UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark One)

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

For the fiscal year ended January 2, 2021

or

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

For the transition period from to

Commission file number 0-26946

INTEVAC, INC.

(Exact name of registrant as specified in its charter)

Delaware	**94-3125814**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

3560 Bassett Street
Santa Clara, California 95054
(Address of principal executive office, including Zip Code)

Registrant's telephone number, including area code: (408) 986-9888

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock ($0.001 par value)	**IVAC**	**The Nasdaq Stock Market LLC (Nasdaq Global Select)**

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes ☒ No

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

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

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

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

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

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

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

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

As of June 27, 2020, the aggregate market value of voting and non-voting stock held by non-affiliates of the registrant was approximately $124,191,554 (based on the closing price for shares of the registrant's Common Stock as reported by the Nasdaq Stock Market for the last trading day prior to that date). Shares of Common Stock held by each executive officer and director have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

On February 12, 2021, 24,089,621 shares of the registrant's Common Stock, $0.001 par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE.

Portions of the registrant's Proxy Statement for the 2021 Annual Meeting of Stockholders are incorporated by reference into Part III. Such proxy statement will be filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain information in this Annual Report on Form 10-K ("report" or "Form 10-K") of Intevac, Inc. and its subsidiaries ("Intevac" or the "Company"), including "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7, is forward-looking in nature. All statements in this report, including those made by the management of Intevac, other than statements of historical fact, are forward-looking statements. Examples of forward-looking statements include statements regarding Intevac's future financial results, operating results, cash flows and cash deployment strategies, business strategies, costs, products, working capital, competitive positions, management's plans and objectives for future operations, research and development, acquisitions and joint ventures, growth opportunities, customer contracts, investments, liquidity, declaration of dividends, and legal proceedings, as well as market conditions and industry trends. These forward-looking statements are based on management's estimates, projections and assumptions as of the date hereof and include the assumptions that underlie such statements. Forward-looking statements may contain words such as "may," "will," "should," "could," "would," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential" and "continue," the negative of these terms, or other comparable terminology. Any expectations based on these forward-looking statements are subject to risks and uncertainties and other important factors, including those discussed in Item 1A, "Risk Factors," below and elsewhere in this report. Other risks and uncertainties may be disclosed in Intevac's prior Securities and Exchange Commission ("SEC") filings. These and many other factors could affect Intevac's future financial condition and operating results and could cause actual results to differ materially from expectations based on forward-looking statements made in this report or elsewhere by Intevac or on its behalf. Intevac undertakes no obligation to revise or update any forward-looking statements.

The following information should be read in conjunction with the Consolidated Financial Statements and the accompanying Notes to Consolidated Financial Statements included in this report.

PART I

Item 1. *Business*

Overview

Intevac's business consists of two reportable segments:

Thin-film Equipment ("TFE"): Intevac is a leader in the design and development of high-productivity, thin-film processing systems. Our production-proven platforms are designed for high-volume manufacturing of substrates with precise thin-film properties, such as the hard disk drive ("HDD") media, display cover panel ("DCP"), and solar photovoltaic ("PV") markets we serve currently.

Photonics: Intevac is a leading developer of advanced high-sensitivity digital sensors, cameras and systems that primarily serve the defense industry. We are a leading provider of integrated digital night-vision imaging systems for the U.S. military.

Intevac was incorporated in California in October 1990 and was reincorporated in Delaware in 2007.

TFE Segment

Hard Disk Drive ("HDD") Equipment Market

Intevac designs, manufactures, markets and services complex capital equipment used to deposit thin films and lubricants onto substrates to produce magnetic disks that are used in HDDs. Disk and disk drive manufacturers produce magnetic disks in a sophisticated manufacturing process involving many steps, including plating, annealing, polishing, texturing, sputtering, etching, stripping and lubrication. Intevac believes its systems represent approximately 65% of the installed capacity for disk sputtering worldwide. Intevac's systems are used by manufacturers of magnetic media such as Seagate Technology, Western Digital and its wholly-owned subsidiary HGST, Fuji Electric and Showa Denko.

HDDs are a primary storage medium for digital data including nearline "cloud" applications and are used in products and applications such as personal computers ("PCs"), enterprise data storage, video players and video game consoles. Intevac believes that HDD media shipments will grow over time, driven by continued high growth rates in digitally-stored data, by the slowing of areal density improvements, by the increase in demand for nearline drives for cloud storage, an increasing tie ratio (the average number of disks per hard drive) and by new and emerging applications. The projected growth rates for digitally-stored data on HDDs exceed the rate of areal density improvements, at the same time as the tie ratio is increasing, which results in demand for magnetic disks outpacing HDD units.

In recent years HDD media units have been negatively impacted by declining PC units, primarily resulting from the proliferation of tablets and the transition to centralized storage. Although the HDD industry continues to expect growth in the nearline data storage market segment, the transition to centralized storage combined with the negative growth in PC shipments has resulted in lower HDD shipments in recent years. However, Intevac continues to believe that long-term demand for hard disks required for high capacity HDDs will increase, driven by growth in demand for digital storage, a declining growth rate in areal density improvements, and increased information technology spending to support the transition to cloud storage. The number of disk manufacturing systems needed to support this growth as well as future technology transitions and improvements is expected to vary from year to year depending on the factors noted above.

Intevac expects that HDD manufacturers will extend their utilization of planar perpendicular media with the introduction of new technologies such as Heat Assisted Magnetic Recording ("HAMR") and Energy Assisted Magnetic Recording ("EAMR"). Initial volume shipments of both HAMR and EAMR-based HDDs began in 2020. Intevac believes that leading manufacturers of magnetic media that are using Intevac systems for the development of these new technologies, will create a significant market opportunity for systems upgrades in support of the media evolution required by these new technologies as they are more widely adopted.

Display Cover Panel ("DCP") Market

Intevac develops equipment to deposit optically transparent thin films onto DCPs typically found on consumer and automotive electronic products.

DCPs are found in products including smartphones, tablet PCs, wearable devices, gaming systems, digital cameras, automotive infotainment systems and digital signage. In 2020, approximately 1.55 billion smartphones, 150 million tablet PCs and 91 million smart watches were shipped to consumers worldwide. For smartphones alone, it is forecasted that nearly 1.7 billion units will ship by 2024, representing a CAGR of 2.3% for the 2020 – 2024 time period.

The DCP is typically made of tempered glass, such as soda-lime or aluminosilicate, or other materials such as sapphire, ceramic and colorless polyimide. The primary function of the DCP is to provide a clear protective interface to the display it protects. In many cases, the DCP is treated with various coatings to enhance its protective performance as well as for clarity, readability and touch sensitivity.

The types of coatings typically found on DCPs of electronic devices include: Scratch Protection ("SP") coatings, Anti-Reflection ("AR") coatings, Anti-Fingerprint ("AF") and Non-Conductive Vacuum Metallization ("NCVM") coatings.

SP coatings generally consist of hard thin films deposited onto the surface of the DCP. Their primary function is to provide enhanced protection against the incidence of scratch, but they can also provide greater breakage resistance. Intevac has developed and is currently marketing a SP coating known as Optical Diamond-like-Carbon ("oDLC®") utilizing its production-proven carbon film technology that is also used on HDD media. This coating provides a hard protective layer which significantly improves the DCP's resistance to scratches and breakage. The oDLC coating has demonstrated scratch protection benefits reflecting a greater than 20 times improvement over current standard cover glass under stainless steel ball Taber scratch testing. Furthermore, using a Ring-on-Ring ("RoR") test, cover glass with our oDLC coating provides a greater than 20 percent increase in breakage resistance strength over cover glass without the oDLC coating. Intevac expects that the adoption of AR and NCVM coatings on mobile devices will create an increased need for SP coatings and provide a significant demand opportunity for oDLC.

In 2019, Intevac released DiamondClad® protective coating. DiamondClad is a proprietary multi-step process that improves upon our original single film solution, oDLC. Developed in-house utilizing the ion beam source technology released in 2018, DiamondClad now performs similarly to sapphire in scratch testing at the Mohs scale of material hardness 8 standard, compared to the industry standard glass with anti-fingerprint or AF coatings, which scratches at a Mohs 5 level. DiamondClad coating outperforms standard cover glass by a factor of 4 in Taber wear testing, and by a factor of 4 to 6 times in use-case AF durability testing with sand, denim, and perspiration.

AR coatings enable greater light transmission though the DCP by reducing the light reflected by the surface back to the user's eye. This allows the user to more easily read the display and reduces the required power needed to display the image which results in extending the battery life. A significant drawback to using AR coatings is their susceptibility to scratch. AR coatings are typically soft and must be applied to the outer surface of the DCP. These coatings generally scratch easily, and as such, smartphone manufacturers have been reluctant to implement AR coatings on their products.

AF coatings provide water and oil protection for the surface of the DCP. This coating, which prevents fingerprints, provides greater aesthetics as well as improving readability. AF coatings allow for greater visual acuity when fingerprints are not visible. The drawback to AF coatings is their relatively low resistance to wear. The coating is soft and usually wears off within a few months of product purchase.

With increasing adoption of wireless charging and the 5G standard of wireless communication, smartphone manufacturers are significantly expanding use of DCPs on the backside of devices. This transition is essential to ensure that the backside cover, which previously was metallic, does not interfere with the wireless signals. NCVM coatings are a new type of color film coating, applied for decorative purposes, to the backside DCP. When applied to the exterior, the NCVM coating provides a pleasing aesthetic and gives manufacturers flexibility with color customization. Decorative NCVM coatings have evolved from single color to multiple colors with complex transitions. Intevac has developed a proprietary technology that enables the creation of uniquely patterned NCVM coatings for the phone back cover. Several leading handset manufacturers are currently evaluating this technology for potential incorporation into their upcoming phone models.

When applied to the exterior of the backside DCP, NCVM has a tendency to scratch easily and rub off over time, leading to a poor appearance. To preserve the color film on the backside DCP, manufacturers are reliant on SP coatings for scratch-resistance and a consistent appearance. Intevac expects the adoption of AR and NCVM coatings on mobile devices will create an increased need for SP coatings and provide a significant demand opportunity for oDLC and DiamondClad coatings.

DIAMOND DOG ® Screen Protectors

In fiscal 2020, Intevac launched DIAMOND DOG ® screen protectors for mobile devices with DiamondClad ® tempered glass, a consumer product. DIAMOND DOG provides long-lasting mobile device screen protection and performance. The DIAMOND DOG screen protector features the patented DiamondClad diamond-like carbon coating technology, which is designed to help protect phones and preserve their brand-new look. The screen protector is custom fit for iPhone and Samsung models. Lab tests show DIAMOND DOG screen protectors provide up to 6 times better scratch protection, up to 5 times more abrasion protection, up to 4-6 times longer anti-fingerprint protection, and up to 3 times better breakage protection. During fiscal 2020 sales of DIAMOND DOG screen protectors were not significant.

Solar Market

Intevac designs, manufactures and markets capital equipment for the PV solar manufacturing industry.

A solar cell (also called a PV cell) is a solid state device that converts the energy of sunlight directly into electricity. Assemblies of cells are used to make solar modules, also known as solar panels. Solar panels have broad-based end market applications for utility-scale solar farms; integrated building PV arrays for commercial, retail, and offices; residential rooftop; and for portable devices.

The cost of electricity generated from solar energy, in many cases, remains higher than that of electricity generated from traditional energy sources. However, deployment of photovoltaics is gaining momentum on a worldwide scale, particularly in Asia, North America and other regions, where solar PV is now increasingly competitive with conventional energy sources. Grid parity, whereby solar PV generates power at a levelized cost of electricity (“LCOE”) less than or equal to the price of power purchased from the electrical grid, has already been reached in about thirty countries. In countries or areas where the cost of solar energy generation remains higher than traditional electricity generation sources, some governments have implemented various tax credits and other financial incentives to promote the growth in solar and other alternative energy sources. As a result of solar energy costs having favorably declined due to the increased scale and improved manufacturing efficiencies spurred by these incentive policies, many governments have reduced or are planning to reduce their incentives for solar, a trend which is likely to continue. More than 120 gigawatts of solar capacity were added globally in 2020, rising 7.1% year-on-year, but the rate is expected to taper off to a modest growth of 4.1% in 2021. Intevac expects that 2021 will continue to be challenging for the solar industry due to further declines in solar panel pricing.

The PV industry continues to focus on the development of high-efficiency cell technologies aimed at simultaneously boosting PV efficiency and reducing solar energy production costs. New vacuum process technologies and integrated processing steps are expected to become increasingly important as companies search for lower-cost manufacturing solutions for PV cells.

Intevac offers products for wafer-based crystalline silicon (“c-Si”) solar cell manufacturing processes, the prevailing manufacturing process in the PV industry. Intevac’s products for the solar industry are specifically focused on cell designs with the highest energy conversion efficiency, which are within the n-type mono crystalline portion of the market.

Intevac offers thin-film vacuum process manufacturing solutions for c-Si cell fabrication applications. Intevac offers high-productivity process equipment solutions that enable low-cost solar cell manufacturing with high cell efficiency, consistent with the PV industry's focus and requirements. Intevac has developed two vacuum process application technologies for solar cell manufacturing: one utilizes Physical Vapor Deposition ("PVD") technology for the deposition of thin films onto c-Si wafers, and the other utilizes ion implantation, which selectively changes the electrical characteristics of the c-Si solar cell.

PVD is a process used in multiple ways in the manufacturing of solar cells such as for fabricating electrical contacts and conductor layers, depositing reflective layers of various types, and for growing transparent conductive oxide layers, all of which are critical to the efficiency of solar cells.

Ion implantation is a solar cell processing technology whereby an impurity is added to a PV structure to improve its conductivity. In ion implantation, a beam of ions of a desired dopant element such as phosphorus or boron is electrostatically accelerated and directed toward the target material, introducing the impurity. In a subsequent thermal annealing step, the dopant is electrically activated. The ion implant processes enable precision engineering of the dose and of the depth of dopant elements to form emitter structures in working solar cells. Ion implantation is a technique being introduced to solar cell lines as a means to lower the cost per watt to manufacture the cell. Ion implantation can replace existing diffusion processes in existing solar processing lines for present-day PV cell structures, and is also extendable to new advanced cell structures. In both cases, ion implant-formed emitters are created with fewer processing steps, and therefore at lower cost, than the diffusion processes implant displaces. Intevac's ion implantation products are based upon technology developed by Solar Implant Technologies, Inc. ("SIT") which was acquired by Intevac in November 2010.

Fan-Out Packaging Market

Intevac is bringing to market capital equipment for fan-out packaging applications, fan-out packaging being a specialized part of the overall semiconductor device packaging market.

Semiconductor device packaging technology in general, and fan-out wafer level packaging ("FOWLP")/fan-out panel level packaging ("FOPLP") technology in particular, is being driven by the strong cost advantages these technologies offer over the cost of further implementing continued Moore's Law progress for 10nm and 7nm semiconductor device process nodes. Generally speaking, fan-out packaging provides for increased Input/Output ("I/O") density for a given semiconductor device while simultaneously supporting continued progress in shrinking the individual semiconductor devices, resulting in decreased footprint per device and, by extension, decreases in the amount of space integrated circuit content occupies in handheld consumer electronic products, for example in smartphones, wearables, and in Internet of Things ("IoT") devices.

Fan-out packaging technology consists of a series of operations where known good semiconductor devices from silicon wafers fabricated by an Integrated Device Manufacturer ("IDM"), or by a semiconductor foundry, are singulated and then assembled onto a substrate or temporary carrier, which is then overmolded with epoxy mold compound and cured to create what is known as a reconstituted wafer. The reconstituted wafer then goes through another series of process steps (dielectric deposition, metallization, photolithography), to create a redistributed "fan-out" of the electrical interconnections from the original silicon device area to an expanded area that includes the device (die) surface itself, along with a generous amount of extra surface created from the mold compound area.

A redistribution layer ("RDL") is the "fanned-out" metal layer on a packaged integrated circuit that makes the I/O pads of the integrated circuit available in other locations. PVD processes are essential to RDL fabrication; in fan-out packaging, our INTEVAC MATRIX ® PVD system is used to deposit thin layers of Titanium ("Ti"), Titanium Tungsten ("TiW") and Copper ("Cu") to form the barrier/seed layer upon which the full RDL is constructed.

Applications driving the adoption of fan-out packaging include, among others: (1) baseband processors and application processors; (2) radio frequency ("RF") transceivers and switches; (3) power management integrated circuits ("PMIC"); (4) radar modules for automotive; (5) audio codec; and (6) microcontrollers.

Smartphones from OEMs including Apple, Samsung, Xiaomi, OPPO and others incorporate fan-out packaged components, as do most higher-end automobiles. IoT applications in the future are expected to contribute additional significant volume in fan-out packaged devices.

The compelling advantages our INTEVAC MATRIX PVD system brings to fan-out packaging are a much-reduced cost of ownership over the current PVD process tools of record used for RDL barrier/seed layer applications, and also the flexibility to run round wafers, and square or rectangular panels, with no changes to the INTEVAC MATRIX PVD system beyond a simple substrate carrier substitution.

TFE Products

Intevac's TFE product portfolio addressing each of these markets is based around common core technologies and competencies. Intevac believes its TFE product portfolio can be extended to support adjacent markets. Based on its history and market and technology leadership in the HDD industry, Intevac offers superior high-productivity vacuum handling of small substrates at the lowest cost of ownership. Lowest cost of ownership includes various advantages such as high target utilization, high throughput, small footprint, double-sided coating, and reduced materials costs.

Product Table

The following table presents a representative list of the TFE products that we offered during fiscal 2020 and fiscal 2019.

TFE Products	Applications and Features
HDD Equipment Market	
200 Lean ® Disk Sputtering System	• Uses PVD and chemical vapor deposition ("CVD") technologies. • Deposits magnetic films, non-magnetic films and protective carbon-based overcoats. • Provides high-throughput for small-substrate processing. • Over 164 units installed.
Upgrades, spares, consumables and services (non-systems business)	• Upgrades to the installed base to support the continued growth in areal density or reduce the manufacturing cost per disk.
DCP Market	
INTEVAC VERTEX ® System	• Utilizes vertical sputtering for multiple film types. • Provides high-throughput for small-substrate processing. • Uses patented carbon deposition source. • Modular design enables expandability. • Enables low-temperature processing.
INTEVAC VERTEX ® Spectra System	• Extension of the VERTEX system. • Incorporates multiple source technologies in a single system. • Uses proprietary ion beam processing for deposition and etching. • Enables unique patterned NCVM and hard AR coatings.
INTEVAC VERTEX ® Marathon System	• Versatile platform for high volume manufacturing of multi-step, multi-layer optical coatings. • Enables diverse coatings — DiamondClad, patterned NCVM and AR films.
DIAMOND DOG ®	• Screen protectors for mobile devices, a consumer product line with DiamondClad tempered glass. • Provides long lasting protection against scratches and abrasion. • Preserves screen clarity and anti-fingerprint performance.
Solar PV Market	
INTEVAC MATRIX PVD System	• Deposits electrical contacts and conductor layers, reflective layers, and transparent conductive oxide layers, all of which are critical to the efficiency of solar cells. • Includes patented Linear Scanning Magnetic Array ("LSMA") magnetron source, with industry-leading target utilization rate of over 65 percent. • Provides high-throughput for small-substrate processing.
INTEVAC MATRIX Implant System	• Utilizes the chambers and transport mechanism of the MATRIX platform while using the implant sources from the ENERG *i* system.
ENERG *i* ® Implant System	• Supports both phosphorus and boron dopant technologies. • Extendable to new advanced solar cell structures.

TFE Products	Applications and Features
Fan-Out Packaging Market	
INTEVAC MATRIX PVD System	• Deposits barrier/seed layers for fan-out RDL. • Includes LSMA magnetron source, with industry-leading target utilization rate of over 65 percent. • Provides high-throughput and low cost of ownership for small-substrate or large panel processing. • Provides flexibility for handling round, square, or rectangular substrates for fan-out packaging.
Adjacent Markets	
INTEVAC MATRIX System	• Incorporates multiple thin-film deposition techniques such as PVD, CVD, Etch, Implant, heating and cooling. • Consists of high-speed linear transport. • Flexible design enables handling of various different small substrate sizes and shapes. • Performs double-sided coating within vacuum.

Photonics Segment

Photonics Market

Intevac Photonics develops, manufactures and sells compact, high-sensitivity digital-optical products for the capture and display of extreme low-light images. These products incorporate high resolution digital night-image sensors operating in the visible and near infrared (“NIR”) light spectrums and are based on Intevac’s proprietary EBAPS ® (Electron Bombarded Active Pixel Sensor) technology.

Photonics products primarily address the high-performance military night-vision market. Our products provide digital imagery in extremely low-light level conditions. Intevac provides these products for military aircraft including the U.S. Army AH-64 Apache Attack Helicopter and the F-35 Joint Strike Fighter. The Company is developing additional technologies to address soldier head-mounted and weapon-mounted applications.

Military Products

Intevac’s EBAPS is incorporated into custom-designed cameras, modules and system products for high performance military applications. Intevac’s EBAPS can be integrated at various levels with optics, electronics, software, and displays based upon customer specifications and requirements. Intevac has developed a next-generation, 3.7 mega-pixel resolution Intevac Silicon Imagine Engine (“ISIE”) 19 EBAPS which operates at higher resolutions, lower light levels, higher speeds, and lower power consumption for use in next-generation systems. Customization typically occurs in the areas of electronics, near-eye micro-displays and mechanical packaging. Intevac’s products by application are:

Helicopter Pilotage

Intevac provides a night-vision camera with a 2.0 mega-pixel resolution EBAPS module which is gimbal turret-mounted on the nose of the Apache helicopter. The low-light level digital video is then viewable by the helicopter pilot on a Head-Mounted Display (“HMD”) enabling the pilot to have enhanced night vision and allowing the aircrew to view multiple aircraft-mounted sensor information.

Fixed Wing Aircraft Pilotage

Intevac provides night-vision modules with a 2.0 mega-pixel resolution EBAPS module which are integrated with the F-35 fighter pilot’s helmet and enables the pilot to have enhanced night vision incorporating navigational and tactical information. Additionally, a similar integrated night vision camera utilizing a 2.0 mega-pixel resolution EBAPS is being designed into the Striker II helmet for the NATO Eurofighter Typhoon aircraft.

Long-Range Target Identification

Intevac provides the Laser Illuminated Viewing and Ranging (“LIVAR ® ”) shortwave-infrared camera for long range military night-time surveillance systems that can identify targets at distances of up to twenty kilometers. Photonics’ LIVAR camera is incorporated into long range target identification systems manufactured by a major defense contractor.

Augmented Reality ("AR") and Wireless HMDs

Intevac provides HMDs for applications in AR and weapon sights. The HMD is a near-eye, high-definition, wide field-of-view ("FOV") micro-display system for portable viewing of video in military and commercial applications. Depending on the application, Intevac provides configuration choices that include monocular or binocular, mono or stereo video, wired or wireless interfaces, and with integral inertial measurement units ("IMU"). An AR HMD overlays symbology and other information on and tracked in a view of the real world, creating the illusion that they occupy the same space. Intevac has developed and demonstrated wide FOV AR displays for use in HMDs.

Soldier Mobility

Intevac is developing a digital-fused binocular night-vision goggle with AR which will integrate the next-generation EBAPS. This goggle will demonstrate superior night-vision capability, with digital advantages, such as zoom, information overlay, and wireless image transmission and reception.

Intevac is developing a digital night-vision camera for the U.S. Army's Integrated Visual Augmentation System ("IVAS") program. The IVAS will incorporate head, body, and weapon technologies on individual soldiers. It is a single platform that soldiers can use to fight, rehearse, and train that provides increased mobility and situational awareness necessary to achieve overmatch against adversaries and includes a squad-level combat training capability.

