



2019
ANNUAL REPORT

HEICO

FINANCIAL HIGHLIGHTS

Year ended October 31, ⁽¹⁾	20	17		2018	2019
		(in	thousands,	except per share data)	
Operating Data:					
Net sales	\$ 1,	524,813	\$	1,777,721	\$ 2,055,647
Operating income	3	306,658		376,245	457,097
Interest expense		9,790		19,901	21,695
Net income attributable to HEICO	1	L85,985 ⁽²⁾		259,233 (3)(4)	327,896 ⁽⁵⁾
Weighted average number of common shares outstanding:					
Basic	1	131,703		132,543	133,640
Diluted	1	135,588		136,696	137,350
Per Share Data:					
Net income per share attributable to HEICO shareholders:					
Basic	\$	1.41 (2)	\$	1.96 (3)(4)	\$ 2.45 (5)
Diluted		1.37 (2)		1.90(3)(4)	2.39 (5)
Cash dividends per share		.097		.116	.140
Balance Sheet Data (as of October 31):					
Total assets	\$ 2,5	512,431	\$	2,653,396	\$ 2,969,211
Total debt (including current portion)	(673,979		532,470	561,955
Redeemable noncontrolling interests		131,123		132,046	188,264
Total shareholders' equity		248,292		1,503,008	1,694,660

- (1) Results include the results of acquisitions from each respective effective date.
- (2) During fiscal 2017, we adopted Accounting Standards Update 2016-09, "Improvements to Employee Share-Based Payment Accounting," resulting in the recognition of a \$3.1 million discrete income tax benefit and a 1,220,000 increase in our weighted average number of diluted common shares outstanding, which, net of noncontrolling interests, increased net income attributable to HEICO by \$2.6 million, or \$.02 per basic and \$.01 per diluted share.
- (3) During fiscal 2018, the United States ("U.S.") government enacted significant changes to existing tax law resulting in HEICO recording a discrete tax benefit from remeasuring its U.S. federal net deferred tax liabilities that was partially offset by a provisional discrete tax expense related to a one-time transition tax on the unremitted earnings of HEICO's foreign subsidiaries. The net impact of these amounts increased net income attributable to HEICO by \$12.1 million, or \$.09 per basic and diluted share.
- (4) During fiscal 2018, the Company recognized a net benefit from stock option exercises that increased net income attributable to HEICO by \$2.1 million, or \$.02 per basic and diluted share.
- (5) During fiscal 2019, the Company recongized a \$16.5 million discrete tax benefit from stock option exercises, which, net of noncontrolling interests, increased net income attributable to HEICO by \$15.0 million, or \$.11 per basic and diluted share.

FORWARD-LOOKING STATEMENTS

Certain statements in this press release constitute forward-looking statements, which are subject to risks, uncertainties and contingencies. HEICO's actual results may differ materially from those expressed in or implied by those forward-looking statements as a result of factors including: lower demand for commercial air travel or airline fleet changes or airline purchasing decisions, which could cause lower demand for our goods and services; product specification costs and requirements, which could cause an increase to our costs to complete contracts; governmental and regulatory demands, export policies and restrictions, reductions in defense, space or homeland security spending by U.S. and/or foreign customers or competition from existing and new competitors, which could reduce our sales; our ability to introduce new products and services at profitable pricing levels, which could reduce our sales or sales growth; product development or manufacturing difficulties, which could increase our product development costs and delay sales; our ability to make acquisitions and achieve operating synergies from acquired businesses; customer credit risk; interest, foreign currency exchange and income tax rates; economic conditions within and outside of the aviation, defense, space, medical, telecommunications and electronics industries, which could negatively impact our costs and revenues; and defense spending or budget cuts, which could reduce our defense-related revenue. Parties receiving this material are encouraged to review all of HEICO's filings with the Securities and Exchange Commission, including, but not limited to filings on Form 10-K, Form 10-Q and Form 8-K. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except to the extent required by applicable law.

CORPORATE PROFILE

elebrating our 62nd anniversary in business, HEICO Corporation is a rapidly growing global aerospace, defense and electronics company focused on niche markets and cost-saving solutions for its customers. HEICO's products are found in the most demanding applications requiring high-reliability parts and components, such as aircraft, spacecraft, defense equipment, medical equipment, and telecommunications systems.

Through our Flight Support Group, we are the world's largest independent provider of commercial, FAA-approved aircraft replacement parts; a significant provider of aircraft accessories component repair & overhaul services for avionic, electro-mechanical, flight surface, hydraulic and pneumatic applications; a leader in niche aircraft parts distribution; and a manufacturer of other critical aircraft parts.

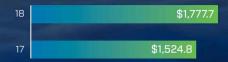
Our Electronic Technologies Group designs and manufactures mission-critical, niche electronic, electro-optical, microwave and other components found in aviation, broadcast, defense, homeland security, medical, scientific, space, telecom and other complex equipment used worldwide.

HEICO's customers include most of the world's airlines, overhaul shops, satellite manufacturers, commercial and defense equipment producers, medical equipment manufacturers, government agencies, telecommunications equipment suppliers and others.

NET SALES (in millions)

\$2,055.6

FOR 2019



OPERATING INCOME (in millions)

\$457.1

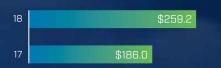
FOR 2019



NET INCOME (in millions)

\$327.9

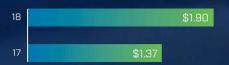
FOR 2019



NET INCOME PER SHARE (diluted)

\$2.39

FOR 2019



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MANAGEMENT'S MESSAGE



Dear Fellow Shareholder:

EICO Corporation, again, reported record net income, operating income and sales in fiscal 2019, which is our 10th consecutive year of these record results. Net income increased 26% to a record \$327.9 million, or \$2.39 per diluted share, up from \$259.2 million, or \$1.90 per diluted share, in fiscal 2018.

Notably, our net cash provided by operating activities increased by nearly \$109 million, or 33% over fiscal 2018. We believe cash generation metrics are the most critical financial metrics for a business and are sure you would agree that our cash income growth was, again, extremely strong.

Our Flight Support Group recorded \$1.24 billion in sales, a 13% increase above fiscal 2018's \$1.098 billion. The Flight Support Group's operating income increased to a record \$242 million, a 17% increase over fiscal 2018's results.

Our Electronic Technologies Group also reported record sales and income, with net sales reaching \$834.5 million, a 19% increase over fiscal 2018's \$701.8 million. The Electronic Technologies Group's operating income increased to a record \$245.7 million, a 20% increase above fiscal 2018.

The sales increase in both the Flight Support Group and our Electronic Technologies Group resulted from excellent organic growth, along with results from a number of acquisitions completed in fiscal 2018 and fiscal 2019.

In another indication of HEICO's health and success, the Company's consolidated operating margin rose to 22.2% in fiscal 2019, up from 21.2% in fiscal 2018. This margin improvement resulted from a variety of factors, including product mix, overhead absorption, cost control and reduction efforts, and acquisitions.

Recognizing the Company's success, HEICO increased its semi-annual cash dividend by 17% in December 2018 and, in December 2019, announced another 14% semi-annual cash dividend increase. This most recent increased dividend is HEICO's 83rd consecutive semi-annual dividend paid since 1979.

Our acquisition program remained robust in the past year, as we acquired seven top-notch businesses, some of which were acquired by our operating subsidiaries and some of which will report directly into one of our two groups.

Achieving these great results is no easy task and we credit our remarkable 6,000+ Team Members around the world for pursuing excellence in everything we do. This team ensures continued innovation in product development, production of the highest quality products and outstanding customer service, all of which are the life blood of our success.

We, therefore, thank all of HEICO's Team Members for your great work and results, as well as thank our customers, partners and the members of HEICO's Board of Directors for all of your continued confidence and support.

Sincerely,

Laurans A. Mendelson Chairman & Chief Executive Officer Eric A. Mendelson Co-President Victor H. Mendelson Co-President



Q. What were HEICO's greatest accomplishments in 2019?

A. We were fortunate to have another year of many notable accomplishments. Aside from the excellent earnings and cash generation, numerous subsidiaries were recognized with the highest-level vendors awards from their customers. Our revenues surpassed \$2 billion for the first time, our seven acquisitions further diversified our already-extensive product offerings and our commercial aircraft replacement parts group saw its parts flying in a record number of aircraft.

Q. Can you tell us about your 2019 acquisitions and your acquisition plans going forward?

A. We started 2019 with the acquisition of Specialty Silicone Products (SSP) on the first day of the fiscal year. SSP is a nicheproducer of Electro-Magnetic and Radio Frequency Interference (EMI/RFI) Shielding products, Silicone Septa Liners and Caps
for Chromatography research and FDA-USP VI Silicone. Soon after, we acquired approximately 90% of Apex Microtechnology
a leading niche designer and maker of Power Operational Amplifiers and Voltage references and other devices. February
saw us acquire 85% of Solid Sealing Technology, a leading designer and manufacturer of high-reliability ceramic-to-metal
feedthroughs and connectors for demanding environments, as well as all of Decavo LLC, a designer and producer of complex
composite parts and assemblies used for Unmanned Aerial Vehicles (UAVs). We also entered the Technical Surveillance
Countermeasure market with the acquisition of 75% of Research Electronics International (REI) in June, as we recognized
a growing need for equipment to help guard against illicit surveillance. In July, we acquired BERNIER Connect, which is a
specialty connector designer and producer based in France and which was founded in 1933.

The last acquisition of our fiscal year was TTT-Cubed, a leading designer and manufacturer of cutting-edge RF Sources,

Detectors and Controllers for a wide range of Aerospace and Defense applications. Finally, at fiscal 2020's outset, we acquired
80% of Quell Corporation, an Albuquerque, NM designer and manufacturer of EMI/RFI transient protection solutions for a wide
variety of connectors, mostly for Aerospace and Defense applications.

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You will notice a common theme in all of our acquisitions — they are all highly specialized, high-quality designers and producers of mission-critical, high-reliability or harsh environment niche products. You will also notice that sellers and managers of businesses often retain an interest in the company when they sell the majority to us, as was the case with Apex Microtechnology, Solid Sealing Technology, Research Electronics International and Quell. This reflects our successful partnerships with numerous owner/managers and companies over the past nearly 20 years.

We intend to continue to pursue high-quality acquisitions where HEICO can be the best home for the business. Around 80% of our acquisitions continue to be run by the sellers and management team that owned and ran the business before we purchased it. We highly value experienced and knowledgeable people and we do not believe that merely because we are the buyer, we can do their jobs better than they can.

Q. Are you still excited about the outlooks for Commercial Aviation, Defense, Space and the other markets HEICO serves?

A. Absolutely. Our markets remain very exciting growth stories for us—both in the United States and elsewhere. Commercial air travel, which experienced healthy growth in 2019, is on pace to set records again in 2020. While defense budgets may not grow at the same rate witnessed in the past three years, we anticipate reasonable growth rates as the result of new program starts, modernization and the military's operations tempo. In the space industry, while we were negatively impacted by reduced Geosynchronous Earth Orbit (GEO) satellite production, our sales in other segments of the satellite industry continue to grow and we expect good sales in the GEO market in 2020.

Finally, while there are some pockets of weakness, the other markets we serve, such as components for medical equipment, offer reasonable growth prospects because of our unique products, our product development and our customer focus.



PRODUCT INNOVATION:

COMMERCIAL AVIATION

The commercial aviation industry continued to deliver strong results in 2019. According to the International Air Transport Association (IATA), passenger traffic grew faster than both US and global GDP at 4.2% and is forecasted to grow at 4.1% in 2020. Global spending by consumers and businesses on air transport grew to over \$870 billion, and Boeing projects that the global commercial jet fleet will double by 2038. Supporting these projections are the macroeconomic factors of strong economic growth, the growth of the global middle class, and evolving airline business models. IATA also expects world trade growth to exceed global GDP growth, which will further strengthen our industry. Overall, we believe that the commercial aviation sector remains an attractive investment.

At the heart of HEICO's heritage is commercial aviation, where we provide crucial parts and services to airlines, aircraft manufacturers and companies that maintain aircraft. Our Flight Support Group is well known as the world's largest independent provider of FAA-approved alternative aircraft replacement parts for commercial

aircraft worldwide. The Flight Support Group is also a significant provider of aircraft accessories component repair and overhaul services for avionic, electromechanical and pneumatic applications. In addition, we are a leader in niche aircraft parts distribution and a manufacturer of other critical aircraft parts. Every one of the world's major airlines is one of our customers. We supply more than 11,200 FAA-approved PMA Parts for all major, large commercial aircraft in production. Our PMA part offerings allow us to provide our customers with the highest quality parts at the lowest possible costs.

Nothing is more important to our Team Members than passenger safety. We are proud that, out of the more than 75 million parts we delivered over the past few decades, not one of them has ever caused a service bulletin, airworthiness directive, or in-flight shutdown. We take air safety seriously, and our unparalleled quality standards are a permanent component of our operational processes. Additionally, our Team Members receive the maximum training available to ensure that all parts that leave our factories will have perfect safety records.

Right, an aircraft jet engine housing produced by our Flight Support Group.



COMMERCIAL AVIATION Continued

By combining our ability to design highly specialized, niche products with our intense focus on passenger safety, we consistently exceed customer expectations. Consequently, we consider our long-lasting relationships with our customers to be among our most valuable assets. Our customers save significant amounts of money and time by working with us, as we anticipate that our parts and repair operations will save customers over \$1.3 billion in the next three to five years. We further increase our product diversity every year, as our team of engineers develops 300 – 500 new PMA parts by sticking to the time-tested processes that result in our impeccable standard of safety. As commercial air travel continues to outpace global GDP growth, HEICO is committed to remaining at the forefront of aviation safety and innovation.





11,200+ FAA-Approved PMA parts that HEICO supplies 1.3 Billion Projected customer savings over the next 3 to 5 years The HEICO Parts Group manufactures and supplies a wide array of critical commercial aircraft parts, such as the specially-machined ring shown here. HEICO is an important supplier in the commercial aviation market. Our products fly on nearly every commercial, regional, and business aircraft manufactured.

DEFENSE & SECURITY

At HEICO, we know that our Armed Forces are the backbone of our country's security, and we are proud to invest in businesses that support America's Military and our allies. Our businesses develop innovative technologies that help serve our soldiers on the battlefield in mission-critical, dangerous environments. Additionally, many of our Team Members have served in the Armed Forces and have family members who served. We are proud that we all share a strong legacy of service and dedication to our country.

In 2019, HEICO continued to grow our footprint in the defense and security fields. We acquired majority control of Decavo and REI, two businesses that support a wide variety of government agencies and defense contractors. Furthermore, continuing a successful practice that we have trusted for

decades, we hired military veterans to make our team even stronger. With our strong technical expertise and customer relationships, our businesses are well poised to design new products for mission-critical applications.

Our products and subcomponents are found in aircraft, spacecraft, missiles, high-end shipboard and ground-based applications. These products include high-performance active antenna systems, electro-optical test equipment, power amplifiers, power supplies, power converters, recorders, digital receivers, digital tuners, laser rangefinder receivers, electromagnetic and radio interference (EMI/RFI) shielding, traveling wave tube amplifiers, and crashworthy and ballistically self-sealing auxiliary fuel systems, among others.











dental and other applications, dosimetry and radiation therapy.

Examples of medical equipment that utilize our components include diagnostic

imaging systems, such as X-Ray and CT Scanners, lasers used for dermatological,

In February 2019, HEICO acquired Solid Sealing Technology, a leading designer and manufacturer of high-reliability ceramicto-metal feedthroughs and connectors for demanding environments within the defense, industrial, life science, medical, research, semiconductor, and other markets. Pictured left is a ceramic-to-metal brazed feedthrough, which is used in high vacuum and pressure applications.

Industrial Gasket Fabricators. Pictured above is a needle piercing one of our sealing mats used

to help automate Quality Control testing for

pharmaceutical companies.

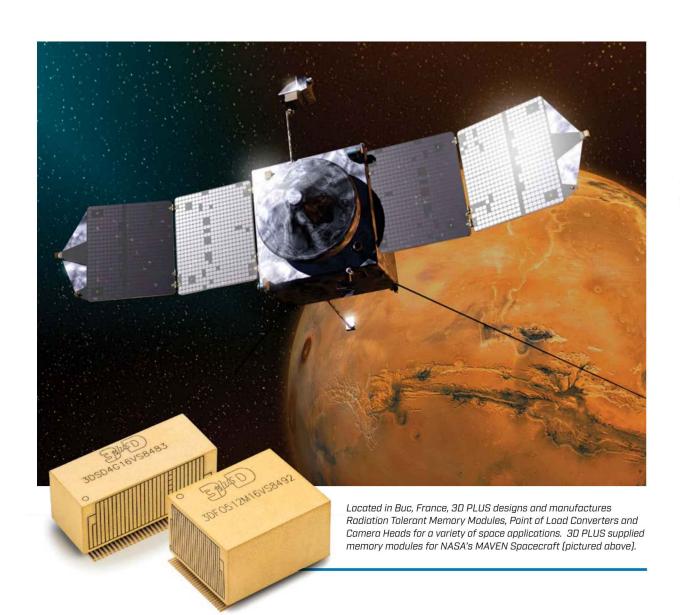
SPACE

Many HEICO businesses develop innovative technologies for major space organizations and contractors. The data collected by the experiments of these programs is incredibly valuable to the scientific research community. We are proud to be a part of the early stages of scientific advancement, as many of our other subsidiaries utilize the technologies developed as a result of these missions.

Some of the critical components and equipment we make include microwave assemblies, ferrite devices, amplifiers, down-converters, electric power converters, memory modules, power supplies, recorders and systems in packages. Our Buc, France-

based 3D PLUS subsidiary supplied components to NASA's MAVEN spacecraft, which is successfully revealing insights on the wind patterns and climate of Mars' thermosphere.

Each of our businesses invests heavily in new technologies and strives to be at the forefront of tomorrow's extraterrestrial missions. Our investment in research and development allows us to perfect our ability to manufacture mission-critical components for "cannot fail" environments. We are honored that our customers trust our products to deliver top results in such demanding applications, and we will continue to develop our offerings for future programs.





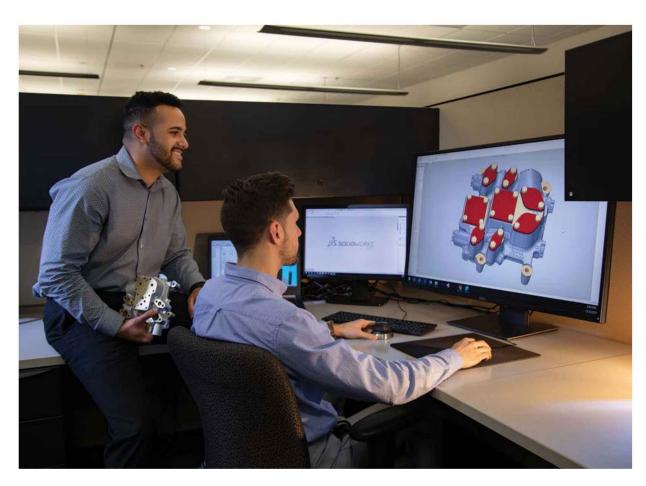
This large autoclave is utilized in our Miami, FL Repair Group operations in the repair and overhaul process for flight surfaces on large commercial transports. HEICO commits significant investments to adding and maintaining highly-specialized equipment to serve our markets.



At HEICO, we encourage our business unit leaders to invest in growth. We often invest in new machinery, research and development, inventory positions, and facility expansion when necessary. With our conservative financial management framework, our businesses know that, if they present a thorough plan to future cash flow, HEICO will supply the cash needed to invest in the future. This philosophy allows us to develop our capabilities in markets that our competitors are not yet operating in. Many of our businesses have invested in newer robotics capabilities, ERP software systems, inventory management systems, vertical storage capabilities, new CNC milling machines and new state-of-the-art facilities. Our business unit managers succeed at differentiating themselves

in an increasingly competitive marketplace, and we are proud to give them the tools and resources to do so.

The key to successful capital investment is developing the "owner's mindset" in our Team Members. Through investment in the HEICO Savings and Investment Plan and Company-sponsored contribution matching, our Team Members are truly shareholders of this business. Their ownership incentivizes risk-reward analysis and decisions that promote our Company's long-term success. Our investment framework and low debt burden allow us to realize strong organic growth in a controlled and reliable fashion.



Two engineers design a brake manifold at Jet Avion, a HEICO Parts Group subsidiary in Hollywood, FL.





With locations in Toulouse, Ft. Lauderdale, Hamburg, and Singapore, Air Cost Control sells electronic interconnect products to customers around the world. Pictured above is one of our automated warehouses in Toulouse, France.

PEOPLE: OUR NUMBER ONE PRIORITY

Whether it's Customers, Team Members or Shareholders, our number one priority will always be to create a culture where people are treated right.

We believe HEICO employs the most intelligent, dedicated, and ethical Team Members in the aerospace and defense industry. As part of our corporate culture, we eschew corporate bureaucracy and red-tape. Instead, our passionate, self-motivated Team Members are focused on getting the job done and satisfying our customers. We foster an environment that creates pride in our organization and our results. With strong collaboration, technical expertise, and hard work, our team has taken HEICO to new heights.

Furthermore, HEICO is consistently praised as a great acquirer of businesses, since our corporate culture values existing Team Member retention and nurturing experienced teams. Our acquisitions have developed HEICO into a truly global company, as we now have 72 facilities in 14 countries around the world. Our Team Members from different countries share new paradigms and innovations, helping us grow our customer base and modernize our processes.

Working with our incredible Team Members is an honor. Since our subsidiaries remain independently operated, our leaders feel empowered and motivated to get the job done. Victor H. Mendelson - Co-President



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SELECTED FINANCIAL DATA

Year ended October 31, ⁽¹⁾	2	2019	2018		2017		2016	2015
			(in thous	ands	s, except per shar	e dat	ra)	
Operating Data:								
Net sales	\$ 2	2,055,647	\$ 1,777,721	\$	1,524,813	\$	1,376,258	\$ 1,188,648
Gross profit		813,840	690,715		574,725		515,492	434,179
Selling, general and administrative expenses		356,743	314,470		268,067		250,147	204,523
Operating income		457,097	376,245		306,658		265,345	229,656
Interest expense		21,695	19,901		9,790		8,272	4,626
Other income (expense)		2,439	(58)		1,092		(23)	(66)
Net income attributable to HEICO		327,896 (2)	259,233 (3)(4)		185,985 ⁽⁵⁾		156,192	133,364
Weighted average number of common shares outstanding: Basic Diluted		133,640 137,350	132,543 136,696		131,703 135,588		130,948 133,145	130,351 132,444
	\$	2.45 (2)	\$ 1.96 (3)(4)	\$	1.41 (5)	\$	1.19	\$ 1.02
Diluted		2.39 (2)	1.90 (3)(4)		1.37 (5)		1.17	1.01
Cash dividends per share		.140	.116		.097		.082	.072
Balance Sheet Data (as of October 31):								
Cash and cash equivalents Total assets Total debt (including current portion) Redeemable noncontrolling interests Total shareholders' equity		57,001 2,969,211 561,955 188,264 1,694,660	\$ 59,599 2,653,396 532,470 132,046 1,503,008	\$	52,066 2,512,431 673,979 131,123 1,248,292	\$	42,955 1,998,412 458,225 99,512 1,047,705	\$ 33,603 1,700,857 367,598 91,282 893,271

⁽¹⁾ Results include the results of acquisitions from each respective effective date. See Note 2, Acquisitions, of the Notes to Consolidated Financial Statements for more information.

