This preliminary prospectus supplement relates to an effective registration statement under the Securities Act of 1933, but the information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

## **SUBJECT TO COMPLETION, DATED OCTOBER 18, 2018**

PROSPECTUS SUPPLEMENT (to the Prospectus dated October 5, 2018)

## \$10,000,000



## 6.5% Convertible Senior Notes due 2023

We are offering \$10,000,000 principal amount of our 6.5% Convertible Senior Notes due 2023. The notes will mature on November 30, 2023, unless earlier converted, redeemed or repurchased. Interest on the notes accrues at the rate of 6.5% per year and is payable on each February 28, May 31, August 31 and November 30, beginning February 28, 2019.

The notes will be convertible into common stock at the option of the holder at any time prior to maturity at an initial conversion price of \$ per share, subject to adjustment under certain circumstances.

The holders of the notes will have a one-time right exercisable prior to November 30, 2021 (the "put date"), in the manner described in the indenture, to require us to repurchase for cash all (but not less than all) of such holder's notes on the put date at a purchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest to, and including, the put date.

We may redeem the notes, in whole or in part, at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest on such principal, if any, up to the redemption date:

- on or after November 30, 2019, if the closing sale price per share of our common stock exceeds 175% of the then-effective conversion price for each of 20 of any 30 consecutive trading days immediately preceding the optional redemption notice;
- on or after November 30, 2020, if the closing sale price per share of our common stock exceeds 150% of the then-effective conversion price for each of 20 of any 30 consecutive trading days immediately preceding the optional redemption notice; and
- on or after November 30, 2021, if the closing sale price per share of our common stock exceeds 125% of the then-effective conversion price for each of 20 of any 30 consecutive trading days immediately preceding the optional redemption notice.

If we redeem the notes as described in the preceding paragraph, the holder will also receive an interest make-whole payment equal to the remaining scheduled interest payments that would have been made on the notes redeemed had such notes remained outstanding through the maturity date. We will pay any such interest make-whole payment in cash; provided, however, that we will have the option to pay interest make-whole payments in freely tradable shares of common stock valued at 95% of the volume weighted average price of our common stock for the ten trading days ending on and including the trading day immediately preceding the redemption date (the "Make-Whole VWAP Price") so long as the Make-Whole VWAP Price (as defined below) is not less than \$ per share (as appropriately adjusted for any stock split, reverse stock split, stock dividend or other reclassification or combination of our common stock occurring after the date of issuance of the notes offered hereby).

If a "fundamental change" (as defined herein) occurs at any time prior to the maturity date, subject to certain conditions, holders of the notes will have the right, at their option, to require us to repurchase for cash all or part of each holder's notes at a purchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest to the fundamental change repurchase date. In addition, if a holder elects to convert its notes following the occurrence of a "qualifying fundamental change" (as defined herein) prior to the maturity date, we will, under certain circumstances, make a payment to such holder for conversion equal to \$130 per \$1,000 of aggregate principal of notes so surrendered for conversion (a "qualifying fundamental change payment"). We will pay any qualifying fundamental change payment in cash; provided, however, that so long as the "stock price" (as defined herein) is not less than \$ per share (as appropriately adjusted for any stock split, reverse stock split, stock dividend or other reclassification or combination of our common stock occurring after the date of issuance of the notes offered hereby), we will have the option to pay any qualifying fundamental change payments in freely tradable shares of common stock valued at 95% of such "stock price".

The notes will be unsecured and will rank pari passu with our outstanding unsubordinated liabilities.

We do not intend to apply to list the notes on any securities exchange or to arrange for quotation on any automated dealer quotation system. Our common stock is listed on the NASDAQ Capital Market under the symbol "AKTS." The last reported sale price of our common stock on the NASDAQ Capital Market on October 17, 2018 was \$5.77 per share.

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012 and, as such, have elected to comply with certain reduced public company reporting requirements.

Investing in our securities involves a high degree of risk. Before making an investment decision, you should carefully review and consider all of the information set forth in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, including the risks and uncertainties described under "Risk Factors" beginning on page S-8 of this prospectus supplement and the risk factors incorporated by reference into this prospectus supplement and the accompanying prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

|                                  | Per  |       |  |
|----------------------------------|------|-------|--|
|                                  | Note | Total |  |
| Public Offering Price (1)        | \$   | \$    |  |
| Underwriting Discount (2)        | \$   | \$    |  |
| Proceeds to Us (Before Expenses) | \$   | \$    |  |

- (1) Plus accrued interest, if any, from October , 2018.
- (2) See "Underwriting" for additional information about the underwriter compensation arrangements.

The underwriter expects to deliver the notes in book-entry form against payment through the facilities of the Depository Trust Company on or about October , 2018.

## Oppenheimer & Co.

The date of this prospectus supplement is October , 2018.

## **Table of Contents**

|   | Page        |
|---|-------------|
| Prospectus Supplement                                       |             |
|   |             |
| ABOUT THIS PROSPECTUS SUPPLEMENT                            | <u>S-1</u>  |
| PROSPECTUS SUPPLEMENT SUMMARY                               | <u>S-2</u>  |
| RISK FACTORS  | <u>S-8</u>  |
| FORWARD-LOOKING STATEMENTS                                  | <u>S-17</u> |
| <u>USE OF PROCEEDS</u>                                      | <u>S-19</u> |
| CONCURRENT COMMON STOCK OFFERING                            | <u>S-20</u> |
| <u>DILUTION</u>   | <u>S-21</u> |
| DESCRIPTION OF NOTES  | S-23        |
| MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS             | <u>S-54</u> |
| UNDERWRITING  | <u>S-61</u> |
| LEGAL MATTERS   | S-64        |
| <u>EXPERTS</u>  | S-64        |
| INCORPORATION OF CERTAIN INFORMATION BY REFERENCE           | S-64        |
| WHERE YOU CAN FIND MORE INFORMATION                         | S-65        |
|   |             |
| Base Prospectus   |             |
|   |             |
| ABOUT THIS PROSPECTUS                                       | 1           |
| FORWARD-LOOKING STATEMENTS                                  | 1           |
| THE COMPANY   | 2           |
| RISK FACTORS  | 3           |
| USE OF PROCEEDS   | 3           |
| DESCRIPTION OF COMMON STOCK WE MAY OFFER                    | 3           |
| DESCRIPTION OF PREFERRED STOCK WE MAY OFFER                 | 4           |
| DESCRIPTION OF DEBT SECURITIES WE MAY OFFER                 | 6           |
| DESCRIPTION OF WARRANTS WE MAY OFFER                        | 15          |
| DESCRIPTION OF UNITS WE MAY OFFER                           | 17          |
| DESCRIPTION OF RIGHTS WE MAY OFFER                          | 17          |
| CERTAIN PROVISIONS OF DELAWARE LAW LAW AND OF THE COMPANY'S | 19          |
| CERTIFICATE OF INCORPORATION AND BY-LAWS                    | 19          |
| PLAN OF DISTRIBUTION  | 20          |
| LEGAL MATTERS   | 21          |
| EXPERTS   | 21          |
| WHERE YOU CAN FIND MORE INFORMATION                         | 22          |
| INCORPORATION BY REFERENCE                                  | 22          |
|   | 22          |
|   |             |
|   |             |
|   |             |

## ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying base prospectus are part of a registration statement that we filed with the Securities and Exchange Commission (the "SEC") utilizing a "shelf" registration process. Each time we conduct an offering to sell securities under the accompanying base prospectus we will provide a prospectus supplement that will contain specific information about the terms of that offering, including the price, the amount of securities being offered and the plan of distribution. The shelf registration statement was initially filed with the SEC on October 1, 2018, and was declared effective by the SEC on October 5, 2018. This prospectus supplement describes the specific details regarding this offering and may add, update or change information contained in the accompanying base prospectus. The accompanying base prospectus provides general information about us and our securities, some of which, such as the section entitled "Plan of Distribution," may not apply to this offering. This prospectus supplement and the accompanying base prospectus are an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. We are not making offers to sell or solicitations to buy our securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation.

If information in this prospectus supplement is inconsistent with the accompanying base prospectus or the information incorporated by reference with an earlier date, you should rely on this prospectus supplement. This prospectus supplement, together with the base prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying base prospectus and any free writing prospectus we have authorized for use in connection with this offering include all material information relating to this offering. We have not, and the underwriter has not, authorized anyone to provide you with different or additional information and you must not rely on any unauthorized information or representations. You should assume that the information appearing in this prospectus supplement, the accompanying base prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying base prospectus and any free writing prospectus we have authorized for use in connection with this offering is accurate only as of the respective dates of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should carefully read this prospectus supplement, the accompanying base prospectus and the information and documents incorporated herein by reference herein and therein, as well as any free writing prospectus we have authorized for use in connection with this offering, before making an investment decision. See "Incorporation of Certain Documents by Reference" and "Where You Can Find More Information" in this prospectus supplement and in the accompanying base prospectus.

This prospectus supplement and the accompanying base prospectus contain summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the full text of the actual documents, some of which have been filed or will be filed and incorporated by reference herein. See "Where You Can Find More Information" in this prospectus supplement. We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference into this prospectus supplement or the accompanying base prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

All references in this prospectus supplement and the accompanying base prospectus to our consolidated financial statements include, unless the context indicates otherwise, the related notes.

