehicle market. Our technology platforms increasingly enable growth trends involving applications that are **mobile, intelligent, and electric**.

Our leadership position in the optical communications components and subsystems market, our strong operating performance, and our attention to delivering financial returns position us to provide vital services to the network communications infrastructure that is accelerating the world's digital transformation. I believe that we are on a trajectory to build a greater company.

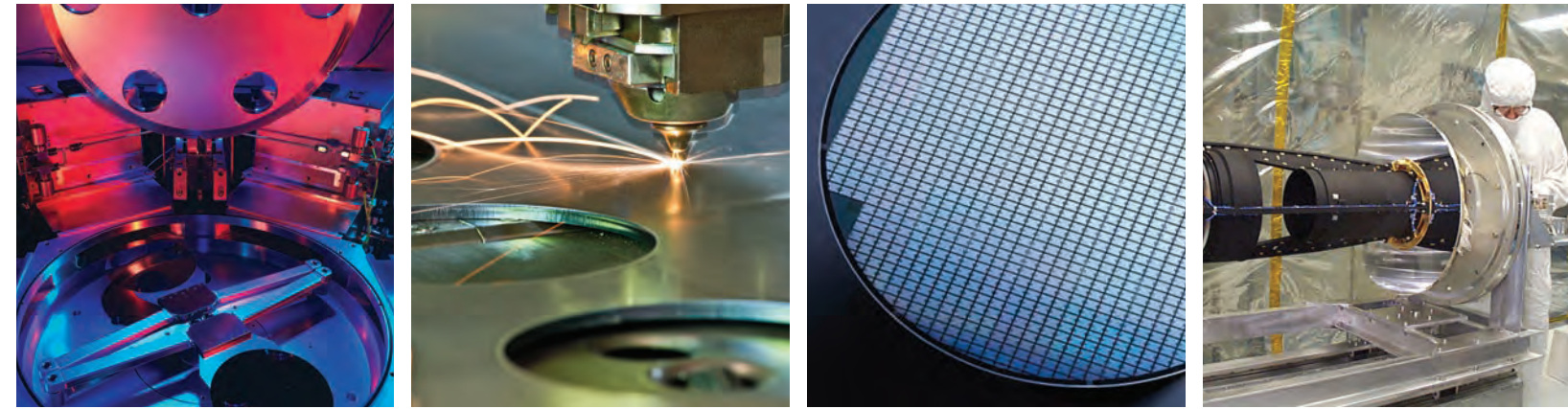
As we enter our 50th year, I would like to recognize our Chairman and second CEO, Francis J. Kramer, and Dr. Carl Johnson, the first CEO and co-founder of II-VI. Both paved the way for employees to have a great opportunity to participate in the ownership and rewards of the company's success and prepared us for the next 50 years with a timeless sense of our position and importance in **a world transformed through innovative materials vital to a better life today and the sustainability of future generations**.

A handwritten signature in blue ink that reads "Chuck".

Dr. Vincent D. (Chuck) Mattered, Jr.
Chief Executive Officer

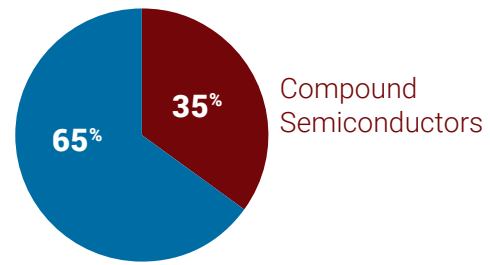
Segments and Business Units

II-VI is organized around two operating segments, each with very large addressable markets. We believe that this structure enables us to fuel our long-term growth and allows us to take a longer-term view with respect to innovation programs linked to large-market megatrends. It also ensures that our precious technology investments are carefully balanced and strategically allocated at all levels of the value chain, from engineered materials to devices, components, and subsystems.

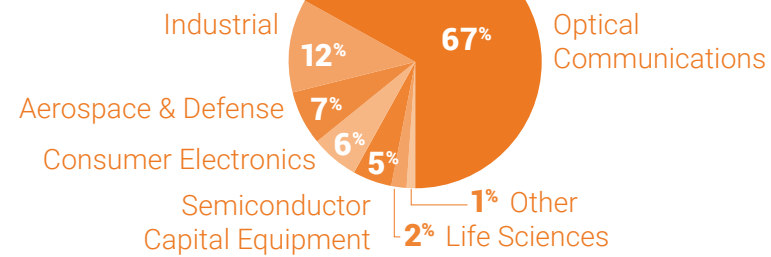


Segments

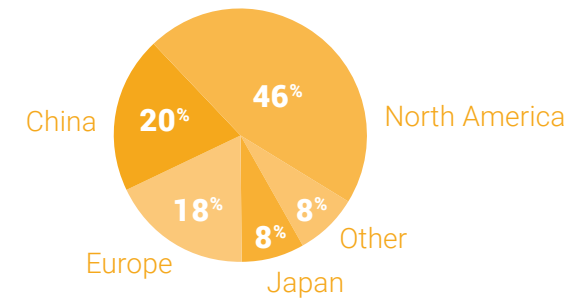
Photonic Solutions



Markets



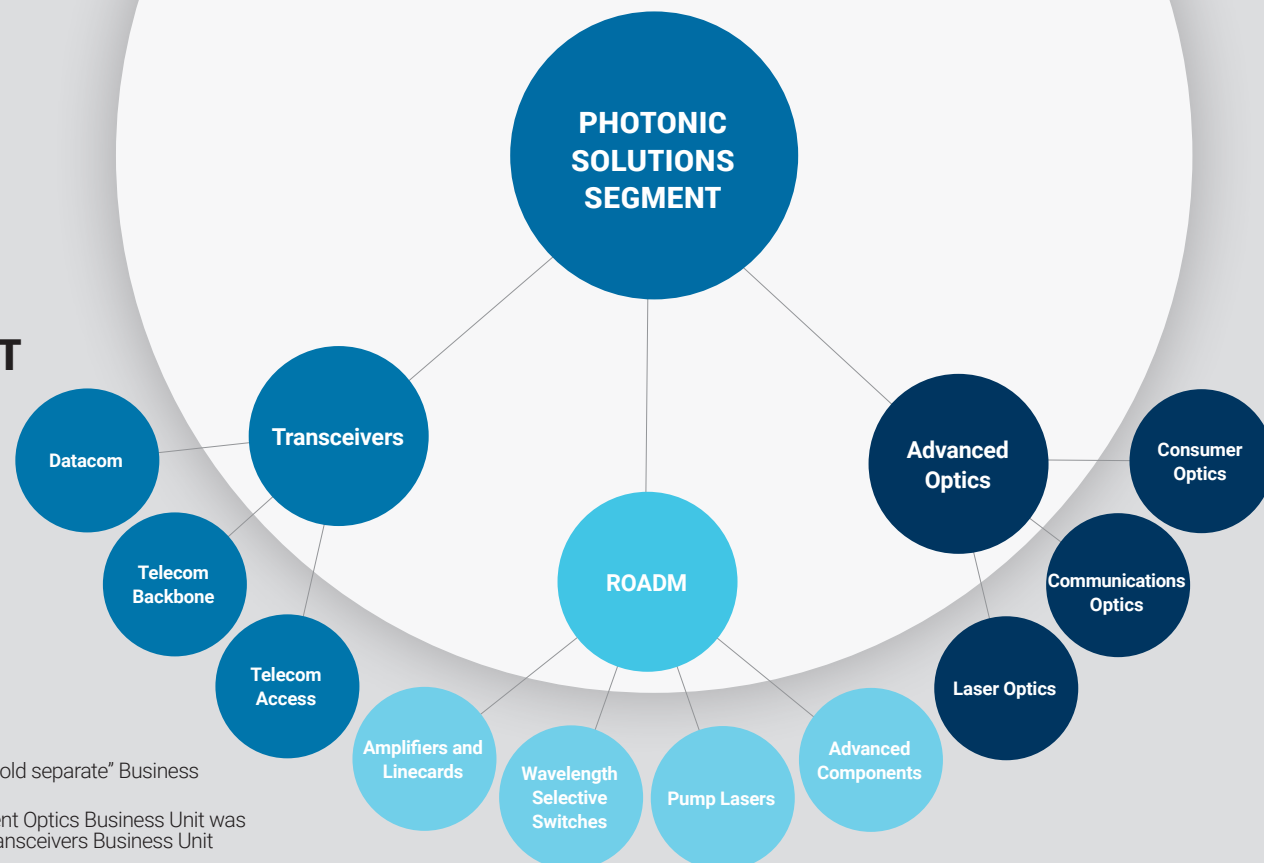
Regions



Founded: **1971**
 IPO 1987: **II-VI**
 Worldwide Employees: **22,000+**
 Worldwide Locations: **69**
 Countries: **18**
 FY2020 Revenue: **\$2,380M**

BUSINESS UNITS

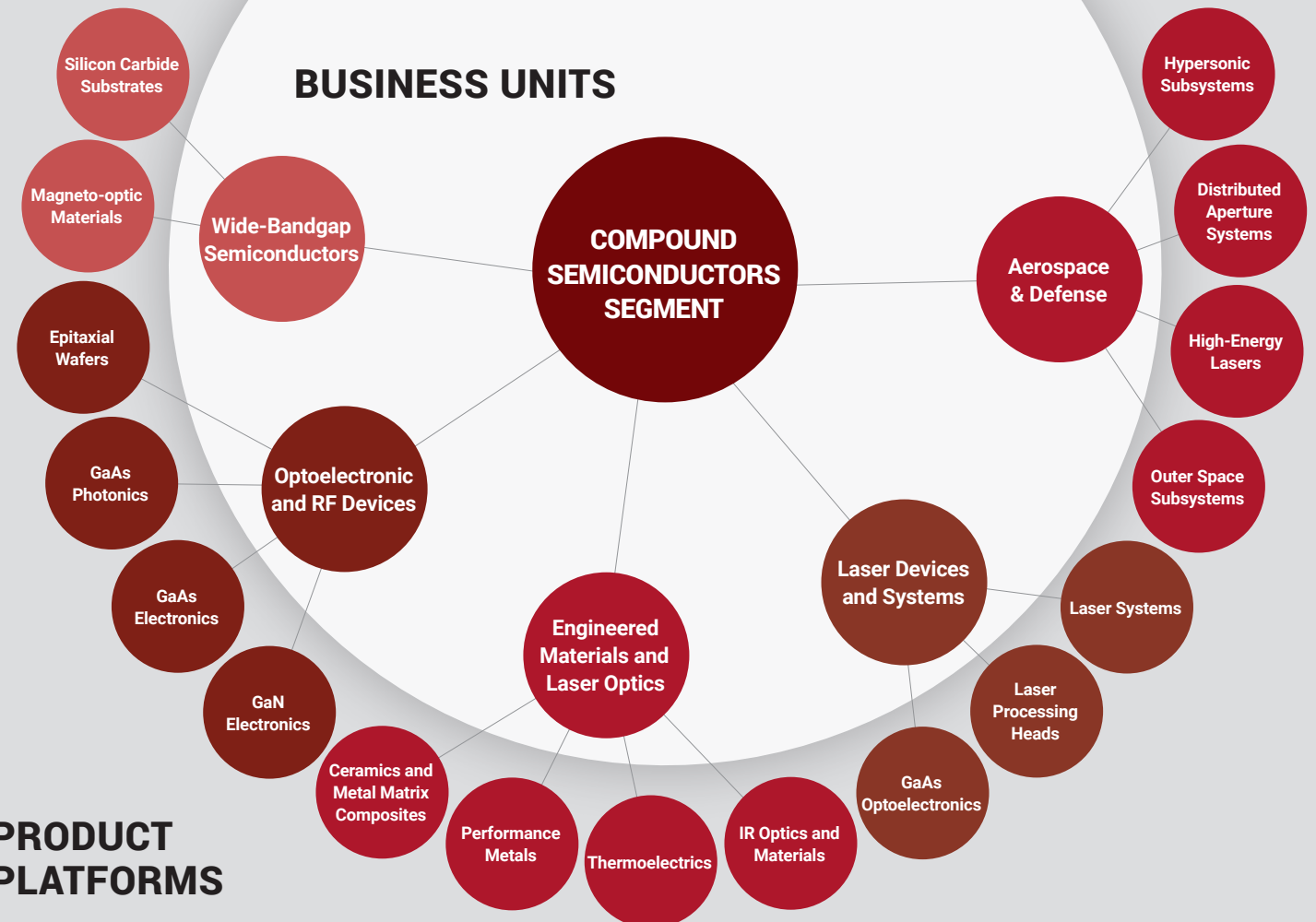
PRODUCT LINES



The Finisar WSS "hold separate" Business Unit is not shown
 In FY21 the Coherent Optics Business Unit was merged into the Transceivers Business Unit

BUSINESS UNITS

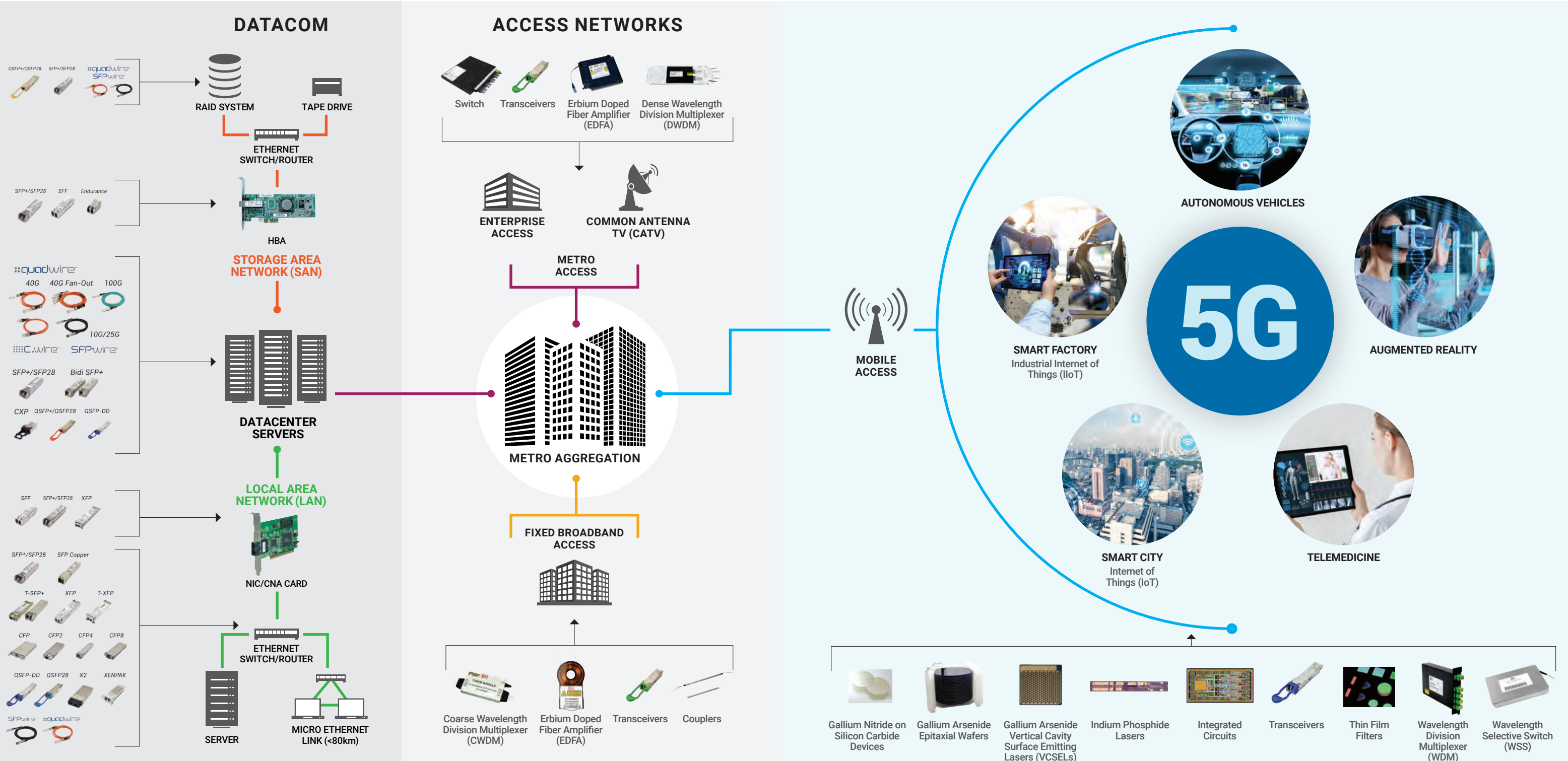
PRODUCT PLATFORMS



A Complete Portfolio of Products for Communication Networks

Cloud computing is driving the buildout of all segments of the optical network. Within datacenters, it is increasing the bandwidth requirements between servers, switches, and routers. Between megascale datacenters, cloud computing is also driving a massive buildout in metro, regional, long-haul, and submarine networks.

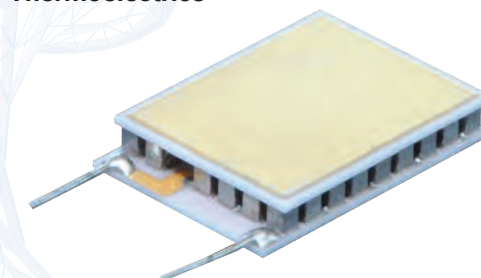
Fifth-generation (5G) wireless networks promise to provide consumers and machines on-demand access to cloud computing power, enabling computationally intensive applications such as big data analytics, blockchain transactions, machine learning, and artificial intelligence.



Gene Sequencing and Testing for COVID-19 with Lasers, Optics, and Thermoelectrics



Thermoelectrics



Fluorescence Filters



Laser Solutions



II-VI plays an important role in the supply chain for Polymerase Chain Reaction (PCR) instruments that can determine the outcome of patient testing for COVID-19.

These PCR instruments were first introduced in the 1980s and are common laboratory equipment used for the identification of genetic structure. The PCR process involves thermal cycling (precise and rapid heating and cooling) of the test sample to drive a reaction that can make millions of copies of the viral genetic material required for detection. Next, optical filters and other optical components are used for sample illumination, light propagation, and ultimately detection. In short, if the COVID-19 viral genetic material is present, it will be amplified and then optically detected.

There are two critical components that make these tests possible — **thermoelectrics** (picture, top right) and optics, including **fluorescence filters** (picture, middle right). II-VI is a global leader in manufacturing and delivering both thermal and optical components and subassemblies to the leading providers of these instrument platforms. II-VI has seen a significant increase in demand for those products and is working tirelessly to support our life sciences customers who are rapidly increasing production of these test platforms.

II-VI is also supplying **laser solutions** (picture, bottom right) to gene sequencing platforms that help scientists study COVID-19 and further optimize PCR test platforms, which may lead to treatments and ultimately provide critical information that is required to develop a vaccine.

Our Strategic House

The Strategic House describes and illustrates how we will meet the expectations from all our stakeholders, which include our employees, our customers, our shareholders, our suppliers, and our communities.

Through it, we aim to create long-term opportunities and achieve a sustainable competitive advantage.

The Strategic House outlines who we are today, the desired future we are pursuing, how we intend to get there, and how we can measure our progress.



Quality Policy

Fully satisfying customers and continually improving

Quality

Mission

Enabling the world to be safer, healthier, closer, and more efficient

Purpose

Strategic Areas of Focus

| Quality-Driven | Fully Engaged Employees | Manufacturing Excellence | Innovation | Fully Satisfied Customers | Exceptional Business Results |
|---|---|--|---|---|---|
| All of our efforts produce consistent and reproducible results that fully satisfy customer requirements, with a focus on performance excellence, continuous improvement, information integrity, and growth. | We seek to create a safe, healthy, and secure environment that is open, supportive, and embraces diversity in which our employees can contribute, grow, achieve work/life balance, and feel valued. | We leverage our global capabilities and knowledge to optimize our processes, drive continuous improvement, plan for business continuity, and deliver quality products on time. | We persistently deliver exceptional value to our customers and the marketplace through the development of innovative products and advanced technologies that enable organic growth. | We fully anticipate and satisfy our customers' requirements, creating satisfaction, loyalty, and long-term partnerships to enable us to increase business and continue to be a market leader. | Our outlook is bold, growth-oriented, sustainable, and stakeholder-focused, and we achieve our financial and strategic goals through leadership, compliance, and risk management in all selected markets. |

Stakeholders' Demands that Drive Long-Term Thinking and Actions

Key Performance Indicators

| | | | | | |
|--|---|---|--|---|---|
| <ul style="list-style-type: none"> • Cost of Quality • Parts per Million Nonconforming • Supplier Parts per Million Nonconforming | <ul style="list-style-type: none"> • Engagement Index • Employee Turnover • Total Recordable Injury Rate • Preventive Action Efficiency | <ul style="list-style-type: none"> • Gross Margin • Inventory Turns • First-Pass Yield • On-Time Delivery • Procurement Cost Reduction | <ul style="list-style-type: none"> • New Product Revenue • Return on Investment • New Product Launch: Quality, Cost, Delivery | <ul style="list-style-type: none"> • Customer Market Share • Customer Satisfaction Index • Corporate Social Responsibility Index | <ul style="list-style-type: none"> • Revenue • Earnings per Share • Return on Sales • Profitability • Free Cash Flow |
|--|---|---|--|---|---|

Long-Term Focus

Vision

A world transformed through innovative materials vital to a better life today and the sustainability of future generations

Desired State

Values

I CARE = Integrity Collaboration Accountability Respect Enthusiasm

I CARE

Vision

A world transformed through innovative materials vital to a better life today and the sustainability of future generations



United States
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

- Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**
for the fiscal year ended June 30, 2020
- 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: 001-39375

II-VI INCORPORATED

(Exact name of registrant as specified in its charter)

| | |
|---|--|
| Pennsylvania (State or other jurisdiction of incorporation or organization) 375 Saxonburg Blvd. Saxonburg, PA (Address of principal executive offices) | 25-1214948 (I.R.S. Employer Identification No.) 16056 (Zip code) |
|---|--|

Registrant's telephone number, including area code: 724-352-4455

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

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|--|-------------------|---|
| Common Stock, no par value | IIVI | Nasdaq Global Select Market |
| Series A Mandatory Convertible Preferred Stock, no par value | IIVIP | Nasdaq Global Select Market |

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes No

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See 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 <input checked="" type="checkbox"/> | Accelerated filer <input type="checkbox"/> |
| Non-accelerated filer <input type="checkbox"/> | Smaller reporting company <input type="checkbox"/> |
| | Emerging growth company <input type="checkbox"/> |

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

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

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

Yes No

Aggregate market value of outstanding Common Stock, no par value, held by non-affiliates of the Registrant at December 31, 2019, was approximately \$3,031,733,938 based on the closing sale price reported on the Nasdaq Global Select Market. For purposes of this calculation only, directors and executive officers of the Registrant and their spouses are deemed to be affiliates of the Registrant.

Number of outstanding shares of Common Stock, no par value, at August 20, 2020, was 103,668,355.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant’s definitive proxy statement, which will be issued in connection with the 2020 Annual Meeting of Shareholders of II-VI Incorporated, are incorporated by reference into Part III of this Annual Report on Form 10-K.

Forward-Looking Statements

This Annual Report on Form 10-K (including certain information incorporated herein by reference) contains forward-looking statements made pursuant to Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 (the “PSLRA”). The statements in this Annual Report on Form 10-K that are not purely historical, but are forward-looking statements, including, without limitation, statements regarding our expectations, assumptions, beliefs, intentions or strategies regarding the future. In some cases, these forward-looking statements can be identified by terminology such as, “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “intends,” “estimates,” “predicts,” “projects,” “potential,” or “continue” or the negative of these terms or other comparable terminology. Forward-looking statements address, among other things, our assumptions, our expectations, our assessments of the size and growth rates of our markets, our growth strategies, our efforts to increase bookings, sales and revenues, projections of our future profitability, cash generation, success of our research, development and engineering investments, results of operations, capital expenditures, our financial condition, our ability to integrate acquired businesses or other “forward-looking” information and include statements about revenues, costs, investments, earnings, margins, or our projections, actions, plans or strategies.

The forward-looking statements in this Annual Report on Form 10-K involve risks and uncertainties, which could cause actual results, performance or trends to differ materially from those expressed in the forward-looking statements herein or in previous disclosures. We believe that all forward-looking statements made by us have a reasonable basis, but there can be no assurance that these expectations, beliefs or projections will actually occur or prove to be correct, at least on the timetable of our expectations. Actual results could differ materially. We claim the protection of the safe harbor for forward-looking statements contained in the PSLRA for our forward-looking statements.

The following risk factors, among others, in some cases have affected and in the future could affect our financial performance and actual results, and could cause actual results for fiscal 2021 and beyond to differ materially from those expressed or implied in any forward-looking statements included in this Annual Report on Form 10-K or otherwise made by our management:

- Investments in future markets of potential significant growth may not result in the expected return.
- Our competitive position depends on our ability to develop new products and processes.
- Widespread health crises, including the global novel coronavirus (COVID-19) pandemic, could materially and adversely affect our business, financial condition and results of operations.
- Global economic downturns, including any downturn related to COVID-19, may adversely affect our business, operating results and financial condition.
- Some systems that use our products are complex in design, and our products may contain defects that are not detected until deployed, which could increase our costs, reduce our revenues, cause us to lose key customers, and may expose us to litigation related to our products.
- Foreign currency risk may negatively affect our revenues, cost of sales and operating margins, and could result in foreign exchange losses.
- Our competitive position may still require significant investments.
- We may be unable to successfully implement our acquisitions strategy or integrate acquired companies and personnel with existing operations.
- Although II-VI continues to expect that its acquisition of Finisar will result in cost savings, synergies, and other benefits, the combined company may not realize those benefits, or be able to retain those benefits even if realized.
- Our future success depends on continued international sales, and our global operations are complex and present multiple challenges to manage.
- We are subject to complex and rapidly changing import and export regulations which could limit our sales and decrease our profitability.
- Changes in trade policies, such as increased import duties, could increase the cost of goods imported into the United States or China. The inclusion of companies, such as Huawei, on the U.S. Entity List, could decrease our access to customers and markets and materially impact our revenues in the aggregate.
- Any inability to access financial markets from time to time to raise required capital, finance our working capital requirements or our acquisition strategies, or otherwise to support our liquidity

needs could negatively impact our ability to finance our operations, meet certain obligations or implement our growth strategy.

- We may not be able to settle conversions of our convertible senior notes in cash or repurchase the notes in accordance with their terms.
- Our credit agreement restricts our operations, particularly our ability to respond to changes or to take certain actions regarding our business.
- We may fail to accurately estimate the size and growth of our markets and our customers' demands.
- We may encounter increased competition and we may fail to accurately estimate our competitors' or our customers' willingness and capability to backward integrate into our competencies and thereby displace us.
- There are limitations on the protection of our intellectual property and we may from time to time be involved in costly intellectual property litigation or indemnification.
- A significant portion of our business is dependent on cyclical industries.
- Our global operations are subject to complex legal and regulatory requirements.
- Changes in laws and regulations governing data privacy and data protection could have a material adverse impact on our business.
- Data breach incidents and breakdown of information and communication technologies could disrupt our operations and impact our financial results.
- We have entered into supply agreements that commit us to supply products on specified terms.
- We depend on highly complex manufacturing processes that require feeder materials, components, and products from limited sources of supply.
- Increases in commodity prices may adversely affect our results of operations and financial condition.
- We use and generate potentially hazardous substances that are subject to stringent environmental regulations.
- We have a substantial amount of debt, which could adversely affect our business, financial condition, or results of operations and prevent us from fulfilling its debt-related obligations.
- Unfavorable changes in tax rates, tax liabilities, or tax accounting rules could negatively affect future results.
- Natural disasters or other global or regional catastrophic events could disrupt our operations, give rise to substantial environmental hazards, and adversely affect our results.
- Our success depends on our ability to attract, retain and develop key personnel and requires continued good relations with our employees.
- We contract with a number of large end-user service providers and product companies that have considerable bargaining power, which may require us to agree to terms and conditions that could have an adverse effect on our business or ability to recognize revenues.
- We may be adversely affected by climate change regulations.
- We depend on large purchases from a few significant customers, and any loss, cancellation, reduction, or delay in purchases by these customers could harm our business.
- The manufacturing of our products may be adversely affected if we are unable to manufacture certain products in our manufacturing facilities.
- Failure to accurately forecast our revenues could result in additional charges for obsolete or excess inventories or noncancelable purchase commitments.
- If we fail to maintain an effective system of disclosure controls and internal control over financial reporting, our ability to produce timely and accurate financial statements or comply with applicable regulations could be impaired.
- Our stock price has been volatile in the past and may be volatile in the future.
- Provisions in our Amended and Restated Articles of Incorporation (the "Articles of Incorporation") and Amended and Restated By-Laws (the "By-Laws") and the Pennsylvania Business Corporation Law (the "BCL") may delay or prevent our acquisition by a third party, which could also reduce the market price of our capital stock.
- Because we do not currently intend to pay dividends, holders will benefit from an investment in our common stock only if it appreciates in value and by the intended anti-dilution actions of our share-buyback program.
- Our ability to declare and pay dividends on our capital stock may be limited, including by the terms of our existing Credit Agreement.
- The Mandatory Convertible Preferred Stock may adversely affect the market price of our common stock.

- Our common stock is subordinate to our existing and future indebtedness; the Mandatory Convertible Preferred Stock, when issued; and any other preferred stock we may issue in the future. Our Mandatory Convertible Preferred Stock ranks junior to all of our and our subsidiaries' consolidated liabilities.
- Our board of directors can issue, without approval of the holders of our common stock, preferred stock with voting and conversion rights that could adversely affect the voting power of the holders of our common stock, the rights of holders of shares of our capital stock or the market price of our capital stock.
- Reports published by securities or industry analysts, freelance bloggers and credit rating agencies, including projections in those reports that exceed our actual results, could adversely affect our share price and trading volume.
- Regulatory actions may adversely affect the trading price and liquidity of the Mandatory Convertible Preferred Stock.
- Holders of Mandatory Convertible Preferred Stock have no voting rights with respect to the Mandatory Convertible Preferred Stock, except under limited circumstances.
- We depend on our subsidiaries for cash to fund our operations and expenses, including future dividend payments with respect to the Mandatory Convertible Preferred Stock.

The foregoing and additional risk factors are described in more detail herein under Item 1A. "Risk Factors". All such factors, as well as factors described or referred to in other filings we make with the Securities and Exchange Commission (the "SEC") from time to time, should be considered in evaluating our business and prospects. Many of these factors are beyond our reasonable control. In addition, we operate in a highly competitive and rapidly changing environment, and, therefore, new risk factors can arise and be present without market participants like us knowing until a substantial amount of time has passed. It is not possible for management to predict all such risk factors, assess the impact of all such risk factors on our business or estimate the extent to which any individual risk factor, or combination of risk factors, may impact our business. It is also not possible for management to mitigate all such risks, and therefore any such risk factor may cause results to differ materially from those contained in any forward-looking statement. The forward-looking statements included in this Annual Report on Form 10-K speak only as of the date of this Annual Report on Form 10-K. We do not assume any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or developments, or otherwise, except as may be required by the securities laws. We caution you not to rely on them unduly.

II-VI Incorporated does communicate with securities analysts from time to time and those communications are conducted in accordance with applicable securities laws. Investors should not assume that II-VI Incorporated agrees with any statement or report issued by any analyst, irrespective of the content of the statement or report.

PART I

Item 1. BUSINESS

Definitions

II-VI Incorporated (“II-VI,” the “Company,” “we,” “us,” or “our”) was incorporated in Pennsylvania in 1971. Our headquarters are located at 375 Saxonburg Boulevard, Saxonburg, Pennsylvania 16056. Our telephone number is 724-352-4455. Reference to “II-VI,” the “Company,” “we,” “us,” or “our” in this Annual Report on Form 10-K, unless the context requires otherwise, refers to II-VI Incorporated and its wholly owned subsidiaries. The Company’s name is pronounced “Two Six Incorporated.” The name II-VI refers to Groups II and VI of the periodic table of elements from which II-VI originally designed and produced infrared optics for high-power CO₂ lasers used in materials processing. The majority of our revenues are attributable to the sale of engineered materials and optoelectronic components, devices, and subsystems for the optical communications, industrial materials processing, aerospace and defense, and consumer electronics markets. Reference to “fiscal” or “fiscal year” means our fiscal year ended June 30 for the year referenced.

The following terms are defined for reference: bismuth telluride (“Bi₂Te₃”); cadmium telluride (“CdTe”); carbon dioxide (“CO₂”); carbon monoxide (“CO”); chemical vapor deposition (“CVD”) of materials including diamond; deep ultraviolet (“DUV”) lithography; dense wavelength division multiplexing (“DWDM”); extreme-ultraviolet (“EUV”) lithography; 5th-generation (“5G”) wireless; 4th-generation (“4G”) wireless; gallium arsenide (“GaAs”); gallium nitride (“GaN”); gigabit Ethernet (“GbE”); gigabit per second (“Gbps”); high-definition multimedia interface (“HDMI”); high-electron-mobility transistor (“HEMT”); indium phosphide (“InP”); infrared (“IR”); intellectual property (“IP”); light detection and ranging (“LiDAR”); liquid crystal (“LC”); liquid crystal on silicon (“LCOS”); nanometers (“nm”); near-infrared (“NIR”); optical channel monitor (“OCM”); organic light-emitting diode (“OLED”); original equipment manufacturer (“OEM”); optical time-domain reflectometer (“OTDR”); polymerase chain reaction (“PCR”); radio frequency (“RF”); reconfigurable optical add/drop multiplexer (“ROADM”); research and development (“R&D”); research, development, and engineering (“RD&E”); silicon carbide (“SiC”); terabit per second (“Tbps”); three-dimensional (“3D”); ultraviolet (“UV”); vertical cavity surface-emitting laser (“VCSEL”); wavelength division multiplexing (“WDM”); wavelength selective switching (“WSS”); zinc selenide (“ZnSe”); and zinc sulfide (“ZnS”).

Acquisition of Finisar Corporation

On September 24, 2019 (the “Closing Date”), the Company completed its acquisition of Finisar Corporation (“Finisar”), a global technology leader for subsystems and components for fiber-optic communications. Additional information regarding the Company’s acquisition of Finisar is set forth below and in Note 3. Acquisitions to our Consolidated Financial Statements in Item 8 of this Annual Report on Form 10-K. Due to timing of the acquisition, the results of Finisar for the three months ended September 30, 2019, have not been allocated to an Operating Segment, and are presented in Unallocated and Other within Note 14. Segment and Geographic Reporting to our Consolidated Financial Statements in Item 8 of this Annual Report on Form 10-K. Beginning on October 1, 2019, the results of Finisar have been allocated to the Photonic Solutions and Compound Semiconductors Segments.

General Description of Business

We develop, manufacture, and market engineered materials, optoelectronic components, and devices for use in optical communications, industrial materials processing, aerospace and defense, consumer electronics, semiconductor capital equipment, life sciences, and automotive applications and markets. We use advanced engineered materials growth technologies and proprietary high-precision fabrication, microassembly, optical thin-film coating, and electronic integration to manufacture complex optoelectronic devices and modules. Our products are deployed in a variety of applications, including (i) optical, data, and wireless communications products; (ii) laser cutting, welding, and marking operations; (iii) 3D sensing consumer applications; (iv) aerospace and defense applications including intelligence, surveillance, and reconnaissance; (v) semiconductor processing tools; and (vi) thermoelectric cooling and power-generation solutions.

Through RD&E investments and its strategic acquisitions, II-VI has expanded its portfolio of materials and product platforms. We believe that the materials we grow and fabricate are differentiated by one or a combination of unique optical, electrical, thermal, and mechanical properties. II-VI's optics are shaped by precision surfacing techniques to meet the most stringent requirements for flat or curved geometries, functionalized with smooth or structured surfaces, or with patterned metallization. Proprietary processes developed at our global optical coating centers differentiate our products' durability against high-energy lasers and extreme operating environments. Optical coatings also provide the desired spectral characteristics, ranging from the ultraviolet to the far-infrared. II-VI leverages these capabilities to deliver miniature- to large-scale precision optical assemblies, including those in combination with thermal management components, integrated electronics, and/or software.

II-VI also offers a broad portfolio of compound semiconductor lasers that are used in a variety of applications in our end markets. These compound semiconductor lasers enable optical signal transmission, reception, and amplification in terrestrial and submarine communications networks; high-bit-rate server connectivity between and within datacenters; optical communications network monitoring; materials processing; and fast and accurate measurements in biomedical instruments and consumer electronics.

II-VI continues to improve its operational capabilities, develop next-generation products, and invest in new technology platforms to drive our growth in the short term while keeping the long term in mind. With a strategic focus on fast-growing and sustainable markets, II-VI pursues its mission of enabling the world to be safer, healthier, closer, and more efficient, and strives to attain its vision of a world transformed through innovative materials vital to a better life today and the sustainability of future generations.

Information Regarding Market Segments and Foreign Operations

Financial data regarding our revenues, results of operations, industry segments, and international sales for the three years ended June 30, 2020, are set forth in the Consolidated Statements of Earnings (Loss) and in Note 14. Segment and Geographic Reporting to our Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K and are incorporated herein by reference. We also discuss certain Risk Factors set forth in Item 1A – Risk Factors of this Annual Report on Form 10-K related to our foreign operations, which are incorporated herein by reference.

Effective July 1, 2019, the Company realigned its organizational structure into two reporting segments for the purpose of making operational decisions and assessing financial performance: (i) Photonic Solutions and (ii) Compound Semiconductors. Refer to Note 14. Segment and Geographic Reporting for further information on reporting segments.

Bookings and Backlog

We define our bookings as customer orders received that are expected to be converted to revenues over the next 12 months. The Company reports as bookings only those orders that are expected to be converted into revenues within 12 months from the end of the reporting period. Bookings are adjusted if changes in customer demands or production schedules cause the expected time of a delivery to extend beyond 12 months. For the fiscal year ended June 30, 2020, our bookings were approximately \$2.7 billion, compared with bookings of approximately \$1.4 billion for the fiscal year ended June 30, 2019.

We define our backlog as bookings that have not been converted to revenues by the end of the reporting period. As of June 30, 2020, our backlog was approximately \$957 million, compared with approximately \$500 million as of June 30, 2019.

Global Operations

II-VI is headquartered in Saxonburg, Pennsylvania, with RD&E, manufacturing, and sales facilities worldwide. Our U.S. production and RD&E operations are located in Arizona, California, Colorado, Connecticut, Delaware, Florida, Illinois, Massachusetts, Michigan, Mississippi, New Jersey, New York, Ohio, Oregon, Pennsylvania, and Texas, and our non-U.S. production and RD&E operations are based in Australia, China, Germany, Malaysia, the Philippines, Singapore, Sweden, Switzerland, the United Kingdom, and Vietnam. We also utilize contract manufacturers and strategic suppliers. In addition to sales offices co-located at most of our manufacturing sites, we have sales and marketing subsidiaries in Belgium, Canada, China, Germany, Hong Kong, Italy, Japan, South Korea, Switzerland, Taiwan, and the United Kingdom.

Employees

The table below summarizes the number of our employees as of June 30, 2020, in the main functions. We have a long-standing practice of encouraging active employee participation in areas of operations and quality management. We believe our relations with our employees are good. We reward substantially all of our employees with some form of variable compensation based on achievement of performance goals. There are approximately 161 employees located in the United States and the Philippines who are covered under collective bargaining agreements. The Company's five-year collective bargaining agreement in the United States is up for renewal in January 2021, and the Company's two-year collective bargaining agreement in the Philippines is up for renewal in June 2021. There are 450 employees of II-VI in China who work under contract manufacturing arrangements for a customer of the Company, Corning Incorporated.

| | Number of employees | Percent of total |
|---|----------------------------|-------------------------|
| Direct production | 15,101 | 66% |
| Research, development, engineering, sales and marketing | 4,058 | 16% |
| General administration | 3,810 | 18% |
| Total: | 22,969 | 100% |

Manufacturing Processes

Our success in developing and manufacturing many of our products depends on our ability to manufacture and to tailor the optical and physical properties of technically challenging materials and components. The ability to produce, process, and refine these complex materials and to control their quality and in-process yields is an expertise of the Company that is critical to the performance of our customers' subsystems and systems. In the markets we serve, there is a limited number of high-quality suppliers of many of the components we manufacture, and there are very few industry-standard products.

Our network of worldwide manufacturing sites allows us to manufacture our products in regions that provide cost-effective and risk management advantages. We employ numerous advanced manufacturing technologies and systems at our manufacturing facilities. These include metal-organic chemical vapor deposition and molecular beam epitaxy reactors, automated computer numeric control optical fabrication, high-throughput thin-film coaters, nanoprecision metrology, and custom-engineered automated furnace controls for crystal growth processes. Manufacturing products for use across the electromagnetic spectrum requires the capability to repeatedly manufacture products with high yields to atomic tolerances. II-VI continuously updates its comprehensive quality management systems that feature manufacturing quality best practices. II-VI is committed to delivering products within specification, on time, and with high quality, with a goal of fully satisfying customers and continually improving.