Commercial Products

Low-Light Cameras

Photonics' MicroVista ® product line of commercial compact and lightweight low-light Complementary Metal–Oxide–Semiconductor ("CMOS") cameras provides high sensitivity in the ultraviolet, visible or NIR regions of the spectrum for use in industrial inspection, bio-medical and scientific applications. These cameras are primarily sold through distribution channels and to original equipment manufacturers.

Customer Concentration

Historically, a significant portion of Intevac's revenue in any particular period has been attributable to sales to a limited number of customers.

The following customers accounted for at least 10 percent of Intevac's consolidated net revenues in fiscal 2020 and 2019.

	2020	2019
Seagate Technology	42%	49%
U.S. Government	29%	20%
Elbit Systems of America	12%	*
Jolywood (Hongkong) Industrial Holdings Co., Limited	*	14%

* Less than 10%

Intevac expects that sales of Intevac's products to relatively few customers will continue to account for a high percentage of Intevac's revenues in the foreseeable future.

Foreign sales accounted for 47% of revenue in fiscal 2020 and 67% of revenue in fiscal 2019. The majority of Intevac's foreign sales are to companies in Asia or to U.S. companies for use in their Asian manufacturing or development operations. Intevac anticipates that foreign sales will continue to be a significant portion of Intevac's TFE revenues. Intevac's disk sputtering equipment customers include magnetic disk manufacturers, such as Fuji Electric and Showa Denko, and vertically integrated HDD manufacturers, such as Seagate, Western Digital and HGST. Intevac's PV solar equipment customers include several major solar cell manufacturers. Intevac's DCP equipment customers include DCP manufacturers, such as Truly Opto-electronics. Intevac's customers' manufacturing facilities are primarily located in California, China, Taiwan, Japan, Malaysia, Portugal and Singapore.

Competition

The principal competitive factors affecting the markets for Intevac TFE products include price, product performance and functionality, ease of integration, customer support and service, reputation and reliability. Intevac has one major competitor, Canon Anelva, in the hard disk drive equipment market and has historically experienced intense worldwide competition for magnetic disk sputtering equipment. Intevac primarily faces competition from large established global competitors in the PV equipment market including Centrotherm Photovoltaics, Jusung, Kingstone, Von Ardenne and Belight Technology. Intevac faces competition in the DCP market from optical coating equipment manufacturers such as Optorun, Shincron and Hongda, glass manufacturers that may develop scratch resistant glass, touchscreen manufacturers that may adopt harder substrate materials, or other equipment companies, chemical companies or the display cover plate manufacturers themselves that may offer competing protective coatings including DLC, NCVM and AR. Intevac's competitors for PVD processes in the fan-out packaging market include the companies SPTS Technologies (a KLA company), Evatec AG, ULVAC Technologies, Inc., Tango Systems, Inc. (an Applied Materials company) and ASM NEXX, Inc. These competitors generally have substantially greater financial, technical, marketing, manufacturing and other resources as compared to Intevac. Furthermore, any of Intevac's competitors may develop enhancements to, or future generations of, competitive products that offer superior price or performance features. In addition, new competitors, with enhanced products may enter the markets that Intevac currently serves.

The principal competitive factors affecting Photonics products include price, extreme low-light level performance, power consumption, resolution, size, ease of integration, reliability, spectral band, reputation and customer support and service. Intevac faces substantial competition for Photonics products, and many competitors have substantially greater resources and brand recognition. In the military market for soldier and helicopter night vision goggles, Elbit Systems and L3Harris Technologies are large and well-established defense contractors and are the primary U.S. manufacturers of analog image intensifier tubes used in Generation-III night-vision devices. For long range airborne targeting applications, Intevac competes against camera providers using low light CMOS imagery. Intevac expects that other companies will develop digital night-vision products and aggressively promote their sales.

Marketing and Sales

TFE sales are made primarily through Intevac's direct sales force. Intevac also sells its products through distributors in Japan and China. The selling process for Intevac's TFE products is multi-level and lengthy, involving individuals from marketing, engineering, operations, customer service and senior management.

Installing and integrating new equipment requires a substantial investment by a customer. Sales of Intevac's systems depend, in significant part, upon the decision of a prospective customer to replace obsolete equipment or to increase manufacturing capacity by upgrading or expanding existing manufacturing facilities or by constructing new manufacturing facilities, all of which typically involve a significant capital commitment. Intevac's systems have a lengthy sales cycle, during which Intevac may expend substantial funds and management time and effort with no assurance that a sale will result.

The production of large complex systems requires Intevac to make significant investments in inventory both to fulfill customer orders and to maintain adequate supplies of spare parts to service previously shipped systems. Intevac maintains inventories of spare parts in the United States, Singapore, Malaysia and China to support its TFE customers. Intevac often requires its TFE customers to pay for systems in three installments, with a portion of the system price billed upon receipt of an order, a portion of the price billed upon shipment, and the balance of the price and any sales tax due upon completion of installation and acceptance of the system at the customer's factory.

Intevac provides process and applications support, customer training, installation, start-up assistance and post-installation service support to Intevac's TFE customers. Intevac supports US customers from Intevac headquarters in Santa Clara, California, and has field offices in Singapore, China, and Malaysia to support customers in Asia.

Warranties for Intevac's TFE products typically range between 12 and 24 months from customer acceptance. During the warranty period any necessary non-consumable parts are supplied and installed without charge.

Sales of Photonics products for military applications are primarily made to the end user through Intevac's direct sales force. Intevac sells to the U.S. government and to leading defense contractors such as Lockheed Martin Corporation, Northrop Grumman Corporation, Elbit Systems of America, Raytheon, Leonardo DRS, BAE Systems and Safran Electronics and Defense.

Intevac is subject to long sales cycles in the Photonics segment because many of Intevac's products, such as Intevac's night-vision systems, typically must be designed into Intevac's customers' products, which are often complex and state-of-the-art. These development cycles are generally multi-year, and Intevac's sales are dependent on Intevac's customer successfully integrating Intevac's product into its product, completing development of its product and then obtaining production orders for its product. Sales of these products are also often dependent on ongoing funding of defense programs by the U.S. government and its allies. Additionally, sales to international customers are contingent on issuance of export licenses by the U.S. government.

Photonics generally invoices its research and development customers either as costs are incurred, or as program milestones are achieved, depending upon the particular contract terms. As a government contractor, Intevac invoices customers using estimated annual rates approved by the Defense Contracts Audit Agency ("DCAA").

Research and Development and Intellectual Property

Intevac's long-term growth strategy requires continued development of new products. Intevac works closely with Intevac's customers to design products that meet their planned technical and production requirements. Product development and engineering organizations are located primarily in the United States and Singapore.

Intevac's competitive position significantly depends on Intevac's research, development, engineering, manufacturing and marketing capabilities, and not just on Intevac's patent position. However, protection of Intevac's technological assets by obtaining and enforcing intellectual property rights, including patents, is important. Therefore, Intevac's practice is to file patent applications in the United States and other countries for inventions that Intevac considers important. Although Intevac does not consider Intevac's business materially dependent upon any one patent, the rights of Intevac and the products made and sold under Intevac's patents along with other intellectual property, including trademarks, know-how, trade secrets and copyrights, taken as a whole, are a significant element of Intevac's business.

Intevac enters into patent and technology licensing agreements with other companies when management determines that it is in Intevac's best interest to do so. Intevac pays royalties under existing patent license agreements for use of certain patented technologies in several of Intevac's products.

In the normal course of business, Intevac periodically receives and makes inquiries regarding possible patent infringements. In dealing with such inquiries, it may be necessary or useful for us to obtain or grant licenses or other rights. However, there can be no assurance that such licenses or rights will be available to us on commercially reasonable terms, or at all. If Intevac is not able to resolve or settle claims, obtain necessary licenses and/or successfully prosecute or defend Intevac's position, Intevac's business, financial condition and results of operations could be materially and adversely affected.

Manufacturing

Intevac manufactures its TFE products at its facilities in California and Singapore. Intevac's TFE manufacturing operations include electromechanical assembly, vacuum processing, fabrication of sputter sources, and system assembly, alignment and testing.

Photonics products are manufactured at Intevac's facility in California. Photonics manufactures sensors, cameras, integrated camera systems, and near-eye display systems using advanced manufacturing techniques and equipment. Intevac's operations include vacuum processing, and electromechanical and optical system assembly.

Government Regulations

We are subject to various government regulations in the United States as well as various international locations where we operate. These regulations cover several diverse areas including environmental compliance, import and export controls, economic sanctions, data and privacy protection, transfer pricing rules, anti-bribery, anti-trafficking and anti-trust provisions. Our policies mandate compliance with applicable laws and regulations administered by various state, federal and international agencies. We instituted various training programs to educate our employees on compliance with governmental regulations, as well as applied legal and ethical practices in our everyday work. We are subject to international, federal, state, and local legislation, regulations, and other requirements relating to the use, storage, discharge, handling, emission, generation, manufacture, treatment and disposal of toxic or otherwise hazardous substances, chemicals, materials or waste; recycling and product packaging; worker health and safety; and other activities affecting the environment, our workforce, and the management of our manufacturing operations. We believe that our operations and facilities comply in all material respects with applicable environmental laws and worker health and safety laws. We treat the cost of complying with government regulations and operating a safe workplace as a normal cost of business and allocates the cost of these activities to all functions, except where the cost can be isolated and charged to a specific function. The environmental standards and regulations promulgated by government agencies in California and Singapore are particularly rigorous and set a high standard of compliance. We believe our costs of compliance with these regulations and standards are comparable to other companies operating similar facilities in these jurisdictions. We are also subject to import/export controls, tariffs, and other trade-related regulations and restrictions in the countries in which we have operations or otherwise do business. These controls, tariffs, regulations, and restrictions (including those related to, or affected by, United States-China relations) have had, and we believe may continue to have, a material impact on our business, including our ability to sell products and to manufacture or source components. Our business is affected by numerous laws and regulations relating to the award, administration and performance of U.S. Government contracts. In addition, many federal and state laws materially affect our operations. These laws relate to ethics, labor, tax, and employment matters. As any employer is, we are subject to federal and state statutes and regulations governing their standards of business conduct with the government, including that government contracts typically contain provisions permitting government clients to terminate contracts without cause with limited notice or compensation. The development of additional statutes and regulations and interpretation of existing statutes and regulations with respect to our industry can be expected to evolve over time. As with any commercial enterprise, we cannot predict with certainty the nature or direction of the development of federal statutes and regulations that will affect its business operations.

Human Capital Resources

General Information About Our Human Capital Resources

As of January 2, 2021, we had 269 employees, including 3 contract employees. Approximately 71% of our employees are located in the United States and 29% are located in Asia. Of our total workforce, 86 employees are involved in research and development; 115 employees are involved in operations, manufacturing, service and quality assurance; and 68 employees are involved in sales, order administration, marketing, finance, information technology, general management and other administrative functions.

Core Principles

Our core values are integral to our Company culture. We pride ourselves in providing a safe and positive work environment where mutual respect and ethical conduct is a core value. We believe in continuous learning and professional development and provide employees with opportunities to grow.

Community Involvement

Our employees are committed to making a difference in the community by actively volunteering and fundraising for many charities, including American Cancer Society, Second Harvest, Human Society, Make a Wish, and Salvation Army.

Health and Safety

The health and safety of our employees is of utmost importance to us. We conduct regular self-assessments and audits to ensure compliance with our health and safety guidelines and regulatory requirements. Our ultimate goal is to achieve a level of work-related injuries as close to zero as possible through continuous investment in our safety programs. We provide protective gear (e.g. eye protection, masks and gloves) as required by applicable standards and as appropriate given employee job duties. Annual participation in trainings related to ethics, environment, health and safety, and emergency responses are at or near 100%.

Refer to “Impact of COVID-19” included in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations” for information on actions taken by the Company to support its employees in response to the COVID-19 pandemic.

Talent Management

We regularly monitor and review with management human capital metrics that are key to our business, including hiring statistics, promotion rates, turnover rates, career growth and development, and diversity and inclusion.

Hiring Practices

It is our policy to hire and promote the best-qualified person for the job and comply fully with all domestic, foreign and local laws relating to discrimination in the workplace. Our good faith outreach efforts are designed to ensure that there are no barriers for members of any group and to encourage interest by all qualified persons. We believe our actions enhance diversity, including recruiting at venues representing women, minorities and U.S. military veterans.

Turnover

We continually monitor employee turnover rates, both regionally and as a whole, as our success depends upon retaining our highly trained engineering, manufacturing and operating personnel. The average tenure of our employees is 9.8 years in the United States and 9.5 years in Asia.

Diversity and Inclusion

Recognizing and respecting our global presence, we strive to maintain a diverse and inclusive workforce everywhere we operate. We believe that a diverse and motivated workforce is vital to our success. We strive to advance diversity and inclusion through various talent acquisition programs to attract, retain and develop a diverse, highly-skilled work force. We conduct employee surveys to provide on-going feedback on how we are doing against our commitment to treat all employees fairly and provide equal opportunity in an environment free of discrimination. Our diversity and inclusion principles are also reflected in our employee training, in particular by educating employees about our policies against harassment and bullying and about the elimination of bias in the workplace.

Management Team

We believe our management team has the experience necessary to effectively execute our strategy and advance our product and technology leadership. Our chief executive officer and business unit leaders average approximately 25 years of industry experience. They are supported by an experienced and talented professional team.

Training and Talent Development

We are committed to the continued development of our employees. Strategic talent reviews and succession planning occur on a planned cadence annually – globally and across all business areas. We are committed to identifying and developing the talents of our next generation leaders. We have a robust talent and succession planning process and have established specialized programs to support the development of our talent pipeline for critical roles in management, engineering, and operations. We also provide technical, professional and leadership training to our employees. We recognize and support the growth and development of our employees and offer opportunities to participate in internal as well as external learning opportunities.

Compensation and Benefits

We strive to offer employees regionally competitive compensation and benefits that are aligned to our values. All employees receive a base salary, incentive compensation and welfare benefits. Depending on the region, benefits include medical, dental and vision coverage, short and long-term disability income protection, flexible spending plans (health, dependent and limited flexible spending) and basic and supplemental life insurance, accidental death and dismemberment insurance and retirement savings plan. Intevac pays the majority or all of the costs for these benefits.

We have various employee incentive plans. Our profit-sharing plan provides for the distribution of a percentage of pre-tax profits to substantially all of our employees not eligible for other performance-based incentive plans. Our executives and key contributors participate in bonus plans based on the achievement of profitability and other individual performance goals and objectives.

To foster a stronger sense of ownership and align the interests of employees with our stockholders we grant equity-based awards, including restricted stock units (“RSUs”) and performance-based restricted stock units (“PRSUs”) to eligible employees. We also have an employee stock purchase plan, which provides employees with the opportunity to purchase Intevac common stock at a discount through payroll deductions. See Note 3 to the consolidated financial statements for a description of these plans.

Oversight and Management

As noted in its charter, our Compensation Committee is responsible for periodically reviewing our employee programs and initiatives, including healthcare and other benefits, as well as our management development and succession planning practices and strategies.

Information about our Executive Officers

Certain information about our executive officers as of February 17, 2021 is listed below:

Name	Age	Position
Executive Officers:		
Wendell T. Blonigan	59	President and Chief Executive Officer
James Moniz	63	Executive Vice President, Finance and Administration, Chief Financial Officer, Secretary and Treasurer
Timothy Justyn	58	Executive Vice President and General Manager, Photonics
Jay Cho	56	Executive Vice President and General Manager, TFE
Other Key Officers:		
Verle Aebi	66	Chief Technology Officer, Photonics
Terry Bluck	61	Chief Technology Officer, TFE
Kimberly Burk	55	Senior Vice President, Global Human Resources

Mr. Blonigan joined Intevac in July 2013 as President and Chief Executive Officer. Prior to joining Intevac, Mr. Blonigan co-founded Orbotech LT Solar in 2009 and served as the company's Chief Executive Officer until 2013. From 2006 until 2009, he was the Chief Operating Officer at Photon Dynamics, Inc. In 1991, Mr. Blonigan joined Applied Materials' AKT display subsidiary. During his tenure at AKT, he held various positions. In 2003, he was appointed President and served in this role until 2006; from 1999 through 2003 he was Vice President, and prior to that time he was Director of Engineering and New Product Development. Mr. Blonigan holds a BS in electronic engineering technology from DeVry University Missouri Institute of Technology.

Mr. Moniz joined Intevac as Executive Vice President, Finance and Administration, Chief Financial Officer and Treasurer in November 2014. Mr. Moniz previously served as the Chief Financial Officer of Nanometrics, Inc. from 2009 until his retirement in 2011. During 2008, Mr. Moniz was the Chief Financial Officer at Photon Dynamics, Inc. From 2000 until 2008, Mr. Moniz served as the Chief Financial Officer at Nextest Systems Corporation. Prior to Nextest, Mr. Moniz held senior financial management positions at Millennia Vision Corporation, Lockheed Martin Corporation, Loral Corporation and Varian Associates. Mr. Moniz holds an MBA, a BS in accounting and a BS in marketing from San Jose State University.

Mr. Justyn has served as Executive Vice President and General Manager, Photonics from February 2018. Mr. Justyn served as Senior Vice President of Global Operations from February 2015 to February 2018. Mr. Justyn served as Vice President, Photonics from October 2008 to February 2015. Mr. Justyn served as Vice President, TFE Manufacturing from April 1997 to October 2008. Mr. Justyn joined Intevac in February 1991 and has served in various roles in our TFE Products Division and our former night-vision business. Mr. Justyn holds a BS in chemical engineering from the University of California, Santa Barbara.

Mr. Cho joined Intevac in January 2014 and currently serves as Executive Vice President and General Manager, TFE. Prior to joining Intevac, Mr. Cho was President, Chief Executive Officer and Co-Founder of REEnewal Corporation. From 2006 to 2011, Mr. Cho served as Vice President / General Manager of the Tester and Repair Business Units of Orbotech LTD. From 2005 to 2006, Mr. Cho served as Vice President, Product Development at Metara Inc. From 1992 to 2005, Mr. Cho held various management positions at Novellus Systems, Inc. Prior to Novellus, Mr. Cho worked for Digital Equipment Corporation and Intermec Corporation. Mr. Cho holds a BS in electrical engineering from Washington State University and an MBA from University of Phoenix.

Mr. Aebi has served as Chief Technology Officer of the Photonics business since August 2006. Previously, Mr. Aebi served as President of the Photonics Division from July 2000 to July 2006 and as General Manager of the Photonics Division since May 1995. Mr. Aebi was elected as a Vice President of the Company in September 1995. From 1988 through 1994, Mr. Aebi was the Engineering Manager of the night-vision business Intevac acquired from Varian Associates in 1991, where he was responsible for new product development in the areas of advanced photocathodes and image intensifiers. Mr. Aebi holds a BS in physics and an MS in electrical engineering from Stanford University.

Mr. Bluck rejoined Intevac as Chief Technology Officer of TFE in August 2004. Mr. Bluck had previously worked at Intevac from December 1996 to November 2002 in various engineering positions. The business unit Mr. Bluck worked for was sold to Photon Dynamics in November 2002, and he was employed there as Vice President, Rapid Thermal Process Product Engineering until August 2004. Mr. Bluck holds a BS in physics from San Jose State University.

Ms. Burk joined Intevac in May 2000 and currently serves as Senior Vice President of Global Human Resources. Prior to joining Intevac, Ms. Burk served as Human Resources Manager of Moen, Inc. from 1999 to 2000 and as Human Resources Manager of Lawson Mardon from 1994 to 1999. Ms. Burk holds a BS in sociology from Northern Illinois University.

Available Information

Intevac's website is *http://www.intevac.com.* Intevac makes available free of charge, on or through its website, its annual, quarterly and current reports, and any amendments to those reports, as soon as reasonably practicable after electronically filing such reports with, or furnishing them to, the SEC. This website address is intended to be an inactive textual reference only and none of the information contained on Intevac's website is part of this report or is incorporated by reference herein.

Trademarks

Intevac's trademarks include the following: "200 Lean ®," "DiamondClad ®," "DIAMOND DOG ®," "EBAPS ®," "ENERG *i* ®," "LIVAR ®," "INTEVAC LSMA ®," "INTEVAC MATRIX ®," "MicroVista ®," "NightVista ®," "oDLC ®," "INTEVAC VERTEX ®," "VERTEX Marathon ®," and "VERTEX SPECTRA ®."

Item 1A. *Risk Factors*

The following factors could materially affect Intevac's business, financial condition or results of operations and should be carefully considered in evaluating the Company and its business, in addition to other information presented elsewhere in this report.

Risks Related to Our Business

The industries we serve are cyclical, volatile and unpredictable.

A significant portion of our revenue is derived from the sale of equipment used to manufacture commodity technology products such as disk drives, PV solar cells and cell phones. This subjects us to business cycles, the timing, length and volatility of which can be difficult to predict. When demand for commodity technology products exceeds production capacity, then demand for new capital equipment such as ours tends to be amplified. Conversely, when supply of commodity technology products exceeds demand, then demand for new capital equipment such as ours tends to be depressed. We cannot predict with any certainty when these cycles will begin or end. Our sales of systems for magnetic disk production increased in 2016 as a customer began upgrading the technology level of its manufacturing capacity. Sales of systems and upgrades for magnetic disk production in 2017 and 2018 were higher than in 2016 as this customer's technology upgrade continued. Sales of systems and upgrades for magnetic disk production in 2019 were slightly down from the levels in 2018 as this customer took delivery of four systems. Sales of systems and upgrades for magnetic disk production in 2020 were down from the levels in 2019 as this customer took delivery of only two systems. Intevac expects sales of systems and upgrades for magnetic disk production in 2021 will be at levels lower than the levels in 2020.

Our equipment represents only a portion of the capital expenditure that our customers incur when they upgrade or add production capacity. Accordingly, our customers generally commit to making large capital expenditures far in excess of the cost of our systems alone when they decide to purchase our systems. The magnitude of these capital expenditures requires our customers to have access to large amounts of capital. Our customers generally reduce their level of capital investment during downturns in the overall economy or during a downturn in their industries.

In recent years the photovoltaic (solar) market has undergone a downturn, which is likely to impact our sales of PV equipment. The solar industry from time to time experiences periods of structural imbalance between supply and demand, and such periods put intense pressure on our customers' pricing. The solar industry is currently in such a period. Competition in solar markets globally and across the solar value chain is intense, and could remain that way for an extended period of time. During any such period, solar module manufacturers may reduce their sales prices in response to competition, even below their manufacturing costs, in order to generate sales and may do so for a sustained period of time. As a result, our customers may be unable to sell their solar modules or systems at attractive prices or for a profit during a period of excess supply of solar modules, which would adversely affect their results of operations and their ability to make capital investments such as purchasing our products.

We must effectively manage our resources and production capacity to meet rapidly changing demand. Our business experiences rapid growth and contraction, which stresses our infrastructure, internal systems and managerial resources. During periods of increasing demand for our products, we must have sufficient manufacturing capacity and inventory to meet customer demand; attract, retain and motivate a sufficient number of qualified individuals; and effectively manage our supply chain. During periods of decreasing demand for our products, we must be able to align our cost structure with prevailing market conditions; motivate and retain key employees and effectively manage our supply chain.

The impact of the COVID-19 outbreak, or similar global health concerns, could negatively impact our operations, supply chain and customer base.

The COVID-19 outbreak has severely restricted the level of economic activity around the world, which may impact demand for our products. Our operations and supply chains for certain of our products or services could be negatively impacted by the regional or global outbreak of illnesses, including COVID-19. Any quarantines, labor shortages or other disruptions to our operations, or those of our suppliers or customers, may adversely impact our sales and operating results. In addition, a significant outbreak, epidemic, or pandemic of contagious diseases in the human population could result in a widespread health crisis that could adversely affect the economies and financial markets of many countries, including those in which we operate, resulting in an economic downturn that could affect the supply or demand for our products and services. Our factory in Singapore was given notice by the Singapore government to suspend all on-site activities on April 27, 2020. We appealed this notice and were provided an exemption on May 14, 2020. We were temporarily required to limit the number of employees on site at our Singapore factory but these restrictions were lifted on June 2, 2020. We are unable to accurately predict the possible future effect on the Company, which could be material to our 2021 results, and which is highly dependent on the breadth and duration of the outbreak and could be affected by other factors we are not currently able to predict, including new information which may emerge concerning the severity of COVID-19, the success of actions taken to contain or treat COVID-19, and reactions by consumers, companies, governmental entities and capital markets. Any widespread growth in infections, or travel restrictions, quarantines or site closures imposed as a result of COVID-19, could, among other things, require the Company to extend mandatory work-from-home protocols resulting in additional expenses and strain on the business as well as adversely impact its supply chain.