This prospectus supplement and the accompanying base prospectus contain and incorporate by reference certain market data and industry statistics and forecasts that are based on management's own estimates, independent industry publications, government publications, reports by market research firms and other publicly available information. Although we believe these sources are reliable, estimates as they relate to projections involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under "Risk Factors" in this prospectus supplement and the accompanying base prospectus and under similar headings in the documents incorporated by reference herein and therein. Accordingly, investors should not place undue reliance on this information.

Unless otherwise stated or the context requires otherwise, all references in this prospectus supplement to the "Company," "we," "us," "our" and "Akoustis" refer to Akoustis Technologies, Inc., a Delaware corporation, and its wholly-owned subsidiaries. We operate under a number of trademarks, including, among others, "Akoustis" and "XBAW," which are registered under applicable intellectual property laws All other trademarks, trade names and service marks included or incorporated by reference into this prospectus supplement, the accompanying base prospectus and any applicable free writing prospectus are the property of their respective owners.

## PROSPECTUS SUPPLEMENT SUMMARY

This prospectus supplement summary highlights information contained elsewhere in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein and therein. This summary does not contain all of the information that you should consider before deciding to invest in our securities. You should read this entire prospectus supplement and the accompanying base prospectus carefully, including the section entitled "Risk Factors" beginning on page S-8 and our consolidated financial statements and the related notes and the other information incorporated by reference into this prospectus supplement and the accompanying base prospectus, before making an investment decision. In addition, any reference to or description of our concurrent common stock offering herein is wholly subject to the other prospectus supplement pursuant to which the common stock is being offered and you should not rely on this prospectus supplement in making an investment decision to purchase the notes.

## **Our Company**

Akoustis® is a development-stage company focused on developing, designing, and manufacturing innovative radio frequency ("RF") filter products for the mobile wireless device industry, including for products such as smartphones and tablets, cellular infrastructure equipment, WiFi consumer premise equipment ("CPE"), WiFi end user devices and military and defense communications equipment. Located between the device's antenna and its digital backend, the RF front-end ("RFFE") is the circuitry that performs the analog signal processing and contains components such as amplifiers, filters and switches. To construct the resonators that are the building blocks for the RF filter, we have developed a new and proprietary microelectromechanical systems ("MEMS")-based bulk acoustic wave ("BAW") technology and a unique manufacturing flow, called "XBAW." Our XBAW process incorporates high purity piezoelectric materials for high power, high frequency and wide bandwidth applications. Filters are critical in selecting and rejecting signals, and their performance enables differentiation in the modules defining the RFFE.

We believe owning the core resonator technology and manufacturing our designs is the most direct and efficient means of delivering our solutions to the market. Furthermore, our technology is based upon bulk-mode resonance, which we believe is superior to surface-mode resonance for high-band applications that include 4G/LTE, emerging 5G, WiFi, and military applications. While some of our target customers utilize or make the RFFE module, they may lack access to critical high-band filter technology to compete in high-band applications and other traditional surface-mode solutions where higher power performance is required. We intend to design, manufacture, and market our RF filter products to mobile phone original equipment manufacturers ("OEMs"), military and defense OEMs, cellular infrastructure OEMs, and WiFi premise equipment customers and to enable broader competition among the front-end module manufacturers. We plan to operate as a "pure-play" RF filter supplier and align with the front-end module manufacturers who seek to acquire high performance filters to grow their module businesses.

We currently build pre-production RF filter circuits, using our first generation XBAW wafer process, in our 122,000-square foot wafer-manufacturing plant located in Canandaigua, New York, which we acquired in June 2017. As of October 10, 2018, we had been awarded 18 patents, including two blocking patents that we have licensed from Cornell University and the University of California, Santa Barbara, and we had over 38 additional patents pending. These patents cover our XBAW process and technology from the substrate level through the system application layer. Where possible, we leverage both federal and state level research and development ("R&D") grants to support development and commercialization of our technology.

We are developing RF filters for 4G/LTE, emerging 5G, military and WiFi bands and the associated proprietary models and design kits required to design our RF filters. As we qualify our first RF filter products, we plan to engage with target customers to evaluate our filter solution. Our initial designs will target high-band 4G/LTE, emerging 5G, WiFi frequency bands and military bands in the sub-6 GHz range. Since Akoustis owns its core technology and controls access to its intellectual property, we expect to offer several ways to engage with potential customers. First, we intend to engage with multiple wireless markets, providing filters that we design and offer as standard catalog components. Second, we expect to deliver filters to customer-supplied specifications, which we will design and fabricate for a specific customer. Finally, we will offer our models and design kits for our customers to design their own filter utilizing our proprietary technology.

## Plan of Operation

We plan to commercialize our technology by designing and manufacturing single-band and multi-band BAW RF filter solutions in our New York wafer fabrication facility. We expect our filter solutions will address problems (such as loss, bandwidth, power handling, and isolation) created by the growing number of frequency bands in the RFFE of mobile devices, infrastructure and premise equipment to support 4G/LTE, emerging 5G, and WiFi. We have prototyped our first single-band low-loss BAW filter designs for 4G/LTE frequency bands, which are dominated by competitive BAW solutions and historically cannot be addressed with low-band, lower power handling surface acoustic wave technology. As we receive customer evaluations, we will do further iterations on the designs and provide next generation samples for evaluation and characterization.

To succeed, we must convince mobile phone OEMs, RFFE module manufacturers, cellular infrastructure OEMs, and WiFi premise equipment OEMs to use our XBAW filter technology in their systems and modules. However, because there are two dominant BAW filter suppliers in the industry that have high-band technology, and both utilize such technology as a competitive advantage at the module level, we expect customers that lack access to high-band filter technology will be open to considering our products.

In June 2018, we completed the qualification of our high purity piezoelectric materials process and our XBAW manufacturing process to support an initial product family of 4G/LTE, emerging 5G mobile, military and WiFi filter solutions. We intend to complete a production release of our high-band filter products in the frequency range from 2 GHz to 6 GHz in the first calendar quarter of 2019. The target frequency bands will be prioritized based upon customer interest. We expect we will need to hire additional personnel and make significant capital investments to complete this initiative.

We plan to pursue RF filter design and R&D development agreements and potentially joint ventures with target customers and other strategic partners, but we cannot guarantee we will be successful in these efforts. These types of arrangements may subsidize technology development costs and qualification, filter design costs, and offer complementary technology and market intelligence and other avenues to revenue. However, we intend to retain ownership of our core technology, intellectual property, designs, and related improvements. We expect to pursue development of catalog designs for multiple customers and to offer such catalog products in multiple sales channels.

#### **Purchase Orders for RF Filters**

In August 2017, we announced our first shipment of premium high-band BAW RF filter prototypes manufactured using our patented single-crystal BulkONE® technology to a Chinese tier one customer. The shipment included high performance, LTE-TDD Band 41, 2.6 GHz BAW RF filters that we believe address the challenging filter requirements in the high growth 4G LTE mobile market in China. Shortly thereafter, we announced our first 3.8GHz RF filter shipments to our second customer for a key radar application.

In March and April of 2018, we announced our first two commercial products, the AKF-1252 and the AKF-1938, which we are sampling with customers involved in the WiFi market and military radar market, respectively. In May we announced a non-recurring engineering ("NRE") contract and purchase order from a 4G/LTE infrastructure customer that we expect will ship in early calendar 2019. Additionally, in June 2018 we announced a 5.2 GHz BAW WiFi filter for the handset market, the AKF-1652. As we receive customer evaluations, we will do further iterations on the designs and provide next generation samples for evaluation and characterization.

In May 2018, we received a development purchase order for two 4G/LTE BAW RF filters from a new tier-one infrastructure customer. The first purchase order covers development and delivery of pre-production units for evaluation and testing. The second purchase order is a placeholder order, containing the pricing terms for the first 0.5 million production RF filters for future orders, assuming successful qualification and testing of the pre-production units.

In July 2018, we announced a filter design win and commercial production order for the AKF-1938 3.8 GHz filter with a military OEM specializing in phased-array radar and high-performance RF transceivers. In October 2018, we announced that we had shipped our first filters to this customer and have received a follow-on order in addition to the original production order, both of which are expected to ship by the end of the current calendar year.

In August 2018, we added our first 5G infrastructure customer, an OEM specializing in the development of 5G infrastructure for the Citizens Band Radio Service ("CBRS") bands. We expect to deliver samples to this customer in the first quarter of calendar 2019.

In October 2018, we received an order for the AKF-1252, our 5.2 GHz WiFi CPE filter, with a distributor to support resale activity. We expect to ship to this customer by the end of the current calendar year.

## **Certain Recent Operating Results**

Below is a summary of certain preliminary estimates regarding our financial results for the quarter ended September 30, 2018. This preliminary financial information is based upon our estimates and is subject to completion of our financial closing procedures. Moreover, this preliminary financial information has been prepared solely on the basis of information that is currently available to, and that is the responsibility of, management. Our independent registered public accounting firm has not audited or reviewed, and does not express an opinion with respect to, this information. This preliminary financial information is not a comprehensive statement of our financial results for the quarter ended September 30, 2018, and remains subject to, among other things, the completion of our financial closing procedures, final adjustments, completion of our internal review and review by our independent registered public accounting firm of our financial statements for the quarter ended September 30, 2018, which may materially impact the results and expectations set forth below.

