

CITIGROUP INC  
Form 424B2  
December 18, 2018

The information in this preliminary pricing supplement is not complete and may be changed. A registration statement relating to these securities has been filed with the Securities and Exchange Commission. This preliminary pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus are not an offer to sell these securities, nor are they soliciting an offer to buy these securities, in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED DECEMBER 18, 2018  
**December----, 2018**

**Medium-Term Senior Notes, Series N**

Citigroup Global Markets Holdings Inc. **Pricing Supplement No. 2018-USNCH1801**

**Filed Pursuant to Rule 424(b)(2)**

**Registration Statement Nos. 333-216372 and 333-216372-01**

Buffer Securities Linked to the EURO STOXX 50<sup>®</sup> Index Due December 24, 2020

The securities offered by this pricing supplement are unsecured debt securities issued by Citigroup Global Markets Holdings Inc. and guaranteed by Citigroup Inc. Unlike conventional debt securities, the securities do not pay interest and do not repay a fixed amount of principal at maturity. Instead, the securities offer a payment at maturity that may be greater than, equal to or less than the stated principal amount, depending on the performance of the underlying specified below from the initial underlying value to the final underlying value.

The securities offer modified exposure to the performance of the underlying, with (i) the opportunity to participate in the potential appreciation of the underlying at the upside participation rate specified below and (ii) a limited buffer against any depreciation of the underlying as described below. In exchange for these features, investors in the securities must be willing to forgo any dividends with respect to the underlying. In addition, investors in the securities must be willing to accept downside exposure to any depreciation of the underlying in excess of the buffer percentage specified below. **If the underlying depreciates by more than the buffer percentage from the initial underlying value to the final underlying value, you will lose 1% of the stated principal amount of your securities for every 1% by which that depreciation exceeds the buffer percentage.**

In order to obtain the modified exposure to the underlying that the securities provide, investors must be willing to accept (i) an investment that may have limited or no liquidity and (ii) the risk of not receiving any amount due under the securities if we and Citigroup Inc. default on our obligations. **All payments on the securities are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.**

**KEY TERMS**

<b>Issuer:</b>	Citigroup Global Markets Holdings Inc., a wholly owned subsidiary of Citigroup Inc.
<b>Guarantee:</b>	All payments due on the securities are fully and unconditionally guaranteed by Citigroup Inc.
<b>Underlying:</b>	EURO STOXX 50 <sup>®</sup> Index
<b>Stated principal amount:</b>	\$1,000 per security
<b>Pricing date:</b>	December 21, 2018
<b>Issue date:</b>	December 27, 2018

**Valuation date:** December 21, 2020, subject to postponement if such date is not a scheduled trading day or certain market disruption events occur

**Maturity date:** December 24, 2020  
You will receive at maturity for each security you then hold:

If the final underlying value is **greater than or equal to** the initial underlying value:

\$1,000 + the return amount

If the final underlying value is **less than** the initial underlying value but **greater than or equal to** the final buffer value:

**Payment at maturity:** \$1,000

If the final underlying value is **less than** the final buffer value:

$\$1,000 + [\$1,000 \times (\text{the underlying return} + \text{the buffer percentage})]$

**If the final underlying value is less than the final buffer value, you will receive less, and possibly significantly less, than the stated principal amount of your securities at maturity.**

**Initial underlying value:** \_\_\_\_\_, the closing value of the underlying on the pricing date

**Final underlying value:** The closing value of the underlying on the valuation date

**Return amount:**  $\$1,000 \times \text{the underlying return} \times \text{the upside participation rate}$

**Upside participation rate:** At least 190%. The actual upside participation rate will be determined on the pricing date.

**Underlying return:** (i) The final underlying value *minus* the initial underlying value, *divided* by (ii) the initial underlying value

**Final buffer value:** \_\_\_\_\_, 85% of the initial underlying value

**Buffer percentage:** 15%

**Listing:** The securities will not be listed on any securities exchange

**CUSIP / ISIN:** 17326YSP2 / US17326YSP24

**Underwriter:** Citigroup Global Markets Inc. ("CGMI"), an affiliate of the issuer, acting as principal

**Underwriting fee and issue price:** **Issue price<sup>(1)</sup> Underwriting fee<sup>(2)</sup> Proceeds to issuer**

**Per security:** \$1,000 — \$1,000

**Total:** \$ — \$

(1) Citigroup Global Markets Holdings Inc. currently expects that the estimated value of the securities on the pricing date will be at least \$959.50 per security, which will be less than the issue price. The estimated value of the securities

is based on CGMI's proprietary pricing models and our internal funding rate. It is not an indication of actual profit to CGMI or other of our affiliates, nor is it an indication of the price, if any, at which CGMI or any other person may be willing to buy the securities from you at any time after issuance. See "Valuation of the Securities" in this pricing supplement.

(2) CGMI will pay selected dealers a structuring fee of up to \$2.50 for each security sold in this offering. For more information on the distribution of the securities, see "Supplemental Plan of Distribution" in this pricing supplement. CGMI and its affiliates may profit from expected hedging activity related to this offering, even if the value of the securities declines. See "Use of Proceeds and Hedging" in the accompanying prospectus.

**Investing in the securities involves risks not associated with an investment in conventional debt securities. See "Summary Risk Factors" beginning on page PS-4.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the securities or determined that this pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus are truthful or complete. Any representation to the contrary is a criminal offense.**

*You should read this pricing supplement together with the accompanying product supplement, underlying supplement, prospectus supplement and prospectus, which can be accessed via the hyperlinks below:*

**Product Supplement No. EA-02-07 dated June 15, 2018**

**Underlying Supplement No. 7 dated July 16,**

**2018**

**Prospectus Supplement and Prospectus each dated April 7, 2017**

**The securities are not bank deposits and are not insured or guaranteed by the Federal Deposit Insurance Corporation or any other governmental agency, nor are they obligations of, or guaranteed by, a bank.**

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#### Additional Information

The terms of the securities are set forth in the accompanying product supplement, prospectus supplement and prospectus, as supplemented by this pricing supplement. The accompanying product supplement, prospectus supplement and prospectus contain important disclosures that are not repeated in this pricing supplement. For example, the accompanying product supplement contains important information about how the closing value of the underlying will be determined and about adjustments that may be made to the terms of the securities upon the occurrence of market disruption events and other specified events with respect to the underlying. The accompanying underlying supplement contains information about the underlying that is not repeated in this pricing supplement. It is important that you read the accompanying product supplement, underlying supplement, prospectus supplement and prospectus together with this pricing supplement in deciding whether to invest in the securities. Certain terms used but not defined in this pricing supplement are defined in the accompanying product supplement.

#### Payout Diagram

The diagram below illustrates your payment at maturity for a range of hypothetical underlying returns. The diagram assumes that the upside participation rate will be set at the lowest value indicated on the cover page of this pricing supplement. The actual upside participation rate will be determined on the pricing date.

**Investors in the securities will not receive any dividends with respect to the underlying. The diagram and examples below do not show any effect of lost dividend yield over the term of the securities.** See “Summary Risk Factors—You will not receive dividends or have any other rights with respect to the underlying” below.

#### **Payout Diagram**

n The Securities n The Underlying

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## Hypothetical Examples

The examples below illustrate how to determine the payment at maturity on the securities, assuming the various hypothetical final underlying values indicated below. The examples are solely for illustrative purposes, do not show all possible outcomes and are not a prediction of what the actual payment at maturity on the securities will be. The actual payment at maturity will depend on the actual final underlying value.

The examples below are based on the following hypothetical values and do not reflect the actual initial underlying value or final buffer value. For the actual initial underlying value and final buffer value, see the cover page of this pricing supplement. We have used these hypothetical values, rather than the actual values, to simplify the calculations and aid understanding of how the securities work. However, you should understand that the actual payment at maturity on the securities will be calculated based on the actual initial underlying value and final buffer value, and not the hypothetical values indicated below. The examples below assume that the upside participation rate will be set at the lowest value indicated on the cover page of this pricing supplement. The actual upside participation rate will be determined on the pricing date.

Hypothetical initial underlying value: 100

Hypothetical final buffer value: 85 (85% of the hypothetical initial underlying value)

**Example 1—Upside Scenario.** The final underlying value is 105, resulting in a 5% underlying return. In this example, the final underlying value is **greater than** the initial underlying value.

Payment at maturity per security = \$1,000 + the return amount

= \$1,000 + (\$1,000 × the underlying return × the upside participation rate)

= \$1,000 + (\$1,000 × 5% × 190%)

= \$1,000 + \$95

= \$1,095

In this scenario, the underlying has appreciated from the initial underlying value to the final underlying value, and your total return at maturity would equal the underlying return *multiplied by* the upside participation rate.

**Example 2—Par Scenario.** The final underlying value is 95, resulting in a -5% underlying return. In this example, the final underlying value is **less than** the initial underlying value but **greater than** the final buffer value.

Payment at maturity per security = \$1,000

In this scenario, the underlying has depreciated from the initial underlying value to the final underlying value, but not by more than the buffer percentage. As a result, you would be repaid the stated principal amount of your securities at maturity but would not receive any positive return on your investment.

**Example 3—Downside Scenario.** The final underlying value is 30, resulting in a -70% underlying return. In this example, the final underlying value is **less than** the final buffer value.

Payment at maturity per security = \$1,000 + [\$1,000 × (the underlying return + the buffer percentage)]

= \$1,000 + [\$1,000 × (-70% + 15%)]

= \$1,000 + [\$1,000 × -55%]

= \$1,000 + -\$550

= \$450

In this scenario, the underlying has depreciated from the initial underlying value to the final underlying value by more than the buffer percentage. As a result, your total return at maturity in this scenario would be negative and would reflect 1-to-1 exposure to the negative performance of the underlying beyond the buffer percentage.

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## Summary Risk Factors

An investment in the securities is significantly riskier than an investment in conventional debt securities. The securities are subject to all of the risks associated with an investment in our conventional debt securities (guaranteed by Citigroup Inc.), including the risk that we and Citigroup Inc. may default on our obligations under the securities, and are also subject to risks associated with the underlying. Accordingly, the securities are suitable only for investors who are capable of understanding the complexities and risks of the securities. You should consult your own financial, tax and legal advisors as to the risks of an investment in the securities and the suitability of the securities in light of your particular circumstances.

The following is a summary of certain key risk factors for investors in the securities. You should read this summary together with the more detailed description of risks relating to an investment in the securities contained in the section “Risk Factors Relating to the Securities” beginning on page EA-7 in the accompanying product supplement. You should also carefully read the risk factors included in the accompanying prospectus supplement and in the documents incorporated by reference in the accompanying prospectus, including Citigroup Inc.’s most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q, which describe risks relating to the business of Citigroup Inc. more generally.

**You may lose a significant portion of your investment.** Unlike conventional debt securities, the securities do not repay a fixed amount of principal at maturity. Instead, your payment at maturity will depend on the performance of the underlying. If the underlying depreciates by more than the buffer percentage from the initial underlying value to the final underlying value, you will lose 1% of the stated principal amount of your securities for every 1% by which that depreciation exceeds the buffer percentage.

**The securities do not pay interest.** Unlike conventional debt securities, the securities do not pay interest or any other amounts prior to maturity. You should not invest in the securities if you seek current income during the term of the securities.

**You will not receive dividends or have any other rights with respect to the underlying.** You will not receive any dividends with respect to the underlying. This lost dividend yield may be significant over the term of the securities. The payment scenarios described in this pricing supplement do not show any effect of lost dividend yield over the term of the securities. In addition, you will not have voting rights or any other rights with respect to the underlying or the stocks included in the underlying.

**Your payment at maturity depends on the closing value of the underlying on a single day.** Because your payment at maturity depends on the closing value of the underlying solely on the valuation date, you are subject to the risk that the closing value of the underlying on that day may be lower, and possibly significantly lower, than on one or more other dates during the term of the securities. If you had invested directly in the underlying or in another instrument linked to the underlying that you could sell for full value at a time selected by you, or if the payment at maturity were



based on an average of closing values of the underlying, you might have achieved better returns.

**The securities are subject to the credit risk of Citigroup Global Markets Holdings Inc. and Citigroup Inc.** If we default on our obligations under the securities and Citigroup Inc. defaults on its guarantee obligations, you may not receive anything owed to you under the securities.