⁽²⁾ During fiscal 2019, the Company recognized a \$16.5 million discrete tax benefit from stock option exercises, which, net of noncontrolling interests, increased net income attributable to HEICO by \$15.0 million, or \$.11 per basic and diluted share.

⁽³⁾ During fiscal 2018, the United States ("U.S.") government enacted significant changes to existing tax law resulting in HEICO recording a discrete tax benefit from remeasuring its U.S. federal net deferred tax liabilities that was partially offset by a provisional discrete tax expense related to a one-time transition tax on the unremitted earnings of HEICO's foreign subsidiaries. The net impact of these amounts increased net income attributable to HEICO by \$12.1 million, or \$.09 per basic and diluted share. See Note 7, Income Taxes, of the Notes to Consolidated Financial Statements for more information.

⁽⁴⁾ During fiscal 2018, the Company recognized a net benefit from stock option exercises that increased net income attributable to HEICO by \$2.1 million, or \$.02 per basic and diluted share

⁽⁵⁾ During fiscal 2017, we adopted Accounting Standards Update 2016-09, "Improvements to Employee Share-Based Payment Accounting," resulting in the recognition of a \$3.1 million discrete income tax benefit and a 1,220,000 increase in our weighted average number of diluted common shares outstanding, which, net of noncontrolling interests, increased net income attributable to HEICO by \$2.6 million, or \$.02 per basic and \$.01 per diluted share.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF

Overview

Our business is comprised of two operating segments, the Flight Support Group ("FSG") and the Electronic Technologies Group ("ETG").

The Flight Support Group consists of HEICO Aerospace Holdings Corp. ("HEICO Aerospace"), which is 80% owned, and HEICO Flight Support Corp., which is wholly owned, and their collective subsidiaries, which primarily:

Designs, Manufactures, Repairs, Overhauls and Distributes Jet Engine and Aircraft Component Replacement Parts. The Flight Support Group designs, manufactures, repairs, overhauls and distributes jet engine and aircraft component replacement parts. The parts and services are approved by the Federal Aviation Administration ("FAA"). The Flight Support Group also manufactures and sells specialty parts as a subcontractor for aerospace and industrial original equipment manufacturers and the United States ("U.S.") government. Additionally, the Flight Support Group is a leading supplier, distributor, and integrator of military aircraft parts and support services primarily to foreign military organizations allied with the U.S. and a leading manufacturer of advanced niche components and complex composite assemblies for commercial aviation, defense and space applications. Further, the Flight Support Group engineers, designs and manufactures thermal insulation blankets and parts as well as removable/reusable insulation systems for aerospace, defense, commercial and industrial applications, manufactures expanded foil mesh for lightning strike protection in fixed and rotary wing aircraft and is a distributor of aviation electrical interconnect products and electromechanical parts.

The Electronic Technologies Group consists of HEICO Electronic Technologies Corp. ("HEICO Electronic") and its subsidiaries, which primarily:

 Designs and Manufactures Electronic, Microwave and Electro-Optical Equipment, High-Speed Interface Products, High Voltage Interconnection Devices and High Voltage Advanced Power Electronics. The Electronic Technologies Group collectively designs, manufactures and sells various types of electronic, data and microwave, and electro-optical products, including power supplies, laser rangefinder receivers, infrared simulation, calibration and testing equipment; power conversion products serving the high-reliability military, space and commercial avionics end-markets; underwater locator beacons used to locate data and voice recorders utilized on aircraft and marine vessels; emergency locator beacons utilized on commercial and military aircraft; electromagnetic interference shielding for commercial and military aircraft operators, electronics companies and telecommunication equipment suppliers; traveling wave tube amplifiers and microwave power modules used in radar, electronic warfare and on-board jamming and countermeasure systems; advanced high-technology interface products that link devices such as telemetry receivers, digital cameras, high resolution scanners, simulation systems and test systems to computers; high voltage energy generators, high voltage interconnection devices, cable assemblies and wire for the medical equipment, defense and other industrial markets; high voltage power supplies found in satellite communications, CT scanners and in medical and industrial x-ray systems; three-dimensional microelectronic and stacked memory products that are principally integrated into larger subsystems equipping satellites and spacecraft; harsh environment connectivity products and custom molded cable assemblies; radio frequency ("RF") and microwave amplifiers, transmitters and receivers used to support military communications on unmanned aerial systems, other aircraft, helicopters and ground-based data/communications systems; communications and electronic intercept receivers and tuners for military and intelligence applications; wireless cabin control systems, solid state power distribution and management systems and fuel level sensing systems for business jets and for general aviation, as well as for the military/defense market; microwave modules, units and integrated sub-systems for commercial and military satellites; crashworthy and ballistically self-sealing auxiliary fuel systems for military rotorcraft; nuclear radiation detectors for law enforcement, homeland security and military applications; high performance active antenna systems for commercial aircraft, precision guided munitions, other defense applications and commercial uses; silicone material for a variety of demanding applications; precision power analog monolithic, hybrid and open frame components for a certain wide range of defense, industrial and medical applications; high-reliability ceramic-to-metal feedthroughs and connectors used in the industrial and medical markets; technical surveillance countermeasures equipment to detect devices used for espionage and information theft; and RF sources, detectors, and controllers for a certain wide range of aerospace and defense applications.

Our results of operations have been affected by recent acquisitions as further detailed in Note 2, Acquisitions, of the Notes to Consolidated Financial Statements.

Presentation of Results of Operations and Liquidity and Capital Resources

The following discussion and analysis of our Results of Operations and Liquidity and Capital Resources includes a comparison of fiscal 2019 to fiscal 2018. A similar discussion and analysis that compares fiscal 2018 to fiscal 2017 may be found in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of our Form 10-K for the fiscal year ended October 31, 2018.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Results of Operations

The following table sets forth the results of our operations, net sales and operating income by segment and the percentage of net sales represented by the respective items in our Consolidated Statements of Operations (in thousands):

	3	
Year ended October 31,	2019	2018
Net sales	\$ 2,055,647	\$ 1,777,721
Cost of sales	1,241,807	1,087,006
Selling, general and administrative expenses	356,743	314,470
Total operating costs and expenses	1,598,550	1,401,476
Operating income	\$ 457,097	\$ 376,245
Net sales by segment:		
Flight Support Group	\$ 1,240,183	\$ 1,097,937
Electronic Technologies Group	834,522	701,827
Intersegment sales	(19,058)	(22,043)
	\$ 2,055,647	\$ 1,777,721
Operating income by segment:		
Flight Support Group	\$ 242,029	\$ 206,623
Electronic Technologies Group	245,743	204,508
Other, primarily corporate	(30,675)	(34,886)
	\$ 457,097	\$ 376,245
Net sales	100.0%	100.0%
Gross profit	39.6%	38.9%
Selling, general and administrative expenses	17.4%	17.7%
Operating income	22.2%	21.2%
Interest expense	1.1%	1.1%
Other income (expense)	.1%	-%
Income tax expense	3.8%	4.0%
Net income attributable to noncontrolling interests	1.5%	1.5%
Net income attributable to HEICO	16.0%	14.6%

Comparison of Fiscal 2019 to Fiscal 2018

Net Sales

Our consolidated net sales in fiscal 2019 increased by 16% to a record \$2,055.6 million, up from net sales of \$1,777.7 million in fiscal 2018. The increase in consolidated net sales principally reflects an increase of \$132.7 million (a 19% increase) to a record \$834.5 million in net sales within the ETG and an increase of \$142.2 million (a 13% increase) to a record \$1,240.2 million in net sales within the FSG. The net sales increase in the ETG reflects organic growth of 10% and net sales of \$66.1 million contributed by fiscal 2019 and 2018 acquisitions. The ETG's organic growth is mainly attributable to increased demand for our defense and aerospace products resulting in net sales increases of \$60.6 million and \$14.0 million, respectively. The net sales increase in the FSG principally reflects organic growth of 13%. The FSG's organic growth is mainly attributable to increased demand and new product offerings within our aftermarket replacement parts, specialty products and repair and overhaul services product lines resulting in net sales increases of \$95.4 million, \$31.5 million and \$10.8 million, respectively. Sales price changes were not a significant contributing factor to the ETG and FSG net sales growth in fiscal 2019.

Our net sales in fiscal 2019 and 2018 by market consisted of approximately 52% and 53% from the commercial aviation industry, respectively, 35% from the defense and space industries in both periods and 13% and 12% from other industrial markets including electronics, medical and telecommunications, respectively.

Gross Profit and Operating Expenses

Our consolidated gross profit margin increased to 39.6% in fiscal 2019, up from 38.9% in fiscal 2018, principally reflecting an increase of .9% and .4% in the ETG's and FSG's gross profit margins, respectively. The increase in the ETG's gross profit margin is principally attributable to increased net sales and a more favorable product mix for certain defense products. The increase in the FSG's gross profit margin is principally attributable to the previously mentioned higher net sales within our aftermarket replacement parts product line. Total new product research and development expenses included within our consolidated cost of sales were \$66.6 million in fiscal 2019 compared to \$57.5 million in fiscal 2018.

Our consolidated selling, general and administrative ("SG&A") expenses were \$356.7 million and \$314.5 million in fiscal 2019 and 2018, respectively. The increase in consolidated SG&A expenses principally reflects \$21.6 million attributable to the fiscal 2019 and 2018 acquisitions, \$9.1 million of higher performance-based compensation expense and \$3.8 million attributable to changes in the estimated fair value of accrued contingent consideration.

Our consolidated SG&A expenses as a percentage of net sales decreased to 17.4% in fiscal 2019, down from 17.7% in fiscal 2018. The decrease in consolidated SG&A expenses as a percentage of net sales principally reflects efficiencies realized from the net sales growth.

Operating Income

Our consolidated operating income increased by 21% to a record \$457.1 million in fiscal 2019, up from \$376.2 million in fiscal 2018. The increase in consolidated operating income principally reflects a \$41.2 million increase (a 20% increase) to a record \$245.7 million in operating income of the ETG and a \$35.4 million increase (a 17% increase) to a record \$242.0 million in operating income of the FSG. The increase in operating income of the ETG and FSG is principally attributable to the previously mentioned net sales growth and improved gross profit margins. Further, the operating income of the ETG in fiscal 2019 reflects \$5.4 million of higher performance-based compensation expense and \$2.7 million of higher acquisition-related costs.

Our consolidated operating income as a percentage of net sales improved to 22.2% in fiscal 2019, up from 21.2% in fiscal 2018. The increase principally reflects an increase in the FSG's operating income as a percentage of net sales to 19.5% in fiscal 2019, up from 18.8% in fiscal 2018 and an increase in the ETG's operating income as a percentage of net sales to 29.4% in fiscal 2019, up from 29.1% in fiscal 2018. The increase in the FSG's and ETG's operating income as a percentage of net sales principally reflects the previously mentioned improved gross profit margins and efficiencies realized from the net sales growth. Further, the ETG's operating income as a percentage of net sales in fiscal 2019 reflects a .6% increase in SG&A expenses as a percentage of net sales mainly from the previously mentioned higher performance-based compensation expense and higher acquisition-related costs.

Interest Expense

Interest expense increased to \$21.7 million in fiscal 2019, up from \$19.9 million in fiscal 2018. The increase was principally due to higher interest rates partially offset by a lower weighted average balance outstanding under our revolving credit facility.

Other Income (Expense)

Other income (expense) in fiscal 2019 and 2018 was not material.

Income Tax Expense

In December 2017, the United States ("U.S.") government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act contains significant changes to previous tax law, some of which became immediately effective in fiscal 2018 including, among other things, a reduction in the U.S. federal statutory tax rate from 35% to 21% effective January 1, 2018 resulting in a blended rate of 23.3% for fiscal 2018 and the implementation of a territorial tax system resulting in a one-time transition tax on the unremitted earnings of our foreign subsidiaries. Certain other provisions of the Tax Act became effective for HEICO in fiscal 2019 including a new tax on Global Intangible Low-Taxed Income ("GILTI"), a new deduction for Foreign-Derived Intangible Income ("FDII"), the repeal of the domestic production activity deduction and increased limitations on the deductibility of certain executive compensation. As a result of the Tax Act, we remeasured our U.S. federal net deferred tax liabilities and recorded a discrete tax benefit of \$16.5 million in fiscal 2018. Further, we recorded a provisional discrete tax expense of \$4.4 million in fiscal 2018 related to a one-time transition tax on the unremitted earnings of our foreign subsidiaries, which we intend to pay over the eight-year period allowed for in the Tax Act.

Our effective tax rate in fiscal 2019 decreased to 17.8% from 19.8% in fiscal 2018. The decrease in our effective tax rate in fiscal 2019 is mainly attributable to a \$14.3 million larger tax benefit in fiscal 2019 from stock option exercises compared to fiscal 2018 and the reduction in the federal tax rate from a blended rate of 23.3% in fiscal 2018 to 21% in fiscal 2019, partially offset by the net impact of the previously mentioned discrete tax amounts recorded in fiscal 2018. The provisions of the Tax Act that became effective for us in fiscal 2019 did not have a material net effect on our effective tax rate.

Net Income Attributable to Noncontrolling Interests

Net income attributable to noncontrolling interests relates to the 20% noncontrolling interest held by Lufthansa Technik AG in HEICO Aerospace Holdings Corp. and the noncontrolling interests held by others in certain subsidiaries of the FSG and ETG. Net income attributable to noncontrolling interests was \$31.8 million in fiscal 2019 as compared to \$26.5 million in fiscal 2018. The increase in net income attributable to noncontrolling interests in fiscal 2019 principally reflects improved operating results of certain subsidiaries of the FSG and ETG in which noncontrolling interests are held.

Net Income Attributable to HEICO

Net income attributable to HEICO increased to a record \$327.9 million, or \$2.39 per diluted share, in fiscal 2019, up from \$259.2 million, or \$1.90 per diluted share, in fiscal 2018 principally reflecting the previously mentioned increased net sales and operating income.

Dutlook

As we look ahead to fiscal 2020, we anticipate net sales growth within the FSG's commercial aviation and defense product lines. We also expect growth within the ETG, principally driven by demand for the majority of our products. During fiscal 2020, we plan to continue our commitments to developing new products and services, further market penetration, and an aggressive acquisition strategy while maintaining our financial strength and flexibility. Overall, we are targeting growth in fiscal 2020 full year net sales and net income over fiscal 2019 levels. This outlook excludes the impact of additional acquired businesses, if any.

Inflation

We have generally experienced increases in our costs of labor, materials and services consistent with overall rates of inflation. The impact of such increases on net income attributable to HEICO has been generally minimized by efforts to lower costs through manufacturing efficiencies and cost reductions.

Liquidity and Capital Resources

The following table summarizes our capitalization (in thousands):

As of October 31,	2019	2018
Cash and cash equivalents	\$ 57,001	\$ 59,599
Total debt (including current portion)	561,955	532,470
Shareholders' equity	1,694,660	1,503,008
Total capitalization (debt plus equity)	2,256,615	2,035,478
Total debt to total capitalization	25%	26%

Our principal uses of cash include acquisitions, capital expenditures, cash dividends, distributions to noncontrolling interests and working capital needs. Capital expenditures in fiscal 2020 are anticipated to approximate \$42 million. We finance our activities primarily from our operating and financing activities, including borrowings under our revolving credit facility.

As of December 17, 2019, we had approximately \$741 million of unused committed availability under the terms of our revolving credit facility. Based on our current outlook, we believe that net cash provided by operating activities and available borrowings under our revolving credit facility will be sufficient to fund our cash requirements for at least the next twelve months.

Operating Activities

Net cash provided by operating activities was \$437.4 million in fiscal 2019 and consisted primarily of net income from consolidated operations of \$359.7 million, depreciation and amortization expense of \$83.5 million (a non-cash item), net changes in other long-term liabilities and assets related to the HEICO Leadership Compensation Plan ("LCP") of \$12.9 million (principally participant deferrals and employer contributions) and \$10.3 million in share-based compensation expense (a non-cash item), partially offset by a \$32.3 million increase in working capital. Net cash provided by operating activities increased by \$108.9 million in fiscal 2019 from \$328.5 million in fiscal 2018. The increase is principally attributable to a \$74.1 million increase in net income from consolidated operations, an \$18.4 million decrease in net working capital, a \$6.6 million decrease in deferred income tax benefits, and a \$6.3 million increase in depreciation and amortization expense. The decrease in net working capital mainly resulted from decreases in inventories and contract assets and an increase in income taxes payable, partially offset by a decrease in trade accounts payable.

Net cash provided by operating activities was \$328.5 million in fiscal 2018 and consisted primarily of net income from consolidated operations of \$285.7 million, depreciation and amortization expense of \$77.2 million (a non-cash item) and net changes in other long-term liabilities and assets related to the HEICO LCP of \$11.6 million (principally participant deferrals and employer contributions), partially offset by a \$50.6 million increase in working capital mainly reflecting an increase in inventories to support the growth of our businesses and anticipated higher demand during fiscal 2019.

Investing Activities

Net cash used in investing activities totaled \$280.6 million in fiscal 2019 and related primarily to acquisitions of \$240.8 million (net of cash acquired), capital expenditures of \$28.9 million and investments related to the HEICO LCP of \$13.7 million. Further details on acquisitions may be found in Note 2, Acquisitions, of the Notes to Consolidated Financial Statement.

Net cash used in investing activities totaled \$113.5 million in fiscal 2018 and related primarily to acquisitions of \$59.8 million (net of cash acquired), capital expenditures of \$41.9 million and investments related to the HEICO LCP of \$11.5 million. Further details on acquisitions may be found in Note 2, Acquisitions, of the Notes to Consolidated Financial Statement.

Financing Activities

Net cash used in financing activities in fiscal 2019 totaled \$159.7 million. During fiscal 2019, we made \$283.0 million in payments on our revolving credit facility, paid \$110.9 million in distributions to noncontrolling interests, redeemed common stock related to stock option exercises aggregating \$64.0 million and paid \$18.7 million in cash dividends on our common stock. Additionally, we borrowed \$313.0 million under our revolving credit facility to fund certain of our fiscal 2019 acquisitions and a certain distribution to a noncontrolling interest holder.

Net cash used in financing activities in fiscal 2018 totaled \$207.5 million. During fiscal 2018, we made payments on our revolving credit facility aggregating \$204.0 million, redeemed common stock related to stock option exercises aggregating \$25.0 million, paid \$15.4 million in cash dividends on our common stock and made distributions to noncontrolling interests aggregating \$13.1 million. Additionally, we borrowed \$56.0 million on our revolving credit facility principally for tax payments, to fund a fiscal 2018 acquisition and for capital expenditures.

In November 2017, we entered into a \$1.3 billion Revolving Credit Facility Agreement ("Credit Facility") with a bank syndicate, which matures in November 2022. Under certain circumstances, the maturity of the Credit Facility may be extended for two one-year periods. The Credit Facility also includes a feature that will allow us to increase the capacity by \$350 million to become a \$1.65 billion facility through increased commitments from existing lenders or the addition of new lenders. Borrowings under the Credit Facility may be used to finance acquisitions and for working capital and other general corporate purposes, including capital expenditures.

Borrowings under the Credit Facility accrue interest at our election of the Base Rate or the Eurocurrency Rate, plus in each case, the Applicable Rate (based on our Total Leverage Ratio). The Base Rate for any day is a fluctuating rate per annum equal to the highest of (i) the Prime Rate; (ii) the Federal Funds Rate plus .50%; and (iii) the Eurocurrency Rate for an Interest Period of one month plus 100 basis points. The Eurocurrency Rate is the rate per annum obtained by dividing LIBOR for the applicable Interest Period by a percentage equal to 1.00 minus the daily average Eurocurrency Rate Loans ranges from 1.00% to 2.00%. The Applicable Rate for Base Rate Loans ranges from 0% to 1.00%. A fee is charged on the amount of the unused commitment ranging from .125% to .30% (depending on our Total Leverage Ratio). The Credit Facility also includes \$100 million sublimits for borrowings made in foreign currencies and for swingline borrowings, and a \$50 million sublimit for letters of credit. Outstanding principal, accrued and unpaid interest and other amounts payable under the Credit Facility may be accelerated upon an event of default, as such events are described in the Credit Facility. The Credit Facility is unsecured and contains covenants that require, among other things, the maintenance of a Total Leverage Ratio and an Interest Coverage Ratio, as such capitalized terms are defined in the Credit Facility. We were in compliance with all financial and nonfinancial covenants of the Credit Facility as of October 31, 2019.

Contractual Obligations

The following table summarizes our contractual obligations as of October 31, 2019 (in thousands):

		Payments due by fiscal period							
	Total		2020	202	21 - 2022	20	23 - 2024	Th	ereafter
Long-term debt obligations (1)	\$ 553,320	\$	62	\$	129	\$	553,106	\$	23
Estimated interest payments (1)	50,310		16,724		33,358		228		_
Capital lease obligations (2)	10,962		1,213		2,415		1,738		5,596
Operating lease obligations (3)	76,947		15,508		29,371		13,256		18,812
Purchase obligations (4) (5) (6)	21,666		2,711		2,253		16,702		_
Other long-term liabilities (7)	8,052		1,976		2,448		1,756		1,872
Total contractual obligations	\$ 721,257	\$	38,194	\$	69,974	\$	586,786	\$	26,303

- (1) Estimated interest payments assumes the \$553.0 million outstanding balance under our revolving credit facility and related interest rate of 3.0% as of October 31, 2019, will remain constant through the credit facility's maturity date in fiscal 2023. Actual interest payments may vary significantly based on future borrowings, repayments and interest rate fluctuations. See Note 5, Long-Term Debt, of the Notes to Consolidated Financial Statements and "Liquidity and Capital Resources," above for additional information regarding our long-term debt obligations.
- (2) Inclusive of \$2.3 million in interest charges. See Note 5, Long-Term Debt, of the Notes to Consolidated Financial Statements for additional information regarding our capital lease obligations.
- (3) See Note 16, Commitments and Contingencies Lease Commitments, of the Notes to Consolidated Financial Statements for additional information regarding our operating lease obligations.
- (4) Includes contingent consideration aggregating \$18.3 million related to a fiscal 2016, 2017 and 2019 acquisition. See Note 8, Fair Value Measurements, of the Notes to Consolidated Financial Statements for additional information.
- (5) Also includes an aggregate \$3.3 million of commitments principally for capital expenditures and inventory. All purchase obligations of inventory and supplies in the ordinary course of business (i.e., with deliveries scheduled within the next year) are excluded from the table.
- (6) The holders of equity interests in certain of our subsidiaries have rights ("Put Rights") that may be exercised on varying dates causing us to purchase their equity interests through fiscal 2029. The Put Rights provide that cash consideration be paid for their equity interests (the "Redemption Amount"). As of October 31, 2019, management's estimate of the aggregate Redemption Amount of all Put Rights that we could be required to pay is approximately \$188.3 million, which is reflected within redeemable noncontrolling interests in our Consolidated Balance Sheet. The amounts in the table do not include Put Right obligations as none of the noncontrolling interest holders have exercised their Put Rights as of October 31, 2019. See Note 12, Redeemable Noncontrolling Interests, of the Notes to Consolidated Financial Statements for further information.
- (7) The amounts in the table do not include liabilities related to the HEICO LCP as they are fully supported by assets held within irrevocable trusts. See Note 3, Selected Financial Statement Information Other Long-Term Assets and Liabilities, of the Notes to Consolidated Financial Statements for further information about this deferred compensation plan.