Sales of our equipment are primarily dependent on our customers' upgrade and capacity expansion plans and whether our customers select our equipment.

We have no control over our customers' upgrade and capacity expansion plans, and we cannot be sure they will select, or continue to select, our equipment when they upgrade or expand their capacity. The sales cycle for our equipment systems can be a year or longer, involving individuals from many different areas of Intevac and numerous product presentations and demonstrations for our prospective customers. Our sales process also commonly includes production of samples and customization of our products. We do not typically enter into long-term contracts with our customers, and until an order is actually submitted by a customer there is no binding commitment to purchase our systems. In some cases, orders are also subject to customer acceptance or other criteria even in the case of a binding agreement.

Sales of new manufacturing systems are also dependent on obsolescence and replacement of the installed base of our customers' existing equipment with newer, more capable equipment. If upgrades are developed that extend the useful life of the installed base of systems, then we tend to sell more upgrade products and fewer new systems, which can significantly reduce total revenue.

Our 200 Lean HDD customers also experience competition from companies that produce alternative storage technologies like flash memory, which offer smaller size, lower power consumption and more rugged designs. These storage technologies are being used increasingly in enterprise applications and smaller form factors such as tablets, smart-phones, ultra-books, and notebook PCs instead of hard disk drives. Tablet computing devices and smart-phones have never contained, nor are they likely in the future to contain, a disk drive. Products using alternative technologies, such as flash memory, optical storage and other storage technologies are becoming increasingly common and could become a significant source of competition to particular applications of the products of our 200 Lean HDD customers, which could adversely affect our results of operations. If alternative technologies, such as flash memory, replace hard disk drives as a significant method of digital storage, then demand for our hard disk manufacturing products would decrease.

The Photonics business is also subject to long sales cycles because many of its products, such as our military imaging products, often must be designed into the customers' end products, which are often complex state-of-the-art products. These development cycles are typically multi-year, and our sales are contingent on our customers successfully integrating our product into their product, completing development of their product and then obtaining production orders for their product from the U.S. government or its allies.

We operate in an intensely competitive marketplace, and our competitors have greater resources than we do.

In the market for our disk sputtering systems, we experience competition primarily from Canon Anelva, which has sold a substantial number of systems worldwide. In the PV equipment market, Intevac faces competition from large established competitors including Centrotherm Photovoltaics, Jusung, Kingstone, Von Ardenne and Belight Technology. In the market for our military imaging products we experience competition from companies such as Elbit Systems, L3Harris Technologies and Photonis. Some of our competitors have substantially greater financial, technical, marketing, manufacturing and other resources than we do, especially in the DCP and PV equipment markets. Our competitors may develop enhancements to, or future generations of, competitive products that offer superior price or performance features, and new competitors may enter our markets and develop such enhanced products. Moreover, competition for our customers is intense, and our competitors have historically offered substantial pricing concessions and incentives to attract our customers or retain their existing customers.

We are exposed to risks associated with a highly concentrated customer base.

Historically, a significant portion of our revenue in any particular period has been attributable to sales of our disk sputtering systems to a limited number of customers. This concentration of customers, when combined with changes in the customers' specific capacity plans and market share shifts can lead to extreme variability in our revenue and financial results from period to period.

The concentration of our customer base may enable our customers to demand pricing and other terms unfavorable to Intevac, and makes us more vulnerable to changes in demand by or issues with a given customer. Orders from a relatively limited number of manufacturers have accounted for, and will likely continue to account for, a substantial portion of our revenues. The loss of one of these large customers, or delays in purchasing by them, could have a material and adverse effect on our revenues.

Our operating results fluctuate significantly from quarter to quarter, which can lead to volatility in the price of our common stock.

Our quarterly revenues and common stock price have fluctuated significantly. We anticipate that our revenues, operating margins and common stock price will continue to fluctuate for a variety of reasons, including: (1) changes in the demand, due to seasonality, cyclicality and other factors in the markets for computer systems, storage subsystems and consumer electronics containing disks as well as cell phones and PV solar cells our customers produce with our systems; (2) delays or problems in the introduction and acceptance of our new products, or delivery of existing products; (3) timing of orders, acceptance of new systems by our customers or cancellation or delay of those orders; (4) new products, services or technological innovations by our competitors or us; (5) changes in our manufacturing costs and operating expense; (6) changes in general economic, political, stock market and industry conditions; and (7) any failure of our operating results to meet the expectations of investment research analysts or investors.

Any of these, or other factors, could lead to volatility and/or a rapid change in the trading price of our common shares. In the past, securities class action litigation has been instituted against companies following periods of volatility in the market price of their securities. Any such litigation, if instituted against Intevac, could result in substantial costs and diversion of management time and attention.

Our success depends on international sales and the management of global operations.

In previous years, the majority of our revenues have come from regions outside the United States. Most of our international sales are to customers in Asia, which includes products shipped to overseas operations of U.S. companies. We currently have manufacturing facilities in California and Singapore and international customer support offices in Singapore, China, and Malaysia. We expect that international sales will continue to account for a significant portion of our total revenue in future years. Certain of our suppliers are also located outside the United States.

Managing our global operations presents challenges including, but not limited to, those arising from: (1) global trade issues; (2) variations in protection of intellectual property and other legal rights in different countries; (3) concerns of U.S. governmental agencies regarding possible national commercial and/or security issues posed by growing manufacturing business in Asia; (4) fluctuation of interest rates, raw material costs, labor and operating costs, and exchange rates; (5) variations in the ability to develop relationships with suppliers and other local businesses; (6) changes in the laws and regulations of the United States, including export restrictions, and other countries, as well as their interpretation and application; (7) the need to provide technical and spares support in different locations; (8) political and economic instability; (9) cultural differences; (10) varying government incentives to promote development; (11) shipping costs and delays; (12) adverse conditions in credit markets; (13) variations in tariffs, quotas, tax codes and other market barriers; and (14) barriers to movement of cash.

We must regularly assess the size, capability and location of our global infrastructure and make appropriate changes to address these issues.

Our success is dependent on recruiting and retaining a highly talented work force.

Our employees are vital to our success, and our key management, engineering and other employees are difficult to replace. We do not maintain key person life insurance on any of our employees. The expansion of high technology companies worldwide has increased demand and competition for qualified personnel, and has made companies increasingly protective of prior employees. It may be difficult for us to locate employees who are not subject to non-competition agreements and other restrictions.

The majority of our U.S. operations are located in California where the cost of living and of recruiting employees is high. Our operating results depend, in large part, upon our ability to retain and attract qualified management, engineering, marketing, manufacturing, customer support, sales and administrative personnel. Furthermore, we compete with industries such as the hard disk drive, semiconductor, and solar industries for skilled employees. Failure to retain existing key personnel, or to attract, assimilate or retain additional highly qualified employees to meet our needs in the future, could have a material and adverse effect on our business, financial condition and results of operations.

We are dependent on certain suppliers for parts used in our products.

We are a manufacturing business. Purchased parts constitute the largest component of our product cost. Our ability to manufacture depends on the timely delivery of parts, components and subassemblies from suppliers. We obtain some of the key components and subassemblies used in our products from a single supplier or a limited group of suppliers. If any of our suppliers fail to deliver quality parts on a timely basis, we may experience delays in manufacturing, which could result in delayed product deliveries, increased costs to expedite deliveries or develop alternative suppliers, or require redesign of our products to accommodate alternative suppliers. Some of our suppliers are thinly capitalized and may be vulnerable to failure.

Risks Related to Our Intellectual Property

Our growth depends on development of technically advanced new products and processes.

We have invested heavily, and continue to invest, in the development of new products, such as our 200 Lean HDD and other PVD systems, our coating systems for DCP, our solar systems for PV applications, our digital night-vision products and our near-eye display products. Our success in developing and selling new products depends upon a variety of factors, including our ability to: predict future customer requirements; make technological advances; achieve a low total cost of ownership for our products; introduce new products on schedule; manufacture products cost-effectively including transitioning production to volume manufacturing; commercialize and attain customer acceptance of our products; and achieve acceptable and reliable performance of our new products in the field. Our new product decisions and development commitments must anticipate continuously evolving industry requirements significantly in advance of sales. In addition, we are attempting to expand into new or related markets, including the PV and display cover glass markets. Our expansion into the PV and cover glass markets is dependent upon the success of our customers' development plans. To date we have not recognized material revenue from such products. Failure to correctly assess the size of the markets, to successfully develop cost effective products to address the markets or to establish effective sales and support of the new products would have a material adverse effect on future revenues and profits. In addition, if we invest in products for which the market does not develop as anticipated, we may incur significant charges related to such investments.

Rapid technological change in our served markets requires us to rapidly develop new technically advanced products. Our future success depends in part on our ability to develop and offer new products with improved capabilities and to continue to enhance our existing products. If new products have reliability or quality problems, our performance may be impacted by reduced orders, higher manufacturing costs, delays in acceptance and payment for new products and additional service and warranty expenses.

Our business depends on the integrity of our intellectual property rights.

The success of our business depends upon the integrity of our intellectual property rights, and we cannot ensure that: (1) any of our pending or future patent applications will be allowed or that any of the allowed applications will be issued as patents or will issue with claims of the scope we sought; (2) any of our patents will not be invalidated, deemed unenforceable, circumvented or challenged; (3) the rights granted under our patents will provide competitive advantages to us; (4) other parties will not develop similar products, duplicate our products or design around our patents; or (5) our patent rights, intellectual property laws or our agreements will adequately protect our intellectual property or competitive position.

From time to time, we have received claims that we are infringing third parties' intellectual property rights or seeking to invalidate our rights. We cannot ensure that third parties will not in the future claim that we have infringed current or future patents, trademarks or other proprietary rights relating to our products. Any claims, with or without merit, could be time-consuming, result in costly litigation, cause product shipment delays or require us to enter into royalty or licensing agreements. Such royalty or licensing agreements, if required, may not be available on terms acceptable to us.

Risks Related to Government Regulation

We may not be able to obtain export licenses from the U.S. government permitting delivery of our products to international customers.

Many of our products, especially Photonics products, require export licenses from U.S. government agencies under the Export Administration Act, the Trading with the Enemy Act of 1917, the Arms Export Act of 1976 or the International Traffic in Arms Regulations. These regulations limit the potential market for some of our products. We can give no assurance that we will be successful in obtaining all the licenses necessary to export our products. Heightened government scrutiny of export licenses for defense related products has resulted in lengthened review periods for our license applications. Exports to countries that are not considered by the U.S. government to be allies are likely to be prohibited, and even sales to U.S. allies may be limited. Failure to comply with export control laws, including identification and reporting of all exports and re-exports of controlled technology or exports made without correct license approval or improper license use could result in severe penalties and revocation of licenses. Failure to obtain export licenses, delays in obtaining licenses, or revocation of previously issued licenses would prevent us from selling the affected products outside the United States and could negatively impact our results of operations.

The Photonics business is dependent on U.S. government contracts, which are subject to fixed pricing, immediate termination and a number of procurement rules and regulations.

We sell our Photonics products and services directly to the U.S. government, as well as to prime contractors for various U.S. government programs. The U.S government is considering significant changes in the level of existing, follow-on or replacement programs. We cannot predict the impact of potential changes in priorities due to military transformations and/or the nature of future war-related activities. A shift of government priorities to programs in which we do not participate and/or reductions in funding for or the termination of programs in which we do participate, unless offset by other programs and opportunities, could have a material adverse effect on our financial position, results of operations, or cash flows.

Funding of multi-year government programs is subject to congressional appropriations, and there is no guarantee that the U.S. government will make further appropriations. Sales to the U.S. government and its prime contractors may also be affected by changes in procurement policies, budget considerations and political developments in the United States or abroad. For example, if the U.S. government is less focused on defense spending or there is a decrease in hostilities, demand for our products could decrease. The loss of funding for a government program would result in a loss of future revenues attributable to that program. The influence of any of these factors, which are beyond our control, could negatively impact our results of operations.

A significant portion of our U.S. government revenue is derived from fixed-price development and production contracts. Under fixed-price contracts, unexpected increases in the cost to develop or manufacture a product, whether due to inaccurate estimates in the bidding process, unanticipated increases in material costs, reduced production volumes, inefficiencies or other factors, are borne by us. We have experienced cost overruns in the past that have resulted in losses on certain contracts, and may experience additional cost overruns in the future. We are required to recognize the total estimated impact of cost overruns in the period in which they are first identified. Such cost overruns could have a material adverse effect on our results of operations.

Generally, government contracts contain provisions permitting termination, in whole or in part, without prior notice at the government's convenience upon the payment of compensation only for work done and commitments made at the time of termination. We cannot ensure that one or more of the government contracts under which we, or our customers, operate will not be terminated under these circumstances. Also, we cannot ensure that we, or our customers, would be able to procure new government contracts to offset the revenues lost as a result of any termination of existing contracts, nor can we ensure that we, or our customers, will continue to remain in good standing as federal contractors.

As a U.S. government contractor we must comply with specific government rules and regulations and are subject to routine audits and investigations by U.S. government agencies.

We are subject to risks of non-compliance with environmental and other governmental regulations.

We are subject to a variety of governmental regulations relating to the use, storage, discharge, handling, emission, generation, manufacture, treatment and disposal of toxic or otherwise hazardous substances, chemicals, materials or waste. If we fail to comply with current or future regulations, such failure could result in suspension of our operations, alteration of our manufacturing process, remediation costs or substantial civil penalties or criminal fines against us or our officers, directors or employees. Additionally, these regulations could require us to acquire expensive remediation or abatement equipment and incur substantial expenses to comply with them.

General Risk Factors

Our business could be negatively impacted by cyber and other security threats or disruptions.

As a defense contractor, we face various cyber and other security threats, including espionage and attempts to gain unauthorized access to sensitive information and networks. Although we utilize various procedures and controls to monitor and mitigate the risk of these threats, there can be no assurance that these procedures and controls will be sufficient. These threats could lead to losses of sensitive information or capabilities; financial liabilities and damage to our reputation. If we are unable to maintain compliance with security standards applicable to defense contractors, we could lose business or suffer reputational harm.

Cyber threats to businesses in general are evolving and include, but are not limited to, malicious software, destructive malware, attempts to gain unauthorized access to data, disruption or denial of service attacks, and other electronic security breaches that could lead to disruptions in our systems, unauthorized release of confidential, personal or otherwise protected information (ours or that of our employees, customers or partners), and corruption of data, networks or systems. In addition, we could be impacted by cyber threats or other disruptions or vulnerabilities found in products we use or in our partners' or customers' systems that are used in connection with our business. These events, if not prevented or effectively mitigated, could damage our reputation, require remedial actions and lead to loss of business, regulatory actions, potential liability and other financial losses.

Changes to our effective tax rate affect our results of operations.

As a global company, we are subject to taxation in the United States, Singapore and various other countries. Significant judgment is required to determine and estimate worldwide tax liabilities. Our future effective tax rate could be affected by: (1) changes in tax laws; (2) the allocation of earnings to countries with differing tax rates; (3) changes in worldwide projected annual earnings in current and future years: (4) accounting pronouncements; or (5) changes in the valuation of our deferred tax assets and liabilities. Although we believe our tax estimates are reasonable, there can be no assurance that any final determination will not be different from the treatment reflected in our historical income tax provisions and accruals, which could result in additional payments by Intevac.

Difficulties in integrating past or future acquisitions could adversely affect our business.

We have completed a number of acquisitions and dispositions during our operating history. We have spent and may continue to spend significant resources identifying and pursuing future acquisition opportunities. Acquisitions involve numerous risks including: (1) difficulties in integrating the operations, technologies and products of the acquired companies; (2) the diversion of our management's attention from other business concerns; and (3) the potential loss of key employees of the acquired companies. Failure to achieve the anticipated benefits of the prior and any future acquisitions or to successfully integrate the operations of the companies we acquire could have a material and adverse effect on our business, financial condition and results of operations. Any future acquisitions could also result in potentially dilutive issuance of equity securities, acquisition or divestiture-related write-offs or the assumption of debt and contingent liabilities. In addition, we have made and will continue to consider making strategic divestitures. With any divestiture, there are risks that future operating results could be unfavorably impacted if targeted objectives, such as cost savings, are not achieved or if other business disruptions occur as a result of the divestiture or activities related to the divestiture.

We could be involved in litigation.

From time to time we may be involved in litigation of various types, including litigation alleging infringement of intellectual property rights and other claims and customer disputes. Litigation is expensive, subjects us to the risk of significant damages and requires significant management time and attention and could have a material and adverse effect on our business, financial condition and results of operations.

Business interruptions could adversely affect our operations.

Our operations are vulnerable to interruption by fire, earthquake, floods or other natural disaster, quarantines or other disruptions associated with infectious diseases, national catastrophe, terrorist activities, war, disruptions in our computing and communications infrastructure due to power loss, telecommunications failure, human error, physical or electronic security breaches and computer viruses, and other events beyond our control. We do not have a detailed disaster recovery plan. Despite our implementation of network security measures, our tools and servers may be vulnerable to computer viruses, break-ins and similar disruptions from unauthorized tampering with our computer systems and tools located at customer sites. Political instability could cause us to incur increased costs in transportation, make such transportation unreliable, increase our insurance costs or cause international currency markets to fluctuate. All these unforeseen disruptions and instabilities could have the same effects on our suppliers and their ability to timely deliver their products. In addition, we do not carry sufficient business interruption insurance to compensate us for all losses that may occur, and any losses or damages incurred by us could have a material adverse effect on our business and results of operations. For example, we self-insure earthquake risks because we believe this is the prudent financial decision based on the high cost of the limited coverage available in the earthquake insurance market. An earthquake could significantly disrupt our operations, most of which are conducted in California. It could also significantly delay our research and engineering effort on new products, most of which is also conducted in California. We take steps to minimize the damage that would be caused by business interruptions, but there is no certainty that our efforts will prove successful.

We could be negatively affected as a result of a proxy contest and the actions of activist stockholders.

A proxy contest with respect to election of our directors, or other activist stockholder activities, could adversely affect our business because: (1) responding to a proxy contest and other actions by activist stockholders can be costly and time-consuming, disruptive to our operations and divert the attention of management and our employees; (2) perceived uncertainties as to our future direction caused by activist activities may result in the loss of potential business opportunities, and may make it more difficult to attract and retain qualified personnel and business partners; and (3) if individuals are elected to our Board of Directors with a specific agenda, it may adversely affect our ability to effectively and timely implement our strategic plans.

We are required to evaluate our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002, and any adverse results from such evaluation could result in a loss of investor confidence in our financial reports and have an adverse effect on our stock price.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, our management must perform evaluations of our internal control over financial reporting. Beginning in 2004, our Form 10-K has included a report by management of their assessment of the adequacy of such internal control. Additionally, our independent registered public accounting firm must publicly attest to the effectiveness of our internal control over financial reporting. We have completed the evaluation of our internal controls over financial reporting as required by Section 404 of the Sarbanes-Oxley Act. Although our assessment, testing, and evaluation resulted in our conclusion that as of January 2, 2021, our internal controls over financial reporting were effective, we cannot predict the outcome of our testing in future periods. Ongoing compliance with this requirement is complex, costly and time-consuming. If Intevac fails to maintain effective internal control over financial reporting; our management does not timely assess the adequacy of such internal control; or our independent registered public accounting firm does not deliver an unqualified opinion as to the effectiveness of our internal control over financial reporting, then we could be subject to restatement of previously reported financial results, regulatory sanctions and a decline in the public's perception of Intevac, which could have a material and adverse effect on our business, financial condition and results of operations.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

Intevac maintains its corporate headquarters in Santa Clara, California. The location, approximate size and type of facility of the principal properties are listed below. Intevac leases all of its properties and does not own any real estate.

Location	Square Footage	Principal Use
Santa Clara, California	169,583	Corporate Headquarters; TFE and Photonics Marketing, Manufacturing, Engineering and Customer Support
Singapore	31,947	TFE Manufacturing and Customer Support
Malaysia	1,291	TFE Customer Support
Shenzhen, China	2,568	TFE Customer Support

Intevac considers these properties adequate to meet its current and future requirements. Intevac regularly assesses the size, capability and location of its global infrastructure and periodically makes adjustments based on these assessments.

Item 3. *Legal Proceedings*

From time to time, Intevac is involved in claims and legal proceedings that arise in the ordinary course of business. Intevac expects that the number and significance of these matters will increase as Intevac's business expands. Any claims or proceedings against us, whether meritorious or not, could be time consuming, result in costly litigation, require significant amounts of management time, result in the diversion of significant operational resources, or require us to enter into royalty or licensing agreements which, if required, may not be available on terms favorable to us or at all. Intevac is not presently a party to any lawsuit or proceeding that, in Intevac's opinion, is likely to seriously harm Intevac's business.

Item 4. *Mine Safety Disclosures*

Not applicable.

PART II

Item 5. *Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*

Market Information

Intevac common stock is traded on The Nasdaq Stock Market (NASDAQ Global Select) under the symbol "IVAC." As of February 17, 2021, there were 73 holders of record.

Recent Sales of Unregistered Securities

None.

Dividend Policy

We currently anticipate that we will retain our earnings, if any, for use in the operation of our business and do not expect to pay cash dividends on our capital stock in the foreseeable future.

Repurchases of Intevac Common Stock

On November 21, 2013, Intevac's Board of Directors approved a stock repurchase program authorizing up to $30.0 million in repurchases. On August 15, 2018, Intevac's Board of Directors approved a $10.0 million increase to the original stock repurchase program authorizing up to $40.0 million. At January 2, 2021, $10.4 million remains available for future stock repurchases under the repurchase program. Intevac did not make any common stock repurchases during the three months ended January 2, 2021.

Item 6. *Selected Financial Data*

Not applicable for smaller reporting companies.

Item 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations***

Management's Discussion and Analysis (MD&A) is intended to facilitate an understanding of Intevac's business and results of operations. This MD&A should be read in conjunction with Intevac's Consolidated Financial Statements and the accompanying Notes to Consolidated Financial Statements included elsewhere in this Form 10- K. The following discussion contains forward-looking statements and should also be read in conjunction with the cautionary statement set forth at the beginning of this Form 10-K. MD&A includes the following sections:

- *Overview:* a summary of Intevac's business, measurements and opportunities.
- *Results of Operations:* a discussion of operating results.
- *Liquidity and Capital Resources:* an analysis of cash flows, sources and uses of cash, and financial position.
- *Critical Accounting Policies:* a discussion of critical accounting policies that require the exercise of judgments and estimates.

Overview

Intevac is a provider of vacuum deposition equipment for a wide variety of thin-film applications, and a leading provider of digital night-vision technologies and products to the defense industry. The Company leverages its core capabilities in high-volume manufacturing of small substrates to provide process manufacturing equipment solutions to the HDD, DCP, and solar cell industries. Intevac also provides sensors, cameras and systems for government applications such as night vision and long-range target identification. Intevac's customers include manufacturers of hard disk media, DCPs and solar cells as well as the U.S. government and its agencies, allies and contractors. Intevac reports two segments: TFE and Photonics.

Product development and manufacturing activities occur in North America and Asia. Intevac has field offices in Asia to support its TFE customers. Intevac's products are highly technical and are sold primarily through Intevac's direct sales force. Intevac also sells its products through distributors in Japan and China.