Sources of Supply

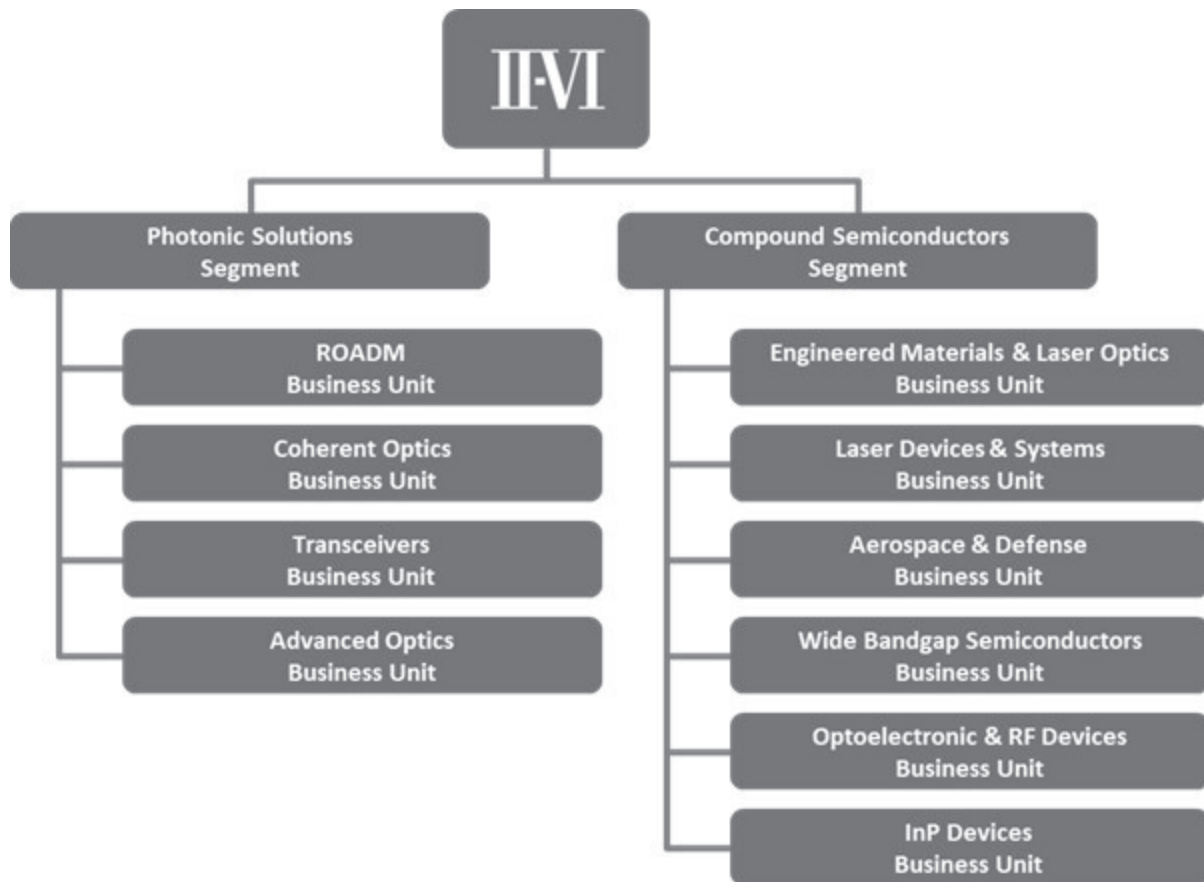
Among the raw materials we use are zinc, selenium, zinc selenide, zinc sulfide, hydrogen selenide, hydrogen sulfide, arsine, phosphine, hydrogen, silane, tellurium, yttrium oxide, aluminum oxide, iridium, platinum, bismuth, silicon, thorium fluoride, antimony, graphite, gallium arsenide, gallium nitride, indium phosphide, copper, gold, nickel, germanium, molybdenum, quartz, optical glass, silicon carbide, and carbon in its diamond form.

We utilize numerous optical, electrical, and mechanical parts in our processes that we often also commonly refer to as raw materials, including integrated circuits, mechanical housings, and optical components from third-party suppliers.

The continued high quality of and access to these raw materials are critical to the stability and predictability of our manufacturing yields. We specify and test these raw materials at the onset of and throughout the production process. Additional research and capital investment may be needed to better define future raw materials specifications. As a result of COVID-19, we have experienced some production delays due to shortages of raw materials, and we are driving the development of strategic second sources as part of our overall business continuity Planning. We do occasionally experience problems associated with vendor-supplied raw materials not meeting contract specifications for quality or purity. As discussed in greater detail in Item 1A – Risk Factors of this Annual Report on Form 10-K, significant failure of our suppliers to deliver sufficient quantities of necessary high-quality raw materials to our specifications on a timely basis could have a materially adverse effect on our results of operations.

Business Units

The Company's organizational structure is divided into two reporting segments for the purpose of making operational decisions and assessing financial performance: (i) Photonic Solutions and (ii) Compound Semiconductors. These segments, and the business units within the segments, are reflected in the Company's current organizational chart below:



The Photonic Solutions Segment leverages II-VI's compound semiconductor technology platforms to deliver components and subsystems that are differentiated based on deep knowledge of end-user applications for our key end markets.

The Compound Semiconductors Segment is a market leader in differentiated materials and devices such as those based on GaAs, InP, GaN, and SiC by independently driving investments that advance its technology roadmaps. We may from time to time reorganize parts of a given segment or corporate center to drive the focus of certain priorities as identified by the CEO.

II-VI's segments are organized by business unit at the group or division level. Each of these business units develops and markets products as described below.

| Segment | Business Unit | Our Products |
|---------------------------|-----------------|---|
| Photonic Solutions | ROADM | <ul style="list-style-type: none"> • Products and solutions that enable high-bit-rate interconnects for datacenters and communications service providers, datacenter interconnects, ROADM systems, and undersea fiber-optic transmission |
| | Coherent Optics | <ul style="list-style-type: none"> • High-speed optoelectronics and modules for optical communications in telecom networks, including for datacenter interconnects and for metro, regional, long-haul, and ultralong-haul networks |
| | Transceivers | <ul style="list-style-type: none"> • Pluggable transceivers for Ethernet and fiber channel applications in cloud and enterprise datacenter applications |
| | Advanced Optics | <ul style="list-style-type: none"> • Fiber optics and precision optics used in projection displays; crystal materials and components for optical communications; high-power UV, visible, and NIR optics for industrial lasers; filters and assemblies for life sciences as well as for sensors, instrumentation, and semiconductor equipment |

| Segment | Business Unit | Our Products |
|--------------------------------|-------------------------------------|--|
| Compound Semiconductors | Engineered Materials & Laser Optics | <ul style="list-style-type: none"> • Laser optics and accessories for CO2 lasers used in materials processing, semiconductors, and life sciences • High-power fiber and direct-diode laser optics • Infrared thermal imaging optics and assemblies • Polycrystalline materials production including ZnSe, ZnS, and CVD diamond • Thermoelectric components, subassemblies, and systems for heating, cooling, temperature tuning, thermal cycling, and power generation in aerospace and defense, medical, industrial, automotive, consumer, telecommunications, and energy-production markets • Specialty refining, recycling, and materials recovery services for high-purity rare metals such as selenium and tellurium, as well as related chemical products such as tellurium dioxide for optics, photovoltaics, semiconductors, thermoelectric coolers, metallurgy, agriculture, and industrial applications • Advanced ceramic and metal-matrix composite products for semiconductor capital equipment, flat-panel displays, industrial and optical equipment, and defense applications |
| | Laser Devices & Systems | <ul style="list-style-type: none"> • High-power semiconductor lasers and laser bars enabling fiber and direct-diode lasers for materials processing, medical, defense, consumer, and printing applications • Laser heads and modules; Q-switched laser modules; high-power, uncooled pump laser modules; laser solutions for super-hard materials processing; high-brightness direct-diode laser engines • Laser processing heads and beam delivery systems for laser materials processing with industrial lasers • High-speed VCSELs for optical communications • High-power pumps for amplifiers and optical communications |
| | Aerospace & Defense | <ul style="list-style-type: none"> • Precision optical assemblies, objectives, infrared optics, thin-film coatings, and optical materials • Optical solutions for critical and complex design, engineering, and production challenges in defense and aerospace |
| | Wide Bandgap Semiconductors | <ul style="list-style-type: none"> • SiC and advanced semiconductor materials for high-frequency and high-power electronic device applications in defense, telecommunications, automotive, and industrial markets |
| | Optoelectronic & RF Devices | <ul style="list-style-type: none"> • VCSELs for sensing, including 3D sensing in consumer electronics and automotive applications • GaAs-based RF electronic devices • Integrated circuits for transceivers for optical communications • III-V epitaxial wafers to enable higher-performance photonic and RF components for consumer, communications, network, and mobile applications |
| | InP Devices | <ul style="list-style-type: none"> • Semiconductor lasers and detectors for optical interconnects and sensing applications |

Our Markets

Our market-focused businesses are currently organized by technologies and products. Our businesses address the following primary markets: optical and wireless communications, industrial materials processing, aerospace and defense, consumer electronics, semiconductor capital equipment, life sciences, and automotive. As we grow, we may add new primary markets.

Communications Market

II-VI's optical communications and wireless products and technologies enable the digital transformation in the next generation of high-speed optical transmission systems, networks, and datacenter solutions necessary to meet the accelerating global bandwidth demand.

Demand for our products is largely driven by the continually growing need for additional network bandwidth created by the ongoing proliferation of data and video traffic from video downloads and streaming, live TV, social networking, on-line gaming, file sharing, enterprise IP/internet traffic, cloud computing, and datacenter virtualization that must be handled by both wireline and wireless networks. Mobile traffic is increasing as a result of the proliferation of smartphones, tablet computers, and other mobile devices.

We are a global technology leader in optical communications, providing materials, components, modules, and subsystems to optical component and module manufacturers, networking equipment manufacturers, datacenter operators, and telecom service providers. We design products that meet the increasing demands for network bandwidth and data storage.

Our optical communications products can be divided into two main groups, optical transmission and optical transport. Our optical transmission products consist primarily of transmitters, receivers, transceivers, transponders, and active optical cables, which provide the fundamental optical-electrical, or optoelectronic, interface for interconnecting the electronic equipment used in these networks. This equipment includes switches, routers, and servers used in wireline networks as well as antennas and base stations used in wireless networks. These products rely on advanced components such as semiconductor lasers and photodetectors in conjunction with integrated circuits and novel optoelectronic packaging to provide a cost-effective means for transmitting and receiving digital signals over fiber-optic cable at speeds ranging from less than 1 Gbps to more than 400 Gbps, over distances of less than 10 meters to more than 5,000 kilometers, using a wide range of network protocols and physical configurations.

Our optical transport products are at the core of both terrestrial and undersea optical networks; our market-leading 980 nm pump lasers are the key enablers of our erbium-doped fiber amplifiers, which boost the power of optical signals in fiber-optic cables at intervals spanning typically 80 km to allow high-speed signals to be transmitted over longer distances. Our latest generation of components for coherent transceivers is critical to a new generation of small-size, long-reach DWDM transmission modules operating from 100 Gbps to 1 Tbps and beyond.

Customers continue to rely on us for our industry-leading optical amplification and embedded monitoring solutions for their next-generation ROADM systems to compensate for inherent signal loss and to monitor signal integrity. Our proprietary OTDR modules allow systems to automatically detect and pinpoint issues along the transmission path in real time. Together with our OCM solutions, which monitor the optical power of the channels transmitted in an fiber-optic link, they enable real-time intelligence to perform preventive maintenance so as to preserve data transmission. In addition, we offer a portfolio of WSS products, which we also incorporate into ROADM line cards and subsystems.

The accelerating adoption of applications such as cloud computing is driving the rapid growth of datacenter buildouts. Our high-speed 25 Gbps VCSELs enable transceivers for intra-datacenter communication. Our miniature WDM thin-film filter assemblies are used to increase the bandwidth within 100 GbE transceivers by combining wavelengths at the transmitter end and separating them out at the receiver end.

In the mobile wireless market, II-VI is a global leader in the strategic supply chain for materials and devices utilized in the latest 4G and 5G base station infrastructure. The deployment of 5G wireless is accelerating globally, driving the demand for RF power amplifiers that can operate efficiently in new high-frequency bands and be manufactured on a technology platform that can scale to meet the growing demand. Gallium nitride on silicon carbide (GaN-on-SiC) RF power amplifiers have superior performance, compared with devices based on silicon, over a wide spectrum of 5G operating frequencies in the gigahertz range, including in the millimeter-wave bands.

We are a market leader in the development and manufacture of 100 mm and 150 mm semi-insulating SiC substrates. These substrates are utilized by customers worldwide to manufacture GaN-on-SiC HEMT RF power amplifier devices that are embedded in remote radio heads in 4G/5G wireless base stations. In areas of high bandwidth demand, 5G antennas with beamforming technology utilizing multiple devices per antenna are expected to be densely deployed, increasing the demand for GaN-on-SiC power amplifiers by approximately an order of magnitude or more versus previous 4G antennas. Looking forward, II-VI continues to advance the state of the art in SiC substrates, with a strong technology portfolio of 30 active patents using highly differentiated and proprietary manufacturing platforms and technologies including crystal growth, substrate fabrication, and polishing. Our recent demonstration of the world's first prototype 200 mm semi-insulating SiC substrates will enable the RF power amplifier market to continue to scale, increasingly replacing functions performed by devices based on silicon and enabling new applications.

Leveraging this materials expertise, II-VI has invested aggressively in a world-class 150 mm compound semiconductor manufacturing platform and is developing a fully vertically integrated, 150 mm wafer fabrication platform to manufacture the state-of-the-art GaN-on-SiC HEMT devices that will enable these next-generation wireless networks.

Materials Processing Market

Our industrial laser optics and solutions for the materials processing market remain well-positioned, although we were impacted by the global industrial slowdown associated with COVID-19. Our vertically integrated and market-leading ZnSe optics and components, due to their inherent low loss at around the 10-micron wavelength, have enabled high-power CO₂ laser systems for many decades and remain critical to the steady stream of new deployments as well as to continued operation, serving as replacement optics for the installed base of CO₂ lasers. II-VI continues to introduce products that address new and growing applications for low-power CO₂ lasers, such as cutting plastics, textiles, leather, wood, and other organic materials, for which the CO₂ laser's 10-micron wavelength is ideally suited. CO₂ lasers are also at the core of EUV lithography systems, which are now emerging on the market to enable a new generation of smaller and more powerful integrated circuits.

Fiber lasers that operate at about the 1-micron wavelength in pulsed or continuous mode have taken a central role in many materials processing applications, especially for precision machining such as marking and microdrilling. II-VI supplies a broad set of laser optics and fused-fiber products that enable many functions within these fiber lasers, from the laser chips that generate the input optical power to the beam delivery systems that direct the output optical power to the target. The same set of II-VI products is at the core of existing and emerging direct-diode laser systems. II-VI is also driving innovation with a direct-diode laser engine small enough to be mounted on a robotic arm so that the end user can apply square beams directly to the workpiece at wavelengths optimized to process specific metals or alloys.

II-VI's broad portfolio of coated optics and crystal materials serves all of these growing laser markets.

Aerospace and Defense Market

II-VI's aerospace and defense solutions enable mission-critical capabilities for applications in high-energy lasers (HELs); contested space; and intelligence, surveillance, and reconnaissance (ISR). From uniquely grown single crystals and advanced ceramics, to completely engineered gimbal subsystems, II-VI solutions are embedded on nearly every platform in the field as well as those under development. Recently acquired coherent laser beam combining (CBC) and advanced lightweight gimbal technologies, along with domestically produced high-power fiber laser pumps and amplifiers, are enabling next-generation HEL systems and space-based laser communications applications. With the addition of nano-machined single-crystal silicon and grating technologies, together with II-VI's advanced HEL coating capabilities, we enable advanced spectral beam combining and novel microstructured surface capabilities, which are highly valued within the aerospace and defense industry.

Our advanced missile warning, electro-optical targeting, and imaging systems are deployed on virtually every U.S. fixed-wing and rotary platform. Our advanced sapphire, germanium, and multispectral domes provide unique protection to our advanced imaging, seeker, and laser solutions packaged behind them. They provide hemispherical coverage for airborne, naval, and ground-based systems.

Our solutions for the Lunar Reconnaissance Orbiter (LRO) provided the first images proving that the footprints on the moon are still there. The LRO continues to orbit the moon and provide rich information for future lunar landing sites. The LRO camera, and more advanced derivatives, are the basis for many advanced space imaging applications being pursued by our customers. Our solution for the OSIRIS-REx mission enables the first-ever ability for a NASA satellite to touch down on an asteroid (Bennu) and to retrieve a sample and return it to Earth. Our advanced imaging lenses and windows ensure our customers' vehicles are able to safely and accurately dock with the Space Station. Our advanced telescope solution for the Geostationary Lightning Mapper enables the GOES satellites to detect early lightning strikes and predict tornados a full 20 minutes before previous technology. It forms the basis for many of our customers' advanced multispectral imaging solutions.

II-VI's Aerospace & Defense (A&D) division maintains separate business development, accounting, finance, engineering, and manufacturing facilities in the United States with strictly controlled access; they are dedicated to our U.S. government-supported contracts.

Semiconductor Capital Equipment Market

Semiconductor capital equipment requires advanced materials to meet the need for tighter tolerances, enhanced thermal stability, faster wafer transfer speeds, and reduced stage settling times. Our metal-matrix composites and reaction-bonded ceramics enable these applications, thanks to their optimum combination of light weight, strength, hardness, and coefficient of thermal expansion. Our reaction-bonded SiC materials are used to manufacture wafer chucks, lightweight scanning stages, and high-temperature, corrosion-resistant wafer support systems. Our cooled SiC mirrors and precision patterned reticles are used in the illumination systems of lithography tools.

Our products enable legacy DUV lithography equipment that is widely deployed in semiconductor fabs. In the emerging market of EUV lithography systems, CO₂ lasers are used to generate extreme-ultraviolet light. These CO₂ lasers and beam delivery systems leverage our broad portfolio of CO₂ laser optics, CdTe modulators, and high-power damage-resistant polycrystalline CVD diamond windows to route the powerful laser beam to a tin droplet from which EUV light will emanate. Due to its very high mechanical and thermal performance characteristics, our reaction-bonded SiC is used in structural support systems that are integral to EUV lithography optics to meet critical requirements for optical system stability.

Life Sciences Market

Within the life sciences end market, II-VI focuses on light-based analytical instruments that are found in modern biotechnology laboratories. Applications include flow cytometry, genome sequencing, PCR, molecular diagnostics, imaging, and spectroscopy, to name a few. Our broad product portfolio delivers solutions covering illumination, light management, and thermal control. Visible-wavelength "QOMO" lasers and multicolored laser engines provide low-noise, high-performance, reliable light sources. Optical components and subassemblies such as filters, lenses, flow cells, gratings, objective lenses, and patterned reticles are embedded into these instruments to manage light delivery to and from samples. Our state-of-the-art thermal engines precisely control temperature and uniformity across large areas such as plate and block assemblies, even extending to reagent or sample chilling.

Medical and clinical procedures are increasingly performed with systems that integrate our lasers, optics, and thermal solutions. These applications are performed at or near the patient, requiring extreme precision and often complex designs and typically reaching into the NIR and IR wavelengths. Applications are varied, from laser-based treatments and surgeries to medical imaging and even point of care. II-VI's semiconductor laser bars and stacks are used in applications such as hair and wrinkle removal procedures. Crystals and laser cavities, along with custom-designed lens assemblies, are integrated and used for ophthalmic, dental, and dermatological surgeries. Finally, thermal components and subassemblies deliver solutions for medical-based applications such as delivering heating and cooling to the human body and medical laser temperature control.

II-VI solutions are the building blocks of scientific molecular spectroscopy and imaging-based platforms. These tools typically target environmental applications such as water, air, food/beverage, pharmaceutical, and agricultural testing and monitoring. II-VI continues to leverage its core laser, optics, and temperature-control expertise to deliver custom components and subassembly-level solutions.

Consumer Electronics Market

II-VI manufactures VCSELs, VCSEL arrays, and filters for the consumer electronics market. Our VCSEL products leverage our world-class 6-inch GaAs platform, combining our epitaxial wafer growth and wafer fabrication capabilities. Our VCSELs, unlike many on the market, have already been designed into consumer products such as computer mice and mobile phones as well as vehicle steering wheels. Our VCSELs are also widely deployed in datacenters and in the emerging market for HDMI optical cables. This expertise in VCSEL technology has been leveraged for the emerging 3D sensing market. 3D sensing was the first application to drive the demand for relatively large two-dimensional VCSEL arrays. A typical design for 3D sensing requires tens of VCSELs per chip in order to scale up the optical power required, for example, for face recognition applications. Therefore, 3D sensing applications drove an entirely new manufacturing infrastructure to enable 6-inch wafer processing. Today, II-VI is one of the very few vertically integrated 6-inch VCSEL manufacturers with a proven track record in high-volume manufacturing of high-reliability, large multi-emitter VCSEL dies designed for 3D sensing. An increasing number of consumer devices are coming on the market with embedded VCSELs, including multiple smartphones and augmented reality headsets.

Automotive Market

II-VI is a global leader in SiC substrates for power electronics that improve the energy efficiency of electric and hybrid-electric vehicles. Power electronics based on SiC enable systems to achieve significantly improved power utilization and conversion efficiencies, lower operating temperatures, and reduced thermal loads. This in turn enables either increased driving range or reductions in required battery capacity for a given range, which results in a significant cost reduction. Our comprehensive understanding of crystal growth and materials processing was acquired over decades of sustained R&D and manufacturing, allowing us to continuously evolve our technology and IP portfolio. We offer a full range of substrate diameters, including the world's first 200 mm substrate.

Our industry-leading semiconductor lasers, optics, and materials are at the core of LiDAR systems embedded in advanced driver-assistance systems (ADAS) and autonomous vehicles. LiDAR sensors enable ADAS to perform functions such as emergency braking and adaptive cruise control. LiDAR sensors are also expected to be embedded in autonomous vehicles. II-VI enables LiDAR sensors with a broad portfolio of components and modules, including high-power laser diodes, fiber amplifiers, frequency-modulated continuous wave detection (FMCW) solutions, optical filters for detection, mirrors for scanning, and thermoelectric coolers for temperature control. Our product offerings include edge-emitters and VCSELs that are capable of providing high peak powers for direct illumination and imaging. Emission and return windows on LiDAR systems are available in ultrahard bulk materials, such as SiC and diamond, and with optical coatings that are water-shedding and oil-resistant. Our thermoelectric coolers are qualified to automotive standards and enable LiDAR systems to operate with optimal performance and efficiency.

New generations of vehicles will be equipped with a greater number of sensors that can monitor a driver's alertness and let occupants interact with the console using touch sensing or gesture recognition. In the event of a collision, sensors can help provide critical information about the position and attention of occupants to activate restraints and deploy airbags in the best possible manner. II-VI's products enable the most advanced in-cabin control and monitoring systems for the latest applications in human-vehicle interactions. Our VCSELs are ideal for optical touch sensors integrated in dashboards or steering wheels. Our VCSEL arrays can provide infrared cabin illumination and structured light projection to enable gesture recognition.

Automotive manufacturers continue to differentiate their products with comfort features such as temperature-controlled car seats and cup holders, all of which require thermoelectric devices. II-VI offers thermal management solutions that are qualified to stringent automotive industry standards and tailored to various applications.

Sales and Marketing

We market our products through a direct sales force and through representatives and distributors around the world. Our market strategy is focused on understanding our customers' requirements and building market awareness and acceptance of our products. New products are continually being developed and introduced to our new and established customers in all markets.

The Company has centralized its worldwide sales and its strategic marketing functions. Sales offices have been strategically realigned to best serve and distribute products to our worldwide customer base. There are significant cooperation, coordination, and synergies among our business units, which capitalize on the most efficient and appropriate marketing channels to address diverse applications within our markets.

Our sales force develops effective communications with our OEM and end-user customers worldwide. Products are actively marketed through key account relationships, personal selling, select advertising, attendance at trade shows, and customer partnerships. Our sales force includes a highly trained technical sales support team to assist customers in designing, testing, and qualifying our products as key components of our customers' systems. As of June 30, 2020, we employed approximately 336 individuals in sales, marketing, and support.

We do business with a number of customers in the aerospace and defense industry, who in turn generally contract with a governmental entity, typically a U.S. government agency. Most governmental programs are subject to funding approval and can be modified or terminated without warning by a legislative or administrative body.

Customers

The representative groups of customers by segment are as follows:

| Segment: | Business Unit: | Our Customers Are: | Representative Customers: |
|---------------------------|-----------------------|--|---|
| Photonic Solutions | ROADM | Worldwide network system and subsystem providers of telecommunications, data communications, and CATV | <ul style="list-style-type: none"> • Ciena Corporation • Fujitsu Network Communications • Nokia Solutions and Networks • Nippon Electric Company Ltd. (NEC Corporation) |
| | Coherent Optics | | |
| | Transceivers | Cloud service providers, telecom service providers, enterprises with internal datacom networks, datacom OEMs, telecom OEMs | <ul style="list-style-type: none"> • Cisco Systems Inc. |
| | Advanced Optics | Global manufacturers of industrial and medical laser optics and crystals including commercial and consumer products used in a wide array of instruments, sensors, fiber lasers, displays, and projection devices | <ul style="list-style-type: none"> • Corning Incorporated • Coherent Inc. • Han's Laser Technology Industry Group Co. Ltd. |

| | | | |
|--------------------------------|-------------------------------------|--|--|
| Compound Semiconductors | Engineered Materials & Laser Optics | OEM and system integrators of industrial, medical, personal comfort, and aerospace and defense laser systems; laser end users who require replacement optics for their existing laser systems | <ul style="list-style-type: none"> • TRUMPF GmbH + Co. KG • Bystronic Laser AG • Coherent Inc. |
| | | Manufacturers and developers of integrated-circuit capital equipment for the semiconductor capital equipment industry | <ul style="list-style-type: none"> • ASML Holding NV • Carl Zeiss AG • Nikon Corporation • KLA-Tencore Corporation |
| | | Primary mineral processors, refiners, and providers of specialized materials used in laser optics, photovoltaics, semiconductors, thermoelectric coolers, metallurgy, and industrial products | <ul style="list-style-type: none"> • Aurubis AG |
| | Laser Devices & Systems | Manufacturers of industrial laser components, optical communications equipment, and consumer technology applications; automotive manufacturers | <ul style="list-style-type: none"> • Ford Motor Company • Laserline GmbH • Wuhan Raycus Fiber Laser Technologies Co. Ltd. • Hisense Broadband |
| | | OEM and subsystem integrators of aiming, machine vision, biomedical instruments, and fiber lasers; laser cutting machines for superhard materials | <ul style="list-style-type: none"> • BGI Complete Genomics, Shenzhen Co. Ltd. • TRUMPF GmbH + Co. KG |
| | Aerospace & Defense | Manufacturers of equipment and devices for aerospace, defense, and commercial markets | <ul style="list-style-type: none"> • Lockheed Martin Corporation |
| | Wide Bandgap Semiconductors | Manufacturers and developers of equipment and devices for high-power RF electronics and high-power, voltage-switching, and power-conversion systems for both commercial and aerospace and defense applications | <ul style="list-style-type: none"> • Sumitomo Electric Device Innovations Inc. • Showa Denko KK • STMicroelectronics • IQE PLC • Infineon Technologies AG • Dynax Semiconductor Inc. |
| | Optoelectronic & RF Devices | Manufacturers of consumer electronics and transceivers | <ul style="list-style-type: none"> • Sumitomo Electric Devices |
| | InP Devices | Manufacturers of transceivers | |

Competition

II-VI is a global leader in many of its product families. We compete partly on the basis of our reputation for offering highly engineered products, product and technology roadmaps, intellectual property, ability to scale, quality, on-time delivery, technical support, and pricing. We believe that we compete favorably with respect to these factors and that our vertical integration, manufacturing facilities and equipment, experienced technical and manufacturing employees, and worldwide marketing and distribution channels provide us with competitive advantages. The representative groups of our competitors by segment are as follows:

| Segment: | Areas of Competition: | Competitors: |
|--------------------------------|--|---|
| Photonic Solutions | Optics, optical components, modules, and subsystems for optical communications | <ul style="list-style-type: none"> • Molex LLC • Lumentum Operations LLC |
| | Optical and crystal components, thin-film coatings, and subassemblies for lasers and metrology instruments | <ul style="list-style-type: none"> • Casix Inc. • CASTECH Inc. • Hellma GmbH & Co. KG • Research Electro-Optics Inc. • IDEX Corporation |
| Compound Semiconductors | Infrared laser optics | <ul style="list-style-type: none"> • Sumitomo Electric Industries Ltd. • MKS Instruments Inc. • Wavelength Opto-Electronic Pte. Ltd. • Sigma Koki Co. Ltd. |
| | Automated equipment and laser materials processing tools to deliver high-power 1-micron laser systems | <ul style="list-style-type: none"> • Optoskand AB • Precitec GmbH & Co. KG • Mitsubishi Cable Industries Ltd. |
| | Biomedical instruments for flow cytometry, DNA sequencing, and fluorescence microscopy | <ul style="list-style-type: none"> • Coherent Inc. • Pavilion Integration Corporation • Shimadzu Corporation |
| | Semiconductor laser diodes for the industrial and consumer markets | <ul style="list-style-type: none"> • Lumentum Operations LLC • Broadcom Ltd. • ams AG • Jenoptik AG • OSRAM Licht AG • Sony Corporation • Hamamatsu Photonics KK |
| | Infrared optics for aerospace and defense applications | <ul style="list-style-type: none"> • In-house fabrication and thin-film coating capabilities of major aerospace and defense customers |
| | Thermoelectric components, subassemblies, and systems | <ul style="list-style-type: none"> • Komatsu Ltd. • Laird PLC • Ferrotec Corporation |
| | Metal-matrix composites and reaction-bonded ceramic products | <ul style="list-style-type: none"> • Berliner Glas KGaA • Herbert Kubatz GmbH & Co. • CoorsTek Inc. • Japan Fine Ceramics Co. Ltd. |
| | Single-crystal SiC substrates | <ul style="list-style-type: none"> • Cree Inc. • Dow Corning Corporation • SICCCo. Ltd. • TankeBlue Semiconductor Co. Ltd. • ROHM Co. Ltd. |
| | Refining and materials recovery services for high-purity rare metals | <ul style="list-style-type: none"> • Vital Materials Co. Ltd. • 5N Plus Inc. • RETORTE GmbH Selenium Chemicals & Metals |

In addition to competitors who manufacture products similar to those we produce, there are other technologies and products available that may compete with our technologies and products.

Our Strategy

Our strategy is to grow businesses with world-class engineered materials capabilities to advance our current customers' strategies, penetrate new markets through innovative technologies and platforms, and enable new applications in large and growing markets. A key strategy of ours is to develop and manufacture high-performance materials and, in certain cases, components from those materials, that are differentiated from those produced by our competitors. We focus on providing components that are critical to the heart of our customers' products serving the applications mentioned above.

We have grown the number and size of our key accounts substantially. A significant portion of our business is based on sales orders with market leaders, which enables our forward planning and production efficiencies. We intend to continue capitalizing and executing on this proven model, participating effectively in the growth of the markets discussed above, and continuing our focus on operational excellence as we execute our primary business strategies:

| Key Business Strategies: | Our Plan to Execute: |
|--|---|
| Identify New Products and Markets | Identify new technologies, products, and markets to meet evolving customer requirements for high-performance engineered materials through our dedicated RD&E programs to increase new product revenue and maximize return on investment |
| Balanced Approach to Research and Development | Internally and externally funded RD&E expenditures, targeting an overall investment of between 7%–11% of revenues depending on the nature of the investment in terms of technology platforms or products |
| Leverage Vertical Integration | Combine RD&E and manufacturing expertise, operating with a bias toward components and production machines; reducing cost and lead time to enhance competitiveness, time to market, profitability, and quality; and enabling our customers to offer competitive products |
| Investment in Scalable Manufacturing | Strategically invest in, evaluate, and identify opportunities to consolidate and automate manufacturing operations worldwide to increase production capacity, capabilities, and cost-effectiveness |
| Enhance Our Performance and Reputation as a Quality and Customer Service Leader | Continue to improve upon our established reputation as a consistent, high-quality supplier of engineered materials and optoelectrical components that are built into our customers' products |
| | Execute our global quality transformation process, eliminating costs of nonconforming materials and processes |
| Identify and Complete Strategic Acquisitions and Alliances | Identify acquisition opportunities that accelerate our access to emerging, high-growth segments of the markets we serve and further leverage our competencies and economies of scale |

Research, Development, and Engineering

During the fiscal year ended June 30, 2020, the Company continued to identify, invest in, and focus our research and development on new products and platform technologies in an effort to accelerate our organic growth. This approach is managed under a disciplined innovation program that we refer to as the "II-VI Phase Gate Process."

We devote significant resources to RD&E programs directed at the continuous improvement of our existing products and processes and to the timely development of new materials, technologies, and products. We believe that our RD&E activities are essential to establishing and maintaining a leadership position in each of the markets we serve. In addition, certain manufacturing personnel support or participate in our research and development efforts on an ongoing basis. We believe this interaction between the development and manufacturing functions enhances the direction of our projects, reducing costs and accelerating technology transfers.

During the fiscal year ended June 30, 2020, we focused our RD&E investments in the following areas:

| Segment: | Area of Development: | Our RD&E Investments: |
|--|--|---|
| Photonic Solutions | Photonics design | Continuing to develop and improve crystal materials, precision optical parts, and laser device components for photonics applications |
| | Datacom transceivers | Continuing cost reduction on 10G-100G products, leveraging our engineering resources and manufacturing scale; continuing to develop high-end 200G/400G products, including RF and packaging designs; exploring high-density, high-bandwidth co-packaged designs through silicon photonics; continuing to develop vertically integrated designs, including with lasers and ICs |
| | Coherent optics | Driving further integration to reduce size and power consumption; optimizing product cost with new design architectures and more efficient manufacturing flow |
| | Pump lasers | Continuing to invest in our next-generation GaAs pump laser portfolio and flexible manufacturing footprint to address evolving terrestrial and undersea markets |
| | | Developing InP growth and processing capability together with associated packaging technology |
| | Optical amplifiers and subsystems | Investing and broadening the range of amplifiers and integrated subsystems, including ROADMs |
| | Wavelength selective switching | Developing LC and LCOS technologies and associated module designs for WSS; investing in manufacturing equipment and the automation platform |
| | Optical monitoring | Continuing optical channel monitoring investment |
| | | Developing OTDRs to monitor the health of the fiber plant |
| | Micro-optics manufacturing | Shifting toward smaller, more compact optics and automated assembly platforms and packages |
| | | Investing in manufacturing equipment for computerized processes |
| Compound Semiconductors | High-power laser diodes, semiconductor lasers, and devices for optical communications and sensing, and high-volume manufacturing | Focusing on increasing fiber-coupled optical output power of multi-emitter modules |
| | | Developing high-power VCSELs for consumer devices and next-generation, high-speed VCSELs for 3D sensing and datacom applications |
| | | Developing high-power and high-speed InP lasers, detectors, and components for applications in optical communications |
| | High-power beam delivery | Developing multi-kW beam delivery systems and cables for welding and cutting |
| | CVD diamond technology | Developing CVD diamond for EUV applications |
| | | Broadening our portfolio beyond infrared window applications |
| | SiC technology | Developing advanced SiC substrate growth technologies to support emerging markets in GaN RF and SiC power electronics |
| | | Continuous improvement to maintain world-class, high-quality, large-diameter substrates and epitaxial wafers |
| | Thermoelectric materials and devices | Continuing to develop leading Bi ₂ Te ₃ materials for thermoelectric cooling/heating |
| | | Focusing on thermoelectric power-generation capability in order to introduce new products to the market |
| Metal-matrix composites and reaction-bonded ceramics | Support industrial customers in developing application-specific wear and thermal management solutions | |
| Fiber laser technologies | Developing high-power fiber laser technologies for aerospace, defense, and commercial applications | |

The development of our products and manufacturing processes is largely based on proprietary technical know-how and expertise. We rely on a combination of contract provisions, trade secret laws, invention disclosures, and patents to protect our proprietary rights. We have entered into selective intellectual property licensing agreements. We have asserted in the past, and expect that we will continue to assert, as well as vigorously protect, our intellectual property rights. We have a total of approximately 2,450 patents globally.

Internally funded research and development expenditures were \$339.1 million, \$139.2 million, and \$116.9 million for the fiscal years 2020, 2019, and 2018, respectively. For these same periods, externally funded research and development expenditures were \$16.4 million, \$14.7 million, and \$12.7 million, respectively, and were included in cost of goods sold in the Consolidated Statements of Earnings (Loss).

Import and Export Compliance

We are required to comply with various import/export and economic sanctions laws and regulations, including:

- The import regulations administered by U.S. Customs and Border Protection;
- The International Traffic in Arms Regulations administered by the U.S. Department of State, Directorate of Defense Trade Controls, which among other things impose licensing requirements on the export from the United States of certain defense articles and defense services, generally including items that are specially designed or adapted for a military application and/or listed on the United States Munitions List;
- The Export Administration Regulations administered by the U.S. Department of Commerce, Bureau of Industry and Security, which among other things impose licensing requirements on certain dual-use goods, technology, and software, i.e., items that potentially have both commercial and military applications; and
- The regulations administered by the U.S. Department of the Treasury, Office of Foreign Assets Control, implementing economic sanctions against designated countries, governments, and persons based on U.S. foreign policy and national security considerations.

Foreign governments have also implemented similar import and export control laws and regulations. For additional discussion regarding our import and export compliance, see the discussion set forth in Item 1A – Risk Factors of this Annual Report Form on Form 10-K.

Trade Secrets, Patents, and Trademarks

Our use of trade secrets, proprietary know-how, trademarks, copyrights, patents, contractual confidentiality, and IP ownership provisions help us develop and maintain our competitive position with respect to our products and manufacturing processes. We aggressively pursue process and product patents in certain areas of our businesses and in certain jurisdictions across the globe. We have entered into selective intellectual property licensing agreements. We have confidentiality and noncompetition agreements with certain personnel. We require that our U.S. employees sign a confidentiality and noncompetition agreement upon commencement of their employment with us.

Executive Officers of the Registrant

The executive officers of the Company and their respective ages and positions as of June 30, 2020, are set forth below. Each executive officer listed has been appointed by the board of directors to serve until removed or until such person’s successor is appointed and qualified.

| Name | Age | Position |
|-------------------------|------------|---|
| Vincent D. Mattera, Jr. | 64 | Chief Executive Officer; Director |
| Walter R. Bashaw II | 55 | President |
| Mary Jane Raymond | 59 | Chief Financial Officer and Treasurer and Assistant Secretary |
| Giovanni Barbarossa | 58 | Chief Strategy Officer and President, Compound Semiconductors |
| Jo Anne Schwendinger | 64 | Chief Legal Officer and Compliance Officer and Secretary |
| Christopher Koeppen | 49 | Chief Technology Officer |

Vincent D. Mattera, Jr. Dr. Mattera initially served as a member of the II-VI board of directors from 2000 to 2002. Dr. Mattera joined the Company as a Vice President in 2004 and served as Executive Vice President from January 2010 to November 2013, when he became the Chief Operating Officer. In November 2014, Dr. Mattera became the President and Chief Operating Officer and was reappointed to the board of directors. In November 2015, he became the President of II-VI. In September 2016, Dr. Mattera became the Company's third President and Chief Executive Officer in 45 years. During his career at II-VI, he has assumed successively broader management roles, including as a lead architect of the Company's diversification strategy. He has provided vision, energy, and dispatch to the Company's growth initiatives, including overseeing the acquisition-related integration activities in the United States, Europe, and Asia—especially in China—thereby establishing additional platforms. These have contributed to a new positioning of the Company into large and transformative global growth markets while increasing considerably the global reach of the Company, deepening the technology and IP portfolio, broadening the product roadmap and customer base, and increasing the potential of II-VI.

Prior to joining II-VI as an executive, Dr. Mattera had a continuous 20-year career in the Optoelectronic Device Division of AT&T Bell Laboratories, Lucent Technologies, and Agere Systems, during which he led the development and manufacturing of semiconductor laser-based materials and devices for optical and data communications networks. Dr. Mattera has 34 years of leadership experience in the compound semiconductor materials, device technology, operations, and markets that are core to II-VI's business and strategy. Dr. Mattera holds a B.S. degree in chemistry from the University of Rhode Island (1979) and a Ph.D. in chemistry from Brown University (1984). He completed the Stanford University Executive Program (1996).

Walter R. Bashaw II has served as the Company's President since July 2019. Mr. Bashaw served as the Company's Senior Vice President, Corporate Strategy and Development, Administration from October 2018 to July 2019. Previously, Mr. Bashaw served as the Company's Interim General Counsel and Secretary from December 2015 until March 2017. Mr. Bashaw also previously was a Managing Shareholder and a Director of the law firm of Sherrard, German & Kelly, P.C. (SGK) in Pittsburgh, Pennsylvania, until October 2018 and Of Counsel at SGK from October 2018 until June 2019. Mr. Bashaw graduated from the Pennsylvania State University with a B.S. degree in Logistics and also holds a J.D. degree from the University of Pittsburgh School of Law.

Mary Jane Raymond has been Chief Financial Officer and Treasurer of the Company since March 2014. Previously, Ms. Raymond was Executive Vice President and Chief Financial Officer of Hudson Global Inc. (Nasdaq: HSON) from 2005 to 2013. Ms. Raymond was the Chief Risk Officer and Vice President and Corporate Controller at Dun and Bradstreet Inc. from 2002 to 2005. Additionally, she was the Vice President, Merger Integration, at Lucent Technologies from 1997 to 2002 and held several management positions at Cummins Engine Company from 1988 to 1997. Ms. Raymond holds a B.A. degree in Public Management from St. Joseph's University, and an MBA from Stanford University.

Giovanni Barbarossa joined II-VI in October 2012 and has been the Chief Strategy Officer of the Company and the President of the Compound Semiconductors Segment since July 2019. Previously, he was the Chief Technology Officer of the Company and the President of the Laser Solutions Segment. Dr. Barbarossa was employed at Avanex Corporation from 2000 through 2009, serving in various executive positions in product development and general management, ultimately serving as President and Chief Executive Officer. When Avanex merged with Bookham Technology, forming Oclaro, Dr. Barbarossa became a member of the board of directors of Oclaro and served as such from 2009 to 2012. Previously, he held senior management roles in the Optical Networking Division of Agilent Technologies and in the Network Products Group of Lucent Technologies. He was previously a Member of Technical Staff, then Technical Manager at AT&T Bell Labs, and a Research Associate at British Telecom Labs. Dr. Barbarossa graduated from the University of Bari, Italy, with a B.S. degree in Electrical Engineering, and holds a Ph.D. in Photonics from the University of Glasgow, U.K.

Jo Anne Schwendinger has served as the Company's Chief Legal and Compliance Officer and Secretary since November 2017. Ms. Schwendinger also served as the Company's General Counsel and Secretary from when she joined the Company in March 2017 until November 2017. Prior to her employment with the Company, Ms. Schwendinger practiced law with the firm Blank Rome LLP from August 2016 until February 2017. Previously, Ms. Schwendinger served in various legal roles at Deere & Company from 2000 until August 2016, including Regional General Counsel—Asia-Pacific and Sub-Saharan Africa and Assistant General Counsel. Ms. Schwendinger holds a bachelor's degree from the Université d'Avignon et des Pays de Vaucluse, a master's degree from the Université de Strasbourg, and a J.D. degree from the University of Pittsburgh Law School.