Off-Balance Sheet Arrangements

Guarantees

As of October 31, 2019, we have arranged for standby letters of credit aggregating \$4.1 million, which are supported by our revolving credit facility and pertain to payment guarantees related to potential workers' compensation claims and a facility lease as well as performance guarantees related to customer contracts entered into by certain of our subsidiaries.

Critical Accounting Policies

We believe that the following are our most critical accounting policies, which require management to make judgments about matters that are inherently uncertain.

Assumptions utilized to determine fair value in connection with business combinations, contingent consideration arrangements and in goodwill and intangible assets impairment tests are highly judgmental. If there is a material change in such assumptions or if there is a material change in the conditions or circumstances influencing fair value, we could be required to recognize a material impairment charge.

Revenue Recognition

During fiscal 2019, we adopted Accounting Standards Update 2014-09, which, as amended, was codified as Accounting Standard Codification ("ASC") Topic 606, "Revenue from Contracts with Customers" ("ASC 606"). Pursuant to ASC 606, HEICO recognizes revenue when it transfers control of a promised good or service to a customer in an amount that reflects the consideration it expects to receive in exchange for the good or service. Our performance obligations are satisfied and control is transferred either at a point-in-time or over-time. The majority of our revenue is recognized at a point-in-time when control is transferred, which is generally evidenced by the shipment or delivery of the product to the customer, a transfer of title, a transfer of the significant risks and rewards of ownership, and customer acceptance. For certain contracts under which we produce products with no alternative use and for which we have an enforceable right to recover costs incurred plus a reasonable profit margin for work completed to date and for certain other contracts under which we create or enhance a customer-owned asset while performing repair and overhaul services, control is transferred to the customer over-time. HEICO recognizes revenue using an over-time recognition model for these types of contracts.

We utilize the cost-to-cost method as a measure of progress for performance obligations that are satisfied over-time as we believe this input method best represents the transfer of control to the customer. Under this method, revenue for the current period is recorded at an amount equal to the ratio of costs incurred to date divided by total estimated contract costs multiplied by (i) the transaction price, less (ii) cumulative revenue recognized in prior periods. Contract costs include all direct material and labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, tools, repairs and depreciation.

Under the cost-to-cost method, the extent of progress toward completion is measured based on the proportion of costs incurred to date to the total estimated costs at completion of the performance obligation. These projections require management to make numerous assumptions and estimates relating to items such as the complexity of design and related development costs, performance of subcontractors, availability and cost of materials, labor productivity and cost, overhead, capital costs, and manufacturing efficiency. We review our cost estimates on a periodic basis, or when circumstances change and warrant a modification to a previous estimate. Cost estimates are largely based on negotiated or estimated purchase contract terms, historical performance trends and other economic projections.

For certain contracts with similar characteristics and for which revenue is recognized using an over-time model, we use a portfolio approach to estimate the amount of revenue to recognize. For each portfolio of contracts, the respective work in process and/or finished goods inventory balances are identified and the portfolio-specific margin is applied to estimate the pro rata portion of the transaction price to recognize in relation to the costs incurred. This approach is utilized only when the resulting revenue recognition is not expected to be materially different than if the accounting was applied to the individual contracts.

Certain of our contracts give rise to variable consideration when they contain items such as customer rebates, credits, volume purchase discounts, penalties and other provisions that may impact the total consideration we will receive. We include variable consideration in the transaction price generally by applying the most likely amount method of the consideration that we expect to be entitled to receive based on an assessment of all available information (i.e., historical experience, current and forecasted performance) and only to the extent it is probable that a significant reversal of revenue recognized will not occur when the uncertainty is resolved. We estimate variable consideration by applying the most likely amount method when there are a limited number of outcomes related to the resolution of the variable consideration.

Changes in estimates that result in adjustments to net sales and cost of sales are recognized as necessary in the period they become known on a cumulative catch-up basis. Changes in estimates did not have a material effect on net income from consolidated operations in fiscal 2019, 2018 and 2017.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Valuation of Inventory

Inventory is stated at the lower of cost or net realizable value, with cost being determined on the first-in, first-out or the average cost basis. Losses, if any, are recognized fully in the period when identified.

We periodically evaluate the carrying value of inventory, giving consideration to factors such as its physical condition, sales patterns and expected future demand in order to estimate the amount necessary to write down any slow moving, obsolete or damaged inventory. These estimates could vary significantly from actual amounts based upon future economic conditions, customer inventory levels, or competitive factors that were not foreseen or did not exist when the estimated write-downs were made.

In accordance with industry practice, all inventories are classified as a current asset including portions with long production cycles, some of which may not be realized within one year.

Business Combinations

We allocate the purchase price of acquired entities to the underlying tangible and identifiable intangible assets acquired and liabilities and any noncontrolling interests assumed based on their estimated fair values, with any excess recorded as goodwill. Determining the fair value of assets acquired and liabilities and noncontrolling interests assumed requires management's judgment and often involves the use of significant estimates and assumptions, including assumptions with respect to future cash inflows and outflows, discount rates, asset lives and market multiples, among other items. We determine the fair values of intangible assets acquired generally in consultation with third-party valuation advisors.

As part of the agreement to acquire certain subsidiaries, we may be obligated to pay contingent consideration should the acquired entity meet certain earnings objectives subsequent to the date of acquisition. As of the acquisition date, contingent consideration is recorded at fair value as determined through the use of a probability-based scenario analysis approach. Under this method, a set of discrete potential future subsidiary earnings is determined using internal estimates based on various revenue growth rate assumptions for each scenario. A probability of likelihood is then assigned to each discrete potential future earnings estimate and the resultant contingent consideration is calculated and discounted using a weighted average discount rate reflecting the credit risk of HEICO. Subsequent to the acquisition date, the fair value of such contingent consideration is measured each reporting period and any changes are recorded to SG&A expenses within our Consolidated Statements of Operations. Changes in either the revenue growth rates, related earnings or the discount rate could result in a material change to the amount of contingent consideration accrued. As of October 31, 2019, 2018 and 2017, \$18.3 million, \$20.9 million and \$27.6 million of contingent consideration was accrued within our Consolidated Balance Sheets, respectively. During fiscal 2019, 2018 and 2017, such fair value measurement adjustments resulted in net increases (decreases) to SG&A expenses of \$2.6 million, (\$1.4) million and \$1.1 million, respectively. For further information regarding our contingent consideration arrangements, see Note 8, Fair Value Measurements, of the Notes to Consolidated Financial Statements.

Valuation of Goodwill and Other Intangible Assets

We test goodwill for impairment annually as of October 31, or more frequently if events or changes in circumstances indicate that the carrying amount of goodwill may not be fully recoverable. In evaluating the recoverability of goodwill, we compare the fair value of each of our reporting units to its carrying value to determine potential impairment. If the carrying value of a reporting unit exceeds its fair value, the implied fair value of that reporting unit's goodwill is to be calculated and an impairment loss is recognized in the amount by which the carrying value of the reporting unit's goodwill exceeds its implied fair value, if any. The fair values of our reporting units were determined using a weighted average of a market approach and an income approach. Under the market approach, fair values are estimated using published market multiples for comparable companies. We calculate fair values under the income approach by taking estimated future cash flows that are based on internal projections and other assumptions deemed reasonable by management and discounting them using an estimated weighted average cost of capital. Based on the annual goodwill impairment test as of October 31, 2019, 2018 and 2017, we determined there was no impairment of our goodwill. The fair value of each of our reporting units as of October 31, 2019 significantly exceeded its carrying value.

We test each non-amortizing intangible asset (principally trade names) for impairment annually as of October 31, or more frequently if events or changes in circumstances indicate that the asset might be impaired. To derive the fair value of our trade names, we utilize an income approach, which relies upon management's assumptions of royalty rates, projected revenues and discount rates. We also test each amortizing intangible asset for impairment if events or circumstances indicate that the asset might be impaired. The test consists of determining whether the carrying value of such assets will be recovered through undiscounted expected future cash flows. If the total of the undiscounted future cash flows is less than the carrying amount of those assets, we recognize an impairment loss based on the excess of the carrying amount over the fair value of the assets. The determination of fair value requires us to make a number of estimates, assumptions and judgments of underlying factors such as projected revenues and related earnings as well as discount rates. Based on the intangible asset impairment tests conducted, we did not recognize any impairment losses in fiscal 2019, 2018 and 2017.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

New Accounting Pronouncements

See Note 1, Summary of Significant Accounting Policies - New Accounting Pronouncements, of the Notes to Consolidated Financial Statements for additional information.

Forward-Looking Statements

Certain statements in this report constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained herein that are not clearly historical in nature may be forward-looking and the words "anticipate," "believe," "expect," "estimate" and similar expressions are generally intended to identify forward-looking statements. Any forward-looking statement contained herein, in press releases, written statements or other documents filed with the Securities and Exchange Commission or in communications and discussions with investors and analysts in the normal course of business through meetings, phone calls and conference calls, concerning our operations, economic performance and financial condition are subject to risks, uncertainties and contingencies. We have based these forward-looking statements on our current expectations and projections about future events. All forward-looking statements involve risks and uncertainties, many of which are beyond our control, which may cause actual results, performance or achievements to differ materially from anticipated results, performance or achievements. Also, forward-looking statements are based upon management's estimates of fair values and of future costs, using currently available information. Therefore, actual results may differ materially from those expressed in or implied by those forward-looking statements. Factors that could cause such differences include:

- Lower demand for commercial air travel or airline fleet changes or airline purchasing decisions, which could cause lower demand for our goods and services;
- Product specification costs and requirements, which could cause an increase to our costs to complete contracts;
- Governmental and regulatory demands, export policies and restrictions, reductions in defense, space or homeland security spending by U.S. and/or foreign customers or competition from existing and new competitors, which could reduce our sales;
- Our ability to introduce new products and services at profitable pricing levels, which could reduce our sales or sales growth;
- · Product development or manufacturing difficulties, which could increase our product development costs and delay sales;
- Our ability to make acquisitions and achieve operating synergies from acquired businesses; customer credit risk; interest, foreign currency
 exchange and income tax rates; economic conditions within and outside of the aviation, defense, space, medical, telecommunications and
 electronics industries, which could negatively impact our costs and revenues; and
- Defense spending or budget cuts, which could reduce our defense-related revenue.

We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise, except to the extent required by applicable law.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest Rate Risk

We have exposure to interest rate risk, mainly related to our revolving credit facility, which has variable interest rates. Interest rate risk associated with our variable rate debt is the potential increase in interest expense from an increase in interest rates. Based on our aggregate outstanding variable rate debt balance of \$553.0 million as of October 31, 2019, a hypothetical 10% increase in interest rates would not have a material effect on our results of operations, financial position or cash flows. We also maintain a portion of our cash and cash equivalents in financial instruments with original maturities of three months or less. These financial instruments are subject to interest rate risk and will decline in value if interest rates increase. Due to the short duration of these financial instruments, a hypothetical 10% increase in interest rates as of October 31, 2019 would not have a material effect on our results of operations, financial position or cash flows.

Foreign Currency Risk

We have several foreign subsidiaries that conduct a portion of their operations in currencies other than the U.S. dollar, or principally in Euros. Accordingly, changes in exchange rates between such foreign currencies and the U.S. dollar will affect the translation of the financial results of our foreign subsidiaries into the U.S. dollar for purposes of reporting our consolidated financial results. A hypothetical 10% weakening in the exchange rate of the Euro to the U.S. dollar as of October 31, 2019 would not have a material effect on our results of operations, financial position or cash flows.

CONSOLIDATED BALANCE SHEETS

(in thousands, except per share data)

As of October 31,	2019	2018
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 57,001	\$ 59,599
Accounts receivable, net	274,326	237,286
Contract assets	43,132	14,183
Inventories, net	420,319	401,553
Prepaid expenses and other current assets	18,953	21,187
Total current assets	813,731	733,808
Property, plant and equipment, net	173,345	154,739
Goodwill	1,268,703	1,114,832
Intangible assets, net	550,693	506,360
Other assets	162,739	143,657
Total assets	\$ 2,969,211	\$ 2,653,396
LIABILITIES AND EQUITY		
Current liabilities:		
Current maturities of long-term debt	\$ 906	\$ 859
Trade accounts payable	106,225	107,219
Accrued expenses and other current liabilities	178,957	171,514
Income taxes payable	3,050	2,837
Total current liabilities	289,138	282,429
Long-term debt, net of current maturities	561,049	531,611
Deferred income taxes	51,496	46,644
Other long-term liabilities	184,604	157,658
Total liabilities	1,086,287	1,018,342
Commitments and contingencies (Note 16)		
Redeemable noncontrolling interests (Note 12)	188,264	132,046
Shareholders' equity:		
Preferred Stock, \$.01 par value per share; 10,000 shares authorized; none issued	_	_
Common Stock, \$.01 par value per share; 150,000 shares authorized;		
54,143 and 53,355 shares issued and outstanding	541	534
Class A Common Stock, \$.01 par value per share; 150,000 shares authorized; 80,353 and		
79,576 shares issued and outstanding	804	796
Capital in excess of par value	284,609	320,994
Deferred compensation obligation	4,232	3,928
HEICO stock held by irrevocable trust	(4,232)	(3,928)
Accumulated other comprehensive loss	(16,739)	(15,256)
Retained earnings	1,397,327	1,091,183
Total HEICO shareholders' equity	1,666,542	1,398,251
Noncontrolling interests Total charabelders' equity	28,118	104,757
Total shareholders' equity Total liabilities and equity	1,694,660 \$ 2,969,211	1,503,008 \$ 2,653,396
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The accompanying notes are an integral part of these consolidated financial statements.

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

Year ended October 31,	2019	2018	2017
Net sales	\$ 2,055,647	\$1,777,721	\$ 1,524,813
Operating costs and expenses:			
Cost of sales	1,241,807	1,087,006	950,088
Selling, general and administrative expenses	356,743	314,470	268,067
Total operating costs and expenses	1,598,550	1,401,476	1,218,155
Operating income	457,097	376,245	306,658
Interest expense	(21,695)	(19,901)	(9,790)
Other income (expense)	2,439	(58)	1,092
Income before income taxes and noncontrolling interests	437,841	356,286	297,960
Income tax expense	78,100	70,600	90,300
Net income from consolidated operations	359,741	285,686	207,660
Less: Net income attributable to noncontrolling interests	31,845	26,453	21,675
Net income attributable to HEICO	\$ 327,896	\$ 259,233	\$ 185,985
Net income per share attributable to HEICO shareholders:			
Basic	\$ 2.45	\$ 1.96	\$ 1.41
Diluted	\$ 2.39	\$ 1.90	\$ 1.37
Weighted average number of common shares outstanding:			
Basic	133,640	132,543	131,703
Diluted	137,350	136,696	135,588

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

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in thousands)

Year ended October 31,	2019	2018	2017	
Net income from consolidated operations	\$ 359,741	\$ 285,686	\$ 207,660	
Other comprehensive (loss) income:				
Foreign currency translation adjustments	(844)	(5,243)	15,346	
Unrealized (loss) gain on defined benefit pension plan, net of tax	(889)	(97)	321	
Amortization of unrealized loss on defined benefit pension plan, net of tax	25	13	29	
Total other comprehensive (loss) income	(1,708)	(5,327)	15,696	
Comprehensive income from consolidated operations	358,033	280,359	223,356	
Net income attributable to noncontrolling interests	31,845	26,453	21,675	
Foreign currency translation adjustments attributable to noncontrolling interests	(225)	(406)	926	
Comprehensive income attributable to noncontrolling interests	31,620	26,047	22,601	
Comprehensive income attributable to HEICO	\$ 326,413	\$ 254,312	\$ 200,755	

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CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(in thousands, except per share data)

	Redeemable Noncontrolling Interests	Common Stock	Class A Common Stock	
Balances as of October 31, 2018	\$ 132,046	\$ 534	\$ 796	
Cumulative effect from adoption of ASC 606 (see Note 1)	819	_	_	
Comprehensive income	18,116	_	_	
Cash dividends (\$.140 per share)	-	_	_	
Issuance of common stock to HEICO Savings and Investment Plan Share-based compensation expense	_	_	_	
Proceeds from stock option exercises	_	12	8	
Redemptions of common stock related to stock option exercises	_	(5)	(1)	
Distributions to noncontrolling interests	(17,847)	-	(±) —	
Noncontrolling interests assumed related to acquisitions	38,696	_	_	
Adjustments to redemption amount of redeemable noncontrolling interests	16,434	_	_	
Deferred compensation obligation	=	-	-	
Other		_	1	
Balances as of October 31, 2019	\$ 188,264	\$ 541	\$ 804	
Balances as of October 31, 2017	\$ 131,123	\$ 338	\$ 507	
Comprehensive income	13,070	_	_	
Cash dividends (\$.116 per share)	_	_	_	
Five-for-four common stock splits	_	191	286	
Issuance of common stock to HEICO Savings and Investment Plan	_	1	1	
Share-based compensation expense	_	_	_	
Proceeds from stock option exercises	_	7	2	
Redemptions of common stock related to stock option exercises	0.401	(3)	_	
Noncontrolling interests assumed related to acquisitions	2,491	_	_	
Distributions to noncontrolling interests Adjustments to redemption amount of redeemable noncontrolling interests	(12,005) (3,627)	_	_	
Deferred compensation obligation	(3,027)	_	_	
Other	994	_	_	
Balances as of October 31, 2018	\$ 132,046	\$ 534	\$ 796	
Balances as of October 31, 2016	\$ 99,512	\$ 270	\$ 403	
Comprehensive income	11,637	Ψ 270	ψ 1 05	
Cash dividends (\$.097 per share)	_	_	_	
Five-for-four common stock split	_	68	101	
Issuance of common stock to HEICO Savings and Investment Plan	_	_	_	
Share-based compensation expense	_	_	_	
Proceeds from stock option exercises	_	_	3	
Noncontrolling interests assumed related to acquisitions	23,339	_	_	
Distributions to noncontrolling interests	(10,323)	_	_	
Acquisitions of noncontrolling interests	(3,848)	_	_	
Adjustments to redemption amount of redeemable noncontrolling interests	10,806		_	
Deferred compensation obligation	_	_	_	
Other Balances as of October 31, 2017	<u> </u>	\$ 338	\$ 507	
Dalatioes as of October 31, 2017	φ 131,123	ф 330	φ JU <i>I</i>	

 $\label{thm:companying} The accompanying notes are an integral part of these consolidated financial statements.$

HEICO Shareholders' Equity							
	Capital in Excess of Par Value	Deferred Compensation Obligation	HEICO Stock Held by Irrevocable Trust	Accumulated Other Comprehensive Loss	Retained Earnings	Noncontrolling Interests	Total Shareholders' Equity
	\$ 320,994	\$ 3,928	\$ (3,928)	\$ (15,256)	\$ 1,091,183	\$ 104,757	\$ 1,503,008
	-	_	_		13,373	326	13,699
	_	_	_	(1,483)	327,896	13,504	339,917
	_	_	-	_	(18,691)	_	(18,691)
	8,666	_	_	_	_	_	8,666
	10,334	_	_	_	_	_	10,334
	8,527	_	_	_	_	_	8,547
	(64,008)	_	_	_	_	(02,022)	(64,014)
	_	_	_	_	_	(93,022)	(93,022)
	_	_	_	_	(10.424)	2,551	2,551
	_	304	(304)	_	(16,434)	_	(16,434)
	96	304	(304)	_	_	2	99
	\$ 284,609	\$ 4,232	\$ (4,232)	\$ (16,739)	\$ 1,397,327	\$ 28,118	\$ 1,694,660
	\$ 326,544	\$ 3,118	\$ (3,118)	\$ (10,556)	\$ 844,247	\$ 87,212	\$ 1,248,292
	φ 320,344	Ψ 3,110	φ (5,110)	(4,921)	259,233	12,977	267,289
	_	_	_	(4,321)	(15,363)	12,311	(15,363)
	(477)	_	_	_	(28)	_	(28)
	7,868	_	_	_	(20)	_	7,870
	9,283	_	_	_	_	_	9,283
	4,022	_	_	_	_	_	4,031
	(24,980)	_	_	_	_	_	(24,983)
	_	_	_	_	_	5,350	5,350
	_	_	_	_	_	(1,054)	(1,054)
	_	_	_	_	3,627	_	3,627
	_	810	(810)		_	_	_
	(1,266)	_	_	221	(533)	272	(1,306)
	\$ 320,994	\$ 3,928	\$ (3,928)	\$ (15,256)	\$ 1,091,183	\$ 104,757	\$ 1,503,008
	\$ 306,328	\$ 2,460	\$ (2,460)	\$ (25,326)	\$ 681,704	\$ 84,326	\$ 1,047,705
	_	_	_	14,770	185,985	10,964	211,719
	_	_	_	_	(12,807)	_	(12,807)
	(169)	_	_	_	(23)	_	(23)
	7,517	_	_	_	_	_	7,517
	7,415	_	_	_	_	_	7,415
	5,656	_	_		_	_	5,659
	_	_	_	_			1—
	_	_	_	_	_	(8,078)	(8,078)
	_	_	_	_	194	_	194
	_	_	-	_	(10,806)	_	(10,806)
		658	(658)	_	_	_	_
	(203)	_ 			- 044047	Ф 07.010	(203)
	\$ 326,544	\$ 3,118	\$ (3,118)	\$ (10,556)	\$ 844,247	\$ 87,212	\$ 1,248,292

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

Year ended October 31,	2019	2018	2017
Operating Activities:			
Net income from consolidated operations	\$ 359,741	\$ 285,686	\$ 207,660
Adjustments to reconcile net income from consolidated operations			
to net cash provided by operating activities:			
Depreciation and amortization	83,497	77,191	64,823
Share-based compensation expense	10,334	9,283	7,415
Employer contributions to HEICO Savings and Investment Plan	9,528	8,019	7,768
Increase (decrease) in accrued contingent consideration, net	2,630	(1,365)	1,100
Deferred income tax benefit	(6,392)	(12,977)	(11,096)
Payment of contingent consideration	(3,105)	_	_
Changes in operating assets and liabilities, net of acquisitions:			
(Increase) decrease in accounts receivable	(28,976)	(23,763)	7,384
Decrease (increase) in contract assets	11,583	(4,806)	(4,538)
Increase in inventories	(30,077)	(49,455)	(21,204)
Decrease in prepaid expenses and other current assets	609	401	134
(Decrease) increase in trade accounts payable	(3,851)	17,403	6,386
Increase in accrued expenses and other current liabilities	17,151	22,121	1,794
Increase (decrease) in income taxes payable	1,296	(12,530)	6,071
Net changes in other long-term liabilities and assets related to			
HEICO Leadership Compensation Plan	12,920	11,610	12,841
Other	490	1,669	1,747
Net cash provided by operating activities	437,378	328,487	288,285
Investing Activities:			
Acquisitions, net of cash acquired	(240,841)	(59,775)	(418,265)
Capital expenditures	(28,938)	(41,871)	(25,998)
Investments related to HEICO Leadership Compensation Plan, net	(13,701)	(11,500)	(13,400)
Other	2,834	(365)	(552)
Net cash used in investing activities	(280,646)	(113,511)	(458,215)
Financing Activities:			
Borrowings on revolving credit facility	313,000	56,000	404,000
Payments on revolving credit facility	(283,000)	(204,000)	(190,877)
Distributions to noncontrolling interests	(110,869)	(13,059)	(18,401)
Redemptions of common stock related to stock option exercises	(64,014)	(24,983)	(203)
Cash dividends paid	(18,691)	(15,363)	(12,807)
Payment of contingent consideration	(4,073)	(5,425)	(7,039)
Revolving credit facility issuance costs	_	(4,067)	(270)
Acquisitions of noncontrolling interests	-	_	(3,848)
Proceeds from stock option exercises	8,547	4,031	5,659
Other	(620)	(669)	(342)
Net cash (used in) provided by financing activities	(159,720)	(207,535)	175,872
Effect of exchange rate changes on cash	390	92	3,169
Net (decrease) increase in cash and cash equivalents	(2,598)	7,533	9,111
Cash and cash equivalents at beginning of year	59,599	52,066	42,955
Cash and cash equivalents at end of year	\$ 57,001	\$ 59,599	\$ 52,066

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Business

HEICO Corporation, through its principal subsidiaries consisting of HEICO Aerospace Holdings Corp. ("HEICO Aerospace"), HEICO Flight Support Corp. and HEICO Electronic Technologies Corp. ("HEICO Electronic") and their respective subsidiaries (collectively, the "Company"), is principally engaged in the design, manufacture and sale of aerospace, defense and electronic related products and services throughout the United States ("U.S.") and internationally. The Company's customer base is primarily the aviation, defense, space, medical, telecommunications and electronics industries.