**The securities will not be listed on any securities exchange and you may not be able to sell them prior to maturity.** The securities will not be listed on any securities exchange. Therefore, there may be little or no secondary market for the securities. CGMI currently intends to make a secondary market in relation to the securities and to provide an indicative bid price for the securities on a daily basis. Any indicative bid price for the securities provided by CGMI will be determined in CGMI's sole discretion, taking into account prevailing market conditions and other relevant factors, and will not be a representation by CGMI that the securities can be sold at that price, or at all. CGMI may suspend or terminate making a market and providing indicative bid prices without notice, at any time and for any reason. If CGMI suspends or terminates making a market, there may be no secondary market at all for the securities because it is likely that CGMI will be the only broker-dealer that is willing to buy your securities prior to maturity. Accordingly, an investor must be prepared to hold the securities until maturity.

**The estimated value of the securities on the pricing date, based on CGMI's proprietary pricing models and our internal funding rate, is less than the issue price.** The difference is attributable to certain costs associated with selling, structuring and hedging the securities that are included in the issue price. These costs include (i) any selling concessions or other fees paid in connection with the offering of the securities, (ii) hedging and other costs incurred by us and our affiliates in connection with the offering of the securities and (iii) the expected profit (which may be more or less than actual profit) to CGMI or other of our affiliates in connection with hedging our obligations under the securities. These costs adversely affect the economic terms of the securities because, if they were lower, the economic terms of the securities would be more favorable to you. The economic terms of the securities are also likely to be adversely affected by the use of our internal funding rate, rather than our secondary market rate, to price the securities. See "The estimated value of the securities would be lower if it were calculated based on our secondary market rate" below.

**The estimated value of the securities was determined for us by our affiliate using proprietary pricing models.** CGMI derived the estimated value disclosed on the cover page of this pricing supplement from its proprietary pricing models. In doing so, it may have made discretionary judgments about the inputs to its models, such as the volatility of the closing value of the underlying, the dividend yield on the underlying and interest rates. CGMI's views on these inputs may differ from your or others' views, and as an underwriter in this offering, CGMI's interests may conflict with yours. Both the models and the inputs to the

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models may prove to be wrong and therefore not an accurate reflection of the value of the securities. Moreover, the estimated value of the securities set forth on the cover page of this pricing supplement may differ from the value that we or our affiliates may determine for the securities for other purposes, including for accounting purposes. You should not invest in the securities because of the estimated value of the securities. Instead, you should be willing to hold the securities to maturity irrespective of the initial estimated value.

**The estimated value of the securities would be lower if it were calculated based on our secondary market rate.**

The estimated value of the securities included in this pricing supplement is calculated based on our internal funding rate, which is the rate at which we are willing to borrow funds through the issuance of the securities. Our internal funding rate is generally lower than our secondary market rate, which is the rate that CGMI will use in determining the value of the securities for purposes of any purchases of the securities from you in the secondary market. If the estimated value included in this pricing supplement were based on our secondary market rate, rather than our internal funding rate, it would likely be lower. We determine our internal funding rate based on factors such as the costs associated with the securities, which are generally higher than the costs associated with conventional debt securities, and our liquidity needs and preferences. Our internal funding rate is not an interest rate that is payable on the securities.

Because there is not an active market for traded instruments referencing our outstanding debt obligations, CGMI determines our secondary market rate based on the market price of traded instruments referencing the debt obligations of Citigroup Inc., our parent company and the guarantor of all payments due on the securities, but subject to adjustments that CGMI makes in its sole discretion. As a result, our secondary market rate is not a market-determined measure of our creditworthiness, but rather reflects the market's perception of our parent company's creditworthiness as adjusted for discretionary factors such as CGMI's preferences with respect to purchasing the securities prior to maturity.

**The estimated value of the securities is not an indication of the price, if any, at which CGMI or any other person may be willing to buy the securities from you in the secondary market.** Any such secondary market price will fluctuate over the term of the securities based on the market and other factors described in the next risk factor. Moreover, unlike the estimated value included in this pricing supplement, any value of the securities determined for purposes of a secondary market transaction will be based on our secondary market rate, which will likely result in a lower value for the securities than if our internal funding rate were used. In addition, any secondary market price for the securities will be reduced by a bid-ask spread, which may vary depending on the aggregate stated principal amount of the securities to be purchased in the secondary market transaction, and the expected cost of unwinding related hedging transactions. As a result, it is likely that any secondary market price for the securities will be less than the issue price.

**The value of the securities prior to maturity will fluctuate based on many unpredictable factors.** The value of your securities prior to maturity will fluctuate based on the closing value of the underlying, the volatility of the closing value of the underlying, the dividend yield on the underlying, interest rates generally, the time remaining to maturity and our and Citigroup Inc.'s creditworthiness, as reflected in our secondary market rate, among other factors described under "Risk Factors Relating to the Securities—Risk Factors Relating to All Securities—The value of your securities prior to maturity will fluctuate based on many unpredictable factors" in the accompanying product supplement. Changes in the closing value of the underlying may not result in a comparable change in the value of your securities. You should understand that the value of your securities at any time prior to maturity may be

significantly less than the issue price.

**Immediately following issuance, any secondary market bid price provided by CGMI, and the value that will be indicated on any brokerage account statements prepared by CGMI or its affiliates, will reflect a temporary upward adjustment.** The amount of this temporary upward adjustment will steadily decline to zero over the temporary adjustment period. See “Valuation of the Securities” in this pricing supplement.

**The underlying is subject to risks associated with non-U.S. markets.** Foreign equity securities involve risks associated with the securities markets in foreign countries, including risks of volatility in those markets, governmental intervention in those markets and cross-shareholdings in companies in certain countries. There is also generally less publicly available information about foreign companies than about U.S. companies that are subject to the reporting requirements of the Securities and Exchange Commission, and foreign companies are subject to accounting, auditing and financial reporting standards and requirements different from those applicable to U.S. reporting companies. The prices of securities in foreign markets may be affected by political, economic, financial and social factors in those countries, or global regions, including changes in government, economic and fiscal policies and currency exchange laws. Moreover, the economies in such countries may differ unfavorably from the economy in the United States in such respects as growth of gross national product, rate of inflation, capital reinvestment, resources and self-sufficiency.

**The performance of the underlying will not be adjusted for changes in the exchange rate between the euro and the U.S. dollar.** The underlying is composed of stocks traded in euro, the value of which may be subject to a high degree of fluctuation relative to the U.S. dollar. However, the performance of the underlying and the value of your securities will not be adjusted for exchange rate fluctuations. If the euro appreciates relative to the U.S. dollar over the term of the securities, the performance of the underlying as measured for purposes of the securities will be less than it would have been if it offered exposure to that appreciation in addition to the change in the prices of the stocks included in the underlying.

**Our offering of the securities is not a recommendation of the underlying.** The fact that we are offering the securities does not mean that we believe that investing in an instrument linked to the underlying is likely to achieve favorable returns. In fact, as we are

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part of a global financial institution, our affiliates may have positions (including short positions) in the underlying or in instruments related to the underlying, and may publish research or express opinions, that in each case are inconsistent with an investment linked to the underlying. These and other activities of our affiliates may affect the closing value of the underlying in a way that negatively affects the value of and your return on the securities.

**The closing value of the underlying may be adversely affected by our or our affiliates' hedging and other trading activities.** We expect to hedge our obligations under the securities through CGMI or other of our affiliates, who may take positions in the underlying or in financial instruments related to the underlying and may adjust such positions during the term of the securities. Our affiliates also take positions in the underlying or in financial instruments related to the underlying on a regular basis (taking long or short positions or both), for their accounts, for other accounts under their management or to facilitate transactions on behalf of customers. These activities could affect the closing value of the underlying in a way that negatively affects the value of and your return on the securities. They could also result in substantial returns for us or our affiliates while the value of the securities declines.

**We and our affiliates may have economic interests that are adverse to yours as a result of our affiliates' business activities.** Our affiliates engage in business activities with a wide range of companies. These activities include extending loans, making and facilitating investments, underwriting securities offerings and providing advisory services. These activities could involve or affect the underlying in a way that negatively affects the value of and your return on the securities. They could also result in substantial returns for us or our affiliates while the value of the securities declines. In addition, in the course of this business, we or our affiliates may acquire non-public information, which will not be disclosed to you.

**The calculation agent, which is an affiliate of ours, will make important determinations with respect to the securities.** If certain events occur during the term of the securities, such as market disruption events and other events with respect to the underlying, CGMI, as calculation agent, will be required to make discretionary judgments that could significantly affect your return on the securities. In making these judgments, the calculation agent's interests as an affiliate of ours could be adverse to your interests as a holder of the securities. See "Risks Relating to the Securities—Risks Relating to All Securities—The calculation agent, which is an affiliate of ours, will make important determinations with respect to the securities" in the accompanying product supplement.

**Changes that affect the underlying may affect the value of your securities.** The sponsor of the underlying may at any time make methodological changes or other changes in the manner in which it operates that could affect the value of the underlying. We are not affiliated with the underlying sponsor and, accordingly, we have no control over any changes such sponsor may make. Such changes could adversely affect the performance of the underlying and the value of and your return on the securities.

**The U.S. federal tax consequences of an investment in the securities are unclear.** There is no direct legal authority regarding the proper U.S. federal tax treatment of the securities, and we do not plan to request a ruling from the Internal Revenue Service (the "IRS"). Consequently, significant aspects of the tax treatment of the securities are uncertain, and the IRS or a court might not agree with the treatment of the securities as prepaid forward contracts. If the IRS were successful in asserting an alternative treatment of the securities, the tax consequences of the ownership and disposition of the securities might be materially and adversely affected. Moreover, future legislation, Treasury

regulations or IRS guidance could adversely affect the U.S. federal tax treatment of the securities, possibly retroactively.

If you are a non-U.S. investor, you should review the discussion of withholding tax issues in “United States Federal Tax Considerations—Non-U.S. Holders” below.

You should read carefully the discussion under “United States Federal Tax Considerations” and “Risk Factors Relating to the Securities” in the accompanying product supplement and “United States Federal Tax Considerations” in this pricing supplement. You should also consult your tax adviser regarding the U.S. federal tax consequences of an investment in the securities, as well as tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

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#### Information About the EURO STOXX 50® Index

The EURO STOXX 50® Index is composed of 50 component stocks of market sector leaders from within the 19 EURO STOXX Supersector indices, which represent the Eurozone portion of the STOXX Europe 600® Supersector indices. The STOXX Europe 600® Supersector indices contain the 600 largest stocks traded on the major exchanges of 18 European countries. The EURO STOXX 50® Index is calculated and maintained by STOXX Limited.

Please refer to the section “Equity Index Descriptions—The EURO STOXX 50® Index” in the accompanying underlying supplement for additional information.

We have derived all information regarding the EURO STOXX 50® Index from publicly available information and have not independently verified any information regarding the EURO STOXX 50® Index. This pricing supplement relates only to the securities and not to the EURO STOXX 50® Index. We make no representation as to the performance of the EURO STOXX 50® Index over the term of the securities.

The securities represent obligations of Citigroup Global Markets Holdings Inc. (guaranteed by Citigroup Inc.) only. The sponsor of the EURO STOXX 50® Index is not involved in any way in this offering and has no obligation relating to the securities or to holders of the securities.

#### Historical Information

The closing value of the EURO STOXX 50® Index on December 17, 2018 was 3,063.65.

The graph below shows the closing value of the EURO STOXX 50® Index for each day such value was available from January 2, 2008 to December 17, 2018. We obtained the closing values from Bloomberg L.P., without independent verification. You should not take historical closing values as an indication of future performance.

#### **EURO STOXX 50® Index – Historical Closing Values January 2, 2008 to December 17, 2018**

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## United States Federal Tax Considerations

You should read carefully the discussion under “United States Federal Tax Considerations” and “Risk Factors Relating to the Securities” in the accompanying product supplement and “Summary Risk Factors” in this pricing supplement.

In the opinion of our counsel, Davis Polk & Wardwell LLP, a security should be treated as a prepaid forward contract for U.S. federal income tax purposes. By purchasing a security, you agree (in the absence of an administrative determination or judicial ruling to the contrary) to this treatment. There is uncertainty regarding this treatment, and the IRS or a court might not agree with it. Moreover, our counsel’s opinion is based on market conditions as of the date of this preliminary pricing supplement and is subject to confirmation on the pricing date.

Assuming this treatment of the securities is respected and subject to the discussion in “United States Federal Tax Considerations” in the accompanying product supplement, the following U.S. federal income tax consequences should result under current law:

You should not recognize taxable income over the term of the securities prior to maturity, other than pursuant to a sale or exchange.

Upon a sale or exchange of a security (including retirement at maturity), you should recognize capital gain or loss equal to the difference between the amount realized and your tax basis in the security. Such gain or loss should be long-term capital gain or loss if you held the security for more than one year.