Christopher Koeppen joined the Company in 2011 following the acquisition of Aegis Lightwave, Inc., where he served as General Manager, Aegis-NJ. He was named General Manager of II-VI's Agile Network Products Division in 2012 and Director of Corporate Strategic Technology Planning in 2015. He then served as Vice President of the Industrial Laser Group and Corporate Strategic Technology Planning from 2017 until his appointment as Chief Technology Officer in 2019. Previously, Dr. Koeppen was co-founder and Chief Executive Officer of CardinalPoint Optics, prior to its acquisition by Aegis Lightwave. He has more than two decades of progressively increasing general and technology management experience in high-tech companies, including at Meriton Networks, Mahi Networks, Photuris, and Lucent Technologies. Dr. Koeppen holds a Ph.D. in Physics from the University of Pennsylvania, where he was an AT&T Bell Laboratories Scholar, and B.S. degrees in Physics and Mathematics from the Pennsylvania State University.

Availability of Information

Our internet address is www.ii-vi.com. Information contained on our website is not part of, and should not be construed as being incorporated by reference into, this Annual Report on Form 10-K. We post the following reports on our website as soon as reasonably practical after they are electronically filed with or furnished to the Securities and Exchange Commission ("SEC"): our Annual Reports on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K, and any amendments to those reports or statements filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. In addition, we post our proxy statements on Schedule 14A related to our annual shareholders' meetings as well as reports filed by our directors, officers, and 10% beneficial owners pursuant to Section 16 of the Exchange Act. In addition, all filings are available via the SEC's website (www.sec.gov). We also make our corporate governance documents available on our website, including the Company's Code of Business Conduct and Ethics, governance guidelines, and the charters for our board committees. All such documents are located on the Investors page of our website and are available free of charge.

Item 1A. RISK FACTORS

The following are certain risk factors that could affect our business, results of operations, financial position or cash flows. These risk factors should be considered along with the forward-looking statements contained in this Annual Report on Form 10-K, because these factors could cause our actual results or financial condition to differ materially from those projected in forward-looking statements. The following discussion is not an all-inclusive listing of risks, although we believe these are the more material risks that we face. If any of the following occur, our business, results of operations, financial position, or cash flows could be adversely affected. You should carefully consider these factors, as well as the other information contained in this Annual Report on Form 10-K, when evaluating an investment in our securities.

Risks Relating to Our Business and Our Industry

Investments in future markets of potential significant growth may not result in the expected return.

We continue to make investments in programs with the goal of gaining a greater share of end markets using semiconductor lasers and other components including those used for 3D sensing and emerging 5G technology. We cannot guarantee that our investments in capital and capabilities will be sufficient. The potential end markets, as well as our ability to gain market share in such markets, may not materialize on the timeline anticipated or at all. We cannot be sure of the end market price, specification, or yield for products incorporating our technologies. Our technologies could fail to fulfill, partially or completely, our target customers' specifications. We cannot guarantee the end market customers' acceptance of our technologies. Further, we may be unable to fulfill the terms of our contracts with our target customers, which could result in penalties of a material nature, including damages, loss of market share, and loss of reputation.

Our competitive position depends on our ability to develop new products and processes.

To meet our strategic objectives, we must develop, manufacture, and market new products and continue to update our existing products and processes to keep pace with market developments to address increasingly sophisticated customer requirements. Our success in developing and selling new and enhanced products and processes depends upon a variety of factors, including strategic product selection, efficient completion of product design and development, timely implementation of manufacturing and assembly processes, effective sales and marketing, and high-quality and successful product performance in the market.

The introduction by our competitors of products or processes using new developments that are better or faster than ours could render our products or processes obsolete or unmarketable. We intend to continue to make significant investments in research, development, and engineering to achieve our goals. There can be no assurance that we will be able to develop and introduce new products or enhancements to our existing products and processes in a manner which satisfies customer needs or achieves market acceptance. The failure to do so could have a material adverse effect on our ability to grow our business and maintain our competitive position and on our results of operations and/or financial condition.

Widespread health crises, including the global novel coronavirus (COVID-19) pandemic, could materially and adversely affect our business, financial condition, and results of operations.

In March 2020, the World Health Organization declared the outbreak of COVID-19 a pandemic, which continues to spread throughout the United States and world. We are closely monitoring the impact of the COVID-19 pandemic on all aspects of our business, including the impact to our suppliers, customers, and employees as well as the impact to the countries and markets in which we operate. At the onset of the COVID-19 outbreak, we began focusing intensely on mitigating the adverse impacts of COVID-19 on our foreign and domestic operations, starting by protecting our employees, suppliers, and customers.

Significant reductions in demand for one or more of our products or a curtailment to one or more of our product lines may be caused by, among other things, the temporary inability of our customers to purchase and utilize our products in next-stage manufacturing due to shutdown orders or financial hardship.

Workforce constraints triggered by shutdown orders and stay-at-home policies may present challenges in meeting our obligations to our customers and achieving cost and operational targets. For example, approximately 45% of our global facilities are subject to a government order, including approximately 10% that are currently closed, most of which are administrative facilities where employees are working remotely. We expect facilities to continue to be subject to similar government orders for the foreseeable future.

We may face disruptions from our third-party manufacturing and raw materials supply arrangements caused by constraints over their workforce capacity or their own financial or operational difficulties. There is also heightened risk and uncertainty regarding the loss or disruption of other essential third-party service providers, including transportation services, contract manufacturing, marketing, and distribution services.

Governmental and regulatory responses to the pandemic may include quarantines, import/export restrictions, price controls, or other governmental or regulatory actions, including closures or other restrictions that limit or close our operating and manufacturing facilities, restrict our workforce's ability to travel or perform necessary business functions, or otherwise impact our suppliers or customers, which could adversely impact our operating results.

Such efforts to ensure the safety of our workforce, customers, and suppliers may result in increased operating expenses and potentially jeopardize the efficiency of operations. Such impacts may further increase the difficulty of planning for operations and may adversely impact our results.

We have made efforts to identify, manage, and mitigate the economic disruption impacts of the COVID-19 pandemic to the Company; however, there are factors beyond our knowledge or control, including the duration and severity of this outbreak or any such similar outbreak, as well as further governmental and regulatory actions.

Global economic downturns, including any downturn related to COVID-19, may adversely affect our business, operating results, and financial condition.

Current and future conditions in the global economy have an inherent degree of uncertainty. As a result, it is difficult to estimate the level of growth or contraction of the global economy as a whole. It is even more difficult to estimate growth or contraction in various parts, sectors, and regions of the economy, including the industrial, aerospace and defense, optical communications, telecommunications, semiconductor, consumer, and medical and life science markets in which we participate. All aspects of our Company's forecast depend on estimates of growth or contraction in the markets we serve. Thus, prevailing global economic uncertainties render estimates of future income and expenditures very difficult to make.

Global economic downturns may affect industries in which our customers operate. These changes could include decreases in the rate of consumption or use of our customers' products. Such conditions could have a material adverse effect on demand for our customers' products and, in turn, on demand for our products.

Adverse changes may occur in the future as a result of declining or flat global or regional economic conditions, fluctuations in currency and commodity prices, wavering confidence, capital expenditure reductions, unemployment, decline in stock markets, contraction of credit availability, or other factors affecting economic conditions. For example, factors that may affect our operating results include disruption in the credit and financial markets in the United States, Europe, and elsewhere, adverse effects of slowdowns in the U.S., European, or Chinese economies, reductions or limited growth in consumer spending or consumer credit, global trade tariffs, and other adverse economic conditions that may be specific to the Internet, e-commerce, and payments industries.

Adverse changes could also occur as a result of economic upswings, such as increased wages and scarce labor pools, and increased interest rates.

These changes may negatively affect sales of products and increase exposure to losses from bad debt and commodity prices, the cost and availability of financing, and costs associated with manufacturing and distributing products. Any economic downturn could have a material adverse effect on our business, results of operations, or financial condition.

Some systems that use our products are complex in design, and our products may contain defects that are not detected until deployed, which could increase our costs, reduce our revenues, cause us to lose key customers, and may expose us to litigation related to our products.

Some systems that use our products are inherently complex in design and require ongoing maintenance. Our customers may discover defects in our products after the products have been fully deployed and operated under peak stress conditions. In addition, some of our products are combined with products from other vendors which may contain defects. Should problems occur, it may be difficult to identify the source of the problem. If we are unable to correct defects or other problems, we could experience, among other things, loss of customers, increased costs of product returns and warranty expenses, damage to our brand reputation, failure to attract new customers or achieve market acceptance, diversion of development and engineering resources, or legal action by our customers.

The occurrence of any one or more of the foregoing factors could have a material adverse effect on our business, results of operations, or financial condition.

Foreign currency risk may negatively affect our revenues, cost of sales, and operating margins, and could result in foreign exchange losses.

We conduct our business and incur costs in the local currency of most countries in which we operate. Our net sales outside the United States represented a majority of our total sales in each of the last three fiscal years. We incur currency transaction risk whenever one of our operating subsidiaries enters into either a purchase or a sales transaction using a different currency from the currency in which it operates, or holds assets or liabilities in a currency different from its functional currency. Changes in exchange rates can also affect our results of operations when the value of sales and expenses of foreign subsidiaries are translated to U.S. dollars. We cannot accurately predict the impact of future exchange rate fluctuations on our results of operations. Further, given the volatility of exchange rates, we may not be able to effectively manage our currency risks, and any volatility in currency exchange rates may increase the price of our products in local currency to our foreign customers or increase the manufacturing cost of our products, either of which may have an adverse effect on our financial condition, cash flows, and profitability.

Our competitive position may still require significant investments.

We continuously monitor the marketplace for strategic opportunities, and our business strategy includes expanding our product lines and markets through both internal product development and acquisitions. Consequently, we expect to continue to consider strategic acquisition of businesses, products, or technologies complementary to our business. This may require significant investments of management time and financial resources. If market demand is outside our organic capabilities, if a strategic acquisition is required and we cannot identify one or execute on it, and/or if financial investments that we undertake distract management, do not result in the expected return on investment, expose us to unforeseen liabilities, or jeopardize our ability to comply with our credit facility covenants due to any inability to integrate the business, adjust to operating a larger and more complex organization, adapt to additional political and other requirements associated with the acquired business, retain staff, or work with customers, we could suffer a material adverse effect on our business, results of operations, or financial condition.

We may be unable to successfully implement our acquisitions strategy or integrate acquired companies and personnel with existing operations.

We have in the past acquired several companies, including the completion of our acquisition of Finisar Corporation (“Finisar”) in September 2019. We may continue to expand and diversify our operations with additional acquisitions. We may be unable to identify or complete prospective acquisitions for many reasons, including increasing competition from other potential acquirers, the effects of consolidation in our industries, and potentially high valuations of acquisition candidates. In addition, applicable antitrust laws and other regulations may limit our ability to acquire targets or force us to divest an acquired business line. If we are unable to identify suitable targets or complete acquisitions, our growth prospects may suffer, and we may not be able to realize sufficient scale and technological advantages to compete effectively in all markets.

To the extent that we are successful in making acquisitions, we may be unsuccessful in integrating acquired companies or product lines with existing operations, or the integration may be more difficult or more costly than anticipated. Some of the risks that may affect our ability to integrate or realize anticipated benefits from acquired companies, businesses, or assets include those associated with:

- unexpected losses of key employees of the acquired company;
- conforming the acquired company’s standards, processes, procedures, and controls with our operations, including integrating enterprise resource planning systems and other key business applications;
- coordinating new product and process development;
- increasing complexity from combining operations;
- increasing the scope, geographic diversity, and complexity of our operations;
- difficulties in consolidating facilities and transferring processes and know-how; and
- diversion of management’s attention from other business concerns.

In connection with acquisitions, we may:

- use a significant portion of our available cash;
- issue equity securities, which would dilute current shareholders' percentage ownership;
- incur significant debt;
- incur or assume contingent liabilities, known or unknown, including potential lawsuits, infringement actions, or similar liabilities;
- incur impairment charges related to goodwill or other intangibles; and
- face antitrust or other regulatory inquiries or actions.

In addition, the market price of our common stock or our 6.00% Series A Mandatory Convertible Preferred Stock ("Mandatory Convertible Preferred Stock") could be adversely affected if the effect of any acquisitions on our consolidated financial results is dilutive or is below the market's or financial analysts' expectations, or if there are unanticipated changes in the business or financial performance of the acquired or combined company. Any failure to successfully integrate acquired businesses may disrupt our business and adversely impact our business, results of operations, or financial condition.

Although II-VI continues to expect that its acquisition of Finisar will result in cost savings, synergies, and other benefits, the combined company may not realize those benefits, or be able to retain those benefits even if realized.

The success of II-VI's acquisition of Finisar will continue to depend in large part on the success of the management of the combined company in integrating the operations, strategies, technologies, and personnel of the two companies. The combined company may fail to realize some or all of the anticipated benefits of the combination if the integration process takes longer than expected or is more costly than expected. The failure of the combined company to meet the challenges involved in successfully integrating the operations of the two companies or to otherwise realize any of the anticipated benefits of the combination, including additional cost savings and synergies, could impair the operations of the combined company. In addition, II-VI continues to believe that the overall integration of Finisar will be a time-consuming and expensive process that, without proper planning and effective and timely implementation, could significantly disrupt the combined company's business.

Potential difficulties that the combined company may encounter in the integration process include:

- the integration of management teams, strategies, technologies and operations, products, and services;
- the disruption of ongoing businesses and distraction of their respective management teams from ongoing business concerns;
- the retention of, and possible decrease in business from, existing customers of both companies;
- the creation of uniform standards, controls, procedures, policies, and information systems;
- the reduction of the costs associated with each company's operations;
- the integration of corporate cultures and maintenance of employee morale;
- the retention of key employees; and
- potential unknown liabilities associated with the merger.

The anticipated cost savings, synergies, and other benefits of the acquisition of Finisar assume a successful integration of the companies and are based on projections and other assumptions, which are inherently uncertain. Even if integration is successful, anticipated cost savings, synergies, and other benefits may not be achieved.

Our future success depends on continued international sales, and our global operations are complex and present multiple challenges to manage.

We anticipate that international sales will continue to account for a significant portion of our revenues for the foreseeable future. The failure to maintain our current volume of international sales could materially affect our business, results of operations, financial condition, and/or cash flows.

We manufacture products in the Australia, China, Germany, Malaysia, the Philippines, Singapore, South Korea, Sweden, Switzerland, the United Kingdom, the United States, and Vietnam, and through a contract manufacturer in Thailand. We also maintain direct sales offices in Belgium, Canada, China, Germany, Hong Kong, Italy, Japan, South Korea, Switzerland, Taiwan, and the United Kingdom. Our operations vary by location and are influenced on a location-by-location basis by local customs, languages, and work practices, as well as different local weather conditions, management styles, and education systems. In addition, multiple complex issues may arise concurrently in different countries, potentially hampering our management's ability to respond in an effective and timely manner. Any inability to respond in an effective and timely manner

to issues in our global operations could have a material adverse effect on our business, results of operations, or financial condition.

We are subject to complex and rapidly changing import and export regulations which could limit our sales and decrease our profitability.

We are subject to the passage of and changes in the interpretation of regulation by U.S. government entities at the federal, state, and local levels and by non-U.S. agencies, including, but not limited to, the following:

- We are required to comply with import laws and export control and economic sanctions laws, which may affect our ability to enter into or complete transactions with certain customers, business partners, and other persons. In certain circumstances, export control and economic sanctions regulations may prohibit the export of certain products, services, and technologies. We may be required to obtain an export license before exporting a controlled item, and granting of a required license cannot be assured. Compliance with the import laws that apply to our businesses may restrict our access to, and may increase the cost of obtaining, certain products and could interrupt our supply of imported inventory.
- Exported technologies necessary to develop and manufacture certain products are subject to U.S. export control laws and similar laws of other jurisdictions. We may be subject to adverse regulatory consequences, including government oversight of facilities and export transactions, monetary penalties, and other sanctions for violations of these laws. In certain instances, these regulations may prohibit us from developing or manufacturing certain of our products for specific applications outside the United States. Failure to comply with any of these laws and regulations could result in civil and criminal, monetary, and nonmonetary penalties; disruptions to our business; limitations on our ability to import and export products and services; and damage to our reputation.

Changes in trade policies, such as increased import duties, could increase the costs of goods imported into the United States or China.

In March 2018, President Trump announced new steel and aluminum tariffs. Then, in July 2018 the United States imposed increased tariffs on products of Chinese origin, and China responded by increasing tariffs on U.S.-origin goods. On the export side, denial orders and placing companies on the U.S. entity list could decrease our access to customers and markets and materially impact our revenues in the aggregate. In April 2018, for example, the U.S. Department of Commerce issued a denial order against two companies in the telecommunications market. In 2019 and 2020, the U.S. Department of Commerce placed a number of entities, including Huawei, on the U.S. Entity List. If we cannot obtain relief from, or take other action to mitigate the impact of, these additional duties and restrictions and duties, our business and profits may be materially and adversely affected. Further changes in the trade policy of the United States or of other countries with which we do cross-border business, or additional sanctions, could result in retaliatory actions by other countries that could materially and negatively impact the volume of economic activity in the United States or globally, which, in turn, may decrease our access to customers and markets, reduce our revenues, and increase our operating costs.

Our association with customers that are or become subject to U.S. regulatory scrutiny or export restrictions could negatively impact our business, and create instability in our operations. Governmental actions such as these could subject us to actual or perceived reputational harm among current or prospective investors, suppliers or customers, customers of our customers, other parties doing business with us, or the general public. Any such reputational harm could result in the loss of investors, suppliers, or customers, which could harm our business, financial condition, operating results, or prospects.

Exports of certain of our products are subject to export controls imposed by the U.S. government and administered by the U.S. Departments of State and Commerce. In certain instances, these regulations may require pre-shipment authorization from the administering department. For products subject to the Export Administration Regulations, or EAR, administered by the Department of Commerce's Bureau of Industry and Security, the requirement for a license is dependent on the type and end use of the product, the final destination, the identity of the end user, and whether a license exception might apply. Virtually all exports of products subject to the International Traffic in Arms Regulations, or ITAR, administered by the Department of State's Directorate of Defense Trade Controls, require a license. Certain of our products are subject to EAR controls. Additionally, certain other products that we sell, including certain products developed with government funding, are subject to ITAR. Products developed and manufactured in our foreign locations are subject to export controls of the applicable foreign nation. Given the current global political climate, obtaining export licenses can be difficult and time-consuming. Failure to obtain export licenses for these shipments, or having one or more of our customers be restricted from receiving exports from us, could significantly reduce our revenue and materially adversely affect our business, financial condition, and results of operations. Compliance with regulations of the United States and other governments also subjects us to additional fees and costs. The absence of comparable restrictions on competitors in other countries may adversely affect our competitive position.

Any inability to access financial markets from time to time to raise required capital, finance our working capital requirements or our acquisition strategies, or otherwise support our liquidity needs could negatively impact our ability to finance our operations, meet certain obligations, or implement our growth strategy.

We borrow under our existing credit facility or to issue our equity to fund operations, including working capital investments, and to finance our acquisition strategies. In the past, market disruptions experienced in the United States and abroad have materially impacted liquidity in the credit and debt markets, making financing terms for borrowers less attractive and, in certain cases, have resulted in the unavailability of certain types of financing. Uncertainty in the financial markets may negatively impact our ability to access additional financing or to refinance our existing credit facility or existing debt arrangements on favorable terms or at all, which could negatively affect our ability to fund current and future expansion as well as future acquisitions and development. These disruptions may include turmoil in the financial services industry, volatility in the markets where our outstanding securities trade, and changes in general economic conditions in the areas where we do business. If we are unable to access funds at competitive rates, or if our short-term or long-term borrowing costs increase, our ability to finance our operations, meet our short-term obligations, and implement our operating strategies could be adversely affected.

In the future we may be required to raise additional capital through public or private financing or other arrangements. Such financing may not be available on acceptable terms or at all, and our failure to raise capital when needed could harm our business and prospects. Additional equity financing may be dilutive to the holders of our common stock, and debt financing, if available, may involve restrictive covenants that may limit our ability to undertake certain activities that we otherwise would find to be desirable. Further, debt service obligations associated with any debt financing could reduce our profitability. If we cannot raise funds on acceptable terms, we may not be able to grow our business or respond to competitive pressures.

We may not be able to settle conversions of our convertible senior notes in cash or repurchase the notes in accordance with their terms.

Holders of our outstanding 0.25% convertible senior notes due 2022 and Finisar's 0.50% Convertible Senior Notes due 2036, which we refer to collectively as our convertible senior notes, have the right to require us to repurchase all or a portion of their notes upon the occurrence of a fundamental change (as defined in the indenture governing such notes) at a repurchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest. In addition, upon conversion of such notes, unless we elect to deliver solely shares of our common stock to settle such conversions (other than paying cash in lieu of delivering any fractional share), we will be required to make cash payments in respect of such notes being converted. However, we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of surrendered notes, or pay cash with respect to notes being converted.

In addition, our ability to repurchase or to pay cash upon conversion of our notes may be limited by law, regulatory authority, or agreements governing our future indebtedness. Our failure to repurchase notes at a time when the repurchase is required by the governing indenture, or to pay any cash upon conversion of the notes as required, would constitute a default under the indenture. A default under the applicable indenture or the fundamental change itself also could lead to a default under agreements governing our credit facility and any of our future indebtedness. If the payment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the notes or to pay cash upon conversion of any such notes.

Our credit agreement restricts our operations, particularly our ability to respond to changes or to take certain actions regarding our business.

The documents governing our amended and restated credit agreement, dated as of September 24, 2019, by and among us, Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer, and the other lenders party thereto (the "Credit Agreement") contain a number of restrictive covenants that may impose operating and financial restrictions on us and limit our ability to engage in acts that may be in our long-term best interest, including restrictions on the ability to incur indebtedness, grant liens, undergo certain fundamental changes, dispose of assets, make certain investments, enter into certain transactions with affiliates, and make certain restricted payments, in each case subject to limitations and exceptions set forth in the Credit Agreement.

The Credit Agreement also contains customary events of default that include, among other things, certain payment defaults, covenant defaults, cross-defaults to other indebtedness, change of control defaults, judgment defaults, and bankruptcy and insolvency defaults. Such events of default may allow the creditors to accelerate the related debt and may result in the acceleration of any other debt to which a cross-acceleration or cross-default provision applies, which could have a material adverse effect on our business, operations, and financial results. Furthermore, if we are unable to repay the amounts due and payable under the Credit Agreement, those lenders could proceed against the collateral granted to them to secure that indebtedness, which could force us into bankruptcy or liquidation. In the event that our lenders accelerated the repayment of the borrowings, we may not have sufficient assets to repay that indebtedness. Any acceleration of amounts due under the credit agreements would likely have a material adverse effect on us. As a result of these restrictions, we may be limited in how we conduct business, unable to raise additional debt or equity financing to operate during general economic or business downturns, or unable to compete effectively or to take advantage of new business opportunities.

We may fail to accurately estimate the size and growth of our markets and our customers' demands.

We make significant decisions based on our estimates of customer requirements. We use our estimates to determine the levels of business we seek and accept, production schedules, personnel needs, and other resource requirements.

Customers may require rapid increases in production on short notice. We may not be able to purchase sufficient supplies or allocate sufficient manufacturing capacity to meet such increases in demand. Rapid customer ramp-up and significant increases in demand may strain our resources or negatively affect our margins. Inability to satisfy customer demand in a timely manner may harm our reputation, reduce our other opportunities, damage our relationships with customers, reduce revenue growth, and/or cause us to incur contractual penalties.

Alternatively, downturns in the industries in which we compete may cause our customers to significantly reduce their demand. With respect to orders we initiate with our suppliers to address anticipated demand from our customers, certain suppliers may have required noncancellable purchase commitments or advance payments from us, and those obligations and commitments could reduce our ability to adjust our inventory or expense levels to reflect declining market demands. Unexpected declines in customer demands can result in excess or obsolete inventory and additional charges. Because certain of our sales, research and development, and internal manufacturing overhead expenses are relatively fixed, a reduction in customer demand likely would decrease our gross margins and operating income.

We may encounter increased competition and we may fail to accurately estimate our competitors' or our customers' willingness and capability to backward integrate into our competencies and thereby displace us.

We may encounter substantial competition from other companies in the same market, including established companies with significant resources. Some of our competitors may have financial, technical, marketing, or other capabilities that are more extensive than ours. They may be able to respond more quickly than we can to new or emerging technologies and other competitive pressures. We may not be able to compete successfully against our present or future competitors. Our failure to compete effectively could have a material adverse effect on our business, results of operations, or financial condition.

There are limitations on the protection of our intellectual property and we may from time to time be involved in costly intellectual property litigation or indemnification.

We rely on a combination of trade secret, patent, copyright, and trademark laws, combined with employee confidentiality, noncompetition, and nondisclosure agreements to protect our intellectual property rights. There can be no assurance that the steps we take will be adequate to prevent misappropriation of our technology or intellectual property. Furthermore, there can be no assurance that third parties will not assert infringement claims against us in the future.

Asserting our intellectual property rights or defending against third-party claims could involve substantial expense. In the event that a third party were successful in a claim that one of our processes infringed its proprietary rights, we could be required to pay substantial damages or royalties, or spend substantial amounts in order to obtain a license or modify processes so that they no longer infringe such proprietary rights. Any such event could have a material adverse effect on our business, results of operations, or financial condition.

The design, processes, and specialized equipment utilized in our engineered materials, advanced components, and subsystems are innovative, complex, and difficult to duplicate. However, there can be no assurance that others will not develop or patent similar technology, or that all aspects of our proprietary technology will be protected. Others have obtained patents covering a variety of materials, devices, equipment, configurations, and processes, and others could obtain patents covering technology similar to ours. We may be required to obtain licenses under such patents, and there can be no assurance that we would be able to obtain such licenses, if required, on commercially reasonable terms, or that claims regarding rights to technology will not be asserted that may adversely affect our results of operations. In addition, our research and development contracts with agencies of the U.S. government present a risk that project-specific technology could be disclosed to competitors as contract reporting requirements are fulfilled. We also enter into development projects from time to time that might result in IP developed during a project that is assigned to the other party without us retaining rights to that IP or is jointly owned with the other party.

A significant portion of our business is dependent on cyclical industries.

Our business is dependent on the demand for products produced by end-users of industrial lasers, optical communication products, components for semiconductor capital equipment, and components for 3D sensing. Many of these end-users are in industries that have historically experienced a highly cyclical demand for their products. As a result, demand for our products is subject to these cyclical fluctuations. Fluctuations in demand could have a material adverse effect on our business, results of operations or financial condition.

Our global operations are subject to complex legal and regulatory requirements.

We manufacture products in Australia, China, Germany, Malaysia, the Philippines, Singapore, South Korea, Sweden, Switzerland, the United Kingdom, the United States, and Vietnam, and through a contract manufacturer in Thailand. We also maintain direct sales offices in Belgium, Canada, China, Germany, Hong Kong, Italy, Japan, South Korea, Switzerland, Taiwan, and the United Kingdom. Operations inside and outside of the United States are subject to many legal and regulatory requirements, some of which are not aligned with others. These include tariffs, quotas, taxes and other market barriers, restrictions on the export or import of technology, potentially limited intellectual property protection, import and export requirements and restrictions, anti-corruption and anti-bribery laws, foreign exchange controls and cash repatriation restrictions, foreign investment rules and regulations, data privacy requirements, competition laws, employment and labor laws, pensions and social insurance, and environmental health and safety laws and regulations.

Compliance with these laws and regulations can be onerous and expensive, and requirements differ among jurisdictions. New laws, changes in existing laws, and abrogation of local regulations by national laws may result in significant uncertainties in how they will be interpreted and enforced. Failure to comply with any of these foreign laws and regulations could have a material adverse effect on our business, results of operations, or financial condition.

Changes in laws and regulations governing data privacy and data protection could have a material adverse impact on our business.

We are subject to many data privacy, data protection, and data breach notification laws, including the European Union General Data Protection Regulation (“GDPR”), which became effective in May 2018. While we have taken measures to assess the requirements of, and to comply with, the GDPR, as well as new and existing data-related laws and regulations of other jurisdictions, these measures may be challenged, including by authorities that regulate data-related compliance. We could incur significant expense in facilitating and responding to investigations, and if the measures we have taken prove to be inadequate, we could face fines, penalties, or damages, and incur reputational harm, which could have a material adverse impact on our business.

Data breach incidents and breakdown of information and communication technologies could disrupt our operations and impact our financial results.

In the course of our business, we collect and store sensitive data, including intellectual property (both our own and that of our customers), as well as proprietary business information. We could be subject to service outages or breaches of security systems which may result in disruption, unauthorized access, misappropriation, or corruption of this information. Security breaches of our network or data, including physical or electronic break-ins, vendor service outages, computer viruses, attacks by hackers or similar breaches can create system disruptions, shutdowns, and unauthorized disclosure of confidential information. If we are unable to prevent or contain such security or privacy breaches, our operations could be disrupted or we could suffer legal claims, loss of reputation, financial loss, property damage, or regulatory penalties.

We have entered into supply agreements that commit us to supply products on specified terms.

We have supply agreements with some customers that require us to supply products and allocate sufficient capacity to make these products. We have also agreed to pricing schedules and methodologies that could result in penalties if we fail to meet development, supply, capacity, and quality commitments. Failure to do so may cause us to be unable to generate the amount of revenue or the level of profitability we expect from these arrangements. Our ability to realize a profit under some of these agreements will be subject to the level of customer demand, the cost of maintaining facilities and manufacturing capacity, and supply chain capability.

If we fail to fulfill our commitments under these supply agreements, our business, after using all remedies available, financial conditions, and results of operations may suffer a material adverse effect.

We depend on highly complex manufacturing processes that require feeder materials, components, and products from limited sources of supply.

Our operations are dependent upon a supply chain of difficult-to-make or difficult-to-refine products and materials. Some of our product inflow is subject to yield reductions from growth or fabrication losses, and thus the quantities we may receive are not consistently predictable. Customers may also change a specification for a product that our suppliers cannot meet.

We also make products for which the Company is one of the world's largest suppliers. We use high-quality, optical-grade ZnSe in the production of many of our IR optical products. We are a leading producer of ZnSe for our internal use and for external sale. The production of ZnSe is a complex process requiring a highly controlled environment. A number of factors, including defective or contaminated materials, could adversely affect our ability to achieve acceptable manufacturing yields of high-quality ZnSe. Lack of adequate availability of high-quality ZnSe could have a material adverse effect upon our business. There can be no assurance that we will not experience manufacturing yield inefficiencies that could have a material adverse effect on our business, results of operations, or financial condition.

We produce hydrogen selenide gas, which is used in our production of ZnSe. There are risks inherent in the production and handling of such material. Our lack of proper handling of hydrogen selenide could require us to curtail our production of the gas. Our potential inability to internally produce hydrogen selenide could have a material adverse effect on our business, results of operations, or financial condition.

In addition, we produce and use other high-purity and relatively uncommon materials and compounds to manufacture our products, including, but not limited to, ZnS, GaAs, yttrium aluminum garnet, yttrium lithium fluoride, calcium fluoride, germanium, selenium, telluride, Bi₂Te₃, and SiC. A significant failure of our internal production processes or our suppliers to deliver sufficient quantities of these necessary materials on a timely basis could have a material adverse effect on our business, results of operations, or financial condition.

Increases in commodity prices may adversely affect our results of operations and financial condition.

We are exposed to a variety of market risks, including the effects of increases in commodity prices. Our businesses purchase, produce, and sell high-purity selenium and other raw materials based upon quoted market prices from minor metal exchanges. The negative impact from increases in commodity prices might not be recovered through our product sales, which could have a material adverse effect on our net earnings and financial condition.

We use and generate potentially hazardous substances that are subject to stringent environmental regulations.

Hazardous substances used or generated in some of our research and manufacturing facilities are subject to stringent environmental regulation. We believe that our handling of such substances is in material compliance with applicable environmental, safety, and health regulations at each operating location. We invest substantially in proper personal protective equipment and process controls, including monitoring and specialized training, to minimize risks to employees, surrounding communities, and the environment that could result from the presence and handling of such hazardous substances. When exposure problems or potential exposure problems have been uncovered, corrective actions have been implemented, and re-occurrence has been minimal or nonexistent.

We have in place an emergency response plans with respect to our generation and use of the hazardous substances hydrogen selenide, hydrogen sulfide, arsine, and phosphine. Special attention has been given to all procedures pertaining to these gaseous materials to minimize the chance of its accidental release into the atmosphere.

With respect to the manufacturing, use, storage, and disposal of the low-level radioactive material thorium fluoride, our facilities and procedures have been inspected and licensed by the Nuclear Regulatory Commission. Thorium-bearing by-products are collected and shipped as solid waste to a government-approved low-level radioactive waste disposal site in Clive, Utah.

The generation, use, collection, storage, and disposal of all other hazardous by-products, such as suspended solids containing heavy metals or airborne particulates, are believed by us to be in material compliance with regulations. We believe that we have obtained all of the permits and licenses required for operation of our business.

Although we do not know of any material environmental, safety, or health problems in our properties, processes, or products, there can be no assurance that problems will not develop in the future that could have a material adverse effect on our business, results of operations, or financial condition.

We have a substantial amount of debt, which could adversely affect our business, financial condition, or results of operations and prevent us from fulfilling our debt-related obligations.

As of June 30, 2020, we had approximately \$2.3 billion of outstanding debt (including our outstanding debt securities and borrowings under our Credit Agreement). Our indebtedness could have important consequences for us, including:

- making it more difficult for us to satisfy our obligations with respect to our debt, or to our trade or other creditors;
- increasing our vulnerability to adverse economic or industry conditions;
- limiting our ability to obtain additional financing to fund capital expenditures and acquisitions, particularly when the availability of financing in the capital markets is limited;

- requiring us to pay higher interest rates upon refinancing or on our variable-rate indebtedness if interest rates rise;
- requiring a substantial portion of our cash flows from operations and the proceeds of any capital markets offerings or loan borrowings for the payment of interest on our debt and reducing our ability to use our cash flows to fund working capital, capital expenditures, acquisitions, and general corporate requirements;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate; and
- placing us at a competitive disadvantage to less leveraged competitors.

We may not generate sufficient cash flow from operations, together with any future borrowings, to enable us to pay our indebtedness or to fund our other liquidity needs. We may need to refinance all or a portion of our indebtedness, on or before its maturity. We may not be able to refinance any of our indebtedness on commercially reasonable terms or at all. In addition, we may incur additional indebtedness in order to finance our operations, fund acquisitions, or repay existing indebtedness. If we cannot service our indebtedness, we may have to take actions such as selling assets; seeking additional debt or equity; or reducing or delaying capital expenditures, strategic acquisitions, investments, and alliances. Any such actions, if necessary, may not be able to be effected on commercially reasonable terms or at all, or on terms that would be advantageous to our stockholders, or on terms that would not require us to breach the terms and conditions of our existing or future debt agreements.

Unfavorable changes in tax rates, tax liabilities, or tax accounting rules could negatively affect future results.

As a global company, we are subject to taxation in the United States and various other countries and jurisdictions. As such, we must exercise a level of judgment in determining our worldwide tax liabilities. Our future tax rates could be affected by changes in the composition of earnings in countries with differing tax rates or changes in tax laws. Changes in tax laws or tax rulings may have a significantly adverse impact on our effective tax rate.

The enactment of the Tax Cuts and Jobs Act (the “Tax Act”) in December 2017 significantly affected U.S. tax law by changing how the United States imposes tax on multinational corporations. The U.S. Department of Treasury has broad authority under the Tax Act to issue regulations and interpretive guidance. We have applied available guidance to estimate our tax obligations, but new guidance issued by the U.S. Treasury Department may cause us to make adjustments to our tax estimates in future periods.

In addition, we are subject to regular examination of our income tax returns by the U.S. Internal Revenue Service and other tax authorities. We regularly assess the likelihood of favorable or unfavorable outcomes resulting from these examinations to determine the adequacy of our provision for income taxes. Although we believe our tax estimates are reasonable, there can be no assurance that any final determination will not be materially different from the treatment reflected in our historical income tax provision and accruals, which could materially and adversely affect our business, results of operation, or financial condition.

Natural disasters or other global or regional catastrophic events could disrupt our operations, give rise to substantial environmental hazards, and adversely affect our results.

We may be exposed to business interruptions due to extreme weather caused by climate change and deforestation, force majeure catastrophes, natural disaster, pandemic, terrorism, or acts of war that are beyond our control. Disruptions to our facilities or systems, or to those of our key suppliers, could also interrupt operational processes and adversely impact our ability to manufacture our products and provide services and support to our customers. As a result, our business, results of operations, or financial condition could be materially adversely affected.

Our success depends on our ability to attract, retain, and develop key personnel and requires continued good relations with our employees.

We are highly dependent upon the experience and continuing services of certain scientists, engineers, production, and management personnel. Competition for the services of these personnel is intense. There can be no assurance that we will be able to retain or attract the personnel necessary for our success. The loss of the services of our key personnel could have a material adverse effect on our business, results of operations, or financial condition.

We contract with a number of large end-user service providers and product companies that have considerable bargaining power, which may require us to agree to terms and conditions that could have an adverse effect on our business or ability to recognize revenues.

Large end-user service providers and product companies comprise a significant portion of our customer base. These customers generally have greater purchasing power than smaller entities and, accordingly, often request and receive more favorable terms from suppliers, including us. As we seek to expand our sales to existing customers and acquire new customers, we may be required to agree to terms and conditions that are favorable to our customers and that may affect the timing of our ability to recognize revenue, increase our costs, and have an adverse effect on our business, financial condition, and results of operations. Furthermore, large customers have increased buying power and ability to require onerous terms in our contracts with them,

including pricing, warranties, and indemnification terms. If we are unable to satisfy the terms of these contracts, it could result in liabilities of a material nature, including litigation, damages, additional costs, loss of market share, and loss of reputation. Additionally, the terms these large customers require, such as most-favored customer or exclusivity provisions, may impact our ability to do business with other customers and generate revenues from such customers.

We may be adversely affected by climate change regulations.

In many of the countries in which we operate, government bodies are increasingly enacting legislation and regulations in response to potential impacts of climate change. These laws and regulations may be mandatory. They have the potential to impact our operations directly or indirectly as a result of required compliance by our customers or our supply chain. Inconsistency of regulations may also affect the costs of compliance with such laws and regulations. Assessments of the potential impact of future climate change legislation, regulation, and international treaties and accords are uncertain, given the wide scope of potential regulatory change in countries in which we operate.

We may incur increased capital expenditures resulting from required compliance with revised or new legislation or regulations, added costs to purchase raw materials, lower profits from sales of our products, allowances or credits under a “cap and trade” system, increased insurance premiums and deductibles as new actuarial tables are developed to reshape coverage, changes in competitive position relative to industry peers, changes to profit or loss arising from increased or decreased demand for goods produced by us, or changes in costs of goods sold.

We depend on large purchases from a few significant customers, and any loss, cancellation, reduction, or delay in purchases by these customers could harm our business.

A small number of customers have consistently accounted for a significant portion of our revenues, although none individually represent greater than 10% of total revenues. Our success will depend on our continued ability to develop and manage relationships with our major customers. Although we are attempting to expand our customer base, we expect that significant customer concentration will continue for the foreseeable future. We may not be able to offset any decline in revenues from our existing major customers with revenues from new customers, and our quarterly results may be volatile because we are dependent on large orders from these customers that may be reduced, delayed, or cancelled. The markets in which we have historically sold our optical subsystems and components products are dominated by a relatively small number of systems manufacturers, thereby limiting the number of our potential customers.

Our dependence on large orders from a relatively small number of customers makes our relationship with each customer critically important to our business. We cannot ensure that we will be able to retain our major customers, attract additional customers, or that our customers will be successful in selling their products that incorporate our products. In addition, governmental trade action or economic sanctions may limit or preclude our ability to do business with certain customers. We have in the past experienced delays and reductions in orders from some of our major customers. In addition, our customers have in the past sought price concessions from us, and we expect that they will continue to do so in the future. Expense reduction measures that we have implemented over the past several years, and additional action we are taking to reduce costs, may adversely affect our ability to introduce new and improved products, which may, in turn, adversely affect our relationships with some of our key customers. Further, some of our customers may in the future shift their purchases of products from us to our competitors or to joint ventures between these customers and our competitors, or may in certain circumstances produce competitive products themselves. The loss of one or more of our major customers, any reduction or delay in sales to these customers, our inability to successfully develop relationships with additional customers, or future price concessions that we may make could significantly harm our business.

The manufacturing of our products may be adversely affected if we are unable to manufacture certain products in our manufacturing facilities.

We manufacture some of the components that we incorporate into our subsystem products; in other cases, we provide components to contract manufacturers to produce finished goods. For some of the components and finished goods, we are the sole manufacturer. Our manufacturing processes are highly complex, and issues are often difficult to detect and correct. From time to time we have experienced problems achieving acceptable yields in our manufacturing facilities, resulting in delays in the availability of our products. In addition, if we experience problems with our manufacturing facilities, it would be costly and require a long period of time to move the manufacture of these components and finished good products to a different facility or contract manufacturer, which could result in interruptions in supply and would likely materially impact our financial condition and results of operations. In addition, for a variety of reasons, including changes in circumstances at our contract manufacturers or our own business strategies, we may voluntarily, or be required to, transfer the manufacturing of certain products to other manufacturing sites.

Changes in manufacturing processes are often required due to changes in product specifications, changing customer needs, and the introduction of new products. These changes may reduce manufacturing yields at our contract manufacturers and at our own manufacturing facilities, resulting in reduced margins on those products. In addition, many of our products are sourced from

suppliers based outside of the United States, primarily in Asia. Uncertainty with respect to tax and trade policies, tariffs, and government regulations affecting trade between the United States and other countries has recently increased. Major developments in tax policy or trade relations, such as the imposition of tariffs on imported products, could increase our product and product-related costs or require us to seek alternative suppliers, either of which could result in decreased sales or increased product and product-related costs.

Failure to accurately forecast our revenues could result in additional charges for obsolete or excess inventories or noncancellable purchase commitments.

We base many of our operating decisions, and enter into purchase commitments, on the basis of anticipated revenue trends that are highly unpredictable. Some of our purchase commitments are not cancellable, and in some cases we are required to recognize a charge representing an amount of material or capital equipment purchased or ordered that exceeds our actual requirements. Should revenues in future periods fall substantially below our expectations, or should we fail to accurately forecast changes in demand mix, we could be required to record substantial charges for obsolete or excess inventories or noncancellable purchase commitments.