Basis of Presentation

The Company has two operating segments: the Flight Support Group ("FSG"), consisting of HEICO Aerospace and HEICO Flight Support Corp. and their respective subsidiaries; and the Electronic Technologies Group ("ETG"), consisting of HEICO Electronic and its subsidiaries.

Certain prior year amounts have been reclassified to conform to the current year presentation principally to reflect the adoption of Accounting Standards Update ("ASU") 2014-09, "Revenue from Contracts with Customers," in the first quarter of fiscal 2019.

The consolidated financial statements include the financial accounts of HEICO Corporation and its direct subsidiaries, all of which are wholly owned except for HEICO Aerospace, which is 20% owned by Lufthansa Technik AG ("LHT"), the technical services subsidiary of Lufthansa German Airlines. HEICO Flight Support Corp. consolidates three subsidiaries which are 80%, 82.3% and 84%, owned, respectively, and six subsidiaries that are each 80.1% owned. In addition, HEICO Aerospace consolidates a joint venture, which is 84% owned. HEICO Electronic consolidates seven subsidiaries, which are 75.0%, 80.1%, 80.1%, 82.5%, 85.0%, 92.7% and 95.9% owned, respectively. Certain subsidiaries of HEICO Electronic consolidate subsidiaries that are less than wholly owned. See Note 12, Redeemable Noncontrolling Interests. All intercompany balances and transactions are eliminated.

Use of Estimates and Assumptions

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 reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents

For purposes of the consolidated financial statements, the Company considers all highly liquid investments such as U.S. Treasury bills and money market funds with an original maturity of three months or less at the time of purchase to be cash equivalents.

Accounts Receivable

Accounts receivable consist of amounts billed and currently due from customers. The valuation of accounts receivable requires that the Company set up an allowance for estimated uncollectible accounts and record a corresponding charge to bad debt expense. The Company estimates uncollectible receivables based on such factors as its prior experience, its appraisal of a customer's ability to pay, age of receivables outstanding and economic conditions within and outside of the aviation, defense, space, medical, telecommunications and electronics industries.

Contract Assets

Contract assets (unbilled receivables) represent revenue recognized on contracts using an over-time recognition model in excess of amounts invoiced to the customer. See Note 6, Revenue, for additional information regarding the Company's contract assets.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of temporary cash investments and trade accounts receivable. The Company places its temporary cash investments with high credit quality financial institutions and limits the amount of credit exposure to any one financial institution. Concentrations of credit risk with respect to trade receivables are limited due to the large number of customers comprising the Company's customer base and their dispersion across many different geographical regions. The Company performs ongoing credit evaluations of its customers, but does not generally require collateral to support customer receivables.

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Inventory is stated at the lower of cost or net realizable value, with cost being determined on the first-in, first-out or the average cost basis. Losses, if any, are recognized fully in the period when identified. The Company periodically evaluates the carrying value of inventory, giving consideration to factors such as its physical condition, sales patterns and expected future demand in order to estimate the amount necessary to write down any slow moving, obsolete or damaged inventory. These estimates could vary significantly from actual amounts based upon future economic conditions, customer inventory levels or competitive factors that were not foreseen or did not exist when the estimated write-downs were made. In accordance with industry practice, all inventories are classified as a current asset including portions with long production cycles, some of which may not be realized within one year.

Property, Plant and Equipment

Property, plant and equipment is recorded at cost. Depreciation and amortization is generally provided on the straight-line method over the estimated useful lives of the various assets. The Company's property, plant and equipment is generally depreciated over the following estimated useful lives:

Buildings and improvements10	to	40	years
Machinery and equipment3	to	10	years
Leasehold improvements2	to	20	years
Tooling	to	5	vears

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The costs of major additions and improvements are capitalized. Leasehold improvements are amortized over the shorter of the leasehold improvement's useful life or the lease term. Repairs and maintenance costs are expensed as incurred. Upon an asset's disposition, its cost and related accumulated depreciation are removed from the financial accounts and any resulting gain or loss is reflected within earnings.

Capital Leases

Assets acquired under capital leases are recorded at the lower of the asset's fair value or the present value of the future minimum lease payments, excluding any portion of the lease payments representing executory costs. The discount rate used in determining the present value of the minimum lease payments is the lower of the rate implicit in the lease or the Company's incremental borrowing rate. Assets under capital leases are included in property, plant and equipment and are depreciated over the shorter of the lease term or the useful life of the leased asset. Lease payments under capital leases are recognized as a reduction of the capital lease obligation and as interest expense.

Business Combinations

The Company allocates the purchase price of acquired entities to the underlying tangible and identifiable intangible assets acquired and liabilities and any noncontrolling interests assumed based on their estimated fair values, with any excess recorded as goodwill. The operating results of acquired businesses are included in the Company's results of operations beginning as of their effective acquisition dates. Acquisition costs are generally expensed as incurred and totaled \$3.2 million in fiscal 2019. Acquisition costs were not material in fiscal 2018 or 2017.

For contingent consideration arrangements, a liability is recognized at fair value as of the acquisition date with subsequent fair value adjustments recorded in operations. Additional information regarding the Company's contingent consideration arrangements may be found in Note 2, Acquisitions, and Note 8, Fair Value Measurements.

Goodwill and Other Intangible Assets

The Company tests goodwill for impairment annually as of October 31, or more frequently if events or changes in circumstances indicate that the carrying amount of goodwill may not be fully recoverable. In evaluating the recoverability of goodwill, the Company compares the fair value of each of its reporting units to its carrying value to determine potential impairment. If the carrying value of a reporting unit exceeds its fair value, the implied fair value of that reporting unit's goodwill is to be calculated and an impairment loss is recognized in the amount by which the carrying value of the reporting unit's goodwill exceeds its implied fair value, if any. The fair values of the Company's reporting units are determined by using a weighted average of a market approach and an income approach. Under the market approach, fair values are estimated using published market multiples for comparable companies. The Company calculates fair values under the income approach by taking estimated future cash flows that are based on internal projections and other assumptions deemed reasonable by management and discounting them using an estimated weighted average cost of capital.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The Company's intangible assets not subject to amortization consist principally of its trade names. The Company's intangible assets subject to amortization are amortized on the straight-line method (except for certain customer relationships amortized on an accelerated method) over the following estimated useful lives:

Customer relationships	4 to	15	years
Intellectual property	4 to	22	years
Licenses1	0 to	11	years
Patents	5 to	20	years
Trade names	8 to	15	vears

Amortization expense of intellectual property, licenses and patents is recorded as a component of cost of sales, and amortization expense of customer relationships, non-compete agreements and trade names is recorded as a component of selling, general and administrative ("SG&A") expenses in the Company's Consolidated Statements of Operations. The Company tests each non-amortizing intangible asset for impairment annually as of October 31, or more frequently if events or changes in circumstances indicate that the asset might be impaired. To derive the fair value of its trade names, the Company utilizes an income approach, which relies upon management's assumptions of royalty rates, projected revenues and discount rates. The Company also tests each amortizing intangible asset for impairment if events or circumstances indicate that the asset might be impaired. The test consists of determining whether the carrying value of such assets will be recovered through undiscounted expected future cash flows. If the total of the undiscounted future cash flows is less than the carrying amount of those assets, the Company recognizes an impairment loss based on the excess of the carrying amount over the fair value of the assets. The determination of fair value requires management to make a number of estimates, assumptions and judgments of such factors as projected revenues and earnings and discount rates.

Customer Rebates and Credits

The Company records accrued customer rebates and credits as a component of accrued expenses and other current liabilities in its Consolidated Balance Sheets. These amounts generally relate to discounts negotiated with customers as part of certain sales contracts that are usually tied to sales volume thresholds. The Company accrues customer rebates and credits as a reduction within net sales as the revenue is recognized based on the estimated level of discount rate expected to be earned by each customer over the life of the contractual rebate period (generally one year). Accrued customer rebates and credits are monitored by management and discount levels are updated at least quarterly.

Product Warranties

Product warranty liabilities are estimated at the time of shipment and recorded as a component of accrued expenses and other current liabilities in the Company's Consolidated Balance Sheets. The amount recognized is based on historical claims experience.

Defined Benefit Pension Plan

In connection with a prior year acquisition, the Company assumed a frozen qualified defined benefit pension plan (the "Plan"). The Plan's benefits are based on employee compensation and years of service; however, the accrued benefit for Plan participants was fixed as of the date of acquisition. The Company uses an actuarial valuation to determine the projected benefit obligation of the Plan and records the difference between the fair value of the Plan's assets and the projected benefit obligation as of October 31 in other long-term liabilities in its Consolidated Balance Sheets. Additionally, any actuarial gain or loss that arises during a fiscal year that is not recognized as a component of net periodic pension income or expense is recorded as a component of other comprehensive income or (loss), net of tax. The following table presents the fair value of the Plan's assets and projected benefit obligation as of October 31, for each of the last two fiscal years (in thousands):

As of October 31,	2019	2018
Fair value of plan assets	\$ 11,311	\$ 10,379
Projected benefit obligation	13,943	12,890
Funded status	\$ (2,632)	\$ (2,511)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Revenue Recognition

During fiscal 2019, the Company adopted ASU 2014-09, which, as amended, was codified as Accounting Standard Codification ("ASC") Topic 606, "Revenue from Contracts with Customers" ("ASC 606"). Pursuant to ASC 606, the Company recognizes revenue when it transfers control of a promised good or service to a customer in an amount that reflects the consideration it expects to receive in exchange for the good or service. The Company's performance obligations are satisfied and control is transferred either at a point-in-time or over-time. The majority of the Company's revenue is recognized at a point-in-time when control is transferred, which is generally evidenced by the shipment or delivery of the product to the customer, a transfer of title, a transfer of the significant risks and rewards of ownership, and customer acceptance. For certain contracts under which the Company produces products with no alternative use and for which it has an enforceable right to recover costs incurred plus a reasonable profit margin for work completed to date and for certain other contracts under which the Company creates or enhances a customerowned asset while performing repair and overhaul services, control is transferred to the customer over-time. The Company recognizes revenue using an over-time recognition model for these types of contracts. See Note 1, Summary of Significant Accounting Policies - New Accounting Pronouncements, and Note 6, Revenue, for additional information regarding the Company's revenue recognition policy.

Stock-Based Compensation

The Company records compensation expense associated with stock options in its Consolidated Statements of Operations based on the grant date fair value of those awards. The fair value of each stock option on the date of grant is estimated using the Black-Scholes pricing model based on certain valuation assumptions. Expected stock price volatility is based on the Company's historical stock prices over the contractual term of the option grant and other factors. The risk-free interest rate used is based on the published U.S. Treasury yield curve in effect at the time of the option grant for instruments with a similar life. The dividend yield reflects the Company's expected dividend yield at the date of grant. The expected option life represents the period of time that the stock options are expected to be outstanding, taking into consideration the contractual term of the option grant and employee historical exercise behavior. The Company generally recognizes stock option compensation expense ratably over the award's vesting period.

Income Taxes

Income tax expense includes U.S. and foreign income taxes. Deferred income taxes are provided on elements of income that are recognized for financial reporting purposes in periods different from when recognized for income tax purposes. Deferred tax assets and liabilities are recognized for the tax effects of temporary differences between the financial reporting and income tax bases of assets and liabilities and are measured using enacted tax rates in effect for the year in which the differences are expected to reverse. Tax law and rate changes are reflected in income in the period such changes are enacted. The Company's policy is to recognize interest and penalties related to income tax matters as a component of income tax expense and to treat any tax on Global Intangible Low-Taxed Income ("GILTI") as a current period income tax expense. Further information regarding income taxes can be found in Note 7, Income Taxes.

Redeemable Noncontrolling Interests

As further detailed in Note 12, Redeemable Noncontrolling Interests, the holders of equity interests in certain of the Company's subsidiaries have rights ("Put Rights") that require the Company to provide cash consideration for their equity interests (the "Redemption Amount") at fair value or at a formula that management intended to reasonably approximate fair value based solely on a multiple of future earnings over a measurement period. The Put Rights are embedded in the shares owned by the noncontrolling interest holders and are not freestanding. The Company tracks the carrying cost of such redeemable noncontrolling interests at historical cost plus an allocation of subsidiary earnings based on ownership interest, less dividends paid to the noncontrolling interest holders. Redeemable noncontrolling interests are recorded outside of permanent equity at the higher of their carrying cost or management's estimate of the Redemption Amount. The initial adjustment to record redeemable noncontrolling interests at the Redemption Amount results in a corresponding decrease to retained earnings. Subsequent adjustments to the Redemption Amount of redeemable noncontrolling interests may result in corresponding decreases or increases to retained earnings, provided any increases to retained earnings may only be recorded to the extent of decreases previously recorded. Adjustments to Redemption Amounts based on fair value will have no effect on net income per share attributable to HEICO shareholders whereas the portion of periodic adjustments to the carrying amount of redeemable noncontrolling interests based solely on a multiple of future earnings that reflect a redemption amount in excess of fair value will affect net income per share attributable to HEICO shareholders. Acquisitions of redeemable noncontrolling interests are treated as equity transactions.

Net Income per Share Attributable to HEICO Shareholders

Basic net income per share attributable to HEICO shareholders is computed by dividing net income attributable to HEICO by the weighted average number of common shares outstanding during the period. Diluted net income per share attributable to HEICO shareholders is computed by dividing net income attributable to HEICO by the weighted average number of common shares outstanding during the period plus potentially dilutive common shares arising from the assumed exercise of stock options, if dilutive. The dilutive impact of potentially dilutive common shares is determined by applying the treasury stock method.

Foreign Currency

All assets and liabilities of foreign subsidiaries that do not utilize the U.S. dollar as its functional currency are translated at period-end exchange rates, while revenue and expenses are translated using average exchange rates for the period. Unrealized translation gains or losses are reported as foreign currency translation adjustments through other comprehensive income or (loss) in shareholders' equity. Transaction gains or losses related to monetary balances denominated in a currency other than the functional currency are recorded in the Company's Consolidated Statements of Operations.

Contingencies

Losses for contingencies such as product warranties, litigation and environmental matters are recognized in income when they are probable and can be reasonably estimated. Gain contingencies are not recognized in income until they have been realized.

New Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued ASU 2014-09, which, as amended, was codified as ASC Topic 606, "Revenue from Contracts with Customers" ("ASC 606"). ASC 606 provides a comprehensive new revenue recognition model that supersedes nearly all existing revenue recognition guidance. Under ASC 606, an entity recognizes revenue when it transfers promised goods or services to a customer at an amount that reflects the consideration it expects to receive in exchange for those goods or services. The guidance also requires additional disclosures about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts.

The Company adopted ASC 606 as of November 1, 2018 using the modified retrospective method and recognized the cumulative effect of initially applying ASC 606 to all uncompleted contracts on the date of adoption as an adjustment to the opening balance of retained earnings. The comparative information has not been restated and remains as previously reported in accordance with ASC Topic 605, "Revenue Recognition."

ASC 606 impacts the timing of revenue recognition for certain contracts under which the Company produces products with no alternative use and for which it has an enforceable right to recover costs incurred plus a reasonable profit margin for work completed to date. ASC 606 also impacts the timing of revenue recognition for certain other contracts under which the Company creates or enhances customer-owned assets while performing repair and overhaul services. For these two types of contracts, the Company now recognizes revenue using an over-time recognition model as opposed to generally recognizing revenue at the time of shipment under previous guidance. See Note 6, Revenue, for additional information regarding the Company's revenue recognition policy and disclosures required by ASC 606.

The following table presents the cumulative effect of adopting ASC 606 on the Company's Consolidated Balance Sheet as of November 1, 2018 (in thousands):

	As Reported Under ASC 605 October 31, 2018	Impact of ASC 606 Adoption	As Adjusted Under ASC 606 November 1, 2018
Assets			
Contract assets	\$ 14,183	\$ 40,089	\$ 54,272
Inventories, net	401,553	(29,412)	372,141
Prepaid expenses and other current assets	21,187	(489)	20,698
Liabilities			
Accrued expenses and other current liabilities	\$ 171,514	\$ (8,588)	\$ 162,926
Deferred income taxes	46,644	4,258	50,902
Redeemable noncontrolling interests	\$ 132,046	\$ 819	\$ 132,865
Shareholders' equity			
Retained earnings	\$1,091,183	\$ 13,373	\$1,104,556
Noncontrolling interests	104,757	326	105,083

The following table presents the impact of adopting ASC 606 on the Company's Consolidated Balance Sheet as of October 31, 2019 (in thousands):

	As	s of October 31, 201	9
	As Reported Under ASC 606	Effect of ASC 606	As Adjusted Under ASC 605
Assets			
Contract assets	\$ 43,132	\$ (39,638)	\$ 3,494
Inventories, net	420,319	28,079	448,398
Prepaid expenses and other current assets	18,953	116	19,069
Liabilities			
Accrued expenses and other current liabilities	\$ 178,957	\$ 6,144	\$ 185,101
Deferred income taxes	51,496	(3,978)	47,518
Redeemable noncontrolling interests	\$ 188,264	\$ -	\$ 188,264
Shareholders' equity			
Retained earnings	\$1,397,327	\$ (13,261)	\$1,384,066
Noncontrolling interests	28,118	(348)	27,770

The impact of adopting ASC 606 on the Company's Consolidated Statement of Operations was not material for fiscal 2019.

In February 2016, the FASB issued ASU 2016-02, "Leases," which requires recognition of lease assets and lease liabilities on the balance sheet of lessees. ASU 2016-02 is effective for fiscal years and interim reporting periods within those years beginning after December 15, 2018, or in fiscal 2020 for HEICO. The Company will adopt ASU 2016-02, as amended, as of November 1, 2019 using a modified retrospective transition approach with the election to apply the guidance as of the adoption date instead of at the beginning of the earliest comparative period presented. The adoption of this guidance will result in an increase in the Company's assets and liabilities due to the recognition of right-of-use ("ROU") assets and corresponding lease liabilities for leases that are currently classified as operating leases.

Upon adoption, the Company will elect certain practical expedients provided by this guidance including the package of transitional practical expedients, which allows the Company to not reassess whether any expired or existing contracts are or contain leases, not reassess the lease classification for any expired or existing leases, and not reassess initial direct costs for any existing leases; the short-term lease practical expedient, which allows the Company to not record an ROU asset and lease liability for any lease with a term of twelve months or less, and the single component practical expedient, which will allow the Company to include both lease and non-lease components associated with a lease as a single lease component, if certain criteria are met, when determining the value of the ROU asset and lease liability.

The adoption of this guidance is expected to result in the Company recording ROU assets and corresponding lease liabilities of approximately \$60 million to \$75 million in the Company's consolidated balance sheet. The Company does not expect the adoption of this guidance will have a material effect on its consolidated results of operations or cash flows.

In January 2017, the FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment," which is intended to simplify the current test for goodwill impairment by eliminating the second step in which the implied value of a reporting unit is calculated when the carrying value of the reporting unit exceeds its fair value. Under ASU 2017-04, goodwill impairment should be recognized for the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. ASU 2017-04 must be applied prospectively and is effective for any annual or interim goodwill impairment test in fiscal years beginning after December 15, 2019, or in fiscal 2021 for HEICO. Early adoption is permitted. The Company is currently evaluating the effect the adoption of this guidance will have on its consolidated results of operations, financial position and cash flows.

2. ACQUISITIONS

AAT Acquisition

On September 15, 2017, the Company, through HEICO Electronic, acquired all of the outstanding stock of AeroAntenna Technology, Inc. ("AAT"). The purchase price of this acquisition was paid in cash using proceeds from the Company's revolving credit facility. AAT designs and produces high performance active antenna systems for commercial aircraft, precision guided munitions, other defense applications and commercial uses. The Company believes that this acquisition is consistent with HEICO's practice of acquiring high quality niche designers and manufacturers who also focus on customer needs and will further enable the Company to broaden its product offerings, technologies and customer base.

The following table summarizes the total consideration for the acquisition of AAT (in thousands):

Cash paid	\$ 317,500
Less: cash acquired	(868)
Cash paid, net	316,632
Contingent consideration	13,797
Additional purchase consideration	544
Total consideration	\$ 330,973

As noted in the table above, the total consideration includes an accrual of \$13.8 million as of the acquisition date representing the estimated fair value of contingent consideration the Company may be obligated to pay should AAT meet certain earnings objectives during the first six years following the acquisition. See Note 8, Fair Value Measurements, for additional information regarding the Company's contingent consideration obligation.

