NATUS MEDICAL INC
Form 10-K/A
July 20, 2018
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UNITED STATES
SECURITIES AND
EXCHANGE
COMMISSION
Washington, D.C.
20549

FORM 10-K/A
Amendment No. 3

ý Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2017
OR
.. Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from to .
Commission
file number:
000–33001

NATUS MEDICAL INCORPORATED
(Exact name of Registrant as specified in its charter)

Delaware	77–0154833
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

6701 Koll Center Parkway, Suite 120, Pleasanton, CA 94566
(Address of principal executive offices) (Zip Code)
(925) 223-6700
(Registrant's telephone number, including area code)
Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $0.001 par value per share	The NASDAQ Stock Market LLC (Nasdaq Global Select Market)

Securities Registered Pursuant to Section 12(g) of the Act: None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ý No ¨
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No ý
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such requirements for the past 90 days. Yes ý No ¨
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ý No ¨
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or

information statements incorporated by reference in Part III of the Form 10-K or any amendment to this Form 10-K. ý

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

Large accelerated filer	ý	Accelerated filer	¨
Non-accelerated filer	¨	Smaller reporting company	¨
(Do not check if a smaller reporting company)			

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

As of June 30, 2017, the last business day of Registrant's most recently completed second fiscal quarter, there were 33,149,439 shares of Registrant's common stock outstanding, and the aggregate market value of such shares held by non-affiliates of Registrant (based upon the closing sale price of such shares on the Nasdaq Global Select Market on June 30, 2017) was $1,236,474,075. Shares of Registrant's common stock held by each executive officer and director and by each entity that owns 5% or more of Registrant's outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

On July 16, 2018, the registrant had 33,590,351 shares of its common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None.

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EXPLANATORY NOTE

This Amendment No. 3 on Form 10-K/A amends our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, which we filed with the Securities and Exchange Commission ("SEC") on March 1, 2018 (the "Original Filing") and which was amended on March 12, 2018 to update the list of exhibits included therein ("Amendment No. 1") and on April 30, 2018 to include certain information required by Part III of Form 10-K ("Amendment No. 2"). We are filing this amendment to include certification required by Exhibits 31 and 32 that refer to our entire Annual Report on Form 10-K for fiscal year ended December 31, 2017.

This Amendment No. 3 does not amend the information in the Original Filing, Amendment No. 1 or Amendment No. 2 other than to provide the certifications referred to above, and we have not updated disclosures to reflect events that occurred subsequent to the March 2, 2018 with respect to information included in the Original Filing, March 1, 2018 with respect to the information included in Amendment No. 1, or April 30, 2018 with respect to the information provided in Amendment No. 2.

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ANNUAL REPORT ON FORM 10-K
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PART I

ITEM 1. Business

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 about Natus Medical Incorporated ("Natus," "we," "us," or "our Company"). These statements include, among other things, statements concerning our expectations, beliefs, plans, intentions, future operations, financial condition and prospects, and business strategies. The words "may," "will," "continue," "estimate," "project," "intend," "believe," "expect," "anticipate," and other similar expre generally identify forward-looking statements. Forward-looking statements in this Item 1 include, but are not limited to, statements regarding the effectiveness and advantages of our products, factors relating to demand for and economic advantages of our products, our plan to develop and acquire additional technologies, products or businesses, our marketing, technology enhancement, and product development strategies, and our ability to complete all of our backlog orders.

Forward-looking statements are not guarantees of future performance and are subject to substantial risks and uncertainties that could cause our actual results to differ materially from those that we predicted in the forward-looking statements. Investors should carefully review the information contained under the caption "Risk Factors" contained in Item 1A for a description of risks and uncertainties that could cause actual results to differ from those that we predicted. All forward-looking statements are based on information available to us on the date hereof, and we assume no obligation to update forward-looking statements, except as required by Federal Securities laws.

"Natus" and other trademarks of ours appearing in this report are our property.

Overview

Natus is a leading provider of newborn care, neurology, and hearing and balance assessment healthcare products and services used for the screening, diagnosis, detection, treatment, monitoring and tracking of common medical ailments in newborn care, hearing impairment, neurological dysfunction, epilepsy, sleep disorders, neuromuscular diseases and balance and mobility disorders.

Product Families

We are organized into three strategic business units, each with multiple product families:

Neuro—Includes products and services that provide diagnostic, therapeutic and surgical solutions in neurodiagnostics, neurocritical care and neurosurgery. Neurology's comprehensive neurodiagnostic solutions include electroencephalography ("EEG") and long term monitoring ("LTM"), Intensive Care Unit ("ICU") monitoring, electromyography ("EMG"), sleep analysis or polysomnography ("PSG"), intra-operative monitoring ("IOM"), and diagnostic and monitoring transcranial doppler ("TCD") ultrasound technology. Additionally, Global Neuro-Diagnostic Services provides ambulatory EEG services with and without video in the patient's home. These solutions enhance the diagnosis of neurological conditions such as epilepsy, sleep disorders and neuromuscular diseases.

Our neurocritical care solutions include management of traumatic brain injury by continuous monitoring of intracranial pressure ("ICP") and cerebrospinal fluid ("CSF") drainage. Our neurosurgical solutions provide options that promote dural healing in the cranium as well as treatment solutions for procedures involving hydrocephalus. We acquired our neurocritical care and neurosurgical product lines from Integra LifeSciences in October 2017 ("Integra Asset Acquisition").

Newborn Care—Includes products and services for newborn care including hearing screening, brain injury, ROP vision screening, thermoregulation, jaundice management, and various disposable newborn care supplies, as well as products for diagnostic hearing assessment for children through adult populations, and products to diagnose and assist in treating balance and mobility disorders.

Otometrics—Includes products for hearing and diagnostics and hearing aid fitting, including computer-based audiological, otoneurologic and vestibular instrumentation and sound rooms for hearing and balance care professionals. Otometrics has a complete product and brand portfolio known for its sophisticated design technology in the hearing and balance assessment markets. Global brands include Aurical®, ICS® and Madsen®. We acquired the Otometrics business in January 2017.

Neuro

Our neurology business unit represents a comprehensive line of neurodiagnostic, neurocritical care, and neurosurgical products that are used by healthcare practitioners in the diagnosis and monitoring of neurological disorders of the central and peripheral nervous system. The environments in which these products are used include outpatient private practice facilities and inpatient hospital environments including diagnostic procedures and monitoring of patients during admissions, surgery, while under sedation, in post-operative care, and in intensive care units. Our neurology products and services include:

Neurodiagnostic

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- Electroencephalography—Equipment, supplies and services used to monitor and visually display the electrical activity generated by the brain and other key physiological signals for both diagnosis and monitoring of neurological disorders in the hospital, research laboratory, clinician office and patient's home.
- Electromyography—Equipment and supplies used to measure electrical activity in nerves, muscles, and critical pathways includes EMG, nerve conduction and evoked potential functionality.
- Polysomnography—Equipment and supplies used to measure a variety of respiratory and physiologic functions to assist in the diagnosis and monitoring of sleep disorders, such as insomnia and obstructive sleep apnea, a condition that causes a person to stop breathing intermittently during sleep.
- Intraoperative monitoring—Equipment and supplies used to monitor the functional integrity of certain neural structures (i.e. nerves, spinal cord and parts of the brain) during surgery. The goal of IOM is to provide real time guidance to the surgeon and anesthesiologist which will reduce the risk to the patient during surgery.
- Transcranial Doppler—Equipment and supplies used to measure blood flow parameters such as velocity in key vascular structures in the brain. This vascular information is helpful in identifying strokes, infarcts and vasospasms.

Neurocritical Care

- Intracranial pressure monitoring—Equipment and catheters used to monitor pressure in the cranium/brain and catheters to drain cerebrospinal fluid from the brain to aid in hydrocephalus and traumatic brain injury cases.

Neurosurgery

- Shunts and Dural grafts—Shunts are used to manage the drainage of cerebrospinal fluid from the brain to maintain appropriate levels of CSF when treating hydrocephalus. Dural grafts are used in procedures to repair or substitute a patient's dura mater in the brain.

Diagnostic EEG and Long-term Monitoring

We design, manufacture, and market a full line of instruments and supplies used to help diagnose the presence of seizure disorders and epilepsy, look for causes of confusion, evaluate head injuries, tumors, infections, degenerative diseases, and metabolic disturbances that affect the brain, and assist in surgical planning. This type of testing is also done to diagnose brain death in comatose patients. These systems and instruments work by detecting, amplifying, and recording the brain's electrical impulses, as well as other physiological signals needed to support clinical findings. Routine clinical EEG recording is done by placing electrodes on a patient's scalp over various areas of the brain to record and detect patterns of activity and specific types of electrical events. EEG technologists perform the tests, and neurologists, neurophysiologists and epileptologists review and interpret the results.

Routine outpatient clinical EEG testing is performed in hospital neurology laboratories, private physician offices, and in ambulatory settings such as the patient's home, providing physicians with a clinical assessment of a patient's condition. Long-term inpatient monitoring of EEG and behavior (LTM) is used to determine complex treatment plans, and for patients with seizures that do not respond to conventional therapeutic approaches, surgical solutions may be appropriate. Patients suffering from severe head trauma and other acute conditions that may affect the brain are monitored in ICUs. In addition, research facilities use EEG equipment to conduct research on humans and laboratory animals.

Global Neuro-Diagnostic Services ("GND") which we acquired in early 2015, provides in-home ambulatory EEG monitoring. GND works with physicians and hospitals to provide superior care and testing services to its patients. Upon receiving a physician referral, GND provides program services in the patient's home, professional oversight throughout the study and preliminary report generation for physician review. GND has received accreditation by The Joint Commission as a home EEG testing services company and also has achieved the American Board of Registered Electroencephalographic and Evoked Potential Technologists (ABRET) Laboratory Accreditation in routine EEG services. GND is a leader in EEG testing services because of our focus on meeting the most stringent quality standards and providing the highest quality patient care.

Diagnostic Electroencephalograph Monitoring Product Lines

Our EEG diagnostic monitoring product lines for neurology consist of signal amplifiers, workstations to capture and store synchronize video and EEG data, and proprietary software. These products are typically used in concert, as part of an EEG "system" by the neurology/neurophysiology department of a hospital or clinic to assist in the diagnosis and monitoring of neurological conditions.

NeuroWorks; Coherence; NicoletOne; Twin. Our EEG Systems include a broad range of products, from software licenses and ambulatory monitoring systems to advanced laboratory systems with multiple capabilities for EEG, ICU monitoring, long-term monitoring of up to 256 channels, and physician review stations with quantitative EEG analysis capabilities.

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- Stellate/Gotman Spike and Seizure; GridView; NicoletOne Trends. Our proprietary spike and seizure detection algorithm detects, summarizes, and reports EEG events that save health care professionals time by increasing the speed and accuracy of interpretation. GridView is a tool that allows the clinician to correlate EEG patterns with electrode contacts on a 3D view of the patient brain using magnetic resonance ("MR") or computed tomography ("CT") images, thus enabling the visualization and annotation of the brain surface and internal structures involved in the diagnosis of epilepsy. NicoletOne Trends provides a comprehensive set of EEG analysis algorithms that are used to generate compressed trends of large amounts of data to assist in the clinical evaluation and data review process.
- Proprietary Signal Amplifiers. Our proprietary signal amplifiers function as the interface between the patient and the computer. The headbox connects electrodes attached to the patient's head to our EEG monitoring systems. Our proprietary amplifier products are sold for a wide variety of applications under the following brand names: Xltek, Trex, EEG32U, EMU40EX, Brain Monitor, Quantum, Schwarzer EEG, Nicolet v32 and v44 models, C series and Nicolet Wireless 32- and 64- channel amplifiers.
- Nicolet Cortical Stimulator. This product is our proprietary device that provides cortical stimulation to the brain during functional brain mapping either before or during surgery to help the surgeon protect the eloquent parts of the brain. The device can be used as a standalone unit or with the fully integrated NicoletOne software that supports control of the device from the software, automated mapping and comprehensive report generation.
- Supplies. We also manufacture and market a full line of proprietary EEG needles and other supplies used in the electroencephalography field.
- Global Neuro-Diagnostic Services. GND provides ambulatory EEG services with and without video in the patient's home. Other services such as Remote Monitoring, ICU monitoring, Virtual EMU monitoring and Detailed Video EEG Technical Descriptions with cloud-based test results are also provided. Our services are specifically designed to partner with hospitals and physicians to improve efficiency, results, and turn-around time, and to reduce costs.

Electrodiagnostic Monitoring

Our electrodiagnostic systems include EMG, nerve conduction ("NCS"), and often evoked potential ("EP") functionality. EMG and NCS involve the measurement of electrical activity of muscles and nerves both at rest and during contraction. Measuring the electrical activity in muscles and nerves can help diagnose diseases of the peripheral, central nervous system or musculature system. An electromyogram is done to determine if there is any disease present that effects muscle tissue, nerves, or the junctions between nerve and muscle (neuromuscular junctions). An electromyogram can also be used to diagnose the cause of weakness, paralysis, and muscle twitching, and is also used as a primary diagnosis for carpal tunnel syndrome, which is the most frequently encountered peripheral compressive neuropathy. EMG is also used for clinical applications of botox to relieve muscle spasm and pain. We market both the clinical system and the needles used for these procedures.

In addition to EMG and NCS functionality, many of our Electrodiagnostic systems also include EP. Evoked potentials are elicited in response to a stimulus. These evoked potentials can come from the sensory pathways (such as hearing and visual) or from the motor pathways. An examination tests the integrity of these pathways including the associated area of the brain. Sophisticated amplifiers are required to recognize and average evoked potential EMG and NCS signals.

Electrodiagnostic Product Lines

- Dantec Keypoint. The Dantec Keypoint EMG and EP family of products features amplifiers, stimulators, and strong signal quality. The Keypoint is used for advanced neurodiagnostic applications such as single fiber EMG, visual and auditory evoked potentials, and in routine nerve conduction studies. The Keypoint system is also available in a portable laptop configuration.
- Dantec Clavis. The Dantec Clavis device is a hand-held EMG and current stimulation device that provides muscle and nerve localization information to assist with medication and botox injections. In conjunction with the Bo-ject hypodermic needle and electrodes, physicians can better localize the site of the injection.
- Nicolet EDX family. A hardware platform of amplifiers, base control units, stimulators and hand-held probes that are sold with Nicolet brand proprietary software. These mid to high end systems have full functionality, strong signal quality, and flexibility. They include EMG, NCS, EP's, IOM and advanced data analysis features.
- Nicolet VikingQuest. An EMG system for the mid-range market. The device runs on our proprietary software.

- Natus Neurology UltraPro. This is a low to mid-level product that offers high quality data collection using the Dantec Keypoint amplifiers and the proprietary Natus EMG software.

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- Supplies. We also manufacture and market a full line of proprietary EMG needles and other supplies used in the electrodiagnostic field.

Diagnostic Polysomnography Monitoring

PSG, which involves the analysis of respiratory patterns, brain electrical activity and other physiological data, has proven critical for the diagnosis and treatment of sleep-related diseases such as apnea, insomnia, and narcolepsy. A full polysomnographic sleep study entails a whole-night recording of brain electrical activity, muscle movement, airflow, respiratory effort, oxygen levels, electrical activity of the heart, and other parameters. In some studies patients are fitted with treatment devices using Positive Airway Pressure technology ("PAP") during the sleep study and the proper settings for the treatment devices are determined. In many cases, the sleep study is performed in the patient's home.

Diagnostic PSG Monitoring Product Lines

We market dedicated diagnostic PSG monitoring products that can be used individually or as part of a networked system for overnight sleep studies to assist in the diagnosis of sleep disorders. Additionally we offer products that are specifically designed to be used in the patient's home. Some of our EEG systems described above can also be configured to perform diagnostic PSG monitoring. These products include software licenses, ambulatory monitoring systems, and laboratory systems that combine multiple capabilities, including EEG monitoring, physician review stations, and quantitative PSG analysis capabilities.

- Embla REMlogic, and Sandman; Xltek SleepWorks; Schwartzer Coherence; and Grass Twin. Our diagnostic PSG systems capture and store all data digitally. The systems enable users to specify rules and personal preferences to be used during analysis, summarizing the results graphically and incorporating them in detailed reports.
- Proprietary Amplifiers. Our data acquisition systems incorporate recent developments in superior amplifiers for sleep analysis and are sold under brand names such as Embla and MPR, Xltek Trex and SleepWorks, and Schwarzer. Our amplifiers are used in both hospitals and stand-alone clinics. In addition to exceptional signal quality, headboxes include various tools such as built-in oximeters and controls to allow the user to start and stop a study or perform electrode impedance testing either at the patient's bedside or from the monitoring room.
- Practice Management Software. Our Embla Enterprise Practice Management Software provides a solution for institutions as well as private labs and physicians for patient scheduling, inventory control, staff scheduling, data management, business reports and billing interfaces. Enterprise may be used in conjunction with many Natus PSG products.
- PMSD. PastuerMatic Sterile Dryers are used in hospital and clinic sleep laboratories to provide non-chemical sterilization of products used in sleep therapy. An environmentally friendly approach to disinfection, the PMSD products offer cost effective sterilization for sleep labs of all sizes.
- Supplies. We also market a broad line of supplies, disposable products and accessories for the PSG laboratory.

Intraoperative Monitoring

Intraoperative monitoring ("IOM") is the use of electrophysiological methods such as EEG, EMG, and evoked potentials to monitor the functional integrity of certain neural structures (i.e. nerves, spinal cord and parts of the brain) during surgery. The purpose of IOM is to reduce the risk to the patient's nervous system, and/or to provide functional guidance to the surgeon and anesthesiologist during surgery.

Diagnostic IOM Product Lines

- Xltek Protektor. The Protektor system is an IOM system that provides medical professionals with all information necessary to make immediate and critical surgical decisions. The system combines flexibility with multi-modality allowing full coverage of IOM techniques. The Protektor comes in 16 or 32 channel options.
- Nicolet Endeavor. A dedicated multi-modality IOM system that offers complete flexibility in work flow and test protocols.
- Nicolet EDX. These combo systems are used in IOM applications where a smaller number of channels is sufficient. This approach is primarily followed in international markets that utilize the integrated system approach that allows for the use of the system in EMG clinical applications as well as in IOM applications.

Transcranial Doppler

Transcranial Doppler is the use of Doppler ultrasound technology to measure blood flow parameters such as velocity in key vascular structures in the brain. A Doppler probe is held against a specific location on the head and the device displays the information in both visual and auditory formats. This technology is used as preventative screening, diagnosis, and monitoring of various diseases and brain injuries such as stroke, embolism, reduced blood flow during surgery, and vasospasm.

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Transcranial Doppler Products

- Sonara and Sonara Tek. The Sonara is an embedded system that is a self-contained unit that includes a CPU, data display screen and speakers. It uses proprietary software with a touch screen menu. Sonara Tek is a small portable device used with a laptop. Both models enable the uploading of images to the hospital information system.

Neurocritical Care Products

Intracranial pressure and temperature provide insight into the health of the brain, especially in patients experiencing a traumatic brain injury, other traumatic, ischemic or hemorrhagic incidents, or a major neurosurgical procedure. A small hole is drilled into the brain to allow insertion of a catheter that contains a pressure/temperature or pressure transducer that allows continuous monitoring of brain temperature and/or pressure.

- Camino ICP Monitor. The Camino ICP Monitor is a compact, portable device that provides tools for continuously determining and monitoring intracranial pressure and intracranial temperature. It has a touch screen interface, physiological alarms, and can output data to either a patient bedside monitor or to remote media types via a USB drive. These systems are used in the intensive care unit (ICU) environment.

- Camino Catheters. Camino catheters use either fiber optic or strain gauge technology to measure either pressure and temperature or just pressure. Camino catheters measure their respective values at the tip of the catheter which eliminates the need for a fluid-filled system that uses an external transducer to measure pressure. The Camino Flex Ventricular Intracranial Pressure Monitoring Kit has a catheter that allows both the measurement of ICP and CSF drainage.

Neurosurgical Products

During brain surgery, the dura of the brain may need to be repaired or replaced. A dural graft is used to serve as a dural substitute for the surgical repair of dural defects. Moreover, brain surgery is performed to place shunts in the brain to help drain excess CSF either externally or into the body for reabsorption to help treat hydrocephalus.

- DURAFORM. DURAFORM Dural Graft Implant is an absorbable collagen matrix to provide a soft, conforming, and easy to use dural substitute. This product is used in the operating room to provide repair of the dura mater and promote dural healing.
- Shunts. Shunts are used in the operating room to provide solutions for hydrocephalus.

Newborn Care

Our newborn care business unit represents a line of products and services that are used by healthcare practitioners in the diagnosis and treatment of common medical ailments in newborn care, as well as other products used in newborn through adult populations, including hearing diagnostics and balance & mobility systems. Our products are organized in nine modalities and include:

- Newborn Hearing Screening—Products used to screen hearing in newborns.
- Diagnostic Hearing Assessment—Products used to screen for or diagnose hearing loss, or to identify abnormalities affecting the peripheral and central auditory nervous systems in patients of all ages.
- Balance and Mobility—Systems to diagnose and assist in treating balance disorders in an evidence-based, multidisciplinary approach.
- Thermoregulation—Products used to control the newborn environment including incubators and warmers.
- Jaundice Management—Products used to treat jaundice, the single largest cause for hospital readmission of newborns in the U.S.
- Newborn Brain Injury—Products used to diagnose the severity of brain injury, monitor the effectiveness of drug therapies, detect seizure activity and monitor general neurological status.
- Vision—Imaging systems and products used in the advanced science and practice of neonatal and pediatric retinal imaging.
- Essentials—Products used in the everyday operation of neonatal intensive care unit (“NICU”) and well-baby nursery department within the hospital environment.
- NICVIEW—Live streaming video for families with babies in the NICU that enables family members and approved friends to see the new baby, 24/7, from anywhere in the world - from any device, within a secured environment.

Newborn Hearing Screening

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Hearing impairment is the most common treatable chronic disorder in newborns, affecting as many as five babies out of every 1,000 newborns. It is estimated that 20,000 hearing-impaired babies are born in the United States ("U.S.") every year, and as many as 60,000 more in the rest of the developed world. Until the introduction of universal newborn hearing screening programs, screening was generally performed only on those newborns that had identifiable risk factors for hearing impairment. However, screening only those newborns with risk factors for hearing impairment overlooks approximately half of newborns with some level of hearing impairment.

Early identification of hearing impairment and early intervention has been shown to improve language development significantly. Undetected hearing impairment often results in the failure to learn, process spoken language, and speak.

Newborn Hearing Screening Techniques

The two traditional technologies used to screen newborns and infants for hearing impairment are auditory brainstem response and otoacoustic emissions.

Auditory brainstem response ("ABR"). ABR technology is the most accurate and comprehensive method for screening and diagnosing hearing impairment. ABR technology is based on detecting the brain's electric impulses resulting from a specific auditory stimulus.

Otoacoustic emission ("OAE"). OAEs are sounds created by the active biomechanical processes within the sensory cells of the cochlea. They occur both spontaneously and in response to acoustic stimuli. OAE screening uses a probe placed in the ear canal to deliver auditory stimuli and to measure the response of the sensory cells with a sensitive microphone.

Newborn Hearing Screening Product Lines

Our newborn hearing screening product lines consist of the ALGO, ABaer, AuDX, and Echo-Screen newborn hearing screeners. These hearing screening products utilize proprietary signal detection technologies to provide accurate and non-invasive hearing screening for newborns and are designed to detect hearing loss at 30 or 35 dB nHL or higher. Each of these devices is designed to generate a PASS or REFER result.

- ALGO 5 and 3i Newborn Hearing Screeners. These AABR devices deliver thousands of soft audible clicks to the newborn's ears through sound cables and disposable earphones connected to the instrument. Each click elicits an identifiable brain wave, which is detected by disposable electrodes placed on the head of the child and analyzed by the screening device. These devices use our proprietary AABR signal detection algorithm.
- ABaer Newborn Hearing Screener. The ABaer, which is a PC-based newborn hearing screening device, offers a combination of AABR, OAE, and diagnostic ABR technologies in one system.
- Echo-Screen. Our hand-held Echo-Screen products provide a choice or combination of proprietary ABR and OAE technologies that can also be used for children through adults. The Echo-Screen III device is a compact, multi-modality handheld hearing screener that is tightly integrated with audible Lite Hearing Screening Data Management.

Hearing Screening Supply Products

For infection control, accuracy, and ease of use, the supply products used with our newborn hearing screening devices are designed as single-use, disposable products. Each screening supply product is designed for a specific hearing screening technology.

- ABR Screening Supply Kits. Each ABR screen is carried out with single-use earphones and electrodes, which are alcohol and latex-free. The adhesives used in these supply products are specially formulated for use on the sensitive skin of newborns. To meet the needs of our customers we offer a variety of packaging options. Echo-Screen and ABaer offer the choice of either an earphone or use of ear tips for perform ABR screening.
- OAE Supply Products. Each OAE screen is carried out with single-use ear tips that are supplied in a variety of sizes and packaging options.

Peloton Screening Services

Peloton Screening Services is a nationwide service offering that provides hearing screening services to hospital-based customers. The platform of the program meets the objectives of today's healthcare environment by aligning with family centered care principals and Joint Committee on Infant Hearing (JCIH) recommendations. Peloton provides all aspects of the program: equipment, supplies, professional oversight by nurses or audiologists, screening personnel, case management, quality review & oversight, and state data management reporting.

Balance and Mobility

Balance is an ability to maintain the line of gravity of the body within the base of support with minimal postural sway. Maintaining balance requires coordination of input from multiple sensory systems including the vestibular (i.e. inner ear), somatosensory (i.e. touch, temperature, body position), and visual systems. Balance disorders impact a large percentage of the

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population in all age ranges from children to adults. Common complaints include dizziness, vertigo, or an inability to walk or drive a vehicle, which can all lead to the curtailment of daily life activities. These symptoms are exacerbated in elderly patients and can result in falls, orthopedic injuries, and sometimes death.

Balance and Mobility Products

Our principal balance and mobility products are sold under the Neurocom brand:

- EquiTest. Proprietary protocols in the EquiTest family of devices objectively quantify and differentiate among sensory, motor, and central adaptive impairments to balance control. This approach is commonly referred to as computerized dynamic posturography ("CDP"). CDP is complementary to clinical tests designed to localize and categorize pathological mechanisms of balance disorders in that it can identify and differentiate the functional impairments associated with the identified disorders.
- Balance Master. A family of devices providing objective assessment and retraining of the sensory and voluntary motor control of balance.
- VSR and VSR Sport. The VSR provides objective assessment of sensory and voluntary motor control of balance with visual biofeedback. The VSR Sport is designed specifically for the athletic market as part of a concussion management program. It is portable, easy-to use and offers athletic trainers, sports medicine practitioners, and other sport professionals the data needed to make objective return-to-play decisions without relying on subjective evaluation.
- inVision. Our inVision device incorporates a set of proprietary diagnostic tests that quantify a patient's ability to maintain visual acuity and stable gaze while actively moving the head. The objective information enables the clinician to assess the patient's ability to live and move safely in a dynamic world and to participate in daily-life functions such as driving, walking through a grocery store, or actively engaging in family activities.

Thermoregulation

Incubators offer a controlled, consistent microenvironment for thermoregulation and humidification within a closed system to maintain skin integrity and body temperature.

Thermoregulation products

- Incubators. Our NatalCare incubators, including those used for transporting infants, provide high thermal performance with a double wall design, easy to use control panels and features such as improved weighing functionality with automatic centering and an electronic tilting mechanism. The easy to clean, smooth design, and choice of options make these customizable incubators appropriate for different use environments.

Jaundice Management

The American Academy of Pediatrics estimates that each year 60% of the approximately four million newborns in the U.S. become jaundiced. According to the Journal of the American Medical Association, neonatal jaundice is the single largest cause for hospital readmission of newborns in the U.S., and accounts for 50% of readmissions. Because of the serious consequences of hyperbilirubinemia, the American Academy of Pediatrics recommends that all newborns be closely monitored for jaundice and that phototherapy is the standard of care for the treatment of hyperbilirubinemia. The guidelines further recommend that all nurseries have the necessary equipment to provide intensive phototherapy, and specifically recommend the use of the "blue" light as incorporated into our neoBLUE products.

Jaundice Management Products

- neoBLUE Product Family. This product line consists of our neoBLUE, neoBLUE Mini, neoBLUE Cozy, neoBLUE Compact and neoBLUE blanket devices, which utilize light emitting diodes ("LEDs") to generate a high-intensity, narrow spectrum of blue light that is clinically proven to be most effective in the treatment of newborn jaundice. Our neoBLUE phototherapy devices emit significantly less ultraviolet light and heat than conventional phototherapy devices, reducing the risk of skin damage and dehydration for infants undergoing treatment. Because of the high intensity of these lights, the treatment time associated with phototherapy is reduced.
- Medix MediLED Product Family. A full-size, free-standing LED phototherapy system and a MediLED mini light to be used on top of an incubator or attached to the Medix radiant warmer. The MediLED incorporates an array of blue and white LEDs, while the mini system utilizes blue "super LEDs" that provide high intensity phototherapy.

Newborn Brain Injury

For many years, newborn infants admitted to the NICU of a hospital have been routinely monitored for heart activity, temperature, respiration, oxygen saturation, and blood pressure. Recently it has also been considered important to monitor brain activity. A

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cerebral function monitor, utilizing amplitude-integrated EEGs ("aEEGs"), is a device for monitoring background neurological activity. Our simplified aEEG devices introduced over ten years ago, allow neonatologists and nurses to set-up and interpret basic neurological traces without neurology oversight.

Newborn Brain Injury Products

Our newborn brain injury products record and display parameters that the neonatologist uses to assess and monitor neurological status in the newborn. These devices continuously monitor and record brain activity, aiding in the detection and treatment of HIE and seizures. The devices also monitor the effects of drugs and other therapies on brain activity and improve the accuracy of newborn neurological assessments. They are used with electrodes attached to the head of the newborn to acquire an EEG signal that is then filtered, compressed, and displayed graphically on the device or as a hardcopy printout. The monitors have touch screens for easy navigation and onscreen keyboards for data entry at the bedside.

- Olympic Brainz Monitor. The Olympic Brainz Monitor is our latest generation Cerebral Function Monitor. The device can be used in single-channel, two-channel or three-channel modes to continuously monitor and record brain activity.

Vision

Our RetCam devices incorporate a camera combined with proprietary imaging software that are used to diagnose and monitor a range of ophthalmic maladies in premature infants. RetCam is the market leader in NICU ophthalmic imaging used in the detection of retinopathy of prematurity in newborns.

Essentials

The Newborn Care Essentials products include such items as: Biliband® eye protectors, GumDrop® pacifiers, MiniMuffs® noise attenuators, NeatNick® heal lancets, Olympic® Circumstraint, Olympic® Papoose Boards, Olympic® Smart Scales, OraSwab, Save the Gonads® x-ray protection devices and SugarPlum® glucose lancets.

NICVIEW

The video streaming solution NICVIEW offers parents and families secured access to a live video stream of their baby. For hospitals, the system offers a step into family centered care.

Otometrics

Otometrics provides hearing diagnostic, hearing aid fitting and balance instrumentation and software solutions to hearing and balance care professionals worldwide. For more than 50 years, Otometrics has been helping hearing and balance care professionals succeed in improving the quality of life for their clients and patients by delivering expert knowledge, reliable solutions and services and trusted partnerships.

Otometrics develops, manufactures and markets computer-based audiological, otoneurologic and vestibular instrumentation in more than 80 countries. The Otometrics solutions portfolio covers key application areas within hearing assessment, hearing screening, hearing instrument fitting and balance assessment. Many of the Otometrics hearing and balance care solutions are industry-firsts and de-facto standards within the hearing care industry and used by thousands of clinicians around the world.

As an independent provider of hearing care diagnostic solutions, Otometrics works closely with leading hearing aid manufacturers to develop new solutions within hearing assessment and, hearing aid fitting.

Hearing Assessment

From otoacoustic emissions (OAE) and immittance screening to advanced audiological testing, Otometrics offers a wide range of flexible devices and PC-based solutions that are designed to screen, test and assess patients of all ages. Otometrics hearing assessment solutions offer functionality to support basic audiometric testing to advanced tinnitus and pediatric hearing assessment. Hearing care solutions by Otometrics help streamline the hearing screening and assessment process making it easier and convenient for the professional and the patient. Otometrics also

manufacturers and markets a broad line of supplies and disposable products and accessories for hearing assessment.

Hearing Instrument Fitting and Verification

Otometrics' fitting solutions help professionals manage the entire hearing aid fitting process - from fitting and verifying the hearing aid to patient counseling and follow up. Used by thousands of hearing aid dispensers, audiologists and

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clinicians around the world, Otometrics fitting solutions support otoscopy, audiometry, hearing aid testing and programming, fitting and verification with wireless design and binaural fitting capability. Otometrics fitting solutions are PC-based, Noah-compatible and supported by integrated audiometric software that helps to streamline the fitting process for greater efficiency and patient satisfaction. Otometrics also manufacturers and markets a broad line of supplies and disposable products and accessories for hearing instrument fitting and verification.

Audiometric Sound Rooms

Otometrics manufacturers and markets a wide range of sound room solutions specifically designed for audiometric testing. Otometrics Genie sound rooms are built to deliver a quality audiometry testing environment while providing efficiency for staff and comfort for patients. Certified staff help in the planning, choice and installation of each sound room so it becomes an integrated part of the clinic, equipment and workflow. Otometrics Genie sound rooms deliver unique features such as the Cam-Lock assembly system, high performance/low profile floor, window in the door, and excellent attenuation and acoustic capabilities to ensure acoustic performance, efficient workflow and maximum testing comfort.

Balance Assessment

Professionals who evaluate patients with balance disorders use Otometrics' vestibular diagnostic and ENG/VNG (elecrtonystagmography/videonystamography) systems and services. These solutions are used by audiologists, otolaryngologists, otologists and neurologists for identifying auditory and vestibular abnormalities. Otometrics balance care solutions are compact and include the world's first portable, gold standard video head impulse test (“vHIT”) and offer modular functionality to support vHIT, video frenzel, postional, oculomotor and SHIMP (suppression head impulse) testing. Otometrics also manufacturers and markets a broad line of supplies, disposable face cushions, and accessories for balance assessment.

Segment and Geographic Information

We operate in one reportable segment, which we have presented as the aggregation of our neurology, newborn care, and otometrics product families. Within this reportable segment we are organized on the basis of the healthcare products and services we provide which are used for the screening, detection, treatment, monitoring and tracking of common medical ailments in newborn care, hearing impairment, neurological dysfunction, epilepsy, and sleep disorders.

Our end-user customer base includes hospitals, clinics, laboratories, physicians, nurses, audiologists, and governmental agencies. Most of our international sales are to distributors, who in turn resell our products to end users or sub-distributors.

Information regarding our sales and long-lived assets in the U.S. and in countries outside the U.S. is contained in Note 19—Segment, Customer and Geographic Information of our Consolidated Financial Statements included in this report and is incorporated in this section by this reference.

Revenue by Product Family and Product Category

For the years ended December 31, 2017, 2016 and 2015, revenue from our product families as a percent of total revenue was approximately as follows:

	Year Ended December 31,		
	2017	2016	2015
Neurology	48 %	62 %	63 %
Newborn Care	29 %	38 %	37 %
Otometrics	23 %	— %	— %
Total	100 %	100 %	100 %

We also look at revenue as either being generated from sales of Devices and Systems, which are generally non-recurring, or related Supplies and Services, which are generally recurring. The products that are attributable to these categories are described above. Revenue from Devices and Systems, Supplies and Services as a percent of total revenue for the years ending December 31, 2017, 2016 and 2015 is as follows:

	Year Ended December 31,		
	2017	2016	2015

Devices and Systems	67	%	63	%	64	%
Supplies	26	%	28	%	29	%
Services	7	%	9	%	7	%
Total	100	%	100	%	100	%

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In 2017, 2016 and 2015, no single end-user customer comprised more than 10% of our revenue.

Backlog

For the years ended December 31, 2017, 2016 and 2015, backlog was approximately as follows (in thousands):

	Year Ended December 31,		
	2017	2016	2015
Backlog	$13,849	$10,555	$9,359

Marketing and Sales

Marketing

Our marketing strategy differentiates our products by their level of quality, performance, and customer benefit. We educate customers worldwide about our products through trade conferences and direct presentations to healthcare professionals.

Domestic Direct and Distributor Sales

We sell our products in North America primarily through a direct sales organization. We believe this direct sales organization allows us to maintain a higher level of customer service and satisfaction than would otherwise be possible by other distribution methods. We also sell certain products under private label and distribution arrangements.

For the years ended December 31, 2017, 2016 and 2015, domestic revenue as a percent of total revenue was approximately as follows:

	Year Ended December 31,		
	2017	2016	2015
Domestic revenue	54.1 %	65.6 %	64.4 %

International Direct and Distributor Sales

We sell some of our products outside the U.S. through direct sales channels in Australia, Canada, China, Denmark, France, Germany, Italy, the Netherlands, New Zealand, Nordics (Finland, Sweden, Norway) Spain, United Kingdom and parts of Latin America; we sell other products in those regions and into more than 100 other countries through a distributor sales channel.