If we fail to maintain an effective system of disclosure controls and internal control over financial reporting, our ability to produce timely and accurate financial statements or comply with applicable regulations could be impaired.

As a public company, we are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (“the Exchange Act”), the Sarbanes-Oxley Act of 2002, as amended (“the Sarbanes-Oxley Act”), and Nasdaq listing requirements. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. In order to maintain and improve the effectiveness of our disclosure controls and procedures and internal control over financial reporting, we have expended, and anticipate that we will continue to expend, significant resources, including accounting-related costs and significant management oversight.

Any failure to develop or maintain effective controls, or any difficulties encountered in their implementation or improvement, could delay the reporting of our financial results or cause us to be subject to investigations, enforcement actions by regulatory agencies, stockholder lawsuits, or other adverse actions requiring us to incur defense costs or pay fines, settlements, or judgments. Any such failures or difficulties could also cause investors to lose confidence in our reported financial and other information, which would likely have a negative effect on the trading price of our common stock. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on the Nasdaq Stock Market.

Risks Relating to Our Capital Stock

Our stock price has been volatile in the past and may be volatile in the future.

The market price for our common stock on the Nasdaq Global Select Market Composite varied between a high of \$51.90 and a low of \$19.00 in the fiscal year ended June 30, 2020. The market price of our common stock could fluctuate significantly for many reasons, including the following:

- future announcements concerning us or our competitors;
- the overall performance of equity markets;
- the trading volume of our common stock;
- additions or changes to our board of directors, management, or key personnel;
- regulatory actions (including, but not limited to, developments in international trade policy) and enforcement actions bearing on manufacturing, development, marketing, or sales;
- the commencement or outcome of litigation;
- reports and recommendations of analysts and whether or not we meet the milestones, metrics, and other expectations set forth in such reports;
- gaining or losing large customers;
- the introduction of new products or services and market acceptance of such products or services;
- the impact of the COVID-19 pandemic on our business, financial condition, results of operations, or prospects or those of our customers and suppliers;
- the acquisition or loss of significant manufacturers, distributors, or suppliers or an inability to obtain sufficient quantities of materials needed to provide our services;

- the issuance of common stock or other securities (including, without limitation, the shares of common stock issued upon conversion of any shares of Mandatory Convertible Preferred Stock and the shares issued upon conversion of outstanding convertible notes);
- incurrence of indebtedness;
- quarterly variations in operating results;
- our ability to accurately forecast future performance;
- business acquisitions or divestitures;
- fluctuations in the economy, political events, or general market conditions; and
- changes in our operating industry generally.

In addition, stock markets have experienced extreme price and volume fluctuations in recent years and are experiencing exceptional volatility as a result of the effects of the COVID-19 pandemic. Moreover, these fluctuations frequently have been unrelated to the operating performance or underlying fundamentals of the affected companies. These broad market fluctuations may adversely affect the market price of our common stock. These fluctuations may be unrelated to our performance or out of our control, and could lead to securities class action litigation that could result in substantial expenses and diversion of management's attention and corporate resources, any or all of which could adversely affect our business, financial condition, and results of operations.

In addition, we expect that the market price of the Mandatory Convertible Preferred Stock will be influenced by yield and interest rates in the capital markets, the time remaining to the Mandatory Conversion Date, our creditworthiness, and the occurrence of certain events affecting us that do not require an adjustment to the fixed conversion rates of the Mandatory Convertible Preferred Stock. Fluctuations in yield rates in particular may give rise to arbitrage opportunities based upon changes in the relative values of the Mandatory Convertible Preferred Stock and our common stock. Any such arbitrage could, in turn, affect the market prices of our common stock and the Mandatory Convertible Preferred Stock. The market price of our common stock could also be affected by possible sales of our common stock by investors who view the Mandatory Convertible Preferred Stock as a more attractive means of equity participation in us and by hedging or arbitrage trading activity that we expect to develop involving our common stock. This trading activity could, in turn, affect the market price of the Mandatory Convertible Preferred Stock.

Provisions in our Amended and Restated Articles of Incorporation (the “Articles of Incorporation”) and Amended and Restated By-Laws (the “By-Laws”) and the Pennsylvania Business Corporation Law (the “BCL”) may delay or prevent our acquisition by a third party, which could also reduce the market price of our capital stock.

Our Articles of Incorporation and By-Laws contain provisions that could make us a less attractive target for a hostile takeover and could make more difficult or discourage a merger proposal, a tender offer, or a proxy contest. Such provisions include:

- a requirement that shareholder-nominated director nominees be nominated in advance of the meeting at which directors are elected and that specific information be provided in connection with such nomination;
- the ability of our board of directors to issue additional shares of common stock or preferred stock without shareholder approval; and
- certain provisions requiring supermajority approval (at least two-thirds of the votes cast by all shareholders entitled to vote thereon, voting together as a single class).

In addition, the BCL contains provisions that may have the effect of delaying or preventing a change in our control or changes in our management. Many of these provisions are triggered if any person or group acquires, or discloses the intent to acquire, 20% or more of a corporation's voting power, subject to certain exceptions. These provisions:

- provide the other shareholders of the corporation with certain rights against the acquiring group or person;
- prohibit the corporation from engaging in a broad range of business combinations with the acquiring group or person;
- restrict the voting and other rights of the acquiring group or person; and
- provide that certain profits realized by the acquiring group or person from the sale of our equity securities belong to and are recoverable by us.

Regardless of the amount of a person's holdings, if a shareholder or shareholder group (including affiliated persons) would be a party to certain proposed transactions with us or would be treated differently from other shareholders of ours in certain proposed transactions, the BCL requires approval by a majority of votes entitled to be cast by all shareholders other than the interested shareholder or affiliate group, unless the transaction is approved by independent directors or other criteria are satisfied. Furthermore, under the BCL, a "short-form" merger of II-VI cannot be implemented without the consent of our board of directors.

In addition, as permitted by Pennsylvania law, an amendment to our Articles of Incorporation or other corporate action that is approved by shareholders may provide mandatory special treatment for specified groups of nonconsenting shareholders of the same class. For example, an amendment to our Articles of Incorporation or other corporate action may provide that shares of common stock held by designated shareholders of record must be cashed out at a price determined by the Company, subject to applicable dissenters' rights.

Furthermore, the BCL provides that directors, in discharging their duties, may consider, to the extent they deem appropriate, the effects of any action upon shareholders, employees, suppliers, customers, and the communities in which the corporation's offices are located. Directors are not required to consider the interests of shareholders to a greater degree than other constituencies' interests. The BCL expressly provides that directors do not violate their fiduciary duties solely by relying on "poison pills" or the anti-takeover provisions of the BCL. We do not currently have a "poison pill."

All of these provisions may limit the price that investors may be willing to pay for shares of our capital stock.

In addition, certain rights of the holders of the Mandatory Convertible Preferred Stock could make it more difficult or more expensive for a third party to acquire us. For example, if a fundamental change were to occur on or prior to July 1, 2023, holders of the Mandatory Convertible Preferred Stock may have the right to convert their Mandatory Convertible Preferred Stock, in whole or in part, at an increased conversion rate and will also be entitled to receive a make-whole amount equal to the present value of all remaining dividend payments on their Mandatory Convertible Preferred Stock, as described in the applicable Statement with Respect to Shares governing the Mandatory Convertible Preferred Stock. These features of the Mandatory Convertible Preferred Stock could increase the cost of acquiring us or otherwise discourage a third party from acquiring us or removing incumbent management.

Because we do not currently intend to pay dividends, holders will benefit from an investment in our common stock only if it appreciates in value and by the intended anti-dilution actions of our share-buyback program.

We have never declared nor paid dividends on our common stock and do not expect to pay cash dividends in the foreseeable future. We currently anticipate that we will retain any future earnings to support operations and to finance the development of our business. As a result, the success of an investment in our capital stock will depend entirely upon future appreciation in its value. There is no guarantee that our common stock will maintain its value or appreciate in value.

Our ability to declare and pay dividends on our capital stock may be limited, including by the terms of our existing Credit Agreement.

Our declaration and payment of dividends on our capital stock in the future will be determined by our board of directors (or an authorized committee thereof) in its sole discretion and will depend on our financial condition, earnings, growth prospects, other uses of cash, funding requirements, applicable Pennsylvania law, and other factors our board of directors deems relevant.

The terms of the Credit Agreement contain a restriction on our ability to pay cash dividends on our capital stock. If the terms of the Credit Agreement restrict our ability to pay cash dividends on the Mandatory Convertible Preferred Stock, we will pay any dividends declared by our board of directors (or an authorized committee thereof) on the Mandatory Convertible Preferred Stock in the form of shares of common stock. In addition, credit facilities, indentures, or other financing agreements that we enter into in the future may contain provisions that restrict or prohibit our ability to pay cash dividends on our capital stock.

In addition, under Pennsylvania law, our board of directors may not pay dividends if after giving effect to the relevant dividend payment we (i) would not be able to pay our debts as they become due in the usual course of our business or (ii) our total assets would not be greater than or equal to the sum of our total liabilities plus the amount that would be needed if we were to be dissolved at the time as of which the dividend is measured, in order to satisfy the preferential rights upon dissolution of shareholders whose preferential rights are superior to those receiving the dividend. Even if we are permitted under our contractual obligations and Pennsylvania law to pay cash dividends on the Mandatory Convertible Preferred Stock, we may not have sufficient cash to pay cash dividends on the Mandatory Convertible Preferred Stock.

The Mandatory Convertible Preferred Stock may adversely affect the market price of our common stock.

The market price of our common stock is likely to be influenced by the Mandatory Convertible Preferred Stock. For example, the market price of our common stock could become more volatile and could depress possible sales of our common stock to

shareholders who view the Mandatory Convertible Preferred Stock as a more attractive means of equity participation in us than owning shares of our common stock.

Our common stock is subordinate to our existing and future indebtedness; the Mandatory Convertible Preferred Stock, when issued; and any other preferred stock we may issue in the future. Our Mandatory Convertible Preferred Stock ranks junior to all of our and our subsidiaries' consolidated liabilities.

Shares of our common stock are equity interests that rank junior to all indebtedness and other non-equity claims on us with respect to assets available to satisfy our claims, including in a liquidation of the Company. Additionally, holders of our common stock may be subject to prior dividend and liquidation rights of any holders of our preferred stock or depositary shares representing such preferred stock then outstanding.

Our common stock ranks junior to our Mandatory Convertible Preferred Stock with respect to the payment of dividends and amounts payable in the event of our liquidation, dissolution, or winding-up of our affairs. This means that, unless accumulated dividends have been paid on all the Mandatory Convertible Preferred Stock then outstanding through the most recently completed dividend period, no dividends may be declared or paid on our common stock and we will not be permitted to repurchase any of our common stock, subject to limited exceptions. Likewise, in the event of our voluntary or involuntary liquidation, dissolution, or winding-up of our affairs, no distribution of our assets may be made to holders of our common stock until we have paid to holders of the Mandatory Convertible Preferred Stock then outstanding a liquidation preference equal to \$200.00 per share plus accumulated and unpaid dividends.

In the event of a bankruptcy, liquidation, dissolution, or winding-up of our affairs, our assets will be available to pay obligations on the Mandatory Convertible Preferred Stock only after all of our consolidated liabilities have been paid. In addition, the Mandatory Convertible Preferred Stock ranks structurally junior to all existing and future liabilities of our subsidiaries. In the event of a bankruptcy, liquidation, dissolution, or winding-up of our affairs, there may not be sufficient assets remaining, after paying our and our subsidiaries' liabilities, to pay amounts due on any or all of the Mandatory Convertible Preferred Stock then outstanding.

As of June 30, 2020, our total consolidated indebtedness was approximately \$2.3 billion, of which an aggregate of approximately \$1.9 billion was secured indebtedness of ours, to which the Mandatory Convertible Preferred Stock would have been subordinated. In addition, we have the ability to, and may, incur additional indebtedness in the future.

Our board of directors can issue, without approval of the holders of our common stock, preferred stock with voting and conversion rights that could adversely affect the voting power of the holders of our common stock, the rights of holders of shares of our capital stock, or the market price of our capital stock.

Our Articles of Incorporation authorize our board of directors to issue one or more additional series of preferred stock and set the terms of the preferred stock without seeking any further approval from our shareholders. Any preferred stock that is issued will rank ahead of our common stock in terms of dividends and liquidation rights. If we issue additional preferred stock, it may adversely affect the market price of our common stock. Our board of directors also has the power, without shareholder approval, subject to applicable law, to set the terms of any such series of preferred stock that may be issued, including voting rights, dividend rights, preferences over our common stock with respect to dividends, and other terms, or upon our liquidation, dissolution, or winding-up of our affairs. If we issue additional preferred stock in the future that has a preference over our common stock with respect to the payment of dividends or upon our liquidation, dissolution, or winding-up of our affairs, or if we issue additional preferred stock with voting rights that dilute the voting power of our common stock, the rights of holders of our capital stock or the market price of our capital stock could be adversely affected. The issuance of preferred stock or even the ability to issue preferred stock could also have the effect of delaying, deterring, or preventing a change of control or other corporate action.

Reports published by securities or industry analysts, freelance bloggers and credit rating agencies, including projections in those reports that exceed our actual results, could adversely affect our share price and trading volume.

Research analysts and freelance bloggers publish their own quarterly projections regarding our operating results. These projections may vary widely from one another and may not accurately predict the results we actually achieve. Our share price may decline if we fail to meet securities research analysts' projections. Similarly, if one or more of the analysts who cover us change their recommendations regarding our common stock or publish inaccurate or unfavorable research about our business, our share price could decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, our share price or trading volume could decline.

Regulatory actions may adversely affect the trading price and liquidity of the Mandatory Convertible Preferred Stock.

Holders of Mandatory Convertible Preferred Stock who employ, or seek to employ, a convertible arbitrage strategy with respect to the Mandatory Convertible Preferred Stock may be adversely impacted by regulatory developments that may limit or restrict such a strategy. The SEC and other regulatory and self-regulatory authorities have implemented various rules and may adopt additional rules in the future that restrict and otherwise regulate short selling, over-the-counter swaps, and security-based swaps, which restrictions and regulations may adversely affect the ability of investors in, or potential purchasers of, the Mandatory Convertible Preferred Stock to conduct a convertible arbitrage strategy with respect to the Mandatory Convertible Preferred Stock. This could, in turn, adversely affect the trading price and liquidity of the Mandatory Convertible Preferred Stock.

Holders of Mandatory Convertible Preferred Stock have no voting rights with respect to the Mandatory Convertible Preferred Stock, except under limited circumstances.

Holders of Mandatory Convertible Preferred Stock have no voting rights with respect to the Mandatory Convertible Preferred Stock, except with respect to certain amendments to the terms of the Mandatory Convertible Preferred Stock, in the case of certain dividend arrearages, in certain other limited circumstances, and except as specifically required by applicable Pennsylvania law or by our amended and restated Articles of Incorporation. Holders of Mandatory Convertible Preferred Stock have no right to vote for any members of our board of directors, except in the case of certain dividend arrearages.

If dividends on any Mandatory Convertible Preferred Stock have not been declared and paid for the equivalent of six or more dividend periods (including, for the avoidance of doubt, the dividend period beginning on, and including, the initial issue date of the Mandatory Convertible Preferred Stock and ending on, but excluding, October 1, 2020), whether or not for consecutive dividend periods, the holders of such Mandatory Convertible Preferred Stock, voting together as a single class with holders of all other series of preferred stock ranking equally with the Mandatory Convertible Preferred Stock and having similar voting rights, will be entitled at our next special or annual meeting of shareholders to vote for the election of a total of two additional members of our board of directors, subject to certain limitations.

We depend on our subsidiaries for cash to fund our operations and expenses, including future dividend payments with respect to the Mandatory Convertible Preferred Stock.

A significant portion of our operations is conducted through our subsidiaries, and our ability to generate cash to meet our debt service obligations or to make future dividend payments with respect to the Mandatory Convertible Preferred Stock is highly dependent on the earnings and the receipt of funds from our subsidiaries. Our subsidiaries are separate legal entities that have no obligation to make any funds available to us, whether by dividends, loans, or other payments.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

Information regarding our principal U.S. properties at June 30, 2020, is set forth below:

| Location | Primary Use(s) | Primary Business Segment(s) | Approximate Square Footage | Ownership |
|---------------|---|-----------------------------|----------------------------|------------------|
| Sherman, TX | Manufacturing | Compound Semiconductors | 700,000 | Owned |
| Easton, PA* | Manufacturing and Research and Development | Compound Semiconductors | 281,000 | Leased |
| Saxonburg, PA | Manufacturing and Research and Development | Compound Semiconductors | 235,000 | Owned and Leased |
| Warren, NJ | Manufacturing and Research and Development | Compound Semiconductors | 159,000 | Leased |
| Newark, DE | Manufacturing and Research and Development | Compound Semiconductors | 135,000 | Leased |
| Sunnyvale, CA | Manufacturing, Research and Development, and Corporate Administrative Offices | Photonic Solutions | 112,000 | Leased |
| Murrieta, CA | Manufacturing and Research and Development | Compound Semiconductors | 108,000 | Leased |
| Fremont, CA | Manufacturing and Research and Development | Compound Semiconductors | 107,000 | Leased |

*Approximately 48,000 square feet are currently used in connection with the Company's manufacturing operations. The remainder is subleased to a third party.

Information regarding our principal foreign properties at June 30, 2020, is set forth below:

| Location | Primary Use(s) | Primary Business Segment(s) | Approximate Square Footage | Ownership |
|----------------|---|--|----------------------------|------------------|
| China | Manufacturing, Research and Development, and Distribution | Compound Semiconductors and Photonic Solutions | 3,232,363 | Owned and Leased |
| Malaysia | Manufacturing | Photonic Solutions | 640,000 | Owned |
| United Kingdom | Manufacturing, Research and Development | Compound Semiconductors and Photonic Solutions | 319,000 | Owned and Leased |
| Philippines | Manufacturing | Compound Semiconductors | 318,000 | Leased |
| Vietnam | Manufacturing | Compound Semiconductors and Photonic Solutions | 189,000 | Owned and Leased |
| Switzerland | Manufacturing, Research and Development, and Distribution | Compound Semiconductors | 118,000 | Leased |

The square footage listed for each of the above properties represents facility square footage, except in the case of the Philippines location, which includes land.

Item 3. LEGAL PROCEEDINGS

The Company and its subsidiaries are involved in various claims and lawsuits incidental to its business. The resolution of each of these matters is subject to various uncertainties, and it is possible that these matters may be resolved unfavorably to the Company. Management believes, after consulting with legal counsel, that the ultimate liabilities, if any, resulting from such legal proceedings will not materially affect the Company's financial condition, liquidity, or results of operations.

Item 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

Item 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

The Company’s common stock is traded on the Nasdaq Global Select Market under the symbol “IIVI.” As of August 20, 2020, there were approximately 839 holders of record of our common stock. The Company historically has not paid cash dividends on its common stock and does not presently anticipate paying cash dividends on its common stock in the future. Dividends on the Company’s Mandatory Convertible Preferred Stock will be payable on a cumulative basis when, as and if declared by our board of directors, or an authorized committee of our board of directors, at an annual rate of 6.00% of the liquidation preference of \$200.00 per share. The Company may pay declared dividends on the Mandatory Convertible Preferred Stock in cash or, subject to certain limitations, in shares of our common stock or in any combination of cash and shares of our common stock on January 1, April 1, July 1 and October 1 of each year, commencing on October 1, 2020 and ending on, and including, July 1, 2023.

ISSUER PURCHASES OF EQUITY SECURITIES

In August 2017, in conjunction with the Company’s offering and sale of our 0.25% outstanding convertible senior notes, the Company’s Board of Directors authorized the Company to purchase up to \$50 million of its common stock with a portion of the net proceeds received from the offering and sale of those convertible notes. The shares that were purchased by the Company pursuant to this authorization were retained as treasury stock and are available for general corporate purposes. The Company purchased 1,414,900 shares of its common stock for approximately \$49.9 million pursuant to this authorization.

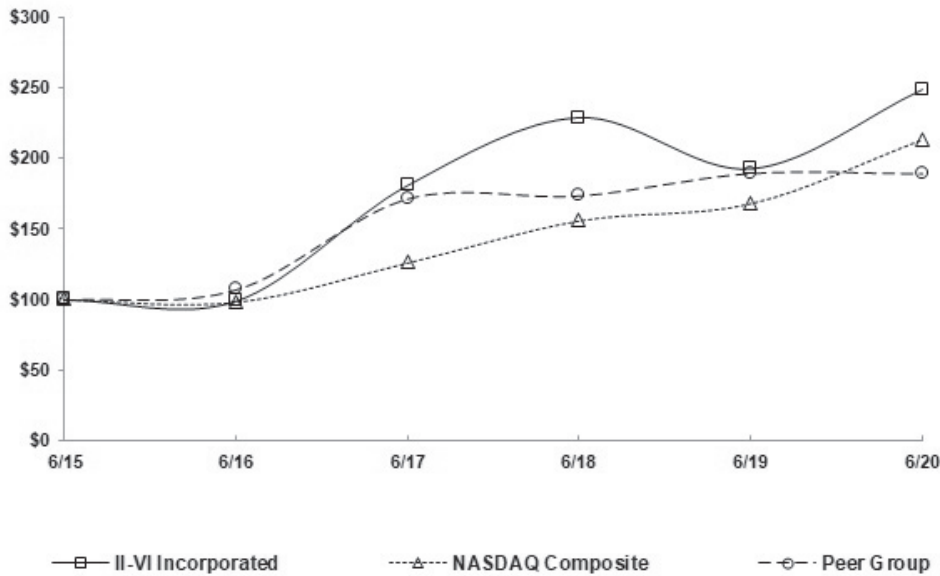
In August 2014, the Company’s Board of Directors authorized the Company to purchase up to \$50 million of its common stock through a share repurchase program (the “Program”) that calls for shares to be purchased in the open market or in private transactions from time to time. The Program has no expiration and may be suspended or discontinued at any time. Shares purchased by the Company are retained as treasury stock and available for general corporate purposes. During each of the fiscal years ended June 30, 2020 and June 30, 2019, the Company purchased 50,000 shares of its common stock for \$1.6 million under this program. As of June 30, 2020, the Company has cumulatively purchased 1,416,587 shares of its common stock pursuant to the Program for approximately \$22.3 million. The dollar value of shares as of June 30, 2020 that may yet be purchased under the Program is approximately \$27.7 million.

PERFORMANCE GRAPH

The following graph compares cumulative total shareholder return on the Company’s common stock with the cumulative total shareholder return of the Nasdaq Composite Index and with a peer group of companies constructed by the Company for the period from June 30, 2015, through June 30, 2020. The Company’s current fiscal year peer group includes Cabot Microelectronics Corporation, Franklin Electric Co. Inc., MKS Instruments, Inc., Silicon Laboratories Inc., Lumentum Holdings Inc., Coherent, Inc. and Corning Incorporated.

In our Annual Report on Form 10-K for our fiscal year ended June 30, 2019, our fiscal year peer group included Finisar. Finisar has been excluded from the current fiscal year peer group as a result of our acquisition of Finisar in September 2019.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
 Among II-VI Incorporated, the NASDAQ Composite Index,
 and a Peer Group



*\$100 invested on 6/30/15 in stock or index, including reinvestment of dividends.
 Fiscal year ending June 30.

Item 6. SELECTED FINANCIAL DATA**Five-Year Financial Summary**

The following selected financial data for the five fiscal years presented are derived from the Company's audited Consolidated Financial Statements. The data should be read in conjunction with the Consolidated Financial Statements and the related notes thereto included elsewhere in this Annual Report on Form 10-K.

| Year Ended June 30, | 2020 | 2019 | 2018 | 2017 | 2016 |
|---|-------------|-------------|-------------|-------------|-------------|
| <i>(\$000 except per share data)</i> | | | | | |
| Statement of Earnings | | | | | |
| Net revenues | \$2,380,071 | \$1,362,496 | \$1,158,794 | \$ 972,046 | \$ 827,216 |
| Net earnings (loss) | (67,029) | 107,517 | 88,002 | 95,274 | 65,486 |
| Basic earnings (loss) per share | (0.79) | 1.69 | 1.41 | 1.52 | 1.07 |
| Diluted earnings (loss) per share | (0.79) | 1.63 | 1.35 | 1.48 | 1.04 |
| Diluted weighted average shares outstanding | 84,828 | 65,804 | 65,133 | 64,507 | 62,909 |

| June 30, | 2020 | 2019 | 2018 | 2017 | 2016 |
|----------------------|-------------|-------------|-------------|-------------|-------------|
| <i>(\$000)</i> | | | | | |
| Balance Sheet | | | | | |
| Working capital | \$1,116,076 | \$ 542,348 | \$ 525,370 | \$ 517,344 | \$ 411,721 |
| Total assets | 5,234,714 | 1,953,773 | 1,761,661 | 1,477,297 | 1,211,981 |
| Long-term debt | 2,186,092 | 443,163 | 419,013 | 322,022 | 215,307 |
| Total debt | 2,255,342 | 466,997 | 439,013 | 342,022 | 235,307 |
| Retained earnings | 876,552 | 943,581 | 836,064 | 748,062 | 652,788 |
| Shareholders' equity | 2,076,803 | 1,133,209 | 1,024,311 | 900,563 | 782,338 |

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**Forward-Looking Statements**

Certain statements contained in this Management's Discussion and Analysis of Financial Condition and Results of Operations ("Management Discussion and Analysis") are forward-looking statements as defined by Section 21E of the Securities Exchange Act of 1934, as amended, including statements regarding projected growth rates, markets, product development, financial position, capital expenditures and foreign currency exposure. Forward-looking statements are also identified by words such as "expects," "anticipates," "believes," "intends," "plans," "projects" or similar expressions.

Although our management considers these expectations and assumptions to have a reasonable basis, there can be no assurance that management's expectations, beliefs or projections as expressed in the forward-looking statements will actually occur or prove to be correct. In addition to general industry and global economic conditions, factors that could cause actual results to differ materially from those discussed in the forward-looking statements in this Annual Report on Form 10-K include, but are not limited to: (i) the failure of any one or more of the assumptions stated above to prove to be correct; and (ii) the risks relating to forward-looking statements and other "Risk Factors" discussed herein at Item 1A. The Company disclaims any obligation to update information contained in these forward-looking statements whether as a result of new information, future events or developments, or otherwise.

In addition, we operate in a highly competitive and rapidly changing environment; new risk factors can arise, and it is not possible for management to anticipate all such risk factors, or to assess the impact of all such risk factors on our business or the extent to which any individual risk factor, or combination of risk factors, may cause results to differ materially from those contained in any forward-looking statement. The forward-looking statements included in this Annual Report on Form 10-K are based only on information currently available to us and speak only as of the date of this Report. We do not assume any obligation, and do not intend to, update any forward-looking statements, whether as a result of new information, future developments or otherwise, except as may be required by the securities laws. Investors should, however, consult any further disclosures of a forward-looking nature that the Company may make in its subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, or other disclosures filed with or furnished to the SEC.

Investors should also be aware that, while the Company does communicate with securities analysts from time to time, such communications are conducted in accordance with applicable securities laws. Investors should not assume that the Company agrees with any statement or report issued by any analyst irrespective of the content of the statement or report.

Overview

II-VI Incorporated (“II-VI,” the “Company,” “we,” “us” or “our”), a worldwide leader in engineered materials and optoelectronic components, is a vertically integrated manufacturing company that develops innovative products for industrial materials processing, communications, aerospace and defense, consumer electronics, semiconductor capital equipment, life sciences and automotive end markets. The Company produces a wide variety of application-specific photonic and electronic materials and components, and deploys them in various forms, including integration with advanced software.

The Company generates revenues, earnings and cash flows from developing, manufacturing and marketing a broad portfolio of products for our end markets. We also generate revenue, earnings and cash flows from government-funded research and development contracts relating to the development and manufacture of new technologies, materials and products.

Our customer base includes original equipment manufacturers, laser end users, system integrators of high-power lasers, manufacturers of equipment and devices for industrial, optical communications, consumer electronics, security and monitoring applications, U.S. government prime contractors, and various U.S. government agencies.

In September 2019, the Company completed its acquisition Finisar Corporation (“Finisar”), See Note 3. Acquisitions, to our Consolidated Financial Statements contained in Item 8 of this Annual Report on Form 10-K. The operating results of this acquisition have been reflected in the selected financial information of the Company’s Photonic Solutions segment and Compound Semiconductors Segment beginning on October 1, 2019, with the results from September 24, 2019 to September 30, 2019 reflected in Unallocated and Other.

Finisar is a global technology leader in optical communications, providing components and subsystems to networking equipment manufacturers, data center operators, telecom service providers, consumer electronics and automotive companies. Finisar, headquartered in Sunnyvale, California, designs products that meet the increasing demands for network bandwidth, data storage and 3D sensing subsystems. As part of the Finisar acquisition, the Company entered into a new Amended and Restated Credit Agreement, dated as of September 24 2019. This agreement secured \$2.425 billion in aggregate principle amount of senior secured credit facilities. See Note 9. Debt, to our Consolidated Financial Statements contained in Item 8 of this Annual Report on Form 10-K.

On June 30, 2020, the Company announced its intention to offer, in concurrent underwritten public offerings, newly issued shares of its common stock and newly issued shares of its Series A Mandatory Convertible Preferred Stock, "Mandatory Convertible Preferred Stock"). In addition, the underwriters were granted a 30-day option to purchase additional shares of its common stock at the applicable public offering price, less underwriting discounts and commissions, and shares of Series A Mandatory Convertible Preferred Stock at the applicable public offering price, less underwriting discounts and commissions and solely to cover over-allotments with respect to the preferred stock offering. See Note 21. Subsequent Event, to our Consolidated Financial Statements contained in Item 8 of this Annual Report on Form 10-K for further details.

As we grow, we are focused on scaling our Company and deriving the continued benefits of vertical integration as we strive to be a best in class competitor in all of our highly competitive markets. The Company may elect to change the way in which the Company operates or is organized in the future to enable the most efficient implementation of our strategy.

Critical Accounting Policies and Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States requires the Company's management to make judgments, assumptions and estimates that affect the amounts reported in its Consolidated Financial Statements and accompanying notes. Note 1. Nature of Business and Summary of Significant Accounting Policies, of the Notes to our Consolidated Financial Statements contained in Item 8 of this Annual Report on Form 10-K describes the significant accounting policies and accounting methods used in the preparation of the Company's Consolidated Financial Statements. Management bases its estimates on historical experience and on various other assumptions that it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates.

Management has discussed the development and selection of the critical accounting policies and estimates described below with the Audit Committee of the Board of Directors and the Audit Committee has reviewed the related disclosure. In addition, there are other items within our Consolidated Financial Statements that require estimation but are not deemed critical. Changes in estimates used in these and other items could impact the Consolidated Financial Statements.

Business Combinations

The Company accounts for business acquisitions under the acquisition method of accounting whereby the total purchase price is allocated to tangible and intangible assets acquired and liabilities assumed based on the respective fair values. In determining the fair value of intangible assets acquired, the Company must make assumptions about the future performance of the acquired business, including among other things, the forecasted revenue growth attributable to the asset group and projected operating expenses inclusive of expected synergies, including future cost savings, and other benefits expected to be achieved by combining the Company and Finisar. The Company's intangible assets are comprised of customer relationships, trade names and developed technology. The estimated fair value of the customer relationships, trade names and developed technology are determined using the multi-period excess earnings method and relief from royalty methods. Both methods require forward looking estimates that are discounted to determine the fair value of the intangible asset using a risk-adjusted discount rate that is reflective of the level of risk associated with future estimates associated with the asset group that could be affected by future economic and market conditions. The estimated fair value of the developed technology is also dependent on the selection of the royalty rate used in the valuation method. Different assumptions for certain intangible assets may result in materially different values for these assets, which would impact the Company's financial position and future results of operations.

Goodwill

The Company tests goodwill for impairment annually, and when events or changes in circumstances indicate that goodwill might be impaired. The determination of whether goodwill is impaired requires us to make judgments based on long-term projections of future performance. Estimates of fair value are based on our projection of revenues, operating costs and cash flows of each reporting unit, considering historical and anticipated results and general economic and market conditions and their projections. For fiscal year 2020, the fair values of the reporting units were determined using a discounted cash flow analysis with projected financial information based on our most recently completed long-term strategic planning processes and also considers the current financial performance compared to our prior projections of the reporting unit. As of June 30, 2020, no reporting units are at risk for impairment. Due to the cyclical nature of our business, and the other factors described in the section on Risk Factors set forth in Item 1A of this Annual Report on Form 10-K, the profitability of our individual reporting units may periodically be affected by downturns in customer demand, operational challenges and other factors. If material adverse conditions occur that impact one or both of our reporting units, our determination of future fair value might not support the carrying amount of one or both of our reporting units, and the related goodwill would need to be impaired.

Income Taxes

The Company prepares and files tax returns based on its interpretation of tax laws and regulations and records estimates based on these judgments and interpretations. In the normal course of business, the Company's tax returns are subject to examination by various taxing authorities, which may result in future tax, interest and penalty assessments by these authorities. The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate resolution. The amount of unrecognized tax benefits is adjusted for changes in facts and circumstances. For example, adjustments could result from significant amendments to existing tax law and the issuance of regulations or interpretations by the taxing authorities, new information obtained during a tax examination, or resolution of an examination. The Company believes that its estimates for uncertain tax positions are appropriate and sufficient to pay assessments that may result from examinations of its tax returns. The Company recognizes both accrued interest and penalties related to unrecognized tax benefits in income tax expense.

Management evaluates the realizability of deferred tax assets for each jurisdiction in which it operates. If the Company experiences cumulative pretax income in a particular jurisdiction in a three-year period including the current and prior two years, management normally concludes that the income tax assets will more likely than not be realizable and no valuation allowance is recognized, unless known or planned operating developments, or changes in tax laws, would lead management to conclude otherwise. However, if the Company experiences cumulative pretax losses in a particular jurisdiction in a three-year period, management then considers a series of factors in the determination of whether the deferred tax assets can be realized. The Company has recorded valuation allowances against certain of its deferred tax assets, primarily those that have been generated from net operating losses in certain foreign taxing jurisdictions and acquired U.S. carryforwards. In evaluating whether the Company would more likely than not recover these deferred tax assets, it has not assumed any future taxable income or tax planning strategies in the jurisdictions associated with these carryforwards where history does not support such an assumption. Implementation of tax planning strategies to recover these deferred tax assets or future income generation in these jurisdictions could lead to the reversal of these valuation allowances and a reduction of income tax expense.

COVID-19 Update

On March 11, 2020, the World Health Organization designated the novel coronavirus known as COVID-19 as a global pandemic. In response to the global spread of COVID-19, governments at various levels have implemented unprecedented response measures. Overall, the COVID-19 pandemic has significantly curtailed global economic activity and caused significant volatility and disruption in global financial markets. Certain of the measures taken in response to the COVID-19 pandemic have adversely affected, and could in the future materially adversely impact, our business, results of operations, financial condition and stock price.

In particular, the COVID-19 pandemic is having a significant impact on global markets due to resulting supply chain and production disruptions, workforce and travel restrictions, quarantines and shelter-in-place orders, reduced spending and other similar measures implemented by many companies and other factors. Following the initial outbreak of COVID-19, we experienced temporary disruptions to our operations in China. While these operations have returned to active service, approximately 45% of our global facilities are subject to a government order, including approximately 10% that are currently closed, most of which are administrative facilities where employees are working remotely. Certain of our customers and suppliers currently are impacted by similar operational restrictions.

Our focus has been on the protection of the health and safety of our employees and business partners. In our facilities, we have deployed new safety measures, including guidance to employees on matters such as effective hygiene and disinfection, social distancing, limited and remote access working where feasible and use of protective equipment. We also are prioritizing efforts to understand and support the changing business needs of our customers and suppliers in light of restrictions that are applicable to them.

At this time, we believe that our existing balances of cash and cash equivalents, along with our existing committed borrowing availability and other short-term liquidity arrangements, will be sufficient to satisfy our working capital needs, make necessary capital asset purchases and debt repayments and meet other liquidity requirements associated with our existing operations. Likewise, our current estimates indicate that we will remain in compliance with financial covenants applicable under our debt arrangements.

The full extent of the impact of the COVID-19 pandemic and the related responses on our operational and financial performance is currently uncertain and will depend on many factors outside our control, including, without limitation, the duration and severity of the pandemic, the imposition of protective public safety measures, and the impact of the pandemic on the global economy as a whole and, in particular, demand for our products. Due to these uncertainties, we cannot reasonably estimate the related impact on us at this time.

For additional information regarding the risks that we face as a result of the COVID-19 pandemic, please see Item 1A, Risk Factors, in Part I of this Form 10-K. Further, to the extent the COVID-19 pandemic adversely affects our business and financial results, it also may have the effect of heightening many of the other risks described in the risk factors in Item 1A of this Form 10-K.

Fiscal Year 2020 Compared to Fiscal Year 2019

The Company aligns its organizational structure into the following two reporting segments for the purpose of making operational decisions and assessing financial performance: (i) Compound Semiconductors and (ii) Photonic Solutions. The Company is reporting financial information (revenue and operating income) for these reporting segments in this Annual Report on Form 10-K.

The following table sets forth select items from our Consolidated Statements of Earnings (Loss) for the years ended June 30, 2020 and 2019 (\$ in millions except per share information):

| | Year Ended June 30, 2020 | | Year Ended June 30, 2019 | |
|-------------------------------------|-----------------------------|------------------|-----------------------------|------------------|
| | | % of Revenues | | % of Revenues |
| Total revenues | \$ 2,380.1 | 100.0 % | \$ 1,362.4 | 100.0 % |
| Cost of goods sold | 1,560.5 | 65.6 % | 841.1 | 61.7 % |
| Gross margin | 819.6 | 34.4 | 521.3 | 38.3 |
| Operating expenses: | | | | |
| Internal research and development | 339.1 | 14.2 | 139.2 | 10.2 |
| Selling, general and administrative | 441.0 | 18.5 | 233.5 | 17.1 |
| Interest and other, net | 103.4 | 4.3 | 19.8 | 1.5 |
| Earnings (Loss) before income tax | (63.9) | (2.7) | 128.8 | 9.5 |
| Income taxes | 3.1 | 0.1 | 21.3 | 1.6 |
| Net earnings (loss) | <u>\$ (67.0)</u> | <u>(2.8)%</u> | <u>\$ 107.5</u> | <u>7.9 %</u> |
| Diluted earnings (loss) per share | <u>\$ (0.79)</u> | | <u>\$ 1.63</u> | |

Consolidated

Revenues. Revenues for the year ended June 30, 2020 increased 75% to \$2,380.1 million, compared to \$1,362.4 million for the prior fiscal year. The increase in revenues is primarily attributed to the acquisition of Finisar, which contributed \$938.4 million of revenues for the fiscal year ended June 30, 2020. In addition to the acquisition of Finisar, the increase in revenues within Photonic Solutions was driven by increased demand from customers in the optical communication market, ROADM and other optical communication products addressing the growing deployment of 5G optical networks. Compound Semiconductors recorded a 13% revenue increase during the current fiscal year, which in addition to revenues from Finisar, was driven by strengthening demand for SiC substrate products addressing RF electronics and high-power switching systems. This segment also realized increased revenues from its aerospace and defense products addressing strengthening demand from customers in the intelligence, surveillance and reconnaissance markets.

Gross margin. Gross margin for the year ended June 30, 2020 was \$819.6 million, or 34.4%, of total revenues, compared to \$521.3 million, or 38.3% of total revenues, for the same period last fiscal year. Gross margin as a percentage of revenues decreased 380 basis points compared to the prior fiscal year despite the 75% increase in revenues during this same period. Gross margin was negatively impacted by additional cost of goods sold of \$87.7 million related to the fair value adjustment of the acquired Finisar inventory, and as the result of product mix relating to Finisar's Transceiver product line which has a lower gross margin profile than the Company's historical margins.

Internal research and development. Company-funded internal research and development (“IR&D”) expenses for the fiscal year ended June 30, 2020 were \$339.1 million, or 14.2% of revenues, compared to \$139.2 million, or 10.2% of revenues, last fiscal year. The increase in IR&D expenses is primarily due to the Company continuing to invest in new products and processes across all its businesses including investments in 5G technology, 3D Sensing, indium phosphide, LIDAR and other emerging market trends.

Selling, general and administrative. Selling, general and administrative (“SG&A”) expenses for the year ended June 30, 2020 were \$441.0 million, or 18.5% of revenues, compared to \$233.5 million, or 17.1% of revenues, last fiscal year. The increase in SG&A was primarily the result of transaction costs incurred relating to the acquisition of Finisar as well as the SG&A from the Finisar acquisition.

Interest and other, net. Interest and other, net for the year ended June 30, 2020 was expense of \$103.4 million compared to expense of \$19.8 million last fiscal year. Interest and other, net primarily includes \$89.4 million for interest expense on borrowings, \$14.4 million of foreign currency losses, and \$2.8 million of equity earnings from unconsolidated investments. Interest expense increased due to the higher levels of outstanding debt incurred in conjunction with the acquisition of Finisar. In addition, the Company expensed \$4.0 million of debt extinguishment costs during the current fiscal year and recorded a \$5.0 million impairment charge for an unconsolidated investment as its carrying value was determined to be unrecoverable.

Income taxes. The Company’s year-to-date effective income tax rate at June 30, 2020 was a (4.9)% benefit, compared to an effective tax rate of 16.6% last fiscal year. The current fiscal year’s effective tax rate was negatively impacted by the U.S. enacted tax legislation related to global intangible low tax income (“GILTI”) partially offset by research and development incentives in certain jurisdictions.

Segment Reporting

Revenues and operating income for the Company’s reportable segments are discussed below. Operating income differs from income from operations in that operating income excludes certain operational expenses included in other expense (income), net, as reported. Management believes operating income to be a useful measure for investors, as it reflects the results of segment performance over which management has direct control and is used by management in its evaluation of segment performance. See Note 14. Segment and Geographic Reporting to the Company’s Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K for further information on the Company’s reportable segments and for the reconciliation of operating income to net earnings, which is incorporated herein by reference.