We expect revenue for the three months ended September 30, 2018 will be approximately \$0.3 million. We recorded revenue of approximately \$0.3 million for the three months ended September 30, 2017.

We expect to record a net loss of approximately \$7.2 million to \$7.6 million for the three months ended September 30, 2018, compared to a net loss of approximately \$4.6 million for the three months ended September 30, 2017.

As of September 30, 2018, we had \$9.1 million of cash and cash equivalents.

## **Concurrent Common Stock Offering**

Concurrently with this offering and pursuant to a separate prospectus supplement, we are also conducting an underwritten offering, or the common stock offering, of \$ million of our common stock. The closing of this offering is not conditioned on the closing of the common stock offering, and the closing of the common stock offering is not contingent upon the closing of this offering. This prospectus supplement is not an offer to sell or a solicitation of an offer to buy any securities being offered in the common stock offering. See "Concurrent Common Stock Offering" for additional information relating to the common stock and the common stock offering.

## **Company Information**

Our principal executive offices are located at 9805 Northcross Center Court, Suite A, Huntersville, North Carolina 28078. Our telephone number is (704) 997-5735. Our website address is www.akoustis.com. The information on, or that can be accessed through, our website is not part of this prospectus supplement.

## The Offering

The summary below describes the principal terms of the notes. Certain of the terms and conditions described below are subject to important limitations and exceptions. The "Description of Notes" section of this prospectus supplement contains a more detailed description of the terms and conditions of the notes. As used in this section, "we", "our", and "us" refer only to Akoustis Technologies, Inc. and not to its subsidiary.

Issuer Akoustis Technologies, Inc.

\$10,000,000 in aggregate principal amount of 6.5% Convertible Senior Notes due 2023, Securities offered

> initially convertible into shares of common stock.

Maturity date November 30, 2023.

Interest on the notes will accrue at the rate of 6.5% per year and is payable in cash on each Interest

February 28, May 31, August 31 and November 30 beginning February 28, 2019.

The notes will be convertible at the option of the holder at any time prior to maturity at an **Conversion rights** 

per share. See "Description of Notes-Conversion Rights." initial conversion price of \$

Concurrently with this offering and pursuant to a separate prospectus supplement, we are conducting an underwritten public offering, or the common stock offering, of of our common stock. This offering is not contingent upon the closing of the common stock offering, and the common stock offering is not contingent upon the closing of this offering. We cannot assure you that the common stock offering will be completed on the terms described herein, or at all. We are not offering common stock pursuant to this prospectus supplement. See "Concurrent Common Stock Offering" for additional information relating to

the common stock offering.

Put right The holders of the notes will have a one-time right, exercisable prior to November 30, 2021 (the "put date") in the manner described in the indenture, to require us to repurchase for cash all (but not less than all) of such holder's notes on the put date at a purchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest

to, and including, the put date. See "Description of Notes—Holders' Put Right."

We may redeem the notes, in whole or in part, at a redemption price equal to 100% of the make-whole payment principal amount plus accrued and unpaid interest on such principal, if any, up to the redemption date:

> on or after November 30, 2019, if the closing sale price per share of our common stock exceeds 175% of the then-effective conversion price for each of 20 of any 30 consecutive trading days immediately preceding the optional redemption notice (as defined herein);

> on or after November 30, 2020, if the closing sale price per share of our common stock exceeds 150% of the then-effective conversion price for each of 20 of any 30 consecutive trading days immediately preceding the optional redemption notice; and

> on or after November 30, 2021, if the closing sale price per share of our common stock exceeds 125% of the then-effective conversion price for each of 20 of any 30 consecutive trading days immediately preceding the optional redemption notice.

See "Description of Notes-Optional Redemption."

If we redeem the notes as described in this section, the holder will also receive an interest make-whole payment equal to the remaining scheduled interest payments that would have been made on the notes redeemed had such notes remained outstanding through the maturity date. We shall pay any such interest make-whole payment in cash; provided, however, that, so long as the Make-Whole VWAP Price (as defined below) is not less than \$ per share (as appropriately adjusted for any stock split, reverse stock split, stock dividend or other reclassification or combination of our common stock occurring after the date of issuance of the notes offered hereby), we will have the option to pay interest make-whole payments in freely tradable shares of common stock valued at 95% of the volume weighted average price of the common stock for the ten trading days ending on and including the trading day immediately preceding the redemption date (the "Make-Whole VWAP Price").

Optional redemption and interest

Concurrent common stock offering

Payment in connection with conversion upon a qualifying fundamental change and qualifying fundamental change payment Upon surrender of notes for conversion in connection with a "qualifying fundamental change" (as herein defined) occurring prior to the maturity date, we shall satisfy the related conversion obligation by delivering shares of common stock based on the conversion rate; *provided*, *however*, for any conversion of notes following the effective date of certain qualifying fundamental changes in which the consideration received by holders of common stock is composed entirely of cash, the conversion obligation will be calculated based solely on the price paid (or deemed to be paid) per share of common stock in such qualifying fundamental change (the "stock price") for the transaction and will be deemed to be an amount of cash per \$1,000 principal amount of converted notes equal to the conversion rate, multiplied by such stock price.

If a holder elects to convert its notes in connection with a qualifying fundamental change, we will, under certain circumstances, make a payment to such holder equal to \$130 per \$1,000 of aggregate principal of notes so surrendered for conversion (a "qualifying fundamental change payment"). A conversion of notes will be deemed for these purposes to be "in connection with" such qualifying fundamental change if the relevant conversion date occurs during the period from, and including, the effective date of the qualifying fundamental change up to, and including, the business day immediately prior to the related fundamental change repurchase date (or, in certain circumstances the 35th trading day immediately following the effective date of such qualifying fundamental change) (such period, the "qualifying fundamental change period").

We shall pay any qualifying fundamental change payment in cash; *provided, however*, that, so long as the "stock price" (determined as described above) is not less than \$ per share (as appropriately adjusted for any stock split, reverse stock split, stock dividend or other reclassification or combination of our common stock occurring after the date of issuance of the notes offered hereby), we will have the option to pay qualifying fundamental change payments in freely tradable shares of common stock valued at 95% of such "stock price". See "Description of Notes—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change."

# Option to require repurchase upon a fundamental change

If a "fundamental change" (as defined herein) occurs at any time prior to the maturity date, subject to certain conditions, holders of the notes will have the right, at their option, to require us to repurchase for cash all or part of each holder's notes at a purchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest, to the fundamental change repurchase date.

## Ranking

The notes will constitute our unsubordinated indebtedness ranking *pari passu* with our outstanding unsubordinated liabilities.

## **Covenants**

The notes will be issued under an indenture with The Bank of New York Mellon Trust Company, N.A., which will act as trustee on behalf of the holders. The indenture, among other things, limits our ability and the ability of or subsidiaries to:

- · incur or guarantee additional indebtedness;
- · issue preferred stock or stock of any subsidiary;
- make investments or acquisitions;
- · merge, consolidate, dissolve or liquidate;
- · engage in certain asset sales;
- · grant liens (except permitted liens);
- · pay dividends;

- · engage in transactions with affiliates; or
- enter into a new line of business.

In addition, the indenture requires us and each of our subsidiaries to maintain all material properties in good working order and condition (subject to ordinary wear and tear).

These covenants are subject to specified exceptions and qualifications. See "Description of Notes—Covenants."

Adjustments

Conversion and redemption prices will be appropriately adjusted for any stock split, reverse stock split, stock dividend or other reclassification or combination of our common stock occurring after the date of issuance of the notes.

**Book-entry form** 

The notes will be issued in book-entry form and represented by one or more permanent global certificates (global notes) deposited with, or on behalf of, The Depository Trust Company ("DTC") and registered in the name of Cede & Co., as nominee of DTC. Beneficial interests in any of the notes will be shown on, and transfers will be effected only through, records maintained by DTC or its nominee and any such interest may not be exchanged for certificated securities, except in limited circumstances.

**Events of default** 

If an event of default occurs, in certain circumstances, the trustee or the holders of at least 25% in principal amount of the notes may declare a default and accelerate the payments under the notes. Events of default under the indenture include, but are not limited to, the following:

- · failure to make certain payments;
- · failure to remain listed on certain eligible markets;
- failure to take certain actions in the case of an fundamental change or a qualifying fundamental change;
- · default under certain other indebtedness;
- · failure to perform certain covenants under the indenture; and
- · the occurrence of certain bankruptcy events.

See "Description of Notes-Events of Default."

**Trading** 

The notes are not listed on any securities exchange or included in any automated quotation system and we do not intend to apply for a listing of the notes on any securities exchange or any automated dealer quotation system. Our common stock is listed on the NASDAQ Capital Market under the symbol "AKTS."

Use of proceeds

We estimate that our net proceeds from this offering will be approximately \$\\$\text{million}, after deducting the underwriting discount and the estimated offering expenses payable by us. We estimate that the net proceeds to us from the common stock offering, if completed, will be approximately \$\\$\text{million} (or approximately \$\\$\text{million} if the underwriters of that offering exercise their over-allotment option in full). We intend to use the net proceeds of this offering and the common stock offering to fund our operations and the growth of our business, including for capital expenditures, working capital, research and development, the commercialization of our technology and other general corporate purposes. See "Use of Proceeds" on page S-19.