The following table summarizes the allocation of the total consideration for the acquisition of AAT to the estimated fair values of the tangible and identifiable intangible assets acquired and liabilities assumed (in thousands):

Assets acquired:	
Goodwill	\$ 157,901
Customer relationships	100,000
Intellectual property	39,000
Trade name	20,000
Inventories	8,306
Accounts receivable	6,115
Property, plant and equipment	1,893
Other assets	208
Total assets acquired, excluding cash	333,423
Liabilities assumed:	
Accounts payable	1,299
Accrued expenses	1,151
Total liabilities assumed	2,450
Net assets acquired, excluding cash	\$ 330,973

The primary items that generated the goodwill recognized were the premiums paid by the Company for the future earnings potential of AAT and the value of its assembled workforce that do not qualify for separate recognition. The amortization period of the customer relationships, intellectual property and trade name acquired is 15 years, 15 years and indefinite, respectively. The operating results of AAT were included in the Company's results of operations from the effective acquisition date. The Company's consolidated net sales and net income attributable to HEICO for the fiscal year ended October 31, 2017 includes \$10.2 million and \$2.5 million, respectively from the acquisition of AAT.

The following table presents unaudited pro forma financial information for fiscal 2017 as if the acquisition of AAT had occurred as of November 1, 2015 (in thousands, except per share data):

Year ended October 31,	2017
Net sales	\$ 1,582,653
Net income from consolidated operations	\$ 220,419
Net income attributable to HEICO	\$ 198,744
Net income per share attributable to HEICO shareholders:	
Basic	\$ 1.51
Diluted	\$ 1.47

The pro forma financial information is presented for comparative purposes only and is not necessarily indicative of the results of operations that actually would have been achieved if the acquisition had taken place as of November 1, 2015. The unaudited pro forma financial information includes adjustments to historical amounts such as additional amortization expense related to intangible assets acquired, increased interest expense associated with borrowings to finance the acquisition and inventory purchase accounting adjustments charged to cost of sales as the inventory is sold.

Other Acquisitions

In September 2019, the Company, through a subsidiary of HEICO Electronic, acquired all of the outstanding stock of TTT-Cubed, Inc. ("TTT"). TTT is a designer and manufacturer of Radio Frequency (RF) Sources, Detectors, and Controllers for a certain wide range of aerospace and defense applications. The purchase price of this acquisition was paid in cash using cash provided by operating activities.

In July 2019, the Company, jointly through HEICO Electronic and one of its subsidiaries, acquired substantially all of the assets and business of a France-based company and transferred the assets to a newly created subsidiary, Bernier Connect SAS ("Bernier"). The acquisition is inclusive of Bernier's 70% equity interest in Moulages Plastiques Industriels de L'essonne SARL, a plastics manufacturer. Bernier is a designer and manufacturer of interconnect products used in demanding defense, aerospace and industrial applications, primarily for communications-related purposes. The purchase price of this acquisition was paid in cash using cash provided by operating activities.

In June 2019, the Company, through HEICO Electronic, acquired 75% of the membership interests of Research Electronics International, LLC ("REI"). REI is a designer and manufacturer of Technical Surveillance Countermeasures (TSCM) equipment to detect devices used for espionage and information theft. The remaining 25% interest continues to be owned by certain members of REI's management team (see Note 12, Redeemable Noncontrolling Interests, for additional information).

In February 2019, the Company, through a subsidiary of HEICO Flight Support Corp., acquired 80.1% of the membership interests of Decavo LLC ("Decavo"). Decavo designs and produces complex composite parts and assemblies incorporated into camera and related sensor assemblies and unmanned aerial vehicle ("UAV") airframes used in demanding defense and civilian applications. The remaining 19.9% interest continues to be owned by certain members of Decavo's management team (see Note 12, Redeemable Noncontrolling Interests, for additional information). The total consideration includes an accrual of \$2.1 million as of the acquisition date representing the estimated fair value of contingent consideration the Company may be obligated to pay should Decavo meet a certain earnings objective during the second and third years following the acquisition. See Note 8, Fair Value Measurements, for additional information regarding the Company's contingent consideration obligation. The purchase price of this acquisition was paid in cash principally using cash provided by operating activities.

In February 2019, the Company, through HEICO Electronic, acquired 85% of the stock of Solid Sealing Technology, Inc. ("SST"). SST designs and manufactures high-reliability ceramic-to-metal feedthroughs and connectors for demanding environments within the defense, industrial, life science, medical, research, semiconductor, and other markets. The remaining 15% interest continues to be owned by certain members of SST's management team (see Note 12, Redeemable Noncontrolling Interests, for additional information).

In November 2018, the Company, through a subsidiary of HEICO Electronic, acquired an additional equity interest in Freebird Semiconductor Corporation ("Freebird"), which increased the Company's aggregate equity interest in Freebird to greater than 50%. Accordingly, the Company began consolidating the operating results of Freebird as of the acquisition date. Prior to this transaction, the Company accounted for its investment in Freebird under the equity method. Freebird is a fabless design and manufacturing company that offers advanced high-reliability wide-band gap power switching technology. The purchase price of this acquisition was paid in cash using cash provided by operating activities.

In November 2018, the Company, through HEICO Electronic, acquired 92.7% of the stock of Apex Microtechnology, Inc. ("Apex"). Apex designs and manufactures precision power analog monolithic, hybrid and open frame components for a certain wide range of aerospace, defense, industrial, measurement, medical and test applications. The remaining 7.3% interest continues to be owned by certain members of Apex's management team (see Note 12, Redeemable Noncontrolling Interests, for additional information).

In November 2018, the Company, through HEICO Electronic, acquired all of the stock of Specialty Silicone Products, Inc. ("SSP"). SSP designs and manufactures silicone material for a variety of demanding applications used in aerospace, defense, research, oil and gas, testing, pharmaceuticals and other markets.

In September 2018, the Company, through a subsidiary of HEICO Electronic, obtained control over 53.1% of the equity interests of SST Components, Inc. ("SST Components"). SST Components manufactures discrete semiconductor components, tests electronic components, and custom assembles a wide variety of prototype and off the shelf components into desired package styles for military, space and commercial uses. The purchase price of this acquisition was paid using cash provided by operating activities.

In August 2018, the Company, through a subsidiary of HEICO Flight Support Corp., acquired all of the business and assets of Optical Display Engineering ("ODE"). ODE is a Federal Aviation Administration ("FAA")-authorized Part 145 Repair Station focusing on the repair of LCD screens and display modules for aviation displays used in civilian and military aircraft. ODE also holds FAA-Parts Manufacturer Approval authority to supply products that it repairs. The purchase price of this acquisition was paid in cash, principally using cash provided by operating activities.

In April 2018, the Company, through a subsidiary of HEICO Electronic, acquired all of the assets and business of the Emergency Locator Transmitter Beacon product line ("ELT Product Line") of Instrumar Limited. The ELT Product Line designs and manufactures Emergency Locator Transmitter Beacons for the commercial aviation and defense markets that upon activation, transmit a distress signal to alert search and rescue operations of the aircraft's location. The purchase price of this acquisition was paid using cash provided by operating activities.

In February 2018, the Company, through a subsidiary of HEICO Electronic, acquired 85% of the assets and business of Sensor Technology Engineering, Inc. ("Sensor Technology"). Sensor Technology designs and manufactures sophisticated nuclear radiation detectors for law enforcement, homeland security and military applications. The remaining 15% continues to be owned by certain members of Sensor Technology's management team (see Note 12, Redeemable Noncontrolling Interests, for additional information).

In November 2017, the Company, through a subsidiary of HEICO Electronic, acquired all of the stock of Interface Displays & Controls, Inc. ("IDC"). IDC designs and manufactures electronic products for aviation, marine, military fighting vehicles, and embedded computing markets. The purchase price of this acquisition was paid using cash provided by operating activities.

In June 2017, the Company, through a subsidiary of HEICO Flight Support Corp., acquired all of the ownership interests of Carbon by Design ("CBD"). CBD is a manufacturer of composite components for UAVs, rockets, spacecraft and other specialized applications. The purchase price of CBD was paid using cash provided by operating activities.

In April 2017, the Company, through a subsidiary of HEICO Flight Support Corp., acquired 80.1% of the equity interests of LLP Enterprises, LLC, which owns all of the outstanding equity interests of the operating units of Air Cost Control ("A2C"). A2C is a leading aviation electrical interconnect product distributor of items such as connectors, wire, cable, protection and fastening systems, in addition to distributing a wide range of electromechanical parts. The remaining 19.9% interest continues to be owned by the founders of A2C (see Note 12, Redeemable Noncontrolling Interests, for additional information).

Unless otherwise noted, the purchase price of each of the above referenced other acquisitions was paid in cash, principally using proceeds from the Company's revolving credit facility, and is not material or significant to the Company's consolidated financial statements.

The following table summarizes the aggregate total consideration for the Company's other acquisitions (in thousands):

Year ended October 31,	2019	2018	2017
Cash paid	\$ 243,550	\$ 61,931	\$ 109,346
Less: cash acquired	(2,466)	(4,000)	(7,713)
Cash paid, net	241,084	57,931	101,633
Contingent consideration	2,107	_	_
Fair value of existing equity interest	1,417	_	_
Additional purchase consideration	_	(243)	1,300
Total consideration	\$ 244,608	\$ 57,688	\$ 102,933

The following table summarizes the allocation of the aggregate total consideration for the Company's other acquisitions to the estimated fair values of the tangible and identifiable intangible assets acquired and liabilities and noncontrolling interests assumed (in thousands):

Year ended October 31,	2019	2018	2017
Assets acquired:			
Goodwill	\$ 156,177	\$ 38,359	\$ 49,932
Customer relationships	47,553	11,620	29,500
Intellectual property	31,459	6,970	1,950
Trade names	19,216	760	16,750
Property, plant and equipment	18,013	1,777	4,522
Inventories	17,676	6,307	28,410
Accounts receivable	8,673	1,480	15,165
Other assets (including contract assets)	907	126	982
Total assets acquired, excluding cash	299,674	67,399	147,211
Liabilities assumed:			
Deferred income taxes	7,455	_	5,432
Accrued expenses	2,937	1,522	6,054
Accounts payable	2,879	671	7,696
Other liabilities	548	_	1,434
Total liabilities assumed	13,819	2,193	20,616
Noncontrolling interests in consolidated subsidiaries	41,247	7,518	23,662
Net assets acquired, excluding cash	\$ 244,608	\$ 57,688	\$ 102,933

The following table summarizes the weighted average amortization period of the definite-lived intangible assets acquired in connection with the Company's other fiscal 2019, 2018 and 2017 acquisitions (in years):

Year ended October 31,	2019	2018	2017
Customer relationships	11	7	12
Intellectual property	15	10	13

The allocation of the total consideration for the Company's fiscal 2019 acquisitions to the tangible and identifiable intangible assets acquired and liabilities and noncontrolling interests assumed is preliminary until the Company obtains final information regarding their fair values. However, the Company does not expect any adjustments to such allocations to be material to the Company's consolidated financial statements. The primary items that generated the goodwill recognized were the premiums paid by the Company for the future earnings potential of the businesses acquired and the value of their assembled workforces that do not qualify for separate recognition, which, in the case of Bernier, REI, Decavo, SST, Freebird, Apex, SST Components, Sensor Technology and A2C benefit both the Company and the noncontrolling interest holders. The fair value of the noncontrolling interests in Bernier, REI, Decavo, SST, Freebird, Apex, SST Components, Sensor Technology and A2C was determined based on the consideration paid by the Company for its controlling ownership interest adjusted for a lack of control that a market participant would consider when estimating the fair value of the noncontrolling interest.

The operating results of the Company's fiscal 2019 acquisitions were included in the Company's results of operations from each of the effective acquisition dates. The amount of net sales and earnings of the fiscal 2019 acquisitions included in the Consolidated Statement of Operations for the fiscal year ended October 31, 2019 is not material. Had the fiscal 2019 acquisitions occurred as of November 1, 2017, net sales on a pro forma basis for fiscal 2019 would not have been materially different than the reported amounts and net sales on a pro forma basis for fiscal 2018 would have been \$1,879.7 million. Net income from consolidated operations, net income attributable to HEICO, and basic and diluted net income per share attributable to HEICO shareholders on a pro forma basis for fiscal 2019 and 2018 would not have been materially different than the reported amounts. The proforma financial information is presented for comparative purposes only and is not necessarily indicative of the results of operations that actually would have been achieved if the acquisitions had taken place as of November 1, 2017.

The operating results of the Company's fiscal 2018 acquisitions were included in the Company's results of operations from each of the effective acquisition dates. The amount of net sales and earnings of the fiscal 2018 acquisitions included in the Consolidated Statement of Operations for the fiscal year ended October 31, 2018 is not material. Had the fiscal 2018 acquisitions occurred as of November 1, 2016, net sales, net income from consolidated operations, net income attributable to HEICO, and basic and diluted net income per share attributable to HEICO shareholders on a pro forma basis for fiscal 2018 and 2017 would not have been materially different than the reported amounts.

The operating results of the Company's other fiscal 2017 acquisitions were included in the Company's results of operations from each of the effective acquisition dates. The Company's consolidated net sales for the fiscal year ended October 31, 2017 includes \$49.0 million from the other fiscal 2017 acquisitions. The amount of earnings of the other fiscal 2017 acquisitions included in the Company's results of operations for the fiscal year ended October 31, 2017 is not material. Had the other fiscal 2017 acquisitions occurred as of November 1, 2015, net sales, net income from consolidated operations, net income attributable to HEICO, and basic and diluted net income per share attributable to HEICO shareholders on a pro forma basis for fiscal 2017 would not have been materially different than the reported amounts.

3. SELECTED FINANCIAL STATEMENT INFORMATION

Accounts Receivable

As of October 31,	2019	2018
(in thousands)		
Accounts receivable	\$ 277,992	\$ 240,544
Less: Allowance for doubtful accounts	(3,666)	(3,258)
Accounts receivable, net	\$ 274,326	\$ 237,286

Inventories

As of October 31,	2019	2018
(in thousands)		,
Finished products	\$ 199,880	\$ 192,758
Work in process	32,548	49,315
Materials, parts, assemblies and supplies	187,891	158,039
Contracts in process	_	1,649
Less: Billings to date	_	(208)
Inventories, net of valuation reserves	\$ 420,319	\$ 401,553

Prior to the adoption of ASC 606, contracts in process represented accumulated capitalized costs associated with fixed price contracts. Additionally, related progress billings and customer advances ("billings to date") were classified as a reduction to contracts in process, if any, and any excess was included in accrued expenses and other liabilities. See Note 1, Summary of Significant Accounting Policies - New Accounting Pronouncements, and Note 6, Revenue, for additional information pertaining to the adoption of ASC 606.

Property, Plant and Equipment

As of October 31,	2019	2018
(in thousands)		
Land	\$ 6,820	\$ 5,864
Buildings and improvements	116,997	101,424
Machinery, equipment and tooling	253,127	230,108
Construction in progress	8,382	5,044
	385,326	342,440
Less: Accumulated depreciation and amortization	(211,981)	(187,701)
Property, plant and equipment, net	\$ 173,345	\$ 154,739

The amounts set forth above include tooling costs having a net book value of \$8.8 million and \$8.2 million as of October 31, 2019 and 2018, respectively. Amortization expense on capitalized tooling was \$3.1 million, \$2.8 million and \$2.7 million in fiscal 2019, 2018 and 2017, respectively.

The amounts set forth above also include \$11.7 million and \$11.9 million of assets under capital leases as of October 31, 2019 and October 31, 2018, respectively. Accumulated depreciation associated with assets under capital leases was \$2.1 million and \$1.5 million as of October 31, 2019 and October 31, 2018, respectively. See Note 5, Long-Term Debt, for additional information pertaining to capital lease obligations.

Depreciation and amortization expense, exclusive of tooling, on property, plant and equipment was \$25.8 million, \$23.2 million and \$21.9 million in fiscal 2019, 2018 and 2017, respectively.

Accrued Expenses and Other Current Liabilities

As of October 31,	2019	2018
(in thousands)		
Accrued employee compensation and related payroll taxes	\$ 112,602	\$ 97,048
Contract liabilities	23,809	28,262
Accrued customer rebates and credits	17,978	16,861
Contingent consideration and other accrued purchase consideration	497	6,138
Other	24,071	23,205
Accrued expenses and other current liabilities	\$ 178,957	\$ 171,514

The increase in accrued employee compensation and related payroll taxes principally reflects a higher level of accrued performance-based compensation expense resulting from the improved consolidated operating results and the impact of our fiscal 2019 acquisitions. The total customer rebates and credits deducted within net sales in fiscal 2019, 2018 and 2017 was \$9.0 million, \$9.9 million and \$11.0 million, respectively.

Other Long-Term Assets and Liabilities

The Company provides eligible employees, officers and directors of the Company the opportunity to voluntarily defer base salary, bonus payments, commissions, long-term incentive awards and directors fees, as applicable, on a pre-tax basis through the HEICO Corporation Leadership Compensation Plan ("LCP"), a nonqualified deferred compensation plan that conforms to Section 409A of the Internal Revenue Code. The Company matches 50% of the first 6% of base salary deferred by each participant. Director fees that would otherwise be payable in Company common stock may be deferred into the LCP, and, when distributable, are distributed in actual shares of Company common stock. The LCP does not provide for diversification of a director's assets allocated to Company common stock. The deferred compensation obligation associated with Company common stock is recorded as a component of shareholders' equity at cost and subsequent changes in fair value are not reflected in operations or shareholders' equity of the Company. Further, while the Company has no obligation to do so, the LCP also provides the Company the opportunity to make discretionary contributions. The Company's matching contributions and any discretionary contributions are subject to vesting and forfeiture provisions set forth in the LCP. Company contributions to the LCP charged to income in fiscal 2019, 2018 and 2017 totaled \$6.1 million, \$5.9 million and \$4.6 million, respectively. The aggregate liabilities of the LCP were \$151.1 million and \$125.8 million as of October 31, 2019 and 2018, respectively, and are classified within other long-term liabilities in the Company's Consolidated Balance Sheets. The assets of the LCP, totaling \$151.9 million and \$126.8 million as of October 31, 2019 and 2018, respectively, are classified within other assets in the Company's Consolidated Balance Sheets and principally represent cash surrender values of life insurance policies that are held within an irrevocable trust that may be used to satisfy the obligations under the LCP

Research and Development Expenses

The amount of new product research and development ("R&D") expenses included in cost of sales is as follows (in thousands):

Year ended October 31,	2019		2018		2017	
R&D expenses	\$	66,630	\$ 57,450		\$	46,473

Accumulated Other Comprehensive Loss

Changes in the components of accumulated other comprehensive loss during fiscal 2019 and 2018 are as follows (in thousands):

	Foreign Currency Translation	Defined Benefit Pension Plan	Accumulated Other Comprehensive Loss
Balances as of October 31, 2017	\$ (9,533)	\$ (1,023)	\$ (10,556)
Unrealized (loss) gain	(4,837)	124	(4,713)
Amortization of unrealized loss		13	13
Balances as of October 31, 2018	(14,370)	(886)	(15,256)
Unrealized loss	(619)	(889)	(1,508)
Amortization of unrealized loss	_	25	25
Balances as of October 31, 2019	\$ (14,989)	\$ (1,750)	\$ (16,739)

4. GOODWILL AND OTHER INTANGIBLE ASSETS

Changes in the carrying amount of goodwill during fiscal 2019 and 2018 by operating segment are as follows (in thousands):

	Segn	nent	Consolidated
	FSG	ETG	Totals
Balances as of October 31, 2017	\$ 388,606	\$ 692,700	\$ 1,081,306
Goodwill acquired	10,586	27,734	38,320
Adjustments to goodwill	972	(3,003)	(2,031)
Foreign currency translation adjustments	(1,470)	(1,293)	(2,763)
Balances as of October 31, 2018	398,694	716,138	1,114,832
Goodwill acquired	12,891	143,286	156,177
Foreign currency translation adjustments	(1,580)	(765)	(2,345)
Adjustments to goodwill	39	_	39
Balances as of October 31, 2019	\$ 410,044	\$ 858,659	\$ 1,268,703

The goodwill acquired during fiscal 2019 and 2018 pertains to the acquisitions consummated in those respective years as discussed in Note 2, Acquisitions, and represents the residual value after the allocation of the total consideration to the tangible and identifiable intangible assets acquired and liabilities and noncontrolling interests assumed. Foreign currency translation adjustments are included in other comprehensive income (loss) in the Company's Consolidated Statements of Comprehensive Income. The adjustments to goodwill represent immaterial measurement period adjustments to the purchase price allocation of certain fiscal 2018 and 2017 acquisitions. The Company estimates that \$92 million of the goodwill acquired in fiscal 2019 and most of the goodwill acquired in fiscal 2018 is deductible for income tax purposes. Based on the annual test for goodwill impairment as of October 31, 2019, the Company determined there is no impairment of its goodwill and the fair value of each of the Company's reporting units significantly exceeded their carrying value.

Identifiable intangible assets consist of the following (in thousands):

	As	As of October 31, 2019 As of C			of October 31, 2	018
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortizing Assets:						
Customer relationships	\$ 411,076	\$ (162,722)	\$ 248,354	\$ 373,946	\$ (135,359)	\$ 238,587
Intellectual property	216,359	(70,169)	146,190	185,983	(56,055)	129,928
Licenses	6,559	(4,102)	2,457	6,559	(3,522)	3,037
Patents	986	(666)	320	927	(609)	318
Non-compete agreements	813	(813)	_	814	(814)	_
Trade names	450	(180)	270	466	(157)	309
	636,243	(238,652)	397,591	568,695	(196,516)	372,179
Non-Amortizing Assets:						
Trade names	153,102	_	153,102	134,181	_	134,181
	\$ 789,345	\$ (238,652)	\$ 550,693	\$ 702,876	\$ (196,516)	\$ 506,360

The increase in the gross carrying amount of customer relationships, intellectual property and trade names as of October 31, 2019 compared to October 31, 2018 principally relates to such intangible assets recognized in connection with the fiscal 2019 acquisitions (see Note 2, Acquisitions).

Amortization expense related to intangible assets was \$53.7 million, \$50.1 million and \$39.5 million in fiscal 2019, 2018 and 2017, respectively. Amortization expense for each of the next five fiscal years and thereafter is estimated to be \$53.8 million in fiscal 2020, \$50.9 million in fiscal 2021, \$44.4 million in fiscal 2022, \$39.1 million in fiscal 2023, \$34.6 million in fiscal 2024 and \$174.8 million thereafter.

5. LONG-TERM DEBT

Long-term debt consists of the following (in thousands):

As of October 31,	2019	2018
Borrowings under revolving credit facility	\$ 553,000	\$ 523,000
Capital leases and note payable	8,955	9,470
	561,955	532,470
Less: Current maturities of long-term debt	(906)	(859)
	\$ 561,049	\$ 531,611

The Company's borrowings under its revolving credit facility mature in fiscal 2023. As of October 31, 2019 and 2018, the weighted average interest rate on borrowings under the Company's revolving credit facility was 3.0% and 3.4%, respectively. The revolving credit facility contains both financial and non-financial covenants. As of October 31, 2019, the Company was in compliance with all such covenants.