Effective July 1, 2019, the Company realigned its composition of its operating segments. The Company combined II-VI Laser Solutions and II-VI Performance Products, and renamed the combined segment Compound Semiconductors. All applicable segment information has been restated to reflect this change. Additionally, the Company changed the name of II-VI Photonics to Photonic Solutions.

Photonic Solutions (\$ in millions)

| | Year Ended June 30, | | % Increase/ (Decrease) |
|------------------|------------------------|----------|------------------------------|
| | 2020 | 2019 | |
| Revenues | \$ 1,536.8 | \$ 638.9 | 141 % |
| Operating income | \$ 49.9 | \$ 81.9 | (39)% |

The above operating results for the year ended June 30, 2020 include the Company’s acquisition of Finisar in September 2019.

Revenues for the year ended June 30, 2020 for Photonic Solutions increased 141% to \$1,536.8 million, compared to \$638.9 million for last fiscal year. Included in the current year’s revenues were \$903.5 million of revenues from the Finisar acquisition. Exclusive of the acquisition, the increase in revenues was attributed to increased demand of our 5G optical networks driven by the China broadband initiative.

Operating income for the year ended June 30, 2020 for Photonic Solutions decreased 39% to \$49.9 million, compared to an operating income of \$81.9 million last fiscal year. The decrease in operating income was primarily due to acquisition related expenses related to amortization expense on acquired intangible assets and the expensing of acquired inventory fair value step-up partially offset by incremental margin realized on increased revenues during the year.

Compound Semiconductors (\$ in millions)

| | Year Ended June 30, | | % Increase/ (Decrease) |
|------------------|------------------------|----------|------------------------------|
| | 2020 | 2019 | |
| Revenues | \$ 821.2 | \$ 723.6 | 13% |
| Operating income | \$ 62.3 | \$ 82.4 | (24%) |

The above operating results for the year ended June 30, 2020 include the Company's acquisition of Finisar in September 2019.

Revenues for the fiscal year ended June 30, 2020 for Compound Semiconductors increased 13% to \$821.2 million, compared to revenues of \$723.6 million last fiscal year. The increase in revenues during the current fiscal year was primarily driven by increased VCSEL product shipments addressing the 3D sensing commercial market, and increased revenues to customers in the aerospace and defense market.

Operating income for the fiscal year ended June 30, 2020 for Compound Semiconductors decreased 24% to \$62.3 million, compared to operating income of \$82.4 million last fiscal year. The decrease in operating income during the current fiscal year was primarily driven by the acquisition of Finisar, which includes unabsorbed operating costs incurred at the segment's Sherman, Texas water fabrication facility, during the qualification phase. In addition, the segment incurred acquisition related expenses associated with expensing of the fair value inventory write-up and other related acquisition expenses.

Fiscal Year 2019 Compared to Fiscal Year 2018

The Company aligned its organizational structure into the following two reporting segments for the purpose of making operational decisions and assessing financial performance: (i) Compound Semiconductors and (ii) Photonic Solutions. The Company is reporting financial information (revenue and operating income) for these reporting segments in this Annual Report on Form 10-K.

The following table sets forth select items from our Consolidated Statements of Earnings for the years ended June 30, 2019 and 2018 (\$ in millions except per share information):

| | Year Ended June 30, 2019 | | Year Ended June 30, 2018 | |
|-------------------------------------|-----------------------------|------------------|-----------------------------|------------------|
| | | % of Revenues | | % of Revenues |
| Total revenues | \$ 1,362.4 | 100.0 % | \$ 1,158.8 | 100.0 % |
| Cost of goods sold | 841.1 | 61.7 | 696.6 | 60.1 |
| Gross margin | 521.3 | 38.3 | 462.2 | 39.9 |
| Operating expenses: | | | | |
| Internal research and development | 139.2 | 10.2 | 116.9 | 10.1 |
| Selling, general and administrative | 233.5 | 17.1 | 208.6 | 18.0 |
| Interest and other, net | 19.8 | 1.5 | 14.6 | 1.3 |
| Earnings before income tax | 128.8 | 9.5 | 122.2 | 10.5 |
| Income taxes | 21.3 | 1.6 | 34.2 | 3.0 |
| Net earnings | <u>\$ 107.5</u> | 7.9 % | <u>\$ 88.0</u> | 7.5 % |
| Diluted earnings per share | <u>\$ 1.63</u> | | <u>\$ 1.35</u> | |

Consolidated

Revenues. Revenues for the year ended June 30, 2019 increased 18% to \$1,362.4 million, compared to \$1,158.8 million for fiscal year 2018. The increase in revenues during fiscal year 2019 was driven by strong demand from customers across the majority of the Company's business units. In particular, Photonic Solutions experienced a 31% revenue growth from the prior fiscal year 2018, primarily driven by increased demand from customers in the optical communication market. Specifically, the segment saw increased demand for ROADM and other optical communication products addressing the growing deployment of 5G optical networks. Compound Semiconductors recorded an 8% revenue increase during the current fiscal year, driven by strengthening demand for SiC substrate products addressing RF electronics and high-power switching and power conversion systems for automotive and communication end markets. In addition, this segment also realized increased revenues from its aerospace and defense products addressing strengthening demand from customers in the intelligence, surveillance and reconnaissance markets.

Gross margin. Gross margin for the year ended June 30, 2019 was \$521.3 million, or 38.3%, of total revenues, compared to \$462.2 million, or 39.9% of total revenues, for fiscal year 2018. Gross margin as a percentage of revenues decreased 160 basis points compared to the prior fiscal year despite the 18% increase in revenues during this same period. The Company's Photonic Solutions' gross margin was negatively impacted by a shift in product mix to lower margin products while Compound Semiconductors experienced under-absorption of manufacturing costs for its 3D Sensing product line due to continued delays in the program and underutilization of capacity.

Internal research and development. Company-funded IR&D expenses for the fiscal year ended June 30, 2019 were \$139.2 million, or 10.2% of revenues, compared to \$116.9 million, or 10.1% of revenues, for fiscal year 2018. The increase in IR&D expenses is primarily due to the Company continuing to invest in new products and processes across all its businesses including investments in 5G technology, 3D Sensing and other engineered material applications. IR&D expenses as a percentage of revenues were consistent between both fiscal years, and the Company anticipates this percentage to continue to range between 10% and 15% of revenues as the Company continues investing in new product and process development.

Selling, general and administrative. SG&A expenses for the year ended June 30, 2019 were \$233.5 million, or 17.1% of revenues, compared to \$208.6 million, or 18.0% of revenues, for fiscal year 2018. During fiscal year 2019, the Company announced its intention to acquire Finisar, and incurred approximately \$15.6 million of related transaction expenses. In addition to the transaction expenses, the Company incurred higher SG&A expenses to support its growing revenue base. The Company has been successful in capitalizing on synergies from its recent acquisitions to improve its operating leverage.

Interest and other, net. Interest and other, net for the year ended June 30, 2019 was expense of \$19.8 million compared to expense of \$14.6 million for fiscal year 2018. Included in interest and other, net were interest expense on long-term borrowings, earnings from equity investments, interest income on excess cash reserves, unrealized gains and losses on the Company's deferred compensation plan, and foreign currency gains and losses. The increase in interest and other, net was primarily due to increased interest expense during the current fiscal year of approximately \$4.1 million due to the higher levels of outstanding debt.

Income taxes. The Company's year-to-date effective income tax rate at June 30, 2019 was 16.6%, compared to an effective tax rate of 28.0% for fiscal year 2018. Fiscal year 2018's effective tax rate was negatively impacted by the U.S. enacted tax legislation and the recording the provision for the transition tax under the new tax law.

Photonic Solutions (\$ in millions)

| | Year Ended June 30, | | % Increase |
|------------------|------------------------|-------|---------------|
| | 2019 | 2018 | |
| Revenues | 638.8 | 486.5 | 31 % |
| Operating income | 81.9 | 63.2 | 30 % |

The above operating results for the year ended June 30, 2019 include the Company's acquisitions of CoAdna Holdings, Inc. in September 2018 and the product line which was acquired in November 2018.

Revenues for the year ended June 30, 2019 for Photonic Solutions increased 31% to \$638.8 million, compared to \$486.5 million for fiscal year 2018. Included in the fiscal year's 2019 revenues were \$12.4 million of revenues, excluding sales to customers through our sales offices, from the above acquisitions. Exclusive of these acquisitions, the increase in revenues was primarily attributed to increased demand for optical communication products driven by the China broadband initiative as China continues to build out its broadband networks. Specifically, the segment saw increased demand for its ROADM and EDFA product lines to address this and other market demands, including the accelerating demand for 5G technology.

Operating income for the year ended June 30, 2019 for Photonic Solutions increased 30% to \$81.9 million, compared to an operating income of \$63.2 million for fiscal year 2018. The increase in operating income was primarily due to incremental margin realized on increased revenues.

Compound Semiconductors (\$ in millions)

| | Year Ended June 30, | | % Increase |
|------------------|--------------------------------|-------------|-----------------------|
| | 2019 | 2018 | |
| Revenues | \$ 723.6 | \$ 672.3 | 8% |
| Operating income | \$ 82.4 | \$ 73.6 | 12% |

Revenues for the fiscal year ended June 30, 2019 for Compound Semiconductors increased 8% to \$723.6 million, compared to revenues of \$672.3 million for fiscal year 2018. The increase in revenues during fiscal year 2019 was primarily driven by increased demand for SiC products addressing RF electronics and high-power switching and power conversion systems for automotive and communication markets. In addition, the segment has seen increased demand for products and components for its thermoelectric and aerospace and defense markets.

Operating income for the fiscal year ended June 30, 2019 for Compound Semiconductors increased 12% to \$82.4 million, compared to operating income of \$73.6 million for fiscal year 2018. The increase in operating income during fiscal year 2019 was primarily driven by incremental margin realized by increased sales volume, as well as favorable product mix toward higher margin products.

LIQUIDITY AND CAPITAL RESOURCES

Historically, our primary sources of cash have been provided from operations, long-term borrowing, and advance funding from customers. Other sources of cash include proceeds received from the exercises of stock options and sale of equity investments and businesses. Our historic uses of cash have been for capital expenditures, investments in research and development, business acquisitions, payments of principal and interest on outstanding debt obligations, payments of debt issuance costs to obtain financing, payments in satisfaction of employees' minimum tax obligations and purchases of treasury stock. Supplemental information pertaining to our sources and uses of cash for the periods indicated is presented as follows:

Sources (uses) of Cash (millions):

| Year Ended June 30, | 2020 | 2019 | 2018 |
|--|-------------|-------------|-------------|
| Net cash provided by operating activities | \$ 297.3 | \$ 178.5 | \$ 161.0 |
| Proceeds on new long-term borrowings | 2,121.0 | — | — |
| Proceeds from exercises of stock options | 13.5 | 8.7 | 10.5 |
| Proceeds from prior credit facility and other borrowings | 10.0 | 150.0 | 445.0 |
| Purchases of businesses, net of cash acquired | (1,036.6) | (83.1) | (80.5) |
| Payments of Finisar Notes | (560.1) | — | — |
| Payments under prior term loan and credit facility | (176.6) | (135.0) | (292.0) |
| Payments under new long-term borrowings and credit facility | (137.9) | — | — |
| Additions to property, plant & equipment | (136.9) | (137.1) | (153.4) |
| Debt issuance costs | (63.5) | (5.6) | (10.1) |
| Payments in satisfaction of employees' minimum tax obligations | (28.7) | (7.1) | (6.6) |
| Common stock repurchases | (1.6) | (1.6) | (49.9) |
| Effect of exchange rate changes on cash and cash equivalents and other items | (11.7) | (9.9) | (48.9) |

Net cash provided by operating activities:

Net cash provided by operating activities was \$297.3 million and \$178.5 million for the fiscal years ended June 30, 2020 and 2019, respectively. The increase in cash flows provided by operating activities during the current fiscal year ended compared to the same period last fiscal year was primarily driven by increased non-cash charges for depreciation and amortization as well as overall favorable changes in working capital offset by lower earnings as a result of acquisition-related expenses incurred for the acquisition of Finisar. Acquisition-related expenses include transaction expenses, expensing of the fair value write-up of acquired inventory and increased depreciation and amortization charges for acquired property, plant and equipment and intangible assets.

Net cash provided by operating activities was \$178.5 million and \$161.0 million for the fiscal years ended June 30, 2019 and 2018, respectively. The increase in cash provided by operations was due to a combination of higher net earnings as well as non-cash items such as depreciation, amortization, and share-based compensation expense and improved working capital management of accounts payable.

Net cash used in investing activities:

Net cash used in investing activities was \$1,179.3 million and \$224.0 million for the fiscal years ended June 30, 2020 and 2019, respectively. Net cash used in investing activities during the current period primarily included \$1,036.6 million for net cash paid for the acquisition of Finisar, and \$136.9 million of cash paid for property, plant and equipment to increase capacity to meet the growing demand for the Company's product portfolio.

Net cash used in investing activities was \$224.0 million and \$285.0 million for the fiscal years ended June 30, 2019 and 2018, respectively. The decrease in cash used in investing activities was the result of lower level of investments in property, plant & equipment as the Company continues to strategically allocate resources.

Net cash provided by financing activities:

Net cash provided by financing activities was \$1,173.6 million for the year ended June 30, 2020 compared to net cash provided by financing activities of \$4.9 million for the year ended June 30, 2019. Net cash provided by financing activities during the current fiscal year included net borrowings on long-term debt of \$1,256.4 million primarily to fund the acquisition of Finisar, and \$13.5 million of cash received from exercises of stock options. Net cash provided by financing activities was offset by \$63.5 million of debt issuance costs associated with the increased borrowings, \$28.7 million of cash payments in satisfaction of employees' minimum tax obligations from the vesting of equity awards and a \$1.6 million payment to repurchase common stock through the Company's share repurchase program.

Net cash provided by financing activities was \$4.9 million for the year ended June 30, 2019 compared to net cash provided by financing activities of \$97.0 million for the year ended June 30, 2018. During the year ended June 30, 2019, the Company had net borrowings of \$15.0 million. The Company realized \$8.7 million of proceeds received from the exercise of stock options offset, by \$7.1 million of cash payments in satisfaction of employees' minimum tax obligations on the vesting of the Company's restricted and performance shares during the current fiscal year. In addition, the Company incurred approximately \$1.6 million of purchases of treasury stock and \$5.6 million of debt issuance costs associated with its pending financing of the cash consideration payable in connection with its Finisar acquisition.

Senior Credit Facilities

On September 24, 2019, in connection with the Finisar acquisition, the Company entered into a Credit Agreement (the "Credit Agreement") with Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer, and the other lenders party thereto.

The Credit Agreement provides for senior secured financing of \$2.425 billion in the aggregate, consisting of

- (i) Aggregate principal amount of \$1,255 million for a five-year senior secured first-lien term A loan facility (the "Term A Facility"),
- (ii) Aggregate principal amount of \$720 million for a seven-year senior secured term B loan facility (the "Term B Facility" and together with the Term A Facility, the "Term Loan Facilities") and
- (iii) Aggregate principal amount of \$450 million for a five-year senior secured first-lien revolving credit facility (the "Revolving Credit Facility" and together with the Term Loan Facilities, the "Senior Credit Facilities").

The Credit Agreement also provides for a letter of credit sub-facility not to exceed \$25.0 million and a swing loan sub-facility initially not to exceed \$20.0 million.

The Company is obligated to repay the outstanding principal amount of the Term A Facility in quarterly installments equal to 1.25% of the initial aggregate principal amount of the Term A Facility, with the remaining outstanding balance due and payable on the fifth anniversary of the Closing Date. Similarly, the Company is obligated to repay the outstanding principal amount of the Term B Facility in quarterly installments equal to 0.25% of the initial aggregate principal amount of the Term B Facility, with the remaining outstanding balance due and payable on the seventh anniversary of the Closing Date. The Company is obligated to repay the aggregate principal amount of all outstanding revolving loans made under the Revolving Credit Facility on the fifth anniversary of the Closing Date.

The Company's obligations under the Senior Credit Facilities are guaranteed by each of the Company's existing or future direct and indirect domestic subsidiaries, including Finisar and its domestic subsidiaries (collectively, the "Guarantors"). Borrowings under the Senior Credit Facilities are collateralized by a first priority lien in substantially all of the assets of the Company and the Guarantors, except that no real property is collateral under the Senior Credit Facilities.

All amounts outstanding under the Senior Credit Facilities will become due and payable 120 days prior to the maturity of the Company's currently outstanding 0.25% Convertible Senior Notes due 2022 (the "II-VI Notes") if (i) the II-VI Notes remain outstanding, and (ii) the Company has insufficient cash and borrowing availability to repay the principal amount of the II-VI Notes.

The Company voluntarily may prepay, at any time or from time to time, any amounts outstanding under the Senior Credit Facilities in whole or in part without premium or penalty; except for the Term B Facility, pursuant to which in the event of (a) a repayment made before September 24, 2020, (b) the occurrence of a repricing event, or (c) a change to the lenders, the Company will be subject to a prepayment premium in an amount equal to one percent of: (i) the principal amount of the Term B Facility that is prepaid under an optional or mandatory prepayment due to a repricing event, (ii) the aggregate outstanding principal amount of the Term B Facility resulting from an amendment to the Credit Agreement, and (iii) the principal amount of the Term B Facility that is mandatorily assigned. The Company may be subject to mandatory prepayment of amounts outstanding under the Senior Credit Facilities under certain circumstances, including in connection with certain asset sales or other dispositions of property and debt issuances.

The Company also may be required to prepay amounts under the Term B Facility based on the Company's excess cash flow (as calculated in accordance with the terms of the Credit Agreement) for the Company's prior fiscal year beginning with its fiscal year ending June 30, 2020 and the Company's consolidated secured net leverage ratio (as calculated in accordance with the terms of the Credit Agreement) as of the end of such fiscal year.

Amounts outstanding under the Senior Credit Facilities will bear interest at a rate per annum equal to an applicable margin over a eurocurrency rate or an applicable margin over a base rate determined by reference to the highest of (a) the federal funds rate plus 0.50%, (b) Bank of America, N.A.'s prime rate and (c) a eurocurrency rate plus 1.00%, in each case as calculated in accordance with the terms of the Credit Agreement. The applicable interest rate would increase under certain circumstances relating to events of default. The Company has entered into an interest rate swap contract to hedge its exposure to interest rate risk on its variable rate borrowings under the Senior Credit Facilities. Refer to Note 15 for further information regarding this interest rate swap.

The Credit Agreement contains customary affirmative and negative covenants with respect to the Senior Credit Facilities, including limitations with respect to liens, investments, indebtedness, dividends, mergers and acquisitions, dispositions of assets and transactions with affiliates. The Company will be obligated to maintain a consolidated interest coverage ratio (as calculated in accordance with the terms of the Credit Agreement) as of the end of each fiscal quarter of not less than 3.00:1.00. The Company will be obligated to maintain a consolidated total net leverage ratio (as calculated in accordance with the terms of the Credit Agreement) of not greater than (i) 5.00 to 1.00 for the first four fiscal quarters after the Closing Date, commencing with the first full fiscal quarter after the Closing Date, (ii) 4.50 to 1.00 for the fifth fiscal quarter through and including the eighth fiscal quarter after the Closing Date, and (iii) 4.00 to 1.00 for each subsequent fiscal quarter. As of June 30, 2020, the Company was in compliance with all financial covenants under the Credit Agreement.

The Company incurred \$69.8 million of debt issuance costs in connection with the Senior Credit Facilities. The Company evaluated these costs to determine appropriate recognition of expense under Accounting Standards Codification 470, Debt to account for debt modification and extinguishment. As a result of the Company's assessment, \$65.8 million have been capitalized in the Consolidated Balance Sheet. Debt extinguishment costs of \$4.0 million were expensed in other expense (income), net in the Consolidated Statement of Earnings (Loss) during the twelve months ended June 30, 2020. The Company expensed \$2.9 million and \$8.8 million of capitalized debt issuance costs during the three and twelve months ended June 30, 2020, respectively, in interest expense in the Consolidated Statement of Earnings (Loss). The capitalized costs are being amortized to interest expense using the effective interest rate method from the issuance date of September 24, 2019, through the end of each facility. The unamortized debt issuance costs of \$56.9 million as of June 30, 2020 are being amortized over five and seven years, for the Term A Facility and Revolving Credit Facility, and the Term B Facility, respectively.

On June 30, 2020, the Company announced its intention to offer, in concurrent underwritten public offerings, newly issued shares of its common stock and newly issued shares of its Series A Mandatory Convertible Preferred Stock. On July 7, 2020, the Company used the proceeds from the public offerings to pay off the remaining balance of \$715.2 million of the Term B Loan Facility. See Note 21 for further details.

0.50% Finisar Convertible Notes

Finisar's outstanding 0.50% Convertible Senior Notes due 2036 (the "Finisar Notes") may be redeemed at any time on or after December 22, 2021 in whole or in part at the option of the Company at a redemption price equal to one hundred percent (100%) of the principal amount of such Finisar Notes plus accrued and unpaid interest. Each holder of Finisar Notes also may require Finisar to repurchase all or any portion of such holder's outstanding Finisar Notes for cash on December 15, 2021, December 15, 2026 and December 15, 2031 at a repurchase price equal to one hundred percent (100%) of the principal amount of such Finisar Notes plus accrued and unpaid interest. The Finisar Notes will mature on December 15, 2036. Interest on the Finisar Notes accrues at 0.50% per annum, paid semi-annually, in arrears, on June 15 and December 15 of each year.

In connection with the acquisition of Finisar, the Company, Finisar and Wells Fargo Bank, National Association, as trustee, entered into a First Supplemental Indenture, dated as of September 24, 2019 (the "First Supplemental Indenture"). The First Supplemental Indenture supplements the base indenture (as supplemented, the "Finisar Indenture"), which governs the Finisar Notes. Pursuant to the terms of the First Supplemental Indenture, the Company has fully and unconditionally guaranteed, on a senior unsecured basis, the due and punctual payment and performance of all obligations of Finisar to the holders of the Finisar Notes. The First Supplemental Indenture also provides that the right of holders of Finisar Notes to convert Finisar Notes into cash and/or shares of Finisar's common stock, is changed to a right to convert Finisar Notes into cash and/or shares of the Company's common stock, subject to the terms of the Finisar Indenture.

Under the terms of the Finisar Indenture, the consummation and effectiveness of the Merger on the Closing Date constituted a Fundamental Change (as defined in the Finisar Indenture) and a Make-Whole Fundamental Change (as defined in the Finisar Indenture). Accordingly, in accordance with the terms of the Finisar Indenture, each holder of Finisar Notes had the right to (i) convert its Finisar Notes into cash and/or shares of Company Common Stock, at Finisar's option, or (ii) require that Finisar repurchase such holder's Finisar Notes for an amount in cash equal to one hundred percent (100%) of the principal amount of such Finisar Notes plus accrued and unpaid interest.

Holders of approximately \$560.1 million in aggregate principal amount of Finisar Notes exercised the repurchase right. The Company repurchased those Finisar Notes on October 23, 2019 for an aggregate consideration of approximately \$561.1 million in cash, including accrued interest. No holders of Finisar Notes exercised the related conversion right. The Company borrowed \$561.0 million under a delayed draw on its Term Loan A to fund the payment to the holders of Finisar Notes that exercised the repurchase right. As of June 30, 2020, approximately \$14.9 million in aggregate principal amount of Finisar Notes remain outstanding.

Aggregate Availability

The Company had aggregate availability of \$374.6 million under its Revolving Credit Facility as of June 30, 2020.

Weighted Average Interest Rate

The weighted average interest rate of total borrowings was 3.4% and 1.6% for the year ended June 30, 2020 and 2019, respectively.

Share Repurchase Programs

In August 2017, in conjunction with the Company's offering and sale of our 0.25% outstanding convertible senior notes, the Company's Board of Directors authorized the Company to purchase up to \$50 million of its common stock with a portion of the net proceeds received from the offering and sale of those convertible notes. The shares that were purchased by the Company pursuant to this authorization were retained as treasury stock and are available for general corporate purposes. The Company purchased 1,414,900 shares of its common stock for approximately \$49.9 million pursuant to this authorization.

In August 2014, the Company's Board of Directors authorized the Company to purchase up to \$50 million of its common stock through a share repurchase program (the "Program") that calls for shares to be purchased in the open market or in private transactions from time to time. The Program has no expiration and may be suspended or discontinued at any time. Shares purchased by the Company are retained as treasury stock and available for general corporate purposes. During each of the fiscal years ended June 30, 2020 and June 30, 2019, the Company purchased 50,000 shares of its common stock for \$1.6 million under this program. As of June 30, 2020, the Company has cumulatively purchased 1,416,587 shares of its common stock pursuant to the Program for approximately \$22.3 million. The dollar value of shares as of June 30, 2020 that may yet be purchased under the Program is approximately \$27.7 million.

Our cash position, borrowing capacity and debt obligations are as follows (in millions):

| | June 30, 2020 | June 30, 2019 |
|------------------------------|----------------------|----------------------|
| Cash and cash equivalents | \$ 493.0 | \$ 204.9 |
| Available borrowing capacity | 374.6 | 211.9 |
| Total debt obligations | 2,255.3 | 467.0 |

The Company believes cash flow from operations, existing cash reserves and available borrowing capacity from its credit facilities and its recent equity raise will be sufficient to fund its needs for working capital, capital expenditures, repayment of scheduled long-term borrowings and lease obligations, investments in internal research and development, share repurchases, and internal and external growth objectives at least through fiscal year 2021. Refer to Note 21 of the Company's Consolidated Financial Statements for subsequent event information regarding use of proceeds from the underwritten public offerings in July 2020 and the impact to existing debt obligations.

The Company's cash and cash equivalent balances are generated and held in numerous locations throughout the world, including amounts held outside the United States. As of June 30, 2020, the Company held approximately \$350.8 million of cash and cash equivalents outside of the United States. Cash balances held outside the United States could be repatriated to the United States.

Off-Balance Sheet Arrangements

The Company's off-balance sheet arrangements include the purchase obligations disclosed in the contractual obligations table below. The Company enters into these off-balance sheet arrangements to acquire goods and services used in its business.

Tabular Disclosure of Contractual Obligations

| Contractual Obligations | Payments Due By Period | | | | |
|---|------------------------|---------------------|-------------------|---------------------|----------------------|
| | Total | Less Than 1 Year | 1-3 Years | 3-5 Years | More Than 5 Years |
| <i>(\$000)</i> | | | | | |
| Long-term debt obligations ⁽⁴⁾ | \$ 2,342,951 | \$ 69,250 | \$ 498,388 | \$ 1,096,713 | \$ 678,600 |
| Interest payments ^{(1),(4)} | \$ 262,554 | \$ 53,549 | \$ 101,431 | \$ 77,574 | \$ 30,000 |
| Operating lease obligations, including imputed interest | \$ 161,288 | \$ 31,100 | \$ 44,585 | \$ 33,287 | \$ 52,316 |
| Finance lease obligations, including imputed interest | \$ 32,199 | \$ 2,419 | \$ 5,040 | \$ 5,321 | \$ 19,419 |
| Purchase and sponsorship obligations ^{(2),(3)} | \$ 199,660 | \$ 196,937 | \$ 2,723 | \$ — | \$ — |
| Total | \$ 2,998,651 | \$ 353,255 | \$ 652,167 | \$ 1,212,895 | \$ 780,335 |

- (1) Interest payments represent both variable and fixed rate interest obligations based on the interest rates in effect at June 30, 2020 relating to the Senior Credit Facilities, the currently outstanding 0.50% convertible senior notes assumed in the Finisar Acquisition, and the currently outstanding 0.25% Convertible Senior Notes due 2022. These interest payments do not reflect the impact of the interest rate swap that hedges our variable interest payments to fixed interest payments.
- (2) A purchase obligation is defined as an agreement to purchase goods or services that is enforceable and legally binding on the Company and that specifies all significant terms, including fixed or minimum quantities to be purchased, minimum or variable price provisions, and the approximate timing of the transaction. These amounts are primarily composed of open purchase order commitments to vendors for the purchase of supplies and materials.
- (3) Includes cash earn out opportunities based on certain acquisitions' achieving agreed-upon financial, operational and technology targets, and the value of the net purchase option for the Company's equity investment in a privately held company.
- (4) Refer to Note 21. Subsequent Event for additional information regarding use of proceeds from the underwritten public offerings in July 2020.

Pension obligations are not included in the table above. Estimated funding obligations are determined by asset performance, workforce and retiree demographics, tax and employment laws and other actuarial assumptions which may change the annual funding obligations. The funded status of our defined benefit plans is disclosed in Note 16 to the Company's Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K.

The Company's gross unrecognized income tax benefit at June 30, 2020 has been excluded from the table above because the Company is not currently able to reasonably estimate the amount by which the liability will increase or decrease over time.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

MARKET RISKS

The Company is exposed to market risks arising from adverse changes in foreign currency exchange rates and interest rates. In the normal course of business, the Company uses a variety of techniques and derivative financial instruments as part of its overall risk management strategy, which is primarily focused on its exposure in relation to the Japanese Yen, Chinese Renminbi, Swiss Franc, Euro, and the Malaysian Ringgit. No significant changes have occurred in the techniques and instruments used.

Interest Rate Risk

As of June 30, 2020, the Company's total borrowings include variable rate borrowings, which exposes the Company to changes in interest rates. In November 2019, the Company entered into an interest rate swap contract to limit the exposure of its variable interest rate debt by effectively converting a portion of interest payments to fixed interest rate debt. If the Company had not hedged its variable rate debt, a change in the interest rate of 100 basis points on these variable rate borrowings would have resulted in additional interest expense of \$15.8 million for the year ended June 30, 2020.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management's Responsibility for Preparation of the Financial Statements

Management is responsible for the preparation of the Consolidated Financial Statements included in this Annual Report on Form 10-K. The consolidated financial statements were prepared in accordance with the accounting principles generally accepted in the United States of America and include amounts that are based on the best estimates and judgments of management. The other financial information contained in this Annual Report on Form 10-K is consistent with the Consolidated Financial Statements.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system is designed to provide reasonable assurance concerning the reliability of the financial data used in the preparation of the Company's Consolidated Financial Statements, as well as reasonable assurance with respect to safeguarding the Company's assets from unauthorized use or disposition.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement presentation and other results of such systems.

Management conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of June 30, 2020. In making this evaluation, management used the criteria set forth by the *Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control – Integrated Framework (2013)*. Management's evaluation included reviewing the documentation of its controls, evaluating the design effectiveness of controls and testing their operating effectiveness. Management excluded from the scope of its assessment of internal control over financial reporting the internal controls of Finisar Corporation, which was acquired in September 2019. The recent acquisition excluded from management's assessment of internal controls over financial reporting represented approximately \$3.1 billion and \$2.8 billion of total assets and net assets, respectively, as of June 30, 2020, and approximately \$938.4 million and \$94.6 million of total revenues and net loss, respectively, for the fiscal year then ended. Based on the evaluation, management concluded that as of June 30, 2020, the Company's internal controls over financial reporting were effective.

Ernst & Young LLP, an independent registered public accounting firm, has issued its report on the effectiveness of our internal control over financial reporting as of June 30, 2020. Its report is included herein.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of II-VI Incorporated

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of II-VI Incorporated and Subsidiaries (the Company) as of June 30, 2020 and 2019, the related consolidated statements of earnings (loss), comprehensive income (loss), shareholders' equity and cash flows for each of the three years in the period ended June 30, 2020, and the related notes and the financial statement schedule listed in the Index at Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at June 30, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended June 30, 2020, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of June 30, 2020, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated August 26, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of customer relationship and technology intangible assets in the acquisition of Finisar Corporation

Description of the Matter

As discussed in Note 3 to the consolidated financial statements, during the year ended June 30, 2020, the Company completed the acquisition of Finisar Corporation ("Finisar") for a total purchase price of approximately \$2,908.5 million. The acquisition was accounted for as a business combination. The consideration paid in the acquisition must be allocated to the acquired assets and liabilities assumed generally based on their fair value with the excess of the purchase price over those fair values allocated to goodwill.

Auditing the Company's accounting for its acquisition of Finisar was complex due to the significant estimation uncertainty involved in estimating the fair value of certain customer relationship and technology intangible assets. The total fair value ascribed to customer relationship and technology intangible assets amounted to \$323.8 million and \$334.7 million, respectively. The Company used the multi-period excess earnings method and the relief from royalty method to value the customer relationship and technology intangible assets, respectively. The significant assumptions used to estimate the fair value of customer relationships included the forecasted revenue growth and projected operating expenses inclusive of expected synergies, including future cost savings, and other benefits expected to be achieved by combining the Company and Finisar. The significant assumptions used to estimate the fair value of technology included the forecasted revenue growth and an estimated royalty rate. These significant assumptions are forward-looking and could be affected by future economic and market conditions.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of the Company's controls over its accounting for the acquisition of Finisar. For example, we tested controls that address the risks of material misstatement relating to the valuation of the customer relationship and technology intangible assets, including management's review of the methods and significant assumptions used to develop such estimates.

To test the estimated fair value of the acquired customer relationship and technology intangible assets, our audit procedures included, among others, assessing the appropriateness of the valuation methodologies used, evaluating the significant assumptions discussed above, and evaluating the completeness and accuracy of the underlying data supporting the significant assumptions and estimates. For the forecasted revenue growth and projected operating expenses inclusive of expected synergies, including future cost savings, and other benefits expected to be achieved by combining the Company and Finisar, we compared the financial projections to current industry and economic trends, the historic financial performance of the acquired business, the Company's history with other acquisitions, and forecasted performance of guideline public companies. We also performed sensitivity analyses to evaluate the changes in the fair value of the intangible assets that would result from changes in the significant assumptions. We involved our valuation specialist to assist in evaluating the methodologies used to estimate the fair value of the customer relationship and technology intangible assets and to test certain significant assumptions, including the royalty rate, which included a comparison of the selected royalty rate to a range of royalty rates we identified by performing an independent search of comparable licensing agreements.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2008.

Pittsburgh, Pennsylvania
August 26, 2020

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of II-VI Incorporated

Opinion on Internal Control over Financial Reporting

We have audited II-VI Incorporated and Subsidiaries' internal control over financial reporting as of June 30, 2020, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, II-VI Incorporated and Subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of June 30, 2020, based on the COSO criteria.

As indicated in the accompanying Management's Report on Internal Control Over Financial Reporting, management's assessment of and conclusion on the effectiveness of internal control over financial reporting did not include the internal controls of Finisar Corporation ("Finisar"), which is included in the June 30, 2020 consolidated financial statements of the Company and constituted \$3.1 billion and \$2.8 billion of total and net assets, respectively, as of June 30, 2020 and \$938.4 million and \$94.6 million of revenues and net loss, respectively, for the fiscal year then ended. Our audit of internal control over financial reporting of the Company also did not include an evaluation of the internal control over financial reporting of Finisar.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of June 30, 2020 and 2019, the related consolidated statements of earnings (loss), comprehensive income (loss), shareholders' equity and cash flows for each of the three years in the period ended June 30, 2020, and the related notes and the financial statement schedule listed in the Index at Item 15(a)(2) and our report dated August 26, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Pittsburgh, Pennsylvania

August 26, 2020

II-VI Incorporated and Subsidiaries
Consolidated Balance Sheets
(\$000)

| June 30, | 2020 | 2019 |
|---|---------------------|---------------------|
| Assets | | |
| Current Assets | | |
| Cash and cash equivalents | \$ 493,046 | \$ 204,872 |
| Accounts receivable - less allowance for doubtful accounts of \$1,698 at June 30, 2020 and \$1,292 at June 30, 2019 | 598,124 | 269,642 |
| Inventories | 619,810 | 296,282 |
| Prepaid and refundable income taxes | 12,279 | 11,778 |
| Prepaid and other current assets | 65,710 | 30,337 |
| Total Current Assets | 1,788,969 | 812,911 |
| Property, plant & equipment, net | 1,214,772 | 582,790 |
| Goodwill | 1,239,009 | 319,778 |
| Other intangible assets, net | 758,368 | 139,324 |
| Investments | 73,767 | 76,208 |
| Deferred income taxes | 22,938 | 8,524 |
| Other assets | 136,891 | 14,238 |
| Total Assets | \$ 5,234,714 | \$ 1,953,773 |
| Liabilities and Shareholders' Equity | | |
| Current Liabilities | | |
| Current portion of long-term debt | \$ 69,250 | \$ 23,834 |
| Accounts payable | 268,773 | 104,462 |
| Accrued compensation and benefits | 157,557 | 71,847 |
| Operating lease current liabilities | 24,634 | — |
| Accrued income taxes payable | 33,341 | 20,476 |
| Other accrued liabilities | 119,338 | 49,944 |
| Total Current Liabilities | 672,893 | 270,563 |
| Long-term debt | 2,186,092 | 443,163 |
| Deferred income taxes | 45,551 | 23,913 |
| Operating lease liabilities | 94,701 | — |
| Other liabilities | 158,674 | 82,925 |
| Total Liabilities | 3,157,911 | 820,564 |
| Shareholders' Equity | | |
| Preferred stock, no par value; authorized - 5,000,000 shares; none issued | — | — |
| Common stock, no par value; authorized - 300,000,000 shares; issued - 105,916,068 shares at June 30, 2020; 76,315,337 shares at June 30, 2019 | 1,486,947 | 382,423 |
| Accumulated other comprehensive loss | (87,383) | (24,221) |
| Retained earnings | 876,552 | 943,581 |
| | 2,276,116 | 1,301,783 |
| Treasury stock, at cost - 13,356,447 shares at June 30, 2020 and 12,603,781 shares at June 30, 2019 | (199,313) | (168,574) |
| Total Shareholders' Equity | 2,076,803 | 1,133,209 |
| Total Liabilities and Shareholders' Equity | \$ 5,234,714 | \$ 1,953,773 |

See Notes to Consolidated Financial Statements.

II-VI Incorporated and Subsidiaries
Consolidated Statements of Earnings (Loss)

| Year Ended June 30, | 2020 | 2019 | 2018 |
|---|--------------|--------------|--------------|
| <i>(\$000, except per share data)</i> | | | |
| Revenues | \$ 2,380,071 | \$ 1,362,496 | \$ 1,158,794 |
| Costs, Expenses and Other Expense (Income) | | | |
| Cost of goods sold | 1,560,521 | 841,147 | 696,591 |
| Internal research and development | 339,073 | 139,163 | 116,875 |
| Selling, general and administrative | 440,998 | 233,518 | 208,565 |
| Interest expense | 89,409 | 22,417 | 18,352 |
| Other expense (income), net | 13,998 | (2,562) | (3,783) |
| Total Costs, Expenses and Other Expense (Income) | 2,443,999 | 1,233,683 | 1,036,600 |
| Earnings (Loss) Before Income Taxes | (63,928) | 128,813 | 122,194 |
| Income Tax Expense | 3,101 | 21,296 | 34,192 |
| Net Earnings (Loss) | \$ (67,029) | \$ 107,517 | \$ 88,002 |
| Basic Earnings (Loss) Per Share | \$ (0.79) | \$ 1.69 | \$ 1.41 |
| Diluted Earnings (Loss) Per Share | \$ (0.79) | \$ 1.63 | \$ 1.35 |

See Notes to Consolidated Financial Statements.

II-VI Incorporated and Subsidiaries
Consolidated Statements of Comprehensive Income (Loss)

| Year Ended June 30, | 2020 | 2019 | 2018 |
|--|---------------------|------------------|------------------|
| <i>(\$000)</i> | | | |
| Net earnings (loss) | \$ (67,029) | \$ 107,517 | \$ 88,002 |
| Other comprehensive income (loss): | | | |
| Foreign currency translation adjustments | (15,969) | (14,319) | 7,152 |
| Change in fair value of interest rate swap | (44,085) | — | — |
| Pension adjustment, net of taxes of (\$851), (\$1,642) and \$763 for the years ended June 30, 2020, 2019, and 2018, respectively | (3,108) | (6,122) | 2,846 |
| Other comprehensive income (loss) | (63,162) | (20,441) | 9,998 |
| Comprehensive income (loss) | <u>\$ (130,191)</u> | <u>\$ 87,076</u> | <u>\$ 98,000</u> |

See Notes to Consolidated Financial Statements.

II-VI Incorporated and Subsidiaries
Consolidated Statements of Shareholders' Equity

| | Common Stock | | Accumulated Other | Retained | Treasury Stock | | Total |
|--|--------------|-------------|--------------------------------|------------|----------------|-------------|-------------|
| | Shares | Amount | Comprehensive Income (Loss) | Earnings | Shares | Amount | |
| <i>(\$000, including share amounts)</i> | | | | | | | |
| Balance - June 30, 2017 | 74,081 | \$ 269,638 | \$ (13,778) | \$ 748,062 | (10,940) | \$(103,359) | \$ 900,563 |
| Share-based and deferred compensation activities | 1,612 | 25,717 | — | — | (41) | (6,500) | 19,217 |
| Net earnings | — | — | — | 88,002 | — | — | 88,002 |
| Purchases of treasury stock | — | — | — | — | (1,415) | (49,875) | (49,875) |
| Foreign currency translation adjustments | — | — | 7,152 | — | — | — | 7,152 |
| Equity portion of convertible debt, net of issuance costs of \$1,694 | — | 56,406 | — | — | — | — | 56,406 |
| Pension adjustment, net of taxes of \$763 | — | — | 2,846 | — | — | — | 2,846 |
| Balance - June 30, 2018 | 75,693 | \$ 351,761 | \$ (3,780) | \$ 836,064 | (12,396) | \$(159,734) | \$1,024,311 |
| Share-based and deferred compensation activities | 622 | 30,662 | — | — | (158) | (7,224) | 23,438 |
| Net earnings | — | — | — | 107,517 | — | — | 107,517 |
| Purchases of treasury stock | — | — | — | — | (50) | (1,616) | (1,616) |
| Foreign currency translation adjustments | — | — | (14,319) | — | — | — | (14,319) |
| Pension adjustment, net of taxes of (\$1,642) | — | — | (6,122) | — | — | — | (6,122) |
| Balance - June 30, 2019 | 76,315 | \$ 382,423 | \$ (24,221) | \$ 943,581 | (12,604) | \$(168,574) | \$1,133,209 |
| Share-based and deferred compensation activities | 2,888 | 116,817 | — | — | (702) | (29,114) | 87,703 |
| Purchases of treasury stock | — | — | — | — | (50) | (1,625) | (1,625) |
| Shares issued related to Finisar acquisition | 26,713 | 987,707 | — | — | — | — | 987,707 |
| Net loss | — | — | — | (67,029) | — | — | (67,029) |
| Foreign currency translation adjustments | — | — | (15,969) | — | — | — | (15,969) |
| Change in fair value of interest rate swap | — | — | (44,085) | — | — | — | (44,085) |
| Pension adjustment, net of taxes of (\$851) | — | — | (3,108) | — | — | — | (3,108) |
| Balance - June 30, 2020 | 105,916 | \$1,486,947 | \$ (87,383) | \$ 876,552 | (13,356) | \$(199,313) | \$2,076,803 |

See Notes to Consolidated Financial Statements.