Intevac's results are driven by a number of factors, including success in its equipment growth initiatives in the DCP and solar markets and by worldwide demand for HDDs. Demand for HDDs depends on the growth in digital data creation and storage, the rate of areal density improvements, the end-user demand for PCs, enterprise data storage, nearline "cloud" applications, video players and video game consoles that include such drives. Intevac continues to execute its strategy of equipment diversification into new markets by introducing new products, such as for a thin-film PVD application for protective coating for DCP manufacturing and a thin-film PVD application for PV solar cell manufacturing. Intevac believes that expansion into these markets will result in incremental equipment revenues for Intevac and decrease Intevac's dependence on the HDD industry. Intevac's equipment business is subject to cyclical industry conditions, as demand for manufacturing equipment and services can change depending on supply and demand for HDDs, cell phones, and PV cells as well as other factors such as global economic conditions and technological advances in fabrication processes.

Fiscal Year	**2020**	**2019**	**Change 2020 vs. 2019**
	(in thousands, except percentages and per share amounts)		
Net revenues	$ 97,824	$ 108,885	$ (11,061)
Gross profit	$ 40,545	$ 40,868	$ (323)
Gross margin percent	41.4%	37.5%	3.9 points
Operating income	$ 2,555	$ 3,925	$ (1,370)
Net income	$ 1,056	$ 1,148	$ (92)
Net income per diluted share	$ 0.04	$ 0.05	$ (0.01)

Fiscal 2019 financial results reflected an improved environment as the Company resumed its growth trajectory. Intevac recognized revenue on four 200 Lean HDD systems. In 2019, Intevac recognized revenue on nine solar implant ENERG *i* systems. We also made significant progress in our TFE growth initiatives, placing evaluation tools with leading manufacturers in both the display cover glass market and the advanced semiconductor packaging market. In fiscal 2019, Photonics business levels were higher compared to the prior year due primarily to the $31.6 million U.S. Army IVAS contract award. Photonics continued to deliver production shipments of the night-vision camera modules for the F35 Joint Strike Fighter program in fiscal 2019 and resumed shipments of the Apache camera in the second half of 2019. Fiscal 2019 net income was the result of higher net revenues and higher gross margins. During 2019, the Company received an unfavorable decision on its appeal to a tax audit in Singapore and recorded a charge of $732,000 which was included in the provision for income taxes. During fiscal 2019, the Company did not recognize an income tax benefit on its U.S. net operating loss.

Fiscal 2020 financial results reflected a challenging environment, partially as a result of the COVID-19 pandemic. We continued to be profitable and grew cash, cash equivalents, restricted cash and investments in 2020 by $7.5 million to $50.4 million. Fiscal 2020 HDD equipment sales were lower than 2019 as Intevac recognized revenue on only two 200 Lean HDD systems, and there were no 200 Lean HDD systems in backlog at the end of 2020. Lower HDD systems revenue was offset in part by higher sales of upgrades, spare parts and service. In fiscal 2020, Photonics business levels were higher compared to the prior year due to higher product shipments as Photonics continued to deliver production shipments of the night-vision camera modules for the F35 Joint Strike Fighter program and the Apache camera and due to higher contract research and development ("R&D") primarily from the IVAS contract award. Lower fiscal 2020 net income resulted from lower net revenues and higher operating expenses, offset in part by higher contributions from gross margins. Higher selling general and administrative expenses resulted primarily from higher variable compensation expenses and incremental e-commerce costs to launch our Diamond Dog e-commerce website. During fiscal 2020, the Company received $567,000 in government assistance related to COVID-19 from the government of Singapore of which $328,000 was reported as a reduction of cost of net revenues, $90,000 was reported as a reduction of R&D expenses and $149,000 was reported as a reduction of selling, general and administrative expenses. During fiscal 2020, the Company did not recognize an income tax benefit on its U.S. net operating loss.

We believe fiscal 2021 will be a challenging year and Intevac does not expect be profitable in fiscal 2021, unless new orders are received sooner than anticipated. Intevac expects that 2021 HDD equipment sales will be lower than 2020 levels as although we expect higher 200 Lean HDD systems revenue, upgrade revenue is expected to be lower. In 2021, Intevac expects higher sales of new TFE products as we expect to: (i) convert the two systems under evaluation at customer factories to revenue and (ii) obtain follow on production orders for our VERTEX coating system for DCPs. In 2021, we expect product revenue in Photonics to decline slightly as we continue to deliver product shipments of the night-vision camera modules for the F35 Joint Strike Fighter program. Shipments for the Apache camera under the current contract with the U.S. government concluded in the third quarter of 2020. In 2021, we expect decreased contract R&D revenue as development work on the multi-year IVAS contract award for the development and production of digital night-vision cameras to support the U.S. Army's IVAS program comes to a conclusion in early 2021. During fiscal 2021, the Company expects to receive $108,000 in government assistance related to COVID-19 from the government of Singapore.

The Impact of COVID-19

We are unable to accurately predict the possible future effect of the COVID-19 outbreak on the Company, which could be material to our 2021 results. Our customers may delay or cancel orders due to reduced demand, supply chain disruptions and/or travel restrictions and border closures. As the economic impact of the COVID-19 pandemic becomes clearer as the year progresses, we could see significant changes to our operations. Our factories in California and Singapore remain open as both TFE and Photonics businesses are within the critical infrastructure sectors. We have experienced pandemic-related delays in our TFE evaluation and development work. In response to COVID-19, we have implemented initiatives to safeguard our employees in this time of crisis. We have implemented work-from-home protocols and all employees that can do so are working remotely and will continue to do so until restrictions are lifted by the applicable authorities in the United States, Singapore and China. The following discussion highlights how we are responding and the expected impacts of COVID-19 on our business.

Essential Business

The Company's priorities during the COVID-19 pandemic have been to protect the health and safety of employees while keeping its manufacturing facilities open due to the essential nature of our products. Our factories in California and Singapore remain open as both TFE and Photonics businesses are within critical infrastructure sectors that are exempt from government-mandated closures. On March 16, 2020, multiple counties in the San Francisco bay area of California issued a "shelter-in-place" order (the "State Order") requiring businesses to temporarily cease operations, effective March 17, 2020. The State Order provides that Californians working within 16 identified critical infrastructure sectors may continue with their work because of the importance of these sectors to Californians' health and well-being. Among the identified critical infrastructure sectors listed are Communications and Information Technology ("IT") and the Defense Industrial Base ("DIB"). On March 20, 2020, Intevac received a communication from the Department of Defense stating that the DIB is identified as a Critical Infrastructure Sector by the Department of Homeland Security, and that the Essential Critical Infrastructure Workforce for the DIB includes workers who support the essential products and services required to meet national security commitments to the Federal Government and the U.S. Military.

Our factory in Singapore was given notice by the Singapore government to suspend all on-site activities on April 27, 2020. We appealed this notice and were provided an exemption on May 14, 2020. We were temporarily required to limit the number of employees on site at our Singapore factory, but these restrictions were lifted on June 2, 2020.

Employee Considerations

Our goal has been to support our employees during the present uncertainty while remaining focused on meeting the needs of our customers and business continuity. Early in the crisis, we provided employees with information about best practices to prevent the spread of COVID-19 and other viruses and illnesses. We instituted practices including symptom checks and non-contact monitoring of body temperatures of those on site twice daily; requiring social distancing and face coverings; streamlining onsite personnel to only those required for production; strongly encouraging and, where mandated, requiring remote work for all those who can work from home; and increasing hygiene through disinfecting facilities. In addition, we have limited in-person meetings and non-employee visits to our locations, reduced room occupancies and eliminated non-essential business travel. In the United States, the Company has educated employees on COVID-19-related benefits (including leave benefits) under the Families First Coronavirus Response Act (“FFCRA”) and the Coronavirus Aid, Relief, and Economic Security Act (“CARES”). To further protect the health and welfare of our employees, we have also required employees who potentially have been exposed to COVID-19 to self-quarantine for 14 days and have committed to paying these employees their normal wages during that quarantine period. To ease access to medical assistance, we are waiving co-payments for COVID-19 testing and telemedicine for those employees enrolled in our health insurance plans.

Business Continuity Team

We have robust pandemic and business continuity plans that include our business units and technology environments. When COVID-19 was declared a pandemic, we activated our business continuity plan (the “Continuity Plan”). As an element of the Continuity Plan, we activated our Business Continuity Team (“BCT”), a group of senior corporate managers who directed a series of activities to address the health and safety of our workforce, assist employees, sustain business operations, coordinate communication and address our management concerning other ongoing pandemic activities. The BCT monitors guidelines published by the Centers for Disease Control and Prevention (“CDC”), the National Institutes of Health (“NIH”), the Occupational Safety and Health Administration (“OSHA”), the World Health Organization (“WHO”) and other state and local authorities, makes assessments of these guidelines and implements the appropriate protocols. The BCT established a COVID-19 policy and continually updates this policy based on the latest guidance. All employees continuing to work on site and visitors were required to complete training on the Company’s COVID-19 policy and any employees returning to work at our facilities are provided additional training prior to returning to work. The BCT also updated and revised policies related to visitors and travel to include COVID-19-related health and safety measures related to the pandemic and updated the Continuity Plan to include a pandemic response appendix.

Productivity

There has been a modest decline in productivity for certain departments as our people adjusted to this significant change in work environment. We currently believe our technology infrastructure is sufficient to maintain a remote-working environment for the vast majority of our workforce for the foreseeable future and that productivity improved as our people adjusted to this significant change in work environment. The productivity level and ability of our employees to continue working from home could change, however, as conditions surrounding COVID-19 evolve and infections increase, if there are interruptions in the internet infrastructure where our employees live or if internet service providers are otherwise adversely affected.

Community

We understand that the communities in which our employees live, work, and serve are also suffering distress as a result of COVID-19. Intevac is committed to help source supplies for local healthcare providers fighting COVID-19, and has donated all of its surplus N95 industrial masks and gloves to local hospitals and emergency responders.

Economic Relief

In Singapore, Intevac receives government assistance under the Job Support Scheme (“JSS”). The purpose of the JSS is to provide wage support to employers to help them retain their local employees. Under the JSS, Intevac received $567,000 in JSS grants in fiscal 2020. Intevac expects to receive an additional $108,000 in JSS grants in fiscal 2021. As previously mentioned, under the CARES Act we have elected to defer the payment of the employer portion of payroll taxes and will receive tax benefits from the employee-retention-tax credit.

During fiscal 2020, the Company's expenses included approximately $159,000 due to costs related to actions taken in response to COVID-19.

Results of Operations

Net revenues

	2020	2019	Change 2020 vs. 2019
		(in thousands)	
TFE	$52,128	$ 73,678	$ (21,550)
Photonics			
Contract R&D	22,945	19,657	3,288
Products	22,751	15,550	7,201
	45,696	35,207	10,489
Total net revenues	$97,824	$108,885	$ (11,061)

Net revenues consist primarily of sales of equipment used to manufacture thin-film disks, PV cells, DCPs and related equipment and system components; sales of low-light imaging products; and revenue from contract R&D related to the development of electro-optical sensors, cameras and systems.

The decrease in TFE revenues in fiscal 2020 versus fiscal 2019 was due primarily to lower systems sales as TFE recognized revenue on two 200 Lean HDD systems, offset in part by increases in revenue recognized on technology upgrades, service and spare parts. In fiscal 2019, TFE revenue recognized four 200 Lean HDD systems and nine solar implant ENERG *i* systems, technology upgrades, service and spare parts.

Photonics revenues increased by 30% to $45.7 million in fiscal 2020 versus fiscal 2019. Photonics product revenue reflected higher unit shipments for the Apache camera shipments and for the F35 Joint Strike Fighter program night-vision camera. Contract R&D revenue in fiscal 2020 increased as a result of development on the IVAS program.

Backlog

	January 2, 2021	December 28, 2019
	(in thousands)	
TFE	$ 5,623	$ 21,391
Photonics	41,317	71,015
Total backlog	$ 46,940	$ 92,406

TFE backlog at January 2, 2021 did not include any 200 Lean HDD systems. TFE backlog at December 28, 2019 included two 200 Lean HDD systems.

Significant portions of Intevac's revenues in any particular period have been attributable to sales to a limited number of customers. The following customers accounted for at least 10 percent of Intevac's consolidated net revenues in fiscal 2020 and 2019.

	2020	2019
Seagate Technology	42%	49%
U.S. Government	29%	20%
Elbit Systems of America	12%	*
Jolywood (Hongkong) Industrial Holdings Co., Limited	*	14%

* Less than 10%

Revenue by geographic region

	2020			2019		
	(in thousands)					
	TFE	Photonics	Total	TFE	Photonics	Total
United States	$ 6,450	$ 45,363	$51,813	$ 1,306	$ 34,664	$ 35,970
Asia	45,611	—	45,611	72,372	—	72,372
Europe	67	333	400	—	543	543
Total net revenues	$52,128	$ 45,696	$97,824	$73,678	$ 35,207	$108,885

International sales include products shipped to overseas operations of U.S. companies. The increase in sales to the U.S. region in 2020 versus 2019 reflected higher Photonics product sales, higher Photonics contract R&D work and higher HDD upgrade sales to U.S. customers. There were no TFE systems sold to factories in the U.S. in 2020 or 2019.

The decrease in sales to the Asia region in 2020 versus 2019 reflected lower system sales, offset in part by higher technology upgrade, service and spare parts sales. Sales to the Asia region in 2020 included two 200 Lean HDD systems. Sales to the Asia region in 2019 included four 200 Lean HDD systems and nine solar implant ENERG *i* systems.

Sales to the Europe region in 2020 and 2019 were not significant.

Gross margin

	Fiscal Year		Change
	2020	2019	2020 vs. 2019
	(in thousands, except percentages)		
TFE gross profit	$22,417	$27,377	$ (4,960)
% of TFE net revenues	43.0%	37.2%	
Photonics gross profit	$18,128	$13,491	$ 4,637
% of Photonics net revenues	39.7%	38.3%	
Total gross profit	$40,545	$40,868	$ (323)
% of net revenues	41.4%	37.5%	

Cost of net revenues consists primarily of purchased materials and costs attributable to contract R&D, and also includes assembly, test and installation labor and overhead, customer-specific engineering costs, warranty costs, royalties, provisions for inventory reserves and scrap.

TFE gross margin was 43.0% in fiscal 2020 compared to 37.2% in fiscal 2019. Fiscal 2020 gross margins improved over fiscal 2019 as a result of higher margins on upgrades. Fiscal 2019 gross margins reflected lower margins on the sale of nine solar implant ENERG *i* systems. Gross margins in the TFE business vary depending on a number of factors, including product mix, product cost, system configuration and pricing, factory utilization, and provisions for excess and obsolete inventory.

Photonics gross margin was 39.7% in fiscal 2020 compared to 38.3% in fiscal 2019. The improvement in gross margin for fiscal 2020 over fiscal 2019 is due primarily to higher revenue levels and improved margins on product sales, slightly offset by lower margins on contract R&D work. Manufacturing costs for digital night-vision products decreased in fiscal 2020 and 2019 as a result of cost reductions and yield improvements.

Research and development

	Fiscal Year		Change
	2020	2019	2020 vs. 2019
	(in thousands)		
Research and development expense	$14,093	$14,309	$ (216)

Research and development expense consists primarily of salaries and related costs of employees engaged in and prototype materials used in ongoing research, design and development activities for PV cell manufacturing equipment, DCP manufacturing equipment, HDD disk sputtering equipment, semiconductor Fan-out equipment and Photonics products.

TFE research and development spending in fiscal 2020 was flat compared to fiscal 2019 due to lower spending on semiconductor Fan-out and DCP development, offset by higher spending on HDD and PV development.

Research and development spending for Photonics decreased during 2020 as compared to fiscal 2019 primarily due to lower spending on the development of the next generation of our low light level CMOS camera. Research and development expenses do not include costs of $15.0 million and $12.3 million in 2020 and 2019, respectively, which are related to customer-funded contract R&D programs and therefore included in cost of net revenues.

Selling, general and administrative

	Fiscal Year		Change
	2020	**2019**	**2020 vs. 2019**
		(in thousands)	
Selling, general and administrative expense	$23,897	$22,634	$ 1,263

Selling, general and administrative expense consists primarily of selling, marketing, customer support, financial and management costs. All domestic sales and the majority of international sales of HDD disk sputtering products in Asia are made through Intevac's direct sales force. Intevac also sells its TFE products through distributors in Japan and China. Intevac has offices in Singapore, Malaysia and China to support Intevac's TFE customers in Asia.

Selling, general and administrative expenses increased in 2020 over the amount spent in 2019 primarily due to higher variable compensation expenses, incremental e-commerce costs to launch our Diamond Dog e-commerce website and higher bid and proposal costs in our Photonics segment, offset in part due to lower spending to support a customer evaluation.

Cost reduction plan

During the third quarter of fiscal 2020, Intevac substantially completed implementation of the 2020 cost reduction plan (the "2020 Plan"), which reduced expenses and reduced its workforce by 1 percent. The total cost of implementing the 2020 Plan was $103,000, of which $16,000 was reported under cost of net revenues and $87,000 was reported under operating expenses. Substantially all cash outlays in connection with the 2020 Plan were completed in fiscal 2020. Implementation of the 2020 Plan reduced salary, wages and other employee-related expenses by approximately $864,000 on an annual basis.

Interest income and other income (expense), net

	Fiscal Year		Change
	2020	**2019**	**2020 vs. 2019**
		(in thousands)	
Interest income and other income (expense), net	$212	$582	$ (370)

Interest income and other income (expense), net in fiscal 2020 included $284,000 of interest income on investments and $56,000 from the sale of scrap materials offset in part by $139,000 of foreign currency losses. Interest income and other income (expense), net in fiscal 2019 included $574,000 of interest income on investments and $20,000 in earnout income from a divestiture, offset in part by $85,000 of foreign currency losses. The decrease in interest income in 2020 over 2019 reflected lower interest rates on Intevac's investments and lower invested balances.

Provision for income taxes

	Fiscal Year		Change
	2020	**2019**	**2020 vs. 2019**
		(in thousands)	
Provision for income taxes	$1,711	$3,359	$ (1,648)

Intevac's effective tax rate was 61.8% for fiscal 2020 and 74.5% for fiscal 2019 and we recorded income tax expense of $1.7 million and $3.4 million in 2020 and 2019, respectively. The income tax expense consists primarily of income taxes in foreign jurisdictions in which we conduct business and foreign withholding taxes. We maintain a full valuation allowance for domestic deferred tax assets, including net operating loss carryforwards and certain domestic tax credits. Intevac's effective tax rate differs from the U.S. statutory rate in both 2020 and 2019 primarily due to the Company not recognizing an income tax benefit on the domestic loss.

The income tax expense for 2020 was largely the result of foreign withholding taxes and income taxes in foreign jurisdictions. The income tax expense for 2019 was largely the result of foreign withholding taxes, income taxes in foreign jurisdictions, and fully reserving a contested tax deposit related to a tax audit in Singapore.

During 2019 the Company received an unfavorable decision on its appeal to a tax audit in Singapore. Management determined that the Company could no longer support a more likely than not position. Accordingly, the Company recorded a charge of $732,000 in provision for income taxes. During 2020 the Company appealed the decision to the Singapore High Court, which was denied. Management decided not to pursue additional appeals and the matter is fully settled. Presently, there are no other active income tax examinations in the jurisdictions where Intevac operates.

We assess the likelihood that our deferred tax assets will be recovered based upon our consideration of many factors, including the current economic climate, our expectations of future taxable income, and our ability to project such income. We maintain a full valuation allowance for our U.S. deferred tax assets due to uncertainty regarding their realization as of January 2, 2021.

Liquidity and Capital Resources

At January 2, 2021, Intevac had $50.4 million in cash, cash equivalents, restricted cash and investments compared to $42.8 million at December 28, 2019. During fiscal 2020, cash, cash equivalents, restricted cash and investments increased by $7.5 million due primarily to cash generated by operating activities and cash received from the sale of Intevac common stock to Intevac's employees through Intevac's employee benefit plans, offset in part by cash used for repurchases of common stock, purchases of fixed assets and tax payments related to the net share settlement of restricted stock units.

Cash, cash equivalents, restricted cash and investments consist of the following:

	January 2, 2021	December 28, 2019
	(in thousands)	
Cash and cash equivalents	$ 29,341	$ 19,767
Restricted cash	787	787
Short-term investments	14,839	16,720
Long-term investments	5,388	5,537
Total cash, cash-equivalents, restricted cash and investments	$ 50,355	$ 42,811

Cash generated by operating activities totaled $8.9 million in 2020 compared to $4.9 million in 2019. Improved operating cash flow in 2020 was a result of net income and improved working capital management.

Accounts receivable totaled $28.6 million at both January 2, 2021 and December 28, 2019. Customer advances for products that had not been shipped to customers and included in accounts receivable were $201,000 at December 28, 2019. The number of days outstanding for Intevac's accounts receivable was 90 at January 2, 2021 compared to 72 at December 28, 2019. Net inventories totaled $21.7 million at January 2, 2021 compared to $24.9 million at December 28, 2019. Net inventories at January 2, 2021 and December 28, 2019 included one VERTEX SPECTRA system for DCP under evaluation in a customer's factory and one MATRIX PVD system for advance semiconductor packaging under evaluation in a customer's factory. Net inventories at January 2, 2021 also included one VERTEX SPECTRA system for DCP at Intevac's factory. Inventory turns were 1.6 in fiscal 2020 and were 2.5 in fiscal 2019. Accounts payable increased to $4.3 million at January 2, 2021 compared to $4.2 million at December 28, 2019. Other accrued liabilities were $3.6 million at both January 2, 2021 and December 28, 2019. Accrued payroll and related liabilities increased to $7.7 million at January 2, 2021 compared to $6.5 million at December 28, 2019 as a result of higher variable compensation accruals and the deferral of payroll tax liabilities under the CARES Act. Customer advances decreased from $4.0 million at December 28, 2019 to $33,000 at January 2, 2021 as a result of recognition of revenue. Other long term liabilities increased to $457,000 at January 2, 2021 compared to $186,000 at December 28, 2019 as a result of the deferral of payroll tax liabilities under the CARES Act.

Investing activities used cash of $599,000 in 2020 and $5.8 million in 2019. Proceeds from sales and maturities of investments net of purchases of investments, totaled $2.0 million in 2020. Purchases of investments net of proceeds from sales and maturities of investments, totaled $1.7 million in 2019. Capital expenditures were $2.6 million in 2020 and $4.1 million in 2019.

Financing activities generated cash of $1.1 million in 2020 and $1.5 million in 2019. The sale of Intevac common stock to Intevac's employees through Intevac's employee benefit plans provided $1.9 million in 2020 and $2.3 million in 2019. Tax payments related to the net share settlement of restricted stock units were $402,000 in 2020 and $404,000 in 2019. In November 2013, Intevac's Board of Directors approved a stock repurchase program authorizing up to $30 million in repurchases. On August 15, 2018, Intevac's Board of Directors approved a $10.0 million increase to the original stock repurchase program authorizing up to $40.0 million in repurchases. Cash used to repurchase common stock totaled $393,000 in 2020 and $111,000 in 2019.

In connection with the acquisition of SIT, Intevac agreed to pay to the selling shareholders in cash a revenue earnout on Intevac's net revenue from commercial sales of certain solar implant products over a specified period up to an aggregate of $9.0 million. The earnout period terminated on June 30, 2019. Payments made associated with the revenue earnout obligation were $230,000 in 2019.

Intevac's investment portfolio consists principally of investment grade money market mutual funds, U.S. treasury and agency securities, certificates of deposit, commercial paper, municipal bonds and corporate bonds. Intevac regularly monitors the credit risk in its investment portfolio and takes measures, which may include the sale of certain securities, to manage such risks in accordance with its investment policies.

As of January 2, 2021, approximately $19.3 million of cash and cash equivalents and $3.4 million of investments were domiciled in foreign tax jurisdictions. Intevac expects a significant portion of these funds to remain offshore in the short term. If the Company chose to repatriate these funds to the United States, it would be required to accrue and pay additional taxes on any portion of the repatriation subject to foreign withholding taxes.