For the years ended December 31, 2017, 2016 and 2015, international revenue as a percent of total revenue was approximately as follows:

	Year Ended December 31,		
	2017	2016	2015
International revenue	45.9 %	34.4 %	35.6 %

We sell products to our distributors under substantially the same terms as sales through our direct sales channels. Terms of sales to international distributors are generally “ex works,” where title and risk of loss are assumed by the distributor at the shipping point. Distributors are generally given exclusive rights in their territories to purchase products from Natus and to resell to end users or sub-distributors. Our distributors typically perform marketing, sales, and technical support functions in their respective markets. Each distributor may sell Natus products to their customer directly, via other distributors or resellers, or both. We actively train our distributors in product marketing, selling, and technical service techniques.

Seasonality in Revenue

We experience seasonality in our revenue. Demand for our products is historically higher in the second half of the year compared to the first. Our seasonality results from the purchasing habits of our hospital-based customers, whose purchases are often governed by calendar year budgets.

Group Purchasing Organizations

More than 90% of the hospitals in the U.S. are members of group purchasing organizations (“GPO”s), which negotiate volume purchase agreements for member hospitals, group practices, and other clinics.

For the years ended December 31, 2017, 2016 and 2015, direct purchases by GPO members as a percent of revenue were approximately as follows:

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	Year Ended December 31,		
	2017	2016	2015
Direct purchases by GPO members	14.5 %	12.3 %	9.3 %

Third-Party Reimbursement

In the U.S., healthcare providers generally rely on third-party payors, including private health insurance plans, federal Medicare, state Medicaid, and managed care organizations, to reimburse all or part of the cost of the procedures they perform. Third-party payors can affect the pricing or the relative attractiveness of our products by regulating the maximum amount of reimbursement these payors provide for services utilizing our products. In addition, our Peloton hearing screening service and GND services are dependent on third-party payors to reimburse us for services provided.

Customer Service and Support

We generally provide a one-year warranty on our medical device products. We also sell extended service agreements on our medical device products. Service, repair, and calibration services for our domestic customers are provided by Company-owned service centers and our field service specialists. Service for international customers is provided by a combination of Company-owned facilities and vendors on a contract basis.

Manufacturing

Other companies manufacture a significant portion of the components used in our products; however, we perform final assembly, testing, and packaging of many of the devices ourselves to control quality and manufacturing efficiency. We also use contract vendors to manufacture some of our disposable supply and medical device products. We perform regular quality assessments of these vendors, which include on-site quality audits.

We purchase materials and components from qualified suppliers that are subject to our quality specifications and inspections. We conduct quality audits of our key suppliers, several of which are experienced in the supply of components to manufacturers of finished medical devices, or supplies for use with medical devices. Most of our purchased components are available from more than one supplier.

Our manufacturing, service, and repair facilities are subject to periodic inspection by local and foreign regulatory authorities. Our quality assurance system is subject to regulation by the U.S. Food and Drug Administration (“FDA”) and other government agencies. We are required to conduct our product design, testing, manufacturing, and control activities in conformance with the FDA’s quality system regulations and to maintain our documentation of these activities in a prescribed manner. In addition, our production facilities have received International Organization for Standardization (“ISO”) 13485 certification. ISO 13485 certification standards for quality operations have been developed to ensure that medical device companies meet the standards of quality on a worldwide basis. We have also received the EC Certificate pursuant to the European Union Medical Device Directive 93/42/EEC, which allows us to place a CE mark on our products.

Research and Development

We are committed to introducing new products and supporting current product offerings in our markets through a combination of internal as well as external efforts that are consistent with our corporate strategy.

Internal product development capabilities. We believe that product development capabilities are essential to provide our customers with new product offerings. We plan to leverage our core technologies by introducing product line extensions as well as new product offerings.

Partnerships that complement our expertise. We continue to seek strategic partners in order to develop products that may not otherwise be available to us. By taking advantage of our core competencies, we believe that we can bring products to market in an efficient manner and leverage our distribution channels.

New opportunities through technology acquisition. We continue to evaluate new, emerging, and complementary technologies in order to identify new product opportunities. With our knowledge of our current markets we believe that we can effectively develop technologies into successful new products.

Our research and development expenses were $51.8 million or 10.3% of total revenue in 2017, $33.4 million or 8.8% of total revenue in 2016, and $30.4 million or 8.1% of total revenue in 2015.

Proprietary Rights

We protect our intellectual property through a combination of patent, copyright, trade secret, and trademark laws. We attempt to protect our intellectual property rights by filing patent applications for new features and products we develop. We enter into confidentiality or license agreements with our employees, consultants, and corporate partners, and seek to control access to our

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intellectual property, distribution channels, documentation, and other proprietary information. However, we believe that these measures afford only limited protection.

The intellectual rights to some of the original patents for technology incorporated into our products are now in the public domain. However, we do not consider these patents, or any currently viable patent or related group of patents, to be of such importance that their expiration or termination would materially affect our business.

We capitalize the cost of purchased technology and intellectual property, as well as certain costs incurred in obtaining patent rights, and amortize these costs over the estimated economic lives of the related assets.

We have several registered trademarks and service marks. Our marks are pending or registered trademarks in the United States and several foreign countries. We intend to file for additional trademarks to strengthen our trademark rights, but we cannot be certain that our trademark applications will result in registration or that our trademarks will be enforceable.

Competition

We sell our products in competitive and rapidly evolving markets. We face competition from other companies in all of our product lines. Our competitors range from small privately-held companies to multinational corporations and their product offerings vary in scope and breadth. We do not believe that any single competitor is dominant in any of our product lines.

We derive a significant portion of our revenue from the sale of disposable supplies that are used with our medical devices. In the U.S., we sell our supply products in a mature market and we expect that our products could face increasing competition, including competitors offering lower prices, which could have an adverse effect on our revenue and profit margins.

Integra LifeSciences continues to offer products and services that compete with the neurosurgery product lines we acquired in the Integra Asset Acquisition, and we expect significant competition from Integra LifeSciences as we seek to maintain and expand this business.

We believe the principal factors that will draw clinicians and other buyers to our products, include:

- Level of specificity, sensitivity, and reliability of the product;
- Time required to obtain results with the product, such as to test for or treat a clinical condition;
- Relative ease of use of the product;
- Depth and breadth of the products features;
- Quality of customer support for the product;
- Frequency of product updates;
- Extent of third-party reimbursement of the cost of the product or procedure;
- Extent to which the products conform to standard of care guidelines; and
- Price of the product.

We believe that our primary competitive strength relates to the functionality and reliability of our products. Different competitors may have competitive advantages in one or more of the categories listed above and they may be able to devote greater resources to the development, promotion, and sale of their products.

Government Regulation

FDA’s Premarket Clearance and Approval Requirements

Unless an exemption applies, the medical devices we sell in the United States, must first receive one of the following types of FDA premarket review authorizations under the Food, Drug, and Cosmetics Act, as amended:

- Clearance via Section 510(k); or
- Premarket approval via Section 515 if the FDA has determined that the medical device in question poses a greater risk of injury.

The FDA’s 510(k) clearance process usually takes from three to six months, but can take longer. The process of obtaining premarket approval via Section 515 is much more costly, lengthy, and uncertain. Premarket approval generally takes from one to three years, but can take longer. We cannot be sure that the FDA will ever grant either 510(k) clearance or premarket approval for any product we propose to market in the United States.

The FDA decides whether a device must undergo either the 510(k) clearance or premarket approval process based upon statutory criteria. These criteria include the level of risk that the FDA perceives to be associated with the device and a determination

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of whether the product is a type of device that is substantially equivalent to devices that are already legally marketed. The FDA places devices deemed to pose relatively less risk in either Class I or Class II, which requires the manufacturer to submit a premarket notification requesting 510(k) clearance, unless an exemption applies. The premarket notification under Section 510(k) must demonstrate that the proposed device is substantially equivalent in intended use and in safety and effectiveness to a previously cleared 510(k) device or a device that was in commercial distribution before May 28, 1976 for which the FDA has not yet called for the submission of premarket approval applications.

The FDA places devices deemed to pose the greatest risk, such as life-sustaining, life-supporting or implantable devices, or devices deemed to be not substantially equivalent to a predicate device, in its Class III classification. The FDA requires these devices to undergo the premarket approval process via Section 515 in which the manufacturer must prove the safety and effectiveness of the device. A premarket approval application must provide extensive pre-clinical and clinical trial data.

The FDA may require results of clinical trials in support of a 510(k) submission and generally requires clinical trial results for a premarket approval application. In order to conduct a clinical trial on a significant-risk device, the FDA requires manufacturers to apply for and obtain, in advance, an investigational-device exemption. The investigational-device exemption application must be supported by appropriate data, such as animal and laboratory testing results. If the FDA and the Institutional Review Boards at the clinical trial sites approve the investigational-device exemption application for a significant-risk device, the manufacturer may begin the clinical trial. An investigational-device exemption approval provides for a specified clinical protocol, including the number of patients and study sites. If the manufacturer deems the product a non-significant risk device, the product will be eligible for more abbreviated investigational-device exemption requirements. If the Institutional Review Boards at the clinical trial sites concur with the non-significant risk determination, the manufacturer may begin the clinical trial.

Most of our products have been cleared by the FDA as Class II devices.

FDA Regulation

Numerous FDA regulatory requirements apply to our products. These requirements include:

- FDA quality system regulations which require manufacturers to create, implement, and follow design, testing, control, documentation, and other quality assurance procedures;
- Medical device reporting regulations, which require that manufacturers report to the FDA certain types of adverse and other events involving their products; and
- FDA general prohibitions against promoting products for unapproved uses.

Class II and III devices may also be subject to special controls applied to them, such as performance standards, post-market surveillance, patient registries, and FDA guidelines that may not apply to Class I devices. We believe we are in compliance with applicable FDA guidelines, but we could be required to change our compliance activities or be subject to other special controls if the FDA changes existing regulations or adopts new requirements.

We are subject to inspection and market surveillance by the FDA to determine compliance with regulatory requirements. If the FDA finds that we have failed to adequately comply, the FDA can institute a wide variety of enforcement actions, including:

- Issuance of a Form 483 citation;
- Fines, injunctions, and civil penalties;
- Recall or seizure of our products;
- Issuance of public notices or warnings;
- Imposition of operating restrictions, partial suspension, or total shutdown of production;
- Refusal of our requests for 510(k) clearance or pre-market approval of new products;
- Withdrawal of 510(k) clearance or pre-market approval already granted; or
- Criminal prosecution.

The FDA also has the authority to require us to repair or replace any misbranded or adulterated medical device manufactured or distributed by us.

Other Regulations

We also must comply with numerous additional federal, state, and local laws relating to matters such as safe working conditions, manufacturing practices, environmental protection, biohazards, fire hazard control, and hazardous substance disposal. We believe we are currently in compliance with such regulations.

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Countries outside of the U.S. regulate medical devices in a manner similar to that of the FDA. Our manufacturing facilities are subject to audit and have been certified to be ISO 13485:2003, Medical Device Directive 93/42/EEC, and CMDCAS compliant, which allows us to sell our products in Canada, Europe, and other territories around the world. All of our manufacturing facilities are subject to inspection by our notified bodies or other competent authorities, and in some cases without advance notice. We plan to seek approval to sell our products in additional countries, while maintaining our current approvals. The time and cost of obtaining new, and maintaining existing, market authorizations from countries outside of North America, and the requirements for licensing products in these countries may differ significantly from FDA requirements.

Employees

On December 31, 2017, we had approximately 1,726 full time employees worldwide. In Argentina, some of our production employees are represented by labor unions and our employees in Germany have established a works council. We have not experienced any work stoppages, and we consider our relations with our employees to be good.

Executives

The following table lists our executive officers and their ages as of March 1, 2018:

Name	Age	Position(s)
James B. Hawkins	62	President and Chief Executive Officer
Jonathan Kennedy	47	Executive Vice President and Chief Financial Officer
D. Christopher Chung, M.D.	54	Vice President Medical Affairs, Quality & Regulatory
Carsten Buhl	44	President & CEO, Otometrics SBU
Leslie McDonnell	45	Vice President and General Manager, Newborn Care
Austin F. Noll, III	54	Vice President and General Manager, Neurology SBU

James B. Hawkins has served as Chief Executive Officer, and as a member of the Board of Directors, since joining Natus in April 2004, and as President from April 2004 through January 2011 and from June 2013 to present. In addition, he currently serves on the Board of Directors for Eldorado Resorts, Inc. and OSI Systems. Prior to joining Natus, Mr. Hawkins was President, Chief Executive Officer and a Director of Invivo Corporation, a developer and manufacturer of multi-parameter vital sign monitoring equipment, and its predecessor, from August 1985 through January 2004. Mr. Hawkins also served as Secretary of Invivo from July 1986 until January 2004. He earned his undergraduate degree in Business Commerce from Santa Clara University and holds a Masters of Business Administration degree from San Francisco State University.

Jonathan A. Kennedy joined Natus as Senior Vice President and Chief Financial Officer in April 2013 and was appointed Executive Vice President and Chief Financial Officer in September 2016. In addition, he currently serves on the Board of Directors for IRadimed Corporation. Before joining Natus, Mr. Kennedy was Senior Vice President and Chief Financial Officer of Intersil Corporation, a global semiconductor manufacturer, since 2009. Prior to that, he was Intersil's Corporate Controller since 2005 and Director of Finance since 2004. Before joining Intersil, Mr. Kennedy held management roles in Finance and Information Technology with Alcon Inc. and Harris Corporation. He holds a Bachelor of Science degree in Business Administration and a Master of Science degree in Accounting from the University of Central Florida. Mr. Kennedy is also a Certified Public Accountant.

D. Christopher Chung, M.D., has served as our Vice President Medical Affairs, Quality and Regulatory since June 2003, and has served as our Vice President Medical Affairs since February 2003. Dr. Chung also served as our Medical Director from October 2000 to February 2003. From 2000 to 2007, Dr. Chung also served as a Pediatric Hospitalist at the California Pacific Medical Center in San Francisco. From 1997 to 2000, Dr. Chung trained as a pediatric resident at Boston Children's Hospital and Harvard Medical School. From 1986 to 1993, Dr. Chung worked as an Engineer at Nellcor, a medical device company. Dr. Chung holds a Bachelor of Arts degree in Computer Mathematics from the University of Pennsylvania and a Doctor of Medicine degree from the Medical College of Pennsylvania-Hahnemann University School of Medicine. He is board certified in Pediatrics and is a Fellow of the American Academy of Pediatrics.

Carsten Buhl joined Natus in February 2018 and is acting as President for Natus' strategic business unit Otometrics. Mr. Buhl has more than 15 years experience in the medical device industry and has a proven track record within commercial execution and global leadership positions. Prior to joining natus, Mr. Buhl acted as Executive Vice President and Chief Commercial Officer at Ambu, a successful medtech company within the fields of anesthesia, patient monitoring and emergency care. Previously, Mr. Buhl held various management positions at GN Hearing, which is one of the world's largest providers of hearing instruments, most recently as Senior Vice President of Europe and Strategic Accounts. Mr. Buhl holds a Master of Law from Copenhagen University and an E*MBA from SIMI/CBS Copenhagen supplemented by graduate diplomas in Finance and Accounting from CBS Copenhagen.

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Leslie McDonnell joined Natus in February 2018 as the Vice President and General Manger, Newborn Care. Ms. McDonnell is a healthcare business executive with 17 years of global experience in medical devices and supplies. Prior to joining Natus, Ms. McDonnell served as Global Business Vice-President for the Critical & Chronic Care Solutions of 3M Healthcare. Prior to joining 3M Healthcare, Ms. McDonnell held leadership positions at Medtronic over a 12 year period in corporate M&A, business development, new therapy and product development, and marketing and business management in the Neuromodulation and Cardiac Rhythm Disease Management business. Ms. McDonnell holds a Bachelor of Science in Business and Masters of Busines Administration as an International Business Fellow from the Carlson School of Management at the University of Minnesota. In 2009, Ms. Donnell was selected as a 40 Under Forty honoree for business and community leadership by the Minneapolis/St. Paul Business Journal.

Austin F. Noll, III joined Natus in August 2012 as the Vice President and General Manager, Neurology. Prior to joining Natus, Mr. Noll served as the President and CEO of Simpirica Spine, a California-based start-up company that developed and commercialized a novel device for spinal stabilization. Prior to joining Simpirica Spine, Mr. Noll served as the President and CEO of NeoGuide Systems, a medical robotics company acquired by Intuitive Surgical. Prior to joining NeoGuide Systems, Mr. Noll held numerous management positions at Medtronic over a 13-year period, where he served as the Vice President and General Manager of the Powered Surgical Solutions and the Neurosurgery businesses. Before Medtronic, he held sales positions at C.R. Bard and Baxter Healthcare. He received a bachelor’s degree in business administration from Miami University and a master’s of business administration from the University of Michigan.

Other Information

Natus was incorporated in California in May 1987 and reincorporated in Delaware in August 2000.

We maintain corporate offices at 6701 Koll Center Parkway Suite 120, Pleasanton, California 94566. Our telephone number is (925) 223-6700. We maintain a corporate website at www.natus.com. References to our website address do not constitute incorporation by reference of the information contained on the website, and the information contained on the website is not part of this document.

We make available, free of charge on our corporate website, copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements, and all amendments to these reports, as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission pursuant to Section 13(a) or 15(d) of the Securities Exchange Act. We also show detail about stock trading by corporate insiders by providing access to SEC Forms 3, 4 and 5. This information may also be obtained from the SEC’s on-line database, which is located at www.sec.gov. Our common stock is traded on the Nasdaq Stock Market under the symbol “BABY”.

Item 1A. Risk Factors

We have completed a number of acquisitions and expect to complete additional acquisitions in the future. There are numerous risks associated with acquisitions and we may not achieve the expected benefit of any of our acquisitions

Our acquisitions of products, technology assets, or businesses may have a negative impact on our business if we fail to achieve the anticipated financial, strategic, and other benefits of acquisitions or investments, and our operating results may suffer because of this.

We expect to continue to pursue opportunities to acquire other businesses in the future. The acquisitions that we have completed may not result in improved operating results for us, or in our achieving a financial condition superior to that which we would have achieved had we not completed them. Our results of operations may be adversely impacted by costs associated with our acquisitions, including one-time charges associated with restructurings. Further, our acquisitions could fail to produce the benefits that we anticipate, or could have other adverse effects that we currently do not foresee. In addition, some of the assumptions that we have relied upon, such as achievement of operating synergies, may not be realized. In this event, one or more of the acquisitions could result in reduced earnings as compared to the earnings that would have been achieved by us if the acquisition had not occurred.

Previously we have assumed, and may in the future enter into, contingent obligations associated with earnout provisions in some of our acquisitions. We believe these provisions help us to negotiate mutually agreeable purchase

terms between us and the sellers. However, a disagreement between us and a seller about the terms of an earnout provision could result in our paying more for an acquisition than we intended.

If we are required to seek additional external financing to support our need for cash to fund future acquisitions, we may not have access to financing on terms that are acceptable to us, or at all. Alternatively, we may feel compelled to access additional financing on terms that are dilutive to existing holders of our common stock or that include covenants that restrict our business, or both.

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In January 2017 we completed the acquisition of GN Otometrics, which is our largest acquisition to date in terms of purchase price and size of business acquired. Accordingly, the risks described above are potentially more material to us than would have otherwise been the case.

If we do not remediate a material weakness in our internal control over financial reporting, the accuracy and timeliness of our financial reporting may be adversely affected

Under Section 404 of the Sarbanes-Oxley Act of 2002 and rules promulgated by the SEC, companies are required to conduct an annual comprehensive evaluation of their internal control over financial reporting. As part of this internal control over financial reporting; and our independent registered public accounting firm is required to attest to and report on the effectiveness of our internal control over financial reporting. Management's assessment of our internal control over financial reporting as of December 31, 2017, identified a control was not effective because we did not perform an effective risk assessment relating to significant acquisitions, and as a result, we did not adequately design control activities over the accounting for the acquisition of Otometrics. The first fiscal year exemption for internal controls over financial reporting does not apply to controls over purchase price accounting, which constituted a material weakness in our internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected on a timely basis. This material weakness is more fully described in Item 9A. Controls and Procedures-Management's Report on Internal Control Over Financial Reporting. The existence of this material weakness and of any other ineffective controls over our financial reporting could result in one or all of the following:

- Revision of previously filed financial statements;
- Failure to meet our reporting obligations;
- Loss of investor confidence; and
- Negative impact on the trading price of our common stock.

Adverse economic conditions in markets in which we operate may harm our business

Unfavorable changes in U.S. and international economic environments may adversely affect our business and financial results. During challenging economic times, and in tight credit markets, our customers may delay or reduce capital expenditures. This could result in reductions in sales of our products, longer sales cycles, difficulties in collection of accounts receivable, slower adoption of new technologies, and increased price competition, all of which could impact our results of operations and financial condition. In addition, we expect these factors will cause us to be more cautious in evaluating potential acquisition opportunities, which could hinder our ability to grow through acquisition while these conditions persist. In 2016 voters in the United Kingdom approved "Brexit," calling for the United Kingdom to withdraw from the European Union and there is speculation that this exit could have adverse consequences for the economies of the United Kingdom and other European countries. We have a significant amount of sales in the European Union and this business could be adversely affected by these developments.

In October 2015, we announced a contract between our Argentinian subsidiary, Medix I.C.S.A, and the Ministry of Health of Venezuela under which our subsidiary would deliver products and services, including third party products, over a three year period pursuant to prepayments received from the Venezuelan Ministry of Health. Following the announcement of this contract, there have been elections in both Venezuela and Argentina leading to significant political changes in those countries. Further, Venezuela is experiencing a highly inflationary economy and recessionary economic conditions. These developments may impact the likelihood of the Venezuelan Ministry of Health's following through with orders under the agreement. While Medix has received the first installment under this contract, the remainder of the contract will not be fulfilled until the outstanding consideration is received. If, for these or any other reasons, the Venezuelan Ministry of Health does not make the additional prepayments required to initiate deliveries under the Medix agreement, we will not receive any additional benefit from it.

Our operating results may suffer because of our exposure to foreign currency exchange rate fluctuations

Substantially all of our sales contracts with our U.S. based customers provide for payment in U.S. dollars. With the exception of our Canadian operations, substantially all of the revenue and expenses of our foreign subsidiaries are denominated in the applicable foreign currency. Our exposure to the currency fluctuations is enhanced as a result of the Otometrics acquisition. To date we have executed only limited foreign currency contracts to hedge these currency

risks. Our future revenue and expenses may be subject to volatility due to exchange rate fluctuations that could result in foreign exchange gains and losses associated with foreign currency transactions and the translation of assets and liabilities denominated in foreign currencies.

Substantially all our sales from our U.S. operations to our international distributors provide for payment in U.S. dollars. A strengthening of the U.S. dollar relative to other foreign currencies could increase the effective cost of our products to our

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international distributors as their functional currency is typically not the U.S. dollar. This could have a potential adverse effect on our ability to increase or maintain average selling prices of our products to our foreign-based customers.

Healthcare reforms, changes in healthcare policies, and changes to third-party reimbursements for our products may affect demand for our products

In March 2010 the U. S. government signed into law the Patient Protection and Affordable Care Act and the Health Care & Education Reconciliation Act (collectively, the "ACA"). The ACA contains many provisions designed to generate the revenues necessary to fund the coverage expansions and to reduce costs of Medicare and Medicaid, including imposing a 2.3% excise tax on domestic sales of many medical devices by manufacturers and importers. The Medical Device Excise Tax ("MDET") went into effect on January 1, 2013 but was suspended for the period January 1, 2016 to December 31, 2017 with the signing of The Consolidated Appropriations Act, 2016 (Pub.L. 114-113).

No action by Congress was taken before the moratorium was set to expire on December 31, 2017. Therefore, MDET was reinstated on January 1, 2018. On January 22, 2018 the U.S. government signed funding bill HR 195 to extend an additional two-year moratorium on the MDET. The moratorium was retroactive to January 1, 2018. Unless there is legislative action prior to 2020, the MDET will automatically reinstate in 2020.

Uncertainty surrounding the ACA and the U.S. healthcare system may impact the way our customers spend on medical devices, supplies, and services in the future. If we fail to effectively react to the implementation of healthcare reform, our business may be adversely affect.

We have initiated changes to our information systems that could disrupt our business and our financial results

We plan to continuously improve our information systems to support the form, functionality, and scale of our business. These types of transitions frequently prove disruptive to the underlying business of an enterprise and may cause us to incur higher costs than we anticipate. Failure to manage a smooth transition to the new systems and the ongoing operations and support of the new systems could materially harm our business operations.

For example, beginning in 2012 we implemented the rollout of a world-wide, single-platform enterprise resource planning ("ERP") application including customer relationship management, product lifecycle management, demand management, consolidation and financial statement generation, and business intelligence, and in 2015 we completed the final implementation of the ERP. In 2017 we completed a portion of the implementation of the ERP application for our Otometrics operations. We may fail to gain the efficiencies the implementation is designed to produce within the anticipated timeframe. We will continue to incur additional costs associated with stabilization and ongoing development of the new platform. The ongoing development and stabilization could also be disruptive to our operations, including the ability to timely ship and track product orders to customers, project inventory requirements, manage our supply chain and otherwise adequately service our customers. As we integrate the Otometrics operations and implement the ERP to cover its operations, we will incur costs and face challenges that could disrupt our operations.

Future changes in technology or market conditions could result in adjustments to our recorded asset balance for intangible assets, including goodwill, resulting in additional charges that could significantly impact our operating results

Our balance sheet includes significant intangible assets, including goodwill and other acquired intangible assets. The determination of related estimated useful lives and whether these assets are impaired involves significant judgment. Our ability to accurately predict future cash flows related to these intangible assets might be hindered by events over which we have no control. Due to the highly competitive nature of the medical device industry, new technologies could impair the value of our intangible assets if they create market conditions that adversely affect the competitiveness of our products. Further, declines in our market capitalization may be an indicator that our intangible assets or goodwill carrying values exceed their fair values which could lead to potential impairment charges that could impact our operating results. In the past we have recorded charges for goodwill impairment and impairments of our trade names.

We may not be able to preserve the value of our intellectual property because we may not be able to protect access to it or we may lose our intellectual property rights due to expiration of our licenses or patents

If we fail to protect our intellectual property rights or if our intellectual property rights do not adequately cover the technology we employ, other medical device companies could sell products with features similar to ours, and this could reduce demand for our products. We protect our intellectual property through a combination of patent, copyright, trade secret and trademark laws. Despite our efforts to protect our proprietary rights, others may attempt to copy or otherwise improperly obtain and use our products or technology. Policing unauthorized use of our technology is difficult and expensive, and we cannot be certain that the steps we have taken will prevent misappropriation. Our means of protecting our proprietary rights may be inadequate. Enforcing our intellectual property rights could be costly and time consuming and may divert our management’s attention and resources. Failing to enforce our intellectual property rights could also result in the loss of those rights.

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If we are not able to maintain effective internal control over financial reporting in the future, the accuracy and timeliness of our financial reporting may be adversely affected.

The Sarbanes-Oxley Act requires, among other things, that we assess the effectiveness of our internal control over financial reporting annually and disclosure controls and procedures quarterly. In particular, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on, and our independent registered public accounting firm to attest to, the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. If we are not able to maintain effective internal control over financial reporting and otherwise comply with the requirements of Section 404 in a timely manner, our reported financial results could be materially misstated or could be restated, we could receive an adverse opinion regarding our controls from our accounting firm and we could be subject to investigations or sanctions by regulatory authorities, which would require additional financial and management resources, and the market price of our stock could decline.

If health care providers are not adequately reimbursed for procedures conducted with our devices or supplies, or if reimbursement policies change adversely, we may not be successful marketing and selling our products or technologies

Clinicians, hospitals, and government agencies are unlikely to purchase our products if they are not adequately reimbursed for the procedures conducted with our devices or supplies. Unless a sufficient amount of conclusive, peer-reviewed clinical data about our products has been published, third-party payors, including insurance companies and government agencies, may refuse to provide reimbursement. Furthermore, even if reimbursement is provided, it may not be adequate to fully compensate the clinicians or hospitals. Some third-party payors may impose restrictions on the procedures for which they will provide reimbursement. If health care providers cannot obtain sufficient reimbursement from third-party payors for our products or the screenings conducted with our products, we may not achieve significant market acceptance of our products. Acceptance of our products in international markets will depend upon the availability of adequate reimbursement or funding within prevailing healthcare payment systems. Reimbursement, funding, and healthcare payment systems vary significantly by country. We may not obtain approvals for reimbursement in a timely manner or at all.

Adverse changes in reimbursement policies in general could harm our business. We are unable to predict changes in the reimbursement methods used by third-party health care payors, particularly those in countries and regions outside the U.S. For example, some payors are moving toward a managed care system in which providers contract to provide comprehensive health care for a fixed cost per person. In a managed care system, the cost of our products may not be incorporated into the overall payment for patient care or there may not be adequate reimbursement for our products separate from reimbursement for other procedures.

Our Peloton hearing screening service and our GND EEG service are dependent on third-party payors to reimburse us for services provided to patients. We have encountered challenges in obtaining reimbursement from third parties and are dedicating resources to the education of third-party payors to the benefits of these services. Our inability to obtain reimbursement for these services, and any adverse changes in reimbursement policies or amounts for either of these services, or other products or services that we provide, could harm our business.

Our business would be harmed if the FDA determines that we have failed to comply with applicable regulations governing the manufacture of our products and/or we do not pass an inspection

We and our suppliers are required to demonstrate and maintain compliance with the FDA’s Quality System Regulation. The Quality System Regulation sets forth the FDA’s requirements for good manufacturing practices of medical devices and includes requirements for, among other things, the design, testing, production processes, controls, quality assurance, labeling, packaging, storage and shipping of such products. In addition, we and our suppliers must engage in extensive recordkeeping and reporting and must make available our manufacturing facility and records for periodic unscheduled inspections by federal, state and foreign agencies, including the FDA. We cannot assure you that we and our suppliers are or will continue to be in full compliance with the Quality System Regulation, and that we will not encounter any manufacturing difficulties.

In 2014 and 2016 we received formal communications from the FDA regarding deficiencies in our manufacturing processes in our Seattle facility. As a result, we imposed ship-holds on certain of our products produced there and

have discontinued certain other products produced in that facility. We are dedicating substantial resources to the resolution of the conditions identified by the FDA. These actions had an adverse effect on our results of operations in 2016 and 2017.

Our inability to address issues that have been raised by the FDA, or failure of us or our third party suppliers and manufacturers to comply with applicable regulations could result in sanctions being imposed on us, including, among other things, fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approval of our products, delays, suspension or withdrawal of approvals, seizures or recalls of products and manufacturing restrictions, any of which could harm our business.

If we fail in our efforts to educate clinicians, government agency personnel, and third-party payors about the effectiveness of our products, we may not achieve future sales growth

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It is critical to the success of our sales efforts that we educate a sufficient number of clinicians, hospital administrators, and government agencies about our products and the costs and benefits of their use. The commercial success of our products depends upon clinician, government agency, and other third-party payer confidence in the economic and clinical benefits of our products as well as their comfort with the efficacy, reliability, sensitivity and specificity of our products. We believe that clinicians will not use our products unless they determine, based on published peer-reviewed journal articles and experience, that our products provide an accurate and cost-effective alternative to other means of testing or treatment. Our customers may choose to use competitive products, which may be less expensive or may provide faster results than our devices. Clinicians are traditionally slow to adopt new products, testing practices and clinical treatments, partly because of perceived liability risks and the uncertainty of third-party reimbursement. If clinicians, government agencies and hospital administrators do not adopt our products, we may not maintain profitability. Factors that may adversely affect the medical community's acceptance of our products include:

- Publication of clinical study results that demonstrate a lack of efficacy or cost-effectiveness of our products;
- Changing governmental and physician group guidelines;
- Actual or perceived performance, quality, price, and total cost of ownership deficiencies of our products relative to other competitive products;
- Our ability to maintain and enhance our existing relationships and to form new relationships with leading physicians, physician organizations, hospitals, state laboratory personnel, and third-party payers;
- Changes in federal, state and third-party payer reimbursement policies for our products; and
- Repeal of laws requiring universal newborn hearing screening and metabolic screening.

Sales through group purchasing organizations and sales to high volume purchasers may reduce our average selling prices, which could reduce our operating margins

We have entered, and expect in the future to enter into agreements with customers who purchase a high volume of our products. Our agreements with these customers may contain discounts from our normal selling prices and other special pricing considerations, which could cause our operating margins to decline. In addition, we have entered into agreements to sell our products to members of GPOs, which negotiate volume purchase prices for medical devices and supplies for member hospitals, group practices and other clinics. While we make sales directly to GPO members, the GPO members receive volume discounts from our normal selling price and may receive other special pricing considerations from us. Sales to members of all GPOs accounted for approximately 14.5%, 12.3% and 9.3% of our total revenue during 2017, 2016 and 2015, respectively. Certain other existing customers may be members of GPOs with which we do not have agreements. Our sales efforts through GPOs may conflict with our direct sales efforts to our existing customers. If we enter into agreements with new GPOs and some of our existing customers begin purchasing our products through those GPOs, our operating margins could decline.

Consolidation in the healthcare industry could have an adverse effect on our revenues and results of operations

Many healthcare industry companies, include our customers and competitors, are consolidating to create new companies with greater market power. As the healthcare industry consolidates, competition to provide goods and services to our customers could become more intense. Our customers may try to use their market power to negotiate price concessions and our competitors may utilize their size and broad product lines to offer cheaper alternatives to our products. If we are forced to reduce our prices because of consolidation in the healthcare industry, our revenues would decrease and our consolidated earnings, financial condition, or cash flow would suffer.

Demand for some of our products depends on the capital spending policies of our customers, and changes in these policies could harm our business

A majority of customers for our products are hospitals, physician offices, and clinics. Many factors, including public policy spending provisions, available resources, and economic cycles have a significant effect on the capital spending policies of these entities and therefore the amount that they can spend on our equipment products. If budget resources limit the capital spending of our customers, they will be unlikely to either purchase any new equipment from us or upgrade to any of our newer equipment products. Lack of liquidity in credit markets and uncertainty about future economic conditions can have an adverse effect on the spending patterns of our customers. These factors can have a

significant adverse effect on the demand for our products.

Our markets are very competitive and in the United States we sell certain of our products in a mature market

We face competition from other companies in all of our product lines. Our competitors range from small privately held companies to multinational corporations and their product offerings vary in scope and breadth. We do not believe that any single competitor is dominant in any of our product lines.

The markets for certain of our products in the U.S., including the newborn hearing screening and EEG monitoring markets, are mature and we are unlikely to see significant growth for such products in the U.S. The market for newborn care products is

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affected by birthrates, and a declining U.S. birthrate has adversely affected our operating results in recent periods. In the U.S. we derive a significant portion of our revenue from the sale of disposable supplies that are used with our hearing screening devices. Our hearing disposable supply products could face increasing competition, including competitors offering lower prices, which could have an adverse effect on our revenue and margins.

Our competitors may have certain competitive advantages, which include the ability to devote greater resources to the development, promotion, and sale of their products. Consequently, we may need to increase our efforts, and related expenses for research and development, marketing, and selling to maintain or improve our position.

We expect recurring sales to our existing customers to generate a majority of our revenue in the future, and if our existing customers do not continue to purchase products from us, our revenue may decline.

In October 2017 we completed the acquisition of our neurosurgery business from Integra LifeSciences. We are relying on Integra LifeSciences for certain transition services to support the acquired business and at the same time we are competing with them in the sale of neurosurgery products. Integra LifeSciences may face conflicting interests in performing required services for us and this may results in adverse effects on the acquire business.

Our operating results may decline if we do not succeed in developing, acquiring, and marketing additional products or improving our existing products

We intend to develop additional products and technologies, including enhancements of existing products, for the screening, detection, treatment, monitoring and tracking of common medical ailments. Developing new products and improving our existing products to meet the needs of current and future customers requires significant investments in research and development. If we fail to successfully sell new products, update our existing products, or timely react to changes in technology, our operating results may decline as our existing products reach the end of their commercial life cycles.

Our growth in recent years has depended substantially on the completion of acquisitions and we may not be able to complete acquisitions of this nature or of a relative size in the future to support a similar level of growth

The acquisitions that we have completed have contributed to our growth in recent years. We expend considerable effort in seeking to identify attractive acquisition candidates and ultimately, to negotiate mutually agreeable acquisition terms. If we are not successful in these efforts in the future, our growth rate will not increase at a rate corresponding to that which we have achieved in recent years. Further, as we grow larger it will be necessary to complete the acquisition of larger companies and product lines to support a growth similar to that which we have achieved in the past. The market for attractive acquisitions is competitive and others with greater financial resources than we have may be better positioned than we are to acquire desirable targets. Further, we may not be able to negotiate acquisition terms with target companies that will allow us to achieve positive financial returns from the transaction.