Revolving Credit Facility

In November 2017, the Company entered into a \$1.3 billion Revolving Credit Facility Agreement ("Credit Facility") with a bank syndicate, which matures in November 2022. Under certain circumstances, the maturity of the Credit Facility may be extended for two one-year periods. The Credit Facility also includes a feature that will allow the Company to increase the capacity by \$350 million to become a \$1.65 billion facility through increased commitments from existing lenders or the addition of new lenders. Borrowings under the Credit Facility may be used to finance acquisitions and for working capital and other general corporate purposes, including capital expenditures.

Borrowings under the Credit Facility accrue interest at the Company's election of the Base Rate or the Eurocurrency Rate, plus in each case, the Applicable Rate (based on the Company's Total Leverage Ratio). The Base Rate for any day is a fluctuating rate per annum equal to the highest of (i) the Prime Rate; (ii) the Federal Funds Rate plus .50%; and (iii) the Eurocurrency Rate for an Interest Period of one month plus 100 basis points. The Eurocurrency Rate is the rate per annum obtained by dividing LIBOR for the applicable Interest Period by a percentage equal to 1.00 minus the daily average Eurocurrency Reserve Rate for such Interest Period, as such capitalized terms are defined in the Credit Facility. The Applicable Rate for Eurocurrency Rate Loans ranges from 1.00% to 2.00%. The Applicable Rate for Base Rate Loans ranges from 0% to 1.00%. A fee is charged on the amount of the unused commitment ranging from .125% to .30% (depending on the Company's Total Leverage Ratio). The Credit Facility also includes \$100 million sublimits for borrowings made in foreign currencies and for swingline borrowings, and a \$50 million sublimit for letters of credit. Outstanding principal, accrued and unpaid interest and other amounts payable under the Credit Facility may be accelerated upon an event of default, as such events are described in the Credit Facility. The Credit Facility is unsecured and contains covenants that require, among other things, the maintenance of a Total Leverage Ratio and an Interest Coverage Ratio, as such capitalized terms are defined in the Credit Facility.

Capital Lease Obligations

The Company's capital lease obligations are principally for manufacturing facilities. The estimated future minimum lease payments of all capital leases for the next five fiscal years and thereafter are as follows (in thousands):

Year ending October 31,	
2020	\$ 1,213
2021	1,212
2022	1,203
2023	906
2024	832
Thereafter	5,596
Total minimum lease payments	10,962
Less: amount representing interest	(2,327)
Present value of minimum lease payments	\$ 8,635

6. REVENUE

The Company recognizes revenue when it transfers control of a promised good or service to a customer in an amount that reflects the consideration it expects to receive in exchange for the good or service. The Company's performance obligations are satisfied and control is transferred either at a point-in-time or over-time. The majority of the Company's revenue is recognized at a point-in-time when control is transferred, which is generally evidenced by the shipment or delivery of the product to the customer, a transfer of title, a transfer of the significant risks and rewards of ownership, and customer acceptance. For certain contracts under which the Company produces products with no alternative use and for which it has an enforceable right to recover costs incurred plus a reasonable profit margin for work completed to date and for certain other contracts under which the Company creates or enhances a customer-owned asset while performing repair and overhaul services, control is transferred to the customer over-time. The Company recognizes revenue using an over-time recognition model for these types of contracts.

Details of the products and services provided by the Company can be found within Disaggregation of Revenue which follows within this Note 6.

Contracts with Customers and Performance Obligations

The Company accounts for a contract with a customer when it has approval and commitment from both parties, the rights of the parties are identified, the payment terms are identified, the contract has commercial substance, and it is probable that the Company will collect the consideration to which it is entitled to receive. Customer payment terms related to the sale of products and the rendering of services vary by Company subsidiary and product line. The time between receipt of payment and recognition of revenue for satisfaction of the related performance obligation is not significant.

A performance obligation is a promise within a contract to transfer a distinct good or service to the customer in exchange for payment and is the unit of account for recognizing revenue. A contract's transaction price is allocated to each distinct performance obligation and recognized as revenue when or as the performance obligation is satisfied. The majority of the Company's contracts have a single performance obligation to transfer goods or services. For contracts with more than one performance obligation, the Company allocates the transaction price to each performance obligation based on its estimated standalone selling price. When standalone selling prices are not available, the transaction price is allocated using an expected cost plus margin approach as pricing for such contracts is typically negotiated on the basis of cost.

The Company accounts for contract modifications prospectively when the remaining goods or services are distinct and on a cumulative catch-up basis when the remaining goods or services are not distinct.

The Company provides assurance type warranties on many of its products and services. Since customers cannot purchase such warranties independently of the products or services under contract and they are not priced separately, warranties are not separate performance obligations.

Contract Estimates

The Company utilizes the cost-to-cost method as a measure of progress for performance obligations that are satisfied over-time as it believes this input method best represents the transfer of control to the customer. Under this method, revenue for the current period is recorded at an amount equal to the ratio of costs incurred to date divided by total estimated contract costs multiplied by (i) the transaction price, less (ii) cumulative revenue recognized in prior periods. Contract costs include all direct material and labor costs and those indirect costs related to contract performance, such as indirect labor, supplies, tools, repairs and depreciation.

Certain of the Company's contracts give rise to variable consideration when they contain items such as customer rebates, credits, volume purchase discounts, penalties and other provisions that may impact the total consideration the Company will receive. The Company includes variable consideration in the transaction price generally by applying the most likely amount method of the consideration that it expects to be entitled to receive based on an assessment of all available information (i.e., historical experience, current and forecasted performance) and only to the extent it is probable that a significant reversal of revenue recognized will not occur when the uncertainty is resolved. The Company estimates variable consideration by applying the most likely amount method when there are a limited number of outcomes related to the resolution of the variable consideration.

Changes in estimates that result in adjustments to net sales and cost of sales are recognized as necessary in the period they become known on a cumulative catch-up basis. Changes in estimates did not have a material effect on net income from consolidated operations in fiscal 2019, 2018 and 2017.

Practical Expedients and Optional Exemptions

The Company has elected the following practical expedients and optional exemptions allowed under ASC 606:

- The majority of the Company's performance obligations related to customer contracts are satisfied within one year. As such, the Company has elected to disclose remaining performance obligations only for contracts with an original duration of greater than one year.
- The Company has elected to record all shipping and handling activities as fulfillment activities. When revenue is recognized in advance of incurring shipping and handling costs, the costs related to the shipping and handling activities are accrued.
- For certain contracts with similar characteristics and for which revenue is recognized using an over-time model, the Company uses a portfolio approach to estimate the amount of revenue to recognize. For each portfolio of contracts, the respective work in process and/ or finished goods inventory balances are identified and the portfolio-specific margin is applied to estimate the pro rata portion of the transaction price to recognize in relation to the costs incurred. This approach is utilized only when the resulting revenue recognition is not expected to be materially different than if the accounting was applied to the individual contracts.
- The Company does not adjust the amount of revenue to be recognized under a customer contract for the effects of the time value of money when the timing difference between receipt of payment and recognition of revenue for satisfaction of the related performance obligation is less than one year.
- Sales commissions and any other costs of obtaining a customer contract with a duration of one year or less are expensed as incurred.

Contract Balances

Contract assets (unbilled receivables) represent revenue recognized on contracts using an over-time recognition model in excess of amounts invoiced to the customer. Contract liabilities (deferred revenue) represent customer advances and billings in excess of revenue recognized and are included within accrued expenses and other current liabilities in the Company's Consolidated Balance Sheet.

Changes in the Company's contract assets and liabilities during fiscal 2019 are as follows (in thousands):

	October :	31, 2019 Novem	ber 1, 2018	Change
Contract assets	\$ 43,	,132 \$	54,272	\$ (11,140)
Contract liabilities	23,	,809	19,674	4,135
Net contract assets	\$ 19,	,323 \$	34,598	\$ (15,275)

The decrease in the Company's contract assets during fiscal 2019 mainly occurred within the ETG and principally reflects billings on certain customer contracts made during the year in excess of the amounts recorded as additional unbilled receivables for contracts using an over-time recognition model.

The increase in the Company's contract liabilities during fiscal 2019 principally reflects the receipt of payment on a certain contract in advance of control transferring to the customer as well as new customer deposits on certain customer contracts, partially offset by reductions to contract liabilities from customer deposits recognized as revenue.

Remaining Performance Obligations

As of October 31, 2019, the Company had \$453.6 million of remaining performance obligations associated with contracts with an original duration of greater than one year pertaining to the majority of the products offered by the ETG and the FSG's aftermarket replacement parts and specialty products product line. The Company will recognize net sales as these obligations are satisfied. The Company expects to recognize \$275.7 million of this amount during fiscal 2020 and \$177.9 million thereafter, of which the majority is expected to occur in fiscal 2021.

The amount of revenue that the Company recognized during fiscal 2019 that was included in contract liabilities as of the beginning of fiscal

Disaggregation of Revenue

The following table summarizes the Company's net sales by product line for each operating segment (in thousands):

Year ended October 31,	2019	2019 2018	
Flight Support Group:			
Aftermarket replacement parts (1)	\$ 678,001	\$ 582,562	\$ 489,644
Repair and overhaul parts and services (2)	299,323	286,454	270,482
Specialty products (3)	262,859	228,921	207,414
Total net sales	1,240,183	1,097,937	967,540
Electronic Technologies Group:			
Electronic component parts for defense, space and aerospace equipment (4)	633,685	547,088	420,991
Electronic component parts for equipment in various other industries (5)	200,837	154,739	153,270
Total net sales	834,522	701,827	574,261
Intersegment sales	(19,058)	(22,043)	(16,988)
Total consolidated net sales	\$ 2,055,647	\$1,777,721	\$ 1,524,813

- (1) Includes various jet engine and aircraft component replacement parts.
- (2) Includes primarily the sale of parts consumed in various repair and overhaul services on selected jet engine and aircraft components, avionics, instruments, composites and flight surfaces of commercial and military aircraft.
- (3) Includes primarily the sale of specialty components such as thermal insulation blankets, renewable/reusable insulation systems, advanced niche components, complex composite assemblies, and expanded foil mesh.
- (4) Includes various component parts such as electro-optical infrared simulation and test equipment, electro-optical laser products, electro-optical, microwave and other power equipment, high-speed interface products, power conversion products, underwater locator beacons, emergency locator transmission beacons, traveling wave tube amplifiers, microwave power modules, three-dimensional microelectronic and stacked memory products, crashworthy and ballistically self-sealing auxiliary fuel systems, radio frequency (RF) and microwave amplifiers, transmitters and receivers, high performance communications and electronic intercept receivers and tuners, high performance active antenna systems, and technical surveillance countermeasures equipment.
- (5) Includes various component parts such as electromagnetic and radio interference shielding, high voltage interconnection devices, high voltage advanced power electronics, harsh environment connectivity products, custom molded cable assemblies, and silicone material for a variety of demanding applications.

The following table summarizes the Company's net sales by industry for each operating segment (in thousands):

Year ended October 31,	2019	2018	2017
Flight Support Group:			
Aerospace	\$ 1,004,088	\$ 890,059	\$ 781,344
Defense and Space	190,076	163,330	146,708
Other ⁽¹⁾	46,019	44,548	39,488
Total net sales	1,240,183	1,097,937	967,540
Electronic Technologies Group:			
Defense and Space	531,029	452,714	368,234
Other ⁽²⁾	217,889	177,878	157,195
Aerospace	85,604	71,235	48,832
Total net sales	834,522	701,827	574,261
Other, primarily corporate and intersegment	(19,058)	(22,043)	(16,988)
Total consolidated net sales	\$ 2,055,647	\$1,777,721	\$ 1,524,813

⁽¹⁾ Principally industrial products.

7. INCOME TAXES

The components of income before income taxes and noncontrolling interests are as follows (in thousands):

Year ended October 31,	2019	2018		2017
Domestic	\$ 386,584	\$ 3	809,123	\$ 264,420
Foreign	51,257		47,163	33,540
Income before taxes and noncontrolling interests	\$ 437,841	\$ 3	56,286	\$ 297,960

The components of the provision for income taxes on income before income taxes and noncontrolling interests are as follows (in thousands):

Year ended October 31,	2019 2018		2017		
Current:					
Federal	\$	56,670	\$ 61,548		\$ 85,047
State		12,795	9,420		6,820
Foreign		15,027	12,608		9,529
		84,492	83,576		101,396
Deferred:					
Federal		(3,140)	(13,115)		(9,661)
State		(1,263)	1,578		(499)
Foreign		(1,989)	(1,439)		(936)
		(6,392)	(12,976)		(11,096)
Total income tax expense	\$	78,100	\$ 70,600		\$ 90,300

⁽²⁾ Principally other electronics and medical products.

A reconciliation of the federal statutory income tax rate to the Company's effective tax rate is as follows:

Year ended October 31,	2019	2018	2017
Federal statutory income tax rate (blended rate in fiscal 2018)	21.0%	23.3%	35.0%
State taxes, net of federal income tax benefit	3.0%	2.9%	1.9%
Tax benefit related to stock option exercises	(3.8%)	(.5%)	(1.0%)
Discrete net tax benefit related to Tax Act	-%	(3.4%)	-%
Research and development tax credits	(1.7%)	(2.0%)	(1.8%)
Foreign derived intangible income deduction	(1.4%)	-%	-%
Tax-exempt (gains) losses on corporate-owned life insurance policies	(.6%)	.1%	(1.8%)
Nondeductible compensation	.8%	.2%	-%
Domestic production activities tax deduction	-%	(.8%)	(1.1%)
Other, net	.5%	-%	(.9%)
Effective tax rate	17.8%	19.8%	30.3%

In December 2017, the United States ("U.S.") government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act contains significant changes to previous tax law, some of which became immediately effective in fiscal 2018 including, among other things, a reduction in the U.S. federal statutory tax rate from 35% to 21% effective January 1, 2018 resulting in a blended rate of 23.3% for fiscal 2018 and the implementation of a territorial tax system resulting in a one-time transition tax on the unremitted earnings of the Company's foreign subsidiaries. Certain other provisions of the Tax Act became effective for HEICO in fiscal 2019 including a new tax on Global Intangible Low-Taxed Income ("GILTI"), a new deduction for Foreign-Derived Intangible Income ("FDII"), the repeal of the domestic production activity deduction and increased limitations on the deductibility of certain executive compensation. As a result of the Tax Act, the Company remeasured its U.S. federal net deferred tax liabilities and recorded a discrete tax benefit of \$16.5 million in fiscal 2018. Further, the Company recorded a provisional discrete tax expense of \$4.4 million in fiscal 2018 related to a one-time transition tax on the unremitted earnings of the Company's foreign subsidiaries, which it intends to pay over the eight-year period allowed for in the Tax Act.

The Company's effective tax rate in fiscal 2019 decreased to 17.8% from 19.8% in fiscal 2018. The decrease in the Company's effective tax rate in fiscal 2019 is mainly attributable to a \$14.3 million larger tax benefit in fiscal 2019 from stock option exercises compared to fiscal 2018 and the reduction in the federal tax rate from a blended rate of 23.3% in fiscal 2018 to 21% in fiscal 2019, partially offset by the net impact of the previously mentioned discrete tax amounts recorded in fiscal 2018. The provisions of the Tax Act that became effective for HEICO in fiscal 2019 did not have a material net effect on the Company's effective tax rate.

The Company's effective tax rate in fiscal 2018 decreased to 19.8% from 30.3% in fiscal 2017. The decrease principally reflects the previously mentioned discrete tax benefit from the remeasurement of the Company's U.S. federal net deferred tax liabilities and the net benefit of a lower federal statutory income tax rate, which were partially offset by the aforementioned one-time transition tax expense. Further, the decrease in fiscal 2018 was slightly moderated by an unfavorable impact from lower tax-exempt unrealized gains in the cash surrender values of life insurance policies related to the HEICO Corporation Leadership Compensation Plan ("HEICO LCP").

The Company files income tax returns in the U.S. federal jurisdiction and in multiple state jurisdictions. The Company is also subject to income taxes in certain jurisdictions outside the U.S., none of which are individually material to the accompanying consolidated financial statements. Generally, the Company is no longer subject to U.S. federal, state or foreign examinations by tax authorities for years prior to fiscal 2015.

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 used for income tax purposes. The Company believes that it is more likely than not that it will generate sufficient future taxable income to utilize all of its deferred tax assets and has therefore not recorded a valuation allowance on any such asset.

Significant components of the Company's deferred tax assets and liabilities are as follows (in thousands):

As of October 31,	2019	2018
Deferred tax assets:		
Deferred compensation liability	\$ 35,437	\$ 31,152
Inventories	23,858	22,204
Share-based compensation	10,206	9,811
Bonus accrual	6,463	4,474
Customer rebates accrual	2,324	1,526
Vacation accrual	1,452	1,456
Other	8,806	7,152
Total deferred tax assets	88,546	77,775
Deferred tax liabilities:		
Goodwill and other intangible assets	(122,075)	(112,533)
Property, plant and equipment	(14,137)	(11,615)
Adoption of ASC 606	(3,277)	_
Other	(553)	(271)
Total deferred tax liabilities	(140,042)	(124,419)
Net deferred tax liability	\$ (51,496)	\$ (46,644)

As of October 31, 2019 and 2018, the Company's liability for gross unrecognized tax benefits related to uncertain tax positions was \$2.7 million and \$2.1 million, respectively, of which \$2.1 million and \$1.7 million, respectively, would decrease the Company's income tax expense and effective income tax rate if the tax benefits were recognized. A reconciliation of the activity related to the liability for gross unrecognized tax benefits during fiscal 2019 and 2018 is as follows (in thousands):

Year ended October 31,	2019	2	2018
Balances as of beginning of year	\$ 2,100	\$	2,040
Increases related to current year tax positions	653		591
Increases related to prior year tax positions	45		20
Settlements	=		(394)
Lapses of statutes of limitations	(128)		(157)
Balances as of end of year	\$ 2,670	\$	2,100

8. FAIR VALUE MEASUREMENTS

The Company's assets and liabilities that were measured at fair value on a recurring basis are set forth by level within the fair value hierarchy in the following tables (in thousands):

	As of October 31, 2019							
	in Act for Ide	ted Prices ive Markets ntical Assets Level 1)	Signif Other Ob: Inpi (Levi	servable uts	Unot	nificant oservable nputs evel 3)	Ti	otal
Assets:								
Deferred compensation plan:								
Corporate-owned life insurance	\$	_	\$ 151	L,871	\$	_	\$ 1	51,871
Money market funds		20		_		_		20
Total assets	\$	20	\$ 151	L,871	\$,—,	\$ 1	51,891
C-1200								
Liabilities:							vi vi	
Contingent consideration	\$	_	\$	_	\$	18,326	\$	18,326

			AS UI UCU	oper 31	, 2016			
	in Activo	d Prices e Markets ical Assets vel 1)	Signific Other Obsc Input (Level	ervable ts	Unob Ir	nificant servable iputs evel 3)	Ţ	otal
Assets:								
Deferred compensation plans:								
Corporate-owned life insurance	\$	_	\$ 123,	255	\$	_	\$ 1	123,255
Money market funds		3,560		_		_		3,560
Equity securities		3,179		_		_		3,179
Mutual funds		1,437				-		1,437
Other		1,306		_		_		1,306
Total assets	\$	9,482	\$ 123,	255	\$	_	\$ 1	L32,737
Liabilities:								
Contingent consideration	\$	_	\$	_	\$	20,875	\$	20,875

Ac of October 21 2010

The Company maintains the HEICO Corporation Leadership Compensation Plan (the "LCP"), which is a non-qualified deferred compensation plan. The assets of the LCP principally represent cash surrender values of life insurance policies, which derive their fair values from investments in mutual funds that are managed by an insurance company, and are classified within Level 2 and valued using a market approach. Certain other assets of the LCP represent investments in money market funds that are classified within Level 1. The assets of the LCP are held within an irrevocable trust and classified within other assets in the Company's Consolidated Balance Sheets.

The Company previously maintained another non-qualified deferred compensation plan. The assets and liabilities of this plan were each \$5.9 million as of October 31, 2018 and classified within other assets and other long-term liabilities, respectively, in the Company's Consolidated Balance Sheet. During fiscal 2019, the plan's assets were liquidated and distribution payments were made to the remaining plan participants in accordance with their elections.

As part of the agreement to acquire a subsidiary by the FSG in fiscal 2019, the Company may be obligated to pay contingent consideration of \$6.4 million in fiscal 2022 should the acquired entity meet a certain earnings objective during the second and third years following the acquisition. As of October 31, 2019, the estimated fair value of the contingent consideration was \$1.1 million.

As part of the agreement to acquire a subsidiary by the ETG in fiscal 2017, the Company may be obligated to pay contingent consideration of \$20.0 million in fiscal 2023 should the acquired entity meet a certain earnings objective during the first six years following the acquisition. As of October 31, 2019, the estimated fair value of the contingent consideration was \$16.7 million. The increase in the fair value of the contingent consideration as of October 31, 2019 as compared to the \$13.9 million accrued as of October 31, 2018 is principally attributable to a reduction in the discount rate used to present value the potential future obligation and higher than originally estimated earnings of the acquired entity during the earnout period.

As part of the agreement to acquire certain assets of a company by the ETG in fiscal 2016, the Company may be obligated to pay contingent consideration of up to \$1.1 million in aggregate during the first two years following the third anniversary of the acquisition should the acquired entity meet certain earnings objectives during this same time period. During fiscal 2019, the Company paid \$.3 million of contingent consideration based on the actual financial performance of the acquired entity during the third year following the acquisition. As of October 31, 2019, the estimated fair value of the remaining contingent consideration was \$.5 million.

As part of the agreement to acquire a subsidiary by the FSG in fiscal 2015, the Company paid contingent consideration of €6.1 million, or \$6.8 million, during the third quarter of fiscal 2019 based on the actual operating results of the acquired entity during the fourth year following the acquisition. The increase in the amount paid as compared to the €5.1 million, or \$5.8 million, accrued as of October 31, 2018 was principally due to the higher actual than anticipated earnings of the acquired entity.

The estimated fair value of the contingent consideration arrangements described above are classified within Level 3 and were determined using probability-based scenario analyses. Under this method, a set of discrete potential future subsidiary earnings was determined using internal estimates based on various revenue growth rate assumptions for each scenario. A probability of likelihood was assigned to each discrete potential future earnings estimate and the resultant contingent consideration was calculated. The resulting probability-weighted contingent consideration amounts were discounted using a weighted average discount rate reflecting the credit risk of HEICO. Changes in either the revenue growth rates, related earnings or the discount rate could result in a material change to the amount of contingent consideration accrued and such changes will be recorded in the Company's consolidated statements of operations.