Intevac believes that its existing cash, cash equivalents and investments will be sufficient to meet Intevac's cash requirements for the next 12 months. Intevac intends to undertake between approximately $6.0 million to $8.0 million in capital expenditures during the next 12 months.

Off-Balance Sheet Arrangements

Off-balance sheet firm commitments relating to outstanding letters of credit amounted to approximately $787,000 as of January 2, 2021. These letters of credit and bank guarantees are collateralized by $787,000 of restricted cash. We do not maintain any other off-balance sheet arrangements, transactions, obligations, or other relationships that would be expected to have a material current or future effect on the consolidated financial statements.

Critical Accounting Policies

The preparation of consolidated financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires management to make judgments, assumptions and estimates that affect the amounts reported. Note 1 of Notes to Consolidated Financial Statements describes the significant accounting policies used in the preparation of the consolidated financial statements. Certain of these significant accounting policies are considered to be critical accounting policies.

A critical accounting policy is defined as one that is both material to the presentation of Intevac's consolidated financial statements and requires management to make difficult, subjective or complex judgments that could have a material effect on Intevac's financial condition or results of operations. Specifically, these policies have the following attributes: (1) Intevac is required to make assumptions about matters that are highly uncertain at the time of the estimate; and (2) different estimates Intevac could reasonably have used, or changes in the estimate that are reasonably likely to occur, would have a material effect on Intevac's financial condition or results of operations.

Estimates and assumptions about future events and their effects cannot be determined with certainty. Intevac bases its estimates on historical experience and on various other assumptions believed to be applicable and reasonable under the circumstances. These estimates may change as new events occur, as additional information is obtained and as Intevac's operating environment changes. These changes have historically been minor and have been included in the consolidated financial statements as soon as they became known. In addition, management is periodically faced with uncertainties, the outcomes of which are not within its control and will not be known for prolonged periods of time. These uncertainties are discussed in the section above entitled "Risk Factors." Based on a critical assessment of its accounting policies and the underlying judgments and uncertainties affecting the application of those policies, management believes that Intevac's consolidated financial statements are fairly stated in accordance with accounting principles generally accepted in the United States of America, and provide a meaningful presentation of Intevac's financial condition and results of operations.

Management believes that the following are critical accounting policies:

Revenue Recognition

In our TFE segment, a majority of our equipment sales revenue, which includes systems, technology upgrades, service and spare parts is recognized when products are shipped from our manufacturing facilities. In our TFE segment, we recognize revenue for equipment sales at a point in time following the transfer of control of such products to the customer, which typically occurs upon shipment or delivery depending on the terms of the underlying contracts. Intevac recognizes revenue in certain circumstances before delivery has occurred (commonly referred to as bill and hold transactions). In such circumstances, among other things, risk of ownership has passed to the customer, the customer has made a written fixed commitment to purchase the finished goods, the customer has requested the finished goods be held for future delivery as scheduled and designated by them, and no additional performance obligations exist by Intevac. For these transactions, the finished goods are segregated from inventory and normal billing and credit terms granted. Our contracts with customers may include multiple performance obligations. Under the revenue standard we allocate revenue for such arrangements to each performance obligation based on its relative standalone selling price. We generally determine standalone selling prices based on the prices charged to customers or by using expected cost plus margin. Under the revenue standard, the expected costs associated with our base warranties continue to be recognized as expense when the equipment is sold.

In our Photonics segment, we recognize revenue for cost plus fixed fee ("CPFF") and firm fixed price ("FFP") government contracts over time under the cost-to-cost method for the majority of our government contracts, which is consistent with our historical revenue recognition model. Revenue on the majority of our government contracts is recognized over time because of the continuous transfer of control to the customer. For U.S. government contracts, this continuous transfer of control to the customer is supported by clauses in the contract that allow the customer to unilaterally terminate the contract for convenience, pay us for costs incurred plus a reasonable profit and take control of any work in process. Similarly, for non-U.S. government contracts, the customer typically controls the work in process as evidenced either by contractual termination clauses or by our rights to payment for work performed to date to deliver products or services that do not have an alternative use to the Company. Under the revenue standard, the cost-to-cost measure of progress continues to best depict the transfer of control of assets to the customer, which occurs as we incur costs.

The majority of our contracts in our Photonics segment have a single performance obligation as the promise to transfer the individual goods or services is not separately identifiable from other promises in the contracts and, therefore, not distinct. Some of our contracts have multiple performance obligations, most commonly due to the contract covering multiple phases of the product lifecycle (development and production). For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. The primary method used to estimate standalone selling price is the expected cost plus a margin approach, under which we forecast our expected costs of satisfying a performance obligation and then add an appropriate margin for that distinct good or service.

In our Photonics segment, we recognize revenue for homogenous manufactured military products sold to the U.S. government and its contractors over time under the units-of-delivery method because of the continuous transfer of control to the customer. Intevac believes that the units-of-delivery method is an appropriate measure for measuring progress for the manufactured units as an equal amount of value is individually transferred to the customer upon delivery. The Company previously recognized revenue for substantially all manufactured military products sold to the U.S. government and its contractors when the customers took delivery of the products, which was generally upon shipment.

The nature of our contracts in our Photonics segment gives rise to several types of variable consideration including tiered pricing. Allocation of contract revenues among Photonics military products, and the timing of the recognition of those revenues, is impacted by agreements with tiered pricing or variable rate structures. We include variable consideration in the estimated transaction price when there is a basis to reasonably estimate the amount of the consideration. These estimates are based on historical experience, anticipated performance and our best judgment at the time. Because of our certainty in estimating these amounts, they are included in the transaction price of our contracts and the associated remaining performance obligations.

Accounting for CPFF and FFP contracts and programs involves the use of various techniques to estimate total contract revenue and costs. For these contracts, we estimate the profit on a contract as the difference between the total estimated revenue and expected costs to complete a contract and recognize that profit over the life of the contract. Contract estimates are based on various assumptions to project the outcome of future events. These assumptions include the complexity of the work to be performed; the cost and availability of materials; the performance of subcontractors; and the availability and timing of funding from the customer.

As a significant change in one or more of these estimates could affect the profitability of our contracts, we review and update our contract-related estimates regularly. We recognize adjustments in estimated profit on contracts under the cumulative catch-up method. Under this method, the impact of the adjustment on profit recorded to date on a contract is recognized in the period the adjustment is identified. Revenue and profit in future periods of contract performance are recognized using the adjusted estimate. If at any time the estimate of contract profitability indicates an anticipated loss on the contract, we recognize the total loss in the quarter it is identified.

Inventories

Inventories are valued using average actual costs and are stated at the lower of cost or net realizable value. The carrying value of inventory is reduced for estimated obsolescence by the difference between its cost and the net realizable value based upon assumptions about future demand. Intevac evaluates the inventory carrying value for potential excess and obsolete inventory exposures by analyzing historical and anticipated demand. In addition, inventories are evaluated for potential obsolescence due to the effect of known and anticipated engineering change orders and new products. If actual demand were to be substantially lower than estimated, additional inventory adjustments for excess or obsolete inventory might be required, which could have a material adverse effect on Intevac's business, financial condition and results of operations.

Warranty

Intevac estimates the costs that may be incurred under the warranty it provides and records a liability in the amount of such costs at the time the related revenue is recognized. Estimated warranty costs are determined by analyzing specific product and historical configuration statistics and regional warranty support costs. Intevac's warranty obligation is affected by product failure rates, material usage, and labor costs incurred in correcting product failures during the warranty period. As Intevac's customer service engineers and process support engineers are highly trained and deployed globally, labor availability is a significant factor in determining labor costs. The quantity and availability of critical replacement parts is another significant factor in estimating warranty costs. Unforeseen component failures or exceptional component performance can also result in changes to warranty costs. If actual warranty costs differ substantially from our estimates, revisions to the estimated warranty liability would be required.

Income Taxes

Intevac accounts for income taxes by recognizing deferred tax assets and liabilities using enacted tax rates for the effect of temporary differences between the book and tax bases of recorded assets and liabilities, net operating losses and tax credit carryforwards. Deferred tax assets are also reduced by a valuation allowance if it is more likely than not that a portion of the deferred tax asset will not be realized. Management has determined that it is more likely than not that its future taxable income will not be sufficient to realize its entire deferred tax assets.

In determining whether to establish or maintain a valuation allowance against a deferred tax asset, the Company reviews available evidence to determine whether it is more likely than not that all or a portion of the Company's net deferred tax assets will be realized in future periods. Consideration is given to various positive and negative factors that could affect the realization of the net deferred tax assets. In making such a determination, the Company considers, among other things, future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, historical financial performance, the length of statutory carry forward periods, experience with operating loss and tax credit carry forwards not expiring unused. If the Company determines that it would be able to realize its deferred tax assets in the future in excess of their net recorded amount, the Company would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The effective tax rate is highly dependent upon the geographic composition of worldwide earnings, tax regulations governing each region, non-tax deductible expenses and availability of tax credits. Management carefully monitors the changes in many factors and adjusts the effective income tax rate as required. If actual results differ from these estimates, Intevac could be required to record additional valuation allowances on deferred tax assets or adjust its effective income tax rate, which could have a material adverse effect on Intevac’s business, financial condition and results of operations.

The calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of complex tax laws. Resolution of these uncertainties in a manner inconsistent with Intevac’s expectations could have a material impact on Intevac’s results of operations and financial condition.

Valuation of Acquisition-Related Contingent Consideration

Contingent consideration related to a business combination is recorded at the acquisition date at the estimated fair value of the contingent payments. The acquisition date fair value is measured based on the consideration expected to be transferred (probability-weighted), discounted back to present value. The discount rate used is determined at the time of the acquisition in accordance with accepted valuation methods. The fair value of the acquisition-related contingent consideration is remeasured at the estimated fair value at each reporting period with the change in fair value recognized as income or expense in the consolidated statements of income.

Equity-Based Compensation

Intevac records compensation expense for equity-based awards using the Black-Scholes option pricing model. This model requires Intevac to estimate the expected volatility of the price of Intevac’s common stock and the expected life of the equity-based awards. Estimating volatility and expected life requires significant judgment and an analysis of historical data. Intevac accounts for forfeitures as they occur rather than estimating expected forfeitures. Intevac may have to increase or decrease compensation expense for equity-based awards if actual results differ significantly from Intevac’s estimates.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

Not applicable for smaller reporting companies.

Item 8. ***Financial Statements and Supplementary Data***

INTEVAC, INC.

CONSOLIDATED FINANCIAL STATEMENTS

Contents

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders of
Intevac, Inc.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Intevac, Inc. (a Delaware corporation) and its subsidiaries (the “Company”) as of January 2, 2021 and December 28, 2019, and the related consolidated statements of income, comprehensive income, stockholders’ equity, and cash flows for each of the two years in the period ended January 2, 2021, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of January 2, 2021 and December 28, 2019, and the results of its operations and its cash flows for each of the two years in the period ended January 2, 2021, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company’s internal control over financial reporting as of January 2, 2021, based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 17, 2021, expressed an unqualified opinion.

Basis for Opinion

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

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

Critical Audit Matters

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

Inventory Valuation - Adjustments for Excess or Obsolete Inventories

As described in Notes 1 and 6 to the consolidated financial statements, the Company’s consolidated inventories balance was $21.7 million as of January 2, 2021. The Company’s inventories are valued using average actual costs and are stated at the lower of cost or net realizable value. The Company adjusts the carrying value of inventories for estimated excess quantities and obsolescence equal to the difference between the costs of inventories and the net realizable value based upon assumptions about future demand, market conditions and product life expectancy. If actual demand were to be substantially lower than estimated, there could be a significant adverse impact on the carrying value of inventories and results of operations.

The principal considerations for our determination that performing procedures relating to net realizable value adjustments to inventories is a critical audit matter are the significant amount of judgement by management in developing the assumptions of the forecasted product demand, which in turn led to significant auditor judgement, subjectivity, and effort in performing audit procedures and evaluating audit evidence relating to the forecasted product demand. Additionally, for certain new product launches there may be limited historical data with which to evaluate forecasts.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of internal controls relating to management's adjustments for excess or obsolete inventories, including internal controls over the development of assumptions related to forecasted product demand. The procedures also included, among others, testing management's process for developing the estimate of the adjustments for excess or obsolete inventories, testing the completeness and accuracy of the underlying data used in the estimate, and evaluating management's assumptions of forecasted product demand. Evaluating management's demand forecast for reasonableness involved considering historical sales by product, comparing prior period estimates to actual results of the same period, and determining whether the demand forecast used was consistent with evidence obtained in other areas of the audit.

Revenue Recognition – Determination of Total Estimated Contract Costs for Fixed-price Contracts

As described in Notes 1 and 2 to the consolidated financial statements, $22.9 million of the Company's total consolidated net revenues for the year ended January 2, 2021 was generated from fixed-price contracts (also known as cost plus fixed-fee and firm fixed-price contracts), as reported under the Photonics segment for technology development revenues. The Company recognizes revenue for these fixed-price contracts over time under the cost-to-cost measure of progress method as it best depicts the transfer of control of assets to the customer, which occurs as it incurs costs. Accounting for these contracts involves the use of various techniques to estimate total contract costs. Contract estimates are based on various assumptions to project the outcome of future events. These assumptions include the complexity of the work to be performed; the cost and availability of materials; and the performance of engineers and subcontractors. As a significant change in one or more of these estimates could affect the profitability of the contracts, the Company reviews and updates its contract-related estimates regularly.

The principal considerations for our determination that performing procedures relating to the determination of the total estimated contract costs for fixed-price contracts is a critical audit matter are the significant amount of judgement required by management in determining the total estimated contract costs for fixed-price contracts, which in turn led to significant auditor judgement, subjectivity, and effort in performing audit procedures and in evaluating audit evidence relating the total estimated contract costs for fixed-price contracts used to calculate the cost-to-cost measure of progress.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of internal controls relating to the revenue recognition process, including internal controls over the determination of total estimated contract costs for fixed-price contracts. These procedures also included, among others, testing management's process for developing the estimate of total estimated contract costs for a sample of contracts, which included evaluating the contract terms and other documents that support those estimates, performing inquiries with the project managers and others directly involved with the contracts to evaluate project status and project needs which may affect total estimated cost to complete, and testing of the underlying contract costs; assessing management's ability to reasonably estimate total contract costs by performing a comparison of the actual total estimated contract costs as compared with prior period estimates, including the timely identification of circumstances that may warrant a modification to the total estimated contract costs; and evaluating, for certain contracts, management's methodologies and assessing the consistency of management's approach over the life of the contract.

/s/ BPM LLP

We have served as the Company's auditor since 2015.

San Jose, California
February 17, 2021

INTEVAC, INC.
CONSOLIDATED BALANCE SHEETS

	January 2, 2021	December 28, 2019
	(In thousands, except par value)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 29,341	$ 19,767
Short-term investments	14,839	16,720
Trade and other accounts receivable, net of allowances of $0 at both January 2, 2021 and December 28, 2019	28,646	28,619
Inventories	21,689	24,907
Prepaid expenses and other current assets	1,893	1,504
Total current assets	96,408	91,517
Property, plant and equipment, net	11,004	11,598
Operating lease right-of-use-assets	8,165	10,279
Long-term investments	5,388	5,537
Restricted cash	787	787
Deferred income taxes and other long-term assets	5,486	6,604
Total assets	$ 127,238	$ 126,322
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current operating lease liabilities	$ 2,853	$ 2,524
Accounts payable	4,259	4,199
Accrued payroll and related liabilities	7,679	6,488
Other accrued liabilities	3,598	3,593
Customer advances	33	4,007
Total current liabilities	18,422	20,811
Noncurrent liabilities:		
Noncurrent operating lease liabilities	6,803	9,532
Other long-term liabilities	457	186
Total noncurrent liabilities	7,260	9,718
Commitments and contingencies		
Stockholders' equity:		
Undesignated preferred stock, $0.001 par value, 10,000 shares authorized, no shares issued and outstanding	—	—
Common stock, $0.001 par value :		
Authorized shares — 50,000 issued and outstanding shares — 23,874 and 23,346 at January 2, 2021 and December 28, 2019, respectively	24	23
Additional paid-in capital	193,173	188,290
Treasury stock, 5,087 shares at January 2, 2021 and 4,989 shares at December 28, 2019	(29,551)	(29,158)
Accumulated other comprehensive income	640	424
Accumulated deficit	(62,730)	(63,786)
Total stockholders' equity	101,556	95,793
Total liabilities and stockholders' equity	$ 127,238	$ 126,322

See accompanying notes.

INTEVAC, INC.
CONSOLIDATED STATEMENTS OF INCOME

	Year Ended,	
	January 2, 2021	December 28, 2019
	(In thousands, except per share amounts)	
Net revenues:		
Systems and components	$ 74,879	$ 89,228
Technology development	22,945	19,657
Total net revenues	97,824	108,885
Cost of net revenues:		
Systems and components	42,231	55,678
Technology development	15,048	12,339
Total cost of net revenues	57,279	68,017
Gross profit	40,545	40,868
Operating expenses:		
Research and development	14,093	14,309
Selling, general and administrative	23,897	22,634
Total operating expenses	37,990	36,943
Operating income	2,555	3,925
Interest income	284	574
Other income (expense), net	(72)	8
Income before provision for income taxes	2,767	4,507
Provision for income taxes	1,711	3,359
Net income	$ 1,056	$ 1,148
Net income per share:		
Basic	$ 0.04	$ 0.05
Diluted	$ 0.04	$ 0.05
Weighted average shares outstanding:		
Basic	23,669	23,063
Diluted	24,151	23,340

See accompanying notes.

INTEVAC, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Year Ended,	
	January 2, 2021	December 28, 2019
	(In thousands)	
Net income	$ 1,056	$ 1,148
Other comprehensive income (loss), before tax		
Change in unrealized net gain on available-for-sale investments	(5)	70
Foreign currency translation gains and (losses)	221	(24)
Other comprehensive income, before tax	216	46
Income tax expense related to items in other comprehensive income	—	—
Other comprehensive income, net of tax	216	46
Comprehensive income	$ 1,272	$ 1,194

See accompanying notes.

INTEVAC, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Common Stock		Additional Paid-In Capital	Treasury Stock		Accumulated Other Comprehensive Income	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount		Shares	Amount			
Balance at December 28, 2019	22,700	$ 23	$ 183,204	4,965	$ (29,047)	$ 378	$ (64,934)	$ 89,624
Shares issued in connection with:								
Exercise of stock options	175	—	799	—	—	—	—	799
Settlement of RSUs	199	—	—	—	—	—	—	—
Employee stock purchase plan	370	—	1,466	—	—	—	—	1,466
Shares withheld in connection with net share settlement of RSUs	(74)	—	(404)	—	—	—	—	(404)
Equity-based compensation expense	—	—	3,225	—	—	—	—	3,225
Net income	—	—	—	—	—	—	1,148	1,148
Other comprehensive income	—	—	—	—	—	46	—	46
Common stock repurchases	(24)	—	—	24	(111)	—	—	(111)
Balance at December 28, 2019	23,346	$ 23	$ 188,290	4,989	$ (29,158)	$ 424	$ (63,786)	$ 95,793
Shares issued in connection with:								
Exercise of stock options	67	—	326	—	—	—	—	326
Settlement of RSUs	244	—	—	—	—	—	—	—
Employee stock purchase plan	392	1	1,570	—	—	—	—	1,571
Shares withheld in connection with net share settlement of RSUs	(77)	—	(402)	—	—	—	—	(402)
Equity-based compensation expense	—	—	3,389	—	—	—	—	3,389
Net income	—	—	—	—	—	—	1,056	1,056
Other comprehensive income	—	—	—	—	—	216	—	216
Common stock repurchases	(98)	—	—	98	(393)	—	—	(393)
Balance at January 2, 2021	23,874	$ 24	$ 193,173	5,087	$ (29,551)	$ 640	$ (62,730)	$ 101,556

See accompanying notes.

INTEVAC, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended	
	January 2, 2021	December 28, 2019
	(In thousands)	
Operating activities		
Net income	$ 1,056	$ 1,148
Adjustments to reconcile net income to net cash and cash equivalents provided by operating activities:		
Depreciation and amortization	3,206	2,976
Net amortization (accretion) of investment premiums and discounts	12	(75)
Amortization of intangible assets	274	615
Equity-based compensation	3,389	3,225
Straight-line rent adjustment and amortization of lease incentives	(286)	(289)
Deferred income taxes	917	1,661
Change in the fair value of acquisition-related contingent consideration	—	7
Loss on disposal of equipment	—	120
Changes in assets and liabilities:		
Accounts receivable	(27)	(902)
Inventories	3,218	6,301
Prepaid expenses and other assets	(462)	1,621
Accounts payable	60	(1,850)
Accrued payroll and other accrued liabilities	1,467	694
Customer advances	(3,974)	(10,307)
Total adjustments	7,794	3,797
Net cash and cash equivalents provided by operating activities	8,850	4,945
Investing activities		
Purchase of investments	(23,342)	(23,306)
Proceeds from sales and maturities of investments	25,355	21,642
Purchase of leasehold improvements and equipment	(2,612)	(4,107)
Net cash and cash equivalents used in investing activities	(599)	(5,771)
Financing activities		
Proceeds from issuance of common stock	1,897	2,265
Common stock repurchases	(393)	(111)
Taxes paid related to net share settlement	(402)	(404)
Payment of acquisition-related contingent consideration	—	(230)
Net cash and cash equivalents provided by financing activities	1,102	1,520
Effect of exchange rate changes on cash	221	(24)
Net increase in cash, cash equivalents and restricted cash	9,574	670
Cash, cash equivalents and restricted cash at beginning of period	20,554	19,884
Cash, cash equivalents and restricted cash at end of period	$ 30,128	$ 20,554
Cash paid (received) for:		
Income taxes	$ 850	$ 1,016
Income tax refund	$ (157)	$ (157)

See accompanying notes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies

Principles of Consolidation and Basis of Presentation

The consolidated financial statements include the accounts of Intevac, Inc. and its subsidiaries (Intevac, the Company or we) after elimination of inter-company balances and transactions.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ materially from those estimates.

Fiscal Year End Date

Intevac operates under a 52-53 week fiscal year ending on the Saturday nearest to December 31 of each year in order to improve the alignment of financial and business processes and to streamline financial reporting. Each fiscal quarter consists of 13 weeks, with an occasional fourth quarter extending to 14 weeks, if necessary, for the fiscal year to end on the Saturday nearest to December 31. The Company's fiscal 2020 and fiscal 2019 years ended on January 2, 2021 and December 28, 2019, respectively.

Cash, Cash Equivalents and Investments

Intevac considers all highly liquid investments with original maturities of three months or less when purchased to be cash equivalents. Available-for-sale securities, comprised of certificates of deposit, commercial paper, obligations of the U.S. government and its agencies, corporate debt securities, asset backed securities and municipal bonds, are carried at fair value, with unrealized gains and losses recorded within other comprehensive income (loss) as a separate component of stockholders' equity. Realized gains and losses and declines in value judged to be other than temporary, if any, on available-for-sale securities are included in earnings. Purchases and sales of investment securities are recognized on a trade date basis. The cost of investment securities sold is determined by the specific identification method.

Restricted Cash

Restricted cash of $600,000 as of January 2, 2021 secures a standby letter of credit obligation associated with a lease obligation and the restriction on the cash will be removed when the letter of credit expires. In addition, Intevac pledged $187,000 as collateral for various guarantees with its bank.

Derivative Instruments and Hedging Arrangements

Foreign Exchange Exposure Management — Intevac enters into forward foreign currency contracts that economically hedge the gains and losses generated by the re-measurement of certain recorded assets and liabilities in a non-functional currency and to offset certain operational exposures from the impact of changes in foreign currency exchange rates. Such exposures result from the portion of the Company's operations, assets and liabilities that are denominated in currencies other than the U.S. dollar, primarily the Singapore dollar. These foreign currency exchange contracts are entered into to support transactions made in the normal course of business, and accordingly, are not speculative in nature. The contracts are for periods consistent with the terms of the underlying transactions, generally one year or less. Changes in the fair value of these undesignated hedges are recognized in other income (expense), net immediately as an offset to the changes in the fair value of the asset or liability being hedged.