We do not plan to request a ruling from the IRS regarding the treatment of the securities. An alternative characterization of the securities could materially and adversely affect the tax consequences of ownership and disposition of the securities, including the timing and character of income recognized. In addition, the U.S. Treasury Department and the IRS have requested comments on various issues regarding the U.S. federal income tax treatment of “prepaid forward contracts” and similar financial instruments and have indicated that such transactions may be the subject of future regulations or other guidance. Furthermore, members of Congress have proposed legislative changes to the tax treatment of derivative contracts. Any legislation, Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the securities, possibly with retroactive effect. You should consult your tax adviser regarding possible alternative tax treatments of the securities and potential changes in applicable law.

**Non-U.S. Holders.** Subject to the discussions below and in “United States Federal Tax Considerations” in the accompanying product supplement, if you are a Non-U.S. Holder (as defined in the accompanying product supplement) of the securities, you generally should not be subject to U.S. federal withholding or income tax in respect

of any amount paid to you with respect to the securities, provided that (i) income in respect of the securities is not effectively connected with your conduct of a trade or business in the United States, and (ii) you comply with the applicable certification requirements.

As discussed under “United States Federal Tax Considerations—Tax Consequences to Non-U.S. Holders” in the accompanying product supplement, Section 871(m) of the Code and Treasury regulations promulgated thereunder (“Section 871(m)”) generally impose a 30% withholding tax on dividend equivalents paid or deemed paid to Non-U.S. Holders with respect to certain financial instruments linked to U.S. equities (“U.S. Underlying Equities”) or indices that include U.S. Underlying Equities. Section 871(m) generally applies to instruments that substantially replicate the economic performance of one or more U.S. Underlying Equities, as determined based on tests set forth in the applicable Treasury regulations. However, the regulations, as modified by an IRS notice, exempt financial instruments issued prior to January 1, 2021 that do not have a “delta” of one. Based on the terms of the securities and representations provided by us as of the date of this preliminary pricing supplement, our counsel is of the opinion that the securities should not be treated as transactions that have a “delta” of one within the meaning of the regulations with respect to any U.S. Underlying Equity and, therefore, should not be subject to withholding tax under Section 871(m). However, the final determination regarding the treatment of the securities under Section 871(m) will be made as of the pricing date for the securities, and it is possible that the securities will be subject to withholding tax under Section 871(m) based on the circumstances as of that date.

A determination that the securities are not subject to Section 871(m) is not binding on the IRS, and the IRS may disagree with this treatment. Moreover, Section 871(m) is complex and its application may depend on your particular circumstances, including your other transactions. You should consult your tax adviser regarding the potential application of Section 871(m) to the securities.

If withholding tax applies to the securities, we will not be required to pay any additional amounts with respect to amounts withheld.

**You should read the section entitled “United States Federal Tax Considerations” in the accompanying product supplement. The preceding discussion, when read in combination with that section, constitutes the full opinion of Davis Polk & Wardwell LLP regarding the material U.S. federal tax consequences of owning and disposing of the securities.**

**You should also consult your tax adviser regarding all aspects of the U.S. federal income and estate tax consequences of an investment in the securities and any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.**

Supplemental Plan of Distribution



CGMI, an affiliate of Citigroup Global Markets Holdings Inc. and the underwriter of the sale of the securities, is acting as principal and will not receive any underwriting fee for any securities sold in this offering. However, CGMI and its affiliates may profit from expected

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hedging activity related to this offering. From these expected hedging profits, CGMI will pay selected dealers participating in the distribution of the securities a structuring fee of up to \$2.50 for each security sold in this offering.

See “Plan of Distribution; Conflicts of Interest” in the accompanying product supplement and “Plan of Distribution” in each of the accompanying prospectus supplement and prospectus for additional information.

### Valuation of the Securities

CGMI calculated the estimated value of the securities set forth on the cover page of this pricing supplement based on proprietary pricing models. CGMI’s proprietary pricing models generated an estimated value for the securities by estimating the value of a hypothetical package of financial instruments that would replicate the payout on the securities, which consists of a fixed-income bond (the “bond component”) and one or more derivative instruments underlying the economic terms of the securities (the “derivative component”). CGMI calculated the estimated value of the bond component using a discount rate based on our internal funding rate. CGMI calculated the estimated value of the derivative component based on a proprietary derivative-pricing model, which generated a theoretical price for the instruments that constitute the derivative component based on various inputs, including the factors described under “Summary Risk Factors—The value of the securities prior to maturity will fluctuate based on many unpredictable factors” in this pricing supplement, but not including our or Citigroup Inc.’s creditworthiness. These inputs may be market-observable or may be based on assumptions made by CGMI in its discretionary judgment.

The estimated value of the securities is a function of the terms of the securities and the inputs to CGMI’s proprietary pricing models. As of the date of this preliminary pricing supplement, it is uncertain what the estimated value of the securities will be on the pricing date because certain terms of the securities have not yet been fixed and because it is uncertain what the values of the inputs to CGMI’s proprietary pricing models will be on the pricing date.

For a period of approximately three months following issuance of the securities, the price, if any, at which CGMI would be willing to buy the securities from investors, and the value that will be indicated for the securities on any brokerage account statements prepared by CGMI or its affiliates (which value CGMI may also publish through one or more financial information vendors), will reflect a temporary upward adjustment from the price or value that would otherwise be determined. This temporary upward adjustment represents a portion of the hedging profit expected to be realized by CGMI or its affiliates over the term of the securities. The amount of this temporary upward adjustment will decline to zero on a straight-line basis over the three-month temporary adjustment period. However, CGMI is not obligated to buy the securities from investors at any time. See “Summary Risk Factors—The securities will not be listed on any securities exchange and you may not be able to sell them prior to maturity.”

### Certain Selling Restrictions

Hong Kong Special Administrative Region

The contents of this pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus have not been reviewed by any regulatory authority in the Hong Kong Special Administrative Region of the People's Republic of China ("Hong Kong"). Investors are advised to exercise caution in relation to the offer. If investors are in any doubt about any of the contents of this pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus, they should obtain independent professional advice.

The securities have not been offered or sold and will not be offered or sold in Hong Kong by means of any document, other than

- (i) to persons whose ordinary business is to buy or sell shares or debentures (whether as principal or agent); or
- (ii) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the "Securities and Futures Ordinance") and any rules made under that Ordinance; or

in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (iii) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance; and

There is no advertisement, invitation or document relating to the securities which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Non-insured Product: These securities are not insured by any governmental agency. These securities are not bank deposits and are not covered by the Hong Kong Deposit Protection Scheme.

Singapore

This pricing supplement and the accompanying product supplement, underlying supplement, prospectus supplement and prospectus have not been registered as a prospectus with the Monetary Authority of Singapore, and the securities

will be offered pursuant to exemptions under the Securities and Futures Act, Chapter 289 of Singapore (the “Securities and Futures Act”). Accordingly, the

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Citigroup Global Markets Holdings Inc.

securities may not be offered or sold or made the subject of an invitation for subscription or purchase nor may this pricing supplement or any other document or material in connection with the offer or sale or invitation for subscription or purchase of any securities be circulated or distributed, whether directly or indirectly, to any person in Singapore other than (a) to an institutional investor pursuant to Section 274 of the Securities and Futures Act, (b) to a relevant person under Section 275(1) of the Securities and Futures Act or to any person pursuant to Section 275(1A) of the Securities and Futures Act and in accordance with the conditions specified in Section 275 of the Securities and Futures Act, or (c) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the Securities and Futures Act. Where the securities are subscribed or purchased under Section 275 of the Securities and Futures Act by a relevant person which is:

a corporation (which is not an accredited investor (as defined in Section 4A of the Securities and Futures Act)) the (a) sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an individual who is an accredited investor, securities (as defined in Section 239(1) of the Securities and Futures Act) of that corporation or the beneficiaries' rights and interests (howsoever described) in that trust shall not be transferable for 6 months after that corporation or that trust has acquired the relevant securities pursuant to an offer under Section 275 of the Securities and Futures Act except:

to an institutional investor or to a relevant person defined in Section 275(2) of the Securities and Futures Act or to (i) any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the Securities and Futures Act; or

(ii) where no consideration is or will be given for the transfer; or

(iii) where the transfer is by operation of law; or

(iv) pursuant to Section 276(7) of the Securities and Futures Act; or

(v) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Any securities referred to herein may not be registered with any regulator, regulatory body or similar organization or institution in any jurisdiction.

The securities are Specified Investment Products (as defined in the Notice on Recommendations on Investment Products and Notice on the Sale of Investment Product issued by the Monetary Authority of Singapore on 28 July 2011) that is neither listed nor quoted on a securities market or a futures market.

Non-insured Product: These securities are not insured by any governmental agency. These securities are not bank deposits. These securities are not insured products subject to the provisions of the Deposit Insurance and Policy Owners' Protection Schemes Act 2011 of Singapore and are not eligible for deposit insurance coverage under the Deposit Insurance Scheme.

#### Contact

Clients may contact their local brokerage representative. Third-party distributors may contact Citi Structured Investment Sales at (212) 723-7005.

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137,270

125,069

Investments

75,289

69,215

Deferred income taxes

2,064

2,046

Other assets

8,834

7,926

Total Assets

\$

1,880,643

\$

1,761,661

Liabilities and Shareholders' Equity



Current Liabilities

Current portion of long-term debt

\$

20,000

\$

20,000

Accounts payable

97,417

89,774

Accrued compensation and benefits

47,929

66,322

Accrued income taxes payable

18,780

17,392

Other accrued liabilities

41,174

42,979

Total Current Liabilities

225,300

236,467

Long-term debt

517,144

419,013

Deferred income taxes

29,205

27,241

Other liabilities

65,406

54,629

Total Liabilities

837,055

737,350

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 - 76,074,972 shares at September 30, 2018;  
75,692,683 shares at June 30, 2018

360,276

351,761

Accumulated other comprehensive income (loss)

(14,379

)

(3,780

)

Retained earnings

862,213

836,064

1,208,110

1,184,045

Treasury stock, at cost - 12,496,873 shares at September 30, 2018 and 12,395,791 shares at June 30, 2018

(164,522

)

(159,734

)

Total Shareholders' Equity

1,043,588

1,024,311

Total Liabilities and Shareholders' Equity

\$

1,880,643

\$

1,761,661

- See notes to condensed consolidated financial statements.

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## II-VI Incorporated and Subsidiaries

## Condensed Consolidated Statements of Earnings (Unaudited)

(\$000 except per share data)

	Three Months Ended September 30,	
	2018	2017
Revenues	\$314,433	\$261,503
Costs, Expenses and Other Expense (Income)		
Cost of goods sold	190,526	155,528
Internal research and development	33,171	25,574
Selling, general and administrative	53,523	50,624
Interest expense	5,584	3,645
Other expense (income), net	(713 )	(767 )
Total Costs, Expenses and Other Expense (Income)	282,091	234,604
Earnings Before Income Taxes	32,342	26,899
Income Taxes	6,193	5,758
Net Earnings	\$26,149	\$21,141
Basic Earnings Per Share	\$0.41	\$0.34
Diluted Earnings Per Share	\$0.40	\$0.32

- See notes to condensed consolidated financial statements.

II-VI Incorporated and Subsidiaries

Condensed Consolidated Statements of Comprehensive Income (Unaudited)

(\$000)

	Three Months Ended September 30,	
	2018	2017
Net earnings	\$26,149	\$21,141
Other comprehensive income (loss):		
Foreign currency translation adjustments	(10,651)	11,097
Pension adjustment, net of taxes of \$15 and \$23 for the three months ended, respectively	52	82
Comprehensive income	\$15,550	\$32,320

- See notes to condensed consolidated financial statements.