We have substantial international operations which are subject to numerous risks; if our international operations are not successful, our business will be adversely affected

In 2017, approximately 45.9% of our sales were made outside the U.S. We plan to expand our international sales and marketing efforts to increase sales of our products in foreign countries. We may not realize corresponding growth in revenue from growth in international unit sales, due to the lower average selling prices we receive on sales outside of the U.S. Even if we are able to successfully expand our international selling efforts, we cannot be certain that we will be able to create or increase demand for our products outside of the U.S. Our international operations are subject to other risks, which include:

- Impact of possible recessions in economies outside the U.S.;
- Political and economic instability, including instability related to war and terrorist attacks and to political and diplomatic matters such as the BREXIT of the United Kingdom from the European Union;
- Contractual provisions governed by foreign law, such as local law rights to sales commissions by terminated distributors;
- Decreased healthcare spending by foreign governments that would reduce international demand for our products;
- Strengthening of the U.S. dollar relative to foreign currencies that could make our products less competitive because approximately half of our international sales are denominated in U.S. dollars;
- Greater difficulty in accounts receivable collection and longer collection periods;

- Difficulties of staffing and managing foreign operations;
- Reduced protection for intellectual property rights in some countries and potentially conflicting intellectual property rights of third parties under the laws of various foreign jurisdictions;
- Difficulty in obtaining and maintaining foreign regulatory approval;

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- Attitudes by clinicians, and cost reimbursement policies, towards use of disposable supplies that are potentially unfavorable to our business;
- Complying with U.S. regulations that apply to international operations, including trade laws, the U.S. Foreign Corrupt Practices Act, and anti-boycott laws, as well as international laws such as the U.K. Bribery Act;
- Loss of business through government tenders that are held annually in many cases; and
- Potentially negative consequences from changes in tax laws, including legislative changes concerning taxation of income earned outside of the U.S.

In particular, our international sales could be adversely affected by a strengthening of the U.S. dollar relative to other foreign currencies, which makes our products more costly to international customers for sales denominated in U.S. dollars.

U.S Tax Reform

The Tax Cuts and Jobs Act was signed into law in December 2017. The new law made numerous changes to federal corporate tax law that we expect will impact our effective tax rate in future periods. The changes included in the Tax Act are broad and complex. The final transition impacts of the Tax Act may differ from our current estimates, possibly materially, due to, among other things, changes in interpretations of the Tax Act, any legislative action to address questions that arise because of the Tax Act, any changes in accounting standards for income taxes or related interpretations in response to the Tax Act, or any updates or changes to estimates the Company has utilized to calculate the transition impacts.

If guidelines mandating universal newborn hearing screening do not continue to develop in foreign countries and governments do not mandate testing of all newborns as we anticipate, or if those guidelines have a long phase-in period, our sales of newborn hearing screening products may not achieve the revenue growth we have achieved in the past

We estimate that approximately 95% of the children born in the U.S. are currently being tested for hearing impairment prior to discharge from the hospital. To date, there has been only limited adoption of newborn hearing screening prior to hospital discharge by foreign governments, and when newborn hearing screening programs are enacted by foreign governments there can be a phase-in period spanning several years. The widespread adoption of guidelines depends, in part, on our ability to educate foreign government agencies, neonatologists, pediatricians, third-party payors, and hospital administrators about the benefits of universal newborn hearing screening as well as the use of our products to perform the screening and monitoring. Our revenue from our newborn hearing screening product lines may not grow if foreign governments do not require universal newborn hearing screening prior to hospital discharge, if physicians or hospitals are slow to comply with those guidelines, or if governments provide for a lengthy phase-in period for compliance.

Because we rely on distributors or sub-distributors to sell our products in most of our markets outside of the U.S., our revenue could decline if our existing distributors reduce the volume of purchases from us, or if our relationship with any of these distributors is terminated

We currently rely on our distributors or sub-distributors for a majority of our sales outside the U.S. Some distributors also assist us with regulatory approvals and education of clinicians and government agencies. Our contracts with our distributors or sub-distributors do not assure us significant minimum purchase volume. If a contract with a distributor or sub-distributor is terminated for cause or by us for convenience, the distributor or sub-distributor will have no obligation to purchase products from us. We intend to continue our efforts to increase our sales in Europe, Japan, and other developed countries. If we fail to sell our products through our international distributors, we would experience a decline in revenue unless we begin to sell our products directly in those markets. We cannot be certain that we will be able to attract new international distributors to market our products effectively or provide timely and cost-effective customer support and service. Even if we are successful in selling our products through new distributors, the rate of growth of our revenue could be harmed if our existing distributors do not continue to sell a large dollar volume of our products. None of our existing distributors are obligated to continue selling our products.

We may be subject to foreign laws governing our relationships with our international distributors. These laws may require us to make payments to our distributors if we terminate our relationship for any reason, including for cause. Some countries require termination payments under local law or legislation that may supersede our contractual

relationship with the distributor. Any required payments would adversely affect our operating results.

If we lose our relationship with any supplier of key product components or our relationship with a supplier deteriorates or key components are not available in sufficient quantities, our manufacturing could be delayed and our business could suffer

We contract with third parties for the supply of some of the components used in our products and the production of our disposable products. Some of our suppliers are not obligated to continue to supply us. We have relatively few sources of supply for some of the components used in our products and in some cases we rely entirely on sole-source suppliers. In addition, the lead-time involved in the manufacturing of some of these components can be lengthy and unpredictable. If our suppliers become

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unwilling or unable to supply us with components meeting our requirements, it might be difficult to establish additional or replacement suppliers in a timely manner, or at all. This would cause our product sales to be disrupted and our revenue and operating results to suffer.

Replacement or alternative sources might not be readily obtainable due to regulatory requirements and other factors applicable to our manufacturing operations. Incorporation of components from a new supplier into our products may require a new or supplemental filing with applicable regulatory authorities and clearance or approval of the filing before we could resume product sales. This process may take a substantial period of time, and we may not be able to obtain the necessary regulatory clearance or approval. This could create supply disruptions that would harm our product sales and operating results.

We depend upon key employees in a competitive market for skilled personnel, and, without additional employees, we cannot grow or maintain profitability

Our products and technologies are complex, and we depend substantially on the continued service of our senior management team. The loss of any of our key employees could adversely affect our business and slow our product development process. Our future success also will depend, in part, on the continued service of our key management personnel, software engineers, and other research and development employees, and our ability to identify, hire, and retain additional personnel, including customer service, marketing, and sales staff. Demand for these skilled employees in our industry is very competitive due to the limited number of people available with the necessary technical skills and understanding of our product technologies. We may be unable to attract and retain personnel necessary for the development of our business.

Our ability to market and sell products depends upon receipt of domestic and foreign regulatory approval of our products and manufacturing operations. Our failure to obtain or maintain regulatory approvals and compliance could negatively affect our business

Our products and manufacturing operations are subject to extensive regulation in the United States by the FDA and by similar regulatory agencies in other countries. Our products are classified as medical devices. Medical devices are subject to extensive regulation by the FDA pursuant to regulations that are wide ranging and govern, among other things: design and development; manufacturing and testing; labeling; storage and record keeping; advertising, promotion, marketing, sales distribution and export; and surveillance and reporting of deaths or serious injuries. Unless an exemption applies, each medical device that we propose to market in the U.S. must first receive one of the following types of FDA premarket review authorizations:

- Clearance via Section 510(k) of the Food, Drug, and Cosmetics Act of 1938, as amended; or
- Premarket approval via Section 515 of the Food, Drug, and Cosmetics Act if the FDA has determined that the medical device in question poses a greater risk of injury.

The FDA will clear marketing of a medical device through the 510(k) process if it is demonstrated that the new product is substantially equivalent to other 510(k)-cleared products. The premarket approval application process is much more costly, lengthy and uncertain than the 510(k) process, and must be supported by extensive data from preclinical studies and human clinical trials. The FDA may not grant either 510(k) clearance or premarket approval for any product we propose to market. Further, any modification to a 510(k)-cleared device that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, design or manufacture, requires a new 510(k) clearance or, possibly, approval of a premarket approval application. The FDA requires every manufacturer to make this determination in the first instance, but the FDA may review any manufacturer’s decision. If the FDA requires us to seek 510(k) clearance or premarket approval for modification of a previously cleared product for which we have concluded that new clearances or approvals are unnecessary, we may be required to cease marketing or to recall the modified product until we obtain clearance or approval, and we may be subject to significant regulatory fines or penalties. Further, our products could be subject to recall if the FDA determines, for any reason, that our products are not safe or effective.

Delays in receipt of, or failure to receive, clearances or approvals, the loss of previously received clearances or approvals, or the failure to comply with existing or future regulatory requirements could adversely impact our operating results. If the FDA finds that we have failed to comply with these requirements, the FDA can institute a wide variety of enforcement actions, ranging from a public warning letter to more severe sanctions such as:

- Fines, injunctions and civil penalties;
- Recall or seizure of our products;
- Issuance of public notices or warnings;
- Imposition of operating restrictions, partial suspension, or total shutdown of production;
- Refusal of our requests for Section 510(k) clearance or premarket approval of new products;

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- Withdrawal of Section 510(k) clearance or premarket approvals already granted;
- Criminal prosecution; or
- Domestic regulation of our products and manufacturing operations, other than that which is administered by the FDA, includes the Environmental Protection Act, the Occupational Safety and Health Act, and state and local counterparts to these Acts.

Our business may suffer if we are required to revise our labeling or promotional materials, or if the FDA takes an enforcement action against us for off-label uses

We are prohibited by the FDA from promoting or advertising our medical device products for uses not within the scope of our clearances or approvals, or from making unsupported promotional claims about the benefits of our products. If the FDA determines that our claims are outside the scope of our clearances, or are unsupported, it could require us to revise our promotional claims or take enforcement action against us. If we were subject to such an action by the FDA, our sales could be delayed, our revenue could decline, and our reputation among clinicians could be harmed. Likewise, if we acquire new products, either through the purchase of products, technology assets, or businesses, that are subsequently deemed to have inadequate supporting data, we may be required to (i) obtain adequate data, which could be costly and impede our ability to market these products, or (ii) modify the labeling on these products, which could impair their marketability, as described above.

If we deliver products with defects, we may incur costs to repair and, possibly, recall that product and market acceptance of our products may decrease.

The manufacturing and marketing of our products involve an inherent risk of our delivering a defective product or products that do not otherwise perform as we expect. We may incur substantial expense to repair any such products and may determine to recall such a product, even if not required to do so under applicable regulations. Any such recall would be time consuming and expensive. Product defects or recalls may adversely affect our customers' acceptance of the recalled and other of our products.

If we fail to comply with healthcare regulations, we could face substantial penalties and our business, operations and financial condition could be adversely affected.

We could be subject to healthcare fraud regulation and enforcement by both the federal government and the states in which we conduct our business. The laws that may affect our ability to operate include: (i) the federal healthcare programs Anti-Kickback Law, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal healthcare programs such as Medicare or Medicaid, (ii) federal false claims laws which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent, and which may apply to entities like us which provide coding and billing advice to customers, and/or (iii) state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers, many of which differ from their federal counterparts in significant ways, thus complicating compliance efforts.

If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines and the curtailment or restructuring of our operations. Any penalties, damages, fines, curtailment or restructuring of our operations could adversely affect our ability to operate our business and our financial results. The risk of our being found in violation of these laws is increased by the fact that their provisions are open to a variety of interpretations. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business.

Our operating results would suffer if we were subject to a protracted infringement claim

The medical technology industry is characterized by a substantial amount of litigation and related administrative proceedings regarding patents and intellectual property rights. We expect that medical screening and diagnostic products may become increasingly subject to third-party infringement claims as the number of competitors in our industry grows and the functionality of products overlap. Third parties such as individuals, educational institutions, or

other medical device companies may claim that we infringe their intellectual property rights. Any claims, with or without merit, could have any of the following negative consequences:

- Result in costly litigation and damage awards;
- Divert our management's attention and resources;
- Cause product shipment delays or suspensions; or

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- Require us to seek to enter into royalty or licensing agreements.

We are currently subject to cases based on third-party patent infringement claims. A successful claim of infringement against us from any current or future claim could result in a substantial damage award and materially harm our financial condition. Our failure or inability to license the infringed or similar technology, or design and build non-infringing products, could prevent us from selling our products and adversely affect our business and financial results.

We may also find it necessary to bring infringement actions against third parties to seek to protect our intellectual property rights. Litigation of this nature, even if successful, is often expensive and disruptive of our management's attention, and in any event may not lead to a successful result relative to the resources dedicated to any such litigation.

We license intellectual property rights from third parties and would be adversely affected if our licensors do not appropriately defend their proprietary rights or if we breach any of the agreements under which we license commercialization rights to products or technology from others

We license rights from third parties for products and technology that are important to our business. If our licensors are unsuccessful in asserting and defending their proprietary rights, including patent rights and trade secrets, we may lose the competitive advantages we have through selling products that we license from third parties. Additionally, if it is found that our licensors infringe on the proprietary rights of others, we may be prohibited from marketing our existing products that incorporate those proprietary rights. Under our licenses, we are subject to commercialization and development, sublicensing, royalty, insurance and other obligations. If we fail to comply with any of these requirements, or otherwise breach a license agreement, the licensor may have the right to terminate the license in whole or to terminate the exclusive nature of the license.

Product liability suits against us could result in expensive and time consuming litigation, payment of substantial damages, and an increase in our insurance rates

The sale and use of our products could lead to the filing of a product liability claim by someone claiming to have been injured using one of our products or claiming that one of our products failed to perform properly. We are currently subject to one such lawsuit. A product liability claim could result in substantial damages and be costly and time consuming to defend, either of which could materially harm our business reputation or financial condition. Our product liability insurance may not protect our assets from the financial impact of defending a product liability claim. Any product liability claim brought against us, with or without merit, could increase our product liability insurance rates or prevent us from securing any coverage in the future.

We have experienced seasonality in the sale of our products

We experience seasonality in our revenue. For example, our sales typically decline from the second half of our fiscal year to the first half of the fiscal year, due to patterns in the capital budgeting and purchasing cycles of our customers, many of which are government agencies, and the compensation arrangements of our direct sales employees, as those arrangements are tied to calendar-year sales plans. We anticipate that we will continue to experience seasonal fluctuations, which may lead to fluctuations in our quarterly operating results. We believe that you should not rely on our results of operations for interim periods as an indication of our expected results in any future period.

An interruption in or breach of security of our information or manufacturing systems, including the occurrence of a cyber-incident or a deficiency in our cybersecurity, or disclosure of private patient health information, may result in a loss of business or damage to our reputation.

We rely on communications, information and manufacturing systems to conduct our business. Any failure, interruption or cyber incident of these systems could result in failures or disruptions in our customer relationship management or product manufacturing. A cyber incident is an intentional attack or an unintentional event that can include gaining unauthorized access to information systems to disrupt operations, corrupt data, or steal confidential information. The occurrence of any failures, interruptions or cyber incidents could result in a loss of customer business or reputation and have a material effect on our business, financial condition, results of operations and cash flows.

In the course of performing our business we obtain, from time to time, confidential patient health information. For example, we may learn patient names and be exposed to confidential patient health information when we provide training on our products to our customers' staff. Complying with federal and state privacy and security requirements

imposes compliance related costs, subjects us to potential regulatory audits, and may restrict our business operations. These various laws may be subject to varying interpretations by courts and government agencies creating potentially complex compliance issues for our business. If we were to violate any of our legal obligations to safeguard any confidential patient health information or protected health information against improper use and disclosure, we could lose customers and be exposed to liability, and our reputation and business could be harmed. Concerns or allegations about our practices with regard to the privacy or security of personal health information or other privacy-related matters, even if unfounded, could damage our reputation and harm our business.

We are also subject to laws and regulations in foreign countries covering data privacy and other protection of health and employee information that may be more onerous than corresponding U.S. laws. These regulations may require that we obtain

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individual consent before we collect or process any personal data, restrict our use or transfer of personal data, impose technical and organizational measures to ensure the security of personal data, and require that we notify regulatory agencies, individuals or the public about any data security breaches. As we expand our international operations, we may be required to expend significant time and resources to put in place additional mechanisms to ensure compliance with multiple data privacy laws. Failure to comply with these laws may result in significant fines and other administrative penalties and harm our business.

Our stock price may be volatile, which may cause the value of our stock to decline or subject us to a securities class action litigation.

The trading price of our common stock price may be volatile and could be subject to wide fluctuations in price in response to various factors, many of which are beyond our control, including:

- general economic, industry and market conditions;
- actions by institutional or other large stockholders;
- the depth and liquidity of the market for our common stock;
- volume and timing of orders for our products;
- developments generally affecting medical device companies;
- the announcement of new products or product enhancements by us or our competitors;
- changes in earnings estimates or recommendations by securities analysts;
- investor perceptions of us and our business, including changes in market valuations of medical device companies; and
- our results of operations and financial performance.

In addition, the stock market in general, and the NASDAQ Stock Market and the market for medical devices in particular, have experienced substantial price and volume volatility that is often seemingly unrelated to the operating performance of particular companies. These broad market fluctuations may cause the trading price of our common stock to decline. In the past, securities class action litigation has often been brought against a company after a period of volatility in the market price of its common stock. We may become involved in this type of litigation in the future. Any securities litigation claims brought against us could result in substantial expense and the diversion of management's attention from our business.

ITEM 1B. Unresolved Staff Comments.

None.

ITEM 2. Properties

Our corporate headquarters are located in Pleasanton, California, in a facility covering 8,200 square feet pursuant to a lease that expires in October 2019.

We also utilize the following properties:

Company-owned Facilities:

- 116,000 square feet in Buenos Aires, Argentina, utilized substantially for manufacturing;
- 44,900 square feet in Oakville, Ontario, Canada, utilized substantially for research and development;
- 42,600 square feet in Gort, Ireland, utilized substantially for manufacturing;
- 26,000 square feet in Mundelein, Illinois, previously utilized substantially for manufacturing. Currently held for sale; and
- 6,400 square feet in Old Woking, England, utilized substantially for research and development.

Leased Facilities:

Following is a listing of our most significant leased properties; we have a number of smaller facilities under lease in various countries where we operate.

- 124,000 square feet in Middleton, Wisconsin, pursuant to a lease that expires in April 2024, that is primarily utilized for manufacturing;
- 65,000 square feet in Seattle, Washington, pursuant to a lease that expires in December 2020, that is utilized substantially for manufacturing;
- 52,000 square feet in Taastrup, Denmark, pursuant to a lease that expires in January 2032, that is utilized for manufacturing, research and development, marketing and sales, and general and administrative;

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- 43,000 square feet in Planegg, Germany, pursuant to a lease that expires in December 2021 that is utilized substantially for sales and marketing and a large portion is subleased to third parties;
- 37,282 square feet in San Diego, California, pursuant to a lease that expires in June 2019, that is utilized substantially for manufacturing;
- 25,128 square feet in Schaumberg, Illinois, pursuant to a lease that expires in July 2021, that is utilized substantially for marketing and sales;
- 23,860 square feet in Quebec, Canada, pursuant to a lease that expires in December 2023, that is utilized substantially for manufacturing; and
- 14,300 square feet in Skovlunde, Denmark, pursuant to a lease that expires with six-month notice that is utilized for research and development.

ITEM 3. Legal Proceedings

We may from time to time become a party to various legal proceedings or claims that arise in the ordinary course of business. We are not currently involved in any legal or administrative proceedings that we believe are likely to have a material effect on our business, financial condition, or results of operations, although we cannot be assured of the outcome of such matters.

In January 2017, a putative class action lawsuit (Badger v. Natus Medical Incorporation, et al., No. 17-cv-00458-JSW) alleging violations of federal securities laws was filed in the United States District Court for the Northern District of California, naming as defendants the Company and certain officers and a director. In July 2017, plaintiffs filed an amended complaint with a new lead plaintiff (Costabile v. Natus Medical Incorporation, et al., No. 17-cv-00458-JSW) alleging violations of federal securities laws based on allegedly false and misleading statements. The defendants moved to dismiss the Amended Complaint, and in February 2018 the motion to dismiss was granted with leave to amend. The Company believes that the plaintiffs' allegations are without merit, and intends to vigorously defend against the claims. In July 2017, a putative shareholder derivative action was filed in California Superior Court (Mortman v. Gunst, et. al., No. RG17867679) against certain of the Company's officers and directors and naming the Company as a nominal defendant. The action is based on allegations similar to those in the securities class action litigation described above.

ITEM 4. Mine Safety Disclosures

The disclosure required by this item is not applicable.

PART II

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

Our common stock trades on the Nasdaq Global Select Market under the symbol "BABY". The following table sets forth, for the periods indicated, the high and low sale price per share of our common stock, as reported on the Nasdaq Global Select Market.

	High	Low
Fiscal Year Ended December 31, 2017:		
Fourth Quarter	$43.60	$37.10
Third Quarter	39.50	31.65
Second Quarter	41.25	33.28
First Quarter	39.75	33.55
Fiscal Year Ended December 31, 2016:		
Fourth Quarter	$43.85	$33.15
Third Quarter	44.39	36.80
Second Quarter	39.81	29.54
First Quarter	47.24	32.00

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As of February 21, 2018, there were 33,160,428 shares of our common stock issued and outstanding and held by approximately 23 stockholders of record. We estimate that there are approximately 22,712 beneficial owners of our common stock.

Dividends

We have never declared or paid cash dividends on our capital stock and do not anticipate paying any cash dividends in the foreseeable future.

Stock Performance Graph

The following information of Part II Item 5 is being furnished and shall not be deemed to be “soliciting material” or to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities of that Section, nor will it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent that we specifically incorporate such information by reference thereto.

The following graph shows a comparison, from January 1, 2012 through December 31, 2017, of cumulative total return for our common stock, the Nasdaq Composite Index and the Standard & Poor’s 500 Health Care Equipment Index. Such returns are based on historical results and are not intended to suggest future performance. Data for the Nasdaq Composite Index and the Standard & Poor’s 500 Health Care Equipment Index assumes reinvestment of dividends.

		2012	2013	2014	2015	2016	2017
Natus Medical Inc.	Return %		101.61	60.18	33.32	(27.58)	9.77
	Cum $	100.00	201.61	322.94	430.56	311.83	342.29
NASDAQ Composite-Total Returns	Return %		40.12	14.75	6.96	8.87	29.64
	Cum $	100.00	140.12	160.78	171.97	187.22	242.71
S&P 500 Health Care Equipment Index	Return %		27.69	26.28	5.97	6.48	30.90
	Cum $	100.00	127.69	161.24	170.88	181.96	238.17

Purchases of Equity Securities by the Issuer

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In June 2014, the Board of Directors authorized the repurchase of up to $10 million of common stock pursuant to a stock repurchase program. In June 2015, the program was expanded to include up to an additional $20 million of our common stock. In June 2016, the program was again expanded to include an additional $20 million of our common stock, for an aggregate purchase amount of $50 million. The expiration date for the program was June 1, 2017. On February 22, 2018, the Board of Directors authorized the repurchase of up to $30 million in common stock with an expiration date of February 26, 2018.

ITEM 6. Selected Financial Data

The following tables set forth certain selected consolidated financial data for each of the years in the five-year period ended December 31, 2017, and is derived from the Consolidated Financial Statements of Natus Medical Incorporated and its subsidiaries. The Consolidated Financial Statements for each of the years in the three-year period ended December 31, 2017 are included elsewhere in this report. The selected consolidated balance sheet data as of December 31, 2015, 2014 and 2013 and the consolidated statements of operations data for the years ended December 31, 2014 and 2013 are derived from our Consolidated Financial Statements, which are not included in this report. The selected consolidated financial data set forth below is qualified in its entirety by, and should be read in conjunction with, the Consolidated Financial Statements and Notes thereto and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included elsewhere in this report.

	Year ended December 31,				
	2017	2016	2015	2014	2013
	(in thousands, except per share amounts)				
Consolidated Statement of Operations Data (a) (b):					
Revenue	$500,970	$381,892	$375,865	$355,834	$344,112
Cost of revenue	213,376	144,632	145,492	138,480	138,788
Intangibles amortization	6,380	2,327	2,836	2,967	2,912
Gross profit	281,214	234,933	227,537	214,387	202,412
Operating expenses:					
Marketing and selling	126,166	84,834	87,675	85,729	83,138
Research and development	51,822	33,443	30,434	30,100	30,786
General and administrative	74,424	50,877	46,363	45,444	43,380
Intangibles amortization	19,171	8,983	7,447	3,025	5,681
Restructuring	914	1,536	2,145	4,238	4,767
Total operating expense	272,497	179,673	174,064	168,536	167,752
Income from operations	8,717	55,260	53,473	45,851	34,660
Other income (expense), net	(3,567)	(357)	(1,064)	158	(2,716)
Income before provision for income tax	5,150	54,903	52,409	46,009	31,944
Provision for income tax	25,443	12,309	14,485	13,531	8,797
Net income (loss)	$(20,293)	$42,594	$37,924	$32,478	$23,147
Earnings per share:					
Basic	$(0.62)	$1.31	$1.17	$1.03	$0.77
Diluted	$(0.62)	$1.29	$1.14	$1.00	$0.75
Weighted average shares used in the calculation of earnings per share:					
Basic	32,564	32,460	32,348	31,499	29,993
Diluted	32,564	33,056	33,241	32,568	30,821

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	December 31,				
	2017	2016	2015	2014	2013
	(in thousands)				
Consolidated Balance Sheet Data:					
Cash, cash equivalents, and short-term investments	$88,950	$247,750	$82,469	$66,558	$56,106
Working capital	213,491	325,858	164,248	148,665	118,585
Total assets	709,919	649,012	479,496	434,821	429,457
Long-term debt (including current portion) and short-term borrowings	154,283	140,000	—	—	38,017
Total stockholders' equity	422,097	417,374	390,710	352,715	308,214

(a) Results of operations and financial position of the businesses we have acquired are included from their acquisition dates as follows: Grass in February 2013, Peloton in January 2014, GND and NicView in January 2015, Monarch in November 2015, NeuroQuest in March 2016, RetCam in July 2016, Otometrics in January 2017, and Integra Asset Acquisition in October 2017.

(b) Data for 2014 and 2013 reflects reclassifications from Cost of revenue to Intangibles amortization, from Marketing and selling, Research and development, and General and administrative to Intangible amortization, and from General and administrative to Restructuring.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A") should be read in conjunction with the Consolidated Financial Statements and the accompanying footnotes. MD&A includes the following sections:

Business

Natus is a leading provider of newborn care, neurology, and hearing and balance assessment healthcare products and services used for the screening, diagnosis, detection, treatment, monitoring and tracking of common medical ailments in newborn care, hearing impairment, neurological dysfunction, epilepsy, sleep disorders, neuromuscular diseases and balance and mobility disorders.

We have completed a number of acquisitions since 2003, consisting of either the purchase of a company, substantially all of the assets of a company, or individual products or product lines. In 2017 we completed two acquisitions, Otometrics in January and the Integra Asset Acquisition in October. We expect to continue to pursue opportunities to acquire other businesses in the future.

Year 2017 Overview

In 2017, we completed the acquisitions mentioned above for total cash consideration of $191.0 million. These acquisitions allowed us to expand our hearing diagnostic and balance assessment target market as well as enter into the neurosurgery business.

Our consolidated revenue increased by $119.1 million for the year ended December 31, 2017 compared to the year ended December 31, 2016. This increase was driven by acquisitions, organic growth in our Newborn care business, partially offset by weakness in our Neurology markets.

Net loss was $20.3 million, or ($0.62) per share in the year ended December 31, 2017, compared with net income of $42.6 million, or $1.29 per diluted share in 2016. This decrease in income was primarily the result of a one-time tax cost of $20.5 million relating to the transition tax on the deemed repatriation of all foreign subsidiary earnings (excluding state and FIN 48 tax impacts) and a non-cash charge to establish a valuation allowance against a significant portion of the U.S. deferred tax assets related to carryforward of foreign tax credits, each due to the enactment in December 2017 of Tax Cuts and Jobs Act of 2017 (the "Act"). We incurred $0.9 million of restructuring charges in 2017, as compared to $1.5 million in 2016, as we continue to eliminate redundant costs.

Application of Critical Accounting Policies

We prepare our financial statements in accordance with accounting principles generally accepted in the United States of America ("GAAP"). In so doing, we must often make estimates and use assumptions that can be subjective and, consequently,

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our actual results could differ from those estimates. For any given individual estimate or assumption we make, there may also be other estimates or assumptions that are reasonable.

We believe that the following critical accounting policies require the use of significant estimates, assumptions, and judgments. The use of different estimates, assumptions, and judgments could have a material effect on the reported amounts of assets, liabilities, revenue, expenses, and related disclosures as of the date of the financial statements and during the reporting period.

Revenue recognition

Revenue, net of discounts, is recognized from sales of medical devices and supplies, including sales to distributors, when the following conditions have been met: a purchase order has been received, title has transferred, the selling price is fixed or determinable, and collection of the resulting receivable is reasonably assured. Terms of sale for most domestic sales are FOB origin, reflecting that title and risk of loss are assumed by the purchaser at the shipping point; however, terms of sale for some neurology, sleep-diagnostic, and head cooling systems are FOB destination, reflecting that title and risk of loss are assumed by the purchaser upon delivery. Terms of sales to international distributors are generally EXW, reflecting that goods are shipped "ex works," in which title and risk of loss are assumed by the distributor at the shipping point. For products shipped under FOB origin or EXW terms, delivery is generally considered to have occurred when the product is shipped. Freight charges billed to customers are included in revenue and freight-related expenses are charged to cost of revenue. We generally do not provide rights of return on products.

For products containing embedded software, we have determined that the hardware and software components function together to deliver the products' essential functionality, and therefore, the revenue from the sale of these products does not fall within the scope of the software revenue recognition rules. Our revenue recognition policies for sales of these products are substantially the same as for our other tangible products.

Revenue from sales of certain of our products that remain within the scope of the software revenue recognition rules under ASC Subtopic 985-605 is not significant.

Revenue from extended service and maintenance agreements, for both medical devices and data management systems, is recognized ratably over the service period. Revenue from installation or training services is deferred until such time service is provided. Hearing screening and ambulatory EEG monitoring revenue is recorded when the procedure is performed at the estimated net realizable value based on contractual agreements with payers and historical collections.

Certain revenue transactions include multiple element arrangements. We allocate revenue in these arrangements to each unit of accounting using the relative selling price method. The selling prices used during the allocation process are based on vendor specific objective evidence ("VSOE") if available, third-party evidence ("TPE") if VSOE is not available, or estimated selling price ("ESP") if neither VSOE or TPE is available.

GPOs negotiate volume purchase prices for member hospitals, group practices, and other clinics. Our agreements with GPOs typically contain preferential terms for the GPO and its members, including provisions for some, if not all, of the following:

- Payment of marketing fees by Natus to the GPO, usually based on purchasing experience of group members; and
- Non-recourse cancellation provisions.

We do not sell products to GPOs. Hospitals, group practices, and other clinics that are members of a GPO purchase products directly from us under the terms negotiated by the GPO. Negotiated pricing and discounts are recognized as a reduction of the selling price of products at the time of the sale. Revenue from sales to members of GPOs is otherwise consistent with general revenue recognition policies as previously described.

Allowance for Doubtful Accounts

We maintain an allowance for doubtful accounts for estimated losses resulting from potential uncollectible accounts receivable. We estimate the allowance for all receivable risks by reviewing the status of each matter and recording reserves based on our experience and knowledge of the particular client and historical collection patterns. However, our actual experience may vary from our estimates. If the financial condition of our clients were to deteriorate or resulting in their inability or unwillingness to pay our fees, we may need to record additional allowances or write-offs in future periods. This risk related to a client's inability to pay may be partially mitigated to the extent that we may receive retainers from some of our clients prior to performing services.

Inventory

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Inventories are carried at the lower of cost or market, with cost being determined using the first-in, first-out method. The carrying value of our inventories is reduced for any difference between cost and estimated market value of inventories that is determined to be obsolete or unmarketable, based upon assumptions about future demand and market conditions. Adjustments to the value of our inventory establish a new cost basis and are considered permanent even if circumstances later suggest that increased carrying amounts are recoverable. Decreases in demand may result in further impairment of inventory, while increases in demand may result in the sale of inventory that had previously been written down.

Acquisition Accounting

We have made a number of acquisitions in the past and may continue to make acquisitions in the future. We account for acquired business combinations using the acquisition method of accounting. The assets acquired and liabilities assumed are recorded based on their respective fair values at the date of acquisition, with limited exceptions. Valuations are generally completed for business acquisitions using a discounted cash flow analysis. The most significant estimates and assumptions inherent in a discounted cash flow analysis include the amount and timing of projected future cash flows, the discounted rate used to measure the risks inherent in the future cash flows, the assessment of the asset's life cycle, and the competitive and other trends impacting the asset, including consideration of technical, legal, regulatory, economic and other factors. Each of these factors and assumptions can significantly affect the value of the intangible asset. The excess of the fair value of consideration transferred over the fair value of the net assets acquired is recorded as goodwill.

Determining the useful life of an intangible asset also requires judgment, as different types of intangibles assets will have different useful lives and certain assets may even be considered to have indefinite useful lives. Useful life is the period over which the intangible asset is expected to contribute directly and indirectly to our future cash flows. We determine the useful lives of intangible assets based on a number of factors, such as legal, regulatory, or contractual provisions that may limit the useful life, and the effects of obsolescence, anticipated demand, existence or absence of competition, and other economic factors on useful life.

Carrying value of intangible assets and goodwill

We amortize intangible assets with finite lives over their useful lives; any future changes that would limit their useful lives or any determination that these assets are carried at amounts greater than their estimated fair value could result in additional charges.

During the second quarter of 2015, we initiated a strategy to increase the brand strength of Natus by replacing acquired product trade names with Natus branded products over time. The implementation of this strategy places definite expected future lives on our acquired trade names which previously had indefinite lives. We assigned these trade names lives of seven years based on the timeline of our branding strategy. We will continue to assess the lives of these assets based on the timing and execution of this strategy. Amortization expense for trade names is recorded as a component of operating expense.

Goodwill is not amortized but is subject to an annual impairment analysis, which is performed as of October 1st; this assessment is also performed whenever there is a change in circumstances that indicates the carrying value of these assets may be impaired.

In 2017, 2016 and 2015, we performed a qualitative assessment to test goodwill for impairment. Qualitative factors considered in this assessment include industry and market considerations, overall financial performance and other relevant events and factors affecting each reporting unit. Based on our qualitative assessment, we determined that the fair value was more likely than not to be greater than its carrying amount, and no further analysis was needed.

If the fair value was less than its carrying amount, the Company would perform a two-step impairment test on goodwill. The first step of the goodwill impairment test, used to identify potential impairment, compares the fair value of a reporting unit to its carrying value, including goodwill. We use a projected discounted cash flow model to determine the fair value of a reporting unit. If the fair value of the reporting unit exceeds its carrying amount, goodwill of the reporting unit is considered not impaired, and the second step of the impairment test is not required. The second step, if required, compares the implied fair value of the reporting unit goodwill with the carrying amount of that goodwill. The fair value of a reporting unit is allocated to all of the assets and liabilities of that unit (including any

unrecognized intangible assets) as if the reporting unit had been acquired in a business combination and the fair value of the reporting unit was the price paid to acquire the reporting unit. If the carrying amount of the reporting unit's goodwill exceeds its implied fair value, an impairment charge is recognized in an amount equal to that excess. Goodwill impairment analysis and measurement is a process that requires significant judgment. Future changes in the judgments and estimates underlying our analysis of goodwill for possible impairment, including expected future cash flows and

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discount rate, could result in a significantly different estimate of the fair value of the reporting units and could result in additional impairment of goodwill.

Long lived assets

We continually monitor events and changes in circumstances that could indicate that carrying amounts of its long-lived assets, including property and equipment and intangible assets that may not be recoverable. When such events or changes in circumstances occur, we assess the recoverability by determining whether the carrying value of such assets or asset groups will be recovered through their undiscounted expected future cash flows. If the future undiscounted cash flows are less than the carrying amount of these assets, we will recognize an impairment loss based on the excess of the carrying amount over the fair value of the assets.

Liability for product warranties

We provide a warranty with our products that is generally one year in length and in some cases, regulations may require us to provide repair or remediation beyond our typical warranty period. If any of our products contain defects, we may be required to incur additional repair and remediation costs. Service for domestic customers is provided by Company-owned service centers that perform all service, repair, and calibration services. Service for international customers is provided by a combination of Company-owned facilities and vendors on a contract basis.

A warranty reserve is included in accrued liabilities for the expected future costs of servicing products. Additions to the reserve are based on management’s best estimate of probable liability. We consider a combination of factors including material and labor costs, regulatory requirements, and other judgments in determining the amount of the reserve. The reserve is reduced as costs are incurred to honor existing warranty and regulatory obligations.

Income Taxes

We account for income taxes under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and for tax losses and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized.

As part of the process of preparing our consolidated financial statements, we must estimate our income tax expense for each of the jurisdictions in which we operate. This process requires significant management judgments and involves estimating our current tax exposures in each jurisdiction including the impact, if any, of additional taxes resulting from tax examinations as well as judging the recoverability of deferred tax assets. To the extent recovery of deferred tax assets is not likely based on our estimation of future taxable income in each jurisdiction, a valuation allowance is established. Tax exposures can involve complex issues and may require an extended period to resolve. Frequent changes in tax laws in each jurisdiction complicate future estimates. To determine the tax rate, we are required to estimate full-year taxable income or loss and the related income tax expense or benefit in each jurisdiction. We update the estimated effective tax rate for the effect of significant unusual items as they are identified. Changes in the geographic mix or estimated level of annual pre-tax income can affect the overall effective tax rate, and such changes could be material.

Regarding accounting for uncertainty in income taxes, we recognize the benefit from a tax position only if it is more likely than not that the position would be sustained upon audit based solely on the technical merits of the tax position. We measure the income tax benefits from the tax positions that are recognized, assess the timing of the derecognition of previously recognized tax benefits and classify and disclose the liabilities within the consolidated financial statements for any unrecognized tax benefits based on the guidance in the interpretation of related accounting guidance for income taxes. The interpretation also provides guidance on how the interest and penalties related to tax positions may be recorded and classified within our Consolidated Statement of Income and presented in the Consolidated Balance Sheet. We classify interest and penalties related to uncertain tax positions as additional income tax expense.