Fair Value Measurement—Definition and Hierarchy

Intevac reports certain financial assets and liabilities at fair value. Intevac defines fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

Fair value measurements are classified and disclosed in one of the following three categories:

Level 1 —Valuations based on quoted prices in active markets for identical assets or liabilities.

Level 2 —Valuations based on other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 —Valuations based on inputs that are generally unobservable and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability.

Trade Accounts Receivables and Doubtful Accounts

Intevac evaluates the collectibility of trade accounts receivable on an ongoing basis and provides reserves against potential losses when appropriate. Management analyzes historical bad debts, customer concentrations, customer creditworthiness, changes in customer payment tendencies and current economic trends when evaluating the adequacy of the allowance for doubtful accounts. Customer accounts are written off against the allowance when the amount is deemed uncollectible.

Inventories

Inventories are generally stated at the lower of cost or net realizable value, with cost determined on an average cost basis.

Property, Plant and Equipment

Equipment and leasehold improvements are stated at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets as follows: computers and software, 3 years; machinery and equipment, 5 years; furniture, 7 years; vehicles, 4 years; and leasehold improvements, remaining lease term.

Contingent Consideration and Purchased Intangible Assets

Contingent consideration related to a business combination is recorded at the acquisition date at the estimated fair value of the contingent payments. The acquisition date fair value is measured based on the consideration expected to be transferred (probability-weighted), discounted back to present value. The discount rate used is determined at the time of the acquisition in accordance with accepted valuation methods. The fair value of the acquisition-related contingent consideration is remeasured at the estimated fair value at each reporting period with the change in fair value recognized as income or expense in the consolidated statements of income.

Purchased intangible assets other than goodwill were amortized over their useful lives unless these lives were determined to be indefinite. Purchased intangible assets were carried at cost, less accumulated amortization. Amortization was computed over the estimated useful lives of the respective assets, generally one to thirteen years using the straight line method. As of January 2, 2021, all purchased intangible assets had reached the end of their useful lives and did not have any remaining carrying value. In 2012, as a result of its impairment analysis, Intevac wrote off all of the goodwill in both its TFE and Photonics reporting units.

Impairment of Long-Lived Assets

Long-lived assets and certain identifiable finite-lived intangible assets to be held and used are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability of long-lived assets is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. Measurement of an impairment loss for long-lived assets and certain identifiable intangible assets that management expects to hold and use is based on the fair value of the asset. When an impairment loss is recognized, the carrying amount of the asset is reduced to its estimated fair value. No impairment charges were recognized in fiscal 2020 and 2019.

Income Taxes

Deferred tax assets and liabilities are recognized using enacted tax rates for the effect of temporary differences between book and tax bases of recorded assets and liabilities. Deferred tax assets are reduced by a valuation allowance if it is more likely than not that a portion of the deferred tax asset will not be realized.

In determining whether to establish or maintain a valuation allowance against a deferred tax asset, the Company reviews available evidence to determine whether it is more likely than not that all or a portion of the Company's net deferred tax assets will be realized in future periods. Consideration is given to various positive and negative factors that could affect the realization of the net deferred tax assets. In making such a determination, the Company considers, among other things, future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies, historical financial performance, the length of statutory carry forward periods, experience with operating loss and tax credit carry forwards not expiring unused. If the Company determines that it would be able to realize its deferred tax assets in the future in excess of their net recorded amount, the Company would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

On a quarterly basis, Intevac provides for income taxes based upon an annual effective income tax rate. The effective tax rate is highly dependent upon the level of Intevac's projected earnings, the geographic composition of worldwide earnings, tax regulations governing each region, net operating loss carryforwards, availability of tax credits and the effectiveness of Intevac's tax planning strategies. Intevac carefully monitors the changes in many factors and adjust its effective income tax rate on a timely basis. If actual results differ from the estimates, this could have a material effect on Intevac's business, financial condition and results of operations.

The calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of complex tax laws. Resolution of these uncertainties in a manner inconsistent with Intevac's expectations could have a material effect on Intevac's business, financial condition and results of operations.

Intevac recognizes accrued interest and penalties related to unrecognized tax benefits in the provision for income taxes.

Sales and Value Added Taxes

Taxes collected from customers and remitted to governmental authorities are presented on a net basis in the accompanying consolidated statements of income.

Revenue Recognition

In our TFE segment, a majority of our equipment sales revenue, which includes systems, technology upgrades, service and spare parts is recognized when products are shipped from our manufacturing facilities. In our TFE segment, we recognize revenue for equipment sales at a point in time following the transfer of control of such products to the customer, which typically occurs upon shipment or delivery depending on the terms of the underlying contracts. Intevac recognizes revenue in certain circumstances before delivery has occurred (commonly referred to as bill and hold transactions). In such circumstances, among other things, risk of ownership has passed to the customer, the customer has made a written fixed commitment to purchase the finished goods, the customer has requested the finished goods be held for future delivery as scheduled and designated by them, and no additional performance obligations exist by Intevac. For these transactions, the finished goods are segregated from inventory and normal billing and credit terms granted. Our contracts with customers may include multiple performance obligations. For such arrangements, under the revenue standard we allocate revenue to each performance obligation based on its relative standalone selling price. We generally determine standalone selling prices based on the prices charged to customers or by using expected cost plus margin. Under the revenue standard, the expected costs associated with our base warranties are recognized as expense when the equipment is sold.

In our Photonics segment, we recognize revenue for CPFF and FFP government contracts over time under the cost-to-cost method for the majority of our government contracts, which is consistent with our historical revenue recognition model. Revenue on the majority of our government contracts are recognized over time because of the continuous transfer of control to the customer. For U.S. government contracts, this continuous transfer of control to the customer is supported by clauses in the contract that allow the customer to unilaterally terminate the contract for convenience, pay us for costs incurred plus a reasonable profit and take control of any work in process. Similarly, for non-U.S. government contracts, the customer typically
controls the work in process as evidenced either by contractual termination clauses or by our rights to payment for work performed to date to deliver products or services that do not have an alternative use to the Company. Under the revenue standard, the cost-to-cost measure of progress continues to best depict the transfer of control of assets to the customer, which occurs as we incur costs.

The majority of our contracts in our Photonics segment have a single performance obligation as the promise to transfer the individual goods or services is not separately identifiable from other promises in the contracts and, therefore, not distinct. Some of our contracts have multiple performance obligations, most commonly due to the contract covering multiple phases of the product lifecycle (development and production). For contracts with multiple performance obligations, we allocate the contract's transaction price to each performance obligation using our best estimate of the standalone selling price of each distinct good or service in the contract. The primary method used to estimate standalone selling price is the expected cost plus a margin approach, under which we forecast our expected costs of satisfying a performance obligation and then add an appropriate margin for that distinct good or service.

In our Photonics segment, we recognize revenue for homogenous manufactured military products sold to the U.S. government and its contractors over time under the units-of-delivery method because of the continuous transfer of control to the customer. Intevac believes that the units-of-delivery method is an appropriate measure for measuring progress for the manufactured units as an equal amount of value is individually transferred to the customer upon delivery. The Company previously recognized revenue for substantially all manufactured military products sold to the U.S. government and its contractors when the customers took delivery of the products, which was generally upon shipment.

The nature of our contracts in our Photonics segment gives rise to several types of variable consideration including tiered pricing. Allocation of contract revenues among Photonics military products, and the timing of the recognition of those revenues, is impacted by agreements with tiered pricing or variable rate structures. We include variable consideration in the estimated transaction price when there is a basis to reasonably estimate the amount of the consideration. These estimates are based on historical experience, anticipated performance and our best judgment at the time. Because of our certainty in estimating these amounts, they are included in the transaction price of our contracts and the associated remaining performance obligations.

Accounting for CPFF and FFP contracts and programs involves the use of various techniques to estimate total contract revenue and costs. For these contracts, we estimate the profit on a contract as the difference between the total estimated revenue and expected costs to complete a contract and recognize that profit over the life of the contract. Contract estimates are based on various assumptions to project the outcome of future events. These assumptions include the complexity of the work to be performed; the cost and availability of materials; the performance of subcontractors; and the availability and timing of funding from the customer.

As a significant change in one or more of these estimates could affect the profitability of our contracts, we review and update our contract-related estimates regularly. We recognize adjustments in estimated profit on contracts under the cumulative catch-up method. Under this method, the impact of the adjustment on profit recorded to date on a contract is recognized in the period the adjustment is identified. Revenue and profit in future periods of contract performance are recognized using the adjusted estimate. If at any time the estimate of contract profitability indicates an anticipated loss on the contract, we recognize the total loss in the quarter it is identified.

Government Grants and Credits

The Company generally records grants from governmental agencies related to income as a reduction in operating expense. Grants are recognized when there is reasonable assurance that the Company will comply with the conditions attached to the grant arrangement and the grant will be received. Reimbursements of eligible expenditures pursuant to government assistance programs are recorded as reductions of operating costs when the related costs have been incurred and there is reasonable assurance regarding collection of the claim. Grant claims not settled by the balance sheet date are recorded as receivables, provided their receipt is reasonably assured. The determination of the amount of the claim, and accordingly the receivable amount, requires management to make calculations based on its interpretation of eligible expenditures in accordance with the terms of the programs. The reimbursement claims submitted by the Company are subject to review by the relevant government agencies. In Singapore, Intevac receives government assistance under the Job Support Scheme ("JSS"). During fiscal 2020, the Company received $567,000 in JSS grants of which $328,000 is reported as a reduction of cost of net revenues, $90,000 is reported as a reduction of research and development ("R&D") expenses and $149,000 is reported as a reduction of selling, general and administrative expenses on the consolidated statement of income.

Advertising Costs

Advertising costs are expensed as incurred. Advertising costs were not material for all periods presented.

Foreign Currency Translation

The functional currency of Intevac's foreign subsidiaries in Singapore and Hong Kong and the Taiwan branch is the U.S. dollar. The functional currency of Intevac's foreign subsidiaries in China, Malaysia and Korea is the local currency of the country in which the respective subsidiary operates. Assets and liabilities recorded in foreign currencies are translated at year-end exchange rates; revenues and expenses are translated at average exchange rates during the year. The effects of foreign currency translation adjustments are included in stockholders' equity as a component of accumulated other comprehensive income in the accompanying consolidated balance sheets. The effects of foreign currency transactions are included in other income (expense), net in the determination of net income. Losses from foreign currency transactions were $139,000 and $85,000 in 2020 and 2019, respectively.

Comprehensive Income

The changes in accumulated other comprehensive income by component, were as follows for the years ended January 2, 2021 and December 28, 2019:

	Foreign currency	Unrealized holding gains (losses) on available-for-sale investments	Total
		(in thousands)	
Balance at December 29, 2018	$ 405	$ (27)	$ 378
Other comprehensive income (loss) before reclassification	(24)	70	46
Amounts reclassified from other comprehensive income (loss)	—	—	—
Net current-period other comprehensive income (loss)	(24)	70	46
Balance at December 28, 2019	$ 381	$ 43	$ 424
Other comprehensive income (loss) before reclassification	221	(5)	216
Amounts reclassified from other comprehensive income (loss)	—	—	—
Net current-period other comprehensive income (loss)	221	(5)	216
Balance at January 2, 2021	$ 602	$ 38	$ 640

Employee Stock Plans

Intevac has equity-based compensation plans that provide for the grant to employees of equity-based awards, including incentive or non-statutory stock options, performance-based stock options ("PSOs"), restricted stock, stock appreciation rights, restricted stock units ("RSUs"), performance-based restricted stock units ("PRSUs") and performance shares. In addition, these plans provide for the grant of non-statutory stock options and RSUs to non-employee directors and consultants. Intevac also has an employee stock purchase plan, which provides Intevac's employees with the opportunity to purchase Intevac common stock at a discount through payroll deductions. See Note 3 for a complete description of these plans and their accounting treatment.

Recent Accounting Pronouncements Not Yet Adopted

In March 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2020-04, *Reference Rate Reform (Topic 848)* . This ASU provides optional expedients and exceptions for applying U.S. generally accepted accounting principles to contracts, hedging relationships and other transactions affected by reference rate reform if certain criteria are met. Adoption of the expedients and exceptions is permitted upon issuance of this update through December 31, 2022. The FASB also issued ASU 2021-01, *Reference Rate Reform (Topic 848): Scope* in January 2021. It clarifies that certain optional expedients and exceptions in Topic 848 apply to derivatives that are affected by the discounting transition. The amendments in this ASU affect the guidance in ASU 2020-04 and are effective in the same timeframe as ASU 2020-04. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In December 2019, the FASB issued ASU 2019-12, *Simplifying the Accounting for Income Taxes (ASC Topic 740)* . This ASU simplifies accounting for income taxes by removing certain exceptions to the general principles and amending existing guidance to improve consistent application. The Company is required to adopt this guidance in the first quarter of fiscal year 2021. We do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326).* This ASU amends the impairment model to utilize an expected loss methodology in place of the currently used incurred loss methodology, which will result in the more-timely recognition of losses. This update becomes effective and will be adopted by Intevac in the first quarter of fiscal 2023. We are currently assessing how the adoption of this standard will impact our consolidated financial statements.

2. Revenue

The following tables represent a disaggregation of revenue from contracts with customers for fiscal 2020 and 2019 along with the reportable segment for each category.

Major Products and Service Lines

TFE	2020				2019			
	(in thousands)							
	HDD	DCP	PV	Total	HDD	DCP	PV	Total
Systems, upgrades and spare parts	$45,620	$—	$426	$46,046	$52,759	$—	$15,653	$68,412
Field service	6,080	—	2	6,082	5,210	2	54	5,266
Total TFE net revenues	$51,700	$—	$428	$52,128	$57,969	$ 2	$15,707	$73,678

Photonics	2020	2019
	(in thousands)	
Products:		
Military products	$20,409	$12,480
Commercial products	395	640
Repair and other services	1,947	2,430
Total Photonics product net revenues	22,751	15,550
Technology development:		
FFP	19,648	12,521
CPFF	3,297	7,134
Time and materials	—	2
Total technology development net revenues	22,945	19,657
Total Photonics net revenues	$45,696	$35,207

Primary Geography Markets

	2020			2019		
	(in thousands)					
	TFE	Photonics	Total	TFE	Photonics	Total
United States	$ 6,450	$ 45,363	$51,813	$ 1,306	$ 34,664	$ 35,970
Asia	45,611	—	45,611	72,372	—	72,372
Europe	67	333	400	—	543	543
Total net revenues	$52,128	$ 45,696	$97,824	$73,678	$ 35,207	$108,885

Timing of Revenue Recognition

	2020			2019		
	(in thousands)					
	TFE	Photonics	Total	TFE	Photonics	Total
Products transferred at a point in time	$ 52,128	$ 1,947	$54,075	$73,678	$ 2,430	$ 76,108
Products and services transferred over time	—	43,749	43,749	—	32,777	32,777
Total net revenues	$52,128	$ 45,696	$97,824	$73,678	$ 35,207	$108,885

The following table reflects the changes in our contract assets, which we classify as accounts receivable, unbilled or retainage and our contract liabilities which we classify as deferred revenue and customer advances for fiscal 2020:

	January 2, 2021	December 28, 2019	Change
	(In thousands)		
TFE:			
Contract assets:			
Accounts receivable, unbilled	$ 369	$ 760	$ (391)
Contract liabilities:			
Deferred revenue	$ 482	$ 320	$ 162
Customer advances	33	4,007	(3,974)
	$ 515	$ 4,327	$(3,812)
Photonics:			
Contract assets:			
Accounts receivable, unbilled	$ 5,439	$ 3,210	$ 2,229
Retainage	126	99	27
	$ 5,565	$ 3,309	$ 2,256
Contract liabilities:			
Deferred revenue	$ 779	$ —	$ 779

Accounts receivable, unbilled in our TFE segment represents a contract asset for revenue that has been recognized in advance of billing the customer. For our system and certain upgrade sales, our TFE customers generally pay in three installments, with a portion of the system price billed upon receipt of an order, a portion of the price billed upon shipment, and the balance of the price due upon completion of installation and acceptance of the system at the customer's factory. Accounts receivable, unbilled in our TFE segment generally represents the balance of the system price that is due upon completion of installation and acceptance less the amount that has been deferred as revenue for the performance of the installation tasks. During fiscal 2020, contract assets in our TFE segment decreased by $391,000 primarily due to the final billing on two systems that were pending acceptance as of December 28, 2019 that completed installation and were accepted by the customer, offset by the accrual of revenue for an additional two systems delivered during fiscal 2020, one of which was pending acceptance as of January 2, 2021.

Customer advances in our TFE segment generally represent amounts billed to the customer prior to transferring goods which represents a contract liability. The Company has elected to use the practical expedient to disregard the effect of the time value of money in a significant financing component when its payment terms are less than one year. These contract advances are liquidated when revenue is recognized. Deferred revenue in our TFE segment generally represents amounts billed to a customer for completed systems at the customer site that are undergoing installation and acceptance testing where transfer of control has not yet occurred as Intevac does not yet have a demonstrated history of meeting the acceptance criteria upon the customer's receipt of product and represents a contract liability. During fiscal 2020, we recognized revenue in our TFE segment of $4.0 million and $203,000 that was included in customer advances and deferred revenue, respectively, at the beginning of the period.

Accounts receivable, unbilled in our Photonics segment represents a contract asset for revenue that has been recognized in advance of billing the customer, which is common for contracts in the defense industry. In our Photonics segment, amounts are billed as work progresses in accordance with agreed-upon contractual terms, either at periodic intervals (e.g., monthly) or upon achievement of contractual milestones. Generally, billing occurs subsequent to revenue recognition, resulting in contract assets. Our contracts with the U.S. government may also contain retainage provisions. Retainage represents a contract asset for the portion of the contract price earned by us for work performed, but held for payment by the U.S. government as a form of security until satisfactory completion of the contract. The retainage is billable upon completion of the contract performance and approval of final indirect expense rates by the government. During fiscal 2020, contract assets in our Photonics segment increased by $2.3 million primarily due to the revenue recognized on FFP contracts in advance of billing and the accrual of revenue incurred costs under CPFF contracts, offset in part by the completion of certain CPFF contracts and the final settlement of retainage amounts under certain CPFF contracts.

Deferred revenue in our Photonics segment generally represents a contract liability for amounts billed to the customer upon achievement of contractual milestones. These amounts are liquidated when revenue is recognized.

On January 2, 2021 we had $ 46.9 million of remaining performance obligations, which we also refer to as backlog. Backlog at January 2, 2021 consisted of $5.6 million of TFE backlog and $41.3 million of Photonics backlog. We expect to recognize approximately 61% of our remaining performance obligations as revenue in 2021, 26% in 2022, 12% in 2023 and 1% in 2024.

3. Equity-Based Compensation

Intevac accounts for share-based awards in accordance with the provisions of the accounting guidance which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees, consultants and directors based upon the grant-date fair value of those awards. The estimated fair value of Intevac's equity-based awards is amortized over the awards' service periods using the graded vesting attribution method.

Descriptions of Plans

Equity Incentive Plans

At January 2, 2021, Intevac had equity-based awards outstanding under the 2020 Equity Incentive Plan, the 2012 Equity Incentive Plan and the 2004 Equity Incentive Plan (the "Plans") and the 2003 Employee Stock Purchase Plan (the "ESPP"). Intevac's stockholders approved all of these plans.

The Plans are a broad-based, long-term retention program intended to attract and retain qualified management and employees, and align stockholder and employee interests. The Plans permit the grant of incentive or non-statutory stock options, performance-based stock options ("PSOs"), restricted stock, stock appreciation rights, restricted stock units ("RSUs"), performance-based restricted stock units ("PRSUs") and performance shares. Option price, vesting period, and other terms are determined by the administrator of the Plans, but the option price shall generally not be less than 100% of the fair market value per share on the date of grant. As of January 2, 2021, 5.0 million shares of common stock were authorized for future issuance under the Plans. The 2020 Equity Incentive Plan expires no later than May 13, 2030.

2003 Employee Stock Purchase Plan

The ESPP provides that eligible employees may purchase Intevac's common stock through payroll deductions at a price equal to 85% of the lower of the fair market value at the entry date of the applicable offering period or at the end of each applicable purchase interval. Offering periods are generally two years in length, and consist of a series of six-month purchase intervals. Eligible employees may join the ESPP at the beginning of any six-month purchase interval. Under the terms of the ESPP, employees can choose to have up to 15% of their base earnings withheld to purchase Intevac common stock. Beginning August 1, 2020, under the terms of the ESPP, employees can choose to have up to 50% of their base earnings withheld to purchase Intevac common stock (not to exceed $25,000 per year). As of January 2, 2021, 663,000 shares remained available for issuance under the ESPP.

The effect of recording equity-based compensation for fiscal 2020 and 2019 was as follows (in thousands):

	2020	2019
Equity-based compensation by type of award:		
Stock options	$504	$819
RSUs	1,936	1,657
Employee stock purchase plan	949	749
Total equity-based compensation	$3,389	$3,225

Equity-based compensation expense is based on awards which vest. Intevac accounts for forfeitures as they occur, rather than estimating expected forfeitures.

Stock Options

The exercise price of each stock option equals the market price of Intevac's stock on the date of grant. Most options are scheduled to vest over three and/or four years and expire no later thanten years after the grant date. The fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model. This model was developed for use in estimating the value of publicly traded options that have no vesting restrictions and are fully transferable. Intevac's employee stock options have characteristics significantly different from those of publicly traded options. The weighted-average assumptions used in the model are outlined in the following table:

	2020	2019
Stock Options:		
Weighted-average fair value of grants per share	$ 1.82	$ 2.06
Expected volatility	46.06%	43.23%
Risk free interest rate	0.44%	1.86%
Expected term of options (in years)	4.39	4.60
Dividend yield	None	None

The computation of the expected volatility assumption used in the Black-Scholes calculations for new grants is based on historical volatility of Intevac's stock price. The risk-free interest rate is based on the yield available on U.S. Treasury Strips with an equivalent remaining term. The expected life of employee stock options represents the weighted-average period that the stock options are expected to remain outstanding and was determined based on historical experience of similar awards, giving consideration to the contractual terms of the stock-based awards and vesting schedules. The dividend yield assumption is based on Intevac's history of not paying dividends and the assumption of not paying dividends in the future.

Performance stock options ("PSOs") vest upon the achievement of certain market conditions (our stock performance) during a set performance period (typically 4 years) subject to the grantee's continued service with Intevac through the date the applicable market condition is achieved. The fair value is based on the values calculated under the Monte Carlo simulation model on the grant date. Compensation cost is not adjusted in future periods for subsequent changes in the expected outcome of market related conditions. The compensation expense is recognized over the derived service period. We granted 37,500 of such stock options to the chief executive officer in 2019. These PSOs have a derived service period of 1.1 years.

Intevac estimated the weighted-average fair value of PSOs using the following weighted-average assumptions:

	2019
Weighted-average fair value of grants per share	$ 1.75
Expected volatility	43.43%
Risk free interest rate	1.96%
Expected term (in years)	4.60
Dividend yield	None

A summary of the stock option activity is as follows:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Options outstanding at December 28, 2019	2,096,610	$ 6.63	3.75	$2,048,964
Options granted	6,000	$ 4.88		
Options cancelled and forfeited	(220,971)	$ 6.88		
Options exercised	(67,172)	$ 4.85		
Options outstanding at January 2, 2021	1,814,467	$ 6.66	3.08	$2,520,722
Options exercisable at January 2, 2021	1,372,871	$ 6.77	2.52	$1,798,938

The total intrinsic value of options exercised during fiscal years 2020 and 2019 was $110,000 and $249,000, respectively. At January 2, 2021, Intevac had $312,000 of total unrecognized compensation expense related to stock option plans that will be recognized over the weighted-average period of 1.03 years.