**Risk factors** 

Investing in our securities involves a high degree of risk. You should carefully consider the information under "Risk Factors" beginning on page S-8 and the information included or incorporated by reference in this prospectus supplement and the accompanying base prospectus for a discussion of factors you should carefully consider before deciding to invest in our securities.

**NASDAQ Capital Market symbol** 

"AKTS"

#### RISK FACTORS

Investing in our securities involves a high degree of risk. Before purchasing these notes, you should read and consider carefully the following risk factors as well as the risk factors described under the section captioned "Risk Factors" contained in our Annual Report on Form 10-K for the fiscal year ended June 30, 2018, as filed with the SEC on August 29, 2018, which are incorporated by reference in this prospectus supplement and the accompanying base prospectus, together with the other information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus, including our consolidated financial statements and the related notes. Each of these risk factors, either alone or taken together, could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our common stock. There may be additional risks that we do not presently know of or that we currently believe are immaterial, which could also impair our business and financial position. If any of the events described below were to occur, our financial condition, our ability to access capital resources, our results of operations and/or our future growth prospects could be materially and adversely affected and the market price of our common stock could decline. As a result, you could lose some or all of any investment you may make in our common stock.

## **Risks Related to Our Business**

We have a history of losses, will need substantial additional funding to continue our operations and may not achieve or sustain profitability in the future. Our operations have consumed substantial amounts of cash since inception. We have incurred losses since our incorporation and formation in 2014. We anticipate that our operating expenses will increase significantly in the foreseeable future as we continue to pursue the development of our patent-pending single-crystal acoustic wave filter technology, invest in marketing, sales and distribution of our RF filters to grow our business, acquire customers, commercialize our technology in the mobile wireless market and continue to invest in our manufacturing facility in Canandaigua, New York. We expect to incur significant capital expenditures in connection with the scale-up of our manufacturing facility, a significant portion of which will be incurred in advance of the receipt of anticipated customer revenues. Moreover, these efforts may prove more expensive than we currently anticipate, and we may not succeed in generating sufficient revenues to offset these higher expenses. In addition, we expect to incur significant expenses related to regulatory requirements and our ability to obtain, protect, and defend our intellectual property rights.

Problems in scaling our manufacturing operations could have a material adverse effect on our business. Future customer demand may require us to significantly increase our manufacturing capacity. There are substantial technical challenges to increasing manufacturing capacity, including equipment acquisition lead times, materials procurement, scaling our manufacturing process, manufacturing site expansion, and the need to significantly increase production yields while maintaining or improving quality control and assurance. Developing commercial-scale manufacturing facilities will require the investment of substantial additional funds and the hiring and retention of additional management, quality assurance, quality control and technical personnel who have the necessary manufacturing experience. The scaling of manufacturing capacity is subject to numerous risks and uncertainties, and may lead to variability in product quality or reliability, increased construction timelines, as well as resources required to acquire, install and maintain manufacturing equipment, among others, all of which can lead to unexpected delays in manufacturing output. Additionally, the production of our products must occur in a highly controlled and clean environment to minimize particles and other yield- and quality-limiting contaminants. Weaknesses in process control or minute impurities in materials may cause a substantial percentage of defective products. We may not be able to maintain stringent quality controls and contamination problems could arise. Material defects in our products could result in loss or delay of revenues, delayed market acceptance, damage to our reputation, lost customers, legal claims, increased insurance costs or increased service and warranty costs. If we are unable to successfully scale up our manufacturing operations to meet customer demand, our business growth could be materially adversely affected.

Our independent registered public accounting firm has expressed doubt about our ability to continue as a going concern. The Company's historical financial statements have been prepared under the assumption that we will continue as a going concern. Our independent registered public accounting firm has issued a report that included an explanatory paragraph referring to our recurring net losses and accumulated deficit and expressing substantial doubt in our ability to continue as a going concern. Our ability to continue as a going concern is dependent upon our ability to obtain additional equity financing or other capital, attain further operating efficiencies, reduce expenditures, and, ultimately, to generate revenue. Our financial statements do not include any adjustments that might result from the outcome of this uncertainty. However, if adequate funds are not available to us when we need them, and we are unable to commercialize our products giving us access to additional cash resources, we will be required to curtail our operations, which would, in turn, further raise substantial doubt about our ability to continue as a going concern.

We are an emerging growth company, and the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors. We are an emerging growth company under the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"). For as long as we continue to be an emerging growth company, we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies including, but not limited to, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, exemptions from the requirements of holding a nonbinding advisory stockholder vote on executive compensation and any golden parachute payments not previously approved, exemption from the requirement of auditor attestation in the assessment of our internal control over financial reporting and exemption from any requirement that may be adopted by the Public Company Accounting Oversight Board. If we do, the information that we provide stockholders may be different than what is available with respect to other public companies. We cannot predict if investors will find our common stock less attractive because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected to take advantage of this extended transition period. Since we will not be required to comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies, our financial statements may not be comparable to the financial statements of companies that comply with the effective dates of those accounting standards.

We will remain an emerging growth company until the earliest of (1) the end of the fiscal year in which the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the end of the second fiscal quarter, (2) the end of the fiscal year in which we have total annual gross revenues of \$1.07 billion or more during such fiscal year, (3) the date on which we issue more than \$1 billion in non-convertible debt in a three-year period or (4) June 30, 2019, the end of the fiscal year following the fifth anniversary of the date of the first sale of our common stock pursuant to an effective registration statement filed under the Securities Act of 1933, as amended (the "Securities Act").

Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company," which would allow us to take advantage of many of the same exemptions from disclosure requirements, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation. Some investors may find our common stock less attractive because we rely on these exemptions, there may be a less active trading market for our common stock and our stock price may be more volatile.

Our status as an "emerging growth company" under the JOBS Act may make it more difficult to raise capital as and when we need it. Decreased disclosures in our SEC filings due to our status as an "emerging growth company" may make it harder for investors to analyze our results of operations and financial prospects. Accordingly, we may be less attractive to investors and it may be difficult for us to raise additional capital as and when we need it. Investors may be unable to compare our business with other companies in our industry if they believe that our reporting is not as transparent as other companies in our industry. If we are unable to raise additional capital as and when we need it, our financial condition and results of operations may be materially and adversely affected.

## Risks Related to this Offering and our Convertible Notes

The preliminary financial data contained herein are based on information existing as of the date hereof and there can be no assurance that actual financial results will not differ, potentially materially so. The estimated financial results included herein are based on information existing as of the date hereof. During the preparation of our financial statements for the quarter ending September 30, 2018, we may identify items that would require us to make adjustments, which may be material to the estimates described above. This preliminary financial data has been prepared by and is the responsibility of our management. Marcum LLP has not audited, reviewed, compiled or performed any procedures with respect to this preliminary financial data, and accordingly, Marcum LLP does not express an opinion or any other form of assurance with respect thereto. Accordingly, there can be no assurance that the projected results will be realized or that actual results will not be significantly lower than projected.

This offering is not contingent upon the closing of any other financing, including the concurrent common stock offering, and our management will have broad discretion over the use of the net proceeds from this offering and the common stock offering, which we may not use effectively or in a manner with which you agree. Neither the completion of this offering nor the completion of the concurrent common stock offering is contingent upon the closing of the other, so it is possible that this offering occurs and the common stock offering does not occur, and vice versa. We cannot assure you that the common stock offering will be completed on the terms described herein, or at all.

Our management will have broad discretion as to the use of the net proceeds from this offering and the common stock offering and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for our company.

Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt. Our ability to make scheduled payments of the principal of the notes depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to repay our debt will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

We may incur additional debt which could affect our ability to make payments on the notes when due. Subject to certain conditions and limitations in the indenture governing the notes, we and our subsidiaries may be able to incur substantial additional debt in the future, some of which may be secured debt. Except for the limitation described under "Description of Notes—Limitation on Incurrence of Additional Indebtedness" with respect the incurrence of additional indebtedness, we and our subsidiaries will not be restricted under the terms of the indenture governing the notes from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of the indenture governing the notes that could have the effect of diminishing our ability to make payments on the notes when due.

Recent and future regulatory actions and other events may adversely affect the trading price and liquidity of the notes. We expect that many investors in, and potential purchasers of, the notes will employ, or seek to employ, a convertible arbitrage strategy with respect to the notes. Investors would typically implement such a strategy by selling short our common stock underlying the notes and dynamically adjusting their short position while continuing to hold the notes. Investors may also implement this type of strategy by entering into swaps on our common stock in lieu of or in addition to short selling the common stock.

The SEC and other regulatory and self-regulatory authorities have implemented various rules and taken certain actions, and may in the future adopt additional rules and take other actions, that may impact those engaging in short selling activity involving equity securities (including our common stock). Such rules and actions include Rule 201 of SEC Regulation SHO, the adoption by the Financial Industry Regulatory Authority, Inc. and the national securities exchanges of a "Limit Up-Limit Down" program, the imposition of market-wide circuit breakers that halt trading of securities for certain periods following specific market declines, and the implementation of certain regulatory reforms required by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. Any governmental or regulatory action that restricts the ability of investors in, or potential purchasers of, the notes to effect short sales of our common stock, borrow our common stock or enter into swaps on our common stock could adversely affect the trading price and the liquidity of the notes.