II-VI Incorporated and Subsidiaries
Consolidated Statements of Cash Flows

| Year Ended June 30, | 2020 | 2019 | 2018 |
|--|--------------------|-------------------|-------------------|
| <i>(\$000)</i> | | | |
| Cash Flows from Operating Activities | | | |
| Net earnings (loss) | \$ (67,029) | \$ 107,517 | \$ 88,002 |
| Adjustments to reconcile net earnings (loss) to net cash provided by operating activities: | | | |
| Depreciation | 156,690 | 75,745 | 66,202 |
| Amortization | 64,192 | 16,620 | 14,568 |
| Share-based compensation expense | 68,480 | 21,946 | 15,312 |
| Amortization of discount on convertible debt and debt issuance costs | 22,150 | 12,550 | 10,057 |
| Debt extinguishment expense | 3,960 | — | — |
| Gains on disposals of property, plant and equipment | (1,461) | — | — |
| Losses on foreign currency remeasurements and transactions | 14,442 | 3,155 | 850 |
| Earnings from equity investments | (2,775) | (3,214) | (3,594) |
| Deferred income taxes | (42,454) | (10,462) | 945 |
| Impairment of investment | 4,980 | — | — |
| Increase (decrease) in cash from changes in (net of effects of acquisitions): | | | |
| Accounts receivable | (91,981) | (50,764) | (21,044) |
| Inventories | 112,572 | (36,392) | (38,732) |
| Accounts payable | 45,026 | 15,999 | 17,436 |
| Income taxes | 40,061 | 366 | 7,380 |
| Other operating net assets | (29,561) | 25,409 | 3,632 |
| Net cash provided by operating activities | 297,292 | 178,475 | 161,014 |
| Cash Flows from Investing Activities | | | |
| Additions to property, plant & equipment | (136,877) | (137,122) | (153,438) |
| Purchases of businesses, net of cash acquired | (1,036,609) | (83,067) | (80,503) |
| Purchases of technology intangible assets | (3,750) | — | — |
| Purchase of equity investments and other investing activities | (2,054) | (3,787) | (51,009) |
| Net cash used in investing activities | (1,179,290) | (223,976) | (284,950) |
| Cash Flows from Financing Activities | | | |
| Proceeds from borrowings of Term A Facility | 1,241,000 | — | — |
| Proceeds from borrowings of Term B Facility | 720,000 | — | — |
| Proceeds from borrowings of Revolving Credit Facility | 160,000 | — | — |
| Proceeds from borrowings under prior Credit Facility | 10,000 | 150,000 | 100,000 |
| Proceeds from issuance of 0.25% convertible senior notes due 2022 | — | — | 345,000 |
| Payment of Finisar Notes | (560,112) | — | — |
| Payments on borrowings under prior Term Loan, Credit Facility, and other loans | (176,618) | (135,000) | (292,000) |
| Payments on borrowings under Term A Facility | (46,538) | — | — |
| Payments on borrowings under Term B Facility | (5,400) | — | — |
| Payments on borrowings under Revolving Credit Facility | (86,000) | — | — |
| Debt issuance costs | (63,510) | (5,589) | (10,061) |
| Proceeds from exercises of stock options | 13,467 | 8,698 | 10,469 |
| Common stock repurchases | (1,625) | (1,616) | (49,875) |
| Payments in satisfaction of employees' minimum tax obligations | (28,700) | (7,092) | (6,564) |
| Other financing activities | (2,339) | (4,524) | — |
| Net cash provided by financing activities | 1,173,625 | 4,877 | 96,969 |
| Effect of exchange rate changes on cash and cash equivalents | (3,453) | (1,542) | 2,117 |
| Net increase (decrease) in cash and cash equivalents | 288,174 | (42,166) | (24,850) |
| Cash and Cash Equivalents at Beginning of Period | 204,872 | 247,038 | 271,888 |
| Cash and Cash Equivalents at End of Period | \$ 493,046 | \$ 204,872 | \$ 247,038 |
| Cash paid for interest | \$ 62,190 | \$ 8,680 | \$ 6,555 |
| Non cash transactions: | | | |
| Purchases of business - earnout consideration recorded in accrued liabilities | \$ 900 | \$ 4,397 | \$ — |
| Additions to property, plant & equipment included in accounts payable | \$ 21,801 | \$ 10,986 | \$ 12,313 |

See Notes to Consolidated Financial Statements.

II-VI Incorporated and Subsidiaries

Notes to the Consolidated Financial Statements

Note 1. Nature of Business and Summary of Significant Accounting Policies

Nature of Business. II-VI Incorporated and its subsidiaries (the “Company,” “we,” “us,” or “our”), a global leader in engineered materials and optoelectronic components and devices, is a vertically-integrated manufacturing company that develops, manufactures and markets engineered materials and optoelectronic components and devices for precision use in industrial materials processing, optical communications, aerospace and defense, consumer electronics, semiconductor capital equipment, life sciences and automotive applications. The Company markets its products through its direct sales force and through distributors and agents.

The Company uses certain uncommon materials and compounds to manufacture its products. Some of these materials are available from only one proven outside source. The continued high quality of these materials is critical to the stability of the Company’s manufacturing yields. The Company has not experienced significant production delays due to a shortage of materials. However, the Company does occasionally experience problems associated with vendor-supplied materials not meeting specifications for quality or purity. A significant failure of the Company’s suppliers to deliver sufficient quantities of necessary high-quality materials on a timely basis could have a material adverse effect on the Company’s results of operations.

In March 2020, the World Health Organization declared the outbreak of COVID-19 as a pandemic, which continues to spread throughout the United States and world. We are closely monitoring the impact of the COVID-19 pandemic on all aspects of our business including the impact to our suppliers and customers as well as the impact to the countries and markets in which we operate. At the onset of the COVID-19 outbreak, we began focusing intensely on mitigating the adverse impacts of COVID-19 on our foreign and domestic operations starting by protecting our employees, suppliers and customers.

Principles of Consolidation. The Consolidated Financial Statements include the accounts of the Company. All intercompany transactions and balances have been eliminated.

Business Segments. Effective July 1, 2019, the Company realigned its organizational structure into two reporting segments for the purpose of making operational decisions and assessing financial performance: (i) Compound Semiconductors and (ii) Photonic Solutions. Refer to Note 14 for further information on reporting segments.

Estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the United States (“U.S. GAAP”) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Foreign Currency Translation. For all foreign subsidiaries whose functional currency is not the U.S. dollar, the functional currency is the local currency. Assets and liabilities of those operations are translated into U.S. dollars using period-end exchange rates while income and expenses are translated using the average exchange rates for the reporting period. Translation adjustments are recorded as accumulated other comprehensive income (loss) within shareholders’ equity in the accompanying Consolidated Balance Sheets.

Cash and Cash Equivalents. The Company considers highly liquid investment instruments with an original maturity of three months or less to be cash equivalents. We place our cash and cash equivalents with high credit quality financial institutions and to date have not experienced credit losses in these instruments.

Accounts Receivable. The Company makes estimates evaluating its allowance for doubtful accounts. The Company continuously monitors collections and payments from its customers and maintains a provision for estimated credit losses based upon its historical experience, current market conditions and any specific customer collection issues that it has identified.

Inventories. Inventories are valued at the lower of cost or net realizable value, with cost determined on the first-in, first-out basis. Inventory costs include material, labor and manufacturing overhead. In evaluating the net realizable value of inventory, management also considers, if applicable, other factors, including known trends, market conditions, currency exchange rates and other such issues. The Company generally records a reduction to the carrying value of inventory as a charge against earnings for all products on hand more than 12 to 24 months, depending on the nature of the products that have not been sold to customers or cannot be further manufactured for sale to alternative customers. An additional charge may be recorded for product on hand that is in excess of product sold to customers over the same periods noted above.

Property, Plant and Equipment. Property, plant and equipment are carried at cost or fair value upon acquisition. Major improvements are capitalized, while maintenance and repairs are generally expensed as incurred. The Company reviews its property, plant and equipment and other long-lived assets for impairment whenever events or circumstances indicate that the carrying amounts may not be recoverable. Depreciation on property, plant and equipment and amortization on finance lease right-of-use assets for financial reporting purposes is computed primarily by the straight-line method over the estimated useful lives for building, building improvements and land improvements of 10 to 20 years and 3 to 20 years for machinery and equipment.

Leases. Leases are recognized under ASC 842, Leases. The Company determines whether a contract contains a lease at contract inception. A contract contains a lease if there is an identified asset and the Company has the right to control the asset. Operating lease right-of-use (“ROU”) assets represent the Company's right to use an underlying asset for the lease term, and lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease ROU assets and lease liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The Company uses the incremental borrowing rate in determining the present value of lease payments, unless the implicit rate is readily determinable. If lease terms include options to extend or terminate the lease, the ROU asset and lease liability are measured based on the reasonably certain decision. The Company has lease agreements with lease and non-lease components, which are accounted for as a single lease component for all classes of leased assets for which the Company is the lessee. Additionally, for certain equipment leases, the portfolio approach is applied to account for the operating lease ROU assets and lease liabilities. In the Consolidated Statements of Earnings (Loss), lease expense for operating lease payments is recognized on a straight-line basis over the lease term. For finance leases, interest expense is recognized on the lease liability and the ROU asset is amortized over the lease term. Some leasing arrangements require variable payments that are dependent upon usage or output, or may vary for other reasons, such as insurance or tax payments. Variable lease payments are recognized as incurred and are not presented as part of the ROU asset or lease liability. See Notes 2 and 12 for additional information.

Business Combinations. The Company accounts for business acquisitions by establishing the acquisition-date fair value as the measurement for all assets acquired and liabilities assumed. Certain provisions of U.S. GAAP prescribe, among other things, the determination of acquisition-date fair value of consideration paid in a business combination (including contingent consideration) and the exclusion of transaction and acquisition-related restructuring costs from acquisition accounting.

On September 24, 2019, the Company completed the acquisition of Finisar Corporation (“Finisar”). The Company’s Consolidated Financial Statements include the operating results of Finisar from the date of acquisition. Refer to Note 3 for further information regarding the Finisar acquisition.

Goodwill. The excess purchase price over the fair value allocated to identifiable tangible and intangible net assets of businesses acquired is reported as goodwill in the accompanying Consolidated Balance Sheets. The Company tests goodwill for impairment at least annually as of April 1, or when events or changes in circumstances indicate that goodwill might be impaired. The evaluation of impairment involves comparing the current fair value of the Company’s reporting units to the recorded value (including goodwill). The Company uses a discounted cash flow (“DCF”) model and/or a market analysis to determine the fair value of its reporting units. A number of assumptions and estimates are involved in estimating the forecasted cash flows used in the DCF model, including markets and market shares, sales volume and pricing, costs to produce, working capital changes and income tax rates. Management considers historical experience and all available information at the time the fair values of the reporting units are estimated. Goodwill impairment is measured as the amount by which a reporting unit’s carrying value exceeds its fair value, not to exceed the carrying amount of goodwill.

The Company has the option to perform a qualitative assessment of goodwill prior to completing the quantitative assessment described above to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, including goodwill and other intangible assets. If the Company concludes that this is the case, it must perform the quantitative assessment. Otherwise, the Company will forego the quantitative assessment and does not need to perform any further testing. As of April 1 of fiscal years 2020 and 2019, the Company completed its annual impairment tests of its reporting units using the quantitative assessment. Based on the results of these analyses the Company’s goodwill was not impaired.

Intangibles. Intangible assets are initially recorded at their cost or fair value upon acquisition. Finite-lived intangible assets are amortized for financial reporting purposes using the straight-line method over the estimated useful lives of the assets ranging from 3 to 20 years. Indefinite-lived intangible assets are not amortized but tested annually for impairment at April 1, or when events or changes in circumstances indicate that indefinite-lived intangible assets might be impaired.

Investments in Other Entities. In the normal course of business, the Company enters into various types of investment arrangements, each having unique terms and conditions. These investments may include equity interests held by the Company in business entities, including general or limited partnerships, contractual ventures, or other forms of equity participation. The Company determines whether such investments involve a variable interest entity (“VIE”) based on the characteristics of the subject entity. If the entity is determined to be a VIE, then management determines if the Company is the primary beneficiary of the entity and whether or not consolidation of the VIE is required. The primary beneficiary consolidating the VIE must normally have both (i) the power to direct the activities of a VIE that most significantly affect the VIE’s economic performance and (ii) the obligation to absorb losses of the VIE or the right to receive benefits from the VIE, in either case that could potentially be significant to the VIE. When the Company is deemed to be the primary beneficiary, the VIE is consolidated and the other party’s equity interest in the VIE is accounted for as a noncontrolling interest.

The Company generally accounts for investments it makes in VIEs in which it has determined that it does not have a controlling financial interest but has significant influence over and holds at least a 20% ownership interest using the equity method. Any such investment not meeting the parameters to be accounted under the equity method would be accounted for under ASU 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities.

If an entity fails to meet the characteristics of a VIE, management then evaluates such entity under the voting model. Under the voting model, management consolidates the entity if they determine that the Company, directly or indirectly, has greater than 50% of the voting shares and determines that other equity holders do not have substantive participating rights.

Commitments and Contingencies. Liabilities for loss contingencies arising from claims, assessments, litigation, fines, and penalties and other sources are recorded when it is probable that a liability has been incurred and the amount of the assessment and/or remediation can be reasonably estimated. Legal costs incurred in connection with loss contingencies are expensed as incurred. Such accruals are adjusted as further information develops or circumstances change. Our customers may discover defects in our products after the products have been fully deployed and operated under peak stress conditions. If we are unable to correct defects or other problems, we could experience, among other things, loss of customers, increased costs of product returns and warranty expenses, damage to our brand reputation, failure to attract new customers or achieve market acceptance, diversion of development and engineering resources, or legal action by our customers. The Company had no material loss contingency liabilities at June 30, 2020 related to commitments and contingencies.

Income Taxes. Deferred income tax assets and liabilities are determined based on the differences between the Consolidated Financial Statements and tax basis of assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. Valuation allowances are established when necessary to reduce deferred income tax assets to the amount more likely than not to be realized. The Company’s accounting policy is to apply acquired deferred tax liabilities to pre-existing deferred tax assets before evaluating the need for a valuation allowance for acquired deferred tax assets.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate resolution. The amount of unrecognized tax benefits is adjusted for changes in facts and circumstances. For example, adjustments could result from significant amendments to existing tax law and the issuance of regulations or interpretations by the taxing authorities, new information obtained during a tax examination, or resolution of an examination. The Company believes that its estimates for uncertain tax positions are appropriate and sufficient to pay assessments that may result from examinations of its tax returns. The Company recognizes both accrued interest and penalties related to unrecognized tax benefits in income tax expense.

Revenue Recognition. Revenue is recognized under Accounting Standards Codification 606, Revenue from Contracts with Customers (ASC 606), when or as obligations under the terms of a contract with the Company’s customer have been satisfied and control has transferred to the customer. The Company has elected the practical expedient to exclude all taxes from the measurement of the transaction price.

For contracts with commercial customers, which comprise the majority of the Company’s performance obligations, ownership of the goods and associated revenue are transferred to customers at a point in time, generally upon shipment of a product (“Direct Ship Parts”) to the customer or receipt of the product by the customer and without significant judgments. The majority of contracts typically require payment within 30 to 90 days after transfer of ownership to the customer.

Contracts with the U.S. government through its prime contractors are typically for products or services with no alternative future use to the Company with an enforceable right to payment for performance completed to date, whereas commercial contracts typically have alternative use. Customized products with no alternative future use to the Company with an enforceable right to payment for performance completed to date are recorded over time utilizing the output method of units delivered. The Company considers this to be a faithful depiction of the transfer to the customer of revenue over time due to short cycle time and immaterial work-in-process balances. The majority of contracts typically require payment within 30 to 90 days after transfer of ownership to the customer.

Service revenue includes repairs, non-recurring engineering, tolling arrangements and installation. Repairs, tolling and installation activities are usually completed in a short period of time (normally less than one month) and therefore recorded at a point in time when the services are completed. Non-recurring engineering arrangements are typically recognized over time under the time and material practical expedient, as the entity has a right to consideration from a customer, in an amount that corresponds directly with the value to the customer of the entity's performance completed to date. The majority of contracts typically require payment within 90 days.

The Company's revenue recognition policy is consistently applied across the Company's segments, product lines, and geographical locations. For the periods covered herein, the Company measures revenue based on the amount of consideration it expects to be entitled to in exchange for products, reduced by the amount of variable consideration related to products expected to be returned. The Company determines variable consideration, which primarily consists of product returns and distributor sales price reductions resulting from price protection agreements, by estimating the impact of such reductions based on historical analysis of such activity.

Under ASC 606, the Company expenses sales commissions when incurred because the amortization period would have been one year or less. These costs are recorded within selling, general and administrative expenses. The Company has elected to recognize the costs for freight and shipping when control over products has transferred to the customer as an expense in cost of goods sold.

The Company monitors and tracks the amount of product returns and reduces revenue at the time of shipment for the estimated amount of future returns, based on historical experience.

The Company offers an assurance-type limited warranty that products will be free from defects in materials and workmanship. The Company establishes an accrual for estimated warranty expenses at the time revenue is recognized. The warranty is typically one year, although can be longer periods for certain products, and is limited to either (1) the replacement or repair of the product or (2) a credit against future purchases.

Research and Development. Internal research and development costs are expensed as incurred.

Share-Based Compensation. Share-based compensation arrangements require the recognition in net earnings (loss) of the grant date fair value of stock compensation (for equity-classified awards). The Company recognizes the share-based compensation expense over the requisite service period of the individual grantees, which generally equals the vesting period.

Accumulated Other Comprehensive Loss. Accumulated other comprehensive loss is a measure of all changes in shareholders' equity that result from transactions and other economic events in the period other than transactions with owners. Accumulated other comprehensive loss is a component of shareholders' equity and consists of accumulated foreign currency translation adjustments, changes in the fair value of interest rate swap derivative instruments, and pension adjustments.

Fair Value Measurements. The Company applies fair value accounting for all financial assets and liabilities that are required to be recognized or disclosed at fair value in the Consolidated Financial Statements. Fair value is defined as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities, the Company considers the principal or most advantageous market in which the Company would transact, and the market-based risk measurements or assumptions that market participants would use in pricing the asset or liability, such as inherent risk, transfer restrictions and credit risk.

Note 2. Recently Issued Financial Accounting Standards

Leases

In February 2016, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2016-02, Leases (Topic 842). This ASU modifies lease accounting for lessees to increase transparency and comparability by recording lease assets and liabilities for operating leases and disclosing key information about leasing arrangements. The Company adopted this standard on July 1, 2019, and has elected to utilize the optional transition method. See Note 12.

Derivatives and Hedging

In August 2017, the FASB issued ASU 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities (“ASU 2017-12”), which more closely aligns an entity’s risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. The Company adopted this standard on July 1, 2019. The adoption of this standard did not have a material effect on the Consolidated Financial Statements.

Pronouncements Currently Under Evaluation

In July 2016, the FASB issued ASU No. 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (“ASU 2016-13”), which among other things, requires the measurement of all expected credit losses of financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. Financial institutions and other organizations will now use forward looking information to better inform their credit loss estimates. In addition, the ASU amends the accounting for credit losses on available-for-sale debt securities and purchased financial assets with credit deterioration. ASU 2016-13 is effective for annual periods beginning after December 15, 2019, and interim periods within those fiscal years. The Company has completed the evaluation of the impact of ASU 2016-13. This pronouncement is not expected to have a material impact to the Consolidated Financial Statements.

In October 2018, the FASB issued ASU 2018-16, Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes (“ASU 2018-16”), which permits the use of the OIS rate based on SOFR as a U.S. benchmark interest rate eligible for hedge accounting purposes. For public business entities that already have adopted the amendments in ASU 2017-12, the amendments in ASU 2018-16 are effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted in any interim period upon issuance of this update if an entity already has adopted ASU 2017-12. The Company is in the process of evaluating the impact of the update.

In March 2020, the FASB issued ASU 2020-04, Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting, which provides optional expedients to ease the potential burden of accounting for the effects of reference rate reform as it pertains to contract modifications of debt and lease contracts and derivative contracts identified in a hedging relationship. These amendments are effective immediately and may be applied prospectively to contract modifications made and hedging relationships entered into or evaluated on or before December 31, 2022. The Company is in the process of evaluating the impact of the pronouncement.

Note 3. Acquisitions

Finisar Corporation

On September 24, 2019 (the “Closing Date”), the Company completed its acquisition of Finisar, a global technology leader for subsystems and components for fiber optic communications.

Pursuant to the terms of the Agreement and Plan of Merger, dated as of November 8, 2018 (the “Merger Agreement”), Mutation Merger Sub Inc., a wholly owned subsidiary of the Company (“Merger Sub”), merged with and into Finisar (the “Merger”), with Finisar surviving the Merger. Each issued and outstanding share of Finisar’s common stock was automatically

cancelled and converted into the right to receive the following consideration (collectively, the “Merger Consideration”), at the election of the holder of the share of Finisar’s common stock:

- \$26.00 in cash, without interest (the “Cash Consideration”),
- 0.5546 of a share of the Company’s common stock (the “Stock Consideration”), or
- a combination of \$15.60 in cash, without interest, and 0.2218 of a share of the Company’s common stock (the “Mixed Consideration”).

The per share Cash Consideration and Stock Consideration were subject to adjustment pursuant to the terms of the Merger Agreement such that the aggregate Merger Consideration consisted of approximately 60.0% cash and approximately 40.0% shares of the Company’s common stock (assuming a per share price of the Company’s common stock equal to the closing price as of November 8, 2018, which was \$46.88 per share) across all shares of Finisar’s common stock (the “Proration Adjustment”). Following the Proration Adjustment, the resulting consideration for Cash Consideration was adjusted to \$15.94 in cash and 0.2146 shares of the Company’s Common Stock. No adjustment was made to the Stock Consideration and Mixed Consideration.

The total fair value of consideration paid in connection with the acquisition of Finisar consisted of the following (in \$000):

| | <u>Shares</u> | <u>Per Share</u> | <u>Total Consideration</u> |
|---|---------------|------------------|--------------------------------|
| Cash paid for outstanding shares of Finisar common stock | | | \$ 1,879,086 |
| II-VI common shares issued to Finisar stockholders | 26,712,822 | \$ 36.98 | 987,707 |
| Replacement equity awards attributable to pre-combination service | | | 41,710 |
| | | | \$ 2,908,503 |

The Company recorded \$44.4 million of acquisition related costs in the year ended June 30, 2020, representing professional and other direct acquisition costs. These costs are recorded within selling, general, and administrative expense in our Consolidated Statements of Earnings (Loss).

On the Closing Date, the Company entered into an Amended and Restated Credit Agreement, dated as of September 24, 2019 (the “Credit Agreement”), by and among the Company, Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer, and the other lender parties thereto. Refer to Note 9 for additional information on the credit facility.

From the Closing Date, Finisar contributed \$938.4 million of our consolidated revenue for the year ended June 30, 2020. Finisar’s contribution to our consolidated net loss for the year ended June 30, 2020 was a loss of \$94.6 million. Finisar’s contribution included amortization expense of \$47.4 million for the year ended June 30, 2020. Finisar’s contribution to our consolidated net loss includes \$26.1 million of severance, restructuring, and related expense for the year ended June 30, 2020. Additionally, a \$87.7 million fair value adjustment to inventory was expensed through cost of goods sold during the year ended June 30, 2020.

The Company allocated the fair value of the purchase price consideration to the tangible assets, liabilities, and intangible assets acquired, based on estimated fair values. The excess purchase price over those fair values is recorded as goodwill. Our valuation assumptions of acquired assets and assumed liabilities require significant estimates with respect to intangible assets. In determining the fair value of intangible assets acquired, the Company must make assumptions about the future performance of the acquired business, including among other things, the forecasted revenue growth attributable to the asset group and projected operating expenses inclusive of expected synergies, future cost savings, and other benefits expected to be achieved by combining the Company and Finisar. The Company’s intangible assets are comprised of customer relationships, trade names and developed technology. The estimated fair value of the customer relationships, trade names and developed technology are determined using the multi-period excess earnings method and relief from royalty methods. Both methods require forward looking estimates that are discounted to determine the fair value of the intangible asset using a risk-adjusted discount rate that is reflective of the level of risk associated with future estimates associated with the asset group that could be affected by future economic and market conditions. The estimated fair value of the developed technology is also dependent on the selection of the royalty rate used in the valuation method.

Certain data necessary to complete the purchase price allocation remains preliminary, including, but not limited to, finalization of certain income tax computations and other assumed liabilities. The Company expects to complete the purchase price allocation within 12 months from the Closing Date, at which time the purchase price allocation set forth herein may be revised. Any such revisions or changes may be material. The Company utilized widely accepted income-based, market-based, and cost-based valuation approaches to perform the preliminary purchase price allocation. Income-based valuation approaches included the use of the multi-period excess earnings and relief-from-royalty methods for certain acquired intangible assets.

Our preliminary allocation of the purchase price of Finisar, based on the estimated fair value of the assets acquired and liabilities assumed as of the Closing Date, is as follows (in \$000):

| | Preliminary Purchase Price Allocation | | | |
|---------------------------------------|---|---|---|--------------------------------------|
| | Previously Reported September 30, 2019 | Reclassification Adjustments | Measurement Period Adjustments (a) | As Adjusted (preliminary) |
| | \$ | \$ | \$ | \$ |
| Cash and cash equivalents | 842,764 | (287) | — | 842,477 |
| Accounts receivable | 260,864 | — | (1,523) | 259,341 |
| Inventories | 437,867 | — | 1,841 | 439,708 |
| Property, plant & equipment (b) | 748,858 | — | (91,145) | 657,713 |
| Intangible assets (c) | 827,689 | — | (162,489) | 665,200 |
| Other assets (d) (h) | 82,624 | 287 | (6,443) | 76,468 |
| Deferred tax assets (e) | — | — | 16,267 | 16,267 |
| Accounts payable | (123,707) | — | — | (123,707) |
| Other accrued liabilities (d) (f) (h) | (148,425) | (43,964) | (9,727) | (202,116) |
| Deferred tax liabilities (e) | (197,809) | 43,964 | 86,805 | (67,040) |
| Debt | (575,000) | — | — | (575,000) |
| Goodwill | 759,239 | — | 159,953 | 919,192 |
| Total Purchase Price (g) | \$ 2,914,964 | \$ — | \$ (6,461) | \$ 2,908,503 |

(a) The Company recorded measurement period adjustments to its preliminary acquisition date fair values due to the refinement of its valuation models, assumptions and inputs. The following measurement period adjustments were based upon information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the measurement of the amounts recognized at that date.

(b) The Company estimated the fair value of the property, plant, and equipment acquired as part of the Finisar acquisition to be \$657.7 million. Upon finalization of the valuation, the fair value of the property, plant, and equipment was decreased by \$91.1 million as of June 30, 2020 with a corresponding increase to goodwill.

(c) The Company estimated the fair value of the intangible assets acquired as part of the Finisar acquisition to be \$665.2 million. Upon finalization of the valuation, the fair value of the intangible assets was decreased by \$162.5 million as of June 30, 2020 with a corresponding increase to goodwill.

(d) The Company reassessed the lease term and discount rates on the right of use assets acquired as part of the Finisar acquisition. As a result, the preliminary fair value of the right of use assets acquired were decreased by \$16.0 million during the measurement period with a corresponding decrease in the lease liability.

(e) The Company has adjusted its deferred tax asset and liability positions as of June 30, 2020, to \$16.3 million and \$67.0 million respectively, as a result of measurement period adjustments.

(f) In addition to the \$16.0 million reduction of lease liabilities described in (d) above, the Company recorded approximately \$11.5 million of uncertain tax positions, approximately \$13.4 million of warranty reserve liabilities, and approximately \$5.5 million of increases in other liabilities, as measurement period adjustments.

(g) Total purchase price decreased \$6.5 million for the deferred tax impact of the purchase price component associated with replacement equity awards attributable to pre-combination service of Finisar employees.

(h) Other assets and other accrued liabilities increased \$6.8 million for a litigation matter and related insurance recovery.

As of June 30, 2020, the goodwill has been recorded within the Photonic Solutions reporting unit. As of June 30, 2020, the other intangible assets have been recorded within the Photonic Solutions and Compound Semiconductors segments. The preliminary goodwill of \$919.2 million arising from the acquisition is attributed to the expected synergies, including future cost savings, and other benefits expected to be generated by combining II-VI and Finisar. Substantially all of the goodwill recognized is not expected to be deductible for tax purposes. See Note 8 for additional information on goodwill and intangibles.

Supplemental Pro Forma Information (Unaudited)

The supplemental pro forma financial information presented below is for illustrative purposes only and is not necessarily indicative of the financial position or results of operations that would have been realized if the acquisition had been completed on the date indicated, does not reflect synergies that might have been achieved, and is not indicative of future operating results or financial position. The pro forma adjustments are based upon currently available information and certain assumptions that we believe are reasonable under the circumstances.

The following unaudited supplemental pro forma information presents the combined results of operations for the years ended June 30, 2020 and 2019 as if Finisar had been acquired as of July 1, 2018. The supplemental pro forma information includes adjustments to amortization and depreciation for acquired intangible assets, property, plant and equipment, adjustments to share-based compensation expense, fair value adjustments on the inventories acquired, transaction costs, and interest expense and amortization of debt issuance costs related to the Senior Credit Facilities as defined in Note 9.

The unaudited supplemental pro forma financial information for the period presented is as follows (in \$000):

| | Year Ended June 30, 2020 | Year Ended June 30, 2019 |
|---------------------|-------------------------------------|-------------------------------------|
| Revenue | \$ 2,638,278 | \$ 2,625,714 |
| Net Earnings (Loss) | \$ 12,902 | \$ (138,452) |

Note 4. Other Investments

Purchase of Equity Investment

The Company holds an equity investment in a privately-held company (“Equity Investment”), which it acquired for \$51.5 million. The Company’s pro-rata share of earnings from this investment was \$1.1 million and \$1.3 million for the years ended June 30, 2020 and 2019, respectively, and was recorded in other expense (income), net in the Consolidated Statements of Earnings (Loss).

This investment is accounted for under the equity method of accounting. The following table summarizes the Company's equity in this nonconsolidated investment:

| Location | Interest Type | Ownership % as of June 30, 2020 | Equity as of June 30, 2020 (\$000) |
|-----------------|----------------------|--|---|
| USA | Equity Investment | 93.8% | \$ 58,751 |

The Equity Investment has been determined to be a variable interest entity because the Company has an overall 93.8% economic position in the investee, comprising a significant portion of its capitalization, but has only a 25% voting interest. The Company’s obligation to receive rewards and absorb expected losses is disproportionate to its voting interest. The Company is not the primary beneficiary because it does not have the power to direct the activities of the equity investment that most significantly impact its economic performance. Certain business decisions, including decisions with respect to operating budgets, material capital expenditures, indebtedness, significant acquisitions or dispositions, and strategic decisions, require the approval of owners holding a majority percentage in the Equity Investment. Beginning on the date it was acquired, the Company accounted for its interest as an equity method investment as the Company has the ability to exercise significant influence over operating and financial policies of the Equity Investment.

As of June 30, 2020, the Company's maximum financial statement exposure related to the Equity Investment was approximately \$58.8 million, which is included in Investments on the Consolidated Balance Sheet as of June 30, 2020.

In August 2020, the Company agreed to purchase the remaining 6.2% ownership from the minority holders.

Note 5. Revenue from Contracts with Customers

The following table summarizes disaggregated revenue by market and product for the year ended June 30, 2020 (\$000):

| | Year Ended June 30, 2020 | | | |
|------------------------|--------------------------|-------------------------|---------------------|---------------------|
| | Photonic Solutions | Compound Semiconductors | Unallocated & Other | Total |
| Commercial | | | | |
| Direct Ship Parts | \$ 1,524,799 | \$ 607,318 | \$ 22,051 | \$ 2,154,168 |
| Services | 11,991 | 36,224 | — | 48,215 |
| U.S. Government | | | | |
| Direct Ship Parts | — | 158,790 | — | 158,790 |
| Services | — | 18,898 | — | 18,898 |
| Total Revenues | \$ 1,536,790 | \$ 821,230 | \$ 22,051 | \$ 2,380,071 |

The following table summarizes disaggregated revenue by market and product for the year ended June 30, 2019 (\$000):

| | Year Ended June 30, 2019 | | | |
|------------------------|--------------------------|-------------------------|---------------------|---------------------|
| | Photonic Solutions | Compound Semiconductors | Unallocated & Other | Total |
| Commercial | | | | |
| Direct Ship Parts | \$ 631,407 | \$ 563,102 | \$ — | \$ 1,194,509 |
| Services | 7,482 | 14,164 | — | 21,646 |
| U.S. Government | | | | |
| Direct Ship Parts | — | 130,313 | — | 130,313 |
| Services | — | 16,028 | — | 16,028 |
| Total Revenues | \$ 638,889 | \$ 723,607 | \$ — | \$ 1,362,496 |

Contracts with the U.S. government disclosed above are through the U.S. Government's prime contractors.

Contract Liabilities

Payments received from customers are based on invoices or billing schedules as established in contracts with customers. Contract liabilities relate to billings in advance of performance under the contract. Contract liabilities are recognized as revenue when the performance obligation has been performed. During the year ended June 30, 2020, the Company recognized revenue of \$9.4 million related to customer payments that were included in the consolidated balance sheet as of July 1, 2019. As of June 30, 2020, the Company had \$38.7 million of contract liabilities recorded in the consolidated balance sheet.

Note 6. Inventories

The components of inventories were as follows:

| June 30, | 2020 | 2019 |
|-------------------|-------------------|-------------------|
| (\$000) | | |
| Raw materials | \$ 190,237 | \$ 119,917 |
| Work in progress | 298,577 | 101,091 |
| Finished goods | 130,996 | 75,274 |
| Total Inventories | <u>\$ 619,810</u> | <u>\$ 296,282</u> |

Note 7. Property, Plant & Equipment

Property, plant & equipment consists of the following:

| June 30, | 2020 | 2019 |
|-------------------------------------|---------------------|-------------------|
| (\$000) | | |
| Land and land improvements | \$ 18,396 | \$ 9,001 |
| Buildings and improvements | 345,736 | 249,238 |
| Machinery and equipment | 1,352,835 | 739,330 |
| Construction in progress | 111,394 | 71,425 |
| Finance lease right-of-use asset | 25,000 | — |
| | <u>1,853,361</u> | <u>1,068,994</u> |
| Less accumulated depreciation | (638,589) | (486,204) |
| Property, plant, and equipment, net | <u>\$ 1,214,772</u> | <u>\$ 582,790</u> |

Included in the table above is a building acquired under a finance lease. As of June 30, 2020 and June 30, 2019, the accumulated depreciation of the finance lease right-of-use asset was \$5.8 million and \$4.2 million, respectively.

Note 8. Goodwill and Other Intangible Assets

Effective July 1, 2019, the Company realigned its organizational structure into two reporting segments for the purpose of making operational decisions and assessing financial performance: (i) Compound Semiconductors and (ii) Photonic Solutions. All applicable information has been restated to reflect this change. See Note 14 for further information regarding this segment realignment.

Goodwill represents the excess of the cost over the net tangible and identifiable intangible assets of acquired businesses. Identifiable intangible assets acquired in business combinations are recorded based upon fair value at the date of acquisition.

Changes in the carrying amount of goodwill were as follows (\$000):

| | Year Ended June 30, 2020 | | |
|------------------------------|--------------------------|-------------------------|---------------------|
| | Photonic Solutions | Compound Semiconductors | Total |
| Balance-beginning of period | \$ 134,057 | \$ 185,721 | \$ 319,778 |
| Goodwill acquired | 919,192 | — | 919,192 |
| Foreign currency translation | (755) | 794 | 39 |
| Balance-end of period | <u>\$ 1,052,494</u> | <u>\$ 186,515</u> | <u>\$ 1,239,009</u> |

Year Ended June 30, 2019

| | Photonic Solutions | Compound Semiconductors | Total |
|------------------------------|-------------------------------|------------------------------------|-------------------|
| Balance-beginning of period | \$ 109,670 | \$ 161,008 | \$ 270,678 |
| Goodwill acquired | 26,069 | 25,569 | 51,638 |
| Foreign currency translation | (1,682) | (856) | (2,538) |
| Balance-end of period | <u>\$ 134,057</u> | <u>\$ 185,721</u> | <u>\$ 319,778</u> |

The gross carrying amount and accumulated amortization of the Company's intangible assets other than goodwill as of June 30, 2020 and 2019 were as follows (\$000):

| | June 30, 2020 | | | June 30, 2019 | | |
|----------------|--------------------------------------|-------------------------------------|-------------------------------|--------------------------------------|-------------------------------------|-------------------------------|
| | Gross Carrying Amount | Accumulated Amortization | Net Book Value | Gross Carrying Amount | Accumulated Amortization | Net Book Value |
| Technology | \$ 444,315 | \$ (68,048) | \$ 376,267 | \$ 91,637 | \$ (39,679) | \$ 51,958 |
| Trade Names | 22,369 | (3,669) | 18,700 | 15,759 | (1,601) | 14,158 |
| Customer Lists | 456,223 | (92,822) | 363,401 | 132,872 | (59,664) | 73,208 |
| Other | 1,570 | (1,570) | — | 1,572 | (1,572) | — |
| Total | <u>\$ 924,477</u> | <u>\$ (166,109)</u> | <u>\$ 758,368</u> | <u>\$ 241,840</u> | <u>\$ (102,516)</u> | <u>\$ 139,324</u> |

Amortization expense recorded on the intangible assets for the fiscal years ended June 30, 2020, 2019 and 2018 was \$64.2 million, \$16.6 million, and \$14.6 million, respectively. The technology intangible assets are being amortized over a range of 60 to 240 months with a weighted-average remaining life of approximately 133 months. The customer lists are being amortized over 60 to 240 months with a weighted-average remaining life of approximately 134 months.

In conjunction with the acquisition of Finisar, the Company recorded the following intangible assets (\$000):

| | Gross Carrying Amount | Weighted Average Assigned Useful Life (Years) |
|-----------------------|--------------------------------------|--|
| Technology | \$ 334,700 | 12.5 |
| Trade Names | 6,700 | 3.0 |
| Customer Lists | 323,800 | 10.2 |
| | <u>\$ 665,200</u> | |

In connection with past acquisitions, the Company acquired trade names with indefinite lives. The carrying amount of these trade names of \$14.3 million as of June 30, 2020 is not amortized but tested annually for impairment. The Company completed its impairment test of these trade names with indefinite lives in the fourth quarter of fiscal years 2020 and 2019. Based on the results of these tests, the trade names were not impaired.

The estimated amortization expense for existing intangible assets for each of the five succeeding years is as follows (\$000):

| Year Ending June 30, | |
|-----------------------------|-----------|
| 2021 | \$ 77,011 |
| 2022 | 74,252 |
| 2023 | 73,380 |
| 2024 | 64,394 |
| 2025 | 62,334 |

Note 9. Debt

The components of debt for the periods indicated were as follows (\$000):

| | June 30, 2020 | June 30, 2019 |
|---|----------------------|----------------------|
| Term A Facility, interest at LIBOR, as defined, plus 2.00% | \$ 1,194,463 | \$ — |
| Revolving Credit Facility, interest at LIBOR, as defined, plus 2.00% | 74,000 | — |
| Debt issuance costs, Term A Facility and Revolving Credit Facility | (32,174) | — |
| Term B Facility, interest at LIBOR, as defined, plus 3.50% | 714,600 | — |
| Debt issuance costs, Term B Facility | (24,747) | — |
| 0.50% convertible senior notes, assumed in the Finisar acquisition | 14,888 | — |
| 0.25% convertible senior notes | 345,000 | 345,000 |
| 0.25% convertible senior notes unamortized discount attributable to cash conversion option and debt issuance costs including initial purchaser discount | (30,688) | (43,859) |
| Term loan, interest at LIBOR, as defined, plus 1.75% | — | 45,000 |
| Line of credit, interest at LIBOR, as defined, plus 1.75% | — | 115,000 |
| Credit facility unamortized debt issuance costs | — | (761) |
| Yen denominated line of credit, interest at LIBOR, as defined, plus 1.75% | — | 2,783 |
| Note payable assumed in IPI acquisition | — | 3,834 |
| Total debt | 2,255,342 | 466,997 |
| Current portion of long-term debt | (69,250) | (23,834) |
| Long-term debt, less current portion | <u>\$ 2,186,092</u> | <u>\$ 443,163</u> |

The scheduled maturities of principal amounts of debt obligations for the next five years and thereafter is as follows (\$000):

| | Year Ending June 30, |
|--------------|---------------------------------|
| 2021 | \$ 69,250 |
| 2022 | 84,138 |
| 2023 | 414,250 |
| 2024 | 69,250 |
| 2025 | 1,027,463 |
| Thereafter | 678,600 |
| Total | <u>\$ 2,342,951</u> |

Senior Credit Facilities

On September 24, 2019, in connection with the Finisar acquisition, the Company entered into a Credit Agreement (the "Credit Agreement") with Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer, and the other lenders party thereto.

The Credit Agreement provides for senior secured financing of \$2.425 billion in the aggregate, consisting of

- (i) Aggregate principal amount of \$1,255 million for a five-year senior secured first-lien term A loan facility (the “Term A Facility”),
- (ii) Aggregate principal amount of \$720 million for a seven-year senior secured term B loan facility (the “Term B Facility” and together with the Term A Facility, the “Term Loan Facilities”) and
- (iii) Aggregate principal amount of \$450 million for a five-year senior secured first-lien revolving credit facility (the “Revolving Credit Facility” and together with the Term Loan Facilities, the “Senior Credit Facilities”).

The Credit Agreement also provides for a letter of credit sub-facility not to exceed \$25.0 million and a swing loan sub-facility initially not to exceed \$20.0 million.