RSUs

A summary of the RSU activity is as follows:

	Shares	Weighted Average Grant Date Fair Value	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value
Non-vested RSUs at December 28, 2019	553,355	$ 6.15	1.30	$3,713,012
Granted	668,413	$ 4.87		
Vested	(243,312)	$ 6.38		
Cancelled	(76,822)	$ 4.26		
Non-vested RSUs at January 2, 2021	901,634	$ 5.30	1.50	$6,500,781

Time-based RSUs are converted into shares of Intevac common stock upon vesting on a one-for-one basis. Time-based RSUs typically are scheduled to vest over three and/or four years. Vesting of time-based RSUs is subject to the grantee's continued service with Intevac. The compensation expense related to these awards is determined using the fair market value of Intevac common stock on the date of the grant, and the compensation expense is recognized over the vesting period. At January 2, 2021, Intevac had $2.5 million of total unrecognized compensation expense related to RSUs that will be recognized over the weighted-average period of 1.50 years.

In May 2020, we granted 109,465 performance-based restricted stock units ("PRSUs") to members of our senior management. The PRSUs were issued collectively in four separate tranches with individual one-year performance periods beginning in May 2020, 2021, 2022 and 2023, respectively. Vesting of the PRSUs is based on the performance of our common stock relative to the performance of a peer group. The fair value of each PRSU award was estimated on the date of grant using a Monte Carlo simulation. PRSU activity is included in the above RSU tables. At the end of each performance measurement

period, the Compensation Committee will determine the achievement against the performance objectives. Any earned PRSU awards will vest 100% after the end of the applicable performance measurement period.

Intevac estimated the weighted-average fair value of PRSUs using the following weighted-average assumptions:

	2020
Weighted-average fair value of grants per share	$ 3.16
Expected volatility	46.7%
Risk-free interest rate	0.25%
Dividend yield	None

ESPP

The fair value of the employee stock purchase right is estimated on the date of grant using the Black-Scholes option pricing model with the following weighted-average assumptions:

	2020	2019
Stock Purchase Rights:		
Weighted-average fair value of grants per share	$ 2.20	$ 1.73
Expected volatility	51.49%	45.81%
Risk free interest rate	0.14%	2.28%
Expected term of purchase rights (in years)	1.24	0.91
Dividend yield	None	None

The expected life of purchase rights is the period of time remaining in the current offering period.

The ESPP activity during fiscal 2020 and 2019 is as follows:

	2020	2019
	(in thousands, except per share amounts)	
Shares purchased	392	370
Weighted-average purchase price per share	$ 4.01	$ 3.96
Aggregate intrinsic value of purchase rights exercised	$ 765	$ 513

As of January 2, 2021, Intevac had $1.2 million of total unrecognized compensation expense related to purchase rights that will be recognized over the weighted-average period of 1.11 years.

4. Earnings Per Share

Intevac calculates basic earnings per share (“EPS”) using net income and the weighted-average number of shares outstanding during the reporting period. Diluted EPS includes the effect from potential issuance of common stock pursuant to the exercise of employee stock options and vesting of RSUs.

The following table sets forth the computation of basic and diluted net income per share:

	2020	2019
	(in thousands, except per share amounts)	
Net income	$ 1,056	$ 1,148
Weighted-average shares – basic	23,669	23,063
Effect of dilutive potential common shares	482	277
Weighted-average shares – diluted	24,151	23,340
Net income per share –basic	$ 0.04	$ 0.05
Net income per share –diluted	$ 0.04	$ 0.05

The potentially dilutive securities were excluded (as common stock equivalents) from the computation of diluted net income per share for the periods presented as their effect would have been antidilutive:

	2020	2019
	(in thousands)	
Stock options to purchase common stock	935	1,235
RSUs	5	5
Employee stock purchase plan	103	3

5. Concentrations

Credit Risk and Significant Customers

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist of cash equivalents, short- and long-term investments, restricted cash, and accounts receivable. Intevac generally invests its excess cash in money market funds, certificates of deposit, commercial paper, obligations of the U.S. government and its agencies, corporate debt securities, asset backed securities and municipal bonds. The Company has adopted an investment policy and established guidelines relating to credit quality, diversification and maturities of its investments in order to preserve principal and maintain liquidity. All investment securities in Intevac's portfolio have an investment grade credit rating.

Intevac's accounts receivable tend to be concentrated in a limited number of customers. The following customers accounted for at least 10 percent of Intevac's accounts receivable at January 2, 2021 and December 28, 2019.

	2020	2019
Seagate Technology	45%	60%
U.S. Government	26%	25%
HGST	14%	*

* Less than 10%

Intevac's largest customers tend to change from period to period. Historically, a significant portion of Intevac's revenues in any particular period have been attributable to sales to a limited number of customers. Intevac performs credit evaluations of its customers' financial condition and generally requires deposits on system orders but does not generally require collateral or other security to support customer receivables.

The following customers accounted for at least 10 percent of Intevac's consolidated net revenues in fiscal 2020 and/or 2019.

	2020	2019
Seagate Technology	42%	49%
U.S. Government	29%	20%
Elbit Systems of America	12%	*
Jolywood (Hongkong) Industrial Holdings Co., Limited	*	14%

* Less than 10%

Products

Disk manufacturing products contributed a significant portion of Intevac's revenues in fiscal 2020 and 2019. Intevac expects that the ability to maintain or expand its current levels of revenues in the future will depend upon continuing market demand for its products; its success in enhancing its existing systems and developing and manufacturing competitive disk manufacturing equipment, such as the 200 Lean; its success in utilizing Intevac's expertise in complex manufacturing equipment to develop and sell new manufacturing equipment products for PV, DCP and advanced semiconductor packaging and Intevac's success in developing military products based on its low-light technology.

6. Balance Sheet Details

Balance sheet details were as follows as of January 2, 2021 and December 28, 2019:

Trade and Other Accounts Receivable, Net

	January 2, 2021	December 28, 2019
	(in thousands)	
Trade receivables and other	$ 22,712	$ 24,472
Unbilled costs and accrued profits	5,934	4,069
Income tax receivable	—	78
Less: allowance for doubtful accounts	—	—
	$ 28,646	$ 28,619

Inventories

Inventories are stated at the lower of average cost or net realizable value and consist of the following:

	January 2, 2021	December 28, 2019
	(in thousands)	
Raw materials	$ 9,999	$ 15,286
Work-in-progress	4,832	4,748
Finished goods	6,858	4,873
	$ 21,689	$ 24,907

Finished goods inventory at January 2, 2021 and December 28, 2019 included one VERTEX SPECTRA system for DCP under evaluation at a customer's factory and one MATRIX PVD system for advanced semiconductor packaging under evaluation at a customer's factory.

Property, Plant and Equipment

	January 2, 2021	December 28, 2019
	(in thousands)	
Leasehold improvements	$ 16,323	$ 15,037
Machinery and equipment	46,846	46,674
	63,169	61,711
Less accumulated depreciation and amortization	52,165	50,113
Total property, plant and equipment, net	$ 11,004	$ 11,598

Deferred Income Taxes and Other Long-Term Assets

	January 2, 2021	December 28, 2019
	(in thousands)	
Deferred income taxes	$ 5,335	$ 6,252
Prepaid expenses	151	—
Purchased intangible assets, net	—	274
Income tax receivable	—	78
	$ 5,486	$ 6,604

Accounts Payable

Included in accounts payable is $84,000 and $512,000 of book overdraft at January 2, 2021 and December 28, 2019, respectively.

Other Accrued Liabilities

	January 2, 2021	December 28, 2019
	(in thousands)	
Deferred revenue	$ 1,261	$ 320
Other taxes payable	935	1,155
Accrued product warranties	405	846
Income taxes payable	263	403
Other	734	869
Total other accrued liabilities	$ 3,598	$ 3,593

Other Long-Term Liabilities

	January 2, 2021	December 28, 2019
	(in thousands)	
Employer payroll taxes	$ 382	$ —
Accrued product warranties	75	176
Accrued income taxes	—	10
Total other long-term liabilities	$ 457	$ 186

7. Purchased Intangible Assets, Net

As of January 2, 2021, all acquisition-related intangible assets had reached the end of their useful lives and did not have any remaining carrying value. The carrying value of acquisition-related intangible assets subject to amortization, excluding fully amortized intangible assets, as of December 28, 2019 is set forth in the following table:

	December 28, 2019		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
		(in thousands)	
Customer relationships	$ 560	$ 524	$ 36
Purchased technology	4,000	3,762	238
Total amortizable intangible assets	$ 4,560	$ 4,286	$ 274

Total amortization expense of purchased intangibles was $274,000 for fiscal 2020 and was $615,000 for fiscal 2019.

8. Contingent Consideration

In connection with the acquisition of SIT, Intevac agreed to pay to the selling shareholders in cash a revenue earnout on Intevac’s net revenues from commercial sales of certain products over a specified period up to an aggregate of $9.0 million. The earnout period terminated on June 30, 2019. There is no remaining contingent consideration obligation associated with the earnout agreement at January 2, 2021.

The following table represents a reconciliation of the change in the fair value measurement of the contingent consideration liability for fiscal 2019:

	2019 (in thousands)
Beginning balance	$ 223
Changes in fair value	7
Cash payments made	(230)
Ending balance	$ —

9. Financial Instruments

Cash, Cash Equivalents and Investments

Cash and cash equivalents, short-term investments and long-term investments consist of:

	January 2, 2021			
	Amortized Cost	Unrealized Holding Gains	Unrealized Holding Losses	Fair Value
	(in thousands)			
Cash and cash equivalents:				
Cash	$ 24,729	$ —	$ —	$ 24,729
Money market funds	3,612	—	—	3,612
Certificates of deposit	1,000	—	—	1,000
Total cash and cash equivalents	$ 29,341	$ —	$ —	$ 29,341
Short-term investments:				
Certificates of deposit	$ 6,450	$ 2	$ —	$ 6,452
Commercial paper	500	—	—	500
Corporate bonds and medium-term notes	2,929	6	—	2,935
Municipal bonds	400	—	—	400
U.S. treasury securities	4,527	25	—	4,552
Total short-term investments	$ 14,806	$ 33	$ —	$ 14,839
Long-term investments:				
Certificates of deposit	$ 500	$ —	$ —	$ 500
Corporate bonds and medium-term notes	3,474	4	—	3,478
U.S. treasury securities	1,409	1	—	1,410
Total long-term investments	$ 5,383	$ 5	$ —	$ 5,388
Total cash, cash equivalents, and investments	$ 49,530	$ 38	$ —	$ 49,568

	December 28, 2019			
	Amortized Cost	Unrealized Holding Gains	Unrealized Holding Losses	Fair Value
	(in thousands)			
Cash and cash equivalents:				
Cash	$ 16,512	$ —	$ —	$ 16,512
Money market funds	3,255	—	—	3,255
Total cash and cash equivalents	$ 19,767	$ —	$ —	$ 19,767
Short-term investments:				
Certificates of deposit	$ 3,000	$ 1	$ —	$ 3,001
Commercial paper	1,891	2	—	1,893
Corporate bonds and medium-term notes	6,383	25	—	6,408
U.S. treasury securities	5,417	1	—	5,418
Total short-term investments	$ 16,691	$ 29	$ —	$ 16,720
Long-term investments:				
Certificates of deposit	$ 499	$ 1	$ —	$ 500
Corporate bonds and medium-term notes	2,530	12	—	2,542
U.S. treasury securities	2,494	1	—	2,495
Total long-term investments	$ 5,523	$ 14	$ —	$ 5,537
Total cash, cash equivalents, and investments	$ 41,981	$ 43	$ —	$ 42,024

The contractual maturities of available-for-sale securities at January 2, 2021 are presented in the following table.

	Amortized Cost	Fair Value
	(in thousands)	
Due in one year or less	$ 19,418	$ 19,451
Due after one through five years	5,383	5,388
	$ 24,801	$ 24,839

All prices for the fixed maturity securities including U.S. treasury and agency securities, certificates of deposit, commercial paper, corporate bonds, and municipal bonds are received from independent pricing services utilized by Intevac's outside investment manager. This investment manager performs a review of the pricing methodologies and inputs utilized by the independent pricing services for each asset type priced by the vendor. In addition, on at least an annual basis, the investment manager conducts due diligence visits and interviews with each pricing vendor to verify the inputs utilized for each asset class. The due diligence visits include a review of the procedures performed by each vendor to ensure that pricing evaluations are representative of the price that would be received to sell a security in an orderly transaction. Any pricing where the input is based solely on a broker price is deemed to be a Level 3 price. Intevac uses the pricing data obtained from its outside investment manager as the primary input to make its assessments and determinations as to the ultimate valuation of the above-mentioned securities and has not made, during the periods presented, any material adjustments to such inputs.

The following table represents the fair value hierarchy of Intevac's available-for-sale securities measured at fair value on a recurring basis as of January 2, 2021.

	Fair Value Measurements at January 2, 2021		
	Total	Level 1	Level 2
	(in thousands)		
Recurring fair value measurements:			
Available-for-sale securities			
Money market funds	$ 3,612	$3,612	$ —
U.S. treasury securities	5,962	5,962	—
Certificates of deposit	7,952	—	7,952
Commercial paper	500	—	500
Corporate bonds and medium-term notes	6,413	—	6,413
Municipal bonds	400	—	400
Total recurring fair value measurements	$24,839	$9,574	$15,265

Derivatives

The Company uses foreign currency forward contracts to mitigate variability in gains and losses generated from the re-measurement of certain monetary assets and liabilities denominated in foreign currencies and to offset certain operational exposures from the impact of changes in foreign currency exchange rates. These derivatives are carried at fair value with changes recorded in interest income and other, net in the consolidated statements of income. Changes in the fair value of these derivatives are largely offset by re-measurement of the underlying assets and liabilities. Cash flows from such derivatives are classified as operating activities. The derivatives have maturities of approximately30 days.

The following table summarizes the Company's outstanding derivative instruments on a gross basis as recorded in its consolidated balance sheets as of January 2, 2021 and December 28, 2019:

Derivative Instrument	Notional Amounts		Derivative Liabilities			
	January 2, 2021	December 28, 2019	January 2, 2021		December 28, 2019	
			Balance Sheet Line	Fair Value	Balance Sheet Line	Fair Value
	(in thousands)					
Undesignated Hedges:						
Forward Foreign Currency Contracts	$ 983	1,035	*	$ 3	*	$ 4
Total Hedges	$ 983	1,035		$ 3		$ 4

* Other accrued liabilities

10. Equity

Stock Repurchase Program

On November 21, 2013, Intevac's Board of Directors approved a stock repurchase program authorizing up to $30.0 million in repurchases. On August 15, 2018, Intevac's Board of Directors approved a $10.0 million increase to the original stock repurchase program authorizing up to $40.0 million. Under this authorization, Intevac purchases shares of its common stock under a systematic stock repurchase program and may also make supplemental stock repurchases from time to time, depending on market conditions, stock price and other factors.

At January 2, 2021, $10.4 million remains available for future stock repurchases under the repurchase program.

The following table summarizes Intevac's stock repurchases for fiscal 2020 and 2019:

	2020	2019
	(in thousands, except per share amounts)	
Shares of common stock repurchased	98	24
Cost of stock repurchased	$ 393	$ 111
Average price paid per share	$ 3.97	$ 4.67

Intevac records treasury stock purchases under the cost method using the first-in, first-out (FIFO) method. Upon reissuance of treasury stock, amounts in excess of the acquisition cost are credited to additional paid-in capital. If Intevac reissues treasury stock at an amount below its acquisition cost and additional paid-in capital associated with prior treasury stock transactions is insufficient to cover the difference between the acquisition cost and the reissue price, this difference is recorded against the accumulated deficit.

11. Income Taxes

The provision for income taxes on income from operations for fiscal 2020 and 2019 consists of the following (in thousands):

	2020	2019
Federal:		
Current	$ (915)	$ —
Deferred	—	—
	(915)	—
State:		
Current	4	4
Deferred	—	—
	4	4
Foreign:		
Current	1,705	1,694
Deferred	917	1,661
	2,622	3,355
Total	$1,711	$3,359

Income (loss) before income taxes for fiscal 2020 and 2019 consisted of the following (in thousands):

	2020	2019
U.S	$(3,293)	$(4,875)
Foreign	6,060	9,382
	$ 2,767	$ 4,507
Effective tax rate	61.8%	74.5%

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts for income tax purposes. Significant components of deferred tax assets are as follows (in thousands):

	January 2, 2021	December 28, 2019
Deferred tax assets:		
Vacation, warranty and other accruals	$ 651	$ 635
Depreciation and amortization	—	89
Intangible amortization	551	804
Purchased technology	14	—
Inventory valuation	1,101	1,288
Equity-based compensation	1,494	1,593
Net operating loss, research and other tax credit carryforwards	55,322	54,818
Other	30	43
	59,163	59,270
Valuation allowance for deferred tax assets	(52,088)	(52,099)
Total deferred tax assets	7,075	7,171
Deferred tax liabilities:		
Depreciation and amortization	(341)	—
Purchased technology	—	(45)
Unbilled revenue	(1,399)	(874)
Total deferred tax liabilities	(1,740)	(919)
Net deferred tax assets	$ 5,335	$ 6,252
As reported on the balance sheet:		
Non-current deferred tax assets	$ 5,335	$ 6,252

Intevac accounts for income taxes in accordance with accounting standards for such taxes, which requires that deferred tax assets and liabilities be recognized using enacted tax rates for the effect of temporary differences between the financial reporting and tax bases of recorded assets and liabilities.

Accounting standards also require that deferred tax assets be reduced by a valuation allowance if it is more likely than not that some portion of or all of the deferred tax asset will not be realized. Management assesses the available positive and negative evidence to estimate if sufficient future taxable income will be generated to use the existing deferred tax assets. In fiscal 2014, a valuation allowance of $9.4 million was established to record the portion of the Singapore deferred tax asset that more likely than not will not be realized. The Company concluded that, as of December 29, 2018, it is more likely than not that the Company will generate sufficient taxable income in Singapore to realize its deferred tax assets and reversed the valuation allowance during the fourth quarter of 2018. This reversal resulted in the recognition of a non-cash income tax benefit of $7.9 million for fiscal 2018. The Company has considered all positive and negative evidence regarding the ability to fully realize the deferred tax asset, including past operating results and the forecast of future taxable income. This conclusion, and the resulting reversal of the deferred tax asset valuation allowance, was based upon consideration of a number of factors, including the Company’s completion of 7 consecutive quarters of profitability and its forecast of future profitability under multiple scenarios that support the utilization of net operating loss carryforwards. After recognizing the reversal, the Company does not have a remaining valuation allowance against the deferred tax assets in Singapore at January 2, 2021.

In fiscal 2012, a valuation allowance of $23.4 million was established to record the portion of the U.S. federal deferred tax asset that more likely than not will not be realized. For fiscal 2020 a valuation allowance decrease of $416,000 and for fiscal 2019 a valuation allowance decrease of $689,000, respectively, were recorded for the U.S. federal deferred tax asset. A valuation allowance is recorded against the entire state deferred tax asset which consists of state income tax temporary differences and deferred research and other tax credits that are not realizable in the foreseeable future.

As of January 2, 2021, our federal, foreign and state net operating loss carryforwards for income tax purposes were approximately $71.0 million, $30.3 million and $70.8 million, respectively. The federal and state net operating loss carryforwards are subject to various limitations under Section 382 of the Internal Revenue Code and applicable state tax laws. If not utilized, the federal net operating loss carryforwards and the state net operating loss carryforwards will begin to expire in 2029 and 2028, respectively. The foreign net operating loss carryforwards do not expire. As of January 2, 2021, our federal and state tax credit carryforwards for income tax purposes were approximately $19.1 million and $16.8 million, respectively. If not utilized, the federal tax credit carryforwards will begin to expire in 2021 and the state tax credits carry forward indefinitely.

We account for Global Intangible Low-Taxed Income ("GILTI") earned by certain foreign subsidiaries in the year the tax is incurred.

The Coronavirus Aid, Relief, and Economic Security Act ("CARES Act") was enacted on March 27, 2020 in the United States. The CARES Act includes several significant provisions for corporations, including the usage of net operating losses and payroll benefits. Several foreign (non-U.S.) jurisdictions in which we operate have taken similar economic stimulus measures. The Company evaluated the provisions of the CARES Act and other non-U.S. economic measures and determined the impact on our financial position at January 2, 2021 and on the results of operations and cash flows for fiscal 2020 to be as follows.

Under the CARES Act, we elected to defer payment, on an interest-free basis, of the employer portion of social security payroll taxes incurred from March 27, 2020 to December 31, 2020. One-half of such deferral amount will become due on each of December 31, 2021 and December 31, 2022. We elected to utilize this deferral program to delay payment of approximately $764,000 of the employer portion of payroll taxes which were incurred between March 27, 2020 and December 31, 2020. On the consolidated balance sheets, the short-term portion of the deferred payroll tax liability is included in accrued payroll and related liabilities, while the long-term portion is included in other long-term liabilities. The Company also utilized the employee retention tax credit under the CARES Act for certain qualifying employee salary and wage expenditures. Tax benefits under the employee retention tax credit are not significant. Additionally, the CARES Act accelerated the timing of the refund for alternative minimum tax ("AMT") credits. The entire balance of the income tax refund receivable of $157,000 was received in fiscal 2020.

In Singapore, Intevac receives government assistance under the Job Support Scheme ("JSS"). The purpose of the JSS is to provide wage support to employers to help them retain their local employees. During fiscal 2020, the Company received $567,000 in JSS grants, of which $328,000 is reported as a reduction of cost of net revenues, $90,000 is reported as a reduction of R&D expenses and $149,000 is reported as a reduction of selling, general and administrative expenses on the consolidated statement of income.

The difference between the tax provision at the statutory federal income tax rate and the tax provision for fiscal 2020 and 2019 was as follows (in thousands):

	2020	2019
Income tax at the federal statutory rate	$ 581	$ 947
State income taxes, net of federal benefit	4	4
Change in valuation allowance:		
U.S	(416)	(689)
Foreign	—	—
Effect of foreign operations taxed at various rates	(235)	(397)
Research tax credits	(1,306)	(1,710)
Effect of tax rate changes, permanent differences and adjustments of prior deferrals	2,504	3,685
Unrecognized tax benefits	579	1,519
Total	$ 1,711	$ 3,359

Intevac has not provided for foreign withholding taxes on approximately $1.7 million of undistributed earnings from non-U.S. operations as of January 2, 2021 because Intevac intends to reinvest such earnings indefinitely outside of the United States. If Intevac were to distribute these earnings, foreign withholding tax would be payable. For all other undistributed foreign earnings, Intevac also intends to reinvest such earnings indefinitely outside of the United States.

The total amount of gross unrecognized tax benefits was $7.3 million as of January 2, 2021, none of which would affect Intevac's effective tax rate if realized. The aggregate changes in the balance of gross unrecognized tax benefits were as follows for fiscal 2020 and 2019:

	2020	2019
Beginning balance	$7,683	$6,164
Additions based on tax positions related to the current year	589	1,519
Settlements	—	—
Lapse of statute of limitations	(945)	—
Ending balance	$7,327	$7,683

The Company does not anticipate any changes in the amount of unrecognized tax benefits in the next twelve months. It is Intevac's policy to include interest and penalties related to unrecognized tax benefits in the provision for income taxes on the consolidated statements of income. During fiscal 2020 and 2019, Intevac recognized a net tax expense (benefit) for interest of ($2,000) and $0, respectively. As of January 2, 2021 Intevac did not have any accrued interest related to unrecognized tax benefits. Intevac did not accrue any penalties related to these unrecognized tax benefits because Intevac has other tax attributes which would offset any potential taxes due.