## II-VI Incorporated and Subsidiaries

## Condensed Consolidated Statements of Cash Flows (Unaudited)

(\$000)

	Three Months Ended September 30,	
	2018	2017
<b>Cash Flows from Operating Activities</b>		
Net earnings	\$26,149	\$21,141
Adjustments to reconcile net earnings to net cash provided by operating activities:		
Depreciation	18,472	15,219
Amortization	3,698	3,597
Share-based compensation expense	3,255	4,250
Loss (gain) on foreign currency remeasurements and transactions	1,412	(496 )
Earnings from equity investment	(1,594 )	(270 )
Deferred income taxes	(1,598 )	(2,995 )
Increase (decrease) in cash from changes in (net of effect of acquisitions):		
Accounts receivable	(10,479 )	2,716
Inventories	(13,637 )	(13,891 )
Accounts payable	5,135	2,542
Income taxes	(3,404 )	235
Accrued compensation and benefits	(17,981 )	(16,434 )
Other operating net assets	9,577	(3,231 )
Net cash provided by operating activities	19,005	12,383
<b>Cash Flows from Investing Activities</b>		
Additions to property, plant & equipment	(35,902 )	(37,426 )
Purchases of businesses, net of cash acquired	(45,229 )	(79,465 )
Purchase of equity investment	(4,480 )	-
Other investing activities	36	136
Net cash used in investing activities	(85,575 )	(116,755 )
<b>Cash Flows from Financing Activities</b>		
Proceeds from issuance of 0.25% convertible senior notes due 2022	-	345,000
Proceeds from borrowings under Credit Facility	120,000	40,000
Payments on borrowings under Credit Facility	(25,000 )	(257,000 )
Payment on earnout consideration	(2,500 )	-
Purchases of treasury stock	-	(49,875 )
Proceeds from exercises of stock options	5,042	3,706
Payments in satisfaction of employees' minimum tax obligations	(4,570 )	(3,608 )
Debt issuance costs	-	(10,061 )
Net provided by financing activities	92,972	68,162
Effect of exchange rate changes on cash and cash equivalents	(2,097 )	5,607
Net increase (decrease) in cash and cash equivalents	24,305	(30,603 )
Cash and Cash Equivalents at Beginning of Period	247,038	271,888
Cash and Cash Equivalents at End of Period	\$271,343	\$241,285
Cash paid for interest	\$2,417	\$2,196

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Cash paid for income taxes	\$5,420	\$6,167
Non cash transactions:		
Additions to property, plant & equipment included in accounts payable	\$11,329	\$3,925

- See notes to condensed consolidated financial statements.

## e II-VI Incorporated and Subsidiaries

## Condensed Consolidated Statement of Shareholders' Equity (Unaudited)

(000)

	Common Stock		Accumulated Other Comprehensive Income	Retained Earnings	Treasury Stock		Total
	Shares	Amount	(Loss)		Shares	Amount	
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	382	8,515	-	-	(101 )	(4,788 )	3,727
Net earnings	-	-	-	26,149	-	-	26,149
Foreign currency translation adjustments	-	-	(10,651 )	-	-	-	(10,651 )
Pension adjustment, net of taxes of \$15	-	-	52	-	-	-	52
Balance - September 30, 2018	76,075	\$360,276	\$ (14,379 )	\$862,213	(12,497)	\$(164,522)	\$1,043,588

- See notes to condensed consolidated financial statements.

## II-VI Incorporated and Subsidiaries

### Notes to Condensed Consolidated Financial Statements (Unaudited)

#### Note 1. Basis of Presentation

The condensed consolidated financial statements of II-VI Incorporated (“II-VI”, the “Company”, “we”, “us” or “our”) for the three months ended September 30, 2018 and 2017 are unaudited. In the opinion of management, all adjustments considered necessary for a fair presentation for the periods presented have been included. All adjustments are of a normal recurring nature unless disclosed otherwise. Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) have been condensed or omitted. These condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in the Company’s Annual Report on Form 10-K for the fiscal year ended June 30, 2018. The consolidated results of operations for the three months ended September 30, 2018 are not necessarily indicative of the results to be expected for the full fiscal year. The June 30, 2018 Condensed Consolidated Balance Sheet information was derived from the Company’s audited financial statements.

Effective July 1, 2018, the Company realigned the composition of its operating segments. The Company moved Laser Systems Group from II-VI Laser Solutions to II-VI Photonics and moved Integrated Photonics, Inc. (“IPI”) from II-VI Photonics to II-VI Performance Products. All applicable segment information has been restated to reflect this change.

#### Note 2. Recently Issued Financial Accounting Standards Revenue Recognition Pronouncement

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2014-09, Revenue from Contracts with Customers (Topic 606). The standard requires an entity to recognize revenue in a manner that depicts the transfer of goods or services to customers at an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The Company adopted this standard on July 1, 2018 using the modified retrospective method of adoption. Adoption of the ASU did not require an adjustment to the opening balance of equity. The Company does not expect the standard to have a significant effect on its results of operations, liquidity or financial position in fiscal year 2019. The Company implemented processes and controls to ensure new contracts are reviewed for the appropriate accounting treatment and to generate the disclosures required under the new standard in the first quarter of fiscal year 2019. For the disclosures required by this ASU, see Note 4. Revenue from Contracts with Customers.

#### Other Adopted Pronouncements

In March 2017, the FASB issued ASU 2017-07, Compensation (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. This update affects employers’ presentation of defined benefit retirement plan costs. Early adoption is permitted. The adoption of this standard did not have a material effect on the Company’s Consolidated Financial Statements.

In January 2017, the FASB issued ASU 2017-01, Business Combinations (Topic 805): Clarifying the Definition of a Business. This update changes the definition of a business to assist entities with evaluating when a set of transferred assets and activities is a business. The adoption of this standard did not have a material effect on the Company’s

Consolidated Financial Statements.

In October 2016, the FASB issued ASU 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory. This update requires that when intra-entity asset transfers occur, the entity must recognize tax effects in the period in which the transfer occurs. The adoption of this standard did not have a material effect on the Company's Consolidated Financial Statements.

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. The guidance clarifies how entities should classify certain cash receipts and cash payments on the statement of cash flows. The guidance also clarifies how the predominance principle should be applied when cash receipts and cash payments have aspects of more than one class of cash flow. The adoption of this standard did not have a material effect on the Company's Consolidated Financial Statements.

In January 2016, the FASB issued ASU 2016-01, Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. This update requires entities to measure equity investments at fair value and recognize any changes in fair value in net income. The adoption of this standard did not have a material effect on the Company's Consolidated Financial Statements.

## Pronouncements Currently Under Evaluation

In August 2018, the FASB issued ASU 2018-15, Intangibles-Goodwill and Other-Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract. ASU 2018-15 aligns the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The standard will be effective for the Company's 2022 fiscal year. Early adoption is permitted. The Company is evaluating the impact of this guidance on the Company's Consolidated Financial Statements.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). This update 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 new standard will become effective for the Company's fiscal year 2020, which begins on July 1, 2019. In July 2018, the FASB issued targeted improvements to this ASU in ASU 2018-11. This update provides entities with an optional transition method, which permits an entity to initially apply the new leases standard at the adoption date and recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption.

The Company has elected to utilize the optional transition method. We have reviewed the requirements of this standard and have formulated a plan for implementation. We are currently working on accumulating a complete population of leases from all of our locations and have selected a software repository to track all of our lease agreements and to assist in the reporting and disclosure requirements required by the standard. We will continue to assess and disclose the impact that this new guidance will have on our consolidated financial statements, disclosures and related controls, when known.

### Note 3. Acquisition CoAdna, Inc.

In September 2018, the Company acquired CoAdna, Holdings, Inc. (TWSE:4984) ("CoAdna"), a publicly traded company on the Taiwan Stock Exchange and headquartered in Sunnyvale, CA, in a cash transaction valued at approximately \$85.0 million, net of cash acquired of approximately \$42.2 million at closing.

CoAdna is a global leader in wavelength selective switches (WSS) based on its patented liquid crystal platform. CoAdna operates within the Company's II-VI Photonics operating segment. Due to the timing of the acquisition, the Company is still in the process of measuring the fair value of assets acquired and liabilities assumed, including tangible and intangible assets and related deferred income taxes.

The following table presents the preliminary allocation of the purchase price of the assets acquired and liabilities assumed at the date of acquisition, as the Company intends to finalize its accounting for the acquisition of CoAdna within one year from the date of acquisition (\$000):

Assets	
Accounts receivable	\$ 5,684
Inventories	6,189
Prepaid and other assets	2,866
Property, plant & equipment	3,181
Intangible assets	16,072
Goodwill	24,844
Total assets acquired	\$ 58,836



<b>Liabilities</b>	
Accounts payable	\$ 4,006
Other accrued liabilities	2,717
Accrued income taxes	5,791
Deferred tax liabilities	3,506
<b>Total liabilities assumed</b>	<b>16,020</b>
Net assets acquired	\$ 42,816

The goodwill of \$24.8 million is included in the II-VI Photonics segment and is attributed to the expected synergies and the assembled workforce of CoAdna. None of the goodwill is deductible for income tax purposes. The fair value of accounts receivable acquired was \$5.7 million and the gross contractual amount being \$5.7 million. The Company expensed transaction costs of \$1.9 million for the three months ended September 30, 2018.

The amount of revenues of CoAdna included in the Company's Condensed Consolidated Statement of Earnings for the three months ended September 30, 2018 was \$3.0 million. The amount of net earnings of CoAdna included in the Company's Consolidated Statement of Earnings for the three months ended September 30, 2018 was immaterial.

#### Note 4. Revenue from Contracts with Customers

As discussed in Note 2, the Company adopted ASU 2014-09, Revenue from Contracts with Customers (Topic 606), on July 1, 2018 using the modified retrospective method of adoption. Adoption of the ASU did not require an adjustment to the opening balance of equity and did not materially change the Company's amount and timing of recognition of revenues. The Company applied the ASU only to contracts that were not completed as of July 1, 2018. The Company has elected to exclude all taxes from the measurement of the transaction price.

Revenue under ASC 606 is recognized 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.

For contracts held with commercial customers, 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 60 days upon transfer of ownership to the customer.

Contracts with the United States ("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 60 days upon 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 60 days.

The Company has elected not to disclose the aggregate amount of the transaction price allocated to unsatisfied performance obligations, as our contracts have an original expected duration of less than one year.

Because the Company's performance obligations have been satisfied and an unconditional right to consideration exists as of the balance sheet date, the Company has recognized amounts due from contracts with customers of \$229.1 million as accounts receivable, net of allowance for doubtful accounts within the Condensed Consolidated Balance Sheet.

#### Costs to Obtain and Fulfill a Contract

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 administration 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 sales.

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 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 and any specific customer collection issues that it has identified.

The Company offers an assurance-type limited warranty that products will be free from defects in materials and workmanship. The warranty is typically one year or the industry standard in length and is limited to either (1) the replacement or repair of the product or (2) a credit against future purchases. The products are not sold with a right of return.

## Disaggregation of Revenue

The following tables summarize disaggregated revenue by revenue market, and product (\$000):

	Three Months Ended September 30, 2018			Total
	II-VI Laser Solutions	II-VI Photonics	II-VI Performance Products	
<b>Commercial</b>				
Direct Ship Parts	\$ 102,870	\$ 133,365	\$ 41,997	\$ 278,232
Services	890	1,791	3,105	5,786
<b>U.S. Government</b>				
Direct Ship Parts	\$ 2,415	\$ -	\$ 24,765	\$ 27,180
Services	-	-	3,235	3,235
<b>Total Revenues</b>	<b>\$ 106,175</b>	<b>\$ 135,156</b>	<b>\$ 73,102</b>	<b>\$ 314,433</b>

## Note 5. Other Investments

## Equity Investment in Privately-Held Company

In November 2017, the Company acquired a 93.8% equity investment in a privately-held company for \$51.5 million. In addition, the Company paid \$0.2 million for a working capital adjustment to that purchase price. The Company's pro-rata share of earnings from this investment for the three months ended September 30, 2018 was \$1.1 million and was recorded in other expense (income), net in the Consolidated Statement of Earnings.

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

Location	Interest Type	Ownership % as of September 30, 2018	Equity as of September 30, 2018 (\$000)
USA	Equity Investment	93.8%	\$ 57,436

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 September 30, 2018 and June 30, 2018, the Company's maximum financial statement exposure related to the Equity Investment was approximately \$57.4 million and \$56.3 million, respectively, which is included in Investments on the Condensed Consolidated Balance Sheet as of September 30, 2018.

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The Company has the right to purchase all of the outstanding interest of each of the minority equity holders and the minority equity holders have the right to cause the Company to purchase all of their outstanding interests at any time on or after the third anniversary of the investment, or earlier upon certain events. The purchase price is equal to the greater of: (a) (i) the product of the aggregate trailing 12-month revenues of the equity investment preceding the date of purchase, multiplied by (ii) a factor of 2.9 multiplied by (iii) a factor of 0.723, multiplied by (iv) the percentage interest owned by each minority equity holder and (b) \$966,666. The Company performed a Monte Carlo simulation to estimate the fair value of the net put option at the investment date and recorded a liability of \$2.2 million in Other long-term liabilities in the Condensed Consolidated Balance Sheet in accordance with ASC 815-10, Derivatives and Hedging. The fair value of the net put option is adjusted as necessary on a quarterly basis, with any changes in the fair value recorded through earnings. The change in fair value of the net purchase option from the investment date to September 30, 2018 was not material.

#### Guangdong Fuxin Electronic Technology Equity Investment

The Company has an equity investment of 20.2% in Guangdong Fuxin Electronic Technology, based in Guangdong Province, China, which is accounted for under the equity method of accounting. The total carrying value of the investment recorded at September 30, 2018 and June 30, 2018 was \$13.4 million and \$12.9 million, respectively. During the three months ended September 30, 2018 and 2017, the Company's pro-rata share of earnings from this investment was \$0.5 million and \$0.3 million, respectively, and was recorded in other expense (income), net in the Condensed Consolidated Statements of Earnings.