The Company is obligated to repay the outstanding principal amount of the Term A Facility in quarterly installments equal to 1.25% of the initial aggregate principal amount of the Term A Facility, with the remaining outstanding balance due and payable on the fifth anniversary of the Closing Date. Similarly, the Company is obligated to repay the outstanding principal amount of the Term B Facility in quarterly installments equal to 0.25% of the initial aggregate principal amount of the Term B Facility, with the remaining outstanding balance due and payable on the seventh anniversary of the Closing Date. The Company is obligated to repay the aggregate principal amount of all outstanding revolving loans made under the Revolving Credit Facility on the fifth anniversary of the Closing Date.

The Company’s obligations under the Senior Credit Facilities are guaranteed by each of the Company’s existing or future direct and indirect domestic subsidiaries, including Finisar and its domestic subsidiaries (collectively, the “Guarantors”). Borrowings under the Senior Credit Facilities are collateralized by a first priority lien in substantially all of the assets of the Company and the Guarantors, except that no real property is collateral under the Senior Credit Facilities.

All amounts outstanding under the Senior Credit Facilities will become due and payable 120 days prior to the maturity of the Company’s currently outstanding 0.25% Convertible Senior Notes due 2022 (the “II-VI Notes”) if (i) the II-VI Notes remain outstanding, and (ii) the Company has insufficient cash and borrowing availability to repay the principal amount of the II-VI Notes.

The Company voluntarily may prepay, at any time or from time to time, any amounts outstanding under the Senior Credit Facilities in whole or in part without premium or penalty; except for the Term B Facility, pursuant to which in the event of (a) a repayment made before September 24, 2020, (b) the occurrence of a repricing event, or (c) a change to the lenders, the Company will be subject to a prepayment premium in an amount equal to one percent of: (i) the principal amount of the Term B Facility that is prepaid under an optional or mandatory prepayment due to a repricing event, (ii) the aggregate outstanding principal amount of the Term B Facility resulting from an amendment to the Credit Agreement, and (iii) the principal amount of the Term B Facility that is mandatorily assigned. The Company may be subject to mandatory prepayment of amounts outstanding under the Senior Credit Facilities under certain circumstances, including in connection with certain asset sales or other dispositions of property and debt issuances.

The Company also may be required to prepay amounts under the Term B Facility based on the Company’s excess cash flow (as calculated in accordance with the terms of the Credit Agreement) for the Company’s prior fiscal year beginning with its fiscal year ending June 30, 2020 and the Company’s consolidated secured net leverage ratio (as calculated in accordance with the terms of the Credit Agreement) as of the end of such fiscal year.

Amounts outstanding under the Senior Credit Facilities will bear interest at a rate per annum equal to an applicable margin over a eurocurrency rate or an applicable margin over a base rate determined by reference to the highest of (a) the federal funds rate plus 0.50%, (b) Bank of America, N.A.’s prime rate and (c) a eurocurrency rate plus 1.00%, in each case as calculated in accordance with the terms of the Credit Agreement. The applicable interest rate would increase under certain circumstances relating to events of default. The Company has entered into an interest rate swap contract to hedge its exposure to interest rate risk on its variable rate borrowings under the Senior Credit Facilities. Refer to Note 15 for further information regarding this interest rate swap.

The Credit Agreement contains customary affirmative and negative covenants with respect to the Senior Credit Facilities, including limitations with respect to liens, investments, indebtedness, dividends, mergers and acquisitions, dispositions of assets and transactions with affiliates. The Company will be obligated to maintain a consolidated interest coverage ratio (as calculated in accordance with the terms of the Credit Agreement) as of the end of each fiscal quarter of not less than 3.00:1.00. The Company will be obligated to maintain a consolidated total net leverage ratio (as calculated in accordance with the terms of the Credit Agreement) of not greater than (i) 5.00 to 1.00 for the first four fiscal quarters after the Closing Date, commencing with the first full fiscal quarter after the Closing Date, (ii) 4.50 to 1.00 for the fifth fiscal quarter through and including the eighth fiscal quarter after the Closing Date, and (iii) 4.00 to 1.00 for each subsequent fiscal quarter. As of June 30, 2020, the Company was in compliance with all financial covenants under the Credit Agreement.

The Company incurred \$69.8 million of debt issuance costs in connection with the Senior Credit Facilities. The Company evaluated these costs to determine appropriate recognition of expense under Accounting Standards Codification 470, Debt, to account for debt modification and extinguishment. As a result of the Company's assessment, \$65.8 million have been capitalized in the Consolidated Balance Sheet. Debt extinguishment costs of \$4.0 million were expensed in other expense (income), net in the Consolidated Statements of Earnings (Loss) during the year ended June 30, 2020. The Company expensed \$8.8 million of capitalized debt issuance costs during the year ended June 30, 2020, in interest expense in the Consolidated Statements of Earnings (Loss). The capitalized costs are being amortized to interest expense using the effective interest rate method from the issuance date of September 24, 2019, through the end of each facility. The unamortized discount amounted to \$56.9 million as of June 30, 2020 and is being amortized over five and seven years, for the Term A Facility and Revolving Credit Facility, and the Term B Facility, respectively.

On June 30, 2020, the Company announced its intention to offer, in concurrent underwritten public offerings, newly issued shares of its common stock and newly issued shares of its Series A Mandatory Convertible Preferred Stock. On July 7, 2020, the Company used the proceeds from the public offerings to pay off the remaining balance of \$715 million of the Term B Loan Facility. See Note 21 for further details.

0.50% Finisar Convertible Notes

Finisar's outstanding 0.50% Convertible Senior Notes due 2036 (the "Finisar Notes") may be redeemed at any time on or after December 22, 2021 in whole or in part at the option of the Company at a redemption price equal to one hundred percent (100%) of the principal amount of such Finisar Notes plus accrued and unpaid interest. Each holder of Finisar Notes also may require Finisar to repurchase all or any portion of such holder's outstanding Finisar Notes for cash on December 15, 2021, December 15, 2026 and December 15, 2031 at a repurchase price equal to one hundred percent (100)% of the principal amount of such Finisar Notes plus accrued and unpaid interest. The Finisar Notes will mature on December 15, 2036. Interest on the Finisar Notes accrues at 0.50% per annum, paid semi-annually, in arrears, on June 15 and December 15 of each year.

In connection with the acquisition of Finisar, the Company, Finisar and the trustee entered into a First Supplemental Indenture, dated as of September 24, 2019 (the "First Supplemental Indenture"). The First Supplemental Indenture supplements the base indenture (as supplemented, the "Finisar Indenture"), which governs the Finisar Notes. Pursuant to the terms of the First Supplemental Indenture, the Company has fully and unconditionally guaranteed, on a senior unsecured basis, the due and punctual payment and performance of all obligations of Finisar to the holders of the Finisar Notes. The First Supplemental Indenture also provides that the right of holders of Finisar Notes to convert Finisar Notes into cash and/or shares of Finisar's common stock, is changed to a right to convert Finisar Notes into cash and/or shares of the Company's common stock, subject to the terms of the Finisar Indenture.

Under the terms of the Finisar Indenture, the consummation and effectiveness of the Merger on the Closing Date constituted a Fundamental Change (as defined in the Finisar Indenture) and a Make-Whole Fundamental Change (as defined in the Finisar Indenture). Accordingly, in accordance with the terms of the Finisar Indenture, each holder of Finisar Notes had the right to (i) convert its Finisar Notes into cash and/or shares of Company Common Stock, at Finisar's option, or (ii) require that Finisar repurchase such holder's Finisar Notes for an amount in cash equal to one hundred percent (100)% of the principal amount of such Finisar Notes plus accrued and unpaid interest.

Holders of approximately \$560.1 million in aggregate principal amount of Finisar Notes exercised the repurchase right. The Company repurchased those Finisar Notes on October 23, 2019 for an aggregate consideration of approximately \$561.1 million in cash, including accrued interest. No holders of Finisar Notes exercised the related conversion right. The Company borrowed \$561.0 million under a delayed draw on its Term Loan A to fund the payment to the holders of Finisar Notes that exercised the repurchase right. As of June 30, 2020, approximately \$14.9 million in aggregate principal amount of Finisar Notes remain outstanding.

0.25% Convertible Senior Notes

In August 2017, the Company issued and sold \$345 million aggregate principal amount of the II-VI Notes in a private placement to qualified institutional buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended.

As a result of our cash conversion option, the Company separately accounted for the value of the embedded conversion option as a debt discount. The value of the embedded conversion option was determined based on the estimated fair value of the debt without the conversion feature, which was determined using an expected present value technique (income approach) to estimate the fair value of similar nonconvertible debt; the debt discount is being amortized as additional non-cash interest expense over the term of the II-VI Notes using the effective interest method.

The equity component is not remeasured as long as it continues to meet the conditions for equity classification. The initial conversion rate is 21.25 shares of common stock per \$1,000 principal amount of II-VI Notes, which is equivalent to an initial conversion price of \$47.06 per share of common stock. Throughout the term of the II-VI Notes, the conversion rate may be adjusted upon the occurrence of certain events. The if-converted value of the II-VI Notes amounted to \$346.2 million as of June 30, 2020 and \$268.0 million as of June 30, 2019 (based on the Company's closing stock price on the last trading day of the fiscal periods then ended). The Notes mature on September 1, 2022, unless earlier repurchased by the Company or converted by holders in accordance with the terms of the Notes. As of June 30, 2020, the II-VI Notes are not yet convertible based upon the II-VI Notes' conversion features. Holders of the II-VI Notes will not receive any cash payment representing accrued and unpaid interest upon conversion of a II-VI Note. Accrued but unpaid interest will be deemed to be paid in full upon conversion rather than cancelled, extinguished or forfeited.

The following table sets forth total interest expense recognized related to the II-VI Notes for the years ended June 30, 2020, 2019 and 2018:

| | Year Ended June 30, 2020 | Year Ended June 30, 2019 | Year Ended June 30, 2018 |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 0.25% contractual coupon | \$ 876 | \$ 874 | \$ 731 |
| Amortization of debt discount and debt issuance costs including initial purchaser discount | 13,172 | 12,550 | 10,058 |
| Interest expense | <u>\$ 14,048</u> | <u>\$ 13,424</u> | <u>\$ 10,789</u> |

The effective interest rate on the liability component for the periods presented was 4.5%. The unamortized discount amounted to \$26.8 million as of June 30, 2020, and is being amortized over 3 years.

Aggregate Availability

The Company had aggregate availability of \$374.6 million under its line of credit as of June 30, 2020.

Weighted Average Interest Rate

The weighted average interest rate of total borrowings was 3.4% and 1.6% for the years ended June 30, 2020 and 2019, respectively.

Note 10. Income Taxes

The components of earnings (loss) before income taxes were as follows:

| Year Ended June 30, | 2020 | 2019 | 2018 |
|-------------------------------------|--------------------|-------------------|-------------------|
| <i>(\$000)</i> | | | |
| U.S. loss | \$ (302,027) | \$ (34,241) | \$ (15,207) |
| Non-U.S. income | 238,099 | 163,054 | 137,401 |
| Earnings (loss) before income taxes | <u>\$ (63,928)</u> | <u>\$ 128,813</u> | <u>\$ 122,194</u> |

The components of income tax expense were as follows:

| Year Ended June 30, | 2020 | 2019 | 2018 |
|---------------------------------|--------------------|--------------------|------------------|
| <i>(\$000)</i> | | | |
| Current: | | | |
| Federal | \$ 7 | \$ 1,755 | \$ 699 |
| State | 496 | 472 | 401 |
| Foreign | 45,052 | 29,531 | 32,147 |
| Total Current | \$ 45,555 | \$ 31,758 | \$ 33,247 |
| Deferred: | | | |
| Federal | \$ (43,955) | \$ (3,764) | \$ (3,064) |
| State | 1,007 | (2,010) | 1,615 |
| Foreign | 494 | (4,688) | 2,394 |
| Total Deferred | \$ (42,454) | \$ (10,462) | \$ 945 |
| Total Income Tax Expense | \$ 3,101 | \$ 21,296 | \$ 34,192 |

Principal items comprising deferred income taxes were as follows:

| June 30, | 2020 | 2019 |
|--|---------------------|--------------------|
| <i>(\$000)</i> | | |
| Deferred income tax assets | | |
| Inventory capitalization | \$ 19,372 | \$ 5,687 |
| Interest rate swap | 9,847 | — |
| Non-deductible accruals | 9,325 | 1,251 |
| Accrued employee benefits | 11,095 | 9,797 |
| Net-operating loss and credit carryforwards | 182,625 | 54,192 |
| Share-based compensation expense | 8,110 | 7,192 |
| Other | 9,736 | 5,488 |
| Right of use asset | 31,573 | — |
| Valuation allowances | (54,559) | (16,558) |
| Total deferred income tax assets | \$ 227,124 | \$ 67,049 |
| Deferred income tax liabilities | | |
| Tax over book accumulated depreciation | \$ (25,926) | \$ (28,184) |
| Intangible assets | (160,577) | (28,202) |
| Tax on unremitted earnings | (21,785) | (11,662) |
| Convertible debt | (6,006) | (8,662) |
| Lease liability | (29,768) | — |
| Other | (5,676) | (5,728) |
| Total deferred income tax liabilities | \$ (249,738) | \$ (82,438) |
| Net deferred income taxes | \$ (22,614) | \$ (15,389) |

The reconciliation of income tax expense at the statutory U.S. federal rate to the reported income tax expense is as follows:

| Year Ended June 30, | 2020 | % | 2019 | % | 2018 | % |
|---|-----------------|------------|------------------|-----------|------------------|-----------|
| <i>(\$000)</i> | | | | | | |
| Taxes at statutory rate | \$ (13,425) | 21 | \$ 27,051 | 21 | \$ 34,284 | 28 |
| Increase (decrease) in taxes resulting from: | | | | | | |
| State income taxes-net of federal benefit | 1,194 | (2) | (1,212) | (1) | 1,426 | 1 |
| Taxes on non U.S. earnings | (915) | 1 | (5,857) | (5) | (16,058) | (13) |
| Valuation allowance | (9,365) | 15 | (6,703) | (5) | (6,008) | (5) |
| Research and manufacturing incentive deductions and credits | (15,836) | 25 | (11,756) | (9) | (7,024) | (6) |
| Stock compensation | 4,334 | (7) | (1,914) | (1) | (4,103) | (3) |
| Repatriation tax | — | — | 14,108 | 11 | 36,777 | 30 |
| GILTI and FDII | 36,067 | (56) | 6,437 | 5 | — | — |
| Impact of U.S. tax rate change on deferred balances | — | — | — | — | (4,209) | (3) |
| Other | 1,047 | (2) | 1,142 | 1 | (893) | (1) |
| | <u>\$ 3,101</u> | <u>(5)</u> | <u>\$ 21,296</u> | <u>17</u> | <u>\$ 34,192</u> | <u>28</u> |

U.S. Tax Reform

On December 22, 2017, the Tax Cuts and Jobs Act (the “Tax Act”) was signed into law. The Tax Act includes changes to the U.S. statutory federal tax rate and puts into effect the migration from a worldwide system of taxation to a territorial system, among other things. As of December 31, 2018, the Company completed its analysis of the impact of the Tax Act in accordance with U.S. Securities and Exchange Commission Staff Accounting Bulletin No. 118 (“SAB 118”) and the amounts are no longer considered provisional. The Company’s transition tax increased due to finalization of calculations and consideration of Notices and regulations issued by the US Department of Treasury and the Internal Revenue Service; however, the increase is offset by available net operating loss and credit carryforwards which currently have a valuation allowance. Consequently, the tax expense reported is reduced by the release of the valuation allowance on the U.S. deferred tax assets, and as result, there was no material financial statement impact due to finalization.

The Company previously considered the earnings in non-U.S. subsidiaries to be indefinitely reinvested and, accordingly, recorded no deferred income taxes. As a result of the Act, among other things, the Company determined it will repatriate earnings for all non-U.S. Subsidiaries with cash in excess of working capital needs. Such distributions could potentially be subject to U.S. state tax in certain states and foreign withholding taxes. Foreign currency gains/losses related to the translation of previously taxed earnings from functional currency to U.S. dollars could also be subject to U.S. tax when distributed. The Company has estimated the associated withholding tax to be \$21.8 million.

Furthermore, the Tax Act includes certain changes such as introducing a new category of income, referred to as global intangible low tax income (“GILTI”), related to earnings taxed at a low rate of foreign entities without a significant fixed asset base, and imposes additional limitations on the deductibility of interest and officer compensation. The Company made a final accounting policy election to treat taxes due from future inclusions in U.S. taxable income related to GILTI as a current period expense when incurred. These changes are included in the Company’s 2020 fiscal year income tax expense.

During the fiscal years ended June 30, 2020, 2019, and 2018, net cash paid by the Company for income taxes was \$39.5 million, \$26.3 million, and \$21.3 million, respectively.

Our foreign subsidiaries in various tax jurisdictions operate under tax holiday arrangements. The impact of the tax holidays on our effective rate is a reduction in the rate of (8.91)%, 0.25% and 0.17% for the fiscal years ended June 30, 2020, 2019 and 2018, respectively, and the impact of the tax holidays on diluted earnings per share is immaterial.

The Company has the following gross operating loss carryforwards and tax credit carryforwards as of June 30, 2020:

| Type | Amount | Expiration Date |
|---|------------|---------------------|
| <i>(\$000)</i> | | |
| Tax credit carryforwards: | | |
| Federal research and development credits | \$ 71,694 | June 2021-June 2040 |
| Foreign tax credits | 14,354 | June 2022-June 2030 |
| State tax credits | 14,364 | June 2021-June 2035 |
| State tax credits (indefinite) | 40,316 | Indefinite |
| Operating loss carryforwards: | | |
| Loss carryforwards - federal | \$ 166,643 | June 2021-June 2036 |
| Loss carryforwards - state | 110,587 | June 2021-June 2039 |
| Loss carryforwards - foreign | 10,683 | June 2021-June 2040 |
| Loss carryforwards - foreign (indefinite) | 36,806 | Indefinite |

The Company has recorded a valuation allowance against the majority of the loss and credit carryforwards. The Company's U.S. federal loss carryforwards, federal research and development credit carryforwards, and certain state tax credits resulting from the Company's acquisitions are subject to various annual limitations under Section 382 of the U.S. Internal Revenue Code.

Changes in the liability for unrecognized tax benefits for the fiscal years ended June 30, 2020, 2019 and 2018 were as follows:

| | 2020 | 2019 | 2018 |
|---|------------------|------------------|-----------------|
| <i>(\$000)</i> | | | |
| Beginning balance | \$ 11,520 | \$ 9,892 | \$ 7,577 |
| Increases in current year tax positions | 1,506 | 191 | 2,536 |
| Increases in prior year tax positions | — | 376 | 224 |
| Decreases in prior year tax positions | — | — | (9) |
| Acquired business | 31,791 | 6,036 | — |
| Expiration of statute of limitations | (2,014) | (4,975) | (436) |
| Ending balance | <u>\$ 42,803</u> | <u>\$ 11,520</u> | <u>\$ 9,892</u> |

The Company classifies all estimated and actual interest and penalties as income tax expense. During fiscal years 2020, 2019 and 2018, there was \$0.6 million, \$(0.1) million and \$0.3 million of interest and penalties within income tax expense, respectively. The Company had \$3.8 million, \$1.2 million and \$0.6 million of interest and penalties accrued at June 30, 2020, 2019 and 2018, respectively. The Company has classified the uncertain tax positions as non-current income tax liabilities, as the amounts are not expected to be paid within one year, except for \$7.4 million which is expected to be paid within a year. Including tax positions for which the Company determined that the tax position would not meet the more likely than not recognition threshold upon examination by the tax authorities based upon the technical merits of the position, the total estimated unrecognized tax benefit that, if recognized, would affect our effective tax rate, was approximately \$24.3 million, \$6.2 million and \$1.6 million at June 30, 2020, 2019 and 2018, respectively. The Company expects a decrease of \$4.9 million of unrecognized tax benefits during the next 12 months due to the expiration of statutes of limitation.

Fiscal years 2017 to 2020 remain open to examination by the Internal Revenue Service, fiscal years 2015 to 2020 remain open to examination by certain state jurisdictions, and fiscal years 2009 to 2019 remain open to examination by certain foreign taxing jurisdictions. The Company is currently under examination for the certain subsidiary companies in Australia for the years ended April 30, 2010 through April 30, 2014; India for the year ended March 31, 2016; Philippines for the year ended June 30, 2018; Germany for the years ended June 30, 2012 through June 30, 2015; and Vietnam for the years June 30, 2015 through June 30, 2016. The Company believes its income tax reserves for these tax matters are adequate.

Note 11. Earnings Per Share

The following table sets forth the computation of earnings (loss) per share for the periods indicated. Basic earnings (loss) per share has been computed using the weighted average number of shares of common stock outstanding during the period. Diluted earnings (loss) per share has been computed using the weighted average number of common shares outstanding during the period plus dilutive potential shares of common stock from (1) stock options, performance and restricted shares (under the treasury stock method) and (2) convertible debt (under the If-Converted method) outstanding during the period.

| Year Ended June 30, | 2020 | 2019 | 2018 |
|---|------------------|----------------|----------------|
| <i>(\$000 except per share)</i> | | | |
| Net earnings (loss) | \$ (67,029) | \$ 107,517 | \$ 88,002 |
| Divided by: | | | |
| Weighted average shares | 84,828 | 63,584 | 62,499 |
| Basic earnings (loss) per common share | <u>\$ (0.79)</u> | <u>\$ 1.69</u> | <u>\$ 1.41</u> |
| Net earnings (loss) | \$ (67,029) | \$ 107,517 | \$ 88,002 |
| Divided by: | | | |
| Weighted average shares | 84,828 | 63,584 | 62,499 |
| Dilutive effect of common stock equivalents | — | 2,220 | 2,634 |
| Diluted weighted average common shares | 84,828 | 65,804 | 65,133 |
| Diluted earnings (loss) per common share | <u>\$ (0.79)</u> | <u>\$ 1.63</u> | <u>\$ 1.35</u> |

The following table presents potential shares of common stock excluded from the calculation of diluted net income per share, as their effect would have been antidilutive (\$000):

| Year Ended June 30, | 2020 | 2019 | 2018 |
|---|--------------|--------------|--------------|
| Stock options and restricted shares | 2,345 | 115 | 135 |
| 0.25% Convertible Senior Notes due 2022 | 7,331 | 7,331 | 7,331 |
| 0.50% Finisar Convertible Notes | 289 | — | — |
| Total anti-dilutive shares | <u>9,965</u> | <u>7,446</u> | <u>7,466</u> |

Note 12. Leases

On July 1, 2019, the Company adopted Topic 842 using the modified retrospective transition approach. The reported results for the year ended June 30, 2020 reflect the application of Topic 842, while prior period amounts have not been adjusted and continue to be reported in accordance with our historical accounting under Topic 840.

The Company elected the practical expedient package permitted under the transition approach. As such, the Company did not reassess whether any expired or existing contracts are or contain leases, did not reassess historical lease classification, and did not reassess initial direct costs for any leases that existed prior to July 1, 2019.

As of the date of adoption, the Company recognized operating lease assets and liabilities of approximately \$80.1 million on the Consolidated Balance Sheet. In addition, we acquired approximately \$29 million of operating lease assets and liabilities through the acquisition of Finisar.

All existing leases that were classified as capital leases under Topic 840 are classified as finance leases under Topic 842. As of the date of adoption, the Company recognized finance lease assets of \$25 million in property, plant and equipment, net, with corresponding finance lease liabilities of \$24 million on the Consolidated Balance Sheet.

We determine if an arrangement is a lease at inception and classify it as either finance or operating.

Finance leases are generally those that allow us to substantially utilize or pay for the entire asset over its estimated useful life. Finance leases are recorded in property, plant and equipment, net, and finance lease liabilities within other current and other non-current liabilities on our Consolidated Balance Sheet. Finance lease assets are amortized in operating expenses on a straight-line basis over the shorter of the estimated useful lives of the assets or the lease term, with the interest component for lease liabilities included in interest expense and recognized using the effective interest method over the lease term.

Operating leases are recorded in other assets and operating lease liabilities, current and non-current on the Company's Consolidated Balance Sheet. Operating lease assets are amortized on a straight-line basis in operating expenses over the lease term.

The Company's lease liabilities are recognized based on the present value of the remaining fixed lease payments, over the lease term, using a discount rate of similarly secured borrowings available to the Company. For the purpose of lease liability measurement, we consider only payments that are fixed and determinable at the time of commencement. Any variable payments that depend on an index or rate are expensed as incurred. We account for non-lease components, such as common area maintenance, as a component of the lease, and include it in the initial measurement of our lease assets and corresponding liabilities. The Company's lease terms and conditions may include options to extend or terminate. An option is recognized when it is reasonably certain that we will exercise that option.

The Company's lease assets also include any lease payments made and exclude any lease incentives received prior to commencement. Our lease assets are tested for impairment in the same manner as long-lived assets used in operations.

The following table presents lease costs, which include short-term leases, lease term, and discount rates (\$000):

| | Year Ended June 30, 2020 |
|---|-------------------------------------|
| Finance Lease Cost | |
| Amortization of right-of-use assets | \$ 1,667 |
| Interest on lease liabilities | 1,328 |
| Total finance lease cost | 2,995 |
| Operating lease cost | 32,466 |
| Sublease income | 368 |
| Total lease cost | <u>\$ 35,093</u> |
| Cash Paid for Amounts Included in the Measurement of Lease Liabilities | |
| Operating cash flows from finance leases | 1,328 |
| Operating cash flows from operating leases | 30,816 |
| Financing cash flows from finance leases | 1,026 |
| Assets Obtained in Exchange for Lease Liabilities | |
| Right-of-use assets obtained in Finisar acquisition | 29,247 |
| Right-of-use assets obtained in exchange for new operating lease liabilities | 29,458 |
| Total assets obtained in exchange for new operating lease liabilities | <u>58,705</u> |
| Weighted-Average Remaining Lease Term (in Years) | |
| Finance leases | 11.5 |
| Operating leases | 7.2 |
| Weighted-Average Discount Rate | |
| Finance leases | 5.6 % |
| Operating leases | 7.3 % |

The following table presents future minimum lease payments, which include short-term leases (\$000):

| Future Years | Operating Leases | Finance Leases | Total |
|--|-------------------------|-----------------------|-------------------|
| Year 1 | \$ 31,100 | \$ 2,419 | \$ 33,519 |
| Year 2 | 23,964 | 2,486 | 26,450 |
| Year 3 | 20,621 | 2,554 | 23,175 |
| Year 4 | 17,906 | 2,624 | 20,530 |
| Year 5 | 15,381 | 2,697 | 18,078 |
| Thereafter | 52,316 | 19,419 | 71,735 |
| Total minimum lease payments | <u>\$ 161,288</u> | <u>\$ 32,199</u> | <u>\$ 193,487</u> |
| Less: amounts representing interest | 41,953 | 8,752 | 50,705 |
| Present value of total lease liabilities | <u>\$ 119,335</u> | <u>\$ 23,447</u> | <u>\$ 142,782</u> |

Note 13. Share-Based Compensation

The Company's Board of Directors adopted the II-VI Incorporated 2018 Omnibus Incentive Plan (the "II-VI Plan"), which was approved by the shareholders at the Annual Meeting in November 2018. The Plan provides for the grant of non-qualified stock options, stock appreciation rights, restricted shares, restricted share units, deferred shares, performance shares and performance share units to employees, officers and directors of the Company. The maximum number of shares of the Company's common stock authorized for issuance under the Plan is limited to 3,550,000 shares of common stock, not including any remaining shares forfeited under the predecessor plans that may be rolled into the Plan. The Plan has vesting provisions predicated upon the death, retirement or disability of the grantee.

Upon consummation of the acquisition, the Company assumed approximately 6.6 million restricted stock units previously granted by Finisar under the Amended and Restated Finisar Corporation 2005 Stock Incentive Plan (each an "Assumed RSU"). Each Assumed RSU is subject to substantially the same terms and conditions as applied to the Assumed RSU immediately prior to the consummation of the acquisition, except that the number of shares of the Company's common stock subject to each Assumed RSU has been adjusted in accordance with the terms of the Merger Agreement. Other than the Assumed RSUs, the Company did not assume any other awards outstanding under the Amended and Restated Finisar Corporation 2005 Stock Incentive Plan (the "Finisar Plan"). As of the Closing Date, the Company also assumed the unused capacity under the Finisar 2005 Plan.

As of June 30, 2020, there were approximately 3.1 million shares available to be issued under the II-VI Plan and the Finisar Plan collectively, including forfeited shares from predecessor plans.

The Company records share-based compensation expense for these awards, which requires the recognition of the grant-date fair value of share-based compensation in net earnings. The Company recognizes the share-based compensation expense over the requisite service period of the individual grantees, which generally equals the vesting period. The Company accounts for cash-based stock appreciation rights, cash-based restricted share unit awards and cash-based performance share unit awards as liability awards, in accordance with applicable accounting standards.

Share-based compensation expense for the fiscal years ended June 30, 2020, 2019 and 2018 is as follows \$000:

| Year Ended June 30, | 2020 | 2019 | 2018 |
|--|------------------|------------------|------------------|
| Stock Options and Cash-Based Stock Appreciation Rights | \$ 11,893 | \$ 6,801 | \$ 6,605 |
| Restricted Share Awards, Restricted Share Units, and Cash-Based Restricted Share Units | 49,957 | 9,242 | 7,850 |
| Performance Share Awards and Cash Based Performance Share Unit Awards | 11,977 | 8,920 | 5,221 |
| | <u>\$ 73,827</u> | <u>\$ 24,963</u> | <u>\$ 19,676</u> |

Share-based compensation expense associated with liability awards was \$5.3 million, \$3.0 million, and \$4.4 million, in the fiscal years ended June 30, 2020, 2019 and 2018, respectively.

Stock Options and Cash-Based Stock Appreciation Rights:

The Company utilized the Black-Scholes valuation model for estimating the fair value of stock option expense. During the fiscal years ended June 30, 2020, 2019 and 2018, the weighted-average fair value of options granted under the stock option plan was \$14.79, \$20.66 and \$14.23, respectively, per option using the following assumptions:

| Year Ended June 30, | 2020 | 2019 | 2018 |
|----------------------------|-------------|-------------|-------------|
| Risk-free interest rate | 1.50 % | 2.80 % | 2.00 % |
| Expected volatility | 39 % | 37 % | 37 % |
| Expected life of options | 6.91 years | 6.96 years | 6.43 years |
| Dividend yield | None | None | None |

The risk-free interest rate is derived from the average U.S. Treasury Note rate during the period, which approximates the rate in effect at the time of grant related to the expected life of the options. The risk-free interest rate shown above is the weighted average rate for all options granted during the fiscal year. Expected volatility is based on the historical volatility of the

Company's common stock over the period commensurate with the expected life of the options. The expected life calculation is based on the observed time to post-vesting exercise and/or forfeitures of options by our employees. The dividend yield of zero is based on the fact that the Company has never paid cash dividends and has no current intention to pay cash dividends in the future. The estimated annualized forfeitures are based on the Company's historical experience of option pre-vesting cancellations. The Company will record additional expense in future periods if the actual forfeiture rate is lower than estimated, and will adjust expense in future periods if the actual forfeitures are higher than estimated.

Stock option and cash-based stock appreciation rights activity during the fiscal year ended June 30, 2020 was as follows:

| | Stock Options | | Cash-Based Stock Appreciation Rights | |
|-----------------------------|------------------|---------------------------------|--------------------------------------|---------------------------------|
| | Number of Shares | Weighted Average Exercise Price | Number of Rights | Weighted Average Exercise Price |
| Outstanding - July 1, 2019 | 3,761,283 | \$ 23.74 | 227,496 | \$ 28.09 |
| Granted | 774,116 | \$ 34.75 | 76,651 | \$ 34.95 |
| Exercised | (774,382) | \$ 17.39 | (65,488) | \$ 21.25 |
| Forfeited and Expired | (39,216) | \$ 32.99 | (8,285) | \$ 33.76 |
| Outstanding - June 30, 2020 | 3,721,801 | \$ 26.99 | 230,374 | \$ 32.13 |
| Exercisable - June 30, 2020 | 2,192,315 | \$ 21.53 | 79,459 | \$ 31.75 |

As of June 30, 2020, 2019 and 2018, the aggregate intrinsic value of stock options and cash-based stock appreciation rights outstanding and exercisable was \$79.8 million, \$56.4 million and \$96.1 million, respectively. Aggregate intrinsic value represents the total pretax intrinsic value (the difference between the Company's closing stock price on the last trading day of the year ended June 30, 2020, and the option's exercise price, multiplied by the number of in-the-money options) that would have been received by the option holders had all option holders exercised their options on June 30, 2020. This amount varies based on the fair market value of the Company's stock. The total intrinsic value of stock options and cash-based stock appreciation rights exercised during the fiscal years ended June 30, 2020, 2019, and 2018 was \$20.2 million, \$14.7 million, and \$14.7 million, respectively. As of June 30, 2020, total unrecognized compensation cost related to non-vested stock options and cash-based stock appreciation rights was \$15.4 million. This cost is expected to be recognized over a weighted-average period of approximately three years.

Outstanding and exercisable stock options at June 30, 2020 were as follows:

| Range of Exercise Prices | Stock Options and Cash-Based Stock Appreciation Rights Outstanding | | | Stock Options and Cash-Based Stock Appreciation Rights Exercisable | | |
|--------------------------|--|---|---------------------------------|--|---|---------------------------------|
| | Number of Shares or Rights | Weighted Average Remaining Contractual Term (Years) | Weighted Average Exercise Price | Number of Shares or Rights | Weighted Average Remaining Contractual Term (Years) | Weighted Average Exercise Price |
| \$13.34 - \$17.69 | 618,493 | 3.21 | \$ 15.25 | 611,301 | 3.19 | \$ 15.21 |
| \$17.70 - \$19.15 | 763,173 | 4.18 | \$ 18.62 | 635,346 | 3.88 | \$ 18.43 |
| \$19.16 - \$26.46 | 842,141 | 5.21 | \$ 21.38 | 658,659 | 4.91 | \$ 20.86 |
| \$26.47 - \$36.32 | 799,316 | 8.09 | \$ 33.77 | 226,693 | 6.88 | \$ 34.56 |
| \$36.33 - \$49.90 | 929,052 | 8.62 | \$ 42.20 | 139,775 | 7.86 | \$ 47.18 |
| | 3,952,175 | 6.08 | \$ 27.29 | 2,271,774 | 4.54 | \$ 21.65 |

Restricted Share Awards, Restricted Share Units, and Cash-Based Restricted Share Unit Awards:

Restricted share awards, restricted share units, and cash-based restricted share unit awards compensation expense was calculated based on the number of shares or units expected to be earned by the grantee multiplied by the stock price at the date of grant (for restricted share awards) or the stock price at the period end date (for cash-based restricted share unit awards), and is being recognized over the vesting period. Generally, the restricted share awards, restricted share units, and cash-based restricted share unit awards have a three-year tranche vesting provision and an estimated forfeiture rate of 4.6%.

Restricted share, restricted share unit, and cash-based restricted share unit activity during the fiscal year ended June 30, 2020, was as follows:

| | Restricted Share Awards | | Restricted Share Units | | Cash-Based Restricted Share Units | |
|--------------------------------|-------------------------|--|------------------------|--|-----------------------------------|--|
| | Number of Shares | Weighted Average Grant Date Fair Value | Number of Shares | Weighted Average Grant Date Fair Value | Number of Units | Weighted Average Grant Date Fair Value |
| Nonvested - June 30, 2019 | 183,429 | \$ 30.30 | 175,737 | \$ 47.13 | 77,642 | \$ 37.19 |
| Assumed in Finisar Acquisition | — | \$ — | 3,652,191 | \$ 36.98 | — | \$ — |
| Granted | — | \$ — | 250,736 | \$ 36.35 | 49,444 | \$ 34.84 |
| Vested | (130,382) | \$ 28.03 | (1,475,663) | \$ 37.49 | (43,699) | \$ 32.31 |
| Forfeited | (2,520) | \$ 35.34 | (360,589) | \$ 36.97 | (1,384) | \$ 40.99 |
| Nonvested - June 30, 2020 | 50,527 | \$ 35.92 | 2,242,412 | \$ 39.46 | 82,003 | \$ 38.31 |

As of June 30, 2020, total unrecognized compensation cost related to non-vested restricted share, restricted share unit, and cash-based restricted share unit awards was \$63.2 million. This cost is expected to be recognized over a weighted-average period of approximately two years. The restricted share and restricted share unit compensation expense was calculated based on the number of shares expected to be earned, multiplied by the stock price at the date of grant, and is being recognized over the vesting period. The cash-based restricted share unit compensation expense was calculated based on the number of shares expected to be earned, multiplied by the stock price at the period-end date, and is being recognized over the vesting period. The total fair value of the restricted share, restricted share unit, and cash-based restricted share unit awards granted during the years ended June 30, 2020, 2019 and 2018, was \$10.9 million, \$9.9 million and \$7.5 million, respectively. The total fair value of restricted share, restricted share unit and cash-based restricted share unit awards vested was \$75.2 million, \$19.9 million and \$17.0 million during fiscal years 2020, 2019 and 2018, respectively.

Performance Share Awards and Cash-Based Performance Share Unit Awards:

The Compensation Committee of the Board of Directors of the Company has granted certain executive officers and employees performance share awards and performance share unit awards under the Plan. As of June 30, 2020, the Company had outstanding grants covering performance periods ranging from 12 to 36 months. These awards are intended to provide continuing emphasis on specified financial performance goals that the Company considers important contributors to the creation of long-term shareholder value. These awards are payable only if the Company achieves specified levels of financial performance during the performance periods.

The performance share compensation expense was calculated based on the number of shares expected to be earned, multiplied by the stock price at the date of grant, and is being recognized over the vesting period. The cash-based performance share unit compensation expense was calculated based on the number of shares expected to be earned, multiplied by the stock price at the period-end date, and is being recognized over the vesting period. Performance share and cash-based performance share unit award activity relating to the Plan during the year ended June 30, 2020, was as follows:

| | Performance Share Awards | | Cash-Based Performance Share Units | |
|---------------------------|--------------------------|--|------------------------------------|--|
| | Number of Shares | Weighted Average Grant Date Fair Value | Number of Units | Weighted Average Grant Date Fair Value |
| Nonvested - June 30, 2019 | 413,651 | \$ 36.80 | 24,224 | \$ 37.47 |
| Granted | 414,464 | \$ 30.29 | 30,199 | \$ 31.79 |
| Vested | (414,582) | \$ 26.21 | (17,200) | \$ 21.67 |
| Forfeited | (4,287) | \$ 35.07 | (2,035) | \$ 29.50 |
| Nonvested - June 30, 2020 | 409,246 | \$ 40.96 | 35,188 | \$ 38.54 |

As of June 30, 2020, total unrecognized compensation cost related to non-vested performance share and cash-based performance share unit awards was \$13.0 million. This cost is expected to be recognized over a weighted-average period of approximately one year. The total fair value of the performance share and cash-based performance share unit awards granted

during the fiscal years ended June 30, 2020, 2019 and 2018 was \$15.4 million, \$10.0 million and \$3.8 million, respectively. The total fair value of performance shares vested during the fiscal years ended June 30, 2020, 2019 and 2018 was \$6.2 million, \$10.5 million and \$3.6 million, respectively.

For our relative Total Shareholder Return (“TSR”) performance-based awards, which are based on market performance of our stock as compared to the Russel 2000 Index, the compensation cost is recognized over the performance period on a straight-line basis net of forfeitures, because the awards vest only at the end of the measurement period and the probability of actual shares expected to be earned is considered in the grant date valuation. As a result, the expense is not adjusted to reflect the actual shares earned. We estimate the fair value of the TSR performance-based awards using the Monte-Carlo simulation model.

Note 14. Segment and Geographic Reporting

The Company reports its business segments using the “management approach” model for segment reporting. This means that the Company determines its reportable business segments based on the way the chief operating decision maker organizes business segments within the Company for making operating decisions and assessing performance.

Effective July 1, 2019, the Company realigned the composition of its operating segments. The Company combined II-VI Laser Solutions and II-VI Performance Products and renamed the combined segment Compound Semiconductors. All applicable segment information has been restated to reflect this change. Additionally, the Company changed the name of II-VI Photonics to Photonic Solutions.

The Company reports its financial results in two segments, and the Company’s chief operating decision maker receives and reviews financial information based on these segments. The Company evaluates business segment performance based upon segment operating income, which is defined as earnings before income taxes, interest and other income or expense.

The Compound Semiconductors segment has locations in the United States, Singapore, China, Germany, Switzerland, Japan, Belgium, the United Kingdom, Italy, South Korea, the Philippines, Vietnam, Sweden, and Taiwan. This segment designs, manufactures and markets: (i) optical and electro-optical components and materials sold under the II-VI Infrared brand name and used primarily in high-power CO₂ lasers, fiber-delivered beam delivery systems and processing tools and direct diode lasers for industrial lasers sold under the II-VI HIGHYAG and II-VI Laser Enterprise brand names; (ii) infrared optical components and high-precision optical assemblies for aerospace and defense, medical and commercial laser imaging applications; (iii) semiconductor lasers and detectors for optical interconnects and sensing applications with InP; and (iv) unique engineered materials for thermoelectric and silicon carbide applications servicing the semiconductor, aerospace and defense and medical markets. Compound Semiconductors also manufactures compound semiconductor epitaxial wafers for applications in optical components, wireless devices, and high-speed communication systems and manufactures 6-inch GaAs wafers allowing for the production of high performance lasers and integrated circuits in high volume sold under the II-VI EpiWorks and II-VI OptoElectronic Devices Division brand names.

The Photonic Solutions segment has locations in the United States, China, Vietnam, Germany, Japan, the United Kingdom, Italy, Malaysia, Australia, and Hong Kong. This segment manufactures crystal materials, optics, microchip lasers and optoelectronic modules for use in optical communication networks and other diverse consumer and commercial applications. In addition, the segment manufactures pump lasers, optical isolators, and optical amplifiers and micro-optics for optical amplifiers, for both terrestrial and submarine applications within the optical communications market.

In September 2019, the Company completed its acquisition of Finisar. See Note 3. The operating results of this acquisition have been reflected in the selected financial information of the Company’s Photonic Solutions segment and Compound Semiconductors Segment beginning on October 1, 2019, with the results from September 24, 2019 to September 30, 2019 reflected in Unallocated and Other.