We cannot assure you that an active trading market will develop for the notes. There is no active trading market for the notes, and we do not intend to apply to list the notes on any securities exchange or to arrange for quotation on any automated dealer quotation system. Any market-making activities relating to the notes may cease at any time without notice. In addition, the liquidity of the trading market in the notes, and the market price quoted for the notes, may be adversely affected by changes in the overall market for this type of security and by changes in our financial performance or prospects or in the prospects for companies in our industry generally. As a result, we cannot assure you that an active trading market will develop for the notes. If an active trading market does not develop or is not maintained, the market price and liquidity of the notes may be adversely affected. In that case you may not be able to sell your notes at a particular time or you may not be able to sell your notes at a favorable price.

Because the notes are held in book-entry form, holders must rely on DTC's procedures to receive communications relating to the notes and exercise their rights and remedies. We will issue the notes in the form of one or more global notes registered in the name of Cede & Co., as nominee of The Depository Trust Company ("DTC"). As a result, beneficial interests in global notes are shown on, and transfers of global notes will be effected only through, the records maintained by DTC. Except in limited circumstances, we will not issue certificated notes. See "Description of Notes—Book-Entry, Settlement and Clearance." Accordingly, if you own a beneficial interest in a global note, then you will not be considered a record owner or holder of the notes. Instead, DTC or its nominee will be the sole holder of the notes. Unlike persons who have certificated notes registered in their names, owners of beneficial interests in global notes will not have the direct right to act on our solicitations for consents or requests for waivers or other actions from holders. Instead, those beneficial owners will be permitted to act only to the extent that they have received appropriate proxies to do so from DTC or, if applicable, a DTC participant. The applicable procedures for the granting of these proxies may not be sufficient to enable owners of beneficial interests in global notes to vote on any requested actions on a timely basis. In addition, notices and other communications relating to the notes will be sent to DTC. We expect DTC to forward any such communications to DTC participants, which in turn would forward such communications to indirect DTC participants. But we can make no assurances that you timely receive any such communications.

Volatility in the market price and trading volume of our common stock could adversely impact the value of the notes. The stock market in recent years has experienced significant price and volume fluctuations that have often been unrelated to the operating performance of companies. In addition, the market price of our common stock historically has been volatile. The market price of our common stock could fluctuate significantly for many reasons, including in response to the risks described in this section or our most recent annual report on Form 10-K or subsequently filed quarterly reports on Form 10-Q or elsewhere in this prospectus for reasons unrelated to our operations, such as reports by industry analysts, investor perceptions or negative announcements by our customers, competitors or suppliers regarding their own performance, as well as industry conditions and general financial, economic and political instability. A decrease in the market price of our common stock would likely adversely impact the value of the notes. The market price of our common stock could also be affected by possible sales of our common stock by investors who view the notes as a more attractive means of equity participation in us and by hedging or arbitrage trading activity that may develop involving our common stock. This trading activity could, in turn, affect the value of the notes. This volatility in the market price of our common stock may affect the price at which you could sell the shares of our common stock you receive upon conversion of your notes, if any, and the sale of substantial amounts of our common stock could adversely affect the price of our common stock and the value of your notes.

Any adverse rating of the notes may cause their market price to fall. We do not intend to seek a rating on the notes. However, if a rating service were to rate the notes and if such rating service were to lower its rating on the notes below the rating initially assigned to the notes or otherwise announce its intention to put the notes on credit watch, the value of the notes could decline.

You may be subject to tax attributable to interest paid on the notes even though you do not receive a corresponding cash payment. The notes permit us, at our option, to make certain payments in freely tradable shares of common stock in lieu of cash. You may be subject to tax attributable to such payments even if they are not paid in cash.

You may be subject to tax if we make or fail to make certain adjustments to the conversion rate of the notes even though you do not receive a corresponding cash distribution. The conversion rate of the notes is subject to adjustment in certain circumstances, including the payment of cash dividends. If the conversion rate is adjusted as a result of a cash dividend paid to our common stockholders, you may be deemed to have received a dividend subject to U.S. federal income tax without the receipt of any cash. In addition, a failure to adjust (or to adjust adequately) the conversion rate after an event that increases your proportionate interest in us could be treated as a deemed taxable dividend to you. If you are a non-U.S. holder (as defined in "Material U.S. Federal Income Tax Considerations"), any deemed dividend would be subject to U.S. federal withholding tax at a 30% rate, or such lower rate as may be specified by an applicable treaty, and if you are a U.S. holder (as defined in "Material U.S. Federal Income Tax Considerations"), any deemed dividend may be subject to federal backup withholding tax at a 24% rate, which, in each case, may be withheld from subsequent payments on the notes or other amounts received by you. See "Material U.S. Federal Income Tax Considerations."

We intend to take the position that the notes are not contingent payment debt instruments, which position is not free from doubt. We may be required to make additional payments on the notes in certain circumstances, including settlement of the interest makewhole payment, as described in "Description of Notes-Optional Redemption-Interest Make-Whole Payment" and any payment made upon certain conversions made in connection with a qualifying fundamental change, as described in "Description of Notes-Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change." Due to a lack of relevant authority regarding certain of these payments, the applicability to the notes of Treasury regulations governing contingent payment debt instruments is uncertain. In particular, the effect of the interest make-whole payment on the tax treatment of the notes is unclear. Although the matter is not free from doubt, we intend to take the position for U.S. federal income tax purposes that the notes are not contingent payment debt instruments. Our position that the notes should not be treated as contingent payment debt instruments is binding on the holders of the notes unless a contrary position is disclosed to the Internal Revenue Service (the "IRS") (but is not binding on the IRS). If the IRS were to successfully challenge our position, and the notes were treated as contingent payment debt instruments, U.S. noteholders would be required, among other potential adverse consequences, to accrue interest income at a rate substantially higher than the stated interest rate on the notes (regardless of such U.S. holder's regular method of accounting for U.S. federal income tax purposes), and to treat as ordinary income, rather than capital gain, any gain recognized on a sale, exchange or redemption of a note. In addition, conversion of the notes would be a taxable event, and any gain realized upon conversion would be required to be treated as ordinary income.

Investors are urged to consult with their own tax advisors regarding the tax consequences of purchasing, owning and disposing of the notes and the common stock that may be received upon conversion of the notes. See "Material U.S. Federal Income Tax Considerations."

Future sales of our common stock in the public market could lower the market price for our common stock and adversely impact the trading price of the notes. In the future, we may sell additional shares of our common stock to raise capital. In addition, a substantial number of shares of our common stock are reserved for issuance upon the exercise of stock options and upon conversion of the notes. We cannot predict the size of future issuances or the effect, if any, that they may have on the market price for our common stock. The issuance and sale of substantial amounts of common stock, or the perception that such issuances and sales may occur, could adversely affect the trading price of the notes and the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities.

Holders of notes are not entitled to any rights with respect to our common stock, but they will be subject to all changes made with respect to our common stock to the extent our conversion obligation includes shares of our common stock. Holders of notes are not entitled to any rights with respect to our common stock (including, without limitation, voting rights and rights to receive any dividends or other distributions on our common stock) prior to the conversion date relating to such notes, but holders of notes will be subject to all changes affecting our common stock. For example, if an amendment is proposed to our certificate of incorporation or bylaws requiring stockholder approval and the record date for determining the stockholders of record entitled to vote on the amendment occurs prior to the conversion date related to a holder's conversion of its notes, such holder will not be entitled to vote on the amendment, although such holder will nevertheless be subject to any changes affecting our common stock.

Upon conversion of the notes, you may receive less valuable consideration than expected because the value of our common stock may decline after you exercise your conversion right but before we settle our conversion obligation. Under the notes, a converting holder will be exposed to fluctuations in the value of our common stock during the period from the date such holder surrenders notes for conversion until the date we settle our conversion obligation, which may be two trading days following the relevant conversion date. Accordingly, if the price of our common stock decreases during this period, the value of the shares that you receive will be adversely affected and would be less than the conversion value of the notes on the conversion date.

The qualifying fundamental change payment for notes converted in connection with a qualifying fundamental change may not adequately compensate you for any lost value of your notes as a result of such transaction. Following the occurrence of a qualifying fundamental change, as described in "Description of Notes—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," we will, under certain circumstances, make a payment to a holder who elects to convert its notes in connection with such qualifying fundamental change equal to \$130 per \$1,000 of aggregate principal amount of notes surrendered for conversion (a "qualifying fundamental change payment"). The qualifying fundamental change payment for notes converted in connection with a qualifying fundamental change may not adequately compensate you for any lost value of your notes as a result of such transaction.

Our obligation to make a qualifying fundamental change payment for notes converted in connection with a qualifying fundamental change could be considered a penalty, in which case the enforceability thereof would be subject to general principles of reasonableness and equitable remedies.