#### Other Equity Investment

During the quarter ended September 30, 2018, the Company acquired a 10% equity investment in a privately-held company for \$4.5 million. The Company has determined that the equity interest does not give it the ability to exercise significant influence or joint control, therefore, the Company will not account for this investment under the equity method of accounting. Under ASU 2016-01, Financial Instruments, the Company has elected the measurement alternative as the investment does not have a readily determinable fair value. Under the alternative, the Company will measure the investment at cost, less any impairment, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar investment of the issuer for which there were none during the quarter ended September 30, 2018.

#### Note 6. Inventories

The components of inventories were as follows (\$000):

	September 30, 2018	June 30, 2018
Raw materials	\$ 100,755	\$97,502
Work in progress	86,810	83,002
Finished goods	77,536	67,764
	\$265,101	\$248,268

Note 7. Property, Plant and Equipment

Property, plant and equipment consists of the following (\$000):

	September 30, 2018	June 30, 2018
Land and land improvements	\$9,050	\$9,072
Buildings and improvements	218,477	216,507
Machinery and equipment	658,702	633,934
Construction in progress	92,575	88,350
	978,804	947,863
Less accumulated depreciation	(437,285)	(422,973)
	\$541,519	\$524,890

## Note 8. Goodwill and Other Intangible Assets

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

	Three Months Ended September 30, 2018			
	II-VI		II- VI	
	Laser	II-VI	Performance	Total
	Solutions	Photonics	Products	
Balance-beginning of period	\$ 103,390	\$ 114,398	\$ 52,890	\$ 270,678
Goodwill acquired	-	24,844	4,001	28,845
Segment Realignment (Note 1)	(4,653 )	(4,728 )	9,381	-
Foreign currency translation	(35 )	(1,180 )	-	(1,215 )
Balance-end of period	\$ 98,702	\$ 133,334	\$ 66,272	\$ 298,308

The Company used the relative fair value method to reallocate goodwill to the associated reporting units in connection with the realignment of its composition of operating segments as described in Note 1.

The gross carrying amount and accumulated amortization of the Company's intangible assets other than goodwill as of September 30, 2018 and June 30, 2018 were as follows (\$000):

	September 30, 2018			June 30, 2018		
	Gross Carrying Amount	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Technology and Patents	\$ 76,245	\$ (34,084 )	\$ 42,161	\$ 66,812	\$ (32,979 )	\$ 33,833
Trademarks	15,757	(1,503 )	14,254	15,882	(1,471 )	14,411
Customer Lists	133,594	(52,744 )	80,850	127,603	(50,792 )	76,811
Other	1,573	(1,568 )	5	1,573	(1,559 )	14
Total	\$ 227,169	\$ (89,899 )	\$ 137,270	\$ 211,870	\$ (86,801 )	\$ 125,069

As a result of the July 1, 2018 segment realignment, the Company reviewed the recoverability of the carrying value of goodwill at its reporting units. The Company performed a quantitative test 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. The Company did not record any impairment of goodwill or long-lived assets during the three months ended September 30, 2018, as the quantitative assessment did not indicate deterioration in the fair value of its reporting units.

In conjunction with the acquisition of CoAdna, the Company recorded \$9.8 million attributed to the value of technology and patents and \$6.3 million of customer lists. The intangibles were recorded based on the Company's preliminary purchase price allocation utilizing either a discounted cash flow or relief from royalty method to derive the fair value. The valuation is expected to be finalized within one year from the date of acquisition.

Technology and patents are being amortized over a range of 60 to 240 months, with a weighted average remaining life of approximately 86 months. Customer lists are being amortized over a range of approximately 120 to 240 months with a weighted average remaining life of approximately 136 months. The gross carrying amount of trademarks



includes \$14.0 million of acquired trade names with indefinite lives that are not amortized but tested annually for impairment or more frequently if a triggering event occurs. Included in the gross carrying amount and accumulated amortization of the Company's intangible assets is the effect of foreign currency translation on that portion of the intangible assets relating to the Company's foreign subsidiaries.

At September 30, 2018, the estimated amortization expense for the existing intangible assets for each of the five succeeding fiscal years is as follows (\$000):

Year Ending June 30,	
Remaining 2019	\$ 12,200
2020	16,000
2021	14,700
2022	12,900
2023	12,500

#### Note 9. Debt

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

	September 30, 2018	June 30, 2018
0.25% convertible senior notes	\$ 345,000	\$ 345,000
Convertible senior notes unamortized discount attributable to cash conversion option and debt issuance costs including initial purchaser discount	(53,300 )	(56,409 )
Term loan, interest at LIBOR, as defined, plus 1.75%	60,000	65,000
Line of credit, interest at LIBOR, as defined, plus 1.75%	180,000	80,000
Credit facility unamortized debt issuance costs	(1,035 )	(1,126 )
Yen denominated line of credit, interest at LIBOR, as defined, plus 1.75%	2,645	2,714
Note payable assumed in IPI acquisition	3,834	3,834
Total debt	537,144	439,013
Current portion of long-term debt	(20,000 )	(20,000 )
Long-term debt, less current portion	\$ 517,144	\$ 419,013
0.25% Convertible Senior Notes		

On August 24, 2017, the Company entered into a purchase agreement with Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the several initial purchasers named therein (collectively, the "Initial Purchasers"), to issue and sell \$300 million aggregate principal amount of our 0.25% convertible senior notes due 2022 (the "Notes") in a private placement to qualified institutional buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended. In addition, we granted the Initial Purchasers a 30-day option to purchase up to an additional \$45 million aggregate principal amount of the Notes (the "Over-Allotment Option").

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 Notes using the effective interest method.

The equity component, which amounts to \$56.4 million, net of issuance costs of \$1.7 million, 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 Notes, which is equivalent to an initial conversion price of \$47.06 per share of common stock. Throughout the term of the Notes, the conversion rate may be adjusted upon the occurrence of certain events. The if-converted value of the Notes amounted to \$346.8 million as of September 30, 2018 and \$318.5 million as of June 30, 2018 (based on the Company's closing stock price on the last trading day of the fiscal periods then ended). As of September 30, 2018, the Notes are not yet convertible based upon the Notes' conversion features. Holders of the Notes will not receive any cash payment representing accrued and unpaid interest upon conversion of a 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 Notes for the three months ended September 30, 2018 and 2017:

September 30,	Three Months Ended	
	2018	2017
0.25% contractual coupon	\$ 220	78
Amortization of debt discount and debt issuance costs including initial purchaser discount	3,110	1,107
Interest expense	\$ 3,330	1,185

The effective interest rate on the liability component for both periods presented was 4.5%. The unamortized discount amounted to \$46.6 million as of September 30, 2018 and is being amortized over 4 years.

#### Amended Credit Facility

On July 28, 2016, the Company amended and restated its existing credit agreement. The Third Amended and Restated Credit Agreement (the “Amended Credit Facility”) provides for a revolving credit facility of \$325 million, as well as a \$100 million term loan. The term loan is being repaid in consecutive quarterly principal payments on the first business day of each January, April, July and October, with the first payment having commenced on October 1, 2016, as follows: (i) twenty consecutive quarterly installments of \$5 million and (ii) a final installment of all remaining principal due and payable on the maturity date of July 27, 2021. Amounts borrowed under the revolving credit facility are due and payable on the maturity date. The Amended Credit Facility is unsecured, but is guaranteed by each existing and subsequently acquired or organized wholly-owned domestic subsidiary of the Company. The Company has the option to request an increase to the size of the revolving credit facility in an aggregate additional amount not to exceed \$100 million. The Amended Credit Facility has a five-year term through July 27, 2021 and has an interest rate of either a Base Rate Option or a Euro-Rate Option, plus an Applicable Margin, as defined in the agreement governing the Amended Credit Facility. If the Base Rate option is selected for a borrowing, the Applicable Margin is 0.00% to 1.25% and if the Euro-Rate Option is selected for a borrowing, the Applicable Margin is 1.00% to 2.25%. The Applicable Margin is based on the ratio of the Company’s consolidated indebtedness to consolidated EBITDA. Additionally, the Credit Facility is subject to certain covenants, including those relating to minimum interest coverage and maximum leverage ratios. As of September 30, 2018, the Company was in compliance with all financial covenants under its Amended Credit Facility.

#### Yen Loan

The Company’s Yen denominated line of credit is a 500 million Yen (approximately \$4.4 million) facility. The Yen line of credit matures in August 2020. The interest rate is equal to LIBOR, as defined in the loan agreement, plus 0.625% to 1.75%. At September 30, 2018 and June 30, 2018, the Company had 300 million Yen borrowed. Additionally, the facility is subject to certain covenants, including those relating to minimum interest coverage and maximum leverage ratios. As of September 30, 2018, the Company was in compliance with all financial covenants under its Yen facility.

#### Note Payable

In conjunction with the acquisition of IPI, the Company assumed a non-interest bearing note payable owed to a major customer of IPI. The agreement if not terminated early by either party is payable in full in January 2020.

#### Aggregate Availability

The Company had aggregate availability of \$146.3 million and \$246.4 million under its lines of credit as of September 30, 2018 and June 30, 2018, respectively. The amounts available under the Company's lines of credit are reduced by outstanding letters of credit. The total outstanding letters of credit supported by these credit facilities were \$0.4 million as of September 30, 2018 and June 30, 2018.

#### Weighted Average Interest Rate

The weighted average interest rate of total borrowings was 1.5% and 1.8% for the three months ended September 30, 2018 and 2017, respectively.

## Remaining Annual Principal Payments

Remaining annual principal payments under the Company's existing credit obligations from September 30, 2018 were as follows:

			U.S. Dollar			
	Term	Yen Line of Credit	Line of Credit	Note Payable	Convertible Notes	Total
Year 1	\$20,000	\$-	\$-	\$-	\$-	\$20,000
Year 2	20,000	2,645	-	3,834	-	26,479
Year 3	20,000	-	180,000	-	-	200,000
Year 4	-	-	-	-	345,000	345,000
Total	\$60,000	\$2,645	\$180,000	\$3,834	\$345,000	\$591,479

## Note 10. Income Taxes

The Company's year-to-date effective income tax rate at September 30, 2018 and 2017 was 19.1% and 21.4%, respectively. The variations between the Company's effective tax rate and the U.S. statutory rate of 21% were primarily due to the impact of the U.S. enacted tax legislation and earnings generated from the Company's foreign operations, which are subject to income taxes at lower statutory rates. The current year's effective income tax rate benefited from the reversal of certain U.S. valuation allowances as the result of the acquisition of CoAdna and the recognition of deferred tax liabilities relating to CoAdna's purchase price allocation.

U.S. GAAP prescribes the accounting for uncertainty in income taxes recognized in an enterprise's financial statements which includes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. As of September 30, 2018 and June 30, 2018, the Company's gross unrecognized income tax benefit was \$13.8 million and \$9.9 million, respectively. The Company has classified the uncertain tax positions as noncurrent income tax liabilities, as the amounts are not expected to be paid within one year. If recognized, \$5.7 million of the gross unrecognized tax benefits at September 30, 2018 would impact the effective tax rate. The Company recognizes interest and penalties related to uncertain tax positions in the income tax provision on the Condensed Consolidated Statements of Earnings. The amount of accrued interest and penalties included in the gross unrecognized income tax benefit was \$0.7 million and \$0.6 million, at September 30, 2018 and June 30, 2018, respectively. Fiscal years 2015 to 2018 remain open to examination by the U.S. Internal Revenue Service, fiscal years 2014 to 2018 remain open to examination by certain state jurisdictions, and fiscal years 2009 to 2018 remain open to examination by certain foreign taxing jurisdictions. The Company is currently under examination for the U.S. Federal income tax return for the year ended June 30, 2016; certain subsidiary companies in the Philippines for the year ended June 30, 2017; Germany for the years ended June 2012 through June 2015; and New Jersey for the years ended 2014 through June 30, 2017. The Company believes its income tax reserves for these tax matters are adequate.

## 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. The Company continues to account for the transition from a worldwide to a territorial tax system impact as an estimated amount, pending further information and analysis, which includes analysis of foreign earnings and profits and interpretive U.S. Internal Revenue Service guidance. At this time, the Company has not made any material adjustments to the provisional impact recorded in its June 30, 2018 financial statements related to the Tax Act, and the Company continues to expect to finalize the provisional amount during the quarter ended December 31, 2018.