The accounting policies are consistent across both of the segments. To the extent possible, the Company’s corporate expenses are allocated to the segments. The Company evaluates segment performance based upon reported segment operating income, which is defined as earnings from continuing operations before income taxes, interest and other income or expense. Unallocated and Other include eliminating inter-segment sales and transfers as well as transaction costs related to the pending Finisar acquisition.

The following tables summarize selected financial information of the Company’s operations by segment:

| | Photonic Solutions | Compound Semiconductors | Unallocated & Other | Total |
|--|-----------------------|----------------------------|------------------------|--------------|
| <i>(\$000)</i> | | | | |
| 2020 | | | | |
| Revenues | \$ 1,536,790 | \$ 821,230 | \$ 22,051 | \$ 2,380,071 |
| Inter-segment revenues | 31,515 | 164,884 | (196,399) | — |
| Operating income (loss) | 49,930 | 62,279 | (72,730) | 39,479 |
| Interest expense | — | — | — | (89,409) |
| Other income (expense), net | — | — | — | (13,998) |
| Income taxes | — | — | — | (3,101) |
| Net earnings (loss) | — | — | — | (67,029) |
| Depreciation and amortization | 112,203 | 104,936 | 3,743 | 220,882 |
| Expenditures for property, plant & equipment | 45,795 | 88,318 | 2,764 | 136,877 |
| Segment assets | 3,502,467 | 1,732,247 | — | 5,234,714 |
| Goodwill | 1,052,494 | 186,515 | — | 1,239,009 |

| | Photonic Solutions | Compound Semiconductors | Unallocated & Other | Total |
|--|-----------------------|----------------------------|------------------------|--------------|
| <i>(\$000)</i> | | | | |
| 2019 | | | | |
| Revenues | \$ 638,889 | \$ 723,607 | \$ — | \$ 1,362,496 |
| Inter-segment revenues | 12,568 | 94,405 | (106,973) | — |
| Operating income (loss) | 81,898 | 82,414 | (15,643) | 148,668 |
| Interest expense | — | — | — | (22,417) |
| Other income (expense), net | — | — | — | 2,562 |
| Income taxes | — | — | — | (21,296) |
| Net earnings | — | — | — | 107,517 |
| Depreciation and amortization | 26,273 | 66,092 | — | 92,365 |
| Expenditures for property, plant & equipment | 44,851 | 83,899 | — | 128,750 |
| Segment assets | 681,610 | 1,272,163 | — | 1,953,773 |
| Goodwill | 134,057 | 185,721 | — | 319,778 |

| | Photonic Solutions | Compound Semiconductors | Unallocated & Other | Total |
|--|-----------------------|----------------------------|------------------------|--------------|
| <i>(\$000)</i> | | | | |
| 2018 | | | | |
| Revenues | \$ 486,485 | \$ 672,309 | \$ — | \$ 1,158,794 |
| Inter-segment revenues | 24,867 | 37,723 | (62,591) | — |
| Operating income | 63,152 | 73,611 | — | 136,763 |
| Interest expense | — | — | — | (18,352) |
| Other income, net | — | — | — | 3,783 |
| Income taxes | — | — | — | (34,192) |
| Net earnings | — | — | — | 88,002 |
| Depreciation and amortization | 23,242 | 57,528 | — | 80,770 |
| Expenditures for property, plant & equipment | 36,122 | 125,201 | — | 161,323 |

Geographic information for revenues from the legal country of origin, and long-lived assets from the country of origin, which include property, plant and equipment, net of related depreciation, and certain other long-term assets, were as follows:

| Year Ended June 30, (\$000) | Revenues | | |
|--------------------------------|---------------------|---------------------|---------------------|
| | 2020 | 2019 | 2018 |
| United States | \$ 1,432,492 | \$ 405,404 | \$ 373,735 |
| Non-United States | | | |
| Hong Kong | 299,359 | 319,601 | 186,978 |
| China | 292,138 | 290,287 | 253,672 |
| Japan | 146,325 | 109,670 | 89,153 |
| Germany | 124,934 | 155,000 | 132,161 |
| Switzerland | 35,895 | 32,770 | 49,557 |
| Vietnam | 22,152 | 22,322 | 26,898 |
| Korea | 8,537 | 11,674 | 9,757 |
| Singapore | 5,791 | 6,868 | 5,941 |
| Philippines | 4,479 | 4,179 | 3,909 |
| United Kingdom | 4,226 | 2,712 | 9,359 |
| Taiwan | 3,743 | 2,005 | 1,705 |
| Belgium | — | 4 | 4,511 |
| Italy | — | — | 11,458 |
| Total Non-United States | 947,579 | 957,092 | 785,059 |
| | <u>\$ 2,380,071</u> | <u>\$ 1,362,496</u> | <u>\$ 1,158,794</u> |

| June 30, (\$000) | Long-Lived Assets | |
|-------------------------|---------------------|-------------------|
| | 2020 | 2019 |
| United States | \$ 754,815 | \$ 345,866 |
| Non-United States | | |
| China | 369,544 | 108,688 |
| United Kingdom | 55,028 | 60,369 |
| Malaysia | 46,162 | — |
| Switzerland | 37,129 | 35,592 |
| Sweden | 24,270 | — |
| Germany | 18,631 | 14,857 |
| Australia | 12,321 | — |
| Vietnam | 11,140 | 11,656 |
| Philippines | 7,607 | 7,793 |
| Korea | 3,438 | — |
| Hong Kong | 2,870 | 5,032 |
| Other | 1,965 | 1,190 |
| Total Non-United States | 590,105 | 245,177 |
| | <u>\$ 1,344,920</u> | <u>\$ 591,043</u> |

Note 15. Fair Value of Financial Instruments

The FASB defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous markets for the asset and liability in an orderly transaction between market participants at the measurement date. The Company estimates fair value of its financial instruments utilizing an established three-level hierarchy in accordance with U.S. GAAP. The hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date as follows:

- Level 1 – Valuation is based upon unadjusted quoted prices for identical assets or liabilities in active markets.
- Level 2 – Valuation is based upon quoted prices for similar assets and liabilities in active markets, or other inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instruments.
- Level 3 – Valuation is based upon other unobservable inputs that are significant to the fair value measurements.

The classification of fair value measurements within the hierarchy is based upon the lowest level of input that is significant to the measurement.

The Company entered into an interest rate swap with a notional amount of \$1,075 million to limit the exposure to its variable interest rate debt by effectively converting it to a fixed interest rate. The Company receives payments based on the one-month LIBOR and makes payments based on a fixed rate of 1.52%. The Company receives payments with a floor of 0.00%. The interest rate swap agreement has an effective date of November 24, 2019, with an expiration date of September 24, 2024. The initial notional amount of the interest rate swap is scheduled to decrease to \$825 million in June 2022 and will remain at that amount through the expiration date. The Company designated this instrument as a cash flow hedge and deemed the hedge relationship effective at inception of the contract. The fair value of the interest rate swap of \$44.1 million is recognized in the Consolidated Balance Sheet within other liabilities. Changes in fair value are recorded within other comprehensive income (loss) on the Consolidated Balance Sheet and reclassified into the Consolidated Statements of Earnings (Loss) as interest expense in the period in which the underlying transaction affects earnings. Cash flows from hedging activities are reported in the Consolidated Statements of Cash Flows in the same classification as the hedged item, generally as a component of cash flows from operations. The fair value of the interest rate swap is determined using widely accepted valuation techniques and reflects the contractual terms of the interest rate swap including the period to maturity, and while there are no quoted prices in active markets, it uses observable market-based inputs, including interest rate curves. The fair value analysis also considers a credit valuation adjustment to reflect nonperformance risk of both the Company and the single counterparty. The interest rate swap is classified as a Level 2 item within the fair value hierarchy.

The Company estimated the fair value of the II-VI Notes and Finisar Notes based on quoted market prices as of the last trading day prior to June 30, 2020; however, the II-VI Notes and Finisar Notes have only a limited trading volume and as such this fair value estimate is not necessarily the value at which the II-VI Notes and Finisar Notes could be retired or transferred. The Company concluded that this fair value measurement should be categorized within Level 2. The carrying value of the II-VI Notes and Finisar Notes is net of unamortized discount and issuance costs. See Note 9. Debt for details on the Company's debt facilities. The fair value and carrying value of the II-VI Notes and Finisar Notes were as follows at June 30, 2020 (\$000):

| | Fair Value | | Carrying Value | |
|---------------|------------|---------|----------------|---------|
| II-VI Notes | \$ | 413,379 | \$ | 314,312 |
| Finisar Notes | \$ | 14,404 | \$ | 14,888 |

The fair values of cash and cash equivalents are considered Level 1 among the fair value hierarchy and approximate fair value because of the short-term maturity of those instruments. The Company's borrowings including its lease obligations, excluding the 0.25% Convertible Notes and the 0.50% Finisar convertible notes, are considered Level 2 among the fair value hierarchy and their principal amounts approximate fair value. Additionally, the Company remeasures certain assets to fair value, using Level 3 measurements, as a result of the occurrence of triggering events such as purchase accounting for acquisitions. See Note 3 for further information.

The Company, from time to time, purchases foreign currency forward exchange contracts, that permit it to sell specified amounts of these foreign currencies expected to be received from its export sales, for pre-established U.S. dollar amounts at specified dates. These contracts are entered into to limit transactional exposure to changes in currency exchange rates of export

sales transactions in which settlement will occur in future periods and which otherwise would expose the Company, on the basis of its aggregate net cash flows in respective currencies, to foreign currency risk.

Note 16. Employee Benefit Plans

Eligible U.S. employees of the Company participate in a profit sharing retirement plan. Contributions accrued for the plan are made at the discretion of the Company’s board of directors and were \$6.1 million, \$4.6 million, and \$5.0 million for the years ended June 30, 2020, 2019 and 2018, respectively.

On August 18, 2018, the Company adopted the 2018 Employee Stock Purchase Plan (“2018 Plan”) for full time U.S. employees who have completed two years of continuous employment with the Company, and the 2018 Plan was approved by the Company’s shareholders at the Company’s Annual Meeting of Shareholders in November 2018. The employee may purchase the Company’s common stock for the lesser of 90% of the fair market value of the shares (i) on the first trading day of the offering period, or (ii) on the purchase date. Offering periods will run from August through January and from February through July each year. The number of shares which may be bought by an employee during each fiscal year is limited to 15% of the employee’s base pay. The 2018 Plan limits the number of shares of common stock available for purchase to 2,000,000 shares. As of June 30, 2020, there have been 80,469 shares purchased on behalf of the employees under the 2018 Plan.

Switzerland Defined Benefit Plan

The Company maintains a pension plan covering employees of our Swiss subsidiary (the “Swiss Plan”). Employer and employee contributions are made to the Swiss Plan based on various percentages of salary and wages that vary according to employee age and other factors. Employer contributions to the Swiss Plan for years ended June 30, 2020 and 2019 were \$3.4 million and \$3.0 million, respectively. Net periodic pension cost is not material for any year presented.

The underfunded pension liability was \$26.9 million and \$20.8 million as of June 30, 2020 and 2019, respectively. The pension adjustment amount recognized in accumulated other comprehensive income was \$3.1 million and \$11.8 million for the fiscal years ended June 30, 2020 and 2019, respectively. The accumulated benefit obligation was \$84.9 million as of June 30, 2020, compared to \$69.7 million as of June 30, 2019.

Estimated future benefit payments under the Swiss Plan are estimated to be as follows:

| Year Ending June 30, | | |
|-----------------------------|----|--------|
| <i>(\$000)</i> | | |
| 2021 | \$ | 4,100 |
| 2022 | | 3,400 |
| 2023 | | 3,700 |
| 2024 | | 4,300 |
| 2025 | | 5,300 |
| Next five years | \$ | 28,400 |

Note 17. Other Accrued Liabilities

The components of other accrued liabilities were as follows:

| June 30, | 2020 | 2019 |
|---------------------------|-------------------|------------------|
| <i>(\$000)</i> | | |
| Contract liabilities | \$ 17,328 | \$ 10,390 |
| Warranty reserves | 27,620 | 4,478 |
| Other accrued liabilities | 74,390 | 35,076 |
| | <u>\$ 119,338</u> | <u>\$ 49,944</u> |

Note 18. Commitments and Contingencies

The Company has purchase commitments for materials and supplies as part of the ordinary conduct of business. A portion of the commitments are long-term and are based on minimum purchase requirements. Certain short-term raw material purchase commitments have a variable price component which is based on market pricing at the time of purchase. Due to the proprietary nature of some of the Company's materials and processes, certain contracts may contain liquidated damage provisions for early termination. The Company does not believe that a significant amount of liquidated damages are reasonably likely to be incurred under these commitments based upon historical experience and current expectations. The Company also has commitments relating to earnout arrangements on its acquisitions of \$2.5 million. Total future commitments held by II-VI as of June 30, 2020, were \$196.9 million in fiscal 2021, and \$2.7 million thereafter.

Note 19. Share Repurchase Programs

In August 2014, the Company's Board of Directors authorized the Company to purchase up to \$50 million of its common stock through a share repurchase program (the "Program") that calls for shares to be purchased in the open market or in private transactions from time to time. The Program has no expiration and may be suspended or discontinued at any time. Shares purchased by the Company are retained as treasury stock and available for general corporate purposes. During each of the fiscal years ended June 30, 2020 and June 30, 2019, the Company purchased 50,000 shares of its common stock for \$1.6 million under this program. As of June 30, 2020, the Company has cumulatively purchased 1,416,587 shares of its common stock pursuant to the Program for approximately \$22.3 million. The dollar value of shares as of June 30, 2020 that may yet be purchased under the Program is approximately \$27.7 million.

Note 20. Accumulated Other Comprehensive Income (Loss)

The changes in accumulated other comprehensive income ("AOCI") by component, net of tax, for the years ended June 30, 2020, 2019, and 2018 were as follows (\$000):

| | Foreign Currency Translation Adjustment | Interest Rate Swap | Defined Benefit Pension Plan | Total Accumulated Other Comprehensive Income (Loss) |
|--|--|--------------------------|------------------------------------|---|
| AOCI - June 30, 2017 | \$ (8,460) | \$ — | \$ (5,318) | \$ (13,778) |
| Other comprehensive income (loss) before reclassifications | 7,152 | — | 2,643 | 9,795 |
| Amounts reclassified from AOCI | — | — | 203 | 203 |
| Net current-period other comprehensive income | 7,152 | — | 2,846 | 9,998 |
| AOCI - June 30, 2018 | \$ (1,308) | \$ — | \$ (2,472) | \$ (3,780) |
| Other comprehensive income (loss) before reclassifications | (14,319) | — | (6,307) | (20,626) |
| Amounts reclassified from AOCI | — | — | 185 | 185 |
| Net current-period other comprehensive income | (14,319) | — | (6,122) | (20,441) |
| AOCI - June 30, 2019 | \$ (15,627) | \$ — | \$ (8,594) | \$ (24,221) |
| Other comprehensive income (loss) before reclassifications | (15,969) | (46,067) | (3,528) | (65,564) |
| Amounts reclassified from AOCI | — | 1,982 | 420 | 2,402 |
| Net current-period other comprehensive income | (15,969) | (44,085) | (3,108) | (63,162) |
| AOCI - June 30, 2020 | \$ (31,596) | \$ (44,085) | \$ (11,702) | \$ (87,383) |

Note 21. Subsequent Event

On July 2, 2020, II-VI announced the pricing of concurrent underwritten public offerings of (a) 9,302,235 shares of its common stock at a public offering price of \$43.00 per share for gross proceeds to II-VI from the offering of approximately \$400 million, before deducting the underwriting discounts and commissions and offering expenses payable by II-VI (the “common stock offering”), and (b) 2,000,000 shares of its Series A Mandatory Convertible Preferred Stock at a public offering price of \$200.00 per share for gross proceeds to II-VI from the offering of \$400 million, before deducting the underwriting discounts and commissions and offering expenses payable by II-VI (the “preferred stock offering”). In addition, the underwriters had a 30-day option to purchase up to an additional (a) 1,395,335 shares of its common stock at the applicable public offering price, less underwriting discounts and commissions, and (b) 300,000 shares of Series A Mandatory Convertible Preferred Stock at the applicable public offering price, less underwriting discounts and commissions and solely to cover over-allotments with respect to the preferred stock offering. On July 2, 2020, the underwriters exercised both the common stock and preferred stock options in full, raising an additional approximately \$120 million in gross proceeds.

On July 7, 2020, the public offerings closed, and the Company raised a total of approximately \$920 million in gross proceeds. The Company used the net proceeds from the public offerings to repay the remaining balance of \$715 million of the Term B Loan Facility, and will use the remainder of net proceeds, to develop, enhance, invest in or acquire related, emerging or complementary technologies, products, or businesses and for other general corporate purposes.

On August 12, 2020, the Company announced that it entered into a definitive agreement to acquire the outstanding shares of Ascatron AB ("Ascatron"), which will add essential elements to the Company's vertically integrated SiC technology platform. On August 20, 2020, the Company completed the acquisition of Ascatron.

Quarterly Financial Data (unaudited)

Fiscal Year 2020

| Quarter Ended | June 30, 2020 | March 31, 2020 | December 31, 2019 | September 30, 2019 |
|-------------------------------------|------------------|-------------------|----------------------|-----------------------|
| <i>(\$000, except per share)</i> | | | | |
| 2020 | | | | |
| Net revenues | \$ 746,290 | \$ 627,041 | \$ 666,331 | \$ 340,409 |
| Cost of goods sold | 444,153 | 381,108 | 517,991 | 217,269 |
| Internal research and development | 100,489 | 94,764 | 107,700 | 36,120 |
| Selling, general and administrative | 134,152 | 82,133 | 119,218 | 105,495 |
| Interest expense | 25,521 | 28,530 | 28,390 | 6,968 |
| Other expense (income) - net | 1,264 | 7,168 | 487 | 5,079 |
| Earnings (loss) before income taxes | 40,711 | 33,338 | (107,455) | (30,522) |
| Income taxes | (10,550) | 27,417 | (9,242) | (4,524) |
| Net Earnings (Loss) | <u>\$ 51,261</u> | <u>\$ 5,921</u> | <u>\$ (98,213)</u> | <u>\$ (25,998)</u> |
| Basic earnings (loss) per share | <u>\$ 0.56</u> | <u>\$ 0.07</u> | <u>\$ (1.08)</u> | <u>\$ (0.39)</u> |
| Diluted earnings (loss) per share | <u>\$ 0.53</u> | <u>\$ 0.06</u> | <u>\$ (1.08)</u> | <u>\$ (0.39)</u> |

Fiscal Year 2019

| Quarter Ended | June 30, 2019 | March 31, 2019 | December 31, 2018 | September 30, 2018 |
|-------------------------------------|------------------|-------------------|----------------------|-----------------------|
| <i>(\$000, except per share)</i> | | | | |
| 2019 | | | | |
| Net revenues | \$ 362,728 | \$ 342,496 | \$ 342,839 | \$ 314,433 |
| Cost of goods sold | 224,076 | 215,212 | 211,333 | 190,526 |
| Internal research and development | 36,202 | 36,026 | 33,764 | 33,171 |
| Selling, general and administrative | 61,731 | 60,128 | 58,136 | 53,523 |
| Interest expense | 5,606 | 5,647 | 5,580 | 5,584 |
| Other expense (income) - net | 384 | (1,532) | (701) | (713) |
| Earnings before income taxes | 34,729 | 27,015 | 34,727 | 32,342 |
| Income taxes | 6,701 | 2,377 | 6,025 | 6,193 |
| Net Earnings | <u>\$ 28,028</u> | <u>\$ 24,638</u> | <u>\$ 28,702</u> | <u>\$ 26,149</u> |
| Basic earnings per share | <u>\$ 0.44</u> | <u>\$ 0.39</u> | <u>\$ 0.45</u> | <u>\$ 0.41</u> |
| Diluted earnings per share | <u>\$ 0.43</u> | <u>\$ 0.38</u> | <u>\$ 0.44</u> | <u>\$ 0.40</u> |

SCHEDULE II
II-VI INCORPORATED AND SUBSIDIARIES
VALUATION AND QUALIFYING ACCOUNTS
YEARS ENDED JUNE 30, 2020, 2019, AND 2018
(IN THOUSANDS OF DOLLARS)

| | Balance at Beginning of Year | Charged to Expense | Charged to Other Accounts | Deduction from Reserves | Balance at End of Year |
|--|------------------------------------|--------------------------|---------------------------------|-------------------------------|------------------------------|
| YEAR ENDED JUNE 30, 2020: | | | | | |
| Allowance for doubtful accounts | \$ 1,292 | \$ 956 | \$ — | \$ (550) ⁽³⁾ | \$ 1,698 |
| Warranty reserves | \$ 4,478 | \$ 11,507 | \$ 37,453 ⁽¹⁾ | \$ (25,818) | \$ 27,620 |
| Deferred tax asset valuation allowance | \$ 20,190 | \$ (2,186) | \$ 36,555 ⁽²⁾ | \$ — | \$ 54,559 |
| YEAR ENDED JUNE 30, 2019: | | | | | |
| Allowance for doubtful accounts | \$ 837 | \$ 548 | \$ — | \$ (93) ⁽³⁾ | \$ 1,292 |
| Warranty reserves | \$ 4,679 | \$ 4,185 | \$ — | \$ (4,386) | \$ 4,478 |
| Deferred tax asset valuation allowance | \$ 21,797 | \$ (1,607) | \$ — | \$ — | \$ 20,190 |
| YEAR ENDED JUNE 30, 2018: | | | | | |
| Allowance for doubtful accounts | \$ 1,314 | \$ (129) | \$ — | \$ (348) ⁽³⁾ | \$ 837 |
| Warranty reserves | \$ 4,546 | \$ 3,821 | \$ — | \$ (3,688) | \$ 4,679 |
| Deferred tax asset valuation allowance | \$ 42,562 | \$ (4,602) | \$ (16,163) ⁽⁴⁾ | \$ — | \$ 21,797 |

(1) Related to amounts assumed from the Finisar Acquisition.

(2) Related to the amounts assumed from the Finisar Acquisition.

(3) Primarily relates to write-offs of accounts receivable.

(4) Primarily relates to the Company's deferred taxes on the conversion feature of the convertible debt.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

The Company's management evaluated, with the participation of the Company's Chief Executive Officer, and the Company's Chief Financial Officer and Treasurer, the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of the end of the period covered by this Annual Report on Form 10-K. The Company's disclosure controls were designed to provide reasonable assurance that information required to be disclosed in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. It should be noted that the design of any system of controls is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions, regardless of how remote. However, the controls have been designed to provide reasonable assurance of achieving the controls' stated goals. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of June 30, 2020, the Company's disclosure controls and procedures are effective.

Management's Report on Internal Control Over Financial Reporting

Refer to Management's Report on Internal Control Over Financial Reporting included in Item 8 of this Annual Report of Form 10-K.

Report of the Registered Public Accounting Firm

The report of Ernst & Young LLP, an independent registered public accounting firm, with respect to our internal control over financial reporting is included in Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal controls over financial reporting that occurred during our most recent quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. OTHER INFORMATION

None.

PART III

Item 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information set forth above in Part I of this Annual Report on Form 10-K under the caption “Executive Officers of the Registrant” is incorporated herein by reference. The other information required by this item is incorporated herein by reference to the information set forth under the captions “Election of Directors and Delinquent Section 16(a) Reports” in the Company’s definitive proxy statement for the 2020 Annual Meeting of Shareholders to be filed pursuant to Regulation 14A of the Exchange Act (the “Proxy Statement”).

Audit Committee Financial Expert

The information as to the Audit Committee and the Audit Committee Financial Expert is incorporated herein by reference to the information set forth in the Company’s Proxy Statement.

Code of Ethics

The Company has adopted its Code of Business Conduct and Ethics for all of its employees and its Code of Ethics for Senior Financial Officers including the principal executive officer and principal financial officer. The Code of Business Conduct and Ethics and Code of Ethics for Senior Financial Officers can be found on the Company’s Internet web site at www.ii-vi.com under “Investors Information – Corporate Governance Documents.” The Company will promptly disclose on its web site (i) any amendments or waivers with respect to a director’s or executive officer’s compliance with the Code of Business Conducts and Ethics and (ii) any amendments or waivers with respect to any provision of the Code of Ethics for Senior Financial Officers. Any person may also obtain a copy of the Code of Business Conduct and Ethics and/or the Code of Ethics for Senior Financial Officer without charge by submitting their request to the Chief Financial Officer and Treasurer of II-VI Incorporated, 375 Saxonburg Boulevard, Saxonburg, Pennsylvania 16056, or by calling (724) 352-4455.

We intend to satisfy any disclosure requirements under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of the Code of Business Conduct and Ethics by posting such information on our web site.

The web site and information contained on it or incorporated in it are not intended to be incorporated in this Annual Report on Form 10-K or other filings with the SEC.

Item 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference to the information set forth under the caption “Director Compensation in Fiscal Year 2020,” “Executive Compensation,” “Compensation Committee Report” and “Compensation and Risk” in the Company’s Proxy Statement.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item is incorporated herein by reference to the information set forth under the captions “Equity Compensation Plan Information” and “Security Owners of Certain Beneficial Owners and Management” in the Company’s Proxy Statement.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated herein by reference to the information set forth under the caption “Director Independence and Corporate Governance Policies” in the Company’s Proxy Statement.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated herein by reference to the information set forth under the caption “Ratification of Selection of Independent Registered Public Accounting Firm” in the Company’s Proxy Statement.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) (1) Financial Statements

The financial statements are set forth under Item 8 of this Annual Report on Form 10-K.

(2) Schedules

Schedule II – Valuation and Qualifying Accounts for each of the three fiscal years in the period ended June 30, 2020 is set forth under Item 8 of this Annual Report on Form 10-K.

Financial statements, financial statement schedules and exhibits not listed have been omitted where the required information is included in the Consolidated Financial Statements or notes thereto, or is not applicable or required.

| Exhibit No. | Description | Location |
|--------------------|---|---|
| 2.01 | <u>Agreement and Plan of Merger, dated November 8, 2018, by and among II-VI Incorporated, Mutation Merger Sub Inc. and Finisar Corporation.</u> | Incorporated herein by reference to Exhibit 2.1 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on November 9, 2018. |
| 3.01 | <u>Amended and Restated Articles of Incorporation of II-VI Incorporated</u> | Incorporated herein by reference to Exhibit 3.1 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on November 8, 2011. |
| 3.02 | <u>Amended and Restated By-Laws of II-VI Incorporated</u> | Incorporated herein by reference to Exhibit 3.1 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on August 19, 2014. |
| 3.03 | <u>Statement with Respect to Shares, filed with the Pennsylvania Department of State Corporations Bureau and effective July 6, 2020.</u> | Filed herewith. |
| 4.01 | <u>Indenture, dated as of August 29, 2017, by and between II-IV Incorporated and U.S. Bank, National Association, as Trustee</u> | Incorporated herein by reference to Exhibit 4.1 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on November 14, 2017. |
| 4.02 | <u>Form of 0.25% Convertible Senior Notes due 2022.</u> | Included in Exhibit 4.01. |
| 4.03 | <u>Description of II-VI's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.</u> | Filed herewith |
| 4.04 | <u>Indenture, dated as of December 21, 2016 by and between Finisar Corporation and Wells Fargo Bank, National Association, as trustee</u> | Incorporated herein by reference to Exhibit 4.1 to Finisar Corporation's Current Report on Form 8-K (File No. 000-27999) filed on December 21, 2016. |
| 4.05 | <u>First Supplemental Indenture, dated as of September 24, 2019, by and among II-VI Incorporated, Finisar Corporation and Wells Fargo Bank, National Association, as trustee</u> | Incorporated herein by reference to Exhibit 4.2 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on September 24, 2019. |
| 4.06 | Form of 0.50% Convertible Senior Notes due 2036 | Included in Exhibit 4.04 |
| 4.07 | Form of 6.00% Series A Mandatory Convertible Preferred Stock Certificate. | Included in Exhibit 3.04. |
| 10.01 | <u>Amended and Restated Credit Agreement, dated as of September 24, 2019, by and among II-VI Incorporated, Bank of America, N.A., as Administrative Agent, Swing Line Lender and an L/C Issuer, and the other lenders party thereto</u> | Incorporated herein by reference to Exhibit 10.1 to Amendment No. 1 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on September 24, 2019. |
| 10.02 | <u>Amended and Restated Employment Agreement, effective January 26, 2020, by and between II-VI Incorporated and Vincent D. Mattera, Jr. *</u> | Incorporated herein by reference to Exhibit 10.1 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on January 30, 2020. |

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| 10.03 | <u>Form of Indemnification Agreement between II-VI Incorporated and its directors and officers</u> | Incorporated herein by reference to Exhibit 10.15 to II-VI's Annual Report on Form 10-K (File No. 000-16195) filed on August 28, 2018. |
| 10.04 | II-VI Incorporated Amended and Restated Employees' Profit-Sharing Plan and Trust Agreement, as amended (P) | Incorporated herein by reference to Exhibit 10.05 to II-VI's Registration Statement on Form S-1 (File No. 33-16389). |
| 10.05 | <u>Description of Bonus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.14 to II-VI's Annual Report on Form 10-K (File No. 000-16195) for the fiscal year ended June 30, 1996. |
| 10.06 | <u>Description of Discretionary Incentive Plan (now known as the Goal/ Results Incentive Program)*</u> | Incorporated herein by reference to Exhibit 10.27 to II-VI's Annual Report on Form 10-K (File No. 000-16195) for the fiscal year ended June 30, 2009. |
| 10.07 | <u>Amended and Restated II-VI Incorporated Deferred Compensation Plan (applicable to periods prior to January 1, 2015)*</u> | Incorporated herein by reference to Exhibit 10.17 to II-VI's Annual Report on Form 10-K (File No. 000-16195) for the fiscal year ended June 30, 2015. |
| 10.08 | <u>Amended and Restated II-VI Incorporated Deferred Compensation Plan (applicable to periods after January 1, 2015)*</u> | Incorporated herein by reference to Exhibit 10.18 to II-VI's Annual Report on Form 10-K (File No. 000-16195) for the fiscal year ended June 30, 2015. |
| 10.09 | <u>Trust Under the II-VI Incorporated Deferred Compensation Plan*</u> | Incorporated herein by reference is Exhibit 10.13 to II-VI's Annual Report on Form 10-K (File No. 000-16195) for the fiscal year ended June 30, 1996. |
| 10.10 | <u>II-VI Incorporated 2009 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit A to II-VI's Definitive Proxy Statement on Schedule 14A (File No. 000-16195) filed on September 25, 2009. |
| 10.11 | <u>Form of Nonqualified Stock Option Agreement under the II-VI Incorporated 2009 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.27 to II-VI's Current Report on Form 10-Q (File No. 000-16195) for the quarter ended December 31, 2011. |
| 10.12 | <u>II-VI Incorporated 2012 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.01 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on November 5, 2012. |
| 10.13 | <u>Form of Nonqualified Stock Option under the II-VI Incorporated 2012 Omnibus Incentive Plan*</u> | Incorporated herein by reference is Exhibit 10.30 to II-VI's Annual Report on Form 10-K (File No. 000-16195) for the fiscal year ended June 30, 2013. |
| 10.14 | <u>II-VI Incorporated Amended and Restated 2012 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.1 to II-VI's Registration Statement on Form S-8 (File No. 333-199855) filed on November 4, 2014. |
| 10.15 | <u>Form of Nonqualified Stock Option Agreement under the II-VI Incorporated Amended and Restated 2012 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.30 to II-VI's Annual Report on Form 10-K (File No. 000-16195) for the fiscal year ended June 30, 2013. |

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| 10.16 | <u>II-VI Incorporated Second Amended and Restated 2012 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.01 to II-VI's Current Report on Form 10-Q (File No. 000-16195) for the quarter ended December 31, 2015. |
| 10.17 | <u>Form of Nonqualified Stock Option Agreement under the II-VI Incorporated Second Amended and Restated Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.03 to II-VI's Quarterly Report on Form 10-Q (File No. 000-16195) for the quarter ended September 30, 2016. |
| 10.18 | <u>Form of Restricted Share Award Agreement (3 year) under the II-VI Incorporated Second Amended and Restated 2012 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.05 to II-VI's Quarterly Report on Form 10-Q (File No. 000-16195) for the quarter ended September 30, 2016. |
| 10.19 | <u>Form of Restricted Share Unit Award Agreement under the II-VI Incorporated Second Amended and Restated 2012 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.07 to II-VI's Quarterly Report on Form 10-Q (File No. 000-16195) for the quarter ended September 30, 2016. |
| 10.20 | <u>Form of Performance Share Award Agreement under the II-VI Incorporated Second Amended and Restated 2012 Omnibus Incentive Plan*</u> | Filed herewith. |
| 10.21 | <u>II-VI Incorporated 2018 Employee Stock Purchase Plan*</u> | Incorporated herein by reference to Exhibit 10.1 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on November 13, 2018. |
| 10.22 | <u>II-VI Incorporated 2018 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.2 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on November 13, 2018. |
| 10.23 | <u>Form of Nonqualified Stock Option Agreement under the II-VI Incorporated 2018 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.01 to II-VI's Quarterly Report on Form 10-Q (File No. 000-16195) for the quarter ended December 31, 2018. |
| 10.24 | <u>Form of Restricted Share Unit Settled In Shares Award Agreement under the II-VI Incorporated 2018 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.02 to II-VI's Quarterly Report on Form 10-Q (File No. 000-16195) for the quarter ended December 31, 2018. |
| 10.25 | <u>Form of Restricted Share Unit Settled In Cash Award Agreement under the II-VI Incorporated 2018 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.03 to II-VI's Quarterly Report on Form 10-Q (File No. 000-16195) for the quarter ended December 31, 2018. |
| 10.26 | <u>Form of Restricted Share Unit Settled In Shares Award Agreement under the II-VI Incorporated 2018 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.04 to II-VI's Quarterly Report on Form 10-Q (File No. 000-16195) for the quarter ended December 31, 2018. |
| 10.27 | <u>Form of Stock Appreciation Rights Agreement under the II-VI Incorporated 2018 Omnibus Incentive Plan*</u> | Incorporated herein by reference to Exhibit 10.05 to II-VI's Quarterly Report on Form 10-Q (File No. 000-16195) for the quarter ended December 31, 2018. |
| 10.28 | <u>Form of Performance Share Award Agreement under the II-VI Incorporated 2018 Omnibus Incentive Plan*</u> | Filed herewith. |

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| 10.29 | <u>II-VI Incorporated Executive Severance Plan *</u> | Incorporated herein by reference to Exhibit 10.1 to II-VI's Current Report on Form 8-K (File No. 000-16195) filed on August 22, 2019. |
| 10.30 | <u>Form of Participation Agreement for the II-VI Incorporated Executive Severance Plan*</u> | Incorporated herein by reference to Exhibit 10.2 to II-VI's Current Report on Form 8-K (File No. 000-016195) filed on August 22, 2019. |
| 21.01 | <u>List of Subsidiaries of II-VI Incorporated</u> | Filed herewith. |
| 23.01 | <u>Consent of Ernst & Young LLP</u> | Filed herewith. |
| 31.01 | <u>Certification of the Chief Executive Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, and Section 302 of the Sarbanes-Oxley Act of 2002</u> | Filed herewith. |
| 31.02 | <u>Certification of the Chief Financial Officer pursuant to Rule 13a-14(a) of the Securities Exchange Act of 1934, as amended, and Section 302 of the Sarbanes-Oxley Act of 2002</u> | Filed herewith. |
| 32.01 | <u>Certification of the Chief Executive Officer pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. § 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u> | Furnished herewith. |
| 32.02 | <u>Certification of the Chief Financial Officer pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. § 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</u> | Furnished herewith. |
| 101 | Interactive Data File | |
| (101.INS) | Inline XBRL Instance Document | Filed herewith. |
| (101.SCH) | Inline XBRL Taxonomy Extension Schema Document | Filed herewith. |
| (101.CAL) | Inline XBRL Taxonomy Extension Calculation Linkbase Document | Filed herewith. |
| (101.DEF) | Inline XBRL Taxonomy Definition Linkbase | Filed herewith. |
| (101.LAB) | Inline XBRL Taxonomy Extension Label Linkbase Document | Filed herewith. |
| (101.PRE) | Inline XBRL Taxonomy Extension Presentation Linkbase Document | Filed herewith. |

* Denotes management contract or compensatory plan, contract or arrangement.

(P) Denotes filed via paper copy.

The Registrant will furnish to the Commission upon request copies of any instruments not filed herewith which authorize the issuance of long-term obligations of the Registrant not in excess of 10% of the Registrant's total assets on a consolidated basis.

Item 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

II-VI INCORPORATED

Date: August 26, 2020

By: /s/ Vincent D. Mattera Jr.
 Vincent D. Mattera Jr.
 Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Principal Executive Officer:

Date: August 26, 2020

By: /s/ Vincent D. Mattera Jr.
 Vincent D. Mattera Jr.
 Chief Executive Officer and Director

Principal Financial and Accounting Officer:

Date: August 26, 2020

By: /s/ Mary Jane Raymond
 Mary Jane Raymond
 Chief Financial Officer and Treasurer

Date: August 26, 2020

By: /s/ Francis J. Kramer
 Francis J. Kramer
 Chairman of the Board

Date: August 26, 2020

By: /s/ Joseph J. Corasanti
 Joseph J. Corasanti
 Director

Date: August 26, 2020

By: /s/ RADM Marc Y. E. Pelaez (retired)
 RADM Marc Y. E. Pelaez (retired)
 Director

Date: August 26, 2020

By: /s/ Howard H. Xia
 Howard H. Xia
 Director

Date: August 26, 2020

By: /s/ Shaker Sadasivam
 Shaker Sadasivam
 Director

Date: August 26, 2020

By: /s/ Enrico Digirolamo
 Enrico Digirolamo
 Director

Date: August 26, 2020

By: /s/ Michael L. Dreyer
 Michael L. Dreyer
 Director

Date: August 26, 2020

By: /s/ Patricia Hatter
 Patricia Hatter
 Director

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Corporate Information

Board of Directors

Francis J. Kramer, Chairman

Retired President and CEO
II-VI Incorporated

Marc Y. E. Pelaez, Lead Independent Director

Rear Admiral
United States Navy (retired)

Dr. Vincent D. Mattera, Jr.

Chief Executive Officer
II-VI Incorporated

Joseph J. Corasanti

Retired President, CEO and Director
CONMED Corporation

Michael L. Dreyer

Director F5 Networks
Former Director Finisar Corporation
Retired COO Silicon Valley Bank

Enrico Digirolamo

Senior Advisor to Technology Companies
and Manufacturing Firms
Retired CFO and SVP Covisint

Patricia Hatter

Senior Vice President, Global Customer
Services
Palo Alto Networks

Dr. Shaker Sadasivam

Co-Founder, President and CEO
Auragent Bioscience, LLC
Retired President and CEO
SunEdison Semiconductor, LLC

Dr. Howard H. Xia

Retired General Manager
Vodafone China Limited

Executive Officers

Dr. Vincent D. Mattera, Jr.

Chief Executive Officer

Walter R. Bashaw II

President

Mary Jane Raymond

Chief Financial Officer

Dr. Giovanni Barbarossa

Chief Strategy Officer and President,
Compound Semiconductors

Jo Anne Schwendinger

Chief Legal and Compliance Officer
and Secretary

Dr. Christopher S. Koeppen

Chief Technology Officer

Annual Meeting

**Monday, November 9, 2020, at
3:00 PM Eastern U.S. time**

Virtual Meeting

Stock Listing

The common stock of II-VI Incorporated
is traded on Nasdaq under the trading
symbol "IIVI."

Transfer Agent

American Stock Transfer & Trust Company

6201 15th Ave.
Brooklyn, NY 11219
1.800.937.5449

Independent Registered Public Accountants

Ernst & Young LLP

2100 One PPG Place
Pittsburgh, PA 15222

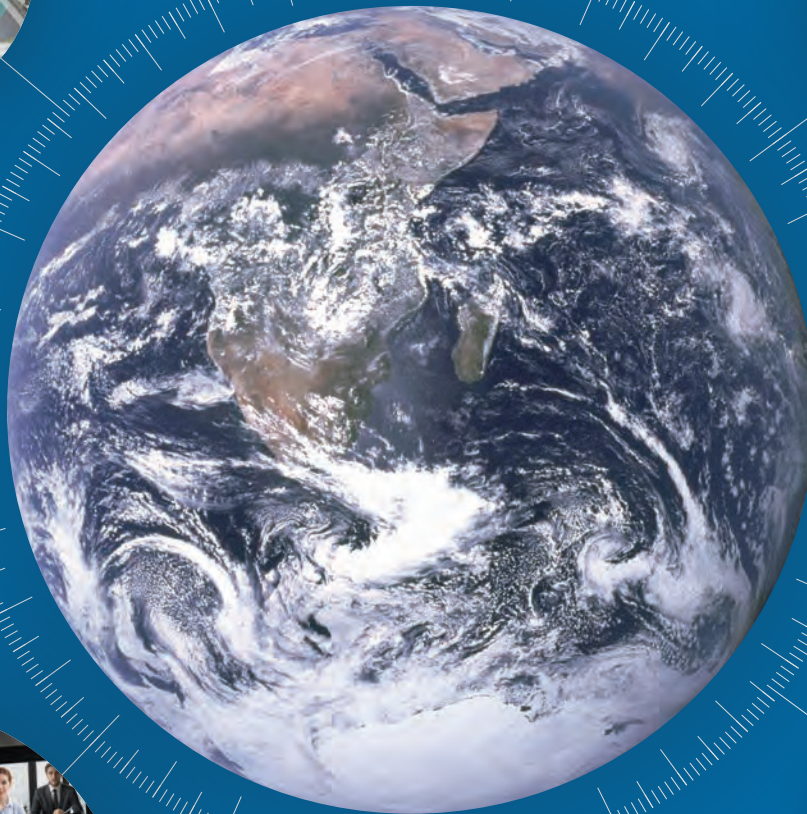
Securities Counsel

K&L Gates LLP

K&L Gates Center
210 Sixth Avenue
Pittsburgh, PA 15222

Mission

Enabling the world to be safer,
healthier, closer, and more efficient



II-VI

375 Saxonburg Boulevard, Saxonburg, PA 16056
724.352.4455

www.ii-vi.com