The notes are our unsecured obligations and will be effectively junior to all of our existing and future secured indebtedness and other secured obligations, to the extent of the value of the assets securing that indebtedness and be structurally subordinated to all indebtedness and other liabilities (including trade payables) of our subsidiaries. The notes are our unsubordinated indebtedness ranking pari passu with our outstanding unsubordinated liabilities and will not be guaranteed by any subsidiary. Accordingly, the notes are our unsecured obligations and will effectively rank junior in right of payment to any of our secured indebtedness, including, without limitation, our \$15.0 million outstanding principal amount of convertible senior secured notes issued in May 2018 (the "Existing Notes"), and other secured obligations to the extent of the value of the assets securing such indebtedness and be structurally subordinated to all indebtedness and other liabilities (including trade payables, but excluding intercompany obligations) of our subsidiaries. In the event of our bankruptcy, liquidation, reorganization or other winding up, our assets that secure other indebtedness or obligations effectively ranking senior in right of payment to the notes will be available to pay obligations on the notes only after the secured indebtedness or other secured obligations has been repaid in full from these assets. There may not be sufficient assets remaining to pay amounts due on any or all of the notes then outstanding. The indenture governing the notes does not prohibit us from incurring additional indebtedness in the future, including senior secured indebtedness, and such indebtedness may be substantial, nor will the indenture prohibit our subsidiaries from incurring additional indebtedness or other liabilities. See "Description of the Notes—Ranking and Security."

Some significant restructuring transactions may not constitute a fundamental change, in which case we would not be obligated to offer to repurchase the notes. If a fundamental change occurs at any time prior to the maturity date, subject to certain conditions, holders of the notes will have the right, at their option, to require us to repurchase for cash all or part of each holder's notes. However, the fundamental change provisions will not afford protection to holders of notes in the event of other transactions that could adversely affect the notes. For example, transactions such as leveraged recapitalizations, refinancings, restructurings, or acquisitions initiated by us may not constitute a fundamental change requiring us to repurchase the notes. In the event of any such transaction, the holders would not have the right to require us to repurchase the notes, even though each of these transactions could increase the amount of our indebtedness, or otherwise adversely affect our capital structure or any credit ratings, thereby adversely affecting the holders of notes.

The conversion price of the notes may not be adjusted for all dilutive events, including third-party tender or exchange offers, that may adversely affect the value of the notes or the shares of our common stock issuable upon conversion of the notes. The conversion price of the notes is subject to adjustment upon specified events, including the issuance of stock dividends on our common stock, the issuance of rights or warrants, subdivisions, combination, distributions of capital stock, indebtedness or assets, cash dividends and issuer tender or exchange offers. The conversion price will not be adjusted for other events, such as third-party tender or exchange offers or the sale of our equity securities or equity-related securities to third parties or so-called price protection provisions that may adversely affect the value of the notes or market price of common stock issuable upon conversion of the notes. In addition, in order to comply with NASDAQ's stockholder approval rules, the terms of the notes prevent any adjustment to the conversion rate (other than as a result of stock splits, reverse stock splits and other similar transactions) if the conversion price would be reduced to less than \$\( \) per share.

The terms of the notes contain limited covenants and other protections. The indenture governing the notes contains covenants restricting our ability to take certain actions. However, each of these covenants contains specified exceptions. In addition, these covenants do not protect holders of the notes and common stock issuable upon conversion of the notes from all events that could have a negative effect on the creditworthiness of the notes and the secondary market value of the notes and common stock issuable upon conversion of the notes.

We face several risks regarding holders' potential rights to require us to repurchase the notes on the put date or upon a fundamental change. Holders of the notes will have the right, at their option, to require us to repurchase for cash all (but not less than all) of each holder's notes on the put date or all or part of each holder's notes upon a fundamental change prior to maturity. We may not have sufficient future cash flow from operations to make any required repurchase in cash at any later time or the ability to arrange additional financing, if necessary, on acceptable terms. In addition, our ability to repurchase the notes in cash may be limited by law or the terms of other agreements relating to our debt outstanding at the time. If we fail to repurchase the notes in cash as required by the indenture governing the notes, it would constitute an event of default under the indenture, which, in turn, could also constitute an event of default under our then existing debt instruments.

If holders of notes do not properly exercise their one-time right to require us to repurchase their notes on the put date, they will not be entitled to require us to repurchase their notes at any other time. As described under "Description of Notes—Holders' Put Right," holders' right to require us to repurchase their notes is a one-time right that is only exercisable effective on November 30, 2021. If holders of notes do not properly exercise their right to require us to repurchase their notes by delivering a proper notice as described under "Description of Notes—Holders' Put Right" prior to the put date, they will not be entitled to require us to repurchase their notes at any other time (except in connection with a fundamental change). Holders of notes will bear the risk of any defective notice and we do not have any obligation to notify holders of the notes of any defect in their put notices.

Holders of notes will not entitled to any rights with respect to our common stock, but will be subject to all changes made with respect to our common stock. Holders of notes are not entitled to any rights with respect to our common stock (including, without limitation, voting rights and rights to receive any dividends or other distributions on our common stock), but holders of notes will be entitled to rights on the common stock if and when we deliver shares of common stock in exchange for holders' notes and in limited cases under the anti-dilution adjustments of the notes. For example, in the event that an amendment is proposed to our certificate of incorporation or by-laws requiring securityholder approval and the record date for determining the securityholders of record entitled to vote on the amendment occurs prior to delivery of the common stock, holders will not be entitled to vote on the amendment, although they will nevertheless be subject to any changes in the powers, preferences or special rights of our common stock.

Certain provisions in the notes and the indenture could delay or prevent an otherwise beneficial takeover or takeover attempt of us and, therefore, the ability of holders to exercise their rights associated with a fundamental change. Certain provisions in the notes and the indenture could make it more difficult or more expensive for a third party to acquire us. For example, if an acquisition event constitutes a fundamental change, we are required to offer to repurchase each holder's notes in cash. In addition, if an acquisition event constitutes a qualifying fundamental change, we may be required to make a qualifying fundamental change payment to holders who convert their notes in connection with such qualifying fundamental change. Accordingly, our obligations under the notes and the indenture as well as provisions of our organizational documents and other agreements could increase the cost of acquiring us or otherwise discourage a third party from acquiring us or removing incumbent management.

Our increased indebtedness could adversely affect our business, financial condition and results of operations and our ability to meet our payment obligations under such indebtedness. As of September 30, 2018, we had approximately \$11.9 million of indebtedness, net of debt discount and issuance costs, outstanding. This level of debt, in addition to the notes offered hereby, could have significant consequences on our future operations, including:

- · increasing our vulnerability to adverse economic and industry conditions;
- making it more difficult for us to meet our payment and other obligations under our convertible notes;
- · making it more difficult to obtain any necessary future financing for working capital, capital expenditures, debt service requirements or other purposes;

- requiring the dedication of a substantial portion of any cash flow from operations to service our indebtedness, thereby reducing the amount of cash flow available for other purposes, including capital expenditures;
- placing us at a possible competitive disadvantage with competitors that are less leveraged than us or have better access to capital than we have; and
- · limiting our flexibility in planning for, or reacting to, changes in our business and the markets in which we compete.

Any of the above-listed factors could have an adverse effect on our business, financial condition and results of operations and our ability to meet our payment obligations under our convertible notes.

Our ability to meet our payment and other obligations under the convertible notes depends on our ability to generate significant cash flow in the future. This, to some extent, is subject to general economic, financial, competitive, legislative and regulatory factors as well as other factors that are beyond our control. We cannot assure you that our business will generate cash flow from operations, or that future borrowings will be available to us, in an amount sufficient to enable us to meet our payment obligations under the convertible notes and to fund other liquidity needs. If we are not able to generate sufficient cash flow to service our debt obligations, we may need to refinance or restructure our debt, including the convertible notes, sell assets, reduce or delay capital investments, or seek to raise additional capital. If we are unable to implement one or more of these alternatives, we may not be able to meet our payment obligations under the convertible notes, and this default could cause us to be in default on any other currently existing or future outstanding indebtedness

Servicing the debt of the notes offered hereby and our Existing Notes requires a significant amount of cash or common stock, and we may not have sufficient cash flow from our business to service our debt. We will pay accrued interest on the notes offered hereby in cash and may be required to pay interest on the Existing Notes in cash in certain circumstances. Our ability to make scheduled payments of interest depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our debt in cash and make necessary capital expenditures.

If we are unable to generate sufficient cash flow to satisfy payment obligations under the notes offered hereby and our Existing Notes, we may be required to adopt one or more alternatives, such as selling assets or obtaining additional equity capital on terms that may be onerous or highly dilutive. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

We are subject to a number of restrictive covenants, which may restrict our business and financing activities. The indenture governing our Existing Notes imposes operating and other restrictions on us, as will the indentures that are to govern the notes offered hereby. Such restrictions may affect, and in many respects limit or prohibit, among other things, our ability to:

- incur or guarantee additional indebtedness;;
- · issue preferred stock or stock of any subsidiary;
- make investments or acquisitions;
- · merge, consolidate, dissolve or liquidate;
- · engage in certain asset sales (including the sale of stock of our subsidiary);
- · grant liens (except permitted liens);
- · pay dividends;
- · engage in transactions with our affiliates; and
- enter into a new line of business.

The restrictions in the indentures governing both the notes offered hereby and the Existing Notes may prevent us from taking actions that we believe would be in the best interests of our business, and may make it difficult for us to successfully execute our business strategy or effectively compete with companies that are not similarly restricted. We also may incur future debt obligations that might subject us to additional restrictive covenants that could affect our financial and operational flexibility. Our ability to comply with these covenants in future periods will largely depend on the pricing of our products and services, and our ability to successfully implement our overall business strategy. We cannot assure you that we will be granted waivers or amendments to these agreements if for any reason we are unable to comply with these agreements. The breach of any of these covenants and restrictions could result in a default under the indentures governing the notes offered hereby and the Existing Notes, which could result in an acceleration of our indebtedness.