Intevac is subject to income taxes in the U.S. federal jurisdiction, and various state and foreign jurisdictions. Tax regulations within each jurisdiction are subject to the interpretation of the related tax laws and regulations and require significant judgment to apply. Intevac has certain tax attributes that are subject to adjustment back to 1999. Intevac is subject to potential income tax return examination by tax authorities for tax years after 2009 in the following material jurisdictions: U.S. (Federal and California) and Singapore. Intevac has certain tax attributes that are subject to adjustment back to 1999.

The Inland Revenue Authority of Singapore ("IRAS") conducted a review of the fiscal 2009 through 2010 tax returns of the Company's wholly-owned subsidiary, Intevac Asia Pte. Ltd. IRAS challenged the Company's tax position with respect to certain deductions. The Company paid all contested taxes and the related interest to have the right to defend its position under Singapore tax law. During 2019, the Company received an unfavorable decision on its appeal to the Singapore Income Tax Board of Review. The Company appealed the decision to the Singapore High Court. In October 2020, the Company received an unfavorable decision on its appeal to the Singapore High Court. Management decided not to pursue additional appeals and the matter is fully settled. Presently, there are no other active income tax examinations in the jurisdictions where Intevac operates.

12. Employee Benefit Plans

Employee Savings and Retirement Plan

In 1991, Intevac established a defined contribution retirement plan with 401(k) plan features. The plan covers all United States employees eighteen years and older. Employees may make contributions by a percentage reduction in their salaries, not to exceed the statutorily prescribed annual limit. Intevac made cash contributions of $358,000 for fiscal 2020 and $334,000 for fiscal 2019. Employees may choose among several investment options for their contributions and their share of Intevac's contributions, and they are able to move funds between investment options at any time. Intevac's common stock is not one of the investment options. Administrative expenses relating to the plan are insignificant.

Employee Bonus Plans

Intevac has various employee bonus plans. A profit-sharing plan provides for the distribution of a percentage of pre-tax profits to substantially all of Intevac's employees not eligible for other performance-based incentive plans, up to a maximum percentage of compensation. Other plans award annual cash bonuses to Intevac's executives and key contributors based on the achievement of profitability and other specific performance criteria. Charges to expense under these plans were $3.3 million, and $2.8 million, respectively, for fiscal 2020 and 2019.

13. Commitments and Contingencies

Leases

Intevac leases certain manufacturing facilities, warehouses, office space, and equipment under non-cancelable operating leases that expire at various times up to March 2024 and has options to renew most leases, with rentals to be negotiated. Certain of Intevac's leases contain provisions for rental adjustments. Operating lease rentals are expensed on a straight-line basis over the life of the lease beginning on the date we take possession of the property. At lease inception, we determine the lease term by assuming the exercise of those renewal options that are reasonably assured. The exercise of lease renewal options is at our sole discretion. The lease term is used to determine whether a lease is financing or operating and is used to calculate straight-line rent expense. Additionally, the depreciable life of leasehold improvements is limited by the expected lease term. Leases with an initial term of 12 months or less are not recorded on the balance sheet; we recognize lease expense for these leases on a straight-line basis over the lease term.

The following table reflects our lease assets and our lease liabilities at January 2, 2021 and December 28, 2019.

	January 2, 2021	December 28, 2019
	(in thousands)	
Assets:		
Operating lease right-of-use assets	$ 8,165	$ 10,279
Liabilities:		
Current operating lease liabilities	$ 2,853	$ 2,524
Noncurrent operating lease liabilities	6,803	9,532
	$ 9,656	$ 12,056

Lease Costs:

The components of lease costs were as follows:

	2020	2019
	(in thousands)	
Operating lease cost	$2,942	$3,112
Short-term lease cost	93	78
Total lease cost	$3,035	$3,190

As of January 2, 2021 the maturity of operating lease liabilities was as follows:

(In thousands)	
2021	$ 3,388
2022	3,474
2023	3,289
2024	541
Total lease payments	10,692
Less: Interest	(1,036)
Present value of lease liabilities	$ 9,656

Lease Term and Discount Rate:

	January 2, 2021	December 28, 2019
Weighted-average remaining lease term (in years)	3.09	4.08
Weighted-average discount rate	6.39%	6.37%

Other information:

Supplemental cash flow information related to leases was as follows (in thousands):

	2020	2019
	(in thousands)	
Operating cash outflows from operating leases	$3,332	$3,484
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 128	$ 934

Guarantees

Officer and Director Indemnifications

As permitted or required under Delaware law and to the maximum extent allowable under that law, Intevac has certain obligations to indemnify its current and former officers and directors for certain events or occurrences while the officer or director is, or was, serving at Intevac's request in such capacity. These indemnification obligations are valid as long as the director or officer acted in good faith and in a manner the person reasonably believed to be in, or not opposed to, the best interests of the Company and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. The maximum potential amount of future payments Intevac could be required to make under these indemnification obligations is unlimited; however, Intevac has a director and officer insurance policy that mitigates Intevac's exposure and enables Intevac to recover a portion of any future amounts paid. As a result of Intevac's insurance policy coverage, Intevac believes the estimated fair value of these indemnification obligations is not material.

Other Indemnifications

As is customary in Intevac's industry, many of Intevac's contracts provide remedies to certain third parties such as defense, settlement, or payment of judgments for intellectual property claims related to the use of its products. Such indemnification obligations may not be subject to maximum loss clauses. Historically, payments made related to these indemnifications have been immaterial.

Letters of Credit

As of January 2, 2021, we had letters of credit and bank guarantees outstanding totaling $787,000, including the standby letter of credit outstanding under the Santa Clara, California facility lease and various other guarantees with its bank. These letters of credit and bank guarantees are collateralized by $787,000 of restricted cash.

Warranty

Intevac provides for the estimated cost of warranty when revenue is recognized. Intevac's warranty is per contract terms and for its HDD, PV and DCP manufacturing systems the warranty typically ranges between 12 and 24 months from customer acceptance. For systems sold through a distributor, Intevac offers a 3-month warranty. The remainder of any warranty period is the responsibility of the distributor. During this warranty period any defective non-consumable parts are replaced and installed at no charge to the customer. Intevac uses estimated repair or replacement costs along with its historical warranty experience to determine its warranty obligation. The provision for the estimated future costs of warranty is based upon historical cost and product performance experience. Intevac exercises judgment in determining the underlying estimates.

On the consolidated balance sheets, the short-term portion of the warranty provision is included in other accrued liabilities, while the long-term portion is included in other long-term liabilities. The expense associated with product warranties issued or adjusted is included in cost of net revenues on the consolidated statements of income.

The following table displays the activity in the warranty provision account for fiscal 2020 and 2019:

	2020	2019
	(in thousands)	
Beginning balance	$1,022	$ 997
Expenditures incurred under warranties	(512)	(625)
Accruals for product warranties	280	955
Adjustments to previously existing warranty accruals	(310)	(305)
Ending balance	$ 480	$1,022

Legal Matters

From time to time, Intevac receives notification from third parties, including customers and suppliers, seeking indemnification, litigation support, payment of money or other actions in connection with claims made against them. In addition, from time to time, Intevac receives notification from third parties claiming that Intevac may be or is infringing their intellectual property or other rights. Intevac also is subject to various other legal proceedings and claims, both asserted and unasserted, that arise in the ordinary course of business. Although the outcome of these claims and proceedings cannot be predicted with certainty, Intevac does not believe that any of these other existing proceedings or claims will have a material adverse effect on its consolidated financial condition or results of operations.

14. Segment and Geographic Information

Intevac'stwo reportable segments are: TFE and Photonics. Intevac's chief operating decision-maker has been identified as the President and CEO, who reviews operating results to make decisions about allocating resources and assessing performance for the entire Company. Segment information is presented based upon Intevac's management organization structure as of January 2, 2021 and the distinctive nature of each segment. Future changes to this internal financial structure may result in changes to the reportable segments disclosed.

Each reportable segment is separately managed and has separate financial results that are reviewed by Intevac's chief operating decision-maker. Each reportable segment contains closely related products that are unique to the particular segment. Segment operating profit is determined based upon internal performance measures used by the chief operating decision-maker.

Intevac derives the segment results from its internal management reporting system. The accounting policies Intevac uses to derive reportable segment results are substantially the same as those used for external reporting purposes. Management measures the performance of each reportable segment based upon several metrics, including orders, net revenues and operating income. Management uses these results to evaluate the performance of, and to assign resources to, each of the reportable segments. Intevac manages certain operating expenses separately at the corporate level. Intevac allocates certain of these corporate expenses to the segments in an amount equal to 3% of net revenues. Segment operating income excludes interest income/expense and other financial charges and income taxes according to how a particular reportable segment's management is measured. Management does not consider impairment charges, gains and losses on divestitures and sales of intellectual property, and unallocated costs in measuring the performance of the reportable segments.

The TFE segment designs, develops and markets vacuum process equipment solutions for high-volume manufacturing of small substrates with precise thin-film properties, such as for the hard drive, solar cell and DCP industries, as well as other adjacent thin-film markets.

The Photonics segment develops compact, cost-effective, high-sensitivity digital-optical products for the capture and display of low-light images. Intevac provides sensors, cameras and systems for government applications such as night vision.

Information for each reportable segment for fiscal 2020 and 2019 is as follows:

Net Revenues	2020	2019
	(in thousands)	
TFE	$52,128	$ 73,678
Photonics	45,696	35,207
Total segment net revenues	$97,824	$108,885

Operating Profit (Loss)	2020	2019
	(in thousands)	
TFE	$ (1,978)	$ 1,747
Photonics	10,064	6,434
Total segment operating profit	8,086	8,181
Unallocated costs	(5,531)	(4,256)
Operating income	2,555	3,925
Interest income	284	574
Other income (expense), net	(72)	8
Income before provision for income taxes	$ 2,767	$ 4,507

Depreciation and Amortization	2020	2019
	(in thousands)	
TFE	$1,817	$1,909
Photonics	1,159	1,310
Total segment depreciation and amortization	2,976	3,219
Unallocated costs	504	372
Total consolidated depreciation and amortization	$3,480	$3,591

Capital Additions	2020	2019
	(in thousands)	
TFE	$1,336	$2,611
Photonics	636	832
Total segment capital additions	1,972	3,443
Unallocated	640	664
Total consolidated capital additions	$2,612	$4,107

Segment Assets	2020	2019
	(in thousands)	
TFE	$ 44,335	$ 51,153
Photonics	22,923	22,071
Total segment assets	67,258	73,224
Cash and investments	49,568	42,024
Restricted cash	787	787
Deferred income taxes	5,335	6,252
Other current assets	1,093	752
Common property, plant and equipment	1,443	1,307
Common operating lease right-of-use assets	1,603	1,898
Other assets	151	78
Consolidated total assets	$127,238	$126,322

Net property, plant and equipment by geographic region at January 2, 2021 and December 28, 2019 was as follows:

	January 2, 2021	December 28, 2019
	(in thousands)	
United States	$ 10,678	$ 11,420
Asia	326	178
Net property, plant & equipment	$ 11,004	$ 11,598

15. Restructuring Charges

During the third quarter of fiscal 2020, Intevac substantially completed implementation of the 2020 cost reduction plan (the "2020 Plan"), which reduced expenses and reduced its workforce by 1 percent. The cost of implementing the 2020 Plan was reported under cost of net revenues and operating expenses in the consolidated statements of income. Substantially all cash outlays in connection with the 2020 Plan occurred in the third quarter of fiscal 2020. Implementation of the 2020 Plan reduced salary, wages and other employee-related expenses by approximately $864,000 on an annual basis.

As of January 2, 2021, activities related to the 2020 Plan were complete.

The changes in restructuring reserves for severance and other employee-related costs associated with the cost reduction plan for fiscal 2020, are as follows.

	2020
	(in thousands)
Balance at the beginning of the year	$ —
Provision for restructuring charges	103
Cash payments made	(103)
Balance at the end of the year	$ —

Item 9. *Changes In and Disagreements With Accountants on Accounting and Financial Disclosure*

None.

Item 9A. ***Controls and Procedures***

Management's Report on Assessment of Internal Controls Over Financial Reporting

Evaluation of Disclosure Controls and Procedures

Based on Intevac's management's evaluation with the participation of the Chief Executive Officer (the "CEO") and the Chief Financial Officer (the "CFO"), as of the end of the period covered by this report, Intevac's CEO and CFO have concluded that Intevac's disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended, (the "Exchange Act") are effective to ensure that information required to be disclosed by Intevac in reports that Intevac files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms and is accumulated and communicated to Intevac's management, including Intevac's CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for Intevac. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting (as defined in Rule 13a-15(f) ender the Exchange Act) includes those policies and procedures that: (i) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

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

Management (with the participation of the CEO and CFO) conducted an evaluation of the effectiveness of Intevac's internal control over financial reporting based on criteria established in the 2013 *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that Intevac's internal control over financial reporting was effective as of January 2, 2021. BPM LLP, the independent registered public accounting firm that has audited the financial statements included in this report, has issued an attestation report on Intevac's internal control over financial reporting, which is included in their report on the following page.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting during our fourth quarter of fiscal 2020 that has materially affected, or is reasonably likely to materially affect, Intevac's internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders of
Intevac, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Intevac, Inc. (a Delaware corporation) and its subsidiaries (the "Company") as of January 2, 2021, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the "COSO criteria"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of January 2, 2021, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets as of January 2, 2021 and December 28, 2019 and the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the two years in the period ended January 2, 2021, and the related notes (collectively referred to as the "consolidated financial statements") of the Company, and our report dated February 17, 2021 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

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

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ BPM LLP

San Jose, California
February 17, 2021

Item 9B. *Other Information*

None.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

The information required by this item relating to the Company's directors and nominees, disclosure relating to compliance with Section 16(a) of the Securities Exchange Act of 1934, and information regarding Intevac's code of ethics, audit committee and stockholder recommendations for director nominees is included under the captions "Election of Directors," "Nominees," "Business Experience of Nominees for Election as Directors," "Board Meetings and Committees," "Corporate Governance Matters," "Section 16(a) Beneficial Ownership Reporting Compliance " and "Code of Business Conduct and Ethics" in the Company's Proxy Statement for the 2021 Annual Meeting of Stockholders and is incorporated herein by reference. The information required by this item relating to the Company's executive officers and key employees is included under the caption "Executive Officers of the Registrant" under Item 1 in Part I of this Annual Report on Form 10-K.

Item 11. *Executive Compensation*

The information required by this item is included under the caption "Executive Compensation and Related Information" in the Company's Proxy Statement for the 2021 Annual Meeting of Stockholders and is incorporated herein by reference.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

The information required by this item is included under the caption "Ownership of Securities" in the Company's Proxy Statement for the 2021 Annual Meeting of Stockholders and is incorporated herein by reference.

Item 13. *Certain Relationships and Related Transactions, and Director Independence*

The information required by this item is included under the captions "Certain Transactions" and "Corporate Governance Matters" in the Company's Proxy Statement for the 2021 Annual Meeting of Stockholders and is incorporated herein by reference.

Item 14. *Principal Accountant Fees and Services*

The information required by this item is included under the caption "Fees Paid To Accountants For Services Rendered During 2020" in the Company's Proxy Statement for the 2021 Annual Meeting of Stockholders and is incorporated herein by reference.

PART IV

Item 15. ***Exhibits and Financial Statements***

(a) The following documents are filed as part of this Annual Report on Form 10-K:

1. Financial Statements:

See "Index to Consolidated Financial Statements" in Part II, Item 8 of this Form 10-K.

All other schedules have been omitted since the required information is not present in amounts sufficient to require submission of the schedule or because the information required is included in the consolidated financial statements or notes thereto.

2. Exhibits

Exhibit Number	Description
3.1 (1)	Certificate of Incorporation of the Registrant
3.2 (2)	Bylaws of the Registrant, as amended
4.1 (4)	Description of the Registrant's Common Stock
10.1+ (5)	The Registrant's 2004 Equity Incentive Plan, as amended
10.2+ (6)	The Registrant's 2003 Employee Stock Purchase Plan, as amended February 12, 2020
10.3+ (7)	The Registrant's 2012 Equity Incentive Plan, as amended
10.4+ (8)	Form of Restricted Stock Unit Agreement for 2012 Equity Incentive Plan
10.5+ (8)	Form of Restricted Stock Agreement for 2012 Equity Incentive Plan
10.6+ (8)	Form of Stock Option Agreement for 2012 Equity Incentive Plan
10.7+ (9)	Form of Performance Based Stock Option Agreement for 2012 Equity Incentive Plan
10.8+ (9)	Form of Outside Director Restricted Stock Unit Agreement for 2012 Equity Incentive Plan
10.9+ (10)	Lease dated March 20, 2014 regarding the space located at 3544, 3560, 3570 and 3580 Bassett Street, Santa Clara, California
10.10+ (6)	The Registrant's 2020 Equity Incentive Plan
10.11+ (11)	Form of Restricted Stock Unit Agreement for 2020 Equity Incentive Plan
10.12+ (11)	Form of Performance Based Restricted Stock Unit Agreement for 2020 Equity Incentive Plan
10.13+ (11)	Form of Stock Option Agreement for 2020 Equity Incentive Plan
10.14+ (11)	Form of Outside Director Restricted Stock Unit Agreement for 2020 Equity Incentive Plan
10.15+ (3)	The Registrant's 401(k) Profit Sharing Plan (P)
10.16 (12)	Director and Officer Indemnification Agreement
10.17+ (6)	The Registrant's Executive Incentive Plan
10.18+ (13)	Offer Letter with Wendell Blonigan
10.19+ (13)	Severance Agreement with Wendell Blonigan

Exhibit Number	Description
10.20+ (14)	Change in Control Agreement with Jay Cho dated December 10, 2013
10.21+ (15)	Offer Letter with James Moniz
10.22+ (15)	Change in Control Agreement with James Moniz dated October 29, 2014
10.23+ (16)	Change in Control Agreement with Timothy Justyn dated March 2, 2018
10.24+ (17)	Form of Change in Control Agreement
21.1	Subsidiaries of the Registrant
23.1	Consent of Independent Registered Public Accounting Firm
24.1	Power of Attorney (see page 73)
31.1	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Vice-President, Finance and Administration, Chief Financial Officer and Treasurer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certifications Pursuant to U.S.C. 1350, adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	The following financial statements from the Registrant's Annual Report on Form 10-K for the year ended January 2, 2021, formatted in Inline XBRL (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Comprehensive Income (Loss), (iv) Consolidated Statements of Stockholders' Equity, (v) Consolidated Statements of Cash Flows, and (vi) Notes to Consolidated Financial Statements.
104	Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101)

(1) Previously filed as an exhibit to the Company's Report on Form 8-K filed July 23, 2007
(2) Previously filed as an exhibit to the Company's Report on Form 8-K filed March 15, 2012
(3) Previously filed as an exhibit to the Registration Statement on Form S-1 (No. 33-97806)
(4) Previously filed as an exhibit to the Company's Form 10-K filed February 12, 2020
(5) Previously filed as an exhibit to the Company's Form 10-Q filed May 3, 2011
(6) Previously filed as an exhibit to the Company's Definitive Proxy Statement filed April 6, 2020.
(7) Previously filed as an exhibit to the Company's Definitive Proxy Statement filed April 11, 2018
(8) Previously filed as an exhibit to the Company's Form 10-Q filed May 1, 2012
(9) Previously filed as an exhibit to the Company's Form 10-Q filed July 30, 2019
(10) Previously filed as an exhibit to the Company's Form 10-Q filed April 29, 2014
(11) Previously filed as an exhibit to the Registration Statement on Form S-8 filed May 14, 2020 (No. 33-238262)
(12) Previously filed as an exhibit to the Company's Form 10-K filed March 14, 2008
(13) Previously filed as an exhibit to the Company's Report on Form 8-K filed July 9, 2013
(14) Previously filed as an exhibit to the Company's Form 10-Q filed October 28, 2014
(15) Previously filed as an exhibit to the Company's Report on Form 8-K filed October 31, 2014
(16) Previously filed as an exhibit to the Company's Form 10-Q filed May 1, 2018
(17) Previously filed as an exhibit to the Company's Report on Form 8-K filed November 15, 2016
(P) Paper exhibit.
\+ Management compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 15(b) of Form 10-K

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on February 17, 2021.

INTEVAC, INC.

/s/ JAMES MONIZ
James Moniz
Executive Vice President, Finance and Administration
Chief Financial Officer, Secretary and Treasurer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Wendell T. Blonigan and James Moniz and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ WENDELL T. BLONIGAN (Wendell T. Blonigan)	President, Chief Executive Officer and Director (Principal Executive Officer)	February 17, 2021
/s/ JAMES MONIZ (James Moniz)	Executive Vice President, Finance and Administration, Chief Financial Officer, Secretary and Treasurer (Principal Financial and Accounting Officer)	February 17, 2021
/s/ DAVID S. DURY (David S. Dury)	Chairman of Board	February 17, 2021
/s/ KEVIN D. BARBER (Kevin D. Barber)	Director	February 17, 2021
/s/ DOROTHY D. HAYES (Dorothy D. Hayes)	Director	February 17, 2021
/s/ STEPHEN A. JAMISON (Stephen A. Jamison)	Director	February 17, 2021
/s/ MICHELE F. KLEIN (Michele F. Klein)	Director	February 17, 2021
/s/ MARK P. POPOVICH (Mark P. Popovich)	Director	February 17, 2021
/s/ THOMAS M. ROHRS (Thomas M. Rohrs)	Director	February 17, 2021

Exhibit 21.1

SUBSIDIARIES OF THE REGISTRANT

1. Intevac Photonics, Inc.
2. Intevac Pacific Group Holdings Ltd. Pte – Singapore
3. Lotus Technologies, Inc. – Santa Clara, California
4. IRPC, Inc. – Santa Clara, California
5. Solar Implant Technologies, Inc. – California
6. Intevac Foreign Sales Corporation – Barbados
7. Intevac Asia Private Limited – Singapore
8. Intevac Malaysia Sdn Bhd – Malaysia
9. Intevac Limited – Hong Kong
10. Intevac (Shenzhen) Co. Ltd. – China
11. IVAC Co. Ltd. – Korea

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-238262, 333-232730, 333-226262, 333-219405, 333-212647, 333-205368, 333-197700, 333-190250, 333-181929, 333-175979, 333-168505, 333-160596, 333-152773, 333-143418, 333-134422, 333-125523, 333-109260, 333-106960, 333-50166 and 333-65421) of Intevac, Inc. of our reports dated February 17, 2021 relating to the consolidated financial statements and internal control over financial reporting, which appear in this Annual Report on Form 10-K.

/s/ BPM LLP

San Jose, California
February 17, 2021

Exhibit 31.1

Certifications

I, Wendell T. Blonigan, certify that:

1. I have reviewed this Annual Report on Form 10-K of Intevac, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: February 17, 2021

/s/ Wendell T. Blonigan

Wendell T. Blonigan
President, Chief Executive Officer and Director

Exhibit 31.2

Certifications

I, James Moniz, certify that:

1. I have reviewed this Annual Report on Form 10-K of Intevac, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: February 17, 2021

/s/ James Moniz

James Moniz
Executive Vice President, Finance and Administration
Chief Financial Officer, Secretary and Treasurer

Exhibit 32.1

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

I, Wendell T. Blonigan, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Intevac, Inc. on Form 10-K for the period ended January 2, 2021 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Form 10-K fairly presents in all material respects the financial condition and results of operations of Intevac, Inc.

Date: February 17, 2021

/s/ Wendell T. Blonigan
Wendell T. Blonigan
President, Chief Executive Officer and Director

I, James Moniz, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report of Intevac, Inc. on Form 10-K for the period ended January 2, 2021 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in such Form 10-K fairly presents in all material respects the financial condition and results of operations of Intevac, Inc.

Date: February 17, 2021

/s/ James Moniz
James Moniz
Executive Vice President, Finance and Administration
Chief Financial Officer, Secretary and Treasurer

A signed original of this written statement required by Section 906 has been provided to Intevac, Inc. and will be retained by Intevac, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.