The Level 3 inputs used to derive the estimated fair value of the Company's contingent consideration liability as of October 31, 2019 are as follows:

	Fiscal 2019 Acquisition	Fiscal 2017 Acquisition	Fiscal 2016 Acquisition
Compound annual revenue growth rate range	(7%) - 9%	(3%) - 10%	(11%) - 3%
Weighted average discount rate	5.7%	4.6%	3.0%

Changes in the Company's contingent consideration liability measured at fair value on a recurring basis using unobservable inputs (Level 3) during fiscal 2019 and 2018 are as follows (in thousands):

	Lia	abilities
Balance as of October 31, 2017	\$	27,573
Payment of contingent consideration		(5,425)
Decrease in accrued contingent consideration, net		(1,365)
Foreign currency transaction adjustments		92
Balance as of October 31, 2018		20,875
Increase in accrued contingent consideration, net		2,630
Contingent consideration related to acquisition		2,107
Payment of contingent consideration		(7,178)
Foreign currency transaction adjustments		(108)
Balance as of October 31, 2019	\$	18,326
Included in the accompanying Consolidated Balance Sheet under the following captions:		
Accrued expenses and other current liabilities	\$	497
Other long-term liabilities		17,829
	\$	18,326

The Company recorded the (decrease) increase in accrued contingent consideration and foreign currency transaction adjustments set forth in the table above within SG&A expenses in the Company's Consolidated Statements of Operations.

The Company did not have any transfers between Level 1 and Level 2 fair value measurements during fiscal 2019 and 2018.

The carrying amounts of the Company's cash and cash equivalents, accounts receivable, trade accounts payable and accrued expenses and other current liabilities approximate fair value as of October 31, 2019 due to the relatively short maturity of the respective instruments. The carrying amount of long-term debt approximates fair value due to its variable interest rates.

9. SHAREHOLDERS' EQUITY

Common Stock and Class A Common Stock

The Company has two classes of common stock that are virtually identical in all economic respects except voting rights. Each share of Common Stock is entitled to one vote per share. Each share of Class A Common Stock is entitled to a 1/10 vote per share. Holders of the Company's common stock are entitled to receive dividends and other distributions payable in cash, property, stock or otherwise, when and if declared by the Board of Directors. In the event of liquidation, after payment of debts and other liabilities of the Company, the remaining assets of the Company will be distributable ratably among the holders of both classes of common stock.

Share Repurchases

In 1990, the Company's Board of Directors authorized a share repurchase program, which allows the Company to repurchase shares of Company common stock in the open market or in privately negotiated transactions at the Company's discretion, subject to certain restrictions included in the Company's revolving credit agreement. As of October 31, 2019, the maximum number of shares that may yet be purchased under this program was 4,886,353 of either or both of the Company's Class A Common Stock and the Company's Common Stock. The repurchase program does not have a fixed termination date. During fiscal 2019, 2018 and 2017, the Company did not repurchase any shares of Company common stock under this program.

During fiscal 2019, the Company repurchased an aggregate 476,586 shares and 111,730 shares of Common Stock and Class A Common Stock, respectively, at a total cost of \$53.1 million and \$10.9 million, respectively. During fiscal 2018, the Company repurchased an aggregate 332,140 shares and 18,145 shares of Common Stock and Class A Common Stock, respectively, at a total cost of \$23.9 million and \$1.1 million, respectively. The shares repurchased represent shares tendered as payments to satisfy employee withholding taxes due upon exercises of stock option awards. The shares repurchased in fiscal 2019 and 2018 did not impact the number of shares authorized for future purchase under the Company's

Noncontrolling Interests

Consistent with the Company's past practice of increasing its ownership in certain non-wholly owned subsidiaries, on June 28, 2019, HEICO Aerospace paid dividends to HEICO and Lufthansa Technik AG ("LHT") in proportion to their ownership interest in HEICO Aerospace of 80% and 20%, respectively (the "Transaction"). LHT received a cash dividend of \$91.5 million that was funded principally using proceeds from the Company's revolving credit facility. HEICO effectively received as its dividend the 20% noncontrolling interest held by LHT in eight of the Company's existing subsidiaries within its HEICO Aerospace subsidiary that are principally part of the FSG's repair and overhaul parts and services product line. HEICO did not record any gain or loss in connection with the Transaction. Immediately following the Transaction, HEICO transferred the eight businesses to HEICO Flight Support Corp., a wholly owned subsidiary of HEICO. LHT remains a 20% owner in HEICO Aerospace, a designer and manufacturer of jet engine and aircraft component replacement parts.

share repurchase program and are reflected as redemptions of common stock related to stock option exercises in the Company's Consolidated Statements of Shareholders' Equity and Consolidated Statements of Cash Flows. Such share repurchases in fiscal 2017 were not material.

10. SHARE-BASED COMPENSATION

The Company currently has one stock option plan, the HEICO Corporation 2018 Incentive Compensation Plan ("2018 Plan"), which enables the Company to grant various forms of share-based compensation awards including stock options, restricted stock, restricted stock awards and stock appreciation rights. The 2018 Plan became effective in fiscal 2018 and replaced the Company's 2012 Incentive Compensation Plan ("2012 Plan"). Options outstanding under the Company's 2012 Plan, 2002 Stock Option Plan and Non-Qualified Stock Option Plan may be exercised pursuant to their terms. The total number of shares approved by the shareholders of the Company for the 2018 Plan is 5.0 million plus any options outstanding under the 2012 Plan as of the 2018 Plan's effective date that are subsequently forfeited or expire. A total of approximately 8.8 million shares of the Company's common stock are reserved for issuance to employees, directors, officers and consultants as of October 31, 2019, including 4.7 million shares currently under option and 4.1 million shares available for future grants.

Stock options granted pursuant to the 2018 Plan may be designated as Common Stock and/or Class A Common Stock in such proportions as shall be determined by the Board of Directors or the Stock Option Plan Committee at its sole discretion. The exercise price per share of a stock option granted under the 2018 Plan may not be less than the fair market value of the designated class of Company common stock as of the date of grant and stock option grants vest ratably over a period specified as of the date of grant (generally five years) and expire ten years after the date of grant. Options issued under the 2018 Plan may be designated as incentive stock options or non-qualified stock options, but only employees are eligible to receive incentive stock options and no incentive stock options were outstanding as of October 31, 2019. The 2018 Plan will terminate no later than the tenth anniversary of its effective date.

Information concerning share-based activity for each of the last three fiscal years ended October 31 is as follows (in thousands, except per share data):

		Shares Under Option		
	Shares Available For Grant	Shares	Weighted Average Exercise Price	
Outstanding as of October 31, 2016	2,016	6,520	\$ 14.23	
Granted	(1,186)	1,186	\$ 41.37	
Exercised	_	(409)	\$ 15.27	
Outstanding as of October 31, 2017	830	7,297	\$ 18.58	
Shares approved by the Company's shareholders for the 2018 Incentive				
Compensation Plan	5,000	-	\$ -	
Cancelled unissued shares under the 2012 Incentive Compensation Plan	(830)	_	\$ -	
Granted	(412)	412	\$ 65.64	
Exercised	_	(1,285)	\$ 10.54	
Cancelled	24	(24)	\$ 28.85	
Outstanding as of October 31, 2018	4,612	6,400	\$ 23.19	
Granted	(538)	538	\$ 73.30	
Exercised	_	(2,235)	\$ 12.98	
Cancelled	11	(11)	\$ 49.79	
Outstanding as of October 31, 2019	4,085	4,692	\$ 33.73	

Information concerning stock options outstanding (all of which are vested or expected to vest) and stock options exercisable by class of common stock as of October 31, 2019 is as follows (in thousands, except per share and contractual life data):

	_	Options Outstanding				
	Number Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value		
Common Stock	1,682	\$ 35.91	5.6	\$ 147,012		
Class A Common Stock	3,010	\$ 32.52	5.8	188,927		
	4,692	\$ 33.73	5.7	\$ 335,939		

		Options Exercisable					
	Number Outstanding	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (Years)	Aggregate Intrinsic Value			
Common Stock	1,030	\$ 22.81	4.2	\$ 103,538			
Class A Common Stock	1,755	\$ 20.85	4.2	130,618			
	2,785	\$ 21.57	4.2	\$ 234,156			

Information concerning stock options exercised is as follows (in thousands):

Year ended October 31,	2019	2018	2017
Cash proceeds from stock option exercises	\$ 8,547	\$ 4,031	\$ 5,659
Tax benefit realized from stock option exercises	16,490	2,162	3,087
Intrinsic value of stock option exercises	204,901	75,152	10,376

Net income from consolidated operations for the fiscal years ended October 31, 2019, 2018 and 2017 includes compensation expense of \$10.3 million, \$9.3 million and \$7.4 million, respectively, and an income tax benefit of \$2.0 million, \$2.2 million and \$2.8 million, respectively, related to the Company's stock options. Substantially all of the stock option compensation expense was recorded as a component of SG&A expenses in the Company's Consolidated Statements of Operations. As of October 31, 2019, there was \$28.4 million of pre-tax unrecognized compensation expense related to nonvested stock options, which is expected to be recognized over a weighted average period of approximately 3.2 years. The total fair value of stock options that vested in fiscal 2019, 2018 and 2017 was \$8.9 million, \$8.5 million and \$5.3 million, respectively. If there were a change in control of the Company, all of the unvested options outstanding as of October 31, 2019 would become immediately exercisable.

The fair value of each stock option grant in fiscal 2019, 2018 and 2017 was estimated on the date of grant using the Black-Scholes option-pricing model based on the following weighted average assumptions:

Year ended October 31,	20	19	20	18	20	17
	Common Stock	Class A Common Stock	Common Stock	Class A Common Stock	Common Stock	Class A Common Stock
Expected stock price volatility	28.52%	24.81%	31.00%	27.69%	37.89%	28.18%
Risk-free interest rate	2.52%	2.69%	2.83%	2.81%	2.44%	2.06%
Dividend yield	.22%	.22%	.24%	.29%	.26%	.31%
Forfeiture rate	.00%	.00%	.00%	.00%	.00%	.00%
Expected option life (years)	8	6	9	8	9	7
Weighted average fair value	\$ 33.88	\$ 19.64	\$ 30.00	\$ 20.93	\$ 21.36	\$ 12.47

11. EMPLOYEE RETIREMENT PLANS

The HEICO Savings and Investment Plan (the "401(k) Plan") is a qualified defined contribution retirement plan under which eligible employees of the Company and its participating subsidiaries may make Elective Deferral Contributions up to the limitations set forth in Section 402(g) of the Internal Revenue Code. The Company generally makes a 50% Employer Matching Contribution, as determined by the Board of Directors, based on a participant's Elective Deferral Contribution up to 6% of the participant's Compensation for the Elective Deferral Contribution period. The 401(k) Plan also provides that the Company may make additional Employer Contributions. Employer Contributions may be contributed in the form of the Company's common stock or cash, as determined by the Company. Employer Contributions awarded in the form of Company common stock are valued based on the fair value of the underlying shares as of the effective date of contribution. Employer Contributions may be diversified by a participant into any of the participant-directed investment options of the 401(k) Plan; however, Employee Contributions may not be invested in Company common stock. Unless specified otherwise, all capitalized terms herein are defined in the 401(k) Plan document.

Participants receive 100% vesting in Employee Contributions and on cash dividends received on Company common stock. Vesting in Employer Contributions is based on a participant's number of Years of Service. Employer Contributions to the 401(k) Plan charged to income in fiscal 2019, 2018 and 2017 totaled \$9.5 million, \$8.0 million and \$7.8 million, respectively, and were made through the issuance of new shares of Company common stock and the use of forfeited shares within the 401(k) Plan.

Information concerning share-based activity pertaining to the 401(k) Plan for each of the last three fiscal years ended October 31 is as follows (in thousands):

	Common Stock	Class A Common Stock
Shares available for issuance as of October 31, 2016	491	491
Issuance of common stock to the 401(k) Plan	(93)	(93)
Shares available for issuance as of October 31, 2017	398	398
Issuance of common stock to the 401(k) Plan	(65)	(65)
Shares available for issuance as of October 31, 2018	333	333
Issuance of common stock to the 401(k) Plan	(53)	(53)
Shares available for issuance as of October 31, 2019	280	280

12. REDEEMABLE NONCONTROLLING INTERESTS

The holders of equity interests in certain of the Company's subsidiaries have rights ("Put Rights") that may be exercised on varying dates causing the Company to purchase their equity interests through fiscal 2029. The Put Rights, all of which relate either to common shares or membership interests in limited liability companies, provide that the cash consideration to be paid for their equity interests (the "Redemption Amount") be at fair value or at a formula that management intended to reasonably approximate fair value based solely on a multiple of future earnings over a measurement period. The Redemption Amounts were determined using probability-adjusted internal estimates of future subsidiary earnings while considering the earliest exercise date, the measurement period and any applicable fair value adjustments. Management's estimate of the aggregate Redemption Amount of all Put Rights that the Company could be required to pay is as follows (in thousands):

As of October 31,	2019	2018
Redeemable at fair value	\$ 136,611	\$ 83,524
Redeemable based on a multiple of future earnings	51,653	48,522
Redeemable noncontrolling interests	\$ 188,264	\$ 132,046

A summary of the Put Rights associated with the redeemable noncontrolling interests in certain of the Company's subsidiaries as of October 31, 2019 is as follows:

Subsidiary Acquisition Year	Operating Segment	Company Ownership Interest	Earliest Put Right Year	Purchase Period (Years)
2005	ETG	95.9%	2020 (1)	4 (2)
2006	FSG	80.1%	2020 (1)	4
2008	FSG	82.3%	2020 (1)	5
2009	ETG	82.5%	2020 (1)	1
2012	ETG	78.0%	2020 (1)	2
2012	FSG	84.0%	2020 (1)	4
2012	FSG	80.1%	2020 (1)	4
2015	FSG	80.0%	2020 (1)	4
2015	FSG	80.1%	2020	4
2015	ETG	80.1%	2020	2
2015	FSG	80.1%	2022	4
2017	FSG	80.1%	2022	2 (3)
2018	ETG	85.0%	2021	1
2019	ETG	92.7%	2023	4
2019	ETG	85.0%	2024	4
2019	FSG	80.1%	2026	4
2019	ETG	75.0%	2024	4
20. 4				

- (1) Currently puttable
- (2) A portion is to be purchased in a lump sum
- (3) The second purchase is to be made two years after the first Put Right Year

The estimated aggregate Redemption Amount of the Put Rights that are currently puttable or becoming puttable during fiscal 2020 is approximately \$106.7 million, of which approximately \$47.8 million would be payable in fiscal 2020 should all of the eligible associated noncontrolling interest holders elect to exercise their Put Rights during fiscal 2020. Additionally, the Company has call rights to purchase the equity interests of the noncontrolling holders over the same purchase period as the Put Rights.

13. NET INCOME PER SHARE ATTRIBUTABLE TO HEICO SHAREHOLDERS

The computation of basic and diluted net income per share attributable to HEICO shareholders is as follows (in thousands, except per share data):

Year ended October 31,	2019	2	018		2017	
Numerator:						
Net income attributable to HEICO	\$ 327,896	\$ 2	259,233	\$	185,985	
Denominator:						
Weighted average common shares outstanding - basic	133,640	1	.32,543	131,703		
Effect of dilutive stock options	3,710		4,153	3,885		
Weighted average common shares outstanding - diluted	137,350	1	.36,696	135,588		
Net income per share attributable to HEICO shareholders:						
Basic	\$ 2.45	\$	1.96	\$	1.41	
Diluted	\$ 2.39	\$	1.90	\$	1.37	
Anti-dilutive stock options excluded	330		512		799	

14. QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

	First	5	Second		Third		Fourth
	Quarter	ζ	Quarter		Juarter	Ç	Juarter
(in thousands, except per share data)							
Net sales:							
2019	\$ 466,146	\$	515,648	\$	532,324	\$	541,529
2018	\$ 404,410	\$	430,602	\$	465,825	\$	476,884
Gross profit:							
2019	\$ 182,237	\$	209,387	\$	212,831	\$	209,385
2018	\$ 154,791	\$	167,857	\$	181,609	\$	186,458
Net income from consolidated operations:							
2019	\$ 88,026	\$	90,083	\$	89,059	\$	92,573
2018	\$ 71,695	\$	66,011	\$	73,899	\$	74,081
Net income attributable to HEICO:							
2019	\$ 79,332	\$	81,782	\$	81,098	\$	85,684
2018	\$ 65,152	\$	59,618	\$	67,086	\$	67,377
Net income per share attributable to HEICO:							
Basic:							
2019	\$.60	\$.61	\$.61	\$.64
2018	\$.49	\$.45	\$.51	\$.51
Diluted:							
2019	\$.58	\$.60	\$.59	\$.62
2018	\$.48	\$.44	\$.49	\$.49

During the first quarter of fiscal 2019, the Company recognized a \$16.6 million discrete tax benefit from stock option exercises, which, net of noncontrolling interests, increased net income attributable to HEICO by \$15.1 million, or \$.11 per basic and diluted share. During the first quarter of fiscal 2018, the Company recognized a net benefit from stock option exercises that increased net income attributable to HEICO by \$2.1 million, or \$.02 per basic and diluted share.

During the first quarter of fiscal 2018, the U.S. government enacted significant changes to existing tax law resulting in the Company recording a provisional discrete tax benefit from remeasuring its U.S. federal net deferred tax liabilities that was partially offset by a provisional discrete tax expense related to a one-time transition tax on the unremitted earnings of the Company's foreign subsidiaries. The net impact of these amounts increased net income attributable to HEICO by \$11.9 million, or \$.09 per basic and dilute share. See Note 7, Income Taxes, for additional information regarding changes to existing tax law.

Due to changes in the average number of common shares outstanding, net income per share attributable to HEICO for the full fiscal year may not equal the sum of the four individual quarters.

15. OPERATING SEGMENTS

The Company has two operating segments: the Flight Support Group ("FSG"), consisting of HEICO Aerospace and HEICO Flight Support Corp. and their collective subsidiaries; and the Electronic Technologies Group ("ETG"), consisting of HEICO Electronic and its subsidiaries. The Company's operating segment reporting structure is consistent with how management reviews the business, makes investing and resource decisions and assesses operating performance. Additionally, characteristics such as similarity of products, customers, economic characteristics and various other factors are considered when identifying the Company's operating segments.

The FSG designs, manufactures, repairs, overhauls and distributes jet engine and aircraft component replacement parts. The parts and services are approved by the FAA. The FSG also manufactures and sells specialty parts as a subcontractor for aerospace and industrial original equipment manufacturers and the U.S. government. Additionally, the FSG is a leading supplier, distributor, and integrator of military aircraft parts and support services primarily to foreign military organizations allied with the U.S. and a leading manufacturer of advanced niche components and complex composite assemblies for commercial aviation, defense and space applications. Further, the FSG engineers, designs and manufactures thermal insulation blankets and parts as well as removable/reusable insulation systems for aerospace, defense, commercial and industrial applications, manufactures expanded foil mesh for lightning strike protection in fixed and rotary wing aircraft and is a distributor of aviation electrical interconnect products and electromechanical parts.

The ETG collectively designs, manufactures and sells various types of electronic, data and microwave, and electro-optical products including three-dimensional microelectronic and stacked memory products, high-speed interface products, high voltage interconnection devices, high voltage advanced power electronics products, power conversion products, underwater locator beacons, emergency locator transmission beacons, electromagnetic interference shielding, traveling wave tube amplifiers, harsh environment electronic connectors and other interconnect products, communications and electronic intercept receivers and tuners, crashworthy and ballistically self-sealing auxiliary fuel systems for military rotorcraft, radio frequency (RF) and microwave amplifiers, transmitters and receivers, satellite microwave modules and integrated subsystems, high performance active antenna systems for commercial aircraft, precision guided munitions, other defense applications and commercial uses, silicone material for a variety of demanding applications; precision power analog monolithic, hybrid and open frame components, high-reliability ceramic-to-metal feedthroughs and connectors, technical surveillance countermeasures equipment, nuclear radiation detectors and RF sources, detectors, and controllers.

The Company's reportable operating segments offer distinctive products and services that are marketed through different channels. They are managed separately because of their unique technology and service requirements.

Segment Profit or Loss

The accounting policies of the Company's operating segments are the same as those described in Note 1, Summary of Significant Accounting Policies. Management evaluates segment performance based on segment operating income.

Information on the Company's two operating segments, the FSG and the ETG, for each of the last three fiscal years ended October 31 is as follows (in thousands):

	Se	gment	Other, Primarily Corporate and	Consolidated
	FSG	ETG	Intersegment (1)	Totals
Year ended October 31, 2019:				
Net sales	\$ 1,240,183	\$ 834,522	\$ (19,058)	\$ 2,055,647
Depreciation	13,793	10,957	1,008	25,758
Amortization	19,624	37,131	984	57,739
Operating income	242,029	245,743	(30,675)	457,097
Capital expenditures	17,036	11,826	76	28,938
Year ended October 31, 2018:				
Net sales	\$ 1,097,937	\$ 701,827	\$ (22,043)	\$ 1,777,721
Depreciation	13,322	9,225	692	23,239
Amortization	19,530	33,339	1,083	53,952
Operating income	206,623	204,508	(34,886)	376,245
Capital expenditures	13,074	9,531	19,266	41,871
Year ended October 31, 2017:				
Net sales	\$ 967,540	\$ 574,261	\$ (16,988)	\$ 1,524,813
Depreciation	13,042	8,609	227	21,878
Amortization	18,026	24,167	752	42,945
Operating income	179,278	157,451	(30,071)	306,658
Capital expenditures	15,665	10,100	233	25,998

⁽¹⁾ Intersegment activity principally consists of net sales from the ETG to the FSG.

Total assets by operating segment are as follows (in thousands):

	Seç	gment	Other, Primarily	Consolidated		
As of October 31,	FSG	ETG	Corporate	Totals		
2019	\$ 1,149,737	\$ 1,643,032	\$ 176,442	\$ 2,969,211		
2018	1,093,858	1,391,997	167,541	2,653,396		

Major Customer and Geographic Information

The Company markets its products and services in approximately 110 countries. The following table summarizes the Company's net sales to customers located in the United States and to those in other countries for each of the last three fiscal years ended October 31 (in thousands). Net sales are attributed to countries based on the location of the customer. Net sales to any one customer or originating from any one foreign country did not account for 10% or more of the Company's consolidated net sales during any of the last three fiscal years. The following table also summarizes the Company's long-lived assets held within and outside of the United States as of October 31 for each of the last three fiscal years (in thousands). Long-lived assets consist of net property, plant and equipment.

	2019	2018	2017
Net sales:			
United States of America	\$ 1,308,943	\$1,127,998	\$1,007,491
Other countries	746,704	649,723	517,322
Total net sales	\$ 2,055,647	\$1,777,721	\$ 1,524,813
Long-lived assets:			
United States of America	\$ 143,350	\$ 124,225	\$ 97,367
Other countries	29,995	30,514	32,516
Total long-lived assets	\$ 173,345	\$ 154,739	\$ 129,883

16. COMMITMENTS AND CONTINGENCIES

Lease Commitments

The Company leases certain property and equipment, including manufacturing facilities and office equipment under operating leases. Some of these leases provide the Company with the option after the initial lease term either to purchase the property at the then fair market value or renew the lease at the then fair rental value. Generally, management expects that leases will be renewed or replaced by other leases in the normal course of business.

Future minimum payments under non-cancelable operating leases for the next five fiscal years and thereafter are estimated to be as follows (in thousands):

Year ending October 31,	
2020	\$ 15,508
2021	15,563
2022	13,808
2023	8,515
2024	4,741
Thereafter	18,812
Total minimum lease commitments	\$ 76,947

Total rent expense charged to operations for operating leases in fiscal 2019, 2018 and 2017 amounted to \$20.0 million, \$17.5 million and \$15.6 million, respectively.