Furthermore, the Tax Act includes certain changes such as introducing a new category of income, referred to as global intangible low tax income, 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. These changes are included in the Company’s 2019 fiscal year income tax expense.

## Note 11. Earnings Per Share

The following table sets forth the computation of earnings per share for the periods indicated. Basic net income per share has been computed using the weighted average number of shares of Common Stock outstanding during the period. Diluted net income 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. The Company's convertible debt calculated under the If-Converted method was anti-dilutive for the three months ended September 30, 2018 and was excluded from the calculation of earnings per share. (\$000 except per share data):

	Three Months Ended September 30, 2018      2017	
Net earnings	\$26,149	\$21,141
Divided by:		
Weighted average shares	63,420	62,744
Basic earnings per common share	\$0.41	\$0.34
Net earnings	\$26,149	\$21,141
Divided by:		
Weighted average shares	63,420	62,744
Dilutive effect of common stock equivalents	2,738	2,539
Diluted weighted average common shares	66,158	65,283
Diluted earnings per common share	\$0.40	\$0.32

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 anti-dilutive (\$000):

	Three Months Ended September 30, 2018      2017	
Stock options and restricted shares	111	87
0.25% convertible senior notes due 2022	7,331	-
Total anti-dilutive shares	7,442	87

## Note 12. Segment 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.

The Company reports its financial results in the following three segments: (i) II-VI Laser Solutions, (ii) II-VI Photonics, and (iii) II-VI Performance Products, 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 segments are managed separately due to the market, production requirements and facilities unique to each segment.

As discussed in Note 1, the Company realigned the composition of its operating segments. The Company moved Laser Systems Group from II-VI Laser Solutions to II-VI Photonics and moved IPI from II-VI Photonics to II-VI Performance Products. All applicable segment information has been restated to reflect this change.

In September 30, 2018, the Company completed its acquisition of CoAdna. See Note 3. Acquisitions and Investments. The operating results of this acquisition have been reflected in the selected financial information of the Company's II-VI Photonics segment since the date of acquisition.

The accounting policies are consistent across each of the segments. The Company's corporate expenses and assets are allocated to the segments. The Company evaluates segment performance based upon reported segment operating income, which is defined as earnings before income taxes, interest and other income or expense. Inter-segment sales and transfers are eliminated.

The following tables summarize selected financial information of the Company's operations by segment (\$000):

	Three Months Ended September 30, 2018					Total
	II-VI		II-VI		Eliminations	
	Laser Solutions	II-VI Photonics	Performance Products			
Revenues	\$106,175	\$135,156	\$73,102	\$-		\$314,433
Inter-segment revenues	13,553	2,896	5,662	(22,111)		-
Operating income	12,310	15,912	8,991	-		37,213
Interest expense						(5,584)
Other income (expense), net						713
Income taxes						(6,193)
Net earnings						26,149
Depreciation and amortization	10,847	6,199	5,124	-		22,170
Segment assets	751,801	671,992	456,850	-		1,880,643
Expenditures for property, plant & equipment	11,593	12,051	11,274	-		34,918
Investments	-	13,373	61,916	-		75,289

	Three Months Ended September 30, 2017					Total
	II-VI		II-VI		Eliminations	
	Laser Solutions	II-VI Photonics	Performance Products			
Revenues	\$87,936	\$115,940	\$57,627	\$-		\$261,503
Inter-segment revenues	7,180	2,863	827	(10,870)		-
Operating income	2,655	20,108	7,014	-		29,777
Interest expense						(3,645)
Other income (expense), net						767
Income taxes						(5,758)
Net earnings						21,141
Depreciation and amortization	8,224	5,507	5,085	-		18,816
Expenditures for property, plant & equipment	12,761	9,782	14,883	-		37,426

Note 13. Share-Based Compensation

The Company's Board of Directors adopted the II-VI Incorporated Amended and Restated 2012 Omnibus Incentive Plan (the "Plan"), which was approved by the Company's shareholders. The Plan provides for the grant of performance-based cash incentive awards, non-qualified stock options, stock appreciation rights, restricted share awards, restricted share units, deferred share awards, performance share awards 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 4,900,000 shares of Common Stock, not including any remaining shares forfeited under the predecessor plans that may be rolled into the Plan. The Company records share-based compensation expense for these awards in accordance with U.S. GAAP, which requires the recognition of grant-date fair value of share-based compensation in net earnings and 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 is allocated approximately 20% to cost of goods sold and 80% to selling, general and administrative expense, based on the employee classification of the grantees. Share-based compensation expense for the periods indicated was as follows (\$000):

September 30,	Three Months Ended	
	2018	2017
Stock Options and Cash-Based Stock Appreciation Rights	\$2,328	\$2,463
Restricted Share Awards and Cash-Based Restricted Share Unit Awards	2,792	2,563
Performance Share Awards and Cash-Based Performance Share Unit Awards	217	1,286
	\$5,337	\$6,312

#### Note 14. 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.

At September 30, 2018, the Company had foreign currency forward contracts recorded at fair value. The fair values of these instruments were measured using valuations based upon quoted prices for similar assets and liabilities in active markets (Level 2) and are valued by reference to similar financial instruments, adjusted for credit risk, restrictions and other terms specific to the contracts.

In February 2016, the Company entered into a contingent earnout arrangement which provides up to a maximum of \$6.0 million of additional cash earnout opportunities based upon II-VI EpiWorks achieving certain agreed upon financial and operational targets for capacity, wafers output and gross margin, which if earned would be payable for the achievement of each specific annual target over the next three years. The Company paid the first year earnout amount of \$2.0 million during the quarter ended June 30, 2017.

The fair values of the contingent earnout arrangements and the net put option were measured using valuations based upon other unobservable inputs that are significant to the fair value measurement (Level 3).

The Company estimated the fair value of the 0.25% convertible notes based on quoted market prices as of the last trading day prior to September 30, 2018; however, the convertible notes have only a limited trading volume and as such this fair value estimate is not necessarily the value at which the convertible 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 convertible 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 convertible notes were as follows at September 30, 2018 (\$000):

	Fair Value	Carrying Value
Convertible notes	\$406,203	\$291,700

The following table provides a summary by level of the fair value of financial instruments that are measured on a recurring basis or for which fair value is disclosed for the periods presented (\$000):

Fair Value Measurements at September 30, 2018 Using:				
		Quoted Prices in Active Markets for Identical	Significant Other Observable	Significant Unobservable
	September 30, 2018	Assets (Level 1)	Inputs (Level 2)	Inputs (Level 3)
<b>Assets:</b>				
Foreign currency forward contracts	\$387	\$ -	\$ 387	\$ -
<b>Liabilities:</b>				
Net put option	2,024	\$ -	\$ -	2,024
Contingent earnout arrangements	4,997	\$ -	\$ -	4,997

Fair Value Measurements at June 30, 2018 Using:				
		Quoted Prices in Active Markets for Identical	Significant Other Observable	Significant Unobservable
	June 30, 2018	Assets (Level 1)	Inputs (Level 2)	Inputs (Level 3)
<b>Assets:</b>				
Foreign currency forward contracts	\$121	\$ -	\$ 121	\$ -
<b>Liabilities:</b>				
Contingent earnout arrangements	\$5,405	\$ -	\$ -	\$ 5,405
Net put option	\$2,024	\$ -	\$ -	\$ 2,024

The Company's policy is to report transfers into and out of Levels 1 and 2 of the fair value hierarchy at fair values as of the beginning of the period in which the transfers occur. There were no transfers in and out of Levels 1 and 2 of the fair value hierarchy during the three months ended September 30, 2018.

The following table presents a reconciliation of the beginning and ending fair value measurements of the Company's Level 3 contingent earnout arrangements related to the Company's acquisitions and the net put option relating to the equity investment acquired in November 2017. (\$000):

	Significant Unobservable Inputs (Level 3)
Balance at July 1, 2018	7,429
<b>Contingent earnout arrangements</b>	
Payments	(2,500 )
Changes in fair value recorded in other expense, (income)	(505 )
Other earnout arrangement	2,597
Balance at September 30, 2018	7,021

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 capital lease obligation are considered Level 2 among the fair value hierarchy and their principal amounts approximate fair value.

## Note 15. Post-Retirement Benefits

The Company has a pension plan (the “Swiss Plan”) covering employees of the Zurich, Switzerland subsidiary. Net periodic pension costs associated with the Swiss Plan included the following (\$000):

	Three Months Ended September 30,	
	2018	2017
Service cost	\$938	\$952
Interest cost	137	107
Expected return on plan assets	(246)	(215)
Net amortization	67	105
Net periodic pension costs	\$896	\$949

The Company contributed \$0.8 million and \$0.9 million to the Swiss Plan during the three months ended September 30, 2018 and 2017, respectively. The Company currently anticipates contributing an additional estimated amount of approximately \$2.5 million to the Swiss Plan during the remainder of fiscal year 2019.

## Note 16. 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. The Company did not repurchase share pursuant to this Program during the quarter ended September 30, 2018. Through September 30, 2018, the Company has cumulatively purchased 1,316,587 shares of its Common Stock pursuant to the Program for approximately \$19.0 million.

## Note 17. Accumulated Other Comprehensive Income (Loss)

The changes in accumulated other comprehensive income (“AOCI”) by component, net of tax, for the three months ended September 30, 2018 were as follows (\$000):

	Foreign Currency Translation Adjustment	Defined Benefit Pension Plan	Total Accumulated Other Comprehensive Income (loss)
AOCI - June 30, 2018	\$ (1,308 )	\$ (2,472 )	\$ (3,780 )
Other comprehensive income before reclassifications	(10,651 )	-	(10,651 )
Amounts reclassified from AOCI	-	52	52
Net current-period other comprehensive income	(10,651 )	52	(10,599 )
AOCI - September 30, 2018	\$ (11,959 )	\$ (2,420 )	\$ (14,379 )





## Note 18. Capital Lease

The Company's OptoElectronic Devices subsidiary entered into a capital lease related to a building in Warren, New Jersey. The following table shows the future minimum lease payments due under the non-cancelable capital lease (\$000):

Fiscal Year Ending June 30,	Amount
2019 (remaining)	\$1,726
2020	2,355
2021	2,419
2022	2,486
2023	2,554
Thereafter	24,740
Total minimum lease payments	36,280
Less amount representing interest	11,341
Present value of capitalized payments	\$24,939

The current and long-term portion of the capital lease obligation was recorded in Other accrued liabilities and Other liabilities, respectively, in the Company's Condensed Consolidated Balance Sheet as of September 30, 2018 and June 30, 2018. The present value of the minimum capital lease payments at inception was \$25 million recorded in Property, Plant & Equipment, net, in the Company's Condensed Consolidated Balance Sheet as of September 30, 2018, with associated depreciation being recorded over the 15-year life of the lease. During the three months ended September 30, 2018, the Company recorded \$0.4 million of depreciation expense associated with the capital leased asset.

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

### Forward-Looking Statements

This Quarterly Report on Form 10-Q, including Management's Discussion and Analysis of Financial Condition and Results of Operations ("Management's Discussion and Analysis"), contains 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," "intends," "plans," "projects" or similar expressions.

Although our management considers these expectations and assumptions to be reasonable, actual results could differ materially from any such forward-looking statements included in this Quarterly Report on Form 10-Q or otherwise made by our management due to the following factors, among others: dependency on international sales and successful management of global operations; the development and use of new technology; the timely release of new products and acceptance of such new products by the market; our ability to devise and execute strategies to respond to market conditions; our ability to achieve the anticipated benefits of capital investments that we make; the impact of acquisitions on our business and our ability to assimilate recently acquired businesses; the impact of impairment in goodwill and indefinite-lived intangible assets in one or more of our segments; adverse changes in economic or industry conditions generally (including capital markets) or in the markets served by the Company; our ability to protect our intellectual property; domestic and foreign governmental regulation, including that related to the environment; the impact of a data breach incident on our operations; supply chain issues; the actions of competitors; the purchasing patterns of customers and end-users; the occurrence of natural disasters and other catastrophic events outside of our control; changes in local market laws and practices and risks related to the recent U.S. tax legislation and the Company's continuing analysis of its impact on the Company and the adoption and expansion of trade restrictions or the occurrence of trade wars. There are additional risk factors that could materially affect the Company's business, results of operations or financial condition as set forth in Part I, Item 1A of the Company's most recent Annual Report on Form 10-K as filed with the Securities and Exchange Commission on August 28, 2018.

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, nor 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 Quarterly Report on Form 10-Q 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.