Share-based compensation

We recognize share-based compensation expense associated with employee stock options under the single-option straight line method over the requisite service period, which is generally a four-year vesting period and ten-year contractual term pursuant to ASC Topic 718, Compensation-Stock Compensation. See Note 14 of our Consolidated Financial Statements.

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For employee stock options, the value of each option is estimated on the date of grant using the Black-Scholes option pricing model, which was developed for use in estimating the value of freely traded options. Similar to other option pricing models, the Black-Scholes method requires the input of highly subjective assumptions, including stock price volatility. Changes in the subjective input assumptions can materially affect the estimated fair value of our employee stock options.

We recognize share-based compensation associated with Restricted Stock Awards ("RSA") and Restricted Stock Units ("RSU"). RSAs and RSUs vest ratably over a three-year period for employees. RSAs and RSUs for executives vest over a four-year period; 50% on the second anniversary of the vesting start date and 25% on each of the third and fourth anniversaries of the vesting date. RSAs and RSUs for non employees (Board of Directors) vest over a one-year period; 100% on the first anniversary. The value is estimated based on the market value of our stock on the date of issuance pursuant to ASC Topic 718, Compensation-Stock Compensation.

We issue new shares of common stock upon the exercise of stock options and the vesting of RSAs and RSUs. Forfeitures of employee stock options and awards are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from initial estimates. Share-based compensation expense is recorded net of estimated forfeitures, such that expense is recorded only for those share-based awards that are expected to vest.

Results of Operations

The following table sets forth for the periods indicated selected consolidated statement of income data as a percentage of total revenue. Our historical operating results are not necessarily indicative of the results for any future period.

	Percent of Revenue		
	Years Ended December 31,		
	2017	2016	2015
Revenue	100.0 %	100.0 %	100.0 %
Cost of revenue	42.6 %	37.9 %	38.7 %
Intangibles amortization	1.3 %	0.6 %	0.8 %
Gross profit	56.1 %	61.5 %	60.5 %
Operating expenses:			
Marketing and selling	25.2 %	22.2 %	23.3 %
Research and development	10.3 %	8.8 %	8.1 %
General and administrative	14.9 %	13.3 %	12.3 %
Intangibles amortization	3.8 %	2.4 %	2.0 %
Restructuring	0.2 %	0.4 %	0.6 %
Total operating expenses	54.4 %	47.0 %	46.3 %
Income from operations	1.7 %	14.5 %	14.2 %
Other income (expense), net	(0.7)%	(0.1)%	(0.3)%
Income before provision for income tax	1.0 %	14.4 %	13.9 %
Provision for income tax expense	5.1 %	3.2 %	3.9 %
Net income	(4.1)%	11.2 %	10.1 %

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Comparison of 2017 and 2016

Revenue

	Year ended December 31,			
	2017	2016	Change	
Neuro				
Devices and Systems	$171,315	$168,200	2	%
Supplies	59,955	58,681	2	%
Services	11,886	11,641	2	%
Total Neurology Revenue	243,156	238,522	2	%
Newborn Care				
Devices and Systems	77,573	72,562	7	%
Supplies	43,732	47,674	(8	)%
Services	22,325	23,134	(3	)%
Total Newborn Care Revenue	143,630	143,370	—	%
Otometrics				
Devices and Systems	$86,920	$—	—	%
Supplies	27,264	—	—	%
Services	—	—	—	%
Total Otometrics Revenue	114,184	—	—	%
Total Revenue	$500,970	$381,892	31	%

For the year ended December 31, 2017, Neurology revenue increased by 2% compared to the prior year with the growth in our international markets partly offset by a decline in our domestic market. Devices and Systems revenue increased by 2% for the year ended December 31, 2017 compared to the prior year due mainly to the addition of acquired Neurosurgery products partly offset by declines in core Neurology products. Supplies revenue for 2017 increased 2%. Services revenue increased by 2% compared to the prior year due mainly to growth in existing markets for GND.

For the year ended December 31, 2017, Newborn Care revenue remained flat compared to the prior year. Devices and Systems revenue increased by 7% due primarily from revenue generated from our RetCam acquisition in July 2016 and sales to the Venezuela Ministry of Health in the first quarter of 2017. Supplies revenue decreased 8% compared to the prior year on lower demand due to lower birth rates and supplies customers converting to our Peloton screening service. Services revenue decreased by 3% compared to the prior year due primarily to the completion of services performed for the Venezuela Ministry of Health in 2016 and the completion of certain contracted services in our Neometrics Data Management business.

For the year ended December 31, 2017, all Otometrics revenue was incremental as we acquired this business on January 3, 2017.

No single customer accounted for more than 10% of our revenue in either 2017 or 2016. Revenue from domestic sales increased 8% to $270.9 million in 2017, from $250.7 million in 2016 due to the acquisition of Otometrics and growth in our Newborn care business. Revenue from international sales increased 75% in 2017 to $230.1 million from $131.2 million in 2016 primarily due to the 2017 acquisition of Otometrics. Revenue from domestic sales was 54% of total revenue in 2017 compared to 66% of total revenue in 2016, and revenue from international sales was 46% of total revenue in 2017 compared to 34% of total revenue in 2016.

Cost of Revenue and Gross Profit

	Year ended December 31,	
	2017	2016
Revenue	$500,970	$381,892
Cost of revenue	213,376	144,632
Intangibles amortization	6,380	2,327
Gross profit	281,214	234,933

Gross profit percentage	56.1	%	61.5	%

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For the year ended December 31, 2017, our gross profit as a percentage of sales decreased by 5.4% compared to the prior year. This decrease in gross profit was driven by the acquisition of Otometrics whose products have lower margins than our neurol and newborn care products, higher warranty reserve for our NeoBLUE® phototherapy system recall, and unfavorable geographic mix as we sold more product through our international distributor channels which yield low gross margin than our direct sales.

Operating Costs

	Year ended December 31,			
	2017		2016	
Marketing and selling	$126,166		$84,834	
Percentage of revenue	25.2	%	22.2	%
Research and development	$51,822		$33,443	
Percentage of revenue	10.3	%	8.8	%
General and administrative	$74,424		$50,877	
Percentage of revenue	14.9	%	13.3	%
Intangibles amortization	$19,171		$8,983	
Percentage of revenue	3.8	%	2.4	%
Restructuring	$914		$1,536	
Percentage of revenue	0.2	%	0.4	%

Marketing and Selling

Marketing and selling expenses increased in 2017 compared to 2016. This is primarily driven by our acquisition of Otometrics.

Research and Development

Research and development expenses increased during the year ended December 31, 2017 compared to the prior year. This is primarily driven by activities related primarily to the remediation of certain deficiencies identified by the FDA in our Newborn Care business as well as the Otometrics acquisition.

General and Administrative

General and administrative expenses increased during the year ended December 31, 2017 compared to the prior year. The increase is related primarily to the Otometrics acquisition.

Intangibles Amortization

Intangibles amortization increased in 2017 compared to 2016. The increase is mainly driven by additional intangible amortization from the acquisition of Otometrics and, to a lesser extent, the Integra Asset Acquisition as well as the 2016 NeuroQuest and RetCam acquisitions.

Restructuring

Restructuring costs decreased during the year ended December 31, 2017 compared to the prior year. In the prior year we experienced higher expenses related to facilities consolidation and severance expense to reduce redundant costs as well as restructuring charges related mostly to the abandonment of two facilities.

Other Income (Expense), net

Other income (expense), net consists of interest income, interest expense, net currency exchange gains and losses, and other miscellaneous income and expense. We reported other expense, net of $3.6 million in 2017, compared to $0.4 million in 2016. We reported $1.0 million of foreign currency exchange gains in 2017 versus $0.3 million of foreign currency losses in 2016. This increase was driven primarily by the changing value of foreign currencies in which we transact. Interest expense was $5.1 million in 2017 compared to $0.4 million in 2016 due to interest expense payments on our $155.0 million debt outstanding while interest income of $0.4 million in 2017 was $0.3 million more than the amount reported for 2016.

Provision for Income Tax

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The effective tax rate ("ETR") for 2017 was 494.0% as compared to 22.4% for 2016. The significantly higher effective tax rate in 2017 compared with 2016 is primarily due to the impacts of the 2017 Tax Act, including the repatriation tax on accumulated foreign earnings and re-measurement of net deferred tax assets. Other increases include withholding taxes from distribution of income and additional tax expense related to the settlement of tax audits in foreign jurisdictions, offset by change in geographic mix of income and utilization of certain tax credits in domestic and foreign jurisdictions.

Comparison of 2016 and 2015

Revenue

	Year ended December 31,		
	2016	2015	Change
Neuro			
Devices and Systems	$168,200	$168,776	— %
Supplies	58,681	60,205	(3)%
Services	11,641	8,320	40 %
Total Neurology Revenue	238,522	237,301	1 %
Newborn Care			
Devices and Systems	72,562	72,669	— %
Supplies	47,674	49,982	(5)%
Services	23,134	15,913	45 %
Total Newborn Care Revenue	143,370	138,564	3 %
Total Revenue	$381,892	$375,865	2 %

For the year ended December 31, 2016, Neurology revenue increased by 1% compared to the prior year with the growth in our domestic market partly offset by a decline in our international markets. Devices and Systems revenue remained constant for the year ended December 31, 2016 compared to the prior year. Supplies revenue for 2016 decreased 3% compared to the prior year due mainly to softness in our domestic market. Services revenue increased by 40% compared to the prior year due mainly to the acquisition of NeuroQuest in March 2016 to complement our GND and Monarch acquisitions.

For the year ended December 31, 2016, Newborn Care revenue increased by 3% compared to the prior year with growth in both international and domestic markets. Devices and Systems revenue remained flat year over year, as revenue generated from the RetCam acquisition and the Venezuela contract was offset by lower revenue from hearing devices, due to Peloton cannibalization, voluntary ship holds, and lower revenue on Incubators and Warmers, due to exiting the U.S. market, and lower revenue from Brain Injury devices, due to higher revenue from China in 2015 that did not repeat in 2016. Supplies revenue for the twelve-month period decreased 5% compared to the prior year mainly due to our ability to convert customers over to our Peloton screening service business. Services revenue increased by 45% compared to the prior year due mainly to the growth in Peloton and our Neometrics Data Management services.

No single customer accounted for more than 10% of our revenue in either 2016 or 2015. Revenue from domestic sales increased 4% to $250.7 million in 2016, from $242.1 million in 2015 primarily due to an increase in our services business and continued strong demand for our devices and systems in the U.S. Revenue from international sales decreased 2% in 2016 to $131.2 million from $133.8 million in 2015 due to on-going weakness in our international markets due, in part, to the strong dollar against the Euro and Canadian dollar. Revenue from domestic sales was 66% of total revenue in 2016 compared to 64% of total revenue in 2015, and revenue from international sales was 34% of total revenue in 2016 compared to 36% of total revenue in 2015.

Cost of Revenue and Gross Profit

	Year ended December 31,	
	2016	2015
Revenue	$381,892	$375,865
Cost of revenue	144,632	145,492
Intangibles amortization	2,327	2,836

Gross profit	234,933		227,537	
Gross profit percentage	61.5	%	60.5	%

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For the year ended December 31, 2016, our gross profit as a percentage of sales increased by 1% compared to the prior year. This increase in gross profit was driven by a $6.6 million charge in 2015 recorded to accrue for the estimated costs of bringing certain NeoBLUE® phototherapy products into U.S. regulatory compliance. These increases in gross profit were also driven by higher domestic revenues which generally have higher gross margins than international sales, as well as cost reduction initiatives which resulted in higher margins primarily in Neurology devices.

Operating Costs

	Year ended December 31,			
	2016		2015	
Marketing and selling	$ 84,834		$ 87,675	
Percentage of revenue	22.2	%	23.3	%
Research and development	$ 33,443		$ 30,434	
Percentage of revenue	8.8	%	8.1	%
General and administrative	$ 50,877		$ 46,363	
Percentage of revenue	13.3	%	12.3	%
Intangibles Amortization	$ 8,983		$ 7,447	
Percentage of revenue	2.4	%	2.0	%
Restructuring	$ 1,536		$ 2,145	
Percentage of revenue	0.4	%	0.6	%

Marketing and Selling

Marketing and selling expenses decreased in 2016 compared to 2015. This is primarily related to a favorable change in estimate in the GND earnout liability in 2016 based on projected GND annual revenue.

Research and Development

Research and development expenses increased during the year ended December 31, 2016 compared to the prior year. This is primarily driven by activities related to the remediation of certain deficiencies identified in our Seattle quality system as well as the RetCam acquisition.

General and Administrative

General and administrative expenses increased during the year ended December 31, 2016 compared to the prior year. The increase is related to an increase of $0.6 million in billing costs due to Peloton growth and the addition of $1.6 million expenses following the NeuroQuest and RetCam acquisitions.

Intangibles Amortization

Intangibles amortization increased in 2016 compared to 2015. The increase is partly due to additional intangible amortization from the 2016 acquisitions of NeuroQuest and RetCam. Additionally, we assigned our previously indefinite lived trade names definite lives of seven years in the second quarter of 2015. As such, there is a full year of amortization for trade names in 2016 compared to a half year in 2015.

Restructuring

Restructuring costs decreased during the year ended December 31, 2016 compared to the prior year. In 2015 we experienced higher expenses related to facilities consolidation and severance expense compared to 2016 in which restructuring charges related mostly to the abandonment of two facilities.

Other Income (Expense), net

Other income (expense), net consists of interest income, interest expense, net currency exchange gains and losses, and other miscellaneous income and expense. We reported other expense, net of $0.3 million in 2016, compared to $1.0 million in 2015. We reported $0.3 million of foreign currency exchange losses in 2016 versus $1.4 million in 2015. This increase was driven primarily by the declining value of foreign currencies in which we transact. Interest expense was $0.4 million in 2016 compared to $0.3 million in 2015. This was offset by interest income of $0.3 million in 2016 which was $0.3 million more than the amount reported for 2015.

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Provision for Income Tax

The effective tax rate ("ETR") for 2016 was 22.4% as compared to 27.6% for 2015. The lower effective tax rate in 2016 compared with 2015 is primarily due to the effect from adoption of ASU 2016-09 which resulted in excess tax benefits being recorded in income tax expense as discrete items, lower state tax expense, reduction of certain uncertain tax positions, and the change in geographic mix of income, offset by additional tax expense related to the settlement of a tax audit in a foreign jurisdiction.

Liquidity and Capital Resources

Liquidity is our ability to generate sufficient cash flows from operating activities to meet our obligations and commitments. In addition, liquidity includes the ability to obtain appropriate financing and to raise capital. Therefore, liquidity cannot be considered separately from capital resources that consist of our current funds and the potential to increase those funds in the future. We plan to use these resources in meeting our commitments and in achieving our business objectives.

We believe that our current cash and cash equivalents and any cash generated from operations will be sufficient to meet our ongoing operating requirements for the foreseeable future.

As of December 31, 2017, we had cash and cash equivalents outside the U.S. in certain of our foreign operations of $74.0 million. We intend to permanently reinvest this cash held by our foreign subsidiaries except for Excel-Tech and Natus Ireland subsidiaries, which we intend to repatriate. If, however, a portion of these permanently reinvested funds were needed and distributed to our operations in the United States, we may be subject to additional U.S. income taxes and foreign withholding taxes depending on facts and circumstances at the time of distribution. The amount of taxes due would depend on the amount and manner of repatriation, as well as the location from where the funds were repatriated.

On September 23, 2016, we entered into a Credit Agreement with JP Morgan Chase Bank ("JP Morgan") and Citibank, NA ("Citibank"). The Credit Agreement provides for an aggregate $150.0 million of secured revolving credit facility (the "Credit Facility"). On September 15, 2017, we exercised our right to increase the amount available under the facility by $75.0 million, bringing the aggregate revolving credit facility to $225.0 million. The Credit Agreement contains covenants, including covenants relating to maintenance of books and records, financial reporting and notification, compliance with laws, maintenance of properties and insurance, and limitations on guaranties, investments, issuance of debt, lease obligations and capital expenditures. The Credit Agreement provides for events of default, including failure to pay any principal or interest when due, failure to perform or observe covenants, bankruptcy or insolvency events and the occurrence of a material adverse effect. The Company has no other significant credit facilities. As of December 31, 2017 we had $155.0 million outstanding under the Credit Facility.

	December 31, 2017	December 31, 2016	December 31, 2015
Cash, cash equivalents, and investments	$ 88,950	$ 247,570	$ 82,469
Debt	154,283	140,000	—
Working capital	213,491	325,858	164,248

	Year Ended December 31, 2017	December 31, 2016	December 31, 2015
Net cash provided by operating activities	$19,726	$ 72,687	$ 36,852
Net cash used in investing activities	(160,935)	(53,264)	(19,478)
Net cash provided by financing activities	5,826	118,417	832

Comparison of 2017, 2016, and 2015

During 2017 cash generated from operating activities of $19.7 million was the result of $20.3 million of net loss, non-cash adjustments to net loss of $53.5 million, and net cash outflows of $13.3 million from changes in operating assets and liabilities. The non-cash adjustments were $30.1 million of depreciation and amortization expense, $10.0 million of accounts receivable reserves, $9.4 million from share-based compensation, $5.4 million of warranty reserves and $1.7 million from intangible impairments. The change in operating assets and liabilities was driven

primarily by an increase in accounts receivable and lower collections during the year compared to the prior year, and a decrease in deferred revenue related to the Venezuelan contract, partially offset by an increase in accrued liabilities for the transition tax under the Act for the deemed repatriation of foreign earnings and decreases in inventories and other assets. Cash used in investing activities during the period was $161.1 million and consisted primarily of the acquisition of Otometrics for $143.6 million, net of cash, and the Integra Asset Acquisition for $46.4

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million, offset by sales of short-term investments of $34.0 million. Cash used to acquire other property and equipment was $4.1 million. Cash provided by financing activities during the year ended December 31, 2017 was $5.8 million and consisted of proceeds from borrowings under the Credit Facility of $60.0 million along with proceeds from stock option exercises and Employee Stock Purchase Program ("ESPP") purchases of $3.5 million, offset by $45.0 million repayment of debt under the Credit Facility, $7.0 million for taxes paid related to net share settlement of equity awards, $3.0 million for contingent acquisition consideration, $2.3 million for repurchases of common stock under our share repurchase program, and $0.3 million of deferred debt issuance costs.

During 2016 cash generated from operating activities of $72.7 million was the result of $42.6 million of net income, non-cash adjustments to net income of $29.9 million, and net cash outflows of $0.1 million from changes in operating assets and liabilities. The change in operating assets and liabilities was driven primarily by a decrease in accounts receivable following increased collections efforts, an increase in deferred revenue following receipt of payment from the Ministry of Health of Venezuela, and an increase in prepaid expenses related to prepayments we made to our distribution partner for the Venezuelan contract. Cash used in investing activities during the period was $53.3 million and consisted primarily of purchases of short-term investments of $34.0 million, as well as cash used in the acquisitions of RetCam of $10.6 million and NeuroQuest of $4.6 million, in each case net of cash acquired. Cash used to acquire other property and equipment and intangible assets was $3.4 million. Cash provided by financing activities during the year ended December 31, 2016 was $118.4 million and consisted primarily of outstanding debt under the current Credit Facility of $140.0 million along with proceeds from stock option exercises and Employee Stock Purchase Program ("ESPP") purchases and their related tax benefits of $3.6 million, offset by $19.3 million for repurchases of common stock under our share repurchase program, $4.1 million for taxes paid related to net share settlement of equity awards, $1.3 million for contingent acquisition consideration, and $0.5 million of deferred debt issuance costs. Under the prior credit facility that was terminated in connection with our entry into the new facility, the Company borrowed and repaid a total of $16.0 million as of December 31, 2016.

During 2015 cash generated from operating activities of $36.9 million was the result of $37.9 million of net income, non-cash adjustment to net income of $28.0 million, and net cash outflows of $29.1 million from changes in operating assets and liabilities. Cash used in investing activities during the period was $19.5 million and consisted primarily of cash used related to the acquisition of GND, Monarch and NicView. Cash used to acquire other property and equipment and intangible assets was $5.4 million. Cash provided by financing activities during the year ended December 31, 2015 was $0.8 million and consisted of proceeds from stock option exercises and ESPP purchases and their related tax benefits of $17.4 million, offset by $11.5 million for repurchases of common stock under our share repurchase program, $4.3 million for taxes paid related to net share settlement of equity awards, and $0.7 million for contingent acquisition consideration, which we acquired in 2014.

Future Liquidity

Our future liquidity and capital requirements will depend on numerous factors, including the:

- Amount and timing of revenue;
- Extent to which our existing and new products gain market acceptance;
- Extent to which we make acquisitions;
- Cost and timing of product development efforts and the success of these development efforts;
- Cost and timing of marketing and selling activities; and
- Availability of borrowings under line of credit arrangements and the availability of other means of financing.

Contractual Obligations

In the normal course of business, we enter into obligations and commitments that require future contractual payments. The commitments result primarily from purchase orders placed with contract vendors that manufacture some of the components used in our medical devices and related disposable supply products, purchase orders placed for employee benefits and outside services, as well as commitments for leased office space, leased equipment, and bank debt. The following table summarizes our contractual obligations and commercial commitments as of December 31, 2017 (in thousands):

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	Payments Due by Period				
	Total	Less than 1 Year	1-3 Years	4-5 Years	More than 5 Years
Unconditional purchase obligations	$50,035	$47,842	$ 2,193	$—	$ —
Operating lease obligations	30,078	7,038	10,340	5,849	6,851
Bank debt	155,000	—	—	155,000	—
Interest payments	14,813	5,950	7,726	1,137	—
Repatriation tax	12,135	$971	$ 1,942	$1,942	$ 7,280
Total	$262,061	$61,801	$ 22,201	$163,928	$ 14,131

Purchase obligations are defined as agreements to purchase goods or services that are enforceable and legally binding. Included in the purchase obligations category above are obligations related to purchase orders for inventory purchases under our standard terms and conditions and under negotiated agreements with vendors. We expect to receive consideration (products or services) for these purchase obligations. The purchase obligation amounts do not represent all anticipated purchases in the future, but represent only those items for which we are contractually obligated. The table above does not include obligations under employment agreements for services rendered in the ordinary course of business.

We are not able to reasonably estimate the timing of any potential payments for uncertain tax positions under ASC 740, Accounting for Uncertainty in Income Taxes—an interpretation of FASB Statement 109. As a result, the preceding table excludes any potential future payments related to our ASC 740 liability for uncertain tax positions. See Note 17 of our Consolidated Financial Statements for further discussion on income taxes.

Quantitative and Qualitative Disclosures about Market Risk

We develop products in the U.S, Canada, Europe, and Argentina, and sell those products into more than 100 countries throughout the world. As a result, our financial results could be affected by factors such as changes in foreign currency exchange rates or weak economic conditions in foreign markets. Most of our sales in Europe and Asia are denominated in the U.S. Dollar and Euro and with a portion of our sales denominated in Canadian dollar, Argentine peso and British pound. As our sales in currencies other than the U.S. dollar increase, our exposure to foreign currency fluctuations may increase.

In addition, changes in exchange rates also may affect the end-user prices of our products compared to those of our foreign competitors, who may be selling their products based on local currency pricing. These factors may make our products less competitive in some countries.

If the U.S. Dollar uniformly increased or decreased in strength by 10% relative to the currencies in which our sales were denominated, our net income would have correspondingly increased or decreased by an immaterial amount for the year ended December 31, 2017.

Our interest expense is sensitive to changes in interest rates and may vary with the federal funds rate and London Interbank Offered Rate (LIBOR). However, we may decrease interest rate risk by keeping our debt leverage low, as a hypothetical decrease of 10% in market interest rates would not result in a material decrease in interest expense paid on debt held at December 31, 2017.

All of the potential changes noted above are based on sensitivity analyses performed on our financial position as of December 31, 2017. Actual results may differ as our analysis of the effects of changes in interest rates does not account for, among other things, sales of securities prior to maturity and repurchase of replacement securities, the change in mix or quality of the investments in the portfolio, and changes in the relationship between short-term and long-term interest rates.

Off-Balance Sheet Arrangements

Under our bylaws, we have agreed to indemnify our officers and directors for certain events or occurrences arising as a result of the officer or director’s serving in such capacity. We have a directors and officers' liability insurance policy that limits our exposure and enables us to recover a portion of any future amounts paid resulting from the indemnification of our officers and directors. In addition, we enter into indemnification agreements with other parties in the ordinary course of business. In some cases we have obtained liability insurance providing coverage that limits our exposure for these other indemnified matters. We have not incurred material costs to defend lawsuits or settle

claims related to these indemnification agreements. We believe the estimated fair value of these indemnification agreements is minimal and have not recorded a liability for these agreements as of December 31, 2017. We had no other off-balance sheet arrangements during any of fiscal 2017, 2016 or 2015 that had, or are reasonably likely to have, a material effect on our consolidated financial condition, results of operations, or liquidity.

Recent Accounting Pronouncements

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See Note 1—Organization and Significant Accounting Policies to the Consolidated Financial Statements contained herein for a full description of recent accounting pronouncements including the respective expected dates of adoption and effects on results of our operations and financial condition.

Cautionary Information Regarding Forward Looking Statements

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 about Natus Medical Incorporated. These statements include, among other things, statements concerning our expectations, beliefs, plans, intentions, future operations, financial condition and prospects, and business strategies. The words “may,” “will,” “continue,” “estimate,” “project,” “intend,” “believe” “expect,” “anticipate,” and other similar expressions generally identify forward-looking statements. Forward-looking statements in this Item 7 include, but are not limited to, statements regarding the following: our ability to capitalize on improving market conditions, the sufficiency of our current cash, cash equivalents and short-term investment balances, and any cash generated from operations to meet our ongoing operating and capital requirements for the foreseeable future, and our intent to acquire additional technologies, products or businesses.

Forward-looking statements are not guarantees of future performance and are subject to substantial risks and uncertainties that could cause the actual results predicted in the forward-looking statements as well as our future financial condition and results of operations to differ materially from our historical results or currently anticipated results. Investors should carefully review the information contained under the caption “Risk Factors” contained in Item 1A of this report for a description of risks and uncertainties. All forward-looking statements are based on information available to us on the date hereof, and we assume no obligation to update forward-looking statements.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk

The information required by this Item is set forth in the section entitled Management’s Discussion and Analysis of Financial Condition and Results of Operations—Quantitative and Qualitative Disclosures About Market Risk, and is incorporated by reference in this section.

ITEM 8. Financial Statements and Supplementary Data

The Consolidated Financial Statements and Supplementary Data required by this Item are set forth where indicated in Item 15 of this report.

Selected Quarterly Financial Data (Unaudited)

The following table presents our operating results for each of the eight quarters in the period ending December 31, 2017. The information for each of these quarters is unaudited and has been prepared on the same basis as our audited financial statements appearing elsewhere in this report.

In the opinion of our management all necessary adjustments, including normal recurring adjustments, have been included to present fairly the unaudited quarterly results when read in conjunction with our audited Consolidated Financial Statements and the related notes appearing elsewhere in this report. These operating results are not necessarily indicative of the results of any future period.

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	Quarters Ended							
	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017	December 31, 2016	September 30, 2016	June 30, 2016	March 31, 2016
	(in thousands, except per amounts)							
Revenue	$131,440	$122,643	$122,227	$124,660	$107,699	$90,906	$95,958	$87,329
Cost of revenue	54,762	47,112	54,589	56,913	42,090	32,194	37,879	32,469
Intangibles amortization	2,590	1,290	1,500	1,000	510	612	604	601
Gross profit	74,088	74,241	66,138	66,747	65,099	58,100	57,475	54,259
Operating expenses:								
Marketing and selling	31,060	32,537	30,354	32,215	23,255	19,746	21,237	20,596
Research and development	13,724	11,632	13,713	12,753	10,847	7,689	7,105	7,802
General and administrative	16,923	17,329	24,156	16,016	13,652	12,821	11,923	12,481
Intangibles amortization	7,330	3,882	3,885	4,074	2,243	2,409	2,197	2,134
Restructuring	—	321	307	286	221	197	1,083	35
Total operating expenses	69,037	65,701	72,415	65,344	50,218	42,862	43,545	43,048
Income from operations	5,051	8,540	(6,277)	1,403	14,881	15,238	13,930	11,211
Other income (expense), net	(2,300)	150	(378)	(1,039)	55	(893)	25	456
Income before provision for income tax	2,751	8,690	(6,655)	364	14,936	14,345	13,955	11,667
Provision for income tax	9,845	17,203	(1,621)	16	4,705	1,032	3,443	3,129
Net income (loss)	$(7,094)	$(8,513)	$(5,034)	$348	$10,231	$13,313	$10,512	$8,538
Earnings per share:								
Basic	$(0.22)	$(0.26)	$(0.15)	$0.01	$0.32	$0.41	$0.32	$0.26
Diluted	$(0.22)	$(0.26)	$(0.15)	$0.01	$0.31	$0.40	$0.32	$0.26
Weighted average shares used in the calculation of net earnings per share:								
Basic	32,648	32,593	32,529	32,485	32,405	32,388	32,438	32,606
Diluted	32,648	32,593	32,529	33,040	33,009	32,981	32,983	33,222

ITEM 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Under the rules of the Securities and Exchange Commission, “disclosure controls and procedures” are controls and other procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in our reports that we file or submit under the Securities Exchange Act of 1934 is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate, to allow timely decisions regarding required disclosure.

We do not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud due to inherent limitations of internal controls. Because of such limitations, there is a risk that material

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misstatements will not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

We have evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, we have concluded that our disclosure controls and procedures were not effective as of December 31, 2017. This conclusion was based solely on the material weakness in our internal control over financial reporting further described below.

However, giving full consideration to the deficiency, we have concluded that the Consolidated Financial Statements included in this annual report present fairly, in all material respects, the Company's financial position, results of operations and cash flows for the periods disclosed in conformity with U.S. generally accepted accounting principles.

Management’s Report on Internal Control Over Financial Reporting

Our management, including our chief executive officer and chief financial officer, is responsible for establishing, maintaining and reviewing adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America and includes those policies and procedures that:

1. pertains 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 authorization of management and directors of the Company; and
3. provide reasonable assurance regarding prevention of 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. 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 and procedures may deteriorate.

We conducted an assessment of the effectiveness of our internal control over financial reporting as of December 31, 2017 based on criteria set forth in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In accordance with guidance issued by the Securities and Exchange Commission, companies are permitted to exclude acquisition from their final assessment of internal control over financial reporting for the first fiscal year in which the acquisition occurred. The first fiscal year exemption for internal controls over financial reporting does not apply to controls over purchase price allocation. Our evaluation of internal control over financial reporting excluded the internal control activities of Otometrics, which we acquired on January 3, 2017 and the internal control activities of our Neurosurgery acquisition which we acquired on October 6, 2017. Otometrics and Neurosurgery constituted 23% and 2% of consolidated revenue, respectively, and 8% and 2% of our total assets (excluding acquired intangible assets and goodwill) for the year ended December 31, 2017.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our annual or interim consolidated financial statements will not be prevented or detected on a timely basis.

Based on our assessment, we did not perform an effective risk assessment relating to significant acquisitions, and as a result we did not adequately design control activities over the accounting for the acquisition of Otometrics.

The control deficiencies described above did not result in material misstatements in the consolidated financial statements as of and for the fiscal year ended December 31, 2017. However, the control deficiencies create a reasonable possibility that a future material misstatement will not be prevented or detected on a timely basis. Accordingly, we have concluded that the control deficiencies represent a material weakness in our internal control over financial reporting as of December 31, 2017.

KPMG LLP, an independent registered public company accounting firm, has audited the Consolidated Financial Statements included in this Annual Report on Form 10-K and, as part of its audit, has issued an adverse opinion on the effectiveness of our internal control over financial reporting. This report appears in Part II, Item 9A of this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

In addition to the control deficiency described above, during the fourth quarter of 2017, we completed a substantial amount of the effort required to transition the critical information technology systems of Otometrics to Natus' legacy

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information technology systems. The remaining information technology systems integration for Otometrics is expected to be completed during 2018.

Remediation Efforts to Address Material Weakness

We expect to remediate the material weakness during 2018 as we operate our redesigned purchase price allocation controls to account for the acquisition of our Neurosurgery business which we acquired during the fourth quarter of 2017. Our remediation actions will include:

- improving the design of internal controls related to our review of key assumptions and data used to allocate acquisition purchase price by evaluating the specific financial reporting risks associated with each acquisition as they occur;
- improving the design of internal controls related to the evidence and documentation of internal control procedures with respect to the process of determining purchase price allocation; and
- sufficiently distinguishing our internal controls from the process we undertake to allocate purchase price.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors

Natus Medical Incorporated:

Opinion on Internal Control Over Financial Reporting

We have audited Natus Medical Incorporated and subsidiaries (the “Company”) internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, because of the effect of the material weakness, described below, on the achievement of the objectives of the control criteria, the Company has not maintained effective internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the consolidated balance sheets of the Company as of December 31, 2017 and 2016, the related consolidated statements of operations and comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the “consolidated financial statements”), and our report dated March 1, 2018 expressed an unqualified opinion on those consolidated financial statements.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the company's annual or interim financial statements will not be prevented or detected on a timely basis. Management concluded that there was a material weakness because the Company did not perform an effective risk assessment relating to significant acquisitions, and as a result, the Company did not adequately design control activities over the accounting for the acquisition of Otometrics. The material weakness was considered in determining the nature, timing, and extent of audit tests applied in our audit of the 2017 consolidated financial statements, and this report does not affect our report on those consolidated financial statements.

The Company acquired the Otometrics business on January 3, 2017 and the Neurosurgery business on October 6, 2017. Management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2017, the internal control activities of Otometrics and Neurosurgery which represented 23% and 2%, respectively, of total revenue and 8% and 2%, respectively, of total assets (excluding acquired intangible assets and goodwill) of the related consolidated financial statement amounts of the Company as of and for the year ended December 31, 2017. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of Otometrics and Neurosurgery.

Basis for Opinion

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

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

Definition and Limitations of Internal Control Over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance

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

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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.

(signed) KPMG LLP
San Francisco, California
March 1, 2018

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PART III

ITEM 10. Directors, Executive Officers, and Corporate Governance

Board of Directors

Our Board currently consists of six directors and is divided into three classes. Each class is elected for a term of three years, so that the term of one class of directors expires at each meeting. There are no family relationships among our executive officers and directors. Information regarding the business experience and age as of April 30, 2018 of each nominee and other members of the Board is provided below.

Doris E. Engibous
Director since 2004
Age 62

Ms. Engibous has served as a consultant and advisor to medical technology companies and executives since 2010. From 2004 to 2010, she served as President and CEO of Hemosphere Inc., an early commercialization stage, venture capital funded, medical technology company, prior to its acquisition by CryoLife Inc. (NYSE: CRY). Prior to 2004, Ms. Engibous served from 2000 through 2003 as President of Nellcor, a business of Tyco Healthcare Group/Tyco International Ltd. (now Covidien/Medtronic, NYSE: MDT). From 1986 through 2000, Ms. Engibous served in several executive capacities at Nellcor and its successors Nellcor Puritan Bennett Inc. and Mallinckrodt Inc., including as vice president, general manager and global business leader and senior director of marketing, and was responsible for the integration of Nellcor into Mallinckrodt and later Tyco Healthcare. Ms. Engibous has served on the board of directors of GI Supply, Inc., a family-owned medical technology company since 2014 and as its Chair since 2016. Ms. Engibous served on the board of directors of the National Kidney Foundation serving Minnesota, the Dakotas and Iowa from 2006 to 2010. She holds a Bachelor of Science degree in Chemical Engineering from the University of Michigan.

Ms. Engibous is distinguished by her technical background in Chemical Engineering, coupled with strong operational experience in manufacturing, regulatory affairs, quality assurance and marketing. She brings to the Natus Board over 30 years of experience in the medical device industry, including knowledge of organizational and operational management, financial expertise, marketing, R&D, human resources and integration experience relevant to a public company in the healthcare industry.

William M. Moore
Director Since 1989
Age: 69

Mr. Moore currently is the Chief Executive Officer and President and Chairman of the board of directors of IRIDEX Corporation, a medical device company, and has served in that capacity, or as interim Chief Executive Officer and President, since August 2012. Mr. Moore has served as the Managing Partner of Alpine Partners LLC since May 2008 as well as from 2003 to 2004. From 2004 until May 2008 Mr. Moore was a special limited partner for medical technology at Blue Line Partners, a private equity firm. He also has served on the boards of directors of Criticare Systems, Inc. from 2006 until it was acquired by Opto Circuits (India) Limited in April 2008 and Urologix Inc. from 2008 until June 2010. Mr. Moore holds a Bachelor of Science degree in Business from the University of Utah. Mr. Moore brings to the Board more than 25 years of executive experience in the worldwide medical technology field, particularly in the areas of sales, marketing, and product development. Mr. Moore is one of our co-founders and resigned as CEO of the Company in 1992.