Guarantees

As of October 31, 2019, the Company has arranged for standby letters of credit aggregating \$4.1 million, which are supported by its revolving credit facility and pertain to payment guarantees related to potential workers' compensation claims and a facility lease as well as performance guarantees related to customer contracts entered into by certain of the Company's subsidiaries.

Product Warranty

Changes in the Company's product warranty liability in fiscal 2019 and 2018 are as follows (in thousands):

Year ended October 31,	2019	2018		
Balances as of beginning of year	\$ 3,306	\$	2,921	
Accruals for warranties	2,061		2,720	
Acquired warranty liabilities	_		320	
Warranty claims settled	(2,557)		(2,655)	
Balances as of end of year	\$ 2,810	\$	3,306	

Litigation

The Company is involved in various legal actions arising in the normal course of business. Based upon the Company's and its legal counsel's evaluations of any claims or assessments, management is of the opinion that the outcome of these matters will not have a material adverse effect on the Company's results of operations, financial position or cash flows.

17. SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION

The following table presents supplemental disclosures of cash flow information and non-cash investing activities for fiscal 2019, 2018 and 2017 (in thousands):

Year ended October 31,	2019	2018			2	2017
Cash paid for income taxes	\$ 82,211	\$	90,488		\$	95,851
Cash received from income tax refunds	(578)		(1,510)			(2,953)
Cash paid for interest	22,158		19,233			9,631
Contingent consideration	2,107		_			13,797
Additional purchase consideration	_		(407)			220
Property, plant and equipment acquired through capital lease obligations	84		7,166			37

18. SUBSEQUENT EVENT

In December 2019, the Company, through HEICO Electronic, acquired 80.1% of the stock of Quell Corporation ("Quell"). Quell designs and manufactures electromagnetic interference (EMI)/radio-frequency interference (RFI) and transient protection solutions for a wide variety of connectors that principally serve customers within the aerospace and defense markets. The remaining 19.9% continues to be owned by certain members of Quell's management team. The purchase price of this acquisition was paid using cash provided by operating activities and the total consideration for the acquisition is not material or significant to the Company's consolidated financial statements.

MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management of HEICO Corporation is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. 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 (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 inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management, under the supervision of and with the participation of the Company's Chief Executive Officer and the Chief Financial Officer, assessed the effectiveness of the Company's internal control over financial reporting based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control - Integrated Framework (2013)*. Based on its assessment, management concluded that the Company's internal control over financial reporting is effective as of October 31, 2019.

As permitted by the Securities and Exchange Commission, companies are allowed to exclude acquisitions from their assessment of internal control over financial reporting during the first year of an acquisition and management elected to exclude TTT-Cubed, Inc., Bernier Connect SAS, Research Electronics International, LLC, Decavo LLC, Solid Sealing Technology, Inc., Freebird Semiconductor Corporation, Apex Microtechnology, Inc. and Specialty Silicone Products, Inc. (collectively, the "Excluded Acquisitions") from its assessment of internal control over financial reporting as of October 31, 2019. See Note 2, Acquisitions, of the Notes to Consolidated Financial Statements for additional information. The aggregate assets and net sales of the Excluded Acquisitions constituted 10.2% and 3.3% of the Company's consolidated total assets and net sales as of and for the year ended October 31, 2019, respectively.

Deloitte & Touche LLP, an independent registered public accounting firm, audited the Company's consolidated financial statements included in this Annual Report for the year ended October 31, 2019. A copy of their report is included in this Annual Report. Deloitte & Touche LLP has issued their attestation report on management's internal control over financial reporting, which is set forth below.

EXECUTIVE OFFICER CERTIFICATIONS

HEICO Corporation has filed with the U.S. Securities and Exchange Commission as Exhibits 31.1 and 31.2 to its Form 10-K for the year ended October 31, 2019, the required certifications of its Chief Executive Officer (CEO) and Chief Financial Officer under Section 302 of the Sarbanes-Oxley Act regarding the quality of its public disclosures. HEICO Corporation's CEO also has submitted to the New York Stock Exchange (NYSE) following the March 2019 annual meeting of shareholders, the annual CEO certification stating that he is not aware of any violation by HEICO Corporation of the NYSE's corporate governance listing standards. All Board of Directors Committee Charters, Corporate Governance Guidelines as well as HEICO's Code of Ethics and Business Conduct are located on HEICO's web site at www.heico.com.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of HEICO Corporation Hollywood, Florida

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of HEICO Corporation and subsidiaries (the "Company") as of October 31, 2019 and 2018, the related consolidated statements of operations, comprehensive income, shareholders' equity, and cash flows, for each of the three years in the period ended October 31, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of October 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended October 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We have also 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 October 31, 2019, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated December 19, 2019, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

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

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

Critical Audit Matter

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

Inventories, net - Refer to Notes 1 and 3 to the financial statements

Critical Audit Matter Description

Inventory is stated at the lower of cost or net realizable value. The Company periodically evaluates the carrying value of inventory, which requires management to make significant estimates and assumptions related to sales patterns and expected future demand in order to estimate the amount necessary to write down any slow moving or obsolete inventory. Changes in the assumptions related to future demand and sales patterns could have a significant impact on the valuation of finished goods inventory for certain of the Company's aftermarket replacement parts business units in the Flight Support Group operating segment.

Given the magnitude of the inventory balances at these business units, coupled with the judgments necessary to project sales patterns and expected future demand within these aftermarket replacement parts business units, auditing such estimates required a high degree of auditor judgment and an increased extent of effort when performing audit procedures and evaluating the results of those procedures.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the expected future demand and sales patterns used by management to estimate the valuation reserve on inventory included the following, among others:

- We tested the effectiveness of controls, including those related to evaluating the reasonableness of expected future demand and sales patterns.
- · We evaluated the reasonableness of management's assumptions of future demand and sales patterns by performing the following:
 - Utilized historical inventory usage data to analyze the relationship between the inventory valuation reserve calculated, the inventory on hand, and the sales trends over time.
 - Evaluated management's ability to accurately estimate future demand by comparing actual inventory sales to estimates made in prior years.
 - Compared management's assumptions to available external market data for certain inventory items.
 - Evaluated the accuracy and completeness of the valuation reserve by selecting a sample of inventory items and obtaining supporting documentation regarding current and historical sales patterns.
- We tested declines in the inventory valuation reserve and evaluated whether such declines were the result of the sale or write off of inventory parts or the result of changes in the significant assumptions used to develop the valuation reserve.

/s/ DELOITTE & TOUCHE LLP

Miami, Florida December 19, 2019

We have served as the Company's auditor since 1990.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders of HEICO Corporation Hollywood, Florida

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of HEICO Corporation and subsidiaries (the "Company") as of October 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of October 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended October 31, 2019 of the Company and our report dated December 19, 2019 expressed an unqualified opinion on those financial statements.

Basis for Opinion

As described in *Management's Annual Report on Internal Control Over Financial Reporting*, management excluded from its assessment the internal control over financial reporting at TTT-Cubed, Inc., Bernier Connect SAS, Research Electronics International, LLC, Decavo LLC, Solid Sealing Technology, Inc., Freebird Semiconductor Corporation, Apex Microtechnology, Inc. and Specialty Silicone Products, Inc., (collectively, the "Excluded Acquisitions") which were acquired during the year ended October 31, 2019, and whose financial statements constitute 10.2% of total assets and 3.3% of net sales of the Company's consolidated financial statement amounts as of and for the year ended October 31, 2019, respectively. Accordingly, our audit did not include the internal control over financial reporting of the Excluded Acquisitions. 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 Annual Report on Internal Control Over Financial Reporting*. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

Definition and Limitations of Internal Control over Financial Reporting

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

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

/s/ DELOITTE & TOUCHE LLP

Miami, Florida December 19, 2019

Market Information

Our Class A Common Stock and Common Stock are listed and traded on the New York Stock Exchange ("NYSE") under the symbols "HEI.A" and "HEI," respectively.

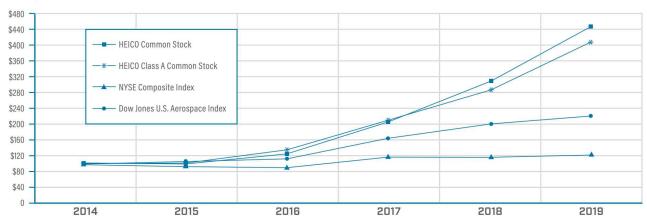
As of December 17, 2019, there were 306 holders of record of our Class A Common Stock and 305 holders of record of our Common Stock.

In addition, as of December 17, 2019, there were approximately 98,491 shareholder account positions of the Company's Class A Common Stock and Common Stock in a brokerage or nominee accounts. The combined total of all record holders and brokerage or nominee shareholder account positions is approximately 99,102 of both classes of common stock

Performance Graphs

The following graph and table compare the total return on \$100 invested in HEICO Common Stock and HEICO Class A Common Stock with the total return on \$100 invested in the NYSE Composite Index and the Dow Jones U.S. Aerospace Index for the five-year period from October 31, 2014 through October 31, 2019. The NYSE Composite Index measures the performance of all common stocks listed on the NYSE. The Dow Jones U.S. Aerospace Index is comprised of large companies which make aircraft, major weapons, radar and other defense equipment and systems as well as providers of satellites and spacecraft used for defense purposes. The total returns include the reinvestment of cash dividends.

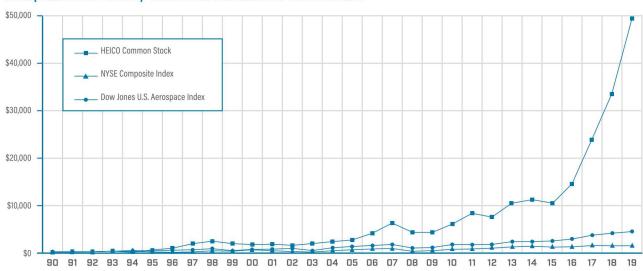
Comparison of Five-Year Cumulative Total Return



	Cumulative Total Return as of October 31,										
	2014		2015		2016		2017		2018		2019
HEICO Common Stock	\$ 100.00	\$	93.22	\$	125.20	\$	210.52	\$	304.59	\$	448.78
HEICO Class A Common Stock	100.00		95.76		131.97		209.77		287.68		411.87
NYSE Composite Index	100.00		96.46		96.65		113.79		112.57		121.46
Dow Jones U.S. Aerospace Index	100.00		104.71		111.30		166.38		199.92		220.76

The following graph and table compare the total return on \$100 invested in HEICO Common Stock since October 31, 1990 using the same indices shown on the five-year performance graph above. October 31, 1990 was the end of the first fiscal year following the date the current executive management team assumed leadership of the Company. No Class A Common Stock was outstanding as of October 31, 1990. As with the five-year performance graph, the total returns include the reinvestment of cash dividends.

Comparison of Twenty-Nine Year Cumulative Total Return



			Cumulat	ive	Total Ret	urn	as of Oct	ober	31,	
	19	90	1991		1992		1993		1994	1995
HEICO Common Stock NYSE Composite Index Dow Jones U.S. Aerospace Index	*	100.00 100.00 100.00	\$ 141.49 130.31 130.67	\$	158.35 138.76 122.00	\$	173.88 156.09 158.36	\$	123.41 155.68 176.11	\$ 263.25 186.32 252.00
	19	196	1997		1998		1999		2000	2001
HEICO Common Stock NYSE Composite Index Dow Jones U.S. Aerospace Index		430.02 225.37 341.65	\$ 1,008.31 289.55 376.36	\$	1,448.99 326.98 378.66	\$	1,051.61 376.40 295.99	\$	809.50 400.81 418.32	\$ 1,045.86 328.78 333.32
	20	002	2003		2004		2005		2006	2007
HEICO Common Stock NYSE Composite Index Dow Jones U.S. Aerospace Index		670.39 284.59 343.88	\$ 1,067.42 339.15 393.19	\$	1,366.57 380.91 478.49	\$	1,674.40 423.05 579.77	\$	2,846.48 499.42 757.97	\$ 4,208.54 586.87 1,000.84
	20	008	2009		2010		2011		2012	2013
HEICO Common Stock NYSE Composite Index Dow Jones U.S. Aerospace Index		872.01 344.96 602.66	\$ 2,984.13 383.57 678.00	\$	4,722.20 427.61 926.75	\$	6,557.88 430.46 995.11	\$	5,900.20 467.91 1,070.15	\$ 10,457.14 569.69 1,645.24
	20	D14	2015		2016		2017		2018	2019
HEICO Common Stock NYSE Composite Index Dow Jones U.S. Aerospace Index		416.51 617.23 687.41	\$ 10,776.88 595.37 1,766.94	\$	14,652.37 596.57 1,878.10	\$	23,994.03 702.38 2,807.42	\$	33,876.95 694.81 3,373.52	\$ 49,277.28 749.66 3,725.15

OFFICERS AND SENIOR LEADERSHIP

Laurans A. Mendelson

Chairman of the Board of Directors and Chief Executive Officer, **HEICO Corporation**

Nadim Bakhache

President,

EMD Technologies Incorporated

Keith Bandolik

President,

Switchcraft, Inc. and Conxall

Vaughn Barnes

President.

HEICO Specialty Products Group - Thermal Products (Thermal Structures, Inc., Thermal Energy Products, Inc. and Jetseal, Inc.)

Paul Belisle

Vice President and General Manager, Turbine Kinetics, Inc.

Adam Bentkover

Vice President - Acquisitions, **HEICO Corporation**

Jeffrey S. Biederwolf

Senior Vice President, **HEICO Repair Group**

Greg Brennan

Chief Executive Officer, Apex Microtechnology, Inc.

Vladimir Cervera

Vice President and General Manager -Structures, HEICO Component Repair Group -

Barry Cohen

Miami

President and Founder, Prime Air, LLC

George Congionti

President,

Seal Dynamics LLC

Dominick Consalvi

Vice President and General Manager, Carbon by Design Corporation

Ian D. Crawford

President and Founder, Analog Modules, Inc.

Alexandre de Gunten

Business Development Officer, **HEICO** Aerospace Corporation

Sjuk de Vries

Chief Executive Officer and Founder, Aeroworks International Holding B.V.

Paul DiCaprio

President.

Specialty Silicone Products, Inc.

Michael England

President, dB Control Corp. Andrew J. Feeley

Vice President and General Manager, CSI Aerospace, Inc.

Vice President and General Manager, Niacc-Avitech Technologies, Inc.

Kevin Foreman

President, **Quell Corporation**

Alan Fuierer

President,

Solid Sealing Technology, Inc.

Dominque Gaucher

President.

BERNIER Connect SAS

Joseph Giesemann

President,

Lucix Corporation

Jerry Goldlust

President and Founder, HVT Group, Inc. and Dielectric Sciences, Inc.

Leon Gonzalez

Vice President and General Manager, Sunshine Avionics LLC

Clarence Hightower

President,

HEICO Specialty Products Group -Interiors and Composites, and Reinhold Industries, Inc.

William J. Hinski

Vice President - Managing Director, Harter Aerospace, LLC

John F. Hunter

Senior Vice President, **HEICO Parts Group**

Tung Huynh

President and Co-Founder, Lumina Power, Inc.

Thomas S. Irwin

Senior Executive Vice President, **HEICO Corporation**

Thomas Jones

President.

Research Electronics International, LLC

Todd Jones

General Manager, Ramona Research, Inc.

Chief Executive Officer and Founder. AeroAntenna Technology, Inc.

Tracy Kuhns

President, Leader Tech, Inc.

Tom Lane President,

Engineering Design Team, Inc.

Elizabeth R. Letendre

Corporate Secretary, **HEICO** Corporation

Jack Lewis

Senior Vice President, **HEICO Parts Group and** Vice President and General Manager, LPI Corporation

Omar Lloret

Vice President and General Manager -Accessories. HEICO Component Repair Group - Miami

Carlos L. Macau, Jr.

Executive Vice President, Chief Financial Officer and Treasurer, **HEICO Corporation**

Patrick Markham

Vice President - Technical Services. HEICO Parts Group

Pierre Maurice

President and Co-Founder, 3D PLUS SAS

Steve McHugh

President and Co-Founder, Santa Barbara Infrared, Inc., IRCameras, LLC and Sensor Technology Engineering, LLC

Robert J. McKenna

Chief Operating Officer, Electronic Technologies Group

Eric A. Mendelson

Co-President, **HEICO Corporation**

Victor H. Mendelson

Co-President, **HEICO Corporation**

Michael Milardo

President.

Astroseal Products Mfg. Corporation

Michael Montgomery

Vice President and General Manager, Aero Design, Inc.

Luis J. Morell

President. **HEICO Parts Group and HEICO Repair Group**

Michael Navon

President and Founder, Blue Aerospace LLC

Phil Nies

President. Decavo LLC

Joseph W. Pallot

General Counsel, **HEICO Corporation** Anish V. Patel

President,

Radiant Power Corp., Dukane Seacom, Inc. and Interface Displays & Controls

Jeffrey Perkins

Vice President and General Manager, Seal Dynamics - Tampa

Niall Porter

Vice President and General Manager, Jet Avion Corporation

Chad Putnam

General Manager,

Action Research Corporation

Rex Reum

President. Jetseal, Inc.

Phillip J. Rezin

President,

Midwest Microwave Solutions, Inc.

Thomas L. Ricketts

Chief Executive Officer and Co-Founder, Connectronics Corp. and Wiremax

Troy J. Rodriguez

President and Co-Founder, Sierra Microwave Technology, LLC

Dr. Daniel M. Sable

Chief Executive Officer and Co-Founder, VPT, Inc.

Val R. Shelley

Vice President - Strategy, **HEICO Corporation**

Newman Shufflebarger

President.

Robertson Fuel Systems, LLC

David R. Smith

President,

Aerospace & Commercial Technologies, LLC

David J. Susser

President.

HEICO Distribution Group and CEO of Seal Dynamics LLC and Air Cost Control

Gregg Tuttle

Vice President and General Manager, Future Aviation, Inc.

Steven M. Walker

Chief Accounting Officer and Assistant Treasurer. **HEICO** Corporation

Nicholas "Tony" Wright

Vice President and General Manager -Avionics. **HEICO** Repair Group



BOARD OF DIRECTORS



THOMAS M. CULLIGAN retired Chairman and CEO, Raytheon International retired Sr. Vice President, The Raytheon Company



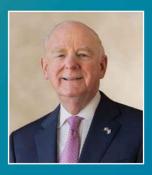
ADOLFO HENRIQUES Vice Chairman, The Related Group



MARK H. HILDEBRANDT Managing Partner and Member, Waldman, Trigoboff, Hildebrandt & Calnan, P.A.



ERIC A. MENDELSONCo-President,
HEICO Corporation



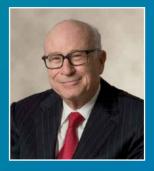
LAURANS A. MENDELSON
Chairman and
Chief Executive Officer,
HEICO Corporation



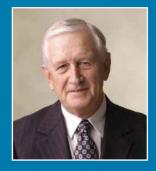
VICTOR H. MENDELSON Co-President, HEICO Corporation



JULIE NEITZEL Partner, WE Family Offices



DR. ALAN SCHRIESHEIM retired Director, Argonne National Laboratory



FRANK J. SCHWITTER retired Partner, Arthur Andersen LLP

Subsidiaries

Flight Support Group

Action Research Corporation

Aero Design, Inc.

Aerospace & Commercial

Technologies, LLC

Aeroworks International Holding B.V.

Air Cost Control

Aircraft Technology, Inc.

Astroseal Products Mfg. Corporation

Blue Aerospace LLC

Carbon by Design Corporation

CSI Aerospace, Inc.

Decavo LLC

Future Aviation, Inc.

Harter Aerospace, LLC

HEICO Aerospace Corporation

HEICO Aerospace Holdings Corp.

HEICO Aerospace Parts Corp.

HEICO Component Repair Group - Miami

HEICO Flight Support Corp.

HEICO Parts Group

HEICO Repair Group

Inertial Airline Services, Inc.

Jet Avion Corporation

Jetseal, Inc.

LPI Corporation

McClain International, Inc.

Niacc-Avitech Technologies, Inc.

Optical Display Engineering

Prime Air, LLC and Prime Air Europe

Reinhold Industries, Inc.

Seal Dynamics LLC

Sunshine Avionics LLC

Thermal Energy Products, Inc.

Thermal Structures, Inc.

Turbine Kinetics, Inc.

Electronic Technologies Group

3D PLUS SAS

AeroAntenna Technology, Inc.

Analog Modules, Inc.

Apex Microtechnology, Inc.

BERNIER Connect SAS

Connectronics Corp. and Wiremax

dB Control Corp.

Dukane Seacom, Inc.

EMD Technologies Incorporated

Engineering Design Team, Inc.

HEICO Electronic Technologies Corp.

HVT Group, Inc.

Dielectric Sciences, Inc.

Essex X-Ray &

Medical Equipment LTD

Interface Displays & Controls, Inc.

IRCameras, LLC

Leader Tech, Inc.

Lucix Corporation

Lumina Power, Inc.

Midwest Microwave Solutions, Inc.

Quell Corporation

Radiant Power Corp.

Ramona Research, Inc.

Research Electronics International, LLC

Robertson Fuel Systems, LLC

Santa Barbara Infrared, Inc.

Sensor Technology Engineering, LLC

Sierra Microwave Technology, LLC

Solid Sealing Technology, Inc.

Specialty Silicone Products, Inc.

Switchcraft, Inc. and Conxall

VPT, Inc.

Registrar & Transfer Agent

Broadridge Shareholder Services

By Regular Mail

c/o Broadridge Corporate Issuer Solutions

P.O. Box 1342

Brentwood, NY 11717-0718

United States

By Overnight Delivery

c/o Broadridge Corporate Issuer Solutions

Attn: IWS

1155 Long Island Avenue

Edgewood, NY 11717-8309

United States

Telephone: 1-877-830-4936 or 720-378-5591

www.shareholder.broadridge.com

New York Stock Exchange Symbols

Class A Common Stock - "HEI.A"

Common Stock - "HEI"

Form 10-K and Board of Directors Inquiries

The Company's Annual Report on Form 10-K for 2019, as filed with the Securities and Exchange Commission, is available without charge upon written request to the Corporate Secretary at the Company's headquarters.

Any inquiry to any member of the Company's Board of Directors, including, but not limited to "independent" Directors, should be addressed to such Director(s) care of the Company's Headquarters and such inquiries will be forwarded to the Director(s) of whom the inquiry is being made.

Annual Meeting

The Annual Meeting of Shareholders will be held on Friday, March 20, 2020 at 10:00 a.m. at the Conrad Miami 1395 Brickell Avenue Miami, FL 33131

Telephone: 305-503-6500

Shareholder Information

Elizabeth R. Letendre Corporate Secretary HEICO Corporation 3000 Taft Street Hollywood, FL 33021 Telephone: 954-987-4000 Facsimile: 954-987-8228

eletendre@heico.com



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HEICO CORPORATION