### Introduction

II-VI Incorporated ("II-VI," the "Company," "we," "us" or "our"), a worldwide leader in engineered materials and opto-electronic components, is a vertically integrated manufacturing company that develops innovative products for

diversified applications in the industrial materials processing, optical communications, military, consumer electronics, semiconductor equipment, life science and automotive applications. 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 engineered materials and opto-electronic components for precision use in industrial, optical communications, military, semiconductor, medical and consumer applications. 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, various U.S. government agencies and thermoelectric solutions suppliers.

In September 2018, the Company completed its acquisition of CoAdna Holdings, Inc. (“CoAdna”). See Note 3. Acquisitions. The operating results of this acquisition have been reflected in the selected financial information of the Company’s II-VI Photonics segment since the date of acquisition.

### Critical Accounting Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America and the Company’s discussion and analysis of its financial condition and results of operations require the Company’s management to make judgments, assumptions and estimates that affect the amounts reported in its condensed consolidated financial statements and accompanying notes. Note 1 of the Notes to Consolidated Financial Statements in the Company’s most recent Annual Report on Form 10-K describes the significant accounting policies and methods used in the preparation of the Company’s consolidated financial statements. The Company adopted ASU 2014-09, Revenues from Contracts with Customers (Topic 606), on July 1, 2018 using the modified retrospective method of adoption. There have been no other changes in significant accounting policies as of September 30, 2018.

### New Accounting Standards

See Note 2. Recent Accounting Pronouncements to our unaudited condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for a description of recent accounting pronouncements, including the expected dates of adoption and estimated effects, if any, on our consolidated financial statements.

### Results of Operations (\$ in millions, except per share data)

The following tables set forth select items from our Condensed Consolidated Statements of Earnings for the three months ended September 30, 2018 and 2017:

	Three Months Ended September 30, 2018			Three Months Ended September 30, 2017		
		% of Revenues			% of Revenues	
Total Revenues	\$314.4	100.0	%	\$261.5	100.0	%
Cost of goods sold	190.5	60.6		155.5	59.5	
Gross margin	123.9	39.4		106.0	40.5	
Operating expenses:						
Internal research and development	33.2	10.6		25.6	9.8	
Selling, general and administrative	53.5	17.0		50.6	19.3	
Interest and other, net	4.9	1.6		2.9	1.1	
Earnings before income tax	32.3	10.3		26.9	10.3	
Income taxes	6.2	2.0		5.8	2.2	
Net Earnings	\$26.1	8.3	%	\$21.1	8.1	%
Diluted earnings per share:	\$0.40			\$0.32		

Executive Summary

Net earnings for the three months ended September 30, 2018 were \$26.1 million (\$0.40 per share diluted), compared to \$21.1 million (\$0.32 per share diluted) for the same period last fiscal year. The increase in net earnings during the current three months ended September 30, 2018 compared to the same period last fiscal year was primarily driven by incremental margin realized on the \$52.9 million revenue increase as a result of increased product demands across the majority of the Company's business units. In addition, the Company benefitted from a lower effective income tax rate due to the mix of worldwide income to lower tax jurisdictions. The increase in net earnings was somewhat offset by increased investment in internal research and development addressing new product development as well as higher interest expense during the current three months due to higher debt levels of the Company.

## Consolidated

**Revenues.** Revenues for the three months ended September 30, 2018 increased 20% to \$314.4 million, compared to \$261.5 million for the same period last fiscal year. The increase in revenues during the current quarter compared to the same period last fiscal year was driven by increased demand from the Company's optical communication customers in the United States ("U.S.") and China for products used in the China broadband expansion, datacenter and U.S. metro communication upgrade cycles. In addition, the Company experienced increased revenues from its vertical cavity surface emitting lasers ("VCSEL") product line due primarily to the growing consumer electronics and datacom end markets as well as the growing demand for silicon carbide ("SiC") addressing RF electronics and high-power switching and power conversion systems and optical components and assemblies used in military related applications.

**Gross margin.** Gross margin for the three months ended September 30, 2018 was \$123.9 million, or 39.4% of total revenues, compared to \$106.0 million, or 40.5% of total revenues, for the same period last fiscal year. The increase in gross margin dollars for the three months ended September 30, 2018, compared to the same periods last fiscal year was due to the 20% revenue increase. Gross margin as a percentage of revenues decreased 110 basis points primarily driven by pricing pressure from customers in China as well as product mix towards lower margin products.

**Internal research and development.** Internal research and development ("IR&D") expenses for the three months ended September 30, 2018 were \$33.2 million, or 10.6% of revenues, compared to \$25.6 million, or 9.8% of revenues, for the same period last fiscal year. The increase in IR&D during the current quarter compared to the same period last fiscal year was due the Company's continued investments in the development of new technology and product introductions to address growing demand from consumer electronics and optical communications markets. The Company expects IR&D to approximate 10% to 11% of revenues during the remainder of fiscal year 2019 to address these growing market opportunities.

**Selling, general and administrative.** Selling, general and administrative ("SG&A") expenses for the three months ended September 30, 2018 were \$53.5 million, or 17.0% of revenues, compared to \$50.6 million, or 19.3% of revenues, for the same period last fiscal year. The increase in SG&A in absolute dollars was the result of higher revenue base requiring more SG&A support and included approximately \$1.9 million of transaction expenses relating to its acquisition of CoAdna. The Company has improved in SG&A leverage during the current quarter due to ongoing cost control initiatives.

**Interest and other, net.** Interest and other, net for the three months ended September 30, 2018 was expense of \$4.9 million, compared to expense of \$2.9 million for the same period last fiscal year. Included in interest and other, net were interest expense on borrowings, foreign currency gains and losses, equity earnings from its unconsolidated investments and interest income on excess cash reserves. Interest expense increased \$1.9 million during the current fiscal quarter due to the higher levels of outstanding debt which increased approximately \$132 million from the balance at September 30, 2017.

**Income taxes.** The Company's year-to-date effective income tax rate at September 30, 2018 was 19.1%, compared to an effective tax rate of 21.4% for the same period last fiscal year. The variation between the Company's effective tax rate and the new U.S. statutory rate of 21% was due to the impact of the U.S. enacted tax legislation and consolidation of the Company's foreign operations, which are subject to income taxes at lower statutory rates. The current year's effective income tax rate benefited from the reversal of certain U.S. valuation allowances as the result of the acquisition of CoAdna and the recognition of deferred tax liabilities relating to CoAdna's purchase price allocation.

## Segment Reporting

Revenues and operating income for the Company's reportable segments are discussed below. Operating income differs from net earnings 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 12. Segment Reporting, to our unaudited condensed consolidated financial statements in Part I, Item 1 of this Quarterly Report on Form 10-Q for further information on the Company's reportable segments and for the reconciliation of the Company's operating income to net earnings, which is incorporated herein by reference.



Effective July 1, 2018, the Company realigned its composition of its operating segments. The Company moved Laser Systems Group, from II-VI Laser Solutions to II-VI Photonics and moved Integrated Photonics, Inc. (“IPI”) from II-VI Photonics to II-VI Performance Products. All applicable segment information has been restated to reflect this change.

II- VI Laser Solutions (\$ in millions)

	Three Months Ended September 30,		%	
	2018	2017	Increase	
Revenues	\$ 106.2	\$ 87.9	21	%
Operating income	\$ 12.3	\$ 2.7	356	%

Revenues for the three months ended September 30, 2018 for II-VI Laser Solutions increased 21% to \$106.2 million, compared to revenues of \$87.9 million for the same period last fiscal year. The increase in revenues for the three month period ended September 30, 2018 compared to the same period last fiscal year was due to increased revenues for its VCSEL product line address the growing consumer electronics and datacom end markets. In addition, the segment has also seen an increase in demand from customers in the industrial markets for the segment’s CQ and direct diode laser components.

Operating income for the three months ended September 30, 2018 for II-VI Laser Solutions increased to \$12.3 million, compared to \$2.7 million for the same period last fiscal year. The improvement in operating income during the current three months compared to the same period last fiscal year was a combination of incremental margin realized on the over 21% revenue increase and the improved operational performance and the commercialization of the VCSEL product line. Operating income for the three months ended September 30, 2017 included approximately \$1.0 million of transaction fees associated with the acquisition of II-VI Compound Semiconductor acquired in August 2017.

II-VI Photonics (\$ in millions)

	Three Months Ended September 30,		%	
	2018	2017	Increase (Decrease)	
Revenues	\$ 135.1	\$ 116.0	16	%
Operating income	\$ 15.9	\$ 20.1	(21)	%

The above operating results for the three months ended September 30, 2018 include the Company’s recent acquisition of CoAdna which was acquired in September 2018.

Revenues for the three months ended September 30, 2018 for II-VI Photonics increased 16% to \$135.1 million, compared to \$116.0 million for the same period last fiscal year. The increase in revenues for the three month period ended September 30, 2018 is the result of increased demand from customers in the datacenter communications market as well as increased demand in China from the broadband initiative as China continues to expand its geographical broadband networks.

Operating income for the three months ended September 30, 2018 for II-VI Photonics decreased 21% to \$15.9 million, compared to \$20.1 million for the same period last fiscal year. Included in the operating income for the current three months ended September 30, 2018 is approximately \$1.9 million of one-time transaction related expenses for the acquisition of CoAdna. The segment has also experienced price erosion from its customers particularly in China where there are significant competition in the optical communication market as well as a shift in the product mix towards lower margin products.

II-VI Performance Products (\$ in millions)

	Three Months Ended September 30, 2018		2017		% Increase
Revenues	\$73.1	\$57.6	27		%
Operating income	\$9.0	\$7.0	29		%

Revenues for the three months ended September 30, 2018 for II-VI Performance Products increased 27% to \$73.1 million compared to \$57.6 million for the same period last fiscal year. The increase in revenues for the three month period ended September 30, 2018 compared to the same period last fiscal year was driven by increased demand for silicone carbide substrates addressing RF electronics and high-power switching and power conversion systems for automotive and communications applications. In addition, the segment's military business has seen an increase in demand for its infrared components and sub-systems from increased U.S. Government budget spending.

Operating income for the three months ended September 30, 2018 for II-VI Performance Products increased 29% to \$9.0 million, compared to \$7.0 million for the same period last fiscal year. The increase in operating income for the three month period ended September 30, 2018 compared to the same period last fiscal year was driven primarily by incremental margin on the increased sales volume as well as favorable product mix towards higher margin products.

### Liquidity and Capital Resources

Historically, our primary sources of cash have been from operations and long-term borrowing. 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, investment in research and development, business acquisitions, payments of principal and interest on outstanding debt obligations and payments in satisfaction of employees' minimum tax obligations. Supplemental information pertaining to our sources and uses of cash for the periods indicated is presented as follows:

#### Sources (uses) of Cash (millions):

	Three Months Ended September 30, 2018	2017
Net cash provided by operating activities	\$ 19.0	\$ 12.4
Additions to property, plant & equipment	(35.9 )	(37.4 )
Purchases of businesses, net of cash acquired	(45.2 )	(79.5 )
Purchase of equity investment	(4.5 )	-
Net proceeds on long-term borrowings	95.0	128.0
Payment on earnout consideration	(2.5 )	-

Purchases of treasury shares	-	(49.9 )
Proceeds from exercises of stock options	5.0	3.7
Payments in satisfaction of employees' minimum tax obligations	(4.6 )	(3.6 )
Debt issuance costs	-	(10.1 )
Effect of exchange rate changes on cash and cash equivalents and other	(2.0 )	5.8

Net cash provided by operating activities:

Net cash provided by operating activities was \$19 million for the three months ended September 30, 2018, compared to net cash provided by operating activities of \$12.4 million for the same period last fiscal year. The increase in cash provided by operations during the current quarter was primarily driven by increased net earnings and increased levels of non-cash items such as depreciation, amortization and share-based compensation expense.

Net cash used in investing activities:

Net cash used in investing activities was \$85.6 million for the three months ended September 30, 2018, compared to net cash used of \$116.8 million for the same period last fiscal year. Net cash used in investing activities during the current three months ended September 30, 2018 included \$45.2 million for acquisitions of businesses, \$35.9 million of cash paid for property used to build capacity to meet the growing demand for the Company's product portfolio, plant & equipment and \$4.5 million for a 10% equity investment in a privately held company.

Net cash provided by financing activities:

Net cash provided by financing activities was \$93 million for the three months ended September 30, 2018, compared to net cash provided by financing activities of \$68.2 million for the same period last fiscal year. Net cash provided by financing activities included net borrowing on long-term debt of \$95 million to fund the acquisition of CoAdna and fiscal year 2018 incentive compensation paid in August 2018 as well as \$5.0 million of cash received from the exercises of stock options. Net cash provided by financing activities was offset by payment of \$4.6 million in satisfaction of employees' minimum tax obligations from the vesting of equity awards as well as a \$2.5 million earnout payment relating to the acquisition of Integrated Photonics, Inc. that occurred in June 2017.