James B. Hawkins
Chief Executive Officer
Director Since 2004
Age: 62

James B. Hawkins has served as Chief Executive Officer, and as a member of the Board, since joining Natus in April 2004 and as President since June 2013. He previously served as President from April 2004 through January 2011. Since December 2015, he has served as a member of the board of directors of OSI Systems, Inc., and he has served as a member of the board of directors of El Dorado Resorts since September 2014. Mr. Hawkins previously served as a director at Iradimed Corporation from 2005 until June 2016, IRIDEX Corporation from October 2007 until December 2014 and Digirad Corporation from April 2012 to October 2014. Prior to joining Natus, Mr. Hawkins was President, Chief Executive Officer and a director of Invivo Corporation, a developer and manufacturer of multi-parameter vital sign monitoring equipment, and its predecessor, from August 1985 through January 2004. He earned his undergraduate degree in Business Commerce from Santa Clara University and holds a Masters of Business Administration degree from San Francisco State University. Mr. Hawkins' brings to the Board highly relevant leadership experience in the medical technology industry as well as a unique perspective on our operations due to his position as our Chief Executive Officer.

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Robert A. Gunst
Chairman of the Board
Director Since 2004
Age: 70
Robert A. Gunst is Chairman of the Board of Directors of Natus Medical. Currently a private investor, Mr. Gunst served from 1990 to 1999 as President and Chief Executive Officer of The Good Guys, Inc., one of the largest specialty retailers of higher-end entertainment electronics in the nation. During that time he grew the business from a few stores in the San Francisco area to a chain of stores in four western states with approximately $1 billion in revenue. Earlier in his career, he held executive positions at several large corporations, including Shaklee Corporation, La Petite Boulangerie, Inc. and PepsiCo Foods International (both subsidiaries of PepsiCo, Inc.), Victoria Station Incorporated and The First National Bank of Chicago.

Mr. Gunst has served on a variety of public and private boards, including serving as a Director of The Good Guys, Inc. from 1986 to 1999, Director of Phoenix Footwear Group, Inc. from 2006 to 2007, Director of PortalPlayer, Inc. from 2005 to 2007, Director of AmNet Mortgage, Inc. (formerly American Residential Investment Trust Inc.) from 2004 to 2005, Director of Garden Fresh Restaurant Corp. from 1996 to 2004 and Chairman of Garden Fresh Restaurant Corp. from 2003 to 2004. He served as a member of the Deans Advisory Council of the Graduate School of Management at the University of California, Davis from 1997 to 2008. Mr. Gunst holds an MBA in Finance from the University of Chicago's Graduate School of Business and a Bachelor of Arts degree in Economics from Dartmouth College.

Mr. Gunst brings to the Natus Board nearly five decades of leadership, strategy, financial and operational experience, as well as experience in overseeing the operations of companies in various stages of development and is therefore uniquely qualified to serve as chairman of our Board.

Kenneth E. Ludlum
Director since 2002
Age 64
Mr. Ludlum currently serves as a board member, and has acted as a board member and as an advisor to and investor in a number of public and private medical and biotechnology companies. He served as Chief Financial Officer of CareDx, Inc., a medical diagnostic company, from March 2014 to April 2016. From April 2011 to October 2013, Mr. Ludlum served as Vice President and Chief Financial Officer, and Head of Operations for Endogastric Solutions, Inc., a medical device company. Prior to that, Mr. Ludlum also served as CFO for two other publicly-held companies, Perclose, Inc. from 1995 to 2000, and Alteon, Inc. from 1992 to 1994. He has also served on the board of directors and as Chair of the Audit Committee of several public and private medical or biotechnology companies. Mr. Ludlum holds a B.S. in Business Administration from Lehigh University and a M.B.A. from Columbia University Graduate School of Business. Mr. Ludlum brings to the Board over 30 years of business and financial experience working with healthcare and biotechnology companies. His service as chief financial officer at several public companies has provided him with extensive financial and accounting experience, and knowledge of accounting principles, financial reporting rules, and regulations. With his background in investment banking, he also brings a broad perspective to the Board.

Barbara R. Paul, M.D.
Director since 2016
Age 64
Dr. Paul serves as an advisor and board member to healthcare companies. In addition to her role on the board of Natus Medical, she serves on the board of Quorum Health Corporation, an owner and operator of general acute care hospitals and outpatient service providers. She served as Senior Vice President & Chief Medical Officer at

Community Health Systems (CHS) from July 2007 to January 2015. Prior to CHS, Dr. Paul was Senior Vice President & Chief Medical Officer for Beverly Enterprises, Inc. (now Golden Living, Inc.). Dr. Paul is a board-certified internist and she practiced as a full-time primary care physician for twelve years. She also worked at the federal Medicare program (Centers for Medicare & Medicaid Services, CMS), where she was Director of the Department of Quality Measurement & Health Assessment. Dr. Paul has a bachelor of science from the University of Wisconsin - Madison and earned her medical degree from Stanford University School of Medicine. Dr. Paul brings the perspective of a physician to the Board and also brings insight into quality measures and reporting, as well as federal government regulation of hospital-practitioner relationships.

Our Executive Officers

The names of our current executive officers, their ages as of April 30, 2018 and their positions are shown below:

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Name	Age	Position(s)
James B. Hawkins	62	President and Chief Executive Officer
Jonathan A. Kennedy	47	Executive Vice President and Chief Financial Officer
D. Christopher Chung, M.D.	54	Vice President Medical Affairs, Quality & Regulatory
Carsten Buhl	44	President & CEO, Otometrics SBU
Leslie McDonnell	45	Vice President and General Manager, Newborn Care
Austin F. Noll, III	51	Vice President and General Manager, Neurology SBU

There is no family relationship between any of the directors or executive officers and any other director or executive officer of Natus.

James B. Hawkins has served as Chief Executive Officer, and as a member of the Board of Directors, since joining Natus in April 2004, and as President from April 2004 through January 2011 and from June 2013 to present. In addition, he currently serves on the Board of Directors for Eldorado Resorts, Inc. and OSI Systems. Prior to joining Natus, Mr. Hawkins was President, Chief Executive Officer and a Director of Invivo Corporation, a developer and manufacturer of multi-parameter vital sign monitoring equipment, and its predecessor, from August 1985 through January 2004. Mr. Hawkins also served as Secretary of Invivo from July 1986 until January 2004. He earned his undergraduate degree in Business Commerce from Santa Clara University and holds a Masters of Business Administration degree from San Francisco State University.

Jonathan A. Kennedy joined Natus as Senior Vice President and Chief Financial Officer in April 2013 and was appointed Executive Vice President and Chief Financial Officer in September 2016. In addition, he currently serves on the Board of Directors for IRadimed Corporation. Before joining Natus, Mr. Kennedy was Senior Vice President and Chief Financial Officer of Intersil Corporation, a global semiconductor manufacturer, since 2009. Prior to that, he was Intersil’s Corporate Controller since 2005 and Director of Finance since 2004. Before joining Intersil, Mr. Kennedy held management roles in Finance and Information Technology with Alcon Inc. and Harris Corporation. He holds a Bachelor of Science degree in Business Administration and a Master of Science degree in Accounting from the University of Central Florida. Mr. Kennedy is also a Certified Public Accountant.

D. Christopher Chung, M.D., has served as our Vice President Medical Affairs, Quality and Regulatory since June 2003, and has served as our Vice President Medical Affairs since February 2003. Dr. Chung also served as our Medical Director from October 2000 to February 2003. From 2000 to 2007, Dr. Chung also served as a Pediatric Hospitalist at the California Pacific Medical Center in San Francisco. From 1997 to 2000, Dr. Chung trained as a pediatric resident at Boston Children’s Hospital and Harvard Medical School. From 1986 to 1993, Dr. Chung worked as an Engineer at Nellcor, a medical device company. Dr. Chung holds a Bachelor of Arts degree in Computer Mathematics from the University of Pennsylvania and a Doctor of Medicine degree from the Medical College of Pennsylvania-Hahnemann University School of Medicine. He is board certified in Pediatrics and is a Fellow of the American Academy of Pediatrics.

Carsten Buhl joined Natus in February 2018 and is acting as President for Natus' strategic business unit Otometrics. Mr. Buhl has more than 15 years experience in the medical device industry and has a proven track record within commercial execution and global leadership positions. Prior to joining natus, Mr. Buhl acted as Executive Vice President and Chief Commercial Officer at Ambu, a successful medtech company within the fields of anesthesia, patient monitoring and emergency care. Previously, Mr. Buhl held various management positions at GN Hearing, which is one of the world's largest providers of hearing instruments, most recently as Senior Vice President of Europe and Strategic Accounts. Mr. Buhl holds a Master of Law from Copenhagen University and an E*MBA from SIMI/CBS Copenhagen supplemented by graduate diplomas in Finance and Accounting from CBS Copenhagen.

Leslie McDonnell joined Natus in February 2018 as the Vice President and General Manger, Newborn Care. Ms. McDonnell is a healthcare business executive with 17 years of global experience in medical devices and supplies. Prior to joining Natus, Ms. McDonnell served as Global Business Vice-President for the Critical & Chronic Care Solutions of 3M Healthcare. Prior to joining 3M Healthcare, Ms. McDonnell held leadership positions at Medtronic over a 12 year period in corporate M&A, business development, new therapy and product development, and

marketing and business management in the Neuromodulation and Cardiac Rhythm Disease Management business. Ms. McDonnell holds a Bachelor of Science in Business and Masters of Busines Administration as an International Business Fellow from the Carlson School of Management at the University of Minnesota. In 2009, Ms. Donnell was selected as a 40 Under Forty honoree for business and community leadership by the Minneapolis/St. Paul Business Journal.

Austin F. Noll, III joined Natus in August 2012 as the Vice President and General Manager, Neurology. Prior to joining Natus, Mr. Noll served as the President and CEO of Simpirica Spine, a California-based start-up company that developed and commercialized a novel device for spinal stabilization. Prior to joining Simpirica Spine, Mr. Noll served as the President and CEO

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of NeoGuide Systems, a medical robotics company acquired by Intuitive Surgical. Prior to joining NeoGuide Systems, Mr. Noll held numerous management positions at Medtronic over a 13-year period, where he served as the Vice President and General Manager of the Powered Surgical Solutions and the Neurosurgery businesses. Before Medtronic, he held sales positions at C.R. Bard and Baxter Healthcare. He received a bachelor's degree in business administration from Miami University and a master's of business administration from the University of Michigan.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our directors, executive officers and holders of more than 10% of our common stock to file with the Securities and Exchange Commission reports regarding their ownership and changes in ownership of our securities. We believe that, during fiscal 2017, our directors, executive officers and 10% stockholders complied with all Section 16(a) filing requirements. In making this statement, we have relied upon examination of the copies of Forms 3, 4 and 5, and amendments thereto, provided to us, and the written representations of our directors, named executive officers and 10% stockholders.

Code of Conduct and Code of Ethics

We have a code of conduct and ethics that applies to all of our employees, including our principal executive officer, principal financial officer, and principal accounting officer or controller. This code of conduct and ethics is posted on our internet website. The internet address for our website is www.natus.com, and the code of conduct and ethics may be found in the "Governance" section of our "Investor" webpage.

We intend to satisfy the disclosure requirement under Item 10 of Form 8-K regarding certain amendments to, or waivers from, provisions of this code of conduct and ethics by posting such information on our website, at the address and location specified above, or as otherwise required by The NASDAQ Stock Market.

Audit Committee and Financial Expert

Our Audit Committee oversees and monitors our financial reporting and disclosure processes, our financial statement audits, the integrity of our financial statements, the qualifications, independence and performance of our independent registered public accounting firm, and our internal accounting and financial controls. The Committee also pre-approves audit and non-audit services, reviews, approves and monitors our Code of Business Conduct and Ethics with respect to our Chief Executive Officer, Chief Financial Officer, and other senior financial officers, and establishes procedures for receiving and handling complaints regarding accounting, internal accounting controls, or auditing matters.

The members of the Audit Committee of our Board of Directors are Kenneth E. Ludlum, Robert A. Gunst, and William M. Moore. Our Board of Directors has determined that Kenneth E. Ludlum is an audit committee financial expert as defined in Item 407(d) of Regulation S-K. All of the members of our audit committee are considered "independent" as the term is used in Item 7(d)(3)(iv) of Schedule 14A under the Exchange Act.

ITEM 11. Executive Compensation

Executive Compensation and Related Information

Compensation Discussion & Analysis (CD&A)

General

Our executive compensation program is designed to:

- attract and retain individuals with the skills and performance needed to achieve our business objectives
- reward and incentivize individuals fairly over time
- align the short and long-term compensation of those individuals with the Company's performance

Executive Summary

In 2017 we completed two significant acquisitions that we believe lay the groundwork for our future revenue growth and growth in profitability, the Otometrics acquisition completed in January 2017, and the acquisition of neurocritical care and neurosurgical product lines from Integra LifeSciences in October 2017. In addition, we continued our efforts to strengthen our

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neurology and newborn care franchises. With our acquisitions, we achieved record revenue in 2017, exceeding the goal of $500 million in annual revenue that we have shared with investors in recent years.

Notwithstanding our revenue growth of 31.2% in 2017, our net income was below our target levels and below the net income achieved in 2016. This was primarily due to lower profitability in our newborn care business unit driven by lower gross profit margins due to unfavorable revenue mix and increased investments in product engineering and required to meet regulatory standards.

Similar to the cash bonus plans we adopted in prior years, our executive officers were eligible to receive cash bonuses for 2017 based on the attainment of specific performance objectives, as further described below. The 2017 plan included a threshold requirement for all executive officers that consolidated earnings must exceed 85% of the plan target as a condition to the payment of any cash bonuses. While many of the other performance metrics were attained at a level that would result in the payment of cash bonuses, no cash bonuses were paid for 2017 because our earnings per share did not meet the threshold. We believe that the cash bonus plan operated effectively in 2017 to establish meaningful performance criteria, resulting in no bonus payments as our earnings target was not satisfied. This being the case, we recognize that the responsibilities of our executive officers were increased substantially with the addition of the Otometrics and neurocritical care/neurosurgical product lines in 2017, and that our executves expended significant additional efforts to integrate these new businesses.

At our annual meeting in 2017, approximately 91% of the stockholders who voted on our 2017 Say on Pay proposal voted in favor of the proposal. Considering this outcome, the Compensation Committee determined that it would continue to apply the same philosophy and guiding principles to the 2018 compensation for the Company’s named executive officers, and, as a result, did not change the structure of our executive compensation for 2018.

Our Business and Our Compensation Philosophy

We believe that opportunities exist for us to increase stockholder value by increasing our per-share earnings, and believe that the optimal manner of doing so is to increase the revenue base of the Company. We seek revenue growth through organic growth involving, primarily, the introduction of existing products into new markets and the internal development of new products, as well as via acquisitions of complementary products and businesses. Our business plans challenge our executives to seek growth through both of these means, and we expect over time to achieve a higher level of overall growth than could be achieved through either method alone. Further, we expect our business, including the businesses that we acquire, to be operated efficiently so that earnings can grow as we increase revenue. We also seek to achieve earnings growth by managing our business efficiently and implementing cost reduction efforts from time to time when we determine that we can do so without impairing our ability to operate effectively. Pursuit of this business model is demanding on our executives. They must implement efforts to enhance sales opportunities of existing products, oversee effective and efficient new product development and enhancements, successfully identify and complete the acquisition of complementary products and businesses and integrate these operations with our existing businesses, as well as conduct our business in an efficient manner.

In consideration of these factors, the primary objectives of our executive compensation are:

Retain Qualified Executive Talent. During the period from 2003 to 2017 we have substantially increased the size of our company. In this time period, we have completed 28 acquisitions of companies with principal offices in six different countries. We believe that maintaining continuity within our executive team has contributed significantly to our ability to achieve this growth. Our business is competitive and our corporate headquarters is in an area where there is significant competition for executive talent. In light of these factors, a key objective of our compensation is to allow us to retain qualified executives.

Attract Qualified Executives. We understand that we may find it in our interests to, or may be required to, add new individuals to our executive team from to time. For example, in February 2018 we added two new executive officers to head our newborn care and Otometrics operations. For us to be appropriately positioned to attract new talent as needed, we must be prepared to, and be perceived as an employer that is willing to, offer competitive compensation.

Link Compensation to Achievement of Our Business Objectives. We believe that a significant portion of the current period cash compensation that our executives are eligible to receive should be tied to attainment of goals that our Compensation Committee has determined are most capable of increasing stockholder value for the Company. Accordingly, our annual bonus plan has been tied to earnings and revenue goals and, for certain of our executives, the

attainment key business objectives.

Provide Direct Incentives for the Enhancement of Stockholder Value Over the Long Term. The effectiveness of our management in operating our business has a strong influence on the value of our common stock over time. We believe that our executives should be positioned to share, with our stockholders, in the gains and losses from changes in the value of our common

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stock over time and that this form of compensation will further motivate our executives to seek to increase long-term stockholder value.

Elements of Compensation

Our executive officers' compensation currently has two primary elements of compensation: (i) cash compensation in the form of salary and annual incentive awards, and (ii) equity awards in the form of restricted stock awards. In addition, we provide our executive officers with benefits that are available generally to all salaried employees.

We believe that we would impair our ability to retain our executives or, as required, attract new executives if we did not offer a competitive salary. As such, our goal is to provide salaries that are sufficient to make us reasonably confident of our ability to retain our executive team without overpaying. We further believe that a substantial portion of the cash compensation that our executives are eligible to receive should be directly tied to corporate performance. We believe that our annual business plans represent reasonably challenging targets, as evidenced by our paying no cash bonuses for 2017 and paying cash bonuses in the range of 17% to 64% of target for 2016. Our long-term equity-based incentive awards are designed to provide a competitive compensation package and to motivate our executives to increase stockholder value.

In establishing compensation, we take into account the compensation that is payable by companies that we believe to be our competitors and by other companies with which we believe we generally compete for executives. To this end, our Compensation Committee works with an outside compensation consultant, Willis Towers Watson, to define the criteria used to identify appropriate market comparisons for establishing compensation levels and the mix of salary, incentive compensation, and equity compensation. When determining our peer companies, we focus on identifying companies with whom we compete directly for customers and employees, as well as other medical device companies in the United States. In addition, we select companies that are similar to our size, limiting the peer group to companies whose trailing twelve-month revenue is generally within a range of approximately 0.5x to 2.0x of our projected annual revenue.

Our Compensation Committee requested and received a formal report from, Willis Towers Watson, to assist it in its deliberations for 2017 cash and equity compensation. The peer companies used in that report were: ABIOMED, Inc.; Accuray; Analogic; AngioDynamics; CONMED Corporation; Globus Medical, Inc.; Haemonetics Corporation; ICU Medical; Insulet Corporation; Integra LifeSciences; Masimo Corporation; Merit Medical Systems, Inc.; NuVasive, Inc.; Nxstage Medical, Inc.; Omnicell; and The Spectranetics Corporation. For the purpose of establishing competitive compensation ranges for elements of compensation, Willis Towers Watson considered the most recently reported compensation information for the peer group companies as well as the applicable compensation survey information based on our size and industry. The peer group was revised from the previous year group with the assistance of Willis Towers Watson in establishing compensation with two companies removed, as one company was acquired (Cyberonics), and another was deemed too small (Abaxis). Three companies were added (Integra LifeSciences, Insulet and Haemonetics) to the peer group based on the criteria described above. In addition to the reports from Willis Towers Watson, in determining the compensation of each of our executive officers other than that the Chief Executive Officer, our Compensation Committee considers the recommendations of the Chief Executive Officer.

Willis Towers Watson has worked directly with the Compensation Committee (and not on behalf of management) to assist the Compensation Committee in satisfying its responsibilities and will undertake no projects for management except at the request of our Compensation Committee chair and in the capacity of our Compensation Committee's agent. To date, Willis Towers Watson has not undertaken any projects for management or for the Company other than advising the Compensation Committee with respect to compensation matters and assisting the Company in the preparation of the pay ratio disclosure required for the first time in this Annual Report on Form 10-K for the year ended December 31, 2017. The Compensation Committee has concluded that none of Willis Towers Watson's work to date has raised any conflicts of interest that will prevent Willis Towers Watson from being independent consultants to the Compensation Committee.

We view the cash and equity elements of compensation as distinct. We think that each of these main components must be perceived by our executives as largely competitive with the corresponding compensation element paid by our peer companies. While we view cash and equity elements of compensation as distinct, we do link these two components of compensation insofar as it is our goal to establish aggregate cash and equity compensation that is between the median

and the 75th percentile of our peer group, assuming achievement of target level of performance, with the understanding that we may from time to time elect to provide compensation above this level in connection with the hiring of a new executive if we determine that it is necessary to provide compensation at this level to attract an executive with skills and experience we desire.

Because we seek to provide cash compensation that our executives regard as competitive with relevant market conditions, when setting salaries and aggregate cash compensation we are mindful of the corresponding amounts of cash consideration of our peer group. However, we may set an individual officer's salary and target bonus above or below median levels of our peer group, as determined to be appropriate by the Compensation Committee. We believe that this approach is sufficient to achieve our retention goals. For the achievement of performance goals above plan, our executives can earn aggregate cash consideration that is

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substantially above the median level of the peer group. We believe that this is appropriate because we adopt business plans that are a challenge for us to attain, and we believe that if our executives exceed the demanding targets in these plans they should be eligible to receive higher levels of compensation.

We view our compensation decisions as an exercise in paying competitive compensation, with desired performance goals, on an annual basis. Our cash compensation is not tied to performance beyond one year. Our equity awards vest over a period of time, and as such are impacted by the value of our common stock over the vesting period of the restricted stock. We do not take account of prior wealth accumulation by our executives from the receipt of cash on exercise or vesting of equity awards as we do not believe these prior period returns provide a significant motivation or retention benefit in the current period. Further, we do not set the compensation of our executives at any multiple or ratio to the compensation of other executives or employees. Our Compensation Committee has not adopted any formal or informal policies or guidelines for allocating compensation between long-term and immediate compensation, between cash and non-cash compensation, or among different forms of non-cash compensation, other than as described in this Compensation Discussion and Analysis for the manner in which we make restricted stock awards to executives.

Our Compensation Committee's current intent is to perform on a regular basis a strategic review of our executive officers' overall compensation packages to determine whether they provide adequate incentives and motivation and whether they adequately compensate our executive officers relative to comparable officers in our peer group companies.

Base Salaries

Our Compensation Committee reviews the base salaries of our executives annually and may adjust an officer's salary if it determines that such a change is merited on the basis of the officer's personal performance and market conditions. As set forth in the "Summary Compensation" table below, the Compensation Committee approved 2017 salary increases for executive officers based on market conditions, individual performance of the executives, the Company's growth and the Company's increased complexity of operation.

Cash Incentive Plan

As noted above, one element of our cash compensation has been a performance-based incentive plan. In 2015, upon the recommendation of the Board and Compensation Committee, our stockholders approved a Cash Incentive Plan, or CIP, for the Company to preserve our ability to deduct "performance-based compensation" awards pursuant to Section 162(m) of the Internal Revenue Code of 1986. The 2017 CIP further described below, which is the performance-based cash incentive plan for 2017, was adopted pursuant to the CIP.

Maximum Bonus and Performance Goals

The 2017 CIP applied the same performance metrics, with the same weighting, as the 2016 CIP for our CEO and CFO. In both plans, the bonus opportunity for our CEO and CFO was based primarily on consolidated adjusted pre-tax earnings per share with a lesser weighting for consolidated revenue. For our CEO and CFO the target bonus for 2017 was weighted (i) at 80% for attainment of the consolidated pre-tax earnings per share contained in the Company's 2017 business plan approved by the Board ("2017 Plan") and (ii) at 20% for attainment of the consolidated revenue contained in the 2017 Plan.

For Mr. Noll, the Vice President and General Manager of our Neurology strategic business units ("SBUs") and Mr. Traverso, who served through the first quarter of 2017 as the general manager of our Newborn care SBU, the target bonus under the 2017 CIP was based on the achievement of five metrics: (i) the consolidated pre-tax earnings per share contained in the 2017 Plan weighted at 15%, (ii) the consolidated revenue contained in the 2017 Plan weighted at 15% (iii) the pre-tax earnings per share of their respective strategic business units contained in the 2017 Plan weighted at 25%, (iv) the revenue of their SBUs contained in the 2017 Plan weighted at 25%, and (v) successful completion of discrete operational goals for their respective SBUs in 2017 weighted at 20%. These performance metrics were the same performance categories implemented in the 2016 CIP. Dr. Chung's bonus was based on the achievement of the following three metrics: (i) the consolidated pre-tax earnings per share contained in the 2017 Plan weighted at 60%, (ii) the consolidated revenue contained in the 2017 Plan weighted at 20% and (iii) the successful

completion of discrete operational goals weighted at 20%. These performance metrics were the same performance categories implemented in the 2016 CIP for Dr. Chung.

The target consolidated revenue for 2017 was $519,400,000.00. The target amount of consolidated non-GAAP EPS was $ 1.89. The 2017 CIP required as a threshold to the payment of cash bonuses to any executive officers that we achieve the non-GAAP EPS target at a minimum of the 85% level. Because it was clear that no bonus payments would be made for 2017 in light of our actual operating results, the actual adjustments to EPS were not calculated. Had it been necessary to determine adjusted EPS for 2017, the likely adjustments would have been to eliminate restructuring costs, costs of acquisitions, and remediation costs at the Company’s Seattle facility.

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Target amounts for our named executive officers under the 2017 CIP were established as a percentage of the base salaries of the respective officers and were as follows:

Name:	($) Minimum Bonus	($) Target Bonus	($) Maximum Bonus
James B. Hawkins, Chief Executive Officer	400,000	800,000	1,600,00
Jonathan A. Kennedy, Senior Vice President Finance and Chief Financial Officer	156,000	312,000	624,000
Austin A. Noll, III, Vice President, General Manager, Neurology	90,000	180,000	360,000
Kenneth M. Traverso, Vice President, General Manager, Newborn Care (1)	82,500	165,000	330,000
D. Christopher Chung, M.D., Vice President Medical Affairs, Quality and Regulatory Affairs	60,000	120,000	240,000

(1) Mr. Traverso served as the general manager of our Newborn Care SBU, and as an executive officer, through the first quarter of 2017, following which time he continued as an employee.

Equity-Based Compensation Element

Equity-based compensation provides employees with a common interest with our stockholders to increase the value of our common stock. Equity awards are granted to employees, including our executive officers, in the form of restricted stock and restricted stock units. Equity grants help retain key employees because they typically cannot be fully exercised or are subject to a right of repurchase for four years. In addition, the four-year vesting schedule also helps focus our employees on long-term performance.

From 2006 until December 2014, we sought to achieve the equity portion of aggregate compensation through stock option grants and restricted stock awards, with each comprising approximately half of the value of the annual equity award. From December 2014 forward, the annual equity award is comprised solely of restricted stock awards.

Equity-based compensation is granted to an executive officer when the executive first joins us. Additional equity-based compensation may be granted in connection with a significant change in responsibilities. Further, we typically make annual equity awards to our executive officers. In making these awards our Compensation Committee applied the compensation philosophy discussed above. In particular, the Compensation Committee used equity awards to help to provide total annual compensation that was consistent with its goals for total compensation, to incent our executives to increase the per share value of the Company over the course of the vesting period of these awards and to provide a mechanism for the retention of the executives over the course of the vesting of the awards. The Compensation Committee's procedure for timing of equity awards provides assurances that grant timing is not being manipulated to result in a price that is favorable to employees. In 2015, the Compensation Committee revised its practice with regard to the granting of equity awards to employees and did so at the beginning of the year in connection with its establishment of cash compensation. Previously, equity awards were made promptly following the annual meeting of stockholders, typically in June of each year. The exercise price for all option grants is the closing price on the last completed day of trading prior to the meeting of the Compensation Committee at which the options are granted.

In 2018 we revised the form of award agreement for our equity-based awards to provide that unvested awards would vest upon retirement if the employee had attained the age of 65 and had been continuously employed for at least 10 years. Our Compensation Committee elected to make this change because it sought to have the ability to continue to motivate employees to remain in our employ following the attainment of age 65, even if the employee might not otherwise be committed to working through the full customary vesting term. This provision applies to all recipients of equity awards made after the adoption of this change, including Executive Officers.

Employment Agreements and Change in Control Arrangements

We entered into employment agreements with Kenneth M. Traverso in November 2002 and D. Christopher Chung, M.D. in February 2003, both of which were amended in December 2008, and with James B. Hawkins in April 2004, which was amended in April 2008, December 2008, and April 2014. We entered into an employment agreement with Austin A. Noll, III on August 1, 2012 and Jonathan A. Kennedy on April, 11, 2013. In addition, with the exception of Mr. Hawkins and Mr. Kennedy, the other executives entered into Amended Employment Agreements with the Company in August, 2014. Other than Mr. Hawkins, the terms of these agreements are substantially the same. Upon termination of employment for cause, death, or disability, the executive

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will only be eligible for severance benefits, if any, in accordance with the Company's established policies for all employees as then in effect, which consist primarily of short-term disability and group life insurance benefits.

Should an officer's, other than Mr. Hawkins' employment with us terminate for other than cause, death or disability, the officer shall be entitled to:

- Receive continuing payments of severance pay, less applicable withholding taxes, at a rate equal to the officer's then current base salary rate for a period of twelve months commencing with the latest payroll date that is also within 70 days from the date of "separation from service" (with earlier commencement possible only if in compliance with Section 409A of the Internal Revenue Code and with payments that would have been made on earlier payroll dates, but for this provision, cumulated and paid on such payroll date);
- The immediate vesting and exercisability of any unvested stock options and of restricted stock, or other equity awards, which in the case of stock options would be exercisable for a period of 30 days after such termination; and
- Continued payment by the Company of COBRA benefits through the lesser of (i) six to eighteen months from the effective date of such termination, (ii) the date upon which the officer and the officer's eligible dependents become covered under similar plans, or (iii) the date the officer no longer constitutes a "Qualified Beneficiary", as such term is defined in Section 4980B(g) of the Internal Revenue Code of 1986, as amended.

These agreements provide for the same severance benefits as above if the officer terminates his employment for "good reason" within 12 months following a change-in-control transaction, in which case the executive also is eligible to receive a cash payment equal to the amount of the officer's target bonus in effect at the time of the change-in-control event occurs or the actual bonus at the time of the officer's termination. Employment termination is for "good reason" if it follows a material reduction in the officer's duties or responsibilities, a reduction in base salary, a material reduction in employee benefits, relocation of more than 35 miles from the officer's present location, or the failure of a successor entity to assume the employment agreement. A change in control for such employment agreements is a transaction by which someone acquires more than 50% of the Company's outstanding voting power, a change in the Board within a two-year period such that fewer than a majority are incumbent directors, a merger or consolidation following which the stockholders of the Company own 40% or less of the combined voting power of the Company or the surviving entity, or the sale of all or substantially all of the assets of the Company.

Should Mr. Hawkins' employment with us terminate for other than cause, death or disability, Mr. Hawkins shall be entitled to:

- Receive a lump sum payment due and payable within thirty (30) days after the date of separation, less applicable withholding taxes, equal to two times his then current base salary;
- The immediate vesting of any unvested stock options, restricted stock, or other equity awards, which in the case of stock options would be exercisable for a period of 30 days after such termination; and
- Continued payment by the Company of COBRA benefits through the lesser of (i) 18 months from the effective date of such termination, or (ii) the date upon which he or his eligible dependents become covered under similar plans

The agreement provides that if within twelve months of a change in control transaction Mr. Hawkins terminates his employment for "good reason" or is terminated without cause, then Mr. Hawkins will receive (i) a lump sum payment due and payable within thirty (30) days after the date of separation, less applicable withholding taxes, equal to two times the sum of (A) the greater of his then current base salary rate and his base salary rate in effect immediately prior to the change in control transaction and (B) the greater of 100% of his target bonus then in effect and 100% of his target bonus as in effect immediately prior to the change in control transaction; (ii) continued provision of COBRA or similar benefits through the lesser of twenty-four months or the date upon which Mr. Hawkins becomes covered under similar plans; and (iii) the immediate vesting of unvested stock options, restricted stock and other equity awards. Employment termination is for "good reason" if it follows a material reduction in the officer's duties or responsibilities, a material reduction in base salary, a material reduction in employee benefits, relocation of more than 35 miles from the officer's present location, or the failure of a successor entity to assume the employment agreement. A change in control for purposes of this employment agreement is a transaction by which someone acquires more than 50% of the Company's outstanding voting power, a merger or consolidation following which the stockholders of the Company own 40% or less of the combined voting power of the Company or the surviving entity, stockholder approval of a plan to liquidate the Company, or the sale of all or substantially all of the assets of the Company.

To be eligible for termination benefits, all executives must comply with certain non-compete and non-solicitation provisions and retention is conditioned on execution of a release of claims.

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The base salaries for our named executive officers for 2017 were as follows: James B. Hawkins, $820,000; Jonathan A. Kennedy, $490,000; Austin A. Noll, III, $370,000; Kenneth M. Traverso, $340,000; and D. Christopher Chung, M.D., $310,000.

We believe that these agreements appropriately balance our needs to offer a competitive level of severance protection to our executives and to induce our executives to remain in our employ through the potentially disruptive conditions that may exist around the time of a change in control, while not unduly rewarding executives for a termination of their employment. We note that our change in control terms include so-called “double trigger” provisions, so that the executive is not entitled to the severance payment by the mere occurrence of the change in control. This feature, we believe, will be an incentive to the executive to remain in the employ of the Company if such continuation is required by our partner in a change in control transaction.

Our 2011 Stock Awards Plan provides for the grant of options to purchase our common stock to employees, directors and consultants. Under the predecessor plan, prior to June 14, 2006, options granted to employees had a contractual term of ten years; options granted since June 14, 2006 have a contractual term of six years. The 2011 plan and the predecessor plan provide that after certain “change in control” events, including, for example, our merger with or into another corporation or the sale of all or substantially all of our assets, outstanding options may be assumed or equivalent options may be substituted, by the successor corporation. The plans provide that the plan administrator may provide that if an optionee’s options are assumed or substituted and the optionee’s status as our employee or employee of the successor corporation is terminated within 12 months other than by a voluntary resignation or termination for cause, the option may become fully exercisable. Further, if the successor corporation does not assume an outstanding option or substitute for it an equivalent option, the option becomes fully vested and exercisable.

For further detailed financial information concerning the severance and change in control arrangements with our executive officers, please see the tabular information contained in the section entitled “Potential Payments Upon Termination or Change in Control.”

Other Benefits

Executive officers are eligible to participate in all of our employee benefit plans, such as medical, dental, vision, group life, disability, and accidental death and dismemberment insurance, and our 401(k) plan, in each case on the same basis as other employees, subject to applicable law. We also provide vacation and other paid holidays to all employees, including our executive officers, which we intend to be comparable to those provided at peer companies.

Accounting Treatment

We account for equity compensation paid to our employees under ASC Topic 718 which requires us to estimate and record an expense over the service period of the award. Our cash compensation is recorded as an expense at the time the obligation is accrued. We structure the cash compensation element of our incentive compensation so that it is taxable to our executives at the time it becomes available to them. We currently intend that all cash compensation paid will be tax deductible by us. However, with respect to equity compensation awards, while any gain recognized by employees from nonqualified options granted at fair market value should be deductible, to the extent that an option constitutes an incentive stock option, gain recognized by the optionee will not be deductible if there is no disqualifying disposition by the optionee. In addition, if we grant restricted stock or restricted stock unit awards that are not subject to performance vesting, they may not be fully deductible by us at the time the award is otherwise taxable to employees.

Tax Deductibility of Executive Compensation

Section 162(m) of the Tax Code generally disallows public companies a tax deduction for federal income tax purposes of remuneration in excess of $1 million paid to certain executive officers. While our Compensation Committee may consider the deductibility of awards as one factor in determining executive compensation, our Compensation Committee also looks at other factors in making its decisions and retains the flexibility to award compensation that it determines to be consistent with the goals of our executive compensation program even if the awards are not deductible by us for tax purposes.

Recent changes to Section 162(m) in connection with the passage of the Tax Cuts and Jobs Act repealed exceptions to the deductibility limit that were previously available for “qualified performance-based compensation” (including stock

option grants, performance-based cash bonuses and performance-based equity awards, such as performance-based restricted stock units) effective for taxable years after December 31, 2017. As a result, any compensation paid to certain of our executive officers in excess of $1 million following December 31, 2017 will be non-deductible. However, compensation payable pursuant to certain binding arrangements in effect on November 2, 2017 may qualify for transition relief afforded by the Tax Cuts and Jobs Act and remain deductible. Because of uncertainties in the interpretation and implementation of the changes to Section 162(m) in the Tax Cuts and Jobs Act, including the scope of the transition relief, we can offer no assurance of such deductibility.

Compensation Risk

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The Compensation Committee regularly reviews the Company's compensation policies and practices, including the risks created by the Company's compensation plans. The Compensation Committee concluded that the compensation plans reflected the appropriate compensation goals and philosophy and that any risks arising from the Company's compensation policies and practices are not reasonably likely to have a material adverse effect on the Company.

SUMMARY COMPENSATION TABLE

The following table sets forth information concerning compensation of our Chief Executive Officer, Chief Financial Officer, and the other three most highly compensated executive officers (the "named executive officers"), all of whom were serving as executive officers of the Company as of December 31, 2017, except for Mr. Traverso, who served as an executive officer through the first quarter of 2017, following which time he continued as an employee[1].