#### 0.25% Convertible Senior Notes

On August 24, 2017, the Company entered into a purchase agreement with Merrill Lynch, Pierce, Fenner & Smith Incorporated, as representative of the several initial purchasers named therein (collectively, the "Initial Purchasers"), to issue and sell \$300 million aggregate principal amount of our 0.25% convertible senior notes due 2022 (the "Notes") in a private placement to qualified institutional buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended. In addition, we granted the Initial Purchasers a 30-day option to purchase up to an additional \$45 million aggregate principal amount of the Notes (the "Over-Allotment Option").

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 Notes using the effective interest method.

The equity component, which amounts to \$56.4 million, net of issuance costs of \$1.7 million, 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 Notes, which is equivalent to an initial conversion price of \$47.06 per share of common stock. Throughout the term of the Notes, the conversion rate may be adjusted upon the occurrence of certain events. The if-converted value of the Notes amounted to \$346.8 million as of September 30, 2018 and \$318.5 million as of June 30, 2018 (based on the Company's closing stock price on the last trading day of the fiscal periods then ended). As of September 30, 2018, the Notes are not yet convertible based upon the Notes' conversion features. Holders of the Notes will not receive any cash payment representing accrued and unpaid interest upon conversion of a 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 Notes for the three months ended September 30, 2018:

	Three Months Ended	
September 30,	2018	2017
0.25% contractual coupon	\$ 220	78
Amortization of debt discount and debt issuance costs including initial purchaser discount	3,110	1,107
Interest expense	\$ 3,330	1,185

The effective interest rate on the liability component for both periods presented was 4.5%. The unamortized discount amounted to \$46.6 million as of September 30, 2018 and is being amortized over 4 years.

## Amended Credit Facility

On July 28, 2016, the Company amended and restated its existing credit agreement. The Third Amended and Restated Credit Agreement (the “Amended Credit Facility”) provides for a revolving credit facility of \$325 million, as well as a \$100 million term loan. The term loan is being repaid in consecutive quarterly principal payments on the first business day of each January, April, July and October, with the first payment having commenced on October 1, 2016, as follows: (i) twenty consecutive quarterly installments of \$5 million and (ii) a final installment of all remaining principal due and payable on the maturity date of July 27, 2021. Amounts borrowed under the revolving credit facility are due and payable on the maturity date. The Amended Credit Facility is unsecured, but is guaranteed by each existing and subsequently acquired or organized wholly-owned domestic subsidiary of the Company. The Company has the option to request an increase to the size of the revolving credit facility in an aggregate additional amount not to exceed \$100 million. The Amended Credit Facility has a five-year term through July 27, 2021 and has an interest rate of either a Base Rate Option or a Euro-Rate Option, plus an Applicable Margin, as defined in the agreement governing the Amended Credit Facility. If the Base Rate option is selected for a borrowing, the Applicable Margin is 0.00% to 1.25% and if the Euro-Rate Option is selected for a borrowing, the Applicable Margin is 1.00% to 2.25%. The Applicable Margin is based on the ratio of the Company’s consolidated indebtedness to consolidated EBITDA. Additionally, the Credit Facility is subject to certain covenants, including those relating to minimum interest coverage and maximum leverage ratios. As of September 30, 2018, the Company was in compliance with all financial covenants under its Amended Credit Facility.

## Yen Loan

The Company's Yen denominated line of credit is a 500 million Yen (approximately \$4.4 million) facility. The Yen line of credit matures in August 2020. The interest rate is equal to LIBOR, as defined in the loan agreement, plus 0.625% to 1.75%. At September 30, 2018 and June 30, 2018, the Company had 300 million Yen borrowed. Additionally, the facility is subject to certain covenants, including those relating to minimum interest coverage and maximum leverage ratios. As of September 30, 2018, the Company was in compliance with all financial covenants under its Yen facility.

## Aggregate Availability

The Company had aggregate availability of \$146.3 million and \$246.4 million under its lines of credit as of September 30, 2018 and June 30, 2018, respectively. The amounts available under the Company's lines of credit are reduced by outstanding letters of credit. The total outstanding letters of credit supported by these credit facilities were \$0.4 million as of September 30, 2018 and June 30, 2018.

## Weighted Average Interest Rate

The weighted average interest rate of total borrowings was 1.5% and 1.8% for the three months ended September 30, 2018 and 2017, respectively.

## 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. The Company did not repurchase shares pursuant to this Program during the six months ended September 30, 2018. Through September 30, 2018, the Company has cumulatively purchased 1,316,587 shares of its Common Stock pursuant to the Program for approximately \$19.0 million.

The Company's cash position, borrowing capacity and debt obligations for the periods indicated were as follows (in millions):

	September 30, 2018	June 30, 2018
Cash and cash equivalents	\$ 271.3	\$247.0
Available borrowing capacity	146.3	246.4
Total debt obligations	537.1	439.0

The Company believes that cash flow from operations, existing cash reserves and available borrowing capacity will allow the Company to fund its working capital needs, capital expenditures, repayment of scheduled long-term borrowings and capital lease obligation, investments in internal research and development, share repurchases and growth objectives for the next twelve months.

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 September 30, 2018 and June 30, 2018, the Company held approximately \$215 million and \$245 million, respectively, of cash and cash equivalents outside of the United States. Cash balances held outside the United States could be repatriated to the United States. The recently enacted "Tax Cuts and Jobs Act" created significant changes to the taxation of undistributed foreign earnings and could change our future intentions regarding repatriation of earnings. The Company is currently evaluating the full impact of the new tax laws and will update future cash repatriation intentions as the Company further understands the new law.

#### Contractual Obligations

The following table presents information about the Company's contractual obligations and commitments as of September 30, 2018.

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## Tabular-Disclosure of Contractual Obligations

Contractual Obligations (\$000)	Payments Due By Period				
	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
Long-term debt obligations	\$591,479	\$20,000	\$226,479	\$345,000	\$-
Interest payments <sup>(1)</sup>	38,022	11,201	18,751	3,090	4,980
Capital lease obligation	24,939	821	2,230	2,776	19,112
Operating lease obligations <sup>(2)</sup>	126,800	21,100	33,700	21,900	50,100
Purchase obligations <sup>(3)(4)</sup>	40,312	35,729	4,583	-	-
<b>Total</b>	<b>\$821,552</b>	<b>\$88,851</b>	<b>\$285,743</b>	<b>\$372,766</b>	<b>\$74,192</b>

- (1) Interest payments represent both variable and fixed rate interest obligations based on the interest rate in place at September 30, 2018 relating to the Amended Credit Facility, the Notes and interest relating to the Company's capital lease obligation.
- (2) Includes an obligation for the use of two parcels of land related to II-VI Performance Metals. The lease obligations extend through 2039 and 2061, respectively.
- (3) 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.
- (4) Includes cash earnout opportunities based upon certain acquisitions achievement of certain agreed upon financial, operational and technology targets.

The Company's gross unrecognized income tax benefit at September 30, 2018 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. However, at this time, the Company does not expect a significant payment related to these obligations within the next year.

Pension obligations are not included in the table above. The Company expects the remaining defined benefit plan employer contributions for fiscal year 2019 to be \$0.9 million. 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.

### Item 3. 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, and the Euro. No significant changes have occurred in the techniques and instruments used other than those described below.

#### Foreign Exchange Risks

In the normal course of business, the Company enters into foreign currency forward exchange contracts with its financial institutions. The purpose of these contracts is to hedge ordinary business risks regarding foreign currencies on product sales. Foreign currency exchange contracts are used to limit transactional exposure to changes in currency rates.

#### Japanese Yen

The Company enters into foreign currency forward contracts that permit it to sell specified amounts of Japanese Yen expected to be received from its export sales for pre-established U.S. dollar amounts at specified dates. The forward contracts are denominated in the same foreign currencies in which export sales are denominated. These contracts provide the Company with an economic hedge in which settlement will occur in future periods, thereby limiting the Company's exposure. These contracts had a total notional amount of \$13.6 million and \$12.0 million at September 30, 2018 and June 30, 2018, respectively.

A 10% change in the Yen to U.S. dollar exchange rate would have changed revenues in the range from a decrease of \$2.0 million to an increase of \$2.5 million for the three months ended September 30, 2018.

#### Chinese Renminbi

The Company enters into month-to-month forward contracts at varying amounts maturing monthly to limit exposure to the Chinese Renminbi. The Company recorded a loss of \$2.3 million in the Condensed Consolidated Statement of Earnings related to these contracts for the three months ended September 30, 2018.

#### Euro

The Company has short-term intercompany notes that are denominated in U.S. dollars with one of the Company's European subsidiaries. A 10% change in the Euro to U.S. dollar exchange rate would have changed net earnings in the range from a decrease of \$0.8 million to an increase of \$1.0 million for the three months ended September 30, 2018.

The Company monitors its positions and the credit ratings of the parties to these contracts. While the Company may be exposed to potential losses due to risk in the event of non-performance by the counterparties to these financial instruments, it does not currently anticipate such losses.

Assets and liabilities of foreign operations are translated into U.S. dollars using the period-end exchange rate, while income and expenses are translated using the average exchange rates for the reporting period. Translation adjustments are recorded as accumulated other comprehensive income within Shareholders' equity.

#### Interest Rate Risks

As of September 30, 2018, the Company's total outstanding borrowings of \$537.1 million consisted of \$242.6 million of variable rate debt borrowings from a line of credit of \$2.6 million denominated in Japanese Yen, borrowings under a term loan of \$60.0 million under the Company's Credit Facility denominated in U.S. dollars and a line of credit borrowing of \$180.0 million under the Company's Credit Facility denominated in U.S. dollars. As such, the Company is exposed to market risks arising from changes in interest rates. An increase in the interest rate of these borrowings of 1% would have resulted in additional interest expense of \$0.7 million for the three months ended September 30, 2018.

## Item 4. CONTROLS AND PROCEDURES

### Evaluation of Disclosure Controls and Procedures

The Company's management evaluated, with the participation of the Company's President and 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 Exchange Act Rules 13a-15(e) and 15d-15(e)) as of the end of the period covered by this Quarterly Report on Form 10-Q. 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 Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission. 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 the Company's disclosure controls and procedures were effective as of the end of the period covered by this Quarterly Report on Form 10-Q.

#### Changes in Internal Control over Financial Reporting

No changes in the Company's internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) were implemented during the Company's most recently completed fiscal quarter that have materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting.

## Part II – Other Information

## Item 1. LEGAL PROCEEDINGS

The Company and its subsidiaries are involved from time to time in various claims, lawsuits, and regulatory proceedings 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 these legal and regulatory proceedings will not materially affect the Company's financial condition, liquidity or results of operations.

## Item 1A. RISK FACTORS

In addition to the other information set forth in this Quarterly Report on Form 10-Q, carefully consider the factors discussed in Part I, "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended June 30, 2018, which could materially affect our business, financial condition or future results. Those risk factors are not the only risks facing the Company. Additional risks and uncertainties not currently known or that we currently deem to be immaterial also may materially adversely affect our business, financial condition and/or operating results.

## Item 2. ISSUER PURCHASES OF EQUITY SECURITIES

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. As of September 30, 2018, the Company has cumulatively purchased 1,316,587 shares of its Common Stock pursuant to the Program for approximately \$19.0 million. The dollar value of shares that may yet be purchased under the Program is approximately \$31.0 million.

The following table sets forth repurchases of our Common Stock during the quarter ended September 30, 2018:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (a)	Dollar Value of Shares That May Yet be Purchased Under the Plan or Program
July 1, 2018 to July 31, 2018	-	\$ -	-	30,906,904
August 1, 2018 to August 31, 2018	98,866	(1) \$ 45.65	-	30,906,904
September 1, 2018 to September 30, 2018	1,185	(2) \$ 48.25	-	30,906,904
Total	100,051	\$ 45.68	-	

(1) Includes 98,866 shares of our Common Stock transferred to the Company from employees in satisfaction of minimum tax withholding obligations associated with the vesting of restricted stock awards.

(2)

Includes 1,185 shares of our Common Stock transferred to the Company from employees in satisfaction of minimum tax withholding obligations associated with the vesting of restricted stock awards.

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## Item 6. EXHIBITS

## Exhibit

Number	Description of Exhibit	Reference
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	Filed herewith.

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

SIGNATURES

Pursuant to the requirements 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  
(Registrant)

Date: November 8, 2018 By: /s/ Vincent D. Mattera, Jr.  
Vincent D. Mattera, Jr  
President and Chief Executive Officer

Date: November 8, 2018 By: /s/ Mary Jane Raymond  
Mary Jane Raymond  
Chief Financial Officer and Treasurer