Name and Principal Position	Year	Salary	Stock Awards [3]	Option Awards [2]	Non-Equity Incentive Plan Compensation ($) [3]	All Other Compensation [4]	Total
James B. Hawkins Chief Executive Officer	2017	$820,000	$4,106,400	$--	$ 0	$6,144	$4,932,544
	2016	750,000	3,999,905	--	985,502	6,064	5,741,471
	2015	700,000	2,811,120	--	1,080,301	7,522	4,598,943
Jonathan A. Kennedy Senior Vice President Finance and Chief Financial Officer	2017	490,000	1,113,600	--	0	5,578	1,609,178
	2016	440,000	1,000,090	--	375,195	5,560	1,820,845
	2015	410,000	792,159	--	410,514	4,250	1,616,923
Austin A. Noll, III Vice President, General Manager, Neurology	2017	370,000	556,800	--	0	6,020	932,820
	2016	340,000	530,075	--	139,859	1,242	1,011,176
	2015	320,000	419,866	--	197,060	828	937,754
Kenneth M. Traverso Vice President, General Manager, Newborn Care	2017	340,000	501,120	--	0	7,124	848,244
	2016	330,000	500,045	--	225,229	7,072	1,062,346
	2015	310,000	225,000	--	156,055	4,319	945,008
D. Christopher Chung, M.D. Vice President Medical Affairs, Quality and Regulatory	2017	310,000	320,160	--	0	6,020	636,180
	2016	286,000	299,845	--	146,637	5,992	742,474
	2015	277,000	237,504	--	152,083	6,114	673,906

(1) Each of the named executive officers has an Employment Agreement with us that provided for an initial base salary that is subject to subsequent review and to adjustments. These agreements provide that the executive's employment with us is on an "at will" basis. These agreements also provide for certain payments and other benefits upon termination of employment in certain circumstances, as further described under "Employment Agreements and Change in Control Arrangements" in the "Compensation Discussion and Analysis" above, and in the "Potential Payments Upon Termination or Change in Control" section below.

(2) The amounts included in the "Stock Awards" and "Option Awards" columns represent the grant-date fair value of the awards on the date of grant, computed in accordance with ASC Topic 718, except that in the case of option awards, a forfeiture rate of zero percent has been used. The assumptions we use in calculating these amounts, other than the exclusion of the impact of estimated forfeitures, are discussed in Note 14-Share Based Compensation of the Notes to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31,

2017. See the “Grants of Plan Based Awards Table” for more information regarding the equity awards granted by the Company in 2017. Refer to the “Compensation Discussion and Analysis” above for a discussion of these awards.
(3) The amounts in this column reflect bonuses under our CIP for 2015 and 2016 that were paid in March 2016 and 2017. See the “Grants of Plan Based Awards Table” for more information regarding non-equity incentive plan compensation. Refer to the “Compensation Discussion and Analysis” above for a discussion of non-equity incentive plan compensation.
(4) The amounts included in the “All Other Compensation” column consist of matching contributions paid by the Company into our 401(k) plan on behalf of the named executive officers, the value of group life insurance benefits.

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GRANTS OF PLAN BASED AWARDS - FISCAL 2017

This table discloses the actual numbers of stock options and restricted stock awards granted to our named executive officers in 2017 and the grant date fair value of these awards. It also captures the payouts under the Company's 2017 Management EMIP.

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards [1]			All Other Stock Awards: Number of Shares of Stock or Units [2]	All Other Option Awards: Number of Securities Underlying Options	Exercise or Base Price of Option Awards ($/Share)	Grant Date Fair Value of Stock and Option Awards ($)[3]
		Threshold ($)	Target ($)	Maximum ($)				
Mr. Hawkins	01/02/2017	400,000	800,000	1,600,000	118,000			$4,106,400
Mr. Kennedy	01/02/2017	156,000	312,000	624,000	32,000			1,113,600
Mr. Noll	01/02/2017	90,000	180,000	360,000	16,000			556,800
Dr. Chung	01/02/2017	60,000	120,000	240,000	9,200			320,160
Mr. Traverso	01/02/2017	82,500	65,000	330,000	14,400			501,120

(1) Each of the named executive officers had a range of payouts targeted for 2017 non equity incentive compensation under our 2017 CIP based on the Company's performance as described in "Compensation Discussion and Analysis" above.

(2) Each of the named executive officers received a grant of restricted shares in 2017 that vest as follows: 50% in January 2019, 25% in January 2020, and 25% in January 2021.

(3) Represents the grant date fair market value of restricted stock awards granted to the named executive officers in 2016 computed in accordance with ASC Topic 718. The assumptions we use in calculating these amounts are discussed in Note 14-Share Based Compensation of the Notes to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2017.

OUTSTANDING EQUITY AWARDS AT 2017 FISCAL YEAR-END

Name	Option Awards [1]				Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($) [3]
Mr. Hawkins	160,000	--	10.69	06/07/2018[2]	181,455	6,931,581
	150,000	--	14.34	06/03/2019[2]		
	107,708	2,292	22.50	01/01/2020[2]		
Mr. Kennedy	31,345	--	13.24	04/08/2019[2]	48,990	649,018
	16,767	833	22.50	01/01/2020[2]		
Mr. Noll					24,950	953,090
	9,375	--	11.92	06/07/2018[2]		

	14,250	--	14.34	02/14/2019[2]		
	19,583	417	22.50	01/01/2020[2]		
Dr. Chung	15,358	--	10.69	06/07/2018[2]	14,495	553,709
	16,000	--	14.34	06/07/2019[2]		
	13,708	292	22.50	01/01/2020[2]		
Mr. Traverso	36,000	--	10.69	06/07/2018[2]	22,770	869,814
	30,000	--	14.34	06/07/2019[2]		
	19,583	417	22.50	01/01/2020[2]		

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(1) Initial grants of options to the named executive officers upon employment vest 1/8th after the completion of six months of service with the remainder vesting ratably over the next 42 months. Subsequent grants of options vest ratably over a 48 month period.
(2) Options expire 6 years from the date of grant.
(3) Represents the value of these awards based on the closing price of our stock on December 30, 2017 of $38.20.

OPTION EXERCISES AND STOCK VESTED - FISCAL 2017
The following table sets forth certain information regarding options and stock awards exercised and vested, respectively, during 2017 for the named executive officers.

	Option Awards		Stock Awards	
Name	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise ($)	Number of Shares Acquired on Vesting (#) [1]	Value Realized on Vesting ($) [1]
Mr. Hawkins	--	--	148,705	5,425,244
Mr. Kennedy	--	--	53,990	2,009,868
Mr. Noll	--	--	24,700	895,565
Mr. Chung	12,642	407,333	14,795	537,519
Mr. Traverso	32,000	633,738	22,870	830,397

(1) Represents the value of restricted stock awards that were granted on June 7, 2013, and January 1, 2014, and January 1, 2015, and January 4, 2016 that vested in 2017.

POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE IN CONTROL
Under the employment agreements between the Company and the named executive officers, upon termination of employment for cause, death or disability, the executive will only be eligible for severance benefits, if any, in accordance with the Company's established policies for all employees as then in effect. The table that follows reflects the amount of compensation due to our named executive officers if their employment is terminated for other than cause, death or disability, or their employment is terminated or the executive terminates his employment for good cause, following a change in control, as more fully described under “Employment Agreements and Change in Control Arrangements” in the “Compensation Discussion and Analysis” above. The amounts shown below assume that such termination or change in control event was effective as of December 31, 2017. For a discussion of the amount of compensation due to our named executive officers if their employment is terminated without cause other than in connection with a change of control, see “Employment Agreements and Change in Control Arrangements” in the “Compensation Discussion and Analysis” above.

Name	Cash Severance Payment	Continuation of Medical and Welfare Benefits	Acceleration of Equity Awards [1]	Total Termination Benefits
Mr. Hawkins	$2,440,000	$42,030	$6,967,565	$9,449,595
Mr. Kennedy	810,000	38,543	1,884,496	2,773,039
Mr. Noll	550,000	38,543	959,637	1,548,180
Dr. Chung	430,000	38,543	558,293	1,026,836
Mr. Traverso	505,000	38,543	876,361	1,419,904

(1)

The amounts shown in the table represent the payments to which the officer is entitled for a termination following a change in control. For termination without cause other than in connection with a change of his control, his cash severance

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payment and other benefits are detailed in the “Employment Agreements and Change in Control Arrangements” Section, above.

Pay Ratio Disclosure

Our ratio of the annual total compensation of our Chief Executive Officer to the median of the annual total compensation of all our employees (excluding our Chief Executive Officer) for 2017 is 90 to 1. We believe this ratio, which was calculated in a manner consistent with Item 402(u) of Regulation S-K, to be a reasonable estimate, based upon the assumptions and adjustments described below. As disclosed in the 2017 Summary Compensation Table, the annual total compensation for 2017 for our Chief Executive Officer was $4,932,544. The annual total compensation for 2017 for our median employee was $55,061. In identifying the median employee under Item 402(u), reporting companies are permitted to use reasonable estimates, assumptions and methodologies based on their own facts and circumstances. As a result, the disclosure regarding the compensation of our median employee may not be directly comparable to similar disclosure by other reporting companies.

Calculation Methodology

We identified the employee with compensation at the median of the compensation of all of our employees (the “median employee”) by considering our employee population as of December 20, 2017 (the “employee population determination date”). We considered all individuals, excluding our Chief Executive Officer, who were employed by us on a world-wide basis (including our consolidated subsidiaries) on the employee population determination date, whether employed on a full-time, part-time, seasonal or temporary basis, including employees on a partial year leave of absence (our “employee population”), subject to the application of the “de minimis” exemption as described below. The de minimis exemption allows us to exclude up to 5% of our total employees who are non-U.S. employees. Our total number of employees, including U.S. and non-U.S. employees as of the employee population determination date was 2,176, and we used this number to calculate the maximum number of employees excludable under the de minimis exemption. Accordingly, in identifying the median employee, we used the de minimis exemption to exclude the following numbers of employees who are employed in the following countries: Australia (12), Brazil (1), China (36), Spain (9), Finland (2), Hong Kong (3), India (2), Jordan (2), Lebanon (1), Mexico (2), Malaysia (1), Netherlands (3), Norway (2), New Zealand (1), Portugal (1), Sweden (4), Singapore (4) and South Africa (1).

Multiple consistently applied calculation measures (“CACM”) were reviewed before selecting base salary as the CACM for purposes of identifying the median employee. The employee compensation data under review reflects 2017 figures.

For employees paid other than in U.S. dollars, we converted their compensation to U.S. dollars using foreign exchange rates in effect on the employee population determination date. We did not make any cost-of-living adjustments for employees outside of the United States. For employees hired between January 1, 2017 and the employee population determination date, we calculated their cash compensation described above as if they had been employed for the entire measurement period.

We believe our methodology represents a CACM that strikes a balance in terms of administrative burden while consistently treating all the primary compensation components for our worldwide employee population.

Using this methodology, we identified the median employee who was in the sales department and based in the United States.

We calculated the annual total compensation for the median employee using the same methodology we use to calculate the amount reported for our named executive officers in the “Total” column of the Summary Compensation Table.

DIRECTOR COMPENSATION

Directors who are employees receive no additional compensation for serving on the Board or its committees. The table below discloses the annual compensation provided during the year ended December 31, 2017 to directors who are not employees:

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Name	Fees Earned or Paid in Cash ($) [1]	Stock Awards ($) [2]	Option Awards ($) [2, 3]	Total ($)
Mr. Gunst	166,000	149,468	--	312,985
Ms. Engibous[4]	88,775	149,468	--	235,760
Mr. Ludlum[5]	101,000	149,468	--	247,985
Mr. Moore[6]	95,549	149,468	--	242,534
Ms. Paul[7]	77,218	149,468	--	224,203

(1) For 2017, fees earned and paid in cash were based on the following retainer and payment schedule:

Board Retainer	$60,000
Audit Committee Member Retainer	$15,000
Compensation Committee Member Retainer	$10,000
Nominating Committee Member Retainer	$5,000
Chairman of the Board	$75,000
Audit Chair Retainer	$20,000
Compensation Chair Retainer	$10,000
Nominating Chair Retainer	$7,500
Compliance Chair Retainer	$10,000
Compliance Committee Member Retainer	$10,000

(2) Represents the grant date fair market value of restricted stock awards granted to the directors in 2017 computed in accordance with ASC Topic 718. Assumptions we use in calculating these amounts, other than the exclusion of the impact of estimated forfeitures, are discussed in Note 12-Share Based Compensation of the Notes to our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2017.

(3) At December 31, 2017, Ms. Engibous had 18,000 options and 4,400 unvested restricted shares outstanding, Mr. Gunst had 18,000 options and 4,400 unvested restricted shares outstanding, Mr. Ludlum had 13,000 options and 4,400 unvested restricted shares outstanding, Mr. Moore had 13,000 options and 4,400 unvested restricted shares outstanding, and Ms. Paul had 4,400 unvested restricted shares outstanding.

(4) Nominating and Governance Committee Chair.

(5) Audit Committee Chair.

(6) Compensation Committee Chair.

(7) Compliance Committee Chair.

Compensation Committee Interlocks and Insider Participation

Our Compensation Committee consists of Ms. Engibous, Mr. Ludlum and Mr. Gunst. Mr. Moore, who served on the Compensation Committee for a portion of 2017, served as our Chief Executive Officer 26 years ago, from April 1989 to May 1992.

Compensation Committee Report

The Compensation Committee of the Board of Natus has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussions, the Compensation Committee recommended to the Board that the Compensation Discussion and Analysis be included in this Annual Report on Form 10-k for the fiscal year ended December 31, 2017.

Respectfully submitted by:
THE COMPENSATION COMMITTEE

DORIS E. ENGIBOUS, Chair

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ROBERT A. GUNST
KENNETH E. LUDLUM

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

Equity Compensation Plan Information

The following table sets forth information about the number of shares of common stock that can be issued under our 2011 Stock Awards Plan, as amended, and our 2011 Employee Stock Purchase Plan as of December 31, 2017.

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants, Awards and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants, Awards and Rights	Number of Securities Remaining Available for Future Issuance under Equity Compensation Plans (excluding securities reflected in the first column)
Equity compensation plans approved by security holders	819,073	$ 15.18	779,298
Equity compensation plans not approved by security holders	—	—	—
Total	819,073	15.18	779,298

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth information, as of March 31, 2017, concerning:

- Beneficial owners of more than 5% of Natus common stock;
- Beneficial ownership by current Natus directors and nominees, and the named executive officers set forth in the "Summary Compensation Table"; and
- Beneficial ownership by all current Natus directors and executive officers as a group.

The information provided in the table is based on Natus' records, information filed with the Securities and Exchange Commission and information provided to Natus, except where otherwise noted.

The number of shares beneficially owned by each entity, person, director or executive officer is determined under rules of the Securities and Exchange Commission, and the information is not necessarily indicative of beneficial ownership for any other purpose. Under such rules, beneficial ownership includes any shares as to which the individual has the sole or shared voting power or investment power and also any shares that the individual has the right to acquire within 60 days of the measurement date through the exercise of any stock option or other right. The address for those individuals for which an address is not otherwise provided is c/o Natus Medical Incorporated, 6701 Koll Center Parkway Suite 120, Pleasanton, CA, 94566. Unless otherwise indicated, each person has sole voting and investment power (or shares such powers with his or her spouse) with respect to the shares set forth in the following table. For each individual and group included in the table below, percentage ownership is calculated by dividing the number of shares beneficially owned by such person or group by the sum of the 33,273,137 shares of common stock outstanding on March 31, 2018, plus the number of shares of common stock that such person or group had the right to acquire on or within 60 days after March 31, 2018.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

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Name and Address of Beneficial Owner	Shares Beneficially Owned	Right to acquire beneficial ownership under options exercisable within 60 days	Total Beneficially Owned	Percent of Class
Principal Stockholders				
BlackRock, Inc. 55 East 52nd Street New York, NY 10055 (1)	4,032,681	--	4,032,681	12.2%
Dimensional Fund Advisors LP Building One 6300 Bee Cave Road Austin, TX 78746 (2)	1,619,337	--	1,619,337	4.9%
Janus Henderson Group plc (3)	2,164,927	--	2,164,927	6.5%
Silvercrest Asset Management Group LLC 1330 Avenue of the Americas, 38th Floor New York, NY 10019 (4)	1,587,355	--	1,587,355	4.8%
Vanguard Group, Inc. 100 Vanguard Blvd. Malvern, PA 19355 (5)	2,245,064	--	2,245,064	6.8%
Wellington Management Group LLP 280 Congress Street Boston, MA 02210 (6)	1,924,157	--	1,924,157	5.8%
Directors, Nominees and Named Executive Officers				
Mr. Noll (7)	81,901	43,625	125,526	*
Dr. Chung (8)	136,373	45,358	181,731	*
Ms. Engibous (9)	21,750	13,000	34,750	*
Mr. Gunst (10)	50,850	13,000	63,850	*
Mr. Hawkins (11)	639,257	420,000	1,059,257	3.1%
Mr. Ludlum (12)	88,825	8,000	97,825	*
Mr. Moore (13)	123,962	8,000	131,962	*
Mr. Kennedy (14)	107,588	48,945	156,533	*
Mr. Traverso (15)	107,889	86,000	193,889	*
Dr. Paul (16)	7,460	--	7,460	*
Officers and Directors as a group (17)	1,366,865	642,303	1,927,267	6.0%

* Represents holdings of less than one percent.

(1) Based on information reported on Schedule 13-G/A filed with the Securities and Exchange Commission on January 19, 2018 by BlackRock, Inc. (“BlackRock”). BlackRock is a parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G) of the Securities Exchange Act of 1934. BlackRock has sole voting power with respect to 3,962,335 of the shares and sole dispositive power with respect to 4,032,681 of the shares. The Schedule 13-G/A states that the following subsidiaries of Blackrock acquired the securities reported on the schedule:

BlackRock (Netherlands) B.V.; BlackRock Advisors, LLC; BlackRock Asset Management Canada Limited; BlackRock Asset Management Ireland Limited; BlackRock Asset Management Schweiz AG; BlackRock Financial Management, Inc.; BlackRock Fund Advisors; BlackRock Institutional Trust Company, National Association.; BlackRock Investment Management (Australia) Limited; BlackRock Investment Management (UK) Ltd; and

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BlackRock Investment Management, LLC. The Schedule 13-G/A indicates that BlackRock Fund Advisors beneficially owns 5% or greater of the outstanding shares of our common stock.

(2) Based on information reported on Schedule 13-G filed with the Securities and Exchange Commission on February 9, 2018 by Dimensional Fund Advisors LP ("Dimensional"). Dimensional is an investment advisor in accordance with Rule 13d-1(b)(1)(ii)(E) of the Securities Exchange Act of 1934. Dimensional reported that is has sole power to vote or to direct the vote of 1,528,550 and sole power to dispose or to direct the disposition of 1,619,337 shares. The shares as to which the Schedule 13-G are filed represent shared held by certain investment companies, trusts and accounts to which Dimensional furnishes investment advice and are not held by Dimensional itself.
(3) Based on information reported on Schedule 13-G filed with the Securities and Exchange Commission on February 12, 2018 by Janus Henderson Group plc. ("Janus"). Janus is a parent holding company or control person in accordance with Rule 13d-1(b)(1)(ii)(G) of the Securities Exchange Act of 1934. Janus reported that is has shared voting power as to 2,164,927 shares and has shared dispositive power as to 2,164,927. The Schedule 13-G states that the following subsidiaries of Janus acquired the securities reported on the schedules: Janus Capital Management LLC, Intech Investment Management LLC, Perkins Investment Management LLC, Geneva Capital Management LLC, Henderson Global Investors Limited, Janus Henderson Investors Australia Institutional Funds Management Limited, and Henderson Global Investors North America Inc. The shares as to which the Schedule 13-G are filed represent shares held by individual and/or institutional clients of Janus and its named subsidiaries.
(4) Based on information reported on Schedule 13-G filed with the Securities and Exchange Commission on February 14, 2018 by Silvercrest Asset Management Group LLC ("Silvercrest"). Silvercrest is an investment advisor in accordance with Rule 13d-1(b)(1)(ii)(E) of the Securities Exchange Act of 1934 and a parent holding company or control person in accordance with Rule 240.13d-(b)(1)(ii)(G). Silvercrest reported that it has shared voting power with respect to 1,587,355 shares and shared dispositive power with respect to 1,587,355 shares. The shares as to which the Schedule 13-G are filed represent shares held by investment advisory clients of Silvercrest Asset Management Group LLC.
(5) Based on information reported on Schedule 13-G/A filed with the Securities and Exchange Commission on February 9, 2018 by The Vanguard Group. Inc. ("Vanguard"). Vanguard is an investment advisor in accordance with Rule 13d-1(b)(1)(ii)(E) of the Securities Exchange Act of 1934. Vanguard reported that it has sole power to vote or direct the vote of 60,127 shares that it beneficially owns, has shared power to vote or direct the vote of 4,500 shares, has sole power to dispose or to direct the disposition of 2,183,137 shares and has shared power to dispose or to direct the disposition of 61,927 shares. Vanguard further reported that (a) Vanguard Fiduciary Trust Company, a wholly-owned subsidiary of Vanguard, is the beneficial owner of 57,427 shares, or 0.17%, of our common stock as a result of its serving as investment manager of collective trust accounts and (b) Vanguard Investments Australia, Ltd., a wholly-owned subsidiary of The Vanguard Group, Inc., is the beneficial owner of 7,200 shares, or 0.02%, of our common stock as a result of its serving as investment manager of Australian investment offerings.
(6) Based on information reported on Schedule 13-G filed with the Securities and Exchange Commission on February 8, 2018 by Wellington Group Holdings LLP ("Wellington"). Wellington is an investment advisor in accordance with Rule 13d-1(b)(1)(ii)(E) of the Securities Exchange Act of 1934 and a parent holding company or control person in accordance with Rule 240.13d-(b)(1)(ii)(G). Wellington reported that is has shared voting power with respect to 1,632,404 shares and shared dispositive power with respect to 1,924,157 of the shares. The Schedule 13-G states that the following holding companies of Wellington acquired the securities reported on the schedule: Wellington Group Holdings LLP, Wellington Investment Advisors LLP, Wellington Management Global Holdings, Ltd ("Wellington Holding Companies"). The shares as to which the Schedule 13-G are filed are held by the Wellington Holding Companies and owned of record by clients of Wellington Management Company LLP, Wellington Management Canada LLC, Wellington Management Singapore Pte Ltd., Wellington Management Hong Kong Ltd., Wellington International Ltd., Wellington Management Japane Pte Ltd., and Wellington Management Australia Pty Ltd.
(7) Includes 24,950 shares subject to a right of repurchase that expire as to 14,037 shares in 2019, 6,913 shares in 2020, and 4,000 shares in 2021 and 43,625 shares that Mr. Noll has the right to acquire within 60 days after March 31,

2018.
(8) Includes 14,495 shares subject to a right of repurchase that expire as to 8,247 shares in 2019, 3,948 shares in 2020, and 2,300 shares in 2021 and 45,358 shares that Dr. Chung has the right to acquire within 60 days after March 31, 2018.
(9) Includes 4,100 shares subject to a right of repurchase by the Company that expires in 2018 and 13,000 shares that Ms. Engibous has the right to acquire within 60 days after March 31, 2018.
(10) Includes 4,100 shares subject to a right of repurchase by the Company that expires in 2018 and 13,000 shares that Mr. Gunst has the right to acquire within 60 days after March 31, 2018.
(11) Includes 181,455 shares subject to a right of repurchase by the Company that expires with respectas to 100,477 shares in 2019, 51,478 shares in 2020, and 29,500 shares in 2021 and 420,000 shares that Mr. Mr. Hawkins has the right to acquire within 60 days after March 31, 2018.

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(12) Includes 4,100 shares subject to a right of repurchase by the Company that expires in 2018 and 13,000 shares that Mr. Ludlum has the right to acquire within 60 days after March 31, 2018.
(13) Includes 4,100 shares subject to a right of repurchase by the Company that expires in 2018 and 8,000 shares that Mr. Moore has the right to acquire within 60 days after March 31, 2018.
(14) Includes 48,990 shares subject to a right of repurchase by the Company that expires as to 27,495 shares in 2019, 13,495 shares in 2020, and 8,000 shares in 2021 and 48,945 shares that Mr. Kennedy has the right to acquire within 60 days after March 31, 2018.

(15) Includes 22,770 shares subject to a right of repurchase by the Company that expires as to 12,822 shares in 2019, 6,348 shares in 2020, and 3,600 shares in 2021 and 86,000 shares that Mr. Traverso has the right to acquire within 60 days after March 31, 2018.

(16) Includes 4,100 shares subject to a right of repurchase by the Company that expires in 2018.

(17) Includes all shares referenced in notes 1 through 16 above.

ITEM 13. Certain Relationships and Related Transactions, and Director Independence

Certain Relationships and Policies on Related Party Transactions

The Company has adopted and maintains a Code of Business Conduct and Ethics (the "Code") that applies to all members of the Company's Board, all executive officers of the Company, and to all other persons who are employees of the Company. This Code covers matters that the Company believes are supportive of high standards of legal and ethical business conduct, including those relating to fair dealing with those with whom the Company does business, the avoidance of conflicts of interest, confidentiality, the protection of corporate assets, special obligations applicable to those involved in our financial reporting, the Company's obligation to make full, fair, accurate and timely disclosure in its filings with the Securities and Exchange Commission and in other public communications, compliance with laws, insider trading, and the reporting of violations of the Code. The Code can be found at the Company's website, www.natus.com, under "Investors/Governance/Governance Documents." We intend to disclose any future amendments to certain provisions of the Code, or waivers of these provisions, on our website and/or in public filings.

The Code does not distinguish between potential conflict of interest transactions with executive officers or directors and those with other employees. It notes that all covered persons must avoid situations where their interests conflict, or would appear to conflict, with those of the Company. The Code notes that it is not possible to list all types of conflict situations, but provides examples of several types of scenarios that would involve a conflict of interest, including:

- Use of Company property
- Dealings with customers and suppliers
- Interests in or relationships with other companies
- Dealings with relatives
- Reporting obligations
- Loans

The Code requires that covered persons report to the Company's Chief Executive Officer ownership interest or other relationship that might affect their ability to exercise impartial, ethical judgments. The Code does not expressly set forth the standards that would be applied in reviewing or approving transactions in which directors or executive officers of the Company have a material interest. In general, any such transactions that are so identified would be submitted for approval to the Audit Committee of the Board, which is authorized by the Charter of the Audit Committee to review related party transactions. The Company expects that in reviewing, and potentially approving, any such transactions, that the Audit Committee would be provided with all material facts relative to the proposed transaction, the nature and extent of the director's or executive officer's interest in the transaction, and the terms upon which the products, services or other subject matter of the transaction could be provided by alternative sources. The Company further expects that any such transaction would be approved only if the Audit Committee determined that it

was in the interest of the Company to proceed with it. The Company expects that pre-approval would be sought for any such transaction whenever practicable, and if pre-approval is not obtained, any such transaction would be submitted for ratification as soon as practicable.

Board Independence

The Board has determined that, except for James B. Hawkins, our Chief Executive Officer, each of our current directors has no material relationship with Natus (either directly or as a partner, shareholder or officer of another organization that has a

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material relationship with Natus) and is independent within the meaning of the Nasdaq Stock Market ("Nasdaq") director independence standards. Furthermore, the Board has determined that each of the members of each of the committees of the Board has no material relationship with Natus (either directly or as a partner, stockholder or officer of an organization that has a material relationship with Natus) and is "independent" within the meaning of the Nasdaq director independence standards, including in the case of the members of the Audit Committee, the heightened "independence" standard required for such committee members set forth in the applicable SEC rules.

ITEM 14. Principal Accounting Fees and Services

The Audit Committee of the Board has appointed KPMG LLP, an independent registered public accounting firm, to audit Natus' consolidated financial statements for the year ending December 31, 2018. We intend to seek stockholder ratification of the appointment of KPMG LLP as our independent registered public accounting firm for the year ending December 31, 2018 at the 2018 annual meeting of stockholders.

Fees Paid to KPMG LLP for 2016 and 2017, respectively

	2016	2017
Audit Fees (1)	$ 1,891,679	$ 3,058,102
Audit-Related Fees (2)	—	70,345
Tax Fees (3)	35,473	35,024
All Other Fees (4)	1,780	1,780
Total	$ 1,928,933	$ 3,165,251

(1) Audit fees associated with the annual audit of our consolidated financial statements and statutory audits.
(2) Audit-related fees are fees associated with assurance and related services that are reasonably related to the performance of the audit or review of the Company's financial statements. This category includes primarily fees for assistance in financial due diligence, and attestation services related to mergers and acquisitions.
(3) Tax fees are fees associated primarily with tax advice and planning services.
(4) Includes fees for online research tools.

Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services of Independent Auditors

Our Audit Committee pre-approves all audit and permissible non-audit services provided by our independent auditors. These services may include audit services, audit-related services, tax services and other services. Pre-approval is generally detailed as to the particular service or category of services and is generally subject to a specific budget. Our independent auditors and management are required to periodically report to the Audit Committee regarding the extent of services provided by our independent auditors in accordance with this pre-approval, and the fees for the services performed to date. Our Audit Committee may also pre-approve particular services on a case-by-case basis.

PART IV

ITEM 15. Exhibits, Financial Statement Schedules

(a)(2) Financial Statement Schedule

SCHEDULE II: VALUATION AND QUALIFYING ACCOUNTS

For the years ended December 31, 2017, 2016 and 2015

(In thousands)

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	Balance at Beginning of Period	Additions Charged to Expense	Deductions	Balance at End of Period
Year ended December 31, 2017				
Allowance for doubtful accounts	$ 4,182	$ 10,017	$ (5,221)	$ 8,978
Valuation allowance	3,706	2,156	—	5,862
Year ended December 31, 2016				
Allowance for doubtful accounts	$ 4,686	$ 1,123	$ (1,627)	$ 4,182
Valuation allowance	3,972	—	(266)	3,706
Year ended December 31, 2015				
Allowance for doubtful accounts	$ 4,324	$ 1,496	$ (1,134)	$ 4,686
Valuation allowance	3,151	821	—	3,972

(a)(3) Exhibits

The Exhibits listed in the Index to Exhibits, which appears immediately following the signature page and is incorporated herein by reference, are filed as part of this 10-K.

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Exhibit No.	Exhibit	Incorporated By Reference			
		Filing	Exhibit No.	File No.	File Date
3.1	Natus Medical Incorporated Amended and Restated Certificate of Incorporation	S-1	3.1.1	333-44138	8/18/2000
3.2	Certificate of Amendment of the Amended and Restated Certificate of Incorporation	8-K	3.1	000-33001	9/13/2012
3.3	Natus Medical Incorporated Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock	8-A	3.1.2	000-33001	9/6/2002
3.4	Bylaws of Natus Medical Incorporated	8-K	3.1	000-33001	6/18/2008
3.5	Amended and Restated Bylaws of Natus Medical Incorporated	10-Q	3.1	000-33001	5/9/2012
10.1	Form of Indemnification Agreement between Natus Medical Incorporated and each of its directors and officers	S-1	10.1	333-44138	8/18/2000
10.2*	Natus Medical Incorporated Amended and Restated 2000 Stock Awards Plan	8-K	10.1	000-33001	1/4/2006
10.2.1*	Form of Option Agreement under the Amended and Restated 2000 Stock Awards Plan	S-1	10.3.1	333-44138	8/18/2000
10.2.2*	Form of Restricted Stock Purchase Agreement under the Amended and Restated 2000 Stock Awards Plan	10-Q	10.2	000-33001	8/9/2006
10.2.3*	Form of Restricted Stock Unit Agreement under the Amended and Restated 2000 Stock Awards Plan	10-K	10.2.3	000-33001	3/14/2008
10.3*	Natus Medical Incorporated 2000 Director Option Plan	10-Q	10.02	000-33001	5/9/2008
10.3.1*	Form of Option Agreement under the 2000 Director Option Plan	S-1	10.4.1	333-44138	8/18/2000
10.4*	Natus Medical Incorporated 2000 Supplemental Stock Option Plan	S-1	10.15	333-44138	2/9/2001
10.4.1*	Form of Option Agreement for 2000 Supplemental Stock Option Plan	S-1	10.15.1	333-44138	2/9/2001
10.5*	Natus Medical Incorporated 2000 Employee Stock Purchase Plan and form of subscription agreement thereunder	8-K	10.2	000-33001	1/4/2006
10.6*	[Amended] 2011 Stock Awards Plan	14-A	—	000-33001	4/20/2011
10.6.1*	Form of Stock Option Award Agreement under the [Amended] 2011 Stock Plan	10-Q	10.1	000-33001	11/7/2011
10.6.2*	Form of Restricted Stock Award Purchase Agreement	10-Q	10.2	000-33001	11/7/2011
10.6.3*	Form of Restricted Stock Unit Agreement	10-Q	10.3	000-33001	11/7/2011
10.7*	2011 Employee Stock Purchase Plan	14-A	—	000-33001	4/20/2011
10.7.1*	2011 Employee Stock Purchase Plan Subscription Agreement	14-A	—	000-33001	4/20/2011
10.8*	Form of Employment Agreement between Natus Medical Incorporated and each of its executive officers other than its Chief Executive Officer and Chief Financial Officer	10-K	10.10	000-33001	3/10/2009

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Exhibit No.	Exhibit	Incorporated By Reference Filing	Exhibit No.	File No.	File Date
10.8.1*	Form of Amendment to Employment Agreement between Natus Medical Incorporated and each of its executive officers other than its Chief Executive Officer and Chief Financial Officer	10-K		000-33001	3/16/2015
10.9*	Amended employment agreement between Natus Medical Incorporated and its Chief Executive Officer, James B. Hawkins dated April 19, 2013	8-K	99.1	000-33001	4/22/2013
10.10*	Form of Employment Agreement between Natus Medical Incorporated and Jonathan A. Kennedy dated April 8, 2013	10-Q	10.1	000-33001	8/8/2013
10.11	Credit Agreement between Natus Medical Incorporated and CitiBank, NA dated October 9, 2015	8-K	10.1	000-33001	10/9/2015
10.12	Agreement For the Acquisition of Medical Devices between Medix ICSA and the Ministry of Health of the Republic of Venezuela dated October 15, 2015	10-Q		000-33001	2/29/2016
10.13	Amendment to Agreement For the Acquisition of Medical Devices between Medix ICSA and the Ministry of Health of the Republic of Venezuela dated October 15, 2015	10-Q	10.2	000-33001	11/3/2016
10.14	Credit Agreement, dated September 23, 2016, between the Company, JP Morgan Chase Bank, N.A. and Citibank, N.A.	10-Q	10.1	000-33001	11/3/2016
10.15	Master Purchase Agreement, dated September 25, 2016, between GN Hearing A/S, GN Nord A/S and the Company	10-Q	10.3	000-33001	11/3/2016
16.1	Letter Regarding Change in Certifying Accountant	8-K	16.1	000-33001	3/28/2014
21.1	Significant Subsidiaries of the Registrant				
23.1	Consent of Independent Registered Public Accounting Firm				
24.1	Power of Attorney				
31.5	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
31.6	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
32.3	Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				
101.INS	XBRL Instance Document				
101.SCH	XBRL Taxonomy Extension Schema Document				
101.CAL	XBRL Taxonomy Extension Label Calculation Linkbase Document				

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Exhibit No.	Exhibit	Incorporated By Reference Filing	Exhibit No.	File No.	File Date
101.DEF	XBRL Taxonomy Extension Definition Document				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document				

* Indicates a management contract or compensatory plan or arrangement

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned thereunto duly authorized.

NATUS MEDICAL INCORPORATED

By /s/ JONATHAN A. KENNEDY
Jonathan A. Kennedy
President and Chief Executive Officer
Dated: July 20, 2018

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NATUS MEDICAL INCORPORATED
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors

Natus Medical Incorporated:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Natus Medical Incorporated and subsidiaries (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations and comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2017, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2017, 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 March 1, 2018 expressed an adverse opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

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

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

(signed) KPMG LLP

We have served as the Company's auditor since 2014.

San Francisco, California

March 1, 2018

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NATUS MEDICAL INCORPORATED
CONSOLIDATED BALANCE SHEETS
(In thousands, except share amounts)

	December 31,	
	2017	2016
ASSETS		
Current assets:		
Cash and cash equivalents	$88,950	$213,551
Short-term investments	—	34,019
Accounts receivable, net of allowance for doubtful accounts of $8,978 and $4,182	126,809	86,638
Inventories	71,529	49,587
Prepaid expenses and other current assets	18,340	22,004
Total current assets	305,628	405,799
Property and equipment, net	22,071	17,333
Intangible assets, net	172,582	77,165
Goodwill	172,998	113,112
Deferred income tax	10,709	14,915
Other assets	25,931	20,688
Total assets	$709,919	$649,012
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$25,242	$18,700
Accrued liabilities	51,738	37,895
Deferred revenue	15,157	23,346
Total current liabilities	92,137	79,941
Long-term liabilities:		
Other liabilities	21,995	8,013
Long-term debt	154,283	140,000
Deferred income tax	19,407	3,684
Total liabilities	287,822	231,638
Commitments and contingencies (Note 20)		
Stockholders' equity:		
Common stock, $0.001 par value; 120,000,000 shares authorized; shares issued and outstanding 33,134,101 in 2017 and 32,920,246 in 2016	316,577	312,986
Preferred stock, $0.001 par value; 10,000,000 shares authorized; no shares issued and outstanding in 2017 and in 2016	—	—
Retained earnings	129,115	149,408
Accumulated other comprehensive loss	(23,595)	(45,020)
Total stockholders' equity	422,097	417,374
Total liabilities and stockholders' equity	$709,919	$649,012

The accompanying notes are an integral part of these Consolidated Financial Statements.

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NATUS MEDICAL INCORPORATED
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
(In thousands, except per share amounts)

	Years Ended December 31,		
	2017	2016	2015
Revenue	$500,970	$381,892	$375,865
Cost of revenue	213,376	144,632	145,492
Intangibles amortization	6,380	2,327	2,836
Gross profit	281,214	234,933	227,537
Operating expenses:			
Marketing and selling	126,166	84,834	87,675
Research and development	51,822	33,443	30,434
General and administrative	74,424	50,877	46,363
Intangibles amortization	19,171	8,983	7,447
Restructuring	914	1,536	2,145
Total operating expenses	272,497	179,673	174,064
Income from operations	8,717	55,260	53,473
Other income (expense), net	(3,567)	(357)	(1,064)
Income before provision for income tax	5,150	54,903	52,409
Provision for income tax	25,443	12,309	14,485
Net income (loss)	$(20,293)	$42,594	$37,924
Net income (loss) per share:			
Basic	$(0.62)	$1.31	$1.17
Diluted	$(0.62)	$1.29	$1.14
Weighted average shares used in the calculation of net income (loss) per share:			
Basic	32,564	32,460	32,348
Diluted	32,564	33,056	33,241
Other Comprehensive income:			
Unrealized losses on available-for-sale investments	$(45)	$(168)	$—
Foreign currency translation adjustment	21,470	(5,003)	(8,378)
Total other comprehensive income	21,425	(5,171)	(8,378)
Comprehensive income	$1,132	$37,423	$29,546

The accompanying notes are an integral part of these Consolidated Financial Statements.

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NATUS MEDICAL INCORPORATED
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, except share amounts)

	Common Stock		Retained Earnings	Accumulated Other Comprehensive Loss	Stockholders' Equity
	Shares	Amount			
Balances, December 31, 2014	32,649,158	$315,296	$68,890	$ (31,471)	$ 352,715
Tax benefit of options exercises	—	7,104	—	—	7,104
Vesting of restricted stock units	21,619	—	—	—	—
Net issuance of restricted stock awards	199,620	—	—	—	—
Employee stock purchase plan	35,467	1,251	—	—	1,251
Stock-based compensation expense	—	6,953	—	—	6,953
Repurchase of company stock	(281,915)	(11,526)	—	—	(11,526)
Taxes paid related to net share settlement of equity awards	(102,112)	(4,341)	—	—	(4,341)
Exercise of stock options	631,663	9,008	—	—	9,008
Other comprehensive income	—	—	—	(8,378)	(8,378)
Net income	—	—	37,924	—	37,924
Balances, December 31, 2015	33,153,500	$323,745	$106,814	$ (39,849)	$ 390,710
Vesting of restricted stock units	20,937	—	—	—	—
Net issuance of restricted stock awards	191,492	—	—	—	—
Employee stock purchase plan	45,515	1,360	—	—	1,360
Stock-based compensation expense	—	9,008	—	—	9,008
Repurchase of company stock	(545,109)	(19,289)	—	—	(19,289)
Taxes paid related to net share settlement of equity awards	(97,231)	(4,107)	—	—	(4,107)
Exercise of stock options	151,142	2,269	—	—	2,269
Other comprehensive income	—	—	—	(5,171)	(5,171)
Net income	—	—	42,594	—	42,594
Balances, December 31, 2016	32,920,246	$312,986	$149,408	$ (45,020)	$ 417,374
Vesting of restricted stock units	35,929	—	—	—	—
Net issuance of restricted stock awards	249,366	—	—	—	—
Employee stock purchase plan	48,470	1,581	—	—	1,581
Stock-based compensation expense	—	9,445	—	—	9,445
Repurchase of company stock	(60,800)	(2,268)	—	—	(2,268)
Taxes paid related to net share settlement of equity awards	(193,212)	(7,052)	—	—	(7,052)
Exercise of stock options	134,102	1,885	—	—	1,885
Other comprehensive income	—	—	—	21,425	21,425
Net loss	—	—	(20,293)	—	(20,293)
Balances, December 31, 2017	33,134,101	$316,577	$129,115	$ (23,595)	$ 422,097

The accompanying notes are an integral part of these Consolidated Financial Statements.

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NATUS MEDICAL INCORPORATED
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		
	2017	2016	2015
Operating activities:			
Net income (loss)	$(20,293)	$42,594	$37,924
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for losses on accounts receivable	10,017	1,123	1,496
Excess tax benefit on the exercise of stock options	—	—	(7,104)
Depreciation and amortization	30,098	16,879	15,987
Gain on disposal of property and equipment	(21)	(29)	(5)
Impairment of intangible assets	1,674	—	—
Warranty reserve	5,370	2,934	10,729
Stock-based compensation	9,445	9,008	6,953
Changes in operating assets and liabilities, net of assets and liabilities acquired in acquisitions:			
Accounts receivable	(30,473)	19,723	(15,272)
Inventories	7,581	(7,668)	(12,232)
Other assets	5,492	(11,387)	858
Accounts payable	(1,385)	(4,965)	3,270
Accrued liabilities	5,421	(6,967)	(6,177)
Deferred revenue	(7,232)	13,879	(1,118)
Deferred taxes	4,032	(2,437)	1,543
Net cash provided by operating activities	19,726	72,687	36,852
Investing activities:			
Acquisition of businesses, net of cash acquired	(190,888)	(15,849)	(14,284)
Acquisition of property and equipment	(4,066)	(3,186)	(4,068)
Acquisition of intangible assets	—	(210)	(1,126)
Purchases of short-term investments	—	(34,019)	—
Sales of short-term investments	34,019	—	—
Net cash used in investing activities	(160,935)	(53,264)	(19,478)
Financing activities:			
Proceeds from stock option exercises and ESPP	3,466	3,630	10,258
Excess tax benefit on the exercise of stock options	—	—	7,104
Repurchase of company stock	(2,268)	(19,289)	(11,525)
Taxes paid related to net share settlement of equity awards	(7,052)	(4,107)	(4,341)
Proceeds from short-term borrowings	—	16,000	—
Proceeds from long-term borrowings	60,000	140,000	—
Deferred debt issuance costs	(354)	(533)	—
Contingent consideration earn-out	(2,966)	(1,284)	(664)
Payments on borrowings	(45,000)	(16,000)	—
Net cash provided by financing activities	5,826	118,417	832
Exchange rate effect on cash and cash equivalents	10,782	(6,758)	(2,295)
Net increase (decrease) in cash and cash equivalents	(124,601)	131,082	15,911
Cash and cash equivalents, beginning of year	213,551	82,469	66,558
Cash and cash equivalents, end of year	$88,950	$213,551	$82,469
Supplemental disclosure of cash flow information:			
Cash paid for interest	$4,464	$41	$—

Cash paid for income taxes	$5,740	$16,344	$10,164
Non-cash investing activities:			
Property and equipment included in accounts payable	$148	$134	$289
Inventory transferred to property and equipment	$1,006	$1,303	$1,056

The accompanying notes are an integral part of these Consolidated Financial Statements.

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NATUS MEDICAL INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
Years Ended December 31, 2017, 2016 and 2015

1—ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

Organization

Natus Medical Incorporated (“Natus”, the “Company”) was incorporated in California in May 1987 and reincorporated in Delaware in August 2000. Natus is a leading provider of newborn care, neurology, and hearing and balance assessment healthcare products and services used for the screening, diagnosis, detection, treatment, monitoring and tracking of common medical ailments in newborn care, hearing impairment, neurological dysfunction, epilepsy, sleep disorders, neuromuscular diseases and balance and mobility disorders. Product offerings include computerized neurodiagnostic systems for audiology, neurology, polysomnography, and neonatology, as well as newborn care products such as hearing screening systems, phototherapy devices for the treatment of newborn jaundice, head-cooling products for the treatment of brain injury in newborns, incubators to control the newborn’s environment, software systems for managing and tracking disorders and diseases for public health laboratories, computer-based audiological, otoneurologic and vestibular instrumentation and sound rooms for hearing and balance care professionals.

Basis of Presentation and Principles of Consolidation

The accompanying Consolidated Financial Statements include the accounts of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation. Certain reclassifications to the prior periods have been made to conform to the current period presentation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America (U.S. GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities in the Consolidated Financial Statements and the reported amount of revenue and expenses during the reporting period. Such estimates include allowances for potentially uncollectible accounts receivable, valuation of inventory, intangible assets, goodwill, share-based compensation, deferred income taxes, reserves for warranty obligations, and the provision for income taxes. Actual results could differ from those estimates.

Revenue recognition

Revenue, net of discounts, is recognized from sales of medical devices and supplies, including sales to distributors, when the following conditions have been met: a purchase order has been received, title has transferred, the selling price is fixed or determinable, and collection of the resulting receivable is reasonably assured. Terms of sale for most domestic sales are FOB origin, reflecting that title and risk of loss are assumed by the purchaser at the shipping point; however, terms of sale for some neurology, sleep-diagnostic, and head cooling systems are FOB destination, reflecting that title and risk of loss are assumed by the purchaser upon delivery. Terms of sales to international distributors are generally EXW, reflecting that goods are shipped “ex works,” in which title and risk of loss are assumed by the distributor at the shipping point. For products shipped under FOB origin or EXW terms, delivery is generally considered to have occurred when the product is shipped. Freight charges billed to customers are included in revenue and freight-related expenses are charged to cost of revenue. The Company generally does not provide rights of return on products.

For products containing embedded software, the Company has determined that the hardware and software components function together to deliver the products’ essential functionality, and therefore, the revenue from the sale of these products does not fall within the scope of the software revenue recognition rules. The Company's revenue recognition policies for sales of these products are substantially the same as for other tangible products.

Revenue from sales of certain products that remain within the scope of the software revenue recognition rules under ASC Subtopic 985-605 is not significant.

Revenue from extended service and maintenance agreements, for both medical devices and data management systems, is recognized ratably over the service period. Revenue from installation or training services is deferred until such time service is provided. Hearing screening and ambulatory EEG monitoring revenue is recorded when the procedure is performed at the estimated net realizable value based on contractual agreements with payers and historical collections.

Certain revenue transactions include multiple element arrangements. The Company allocates revenue in these arrangements to each unit of accounting using the relative selling price method. The selling prices used during the allocation process are based on vendor specific objective evidence (“VSOE”) if available, third party evidence (“TPE”) if VSOE is not available, or estimated selling price (“ESP”) if neither VSOE or TPE is available.

Group purchasing organization (“GPOs”) negotiate volume purchase prices for member hospitals, group practices, and other clinics. The Company's agreements with GPOs typically contain preferential terms for the GPO and its members, including provisions for some, if not all, of the following:

- Payment of marketing fees by Natus to the GPO, usually based on purchasing experience of group members; and
- Non-recourse cancellation provisions.

Natus does not sell products to GPOs. Hospitals, group practices, and other clinics that are members of a GPO purchase products directly from the Company under the terms negotiated by the GPO. Negotiated pricing and discounts are recognized as a reduction of the selling price of products at the time of the sale. Revenue from sales to members of GPOs is otherwise consistent with general revenue recognition policies as previously described.

Inventory

Inventories are carried at the lower of cost or market, with cost being determined using the first-in, first-out method. The carrying value of the Company's inventories is reduced for any difference between cost and estimated market value of inventories that is determined to be obsolete or unmarketable, based upon assumptions about future demand and market conditions. Adjustments to the value of inventory establish a new cost basis and are considered permanent even if circumstances later suggest that increased carrying amounts are recoverable. If demand is higher than expected, Natus may sell inventory that had previously been impaired.

Carrying value of intangible assets and goodwill

The Company amortizes intangible assets with finite lives over the useful lives; any future changes that would limit the useful lives or any determination that these assets are carried at amounts greater than the estimated fair value could result in additional charges.

Goodwill is not amortized but is subject to an annual impairment analysis, which is performed as of October 1st; this assessment is also performed whenever there is a change in circumstances that indicates the carrying value of goodwill may be impaired.

In 2017, 2016 and 2015, the Company performed a qualitative assessment to test goodwill for impairment. Qualitative factors considered in this assessment include industry and market considerations, overall financial performance and other relevant events and factors affecting each reporting unit. Based on the qualitative assessment, the Company determined that the fair value was more likely than not to be greater than its carrying amount, and no further analysis was needed.

If the fair value was less than its carrying amount, the Company would perform a two-step impairment test on goodwill. The first step of the goodwill impairment test, used to identify potential impairment, compares the fair value of a reporting unit to its carrying value, including goodwill. The Company uses a projected discounted cash flow model to determine the fair value of a reporting unit. If the fair value of the reporting unit exceeds its carrying amount, goodwill of the reporting unit is considered not impaired, and the second step of the impairment test is not required. The second step, if required, compares the implied fair value of the reporting unit goodwill with the carrying amount of that goodwill. The fair value of a reporting unit is allocated to all of the assets and liabilities of that unit (including any unrecognized intangible assets) as if the reporting unit had been acquired in a business combination and the fair value of the reporting unit was the price paid to acquire the reporting unit. If the carrying amount of the reporting unit’s goodwill exceeds its implied fair value, an impairment charge is recognized in an amount equal to that excess.

Prior to the assignment of definite lives to trade names in the second quarter of 2015 (See Note 6 - Intangible Assets), the Company tested indefinite lived intangibles for impairment by comparing the carrying value of those assets to be fair value as of the assessment date. The Company used the relief from royalty method to determine the fair value of the assets. This analysis is dependent upon a number of quantitative and qualitative factors including estimates of forecasted revenue, royalty rate, and taxes. The discount rate applied also has an impact on the estimates of fair value, as use of a higher rate will result in a lower estimate of fair value.

Long lived assets

The Company continually monitors events and changes in circumstances that could indicate that carrying amounts of its long-lived assets, including property and equipment and intangible assets, may not be recoverable. When such events or changes in circumstances occur, the Company assess the recoverability by determining whether the carrying value of such assets will be recovered through undiscounted expected future cash flows. If the future undiscounted cash flows are less than the carrying amount of these assets, the Company will recognize an impairment loss based on the excess of the carrying amount over the fair value of the assets.

Liability for product warranties

The Company provides a warranty for products that is generally one year in length. In some cases, regulations may require the Company to provide repair or remediation beyond the typical warranty period. If any products contain defects, the Company may be required to incur additional repair and remediation costs. Service for domestic customers is provided by Company-owned service centers that perform all service, repair, and calibration services. Service for international customers is provided by a combination of Company-owned facilities and vendors on a contract basis.

A warranty reserve is included in accrued liabilities for the expected future costs of servicing products. Additions to the reserve are based on management’s best estimate of probable liability. The Company considers a combination of factors including material and labor costs, regulatory requirements, and other judgments in determining the amount of the reserve. The reserve is reduced as costs are incurred to honor existing warranty and regulatory obligations.

Share-based compensation

The Company recognizes share-based compensation expense associated with employee stock options under the single-option straight line method over the requisite service period, which is generally a four-year vesting period and ten-year contractual term pursuant to ASC Topic 718, Compensation-Stock Compensation. See Note 14 of the Consolidated Financial Statements.

For employee stock options, the value of each option is estimated on the date of grant using the Black-Scholes option pricing model, which was developed for use in estimating the value of freely traded options. Similar to other option pricing models, the Black-Scholes method requires the input of highly subjective assumptions, including stock price volatility. Changes in the subjective input assumptions can materially affect the estimated fair value of the employee stock options.

The Company recognizes share-based compensation associated with Restricted Stock Awards (“RSA”) and Restricted Stock Units (“RSU”). RSAs and RSUs vest ratably over a three-year period for employees. RSAs and RSUs for executives vest over a four-year period; 50% on the second anniversary of the awarded date and 25% on each of the third and fourth anniversaries. RSAs and RSUs for non employees (Board of Directors) vest over a one-year period; 100% on the first anniversary. The value is estimated based on the market value of Natus common stock on the date of issuance pursuant to ASC Topic 718, Compensation-Stock Compensation.

The Company issues new shares of common stock upon the exercise of stock options and the vesting of RSAs and RSUs.

Forfeitures of employee stock options and awards are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from initial estimates. Share-based compensation expense is recorded net of estimated forfeitures, such that expense is recorded only for those share-based awards that are expected to vest.

Cash Equivalents and Short-term Investments

All highly liquid investments purchased with an original maturity of three months or less are classified as cash equivalents. Investments with maturities greater than one year are classified as current because management considers all investments to be available for current operations. Cash equivalents and investments are stated at amounts that approximate fair value based on quoted market prices.

The Company's investments have been classified and accounted for as available-for-sale. Such investments are recorded at fair value and unrealized holding gains and losses are reported as a separate component of comprehensive income until realized. Realized gains and losses on sales of investments, if any, are determined on the specific identification method and are reclassified from accumulated other comprehensive loss to results of operations as other income (expense).

Allowance for Doubtful Accounts

The Company estimates the allowance for potentially uncollectible accounts receivable based on historical collection experience within the markets in which the Company operates and other customer-specific information, such as bankruptcy filings or customer liquidity problems. When all internal efforts have been exhausted to collect the

receivable, it is written off and relieved from the reserve.

Fair Value of Financial Instruments

Financial instruments include cash and cash equivalents, investments, accounts receivable, and accounts payable. Cash is reported at its fair value on the balance sheet dates. The recorded carrying amounts of investments, accounts receivable and accounts payable approximate the fair values due to the short-term maturities.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation expense is computed using the straight-line method over estimated useful lives of the respective assets, which are three to ten years for office furniture and equipment, three to five years or the length of the license for computer software and hardware, three to five years for demonstration and loaned equipment, and 30 to 40 years for buildings. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life. Land is not depreciated. Costs associated with acquiring and installing software to be used for internal purposes are capitalized and amortized on a straight-line basis over three years.

Research & Development Costs

Costs incurred in research and development are charged to operations as incurred.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date.

The Company records net deferred tax assets to the extent it is more likely than not that the assets will be realized. In making such determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and recent financial operations. To the extent that previously reserved deferred tax assets are estimated to be realizable, the Company adjusts the valuation allowance which reduces the provision for income taxes.

The Company recognizes the tax benefit of uncertain tax positions in the financial statements as defined in ASC Topic 740, Income Tax. When the tax position is deemed more likely than not of being sustained, the Company recognizes the largest amount of tax benefit that is greater than 50 percent likely of being ultimately realized upon settlement, as defined in ASC 740-10-05.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 (“SAB 118”), which provides guidance on accounting for the tax effects of the Tax Act. SAB 118 provides a measurement period that should not extend beyond one year from the Tax Act enactment date for companies to complete the accounting under ASC 740, Income Taxes. In accordance with SAB 118, a company must reflect the income tax effects of those aspects of the Tax Act for which the accounting under ASC 740 is complete. To the extent that a company’s accounting for certain income tax effects of the Tax Act is incomplete but it is able to determine a reasonable estimate, it must record a provisional estimate in the financial statements.

Foreign Currency

The functional currency of the Company's subsidiaries outside of North America is generally the local currency of the country where the subsidiary is located. Accordingly, foreign currency translation adjustments relating to the translation of foreign subsidiary financial statements are included as a component of accumulated other comprehensive loss. The Company recorded $21.5 million, $(5.0) million, and $(8.4) million of foreign currency translation gains (losses) for the years ended December 31, 2017, 2016 and 2015, respectively.

Gains and losses from transactions denominated in currencies other than the functional currencies are included in other income and expense. In 2017, 2016, and 2015, net foreign currency transaction gains (losses) were $1.0 million, $(0.4) million, and $(1.4) million, respectively. Foreign currency gains and losses result primarily from fluctuations in the exchange rate between the U.S. Dollar, Canadian Dollar, Euro, Argentine Peso, British Pound, and Danish Kroner.

Comprehensive Income

The Company reports by major components and as a single total the change in net assets during the period from non-owner sources as defined in ASC Topic 220, Comprehensive Income. The consolidated statement of

comprehensive income has been included with the consolidated statements of operations. Accumulated other comprehensive income consists of translation gains and losses on foreign subsidiary financial statements as well as unrealized gains and losses on investments.

Basic and Diluted Net Income per Share

Natus computes net income per share as defined in ASC Topic 260, Earnings per Share. Basic net income per share is based upon the weighted average number of common shares outstanding during the period. Diluted net income per share is based upon the weighted average number of common shares outstanding and dilutive common stock equivalents outstanding during the period.

Common stock equivalents are options granted and shares of restricted stock issued under the stock awards plans and are calculated under the treasury stock method. Common equivalent shares from unexercised stock options and restricted stock are excluded from the computation when there is a loss as the effect is anti-dilutive, or if the exercise price of such options is greater than the average market price of the stock for the period.

Recent Adopted Accounting Pronouncements

In July 2015, the FASB issued ASU 2015-11, Inventory (Topic 330). This standard requires an entity to measure inventory at the lower of cost and net realizable value. Net realizable value is estimated selling prices in the ordinary course of business, less reasonable predictable costs of completion, disposal, and transportation. ASU 2015-11 is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. The Company adopted ASU 2015-11in January 2017 and no impact was recorded by the Company.

In January 2017, the FASB issued ASU 2017-01, Business Combinations (Topic 805). This update is to clarify the definition of a business with the objective of adding guidance to assist entities with evaluating whether transactions should be accounted for as acquisition (or disposals) of assets or businesses. The definition of a business affects many areas of accounting including acquisitions, disposals, goodwill, and consolidation. ASU 2017-01 is effective for annual periods beginning after December 15, 2017, including interim periods within those periods, and must be applied prospectively. The Company will apply this guidance to business combinations that occur on or after the effective date.

Recent Issued Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standard Update No. 2014-09, Revenue from Contracts with Customers (Topic 606) (“ASU 2014-09”), which supersedes nearly all existing revenue recognition guidance. The standard's core principle is that an entity should recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The standard creates a five-step model to achieve its core principle: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction's price to the separate performance obligations in the contract; and (v) recognize revenue when (or as) the entity satisfies a performance obligation. In addition, entities must disclose sufficient information to enable users of financial statements to understand the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Qualitative and quantitative disclosures are required about: (i) the entity's contracts with customers; (ii) the significant judgments, and changes in judgments, made in applying the guidance to those contracts; and (iii) any assets recognized from the costs to obtain or fulfill a contract with a customer. In August 2015, the FASB issued ASU 2015-14, Revenue from Contracts with Customers (Topic 616) - Deferral of the Effective Date, which deferred the effective date of ASU 2014-09 to interim and annual periods beginning January 1, 2018. The standard allows entities to apply the standard retrospectively to each prior period presented (“full retrospective adoption”) or retrospectively with the cumulative effect of initially applying the standard recognized at the date of initial application (“modified retrospective adoption”). The Company adopted the modified retrospective approach of this guidance on January 1, 2018 and has determined that its adoption will not have a material effect on its financial position or results of operations.

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). This standard requires a lessee to recognize the lease assets and lease liabilities arising from operating leases in the statement of financial position. Qualitative along with specific quantitative disclosures are required by lessees to meet the objective of enabling users of financial statements to assess the amount, timing, and uncertainty of cash flows arising from leases. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018 including interim periods within those fiscal years. The Company is currently evaluating the impact that will result from adopting ASU 2016-02.

In January 2017, the FASB issued ASU 2017-04, Intangibles - Goodwill and Other (Topic 350). This update modifies the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its implied

fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. An entity no longer will determine goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. Because these amendments eliminate a step from the goodwill impairment test, they should reduce the cost and complexity of evaluating goodwill for impairment. ASU 2017-04 is effective for annual or any interim goodwill impairment tests in fiscal years beginning after December 15, 2019. The Company will adopt ASU 2017-04 to goodwill impairment testing on the effective date.

In May 2017, the FASB issued ASU 2017-09, Compensation - Stock Compensation (Topic 718): Scope of Modification Accounting. This update provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. This guidance is effective for annual periods beginning after December

15, 2017, including interim periods within that year, and must be applied prospectively to an award modified on or after the adoption date. The Company will adopt this guidance and will apply to all future share-based modifications.

2—BUSINESS COMBINATIONS

The assets acquired and liabilities assumed at the date of acquisition are recorded in the Consolidated Financial Statements at the respective fair values as of the acquisition date. The excess of the purchase price over the fair value of the acquired net assets is recorded as goodwill.

The determination of estimated fair value of acquired assets and liabilities requires management to make significant estimates and assumptions. The Company determines the fair value by applying established valuation techniques, based on information that management believes to be relevant to this determination. The Company also utilizes independent third parties to assist in the valuation of goodwill and intangible assets.

The results of operations from acquisitions are included in the Consolidated Financial Statements from the date of the acquisition.

Integra

On October 6, 2017, the Company acquired certain neurosurgery business assets from Integra LifeSciences (“Integra” or “Neurosurgery”) for $46.4 million in cash. As part of the acquisition, the Company acquired a global product line, including the manufacturing facility it leases from a third party and the U.S. rights related to four other product lines. The total purchase price has been preliminarily allocated to $12.5 million of tangible assets, $19.5 million of intangible assets with an associated weighted average life of 9 years being amortized on the straight line method, and $15.5 million of goodwill, offset by $1.1 million of net liabilities. Purchase price allocation is considered preliminary at this time although no material adjustments are anticipated. Pro form financial information for the Integra acquisition is not presented as the data necessary to present pro forma net income and pro forma earnings per share is not available. However, pro forma revenue assuming the acquisition occurred on January 1, 2016 would be $539.1 million and $432.4 million for the years ended December 31, 2017 and 2016, respectively.

Otometrics

On January 3, 2017, the Company acquired the Otometrics business from GN Store Nord A/S for a cash purchase price of $149.2 million, which includes a $4.2 million net working capital adjustment. Otometrics is a manufacturer of hearing diagnostics and balance assessment equipment, disposables and software. Otometrics provides computer-based audiological, otoneurologic and vestibular instrumentation and sound rooms to hearing and balance care professionals worldwide. Otometrics has a complete product and brand portfolio known for its sophisticated design technology in the hearing and balance assessment markets.

The following table summarizes the purchase price allocation of the fair value of the assets acquired and liabilities assumed at the date of acquisition, (in thousands):

Cash and cash equivalents	$5,604
Accounts receivable	26,851
Inventories	22,182
Property and equipment	2,256
Intangible assets	90,913
Goodwill	39,355
Other assets	1,748
Accounts payable	(7,655)
Accrued liabilities	(16,069)
Deferred revenue	(745)
Deferred income tax	(15,193)
Total purchase price	$149,247

The goodwill recorded represents the future economic benefits arising from the other assets acquired that could not be individually identified and separately recognized. The goodwill recorded as part of the acquisition of Otometrics is not

amortized and includes the following:

- The expected synergies and other benefits that the Company believes will result from combining the operations of Otometrics with the operations of Natus;

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- Any intangible assets that did not qualify for separate recognition, as well as future, yet unidentified projects and products; and
- The value of the going-concern element of Otometrics's existing businesses (the higher rate of return on the assembled collection of net assets versus if Natus has acquired all of the net assets separately).

Management worked with an independent valuation firm to determine fair values of the identifiable intangible assets. The Company used a combination of income approaches including relief from royalty and multi-period excess earnings methods. The valuation models were based on estimates of future operating projections of the acquired business and rights to sell products as well as judgments on the discount rates used and other variables. The Company determined the forecasts based on a number of factors, included their best estimate of near-term net sales expectations and long-term projections, which included review of internal and independent market analyses.

Otometrics's revenue of $114.2 million and loss from operations of $1.0 million are included in the condensed consolidated statement of operations for the period from January 3, 2017 (acquisition date) to December 31, 2017.

The unaudited pro forma financial results presented below for the twelve months ended December 31, 2017 and December 31, 2016, include the effects of pro forma adjustments as if the acquisition occurred on January 1, 2016. The pro forma results were prepared using the acquisition method of accounting and combine the historical results of Natus and Otometrics for the twelve months ended December 31, 2017 and December 31, 2016, including the effects of the business combination, primarily amortization expense related to the fair value of identifiable intangible assets acquired, interest expense associated with the financing obtained by Natus in connection with the acquisition, and the elimination of acquisition-related costs incurred.

The pro forma financial information is presented for informational purposes only and is not necessarily indicative of the results of operations that would have been achieved if the acquisition had taken place at the beginning of the earliest period presented, nor is it intended to be a projection of future results.

Unaudited Pro forma Financial Information
(in thousands)

	Year Ended December 31,	
	2017	2016
Revenue	$ 500,970	$ 491,994
Net income (loss)	$ (15,965)	$ 17,385
Earnings (loss) per share:		
Basic	$ (0.49)	$ 0.54
Diluted	$ (0.49)	$ 0.53
Weighted average shares used in the calculation of earnings per share:		
Basic	32,564	32,460
Diluted	32,564	33,056

The pro forma results for the year ended December 31, 2017 were adjusted to exclude $4.3 million of nonrecurring expense related to the fair value adjustment of acquisition-date inventory.

The pro forma results for the year ended December 31, 2016 were adjusted to include $3.0 million of amortization of intangible assets, and $4.6 million of interest expense.

RetCam

On July 6, 2016, the Company acquired the portfolio of RetCam Imaging Systems (“RetCam”) from Clarity Medical Systems, Inc. for $10.6 million in cash. RetCam is an imaging system used to diagnose and monitor a range of

ophthalmic maladies in premature infants. The purchase agreement also included a holdback of $2.0 million which was paid on February 16, 2017. Subsequent to the acquisition, an additional $1.1 million was paid by the Company to Clarity Medical Systems as a

result of a working capital adjustment. Results of operations for RetCam are included in the consolidated financial statements from the date of acquisition. The total purchase price was allocated $7.2 million to tangible assets, $4.9 million to intangible assets with an assigned weighted average life of 5 years being amortized on the straight line method, and $1.7 million to goodwill, offset by $2.0 million to net liabilities. Pro forma financial information for the RetCam acquisition is not presented as it is not considered material.

NeuroQuest

On March 2, 2016, the Company acquired NeuroQuest, LLC (“NeuroQuest”) through an asset purchase. NeuroQuest complements the Global Neuro-Diagnostics (“GND”) and Monarch Medical Diagnostics, LLC (“Monarch”) acquisitions which offer patients a convenient way to complete routine-electroencephalography and extended video electronencephalography (“VEEG”) testing. The cash consideration for NeuroQuest was $4.6 million. The purchase agreement included a consideration holdback of $0.5 million which was paid on April 30, 2017. The total purchase price was allocated to $0.5 million of tangible assets, $1.3 million of intangible assets with an assigned weighted average life of 5 years being amortized on the straight line method, and $3.5 million of goodwill, offset by $0.1 million of net liabilities. Pro forma financial information for the NeuroQuest acquisition is not presented as it is not considered material.

Monarch

The Company acquired Monarch Medical Diagnostics, LLC (“Monarch”) through an asset purchase on November 13, 2015. Monarch's service compliments the Global Neuro-Diagnostics acquisition which offers patients a more convenient way to complete routine diagnostic electroencephalography and video electromyography testing which can be performed at the home, hospital or physician's office. The service also provides comprehensive reporting and support to the physician. The cash consideration for Monarch was $2.7 million. The purchase agreement also included contingent consideration which was paid on January 11, 2016 of $1.0 million. The total purchase price was allocated to $112,000 of tangible assets, $1.2 million of intangible assets with an assigned weighted average life of 5 years being amortized on the straight line method, and $2.4 million of goodwill. Pro forma financial information for the Monarch acquisition is not presented as it is not considered material.

Global Neuro-Diagnostics

The Company acquired GND through an equity purchase on January 23, 2015. GND's service offers patients a more convenient way to complete routine EEG and EMG testing which can be performed at the home, hospital or physician's office. The service also provides comprehensive reporting and support to the physician. The cash consideration for GND was $11.4 million, which consists primarily of $1.5 million of tangible assets, $4.8 million of intangible assets with an assigned weighted average life of 5 years being amortized on the straight line method, and $8.9 million of goodwill, offset by $0.5 million of net liabilities. The purchase agreement also included an earn-out condition which was originally estimated to be $3.2 million. The earn-out condition was subsequently not achieved. Pro forma financial information for the GND acquisition is not presented as it is not considered material.

NicView

On January 2, 2015, the Company purchased the assets of NicView. NicView provides streaming video for families with babies in the neonatal intensive care unit. The cash consideration for NicView was $1.1 million, of which $0.3 million was allocated to tangible assets and $2.7 million to goodwill, offset by $0.6 million allocated to net liabilities. The asset purchase agreement included an earn-out condition contingent upon orders received in and installed by February 28, 2016. The Company settled this earnout for $1.3 million in March 2016. Pro forma financial information for the NicView acquisition is not presented as it is not considered material.

3—CASH, CASH EQUIVALENTS, AND SHORT-TERM INVESTMENTS

The Company has invested its excess cash in highly liquid marketable securities such as corporate debt instruments, U.S. government agency securities and asset-backed securities. Investments with maturities greater than one year are classified as current because management considers all investments to be available for current operations.

The Company's investments are designed to provide liquidity, preserve capital and maximize total return on invested assets with a focus on high credit-quality securities.

The Company's investments have been classified and accounted for as available-for-sale. Such investments are recorded at fair value, and unrealized holding gains and losses are reported as a separate component of accumulated other comprehensive income (loss) in stockholders' equity until realized. Realized gains and losses on sales of investments, if any, are

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determined on the specific identification method and are reclassified from accumulated other comprehensive income (loss) to results of operations as other income (expense).

The Company, to date, has not determined that any of the unrealized losses on its investments are considered to be other-than-temporary. The Company reviews its investment portfolio to determine if any security is other-than-temporarily impaired, which would require the Company to record an impairment charge in the period any such determination is made. In making this judgment, the Company evaluates, among other things: the duration and extent to which the fair value of a security is less than its cost; the financial condition of the issuer and any changes thereto; and the Company's intent and ability to hold its investment for a period of time sufficient to allow for any anticipated recovery in market value, or whether the Company will more likely than not be required to sell the security before recovery of its aggregated cost basis.

Cash, cash equivalents and short-term investments consisted of the following (in thousands):

	December 31, 2017	December 31, 2016
Cash and cash equivalents:		
Cash	88,950	213,551
Short-term investments:		
U.S. investment grade bonds	—	24,477
Developed investment grade bonds	—	9,542
Total short-term investments	—	34,019
Total cash, cash equivalents and short-term investments	88,950	247,570

Short-term investments by investment type are as follows (in thousands):

	December 31, 2017				December 31, 2016			
	Aggregated Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Aggregated Fair Value	Aggregated Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Aggregated Fair Value
U.S. investment grade bonds	—	—	—	—	24,531	—	(54)	24,477
Developed investment grade bonds	—	—	—	—	9,567	—	(25)	9,542
Total short-term investments	$ —	$ —	$ —	$ —	$ 34,098	$ —	$ (79)	$ 34,019

Short-term investments by contractual maturity are as follows (in thousands):

	December 31, 2017 Investments	December 31, 2016 Investments
Due in one year or less	$ —	$ 21,655
Due after one year through five years	—	12,364
Total short-term investment	$ —	$ 34,019

See Note 21 to these Consolidated Financial Statements for additional discussion regarding the fair value of the Company's short-term investments.

4—INVENTORIES

Inventories consist of (in thousands):

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	December 31,	
	2017	2016
Raw materials and subassemblies	$44,699	$28,245
Work in process	3,788	1,507
Finished goods	43,488	34,908
Total Inventories	91,975	64,660
Less: Non-current Inventories	(20,446)	(15,073)
Inventories	$71,529	$49,587

At December 31, 2017 and 2016, the Company has classified $20.4 million and $15.1 million, respectively, of inventories as non-current. This inventory consists of service components used to repair products held by customers pursuant to warranty obligations and extended service contracts, including service components for products that the Company no longer sells, inventory purchased for lifetime buys, and inventory that is turning at a slow rate. The Company believes that these inventories will be utilized for the intended purpose.

5—PROPERTY AND EQUIPMENT

Property and equipment consist of (in thousands):

	December 31,	
	2017	2016
Land	$2,815	$2,856
Buildings	5,096	5,219
Leasehold improvements	3,295	2,386
Office furniture and equipment	25,612	18,398
Computer software and hardware	9,760	9,100
Demonstration and loaned equipment	11,932	11,393
	58,510	49,352
Accumulated depreciation	(36,439)	(32,019)
Total	$22,071	$17,333

Depreciation expense of property and equipment was $4.1 million, $3.7 million, and $4.2 million in the years ending December 31, 2017, 2016 and 2015, respectively.

6—INTANGIBLE ASSETS

The following table summarizes the components of gross and net intangible asset balances (in thousands):

	December 31, 2017				December 31, 2016			
	Gross Carrying Amount	Accumulated Impairment	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Impairment	Accumulated Amortization	Net Book Value
Technology	$101,045	(1,058)	$ (42,048)	$57,939	$62,563	—	$ (34,683)	$27,880
Customer related	108,074	(50)	(28,972)	79,052	38,087	—	(17,610)	20,477
Trade names	49,313	(3,916)	(13,273)	32,124	32,106	(3,290)	(7,135)	21,681
Internally developed software	15,610	—	(12,293)	3,317	16,978	—	(10,220)	6,758
Patents	2,778	(133)	(2,495)	150	2,620	—	(2,251)	369
Total Definite-lived intangible assets	276,820	(5,157)	(99,081)	172,582	152,354	(3,290)	(71,899)	77,165

Finite lived intangible assets are amortized over their weighted average lives, which are 13 years for patents, 14 years for technology, 10 years for customer-related intangibles, 10 years for trade names, and 6 years for internally

developed software.

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Internally developed software consists of $14.8 million relating to costs incurred for development of internal use computer software and $2.2 million for development of software to be sold.

Amortization expense related to intangible assets with finite lives was as follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Technology	$7,705	$3,407	$3,916
Customer related	10,945	3,452	2,938
Trade names	6,479	4,115	3,159
Internally developed software	2,117	2,069	1,620
Patents	244	112	112
Total amortization	$27,490	$13,155	$11,745

Expected annual amortization expense related to amortizable intangible assets is as follows (in thousands):

2018	$27,014
2019	25,836
2020	23,634
2021	22,210
2022	18,564
Thereafter	55,324
Total expected amortization expense	$172,582

7—GOODWILL

The carrying amount of goodwill and the changes in those balances are as follows (in thousands):

As of December 31, 2015	$107,466
Acquisitions/Purchase Accounting Adjustments	6,705
Foreign currency translation	(1,059)
As of December 31, 2016	$113,112
Acquisitions/Purchase Accounting Adjustments	54,746
Foreign currency translation	5,140
As of December 31, 2017	$172,998

8—ACCRUED LIABILITIES

Accrued liabilities consist of (in thousands):

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	December 31,	
	2017	2016
Compensation and related benefits	$22,816	$16,064
Accrued federal, state, and local taxes	8,155	4,160
Warranty reserve	10,995	10,670
Accrued amounts due to customers	2,424	1,625
Accrued professional fees	2,280	1,191
Accrued selling expenses	1,704	292
Contingent consideration	147	3,043
Accrued travel	338	—
Deferred rent	161	132
Other	2,718	718
Total	$51,738	$37,895

9—LONG-TERM OTHER LIABILITIES
Long-term other liabilities consist of (in thousands):

	December 31,	
	2017	2016
Contingent tax obligations	$17,934	$6,125
Non-current deferred revenue	4,039	1,885
Other	22	3
Total	$21,995	$8,013

10—DEBT AND CREDIT ARRANGEMENTS
The Company has a Credit Agreement with JP Morgan Chase Bank ("JP Morgan") and Citibank, NA (“Citibank”). The Credit Agreement provides for an aggregate $150 million of secured revolving credit facility. In the third quarter of 2017, the Company exercised the right to increase the amount available under the facility by $75.0 million, bringing the aggregate revolving credit facility to $225.0 million. The Credit Agreement contains covenants relating to maintenance of books and records, financial reporting and notification, compliance with laws, maintenance of properties and insurance, and limitations on guaranties, investments, issuance of debt, lease obligations and capital expenditures, and is secured by virtually all of the Company's assets. The Credit Agreement provides for events of default, including failure to pay any principal or interest when due, failure to perform or observe covenants, bankruptcy or insolvency events and the occurrence of a material adverse effect. The Company has no other significant credit facilities.
In addition to the customary restrictive covenants listed above, the Credit Agreement also contains financial covenants that require the Company to maintain a certain leverage ratio and fixed charge coverage ratio, each as defined in the Credit Agreement:
•Leverage Ratio, as defined, to be no higher than 2.75 to 1.00.
•Interest Coverage Ratio, as defined, to be at least 1.75 to 1.00 at all times.
As of December 31, 2017, the Company was in compliance with the Leverage Ratio at 2.44 to 1.00 and the Interest Coverage Ratio at 10.16 to 1.00.
As of December 31, 2017, the Company had $155 million outstanding under the Credit Agreement.
Pursuant to the terms of the Credit Agreement, the outstanding principal balance will bear interest at either (a) a fluctuating rate per annum equal to the Applicable Rate, as defined in the Credit Agreement, depending on the leverage ratio plus the higher of (i) the federal funds rate plus one-half of one percent per annum; (ii) the prime rate in effect on such a day; and (iii) the LIBOR rate plus one percent, or (b) a fluctuating rate per annum of LIBOR Rate

plus the Applicable Rate, which ranges between 1.75% to 2.75%. The effective interest rate during the twelve months ended December 31, 2017 was 3.34%.

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The Credit Agreement matures on September 23, 2021, at which time all principal amounts outstanding under the Credit Agreement will be due and payable.

Long-term debt consists of (in thousands):

	December 31,	
	2017	2016
Revolving credit facility	$155,000	$140,000
Debt issuance costs	(717)	—
Less: current portion of long-term debt	—	—
Total long-term debt	$154,283	$140,000

Maturities of long-term debt as of December 31, 2017 are as follows (in thousands):

	December 31,	
	2017	2016
2018	$—	$—
2019	—	—
2020	—	—
Thereafter	154,283	140,000
Total	$154,283	$140,000

As of December 31, 2017, the carrying value of the total debt approximated fair market value.

11—RESERVE FOR PRODUCT WARRANTIES

The Company provides a warranty for products that is generally one year in length and in some cases, regulations may require them to provide repair or remediation beyond the typical warranty period. If any of the products contain defects, the Company may be required to incur additional repair and remediation costs. Service for domestic customers is provided by Company-owned service centers that perform all service, repair and calibration services. Service for international customers is provided by a combination of Company-owned facilities and vendors on a contract basis.

A warranty reserve is included in accrued liabilities for the expected future costs of servicing products. Additions to the reserve are based on management's best estimate of probable liability. The Company considers a combination of factors including material and labor costs, regulatory requirements, and other judgments in determining the amount of reserve. The reserve is reduced as costs are incurred to honor existing warranty and regulatory obligations.

As of December 31, 2017, the Company has accrued $5.4 million to bring certain NeoBLUE® phototherapy products into U.S. regulatory compliance. The Company's estimate of the costs associated with bringing the NeoBLUE® phototherapy products into compliance is primarily based upon the number of units outstanding that may require the repair, costs associated with shipping and repairing the product, and the assumption that the FDA will approve the Company's plan for compliance.

The details of activity in the warranty reserve are as follows (in thousands):

	Balance at Beginning of Period	Assumed Through Acquisitions	Additions Charged to Expense	Reductions	Balance at End of Period
December 31, 2017	$ 10,670	$ 1,159	$ 5,370	$ (6,204)	$ 10,995
December 31, 2016	$ 10,386	$ 222	$ 2,711	$ (2,649)	$ 10,670
December 31, 2015	$ 2,753	$ —	$ 10,729	$ (3,096)	$ 10,386

The estimates the Company uses in projecting future product warranty costs may prove to be incorrect. Any future determination that product warranty reserves are understated could result in increases to cost of sales and reductions in operating profits and results of operations.

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12—STOCKHOLDERS' EQUITY

Common Stock—The Company has 120,000,000 shares of common stock authorized at a par value or $0.001 per share.

Preferred Stock—The Company has 10,000,000 shares of preferred stock authorized at a par value of $0.001 per share. In accordance with the terms of the amended and restated certificate of incorporation, the Board of Directors is authorized to provide for the issuance of one or more series of preferred stock, including increases or decreases to the series. The Board of Directors has the authority to set the rights, preferences, and terms of such shares. As of December 31, 2017, no shares of preferred stock were issued and outstanding.

13—EARNINGS PER SHARE

The components of basic and diluted EPS are as follows (in thousands, except per share amounts):

	December 31,		
	2017	2016	2015
Net income (loss)	$(20,293)	$42,594	$37,924
Weighted average common shares	32,564	32,460	32,348
Dilutive effect of stock based awards	—	596	893
Diluted Shares	32,564	33,056	33,241
Basic earnings per share	$(0.62)	$1.31	$1.17
Diluted earnings per share	$(0.62)	$1.29	$1.14
Shares excluded from calculation of diluted EPS	565	2	—

14—SHARE-BASED COMPENSATION

Share-Based Compensation Expense—The Company accounts for share-based compensation in accordance with ASC Topic 718, Compensation—Stock Compensation. Share-based compensation was recognized as follows in the consolidated statement of income (in thousands):

	December 31,		
	2017	2016	2015
Cost of revenue	$232	$219	$156
Marketing and selling	540	821	808
Research and development	1,332	1,515	1,264
General and administrative	7,341	6,453	4,725
Total expense	9,445	9,008	6,953

Stock Awards Plans—Natus' 2011 Stock Awards Plan (the "Plan") provides for the granting of the following:

- Incentive stock options to employees;
- Non-statutory stock options to employees, directors and consultants;
- Restricted stock awards and restricted stock units;
- Stock bonuses; and
- Stock appreciation rights.

As of December 31, 2017, there were 779,298 shares available for future awards under the plan.

Under the Plan, stock options may be issued at not less than the fair market value of the common stock on the date of grant, as determined by the Board of Directors. Options issued under the Plan become exercisable as determined by the Board of Directors and expire no more than six years after the date of grant. Most options vest ratably over four years.

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Stock Option Activity—Stock option activity under the stock awards plans for the year ended December 31, 2017 is summarized as follows:

	Number of Shares	Weighted Average Exercise Price
Outstanding, December 31, 2016 (816,691 shares exercisable at a weighted average exercise price of $14.54 per share)	933,096	$ 15.02
Granted	—	$ —
Exercised	(134,102)	$ 14.06
Forfeited	(1,317)	$ 13.83
Expired	(2,592)	$ 16.31
Outstanding, December 31, 2017 (790,573 shares exercisable at a weighted average exercise price of $15.14 per share)	795,085	$ 15.18

As of December 31, 2017, unrecognized compensation related to the unvested portion of stock options was approximately $1.0 thousand, which is expected to be recognized at the beginning of 2018. The intrinsic value of options exercised, representing the difference between the closing stock price of common stock on the date of the exercise and the exercise price, in the years ended December 31, 2017, 2016 and 2015 was $3.1 million, $3.4 million, and $17.7 million, respectively.

As of December 31, 2017, there were: (i) 795,085 options vested and expected to vest with a weighted average exercise price of $15.18, an intrinsic value of $18.3 million, and a weighted average remaining contractual term of 1.2 years; and (ii) 790,573 options exercisable with a weighted average exercise price of $15.14, an intrinsic value of $18.2 million, and a weighted average remaining contractual term of 1.2 years.

The expected life of options is based primarily on historical share option exercise experience of the employees for options granted by the Company. All options are treated as a single group in the determination of expected life, as the Company does not currently expect substantially different exercise or post-vesting termination behavior among the employee population. The risk-free interest rate is based on the U.S. Treasury yield for a term consistent with the expected life of the awards in effect at the time of grant. Expected volatility is based primarily on historical volatility data of the Company's common stock. The Company has no history or expectation of paying dividends on common stock.

Share-based compensation expense associated with options is based on awards ultimately expected to vest. At the time of an option grant, the Company estimates the expected future rate of forfeitures based on historical experience. These estimates are revised, if necessary, in subsequent periods if actual forfeiture rates differ from those estimates. If the actual forfeiture rate is lower than estimated the Company will record additional expense and if the actual forfeiture is higher than estimated the Company will record a recovery of prior expense.

Restricted Stock Awards Activity—The following table summarizes the activity for restricted stock awards during the year ended December 31, 2017:

	Shares	Weighted Average Grant Date Fair Value
Unvested at December 31, 2016	506,389	$ 34.82
Granted	265,449	$ 34.94
Vested	(391,947)	$ 32.41
Forfeited	(16,083)	$ 35.87
Unvested at December 31, 2017	363,808	$ 37.46

As of December 31, 2017, unrecognized compensation related to the unvested portion of stock awards was $10.8 million, which is expected to be recognized over a weighted average period of 2.3 years. The fair market value of outstanding restricted stock awards at December 31, 2017 was $13.9 million. For the restricted stock awards units that vested during the years ended December 31, 2017, 2016, and 2015, the total intrinsic value was $14.3 million, $9.0 million, and $10.3 million, respectively.

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Restricted Stock Units Activity—The following table summarizes restricted stock units activity for the year ended December 31, 2017:

	Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2016	29,903	$ 34.39
Awarded	55,176	$ 35.16
Released	(35,929)	$ 33.65
Forfeited	(25,006)	$ 34.47
Outstanding at December 31, 2017	24,144	$ 37.17

As of December 31, 2017, unrecognized compensation related to the unvested portion of stock units was $0.9 million, which is expected to be recognized over a weighted average period of 1.8 years. The aggregate intrinsic value of outstanding restricted stock units at December 31, 2017 was $0.9 million. For the restricted stock units that vested during the years ended December 31, 2017, 2016, and 2015, the total intrinsic value was $1.3 million, $0.9 million, and $0.9 million, respectively.

Employee Stock Purchase Plan—Under Natus' 2011 Employee Stock Purchase Plan (the “ESPP”), U.S. employees can elect to have salary withholdings of up to 15% of eligible compensation to a maximum of $10,625 per offering period, to purchase shares of common stock on April 30 and October 31 of each year. The purchase price for shares acquired under the ESPP is 85% of the fair market value on the last day of the offering period. As of December 31, 2017, there were 117,270 shares reserved for future issuance under the ESPP.

Because the ESPP does not have a “look back” feature, the compensation expense associated with the Plan is not measured by the use of the Black-Scholes pricing model, but rather by measuring the difference between the fair market value of common stock on the last day of the offering period and the purchase price for the offering period, which is 85% of the fair market value. Compensation expense associated with the ESPP for the years ended December 31, 2017, 2016 and 2015, respectively, was $0.3 million, $0.2 million, and $0.2 million.

15—RESTRUCTURING RESERVE

The Company has historically incurred an ongoing level of restructuring-type activities to maintain a competitive cost structure, including manufacturing and workforce optimization resulting from acquisitions.

The balance of the restructuring reserve is included in accrued liabilities on the accompanying consolidated balance sheets. Employee termination benefits are included as a part of restructuring expenses.

Activity in the restructuring reserves for these plans for the years ended December 31, 2017, 2016 and 2015 is as follows (in thousands):

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NATUS MEDICAL INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)
Years Ended December 31, 2017, 2016 and 2015

	Personnel Related	Facility Related	Total
Balance as of December 31, 2014	$ 368	—	$368
Additions	1,905	156	2,061
Reversals	(124)	—	(124)
Payments	(473)	(156)	(629)
Balance as of December 31, 2015	1,676	—	1,676
Additions	1,093	725	1,818
Reversals	(436)	—	(436)
Payments	(1,990)	(573)	(2,563)
Balance as of December 31, 2016	343	152	495
Additions	431	—	431
Reversals	(182)	—	(182)
Payments	(631)	(93)	(724)
Balance as of December 31, 2017	$ (39)	59	$20

16—OTHER INCOME (EXPENSE), NET

Other income (expense), net consists of (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Interest income	$425	$315	$27
Interest expense	(5,081)	(430)	(352)
Foreign currency gain (loss)	1,013	(359)	(1,415)
Other	76	117	676
Total other income (expense), net	$(3,567)	$(357)	$(1,064)

17—INCOME TAXES

Income before provision for income tax is as follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
U.S.	$(18,059)	$68	$20,507
Foreign	23,209	54,835	31,902
Income before provision for income tax	$5,150	$54,903	$52,409

The components of income tax expense for the years ended December 31, 2017, 2016 and 2015 (in thousands):

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NATUS MEDICAL INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)
Years Ended December 31, 2017, 2016 and 2015

	Years Ended December 31,		
	2017	2016	2015
Current			
U.S. Federal	$10,110	$(1,388)	$13,497
U.S. State and local	1,079	692	1,984
Non-U.S.	12,764	15,069	2,239
Total current tax expense	23,953	14,373	17,720
Deferred			
U.S. Federal	6,345	(1,534)	(3,410)
U.S. State and local	(1,333)	(378)	(385)
Non-U.S.	(3,522)	(152)	560
Total deferred tax benefit	1,490	(2,064)	(3,235)
Total income tax expense	$25,443	$12,309	$14,485

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. Significant components of deferred tax assets and liabilities as of December 31, 2017 and 2016 are as follows (in thousands):

	December 31,	
	2017	2016
Deferred tax assets:		
Net operating loss carryforwards	$3,958	$6,557
Credit carryforwards	4,466	2,512
Accruals deductible in different periods	11,969	16,157
Employee benefits	1,085	2,389
Total deferred tax assets	21,478	27,615
Valuation allowance	(5,862)	(3,706)
Total net deferred tax assets	$15,616	$23,909
Deferred tax liabilities:		
Basis difference in fixed and intangible assets	(23,934)	(12,678)
Foreign earnings to be repatriated	(380)	—
Total deferred tax liabilities	(24,314)	(12,678)
Total net deferred tax assets	$(8,698)	$11,231

The income tax expense in the accompanying statements of income differs from the provision calculated by applying the U.S. federal statutory income tax rate of 35% in 2017, 2016, and 2015 to income before taxes due to the following:

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NATUS MEDICAL INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)
Years Ended December 31, 2017, 2016 and 2015

	Years Ended December 31,		
	2017	2016	2015
Federal statutory tax expense	$1,802	$19,216	$18,343
State tax expense	(318)	188	1,249
Foreign taxes at rates less than U.S. rates	(3,101)	(6,838)	(1,760)
Deferred charges on sales of U.S. intellectual property	980	980	(5,878)
Equity compensation	606	(530)	204
Tax credits	(1,498)	(911)	(935)
Uncertain tax position	2,048	485	3,897
Lapse of statute	(1,521)	(495)	(784)
Change of valuation allowance on foreign tax credit	314	—	—
Earnout adjustment	(190)	(1,184)	—
Repatriation tax net of foreign tax credits	16,564	—	—
Net deferred tax asset re-measurement	3,883	—	—
Tax audits	726	543	—
Withholding taxes	2,880	—	—
Return to provision	711	—	—
AMT on acquisition	621	—	—
Other	936	855	149
Total expense	$25,443	$12,309	$14,485

On December 22, 2017, the Tax Cuts and Jobs Act of 2017 (the “Act”) was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a corporate tax rate decrease from 35% to 21% effective for tax years beginning after December 31, 2017, the transition of U.S. international taxation from a worldwide tax system to a modified territorial system, and a one-time transition tax on the mandatory deemed repatriation of cumulative foreign earnings as of December 31, 2017. On December 22, 2017, Staff Accounting Bulletin No. 118 (“SAB 118”) was issued to address the application of US GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. The Company has calculated its best estimate of the impact of the Act in its year end income tax provision in accordance with its understanding of the Act and guidance available as of the date of this filing. As a result, the Company has recorded $20.5 million as an additional income tax expense in the fourth quarter of 2017, the period in which the legislation was enacted. The provisional amount related to the re-measurement of certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future was $3.9 million. The provisional amount related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings, net of foreign tax credits was $16.6 million based on cumulative foreign earnings of $181.0 million.

In accordance with SAB 118, the Company has determined that the $16.6 million of current tax expense recorded in connection with the transition tax on the mandatory deemed repatriation of foreign earnings was a provisional amount and a reasonable estimate at December 31, 2017. Additional work is necessary to do a more detailed analysis of historical foreign earnings as well as potential correlative adjustments. Any subsequent adjustment to these amounts will be recorded to current tax expense in the quarter of 2018 when the analysis is complete.

As of December 31, 2017, the Company has not assessed the impact of the changes arising from the Act that are effective in tax year 2018 and onward and will be included in the 2018 as interpreted guidance is further released. The Company has also not yet made a policy election with respect to its treatment of potential global intangible low-taxed income (“GILTI”). Companies can either account for taxes on GILTI as incurred or recognize deferred taxes when basis differences exist that are expected to affect the amount of the GILTI inclusion upon reversal. The Company is still in

the process of analyzing the provisions of the Act associated with GILTI and the expected impact of GILTI on the Company in the future.

At December 31, 2017, the Company had deferred tax assets attributable to U.S. state net operating loss carryforwards of $1.2 million, which will begin to expire in 2018. At December 31, 2017, the Company had U.S. state R&D credit carryforwards of $0.4 million, which will begin to expire in 2021. At December 31, 2017, the Company had $4.2 million of U.S. foreign tax credit carryforwards that can be used to offset future U.S. tax liabilities related to foreign source taxable income. The foreign tax credits will start to expire in 2022.

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NATUS MEDICAL INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)
Years Ended December 31, 2017, 2016 and 2015

At December 31, 2017, certain foreign subsidiaries had deferred tax assets attributable to net operating loss carryforwards as follows: $0.03 million in Germany, $1.4 million in France, $0.5 million in Canada, and $0.5 million in Denmark. These foreign net operating loss carryforwards, if not utilized to offset taxable income in future periods, will expire in various amounts beginning in 2028.

A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. Accordingly, valuation allowances of $5.9 million and $3.7 million were recorded at December 31, 2017 and 2016, respectively. The increase of $2.2 million in valuation allowance was primarily due to a valuation allowance recorded against the Company's current year generation of the Foreign Tax Credit in U.S.

The realizability of the deferred tax assets is primarily dependent on the Company's ability to generate sufficient taxable income in future periods. The Company's management weighed the aggregate effect of all positive evidence and negative evidence in determining the likelihood of realization of the deferred tax assets. The factors used by management to collect evidence included historical earnings of the applicable taxing jurisdiction, the cash refund opportunity to utilize the tax losses, and the future forecast of profitability in the jurisdiction. Weighing all the positive and negative evidence, the Company has recorded a valuation allowance related primarily to net operating losses in certain foreign jurisdictions and U.S. foreign tax credits where it is more likely than not that the tax benefit of the net operating losses and tax credits will not be realized.

There are no changes to the position on the Company's permanent reinvestment of its earnings from foreign operations, with the exception of Excel-Tech and Natus Ireland. As of December 31, 2017, the Company intends to distribute all of the earnings from Excel-Tech and Natus Ireland in excess of their operational needs. The Company has recorded a deferred tax liability of $0.4 million accordingly for 5% Canadian withholding tax on the expected Excel-Tech distribution to Natus Ireland. Natus Ireland has 0% withholding tax under domestic exemption and therefore, no liability has been recorded. The Company intends on permanently reinvesting the earnings of its remaining foreign subsidiaries. The other remaining foreign subsidiaries have both the intent and ability to indefinitely reinvest its undistributed earnings.

Uncertain Tax Positions

A reconciliation of the beginning and ending amount of unrecognized tax benefits (excluding interest and penalties) is as follows (in thousands):

Balance at January 1, 2015	$3,395
Increases for tax positions related to prior years	281
Increases for tax positions related to the current year	3,302
Lapse of statutes of limitations	(664)
Balance at January 1, 2016	$6,314
Increases for tax positions related to prior years	174
Increases for tax positions related to the current year	70
Lapse of statutes of limitations	(475)
Foreign exchange difference	(185)
Balance at January 1, 2017	$5,898
Increases for tax positions related to prior years	747
Increases for tax positions related to the current year	1,712
Lapse of statutes of limitations	(1,393)
Foreign exchange difference	53
Balance at December 31, 2017	$7,017

For the year ended December 31, 2017, unrecognized tax benefits increased by $1.1 million and $0.6 million of tax expense in the income tax provision were recorded. The increase was primarily attributable to the increase in uncertain tax positions related to the current year in certain jurisdictions.

The unrecognized tax benefits for the tax years ended December 31, 2017, 2016 and 2015 were $7.0 million, $5.9 million and $6.3 million, respectively which include $4.0 million, $2.5 million and $2.4 million, respectively that would impact the effective tax rate if recognized.

The Company expects a range from zero to $0.9 million of unrecognized tax benefit that will impact the effective tax rate in the next 12 months due to the lapse of statute of limitations provided that no taxing authority conducts a new examination.

At December 31, 2017, 2016 and 2015, the Company had cumulatively accrued $0.6 million, $0.6 million, and $0.4 million for estimated interest and penalties related to uncertain tax positions. The Company records interest and penalties related to recognized tax positions as a component of income tax expense (benefit), which totaled approximately $(0.01) million, $0.2 million, and $0.1 million for the years ended December 31, 2017, 2016, and 2015, respectively.

The Company is currently unaware of any uncertain tax positions that could result in significant additional payments, accruals, or other material deviation in this estimate over the next 12 months.

The Company's tax returns remain open to examination as follows: U.S. federal, 2014 through 2017; U.S. states, generally 2013 through 2017; and significant foreign jurisdictions, generally 2013 through 2017.

18—EMPLOYEE BENEFIT PLAN

The Company offers pre-tax and after-tax 401(k) savings plan options under which eligible U.S. employees may elect to have a portion of their salary deferred and contributed to the plan. Employer matching contributions are determined by management and are discretionary. Employer matching contributions were $2.5 million, $1.5 million, and $1.3 million respectively, in the years ended December 31, 2017, 2016, and 2015. For new hires, employer contributions vest ratably over the first two years of employment.

19—SEGMENT, CUSTOMER, AND GEOGRAPHIC INFORMATION

The Company operates in one reportable segment, which is presented as the aggregation of the Neurology, Newborn Care, and Otometrics operating segments. Through the one reportable segment the Company is organized on the basis of the healthcare products and services provided which are used for the screening, detection, treatment, monitoring and tracking of common medical ailments in newborn care, hearing impairment, neurological dysfunction, epilepsy, and sleep disorders.

End-users customer base includes hospitals, clinics, laboratories, physicians, nurses, audiologists, and governmental agencies. Most of the Company's international sales are to distributors who resell products to end users or sub-distributors. The Company's foreign countries’ revenue is determined based on the customer’s billing address. Revenue and long-lived asset information by geographic region is as follows (in thousands):

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NATUS MEDICAL INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)
Years Ended December 31, 2017, 2016 and 2015

	Years Ended December 31,		
	2017	2016	2015
Consolidated Revenue:			
United States	$270,860	$250,694	$242,050
Foreign countries	230,110	131,198	133,815
	$500,970	$381,892	$375,865
Revenue by End Market:			
Neuro			
Devices and Systems	$171,315	$168,200	$168,776
Supplies	59,955	58,681	60,205
Services	11,886	11,641	8,320
Total Neurology Revenue	$243,156	$238,522	$237,301
Newborn Care			
Devices and Systems	$77,573	$72,562	$72,669
Supplies	43,732	47,674	49,982
Services	22,325	23,134	15,913
Total Newborn Care Revenue	$143,630	$143,370	$138,564
Otometrics			
Devices and Systems	$86,920	$—	$—
Supplies	27,264	—	—
Services	—	—	—
Total Otometrics Revenue	$114,184	$—	$—
Total Revenue	$500,970	$381,892	$375,865

Property and equipment, net:		
United States	$10,128	$7,024
Canada	5,068	4,941
Argentina	1,591	2,121
Ireland	3,178	2,530
Denmark	1,158	17
Other foreign countries	948	700
	$22,071	$17,333

During the years ended December 31, 2017, 2016 and 2015, no single customer or foreign country contributed to more than 10% of revenue.

20—COMMITMENTS AND CONTINGENCIES

Leases—The Company has entered into noncancelable operating leases for some of the facilities including related office equipment located in the U.S. and Europe through 2024. Minimum lease payments under noncancelable operating leases as of December 31, 2017 are as follows (in thousands):

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	Operating Leases
Year Ending December 31,	
2018	$ 7,038
2019	5,732
2020	4,609
2021	3,392
2022	2,457
Thereafter	6,850
Total minimum lease payments	$ 30,078

Rent expense, which is recorded on the straight-line method from commencement over the period of the lease, totaled $6.7 million, $5.3 million and $4.4 million in 2017, 2016, and 2015, respectively.

Purchase commitments—The Company has various purchase obligations for goods or services totaling $47.8 million at December 31, 2017, which are expected to be paid within the next year.

Indemnifications—Under the bylaws, the Company has agreed to indemnify the officers and directors for certain events or occurrences arising as a result of the officer or director serving in such capacity. The Company has a director and officer liability insurance policy that limits the exposure under these indemnifications and enables them to recover a portion of any future loss arising out of them. In addition, the Company entered into indemnification agreements with other parties in the ordinary course of business. The Company has determined that these agreements fall within the scope of ASC 460, Guarantees. In some cases liability insurance is obtained to provide coverage that limits its exposure for these other indemnified matters. The Company has not incurred material costs to defend lawsuits or settle claims related to these indemnification agreements. The Company believes the estimated fair value of these indemnification agreements is minimal and have not recorded a liability for these agreements as of December 31, 2017.

Legal matters—The Company may from time to time become a party to various legal proceedings or claims that arise in the ordinary course of business. The Company does not believe that any current legal or administrative proceedings are likely to have a material effect on business, financial condition, or results of operations.

In January 2017, a putative class action lawsuit (Badger v. Natus Medical Incorporation, et al., No. 17-cv-00458-JSW) alleging violations of federal securities laws was filed in the United States District Court for the Northern District of California, naming as defendants the Company and certain officers and a director. In July 2017, plaintiffs filed an amended complaint with a new lead plaintiff (Costabile v. Natus Medical Incorporation, et al., No. 17-cv-00458-JSW) alleging violations of federal securities laws based on allegedly false and misleading statements. The defendants moved to dismiss the Amended Complaint, and in February 2018 the motion to dismiss was granted with leave to amend. The Company believes that the plaintiffs' allegations are without merit, and intends to vigorously defend against the claims. In July 2017, a putative shareholder derivative action was filed in California Superior Court (Mortman v. Gunst, et. al., No. RG17867679) against certain of the Company's officers and directors and naming the Company as a nominal defendant. The action is based on allegations similar to those in the securities class action litigation described above. The Company believes the likelihood of an unfavorable outcome from these actions is remote.

21—FAIR VALUE MEASUREMENTS

ASC 820 defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements. Fair value is defined under ASC 820 as the exit price associated with the sale of an asset or transfer of a liability in an orderly transaction between market participants at the measurement date. ASC 820 establishes the following three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value:

Level 1—Quoted prices (unadjusted) in active markets that are accessible at the measurement date for assets or liabilities. The fair value hierarchy gives the highest priority to Level 1 inputs.

Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets and liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
Level 3—Unobservable inputs that are used when little or no market data is available. The fair value hierarchy gives the lowest priority to Level 3 inputs.

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NATUS MEDICAL INCORPORATED
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS-(Continued)
Years Ended December 31, 2017, 2016 and 2015

The Company does not have any financial assets or liabilities measured at fair value on a recurring basis.
The following financial instruments are not measured at fair value on the consolidated balance sheet as of December 31, 2017 and 2016, but require disclosure of fair values: cash and cash equivalents, accounts receivable, and accounts payable. The carrying value of these financial instruments approximates fair values because of the relatively short maturity.
During the third quarter of 2014, the Company listed the facility in Mundelein, Illinois for sale. This asset was measured at fair value less cost to sell as of September 30, 2014 based on market price and Level 2 inputs. The book value of this asset on June 30, 2014 was $3.6 million. The Company expensed $2.2 million during the third quarter of 2014 for this impairment. As of December 31, 2017 the Company is carrying the asset as held for sale its fair value of $1.4 million.
The Company also has contingent consideration associated with earnouts from acquisitions. Contingent consideration liabilities are classified as Level 3 liabilities, as the Company use unobservable inputs to value them, which is a probability-based income approach. Contingent considerations are classified as accrued liabilities on the consolidated balance sheets. Subsequent changes in the fair value of contingent consideration liabilities are recorded within the income statement as an operating expense.
Contingent consideration associated with earnouts from acquisitions is as follows (in thousands):

	December 31, 2016	Additions	Payments	Adjustments	December 31, 2017
Liabilities:					
Contingent consideration	$ 3,043	$ 693	$ (2,966)	$ (623)	$ 147
Total	$ 3,043	$ 693	$ (2,966)	$ (623)	$ 147

The significant unobservable inputs used in the fair value measurement of contingent consideration related to the acquisitions are annualized revenue forecasts developed by the Company considering the probability of achievement of those revenue forecasts. Significant increases (decreases) in these unobservable inputs in isolation would result in a significantly lower (higher) fair value measurement.
The Company's Level 2 securities are valued using third-party pricing sources. The pricing services utilize industry standard valuation models, including both income and market-based approaches, for which all significant inputs are observable, either directly or indirectly, to estimate fair value. These inputs include reported trades of and broker/dealer quotes on the same or similar securities, issuer credit spread, benchmark securities, prepayment/default projections based on historical data and other observable inputs. The Company validates the prices provided by its third-party pricing services by understanding the models used, obtaining market values from other pricing sources, analyzing pricing data in certain instances and confirming those securities traded in active markets. See Note 4 to these Consolidated Financial Statements for further information regarding the Company's financial instruments.

ITEM 16. Form 10-K Summary
Not Applicable.

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EXHIBIT INDEX

Exhibit No.	Exhibit	Incorporated By Reference Filing	Exhibit No.	File No.	File Date
3.1	Natus Medical Incorporated Amended and Restated Certificate of Incorporation	S-1	3.1.1	333-44138	8/18/2000
3.2	Certificate of Amendment of the Amended and Restated Certificate of Incorporation	8-K	3.1	000-33001	9/13/2012
3.3	Natus Medical Incorporated Certificate of Designation of Rights, Preferences and Privileges of Series A Participating Preferred Stock	8-A	3.1.2	000-33001	9/6/2002
3.4	Bylaws of Natus Medical Incorporated	8-K	3.1	000-33001	6/18/2008
3.5	Amended and Restated Bylaws of Natus Medical Incorporated	10-Q	3.1	000-33001	5/9/2012
10.1	Form of Indemnification Agreement between Natus Medical Incorporated and each of its directors and officers	S-1	10.1	333-44138	8/18/2000
10.2*	Natus Medical Incorporated Amended and Restated 2000 Stock Awards Plan	8-K	10.1	000-33001	1/4/2006
10.2.1*	Form of Option Agreement under the Amended and Restated 2000 Stock Awards Plan	S-1	10.3.1	333-44138	8/18/2000
10.2.2*	Form of Restricted Stock Purchase Agreement under the Amended and Restated 2000 Stock Awards Plan	10-Q	10.2	000-33001	8/9/2006
10.2.3*	Form of Restricted Stock Unit Agreement under the Amended and Restated 2000 Stock Awards Plan	10-K	10.2.3	000-33001	3/14/2008
10.3*	Natus Medical Incorporated 2000 Director Option Plan	10-Q	10.02	000-33001	5/9/2008
10.3.1*	Form of Option Agreement under the 2000 Director Option Plan	S-1	10.4.1	333-44138	8/18/2000
10.4*	Natus Medical Incorporated 2000 Supplemental Stock Option Plan	S-1	10.15	333-44138	2/9/2001
10.4.1*	Form of Option Agreement for 2000 Supplemental Stock Option Plan	S-1	10.15.1	333-44138	2/9/2001
10.5*	Natus Medical Incorporated 2000 Employee Stock Purchase Plan and form of subscription agreement thereunder	8-K	10.2	000-33001	1/4/2006
10.6*	[Amended] 2011 Stock Awards Plan	14-A	—	000-33001	4/20/2011
10.6.1*	Form of Stock Option Award Agreement under the [Amended] 2011 Stock Plan	10-Q	10.1	000-33001	11/7/2011
10.6.2*	Form of Restricted Stock Award Purchase Agreement	10-Q	10.2	000-33001	11/7/2011
10.6.3*	Form of Restricted Stock Unit Agreement	10-Q	10.3	000-33001	11/7/2011
10.7*	2011 Employee Stock Purchase Plan	14-A	—	000-33001	4/20/2011
10.7.1*	2011 Employee Stock Purchase Plan Subscription Agreement	14-A	—	000-33001	4/20/2011
10.8*	Form of Employment Agreement between Natus Medical Incorporated and each of its executive officers other than its Chief Executive Officer and Chief Financial Officer	10-K	10.10	000-33001	3/10/2009

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Exhibit No.	Exhibit	Incorporated By Reference Filing	Exhibit No.	File No.	File Date
10.8.1*	Form of Amendment to Employment Agreement between Natus Medical Incorporated and each of its executive officers other than its Chief Executive Officer and Chief Financial Officer	10-K		000-33001	3/16/2015
10.9*	Amended employment agreement between Natus Medical Incorporated and its Chief Executive Officer, James B. Hawkins dated April 19, 2013	8-K	99.1	000-33001	4/22/2013
10.10*	Form of Employment Agreement between Natus Medical Incorporated and Jonathan A. Kennedy dated April 8, 2013	10-Q	10.1	000-33001	8/8/2013
10.11	Credit Agreement between Natus Medical Incorporated and CitiBank, NA dated October 9, 2015	8-K	10.1	000-33001	10/9/2015
10.12	Agreement For the Acquisition of Medical Devices between Medix ICSA and the Ministry of Health of the Republic of Venezuela dated October 15, 2015	10-Q		000-33001	2/29/2016
10.13	Amendment to Agreement For the Acquisition of Medical Devices between Medix ICSA and the Ministry of Health of the Republic of Venezuela dated October 15, 2015	10-Q	10.2	000-33001	11/3/2016
10.14	Credit Agreement, dated September 23, 2016, between the Company, JP Morgan Chase Bank, N.A. and Citibank, N.A.	10-Q	10.1	000-33001	11/3/2016
10.15	Master Purchase Agreement, dated September 25, 2016, between GN Hearing A/S, GN Nord A/S and the Company	10-Q	10.3	000-33001	11/3/2016
16.1	Letter Regarding Change in Certifying Accountant	8-K	16.1	000-33001	3/28/2014
21.1#	Significant Subsidiaries of the Registrant				
23.1#	Consent of Independent Registered Public Accounting Firm				
24.1#	Power of Attorney				
31.5	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
31.6	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002				
32.3	Certification of Principal Executive Officer and Principal Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002				
101.INS#	XBRL Instance Document				
101.SCH#	XBRL Taxonomy Extension Schema Document				
101.CAL#	XBRL Taxonomy Extension Label Calculation Linkbase Document				

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		Incorporated By Reference			
Exhibit No.	Exhibit	Filing	Exhibit No.	File No.	File Date
101.DEF#	XBRL Taxonomy Extension Definition Document				
101.LAB#	XBRL Taxonomy Extension Label Linkbase Document				
101.PRE#	XBRL Taxonomy Extension Presentation Linkbase Document				

* Indicates a management contract or compensatory plan or arrangement

\# Previously filed with Annual Report on Form 10-K for year ended December 31, 2017