## **Risks Related to Our Common Stock**

Our common stock is thinly traded and our share price has been volatile. Our common stock has traded on the NASDAQ Capital Market, under the symbol "AKTS", since March 13, 2017. Since that date, our common stock has at times been relatively thinly traded and subject to price volatility. There can be no assurance that we will be able to successfully maintain a liquid market for our common shares. The stock market, and development-stage public companies in particular, have been subject to extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of such companies. If you have converted your notes into common stock and we are unable to develop and maintain a liquid market for our common stock, you may not be able to sell your common stock at prices you consider to be fair or at times that are convenient for you, or at all. This situation may be attributable to a number of factors, including but not limited to the fact that we are a development-stage company that is relatively unknown to stock analysts, stock brokers, institutional investors, and others in the investor community. In addition, investors may be risk averse to investments in development-stage companies. The low trading volume is outside of our control and may not increase or, if it increases, may not be maintained. In addition, following periods of volatility in the market price of a company's securities, litigation has often been brought against that company and we may become the target of litigation as a result of price volatility. Litigation could result in substantial costs and divert our management's attention and resources from our business. This could have a material adverse effect on our business, results of operations and financial condition.

We do not anticipate paying dividends on our common stock. Cash dividends have never been declared or paid on our common stock, and we do not anticipate such a declaration or payment for the foreseeable future. We expect to use future earnings, if any, to fund business growth. Furthermore, the terms of the notes offered hereby and the terms of the Existing Notes prohibit us from declaring or paying any dividend or making any other payment or distribution on account of our capital stock. Therefore, stockholders will not receive any funds absent a sale of their shares of common stock. If we do not pay dividends, our common stock may be less valuable because a return on your investment will only occur if our stock price appreciates. We cannot assure stockholders that our stock price will appreciate or that they will receive a positive return on their investment if and when they sell their shares.

Shares eligible for future sale may adversely affect the market for our common stock. Of the 22,374,422 shares of our common stock outstanding as of October 10, 2018, approximately 17,515,745 shares are held by "non-affiliates" and are freely tradable without restriction, either pursuant to a resale prospectus or Rule 144 under the Securities Act. Any substantial sale of our common stock pursuant to Rule 144 or pursuant to any resale prospectus may have a material adverse effect on the market price of our common stock.

Our bylaws designate a state or federal court located within the state of North Carolina as the sole and exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with the Company. Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, a state or federal court located within the state of North Carolina shall be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (3) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, or (4) any action asserting a claim governed by the internal affairs doctrine. This forum selection provision in our bylaws may limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or any our directors, officers or other employees.

The ability of our Board of Directors to issue additional stock may prevent or make more difficult certain transactions, including a sale or merger of the Company. Our Board of Directors is authorized to issue up to 5,000,000 shares of preferred stock with powers, rights and preferences designated by it. Shares of voting or convertible preferred stock could be issued, or rights to purchase such shares could be issued, to create voting impediments or to frustrate persons seeking to effect a takeover or otherwise gain control of the Company. The ability of the Board to issue such additional shares of preferred stock, with rights and preferences it deems advisable, could discourage an attempt by a party to acquire control of the Company by tender offer or other means. Such issuances could therefore deprive stockholders of benefits that could result from such an attempt, such as the realization of a premium over the market price for their shares in a tender offer or the temporary increase in market price that such an attempt could cause. Moreover, the issuance of such additional shares of preferred stock to persons friendly to the Board of Directors could make it more difficult to remove incumbent managers and directors from office even if such change were to be favorable to stockholders generally.

Stockholders may experience dilution of their ownership interests because of the future issuance of additional shares of our common or preferred stock or other securities that are convertible into or exercisable for our common or preferred stock, including as a result of triggering price protection rights held by certain investors. In the future, we may issue our authorized but previously unissued equity securities, resulting in the dilution of the ownership interests of our stockholders. We are authorized to issue an aggregate of 45,000,000 shares of common stock and 5,000,000 shares of preferred stock. We may issue additional shares of our common stock or other securities that are convertible into or exercisable for our common stock in connection with hiring or retaining employees, future acquisitions, future sales of our securities for capital raising purposes, or for other business purposes. In addition, as of October 10, 2018, warrants and options to purchase 728,493 and 1,364,859 shares, respectively, of our common stock remained outstanding. Additionally, the aggregate principal amount our Existing Notes were convertible into approximately 2.3 million shares of common stock on such date. In addition, investors in the May 2017 Offering (as described more fully under "Management's Discussion and Analysis - Liquidity and Capital Resources - Financing Activities" in our annual report on Form 10-K, filed with the SEC on August 29, 2018) have certain price protection rights. The price-protected anti-dilution rights of investors in the May 2017 Offering were triggered by the December 2017 Offering conducted at \$5.50 per share and, as a result, in December 2017 we issued an additional 542,450 shares to investors in the May 2017 Offering for no additional consideration. If we issue shares of our common stock (subject to customary exceptions, including issuances of awards under our employee stock incentive programs and certain issuances in connection with credit arrangements) at a price less than \$5.50 per share, investors in the May 2017 Offering will be entitled to receive (for no additional consideration) additional shares of our common stock in an amount such that, when added to the number of shares of common stock they initially purchased in the May 2017 Offering, will equal the number of shares of common stock that their investment in such offering would have purchased at 90% of the lower purchase price. The future issuance of additional shares of our common stock may create downward pressure on the trading price of the common stock. We will need to raise additional capital in the near future to meet our working capital needs, and there can be no assurance that we will not be required to issue additional shares, warrants or other convertible securities in the future in conjunction with these capital raising efforts, including at a price (or exercise prices) below the price you paid for your stock.

Additionally, in the event that we sell shares of common stock in the concurrent common stock offering for a consideration per share less than \$6.55, the conversion rate of our Existing Notes shall be adjusted to reduce the conversion price to an amount equal to price per share sold in that offering (subject to a minimum of \$5.00), which would increase the number of shares of common stock issuable upon the conversion of the Existing Notes.

A large number of shares of common stock issued in the concurrent common stock offering may be sold in the market following such offering, which may depress the market price of our common stock. A large number of shares of common stock issued in the concurrent common stock offering may be sold in the market following such offering, which may depress the market price of our common stock. Sales of a substantial number of shares of our common stock in the public market following the common stock offering could cause the market price of our common stock to decline. If there are more shares of common stock offered for sale than buyers are willing to purchase, then the market price of our common stock may decline to a market price at which buyers are willing to purchase the offered shares of common stock and sellers remain willing to sell the shares of common stock. The common stock issued in the concurrent common stock offering will be freely tradable without restriction (other than any shares that may be sold to our directors or any of their affiliates in this offering, which will be subject to the lock-up restrictions set forth in the section titled "Underwriting") or further registration under the Securities Act.

Conversion of the notes offered hereby or our Existing Notes will dilute the ownership interest of our existing stockholders or may otherwise depress the price of our common stock. The conversion of some or all of the notes offered hereby and our Existing Notes will dilute the ownership interests of existing stockholders. Any sales in the public market of our common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the Existing Notes and the notes offered hereby may encourage short selling by market participants because the conversion of such notes could be used to satisfy short positions, and anticipated conversion of such notes into shares of our common stock could depress the price of our common stock.

#### FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying base prospectus and documents we have filed with the SEC that are incorporated by reference herein and therein contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. In addition, from time to time we or our representatives have made or will make forward-looking statements in various other filings that we make with the SEC or in other documents, including press releases or other similar announcements. Any and all statements contained in this prospectus supplement and the accompanying base prospectus that are not statements of historical fact may be deemed forward-looking statements. Terms such as "may," "will," "might," "would," "should," "could," "project," "forecast," "estimate," "predict," "potential," "strategy," "anticipate," "attempt," "develop," "plan," "help," "seek," "believe," "continue," "intend," "expect," "future," and terms of similar import (including the negative of any of the foregoing) may be intended to identify forward-looking statements. However, not all forward-looking statements may contain one or more of these identifying terms. Forward-looking statements in this prospectus supplement, the accompanying base prospectus and documents we have filed with the SEC that are incorporated by reference herein and therein the may include, without limitation, statements regarding (i) the plans and objectives of management for future operations, including plans or objectives relating to the development of commercially viable RF filters, (ii) a projection of income (including income/loss), earnings (including earnings/loss) per share, capital expenditures, dividends, capital structure or other financial items, (iii) our future financial performance, including any such statement contained in a discussion and analysis of financial condition by management or in the results of operations included pursuant to the rules and regulations of the SEC, and (iv) the assumptions underlying or relati

The forward-looking statements are not meant to predict or guarantee actual results, performance, events or circumstances and may not be realized because they are based upon our current projections, plans, objectives, beliefs, expectations, estimates and assumptions and are subject to a number of risks and uncertainties and other influences, many of which are beyond our control. Actual results and the timing of certain events and circumstances may differ materially from those described by the forward-looking statements as a result of these risks and uncertainties. Factors that may influence or contribute to the inaccuracy of the forward-looking statements or cause actual results to differ materially from expected or desired results may include, without limitation:

- · our inability to obtain adequate financing to support operations and the continued development and qualification of our products and the technologies underlying them,
- · our limited operating history,
- · our inability to generate significant revenues or achieve profitability,
- · the incurrence of significant capital expenditures in advance of related revenues;
- · our inability to service the debt represented by our convertible notes,
- · risks relating to the results of our R&D activities, including uncertainties relating to semiconductor process manufacturing,
- · the development of our XBAW technology and products presently under development and the anticipated timing of such development,
- · the rate and degree of market acceptance of any of our products,
- · general economic conditions, including upturns and downturns in the industry,
- · our limited number of patents,
- our ability to protect our intellectual property rights that are valuable to our business, including patent and other intellectual property rights,
- · our inability to attract and retain qualified personnel,
- · our inability to successfully manufacture, market and sell products based on our technologies,
- our reliance on third parties to complete certain processes in connection with the manufacture of our products;
- · our inability to scale up our manufacturing processes to commercial scale,
- · our inability to achieve qualification of our products for commercial manufacturing in a timely manner and the size and growth of the potential markets for any products so qualified,
- · product quality and defects,
- existing or increased competition,
- · our ability to market and sell our products,
- · our inability to successfully integrate our New York fabrication facility and related operations into our business,
- · our failure to innovate or adapt to new or emerging technologies,
- · our failure to comply with regulatory requirements,
- · results of any arbitration or litigation that may arise,
- · stock volatility and illiquidity,
- · our failure to implement our business plans or strategies,
- · our failure to remediate the material weakness in our internal control over financial reporting, and
- · our failure to obtain the Trusted Foundry accreditation of our New York fabrication facility.

A description of some of the risks and uncertainties that could cause our actual results to differ materially from those described by the forward-looking statements in this prospectus supplement and accompanying base prospectus appears in the section captioned "Risk Factors" as well as the risk factors described under the section captioned "Risk Factors" contained in our Annual Report on Form 10-K for the fiscal year ended June 30, 2018, as filed with the SEC on August 29, 2018, which are incorporated by reference in this prospectus supplement and accompanying base prospectus. Readers are cautioned not to place undue reliance on forward-looking statements because of the risks and uncertainties related to them and to the risk factors. The forward-looking statements in this prospectus supplement and accompanying base prospectus speak only as of the date hereof and, except as may be required by law, we do not undertake any obligation to update the forward-looking statements contained in this prospectus supplement or accompanying base prospectus to reflect any new information or future events or circumstances or otherwise.

## **USE OF PROCEEDS**

We estimate that our net proceeds from this offering will be approximately \$\\$million, after deducting the underwriting discount and estimated offering expenses payable by us.

The net proceeds of this offering and the common stock offering are expected to be used to fund our operations and the growth of our business, including for capital expenditures, working capital, research and development, the commercialization of our technology and other general corporate purposes.

We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures overall. The amounts and timing of these expenditures will depend on a number of factors, such as the results of our research and development activities, our ability to achieve acceptance of our products in the market and our ability to successfully integrate our Canandaigua, New York manufacturing facility and related operations into our business. As a result, our management will have broad discretion to allocate the net proceeds from this offering.

Pending the uses described above, we intend to invest the net proceeds from this offering in short-term, investment-grade interest-bearing securities such as money market accounts, certificates of deposit, commercial paper, and guaranteed obligations of the U.S. government.

## CONCURRENT COMMON STOCK OFFERING

Concurrently with this offering, we are conducting an underwritten offering, or the common stock offering, of \$ million of our common stock (or up to \$ million of our common stock if the underwriters of that offering exercise their option to purchase additional shares in full). This offering is not conditioned on the closing of the common stock offering and we cannot assure you that the common stock offering will be completed.

We expect that the net proceeds of the common stock offering will be used to fund our operations and the growth of our business, including for capital expenditures, working capital, research and development, the commercialization of our technology and other general corporate purposes.

## **DILUTION**

If you invest in our notes and convert the notes into common stock, you will experience immediate dilution to the extent that the conversion price per share of common stock at the time of conversion is greater than the net tangible book value per share of our common stock at such time. Net tangible book value is determined by subtracting our total liabilities from our total tangible assets, and net tangible book value per share is determined by dividing our net tangible book value by the number of outstanding shares of our common stock.

Our net tangible book value as of June 30, 2018 was approximately \$8.8 million, or approximately \$0.39 per share. After giving effect to (i) the sale of \$10,000,000 principal amount of the notes offered hereby and assuming the conversion of all such principal immediately thereafter at a conversion rate equal to shares of our common stock per \$1,000 principal amount of notes (equivalent to a conversion price of approximately \$ per share of our common stock) and (ii) the sale of \$ million of our common stock in the common stock offering, and after deducting the underwriting discount and estimated offering expenses payable by us, our adjusted net tangible book value as of June 30, 2018 would be \$ million, or \$ per share. This represents an immediate increase in net tangible per share to our existing stockholders and an immediate dilution in net tangible book value of book value of approximately \$ per share to investors participating in this offering that immediately convert their notes into common stock at an initial approximately \$ conversion price of approximately \$ per share of our common stock.

The following table illustrates this calculation on a per share basis:

| Initial conversion price per share of common stock  |            | \$ |
|---|------------|----|
| Net tangible book value per share as of June 30, 2018   | \$<br>0.39 |    |
| Increase per share attributable to investors participating in this offering, assuming the     |            |    |
| immediate conversion of the notes and the closing of the common stock offering                | \$         |    |
| Adjusted net tangible book value per share after giving effect to the immediate conversion of |            |    |
| the notes issued in this offering and the common stock offering                               |            | \$ |
| Dilution per share to investors participating in this offering                                |            | \$ |

The above discussion and table is based on 22,203,437 shares of common stock outstanding as of June 30, 2018, and excludes, as of that date, the following:

- warrants to purchase 748,572 shares of common stock (including warrants currently exercisable to purchase up to 748,572 shares of common stock) having a weighted average exercise price of \$3.93 per share;
- options to purchase 1,338,859 shares of common stock (including options currently exercisable to purchase up to 120,000 shares of common stock) having a weighted average exercise price of \$6.06 per share;
- · unvested restricted stock units for 879,494 shares of common stock;
- 120,550 shares of common stock that may become issuable in the future pursuant to the price-protected anti-dilution provision applicable to 663,000 outstanding shares that were sold in a private placement offering in May 2017;
- 246,809 shares of common stock that may have become issuable pursuant to the price-protected anti-dilution provision applicable to 2,468,094 outstanding shares that were sold in a private placement offering in December 2017;
- · 2,290,077 shares of common stock reserved for issuance upon the conversion of outstanding convertible notes as of June 30, 2018 at a conversion price of \$6.55 per share; and

· shares of common stock that we may issue to holders of our existing convertible senior notes in payment of accrued interest on such notes or in connection with an interest make-whole payment or as a qualifying fundamental change payment pursuant to the terms of such notes.

The above illustration of dilution per share to investors participating in this offering assumes no exercise of outstanding options or warrants to purchase our common stock and does not take into account the possible issuance of shares of our common stock in respect of our Existing Notes. The exercise of such options or warrants, or such issuance of common stock could result in further dilution to investors participating in this offering. In addition, we may choose to raise additional capital depending on market conditions, our capital requirements and strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through our sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

## **DESCRIPTION OF NOTES**

We will issue the notes under a base indenture (the "base indenture") between us and The Bank of New York Mellon Trust Company, N.A., as trustee, as modified by a supplemental indenture (the "supplemental indenture" and, together with the base indenture, the "indenture") establishing the terms of the notes. The following description is a summary of the material provisions of the notes and the indenture and does not purport to be complete. This summary is subject to and is qualified by reference to all of the provisions of the notes and the indenture, including the definitions of certain terms used in the notes and the indenture. We urge you to read these documents because they, and not this description, define your rights as a holder of the notes.

For purposes of this description, references to "we," "our" and "us" refer only to Akoustis Technologies, Inc. and not to its subsidiary, Akoustis, Inc.

#### General

#### The notes will:

- be our unsubordinated indebtedness ranking pari passu with our outstanding unsubordinated liabilities.
- be limited to an aggregate principal amount of \$10.0 million;
- bear cash interest payable from the date of issuance at an annual rate of 6.5% payable on February 28, May 31, August 31 and November 30 of each year, beginning on February 28, 2019;
- mature on November 30, 2023 (the "maturity date"), unless earlier converted or repurchased;
- be subject to repurchase by us for cash at the option of a holder effective on November 30, 2021 (the "put date") and exercisable in the manner described in the indenture at a repurchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest to, and including, the put date as described below under "Holders' Put Right";
- be subject to repurchase by us at the option of a holder following a fundamental change (as defined below under "—
  Fundamental Change Permits Holders to Require Us to Repurchase Notes"), at a repurchase price equal to 100% of the principal amount of the notes to be repurchased, *plus* accrued and unpaid interest to, but excluding, the fundamental change repurchase date;
- be redeemable by us, in whole or in part, at a redemption price equal to 100% of the principal amount of the notes to be redeemed, *plus* accrued and unpaid interest to, but excluding the redemption date, as described below under "—Optional Redemption", *plus* an interest make-whole payment, as described below under "—Optional Redemption—Interest Make-Whole Payment":
  - o on or after November 30, 2019, if the closing sale price per share of our common stock is greater than 175% of the theneffective conversion price for each of 20 days of any 30 consecutive trading day period immediately preceding our optional redemption notice;
  - o on or after November 30, 2020, if the closing sale price per share of our common stock is greater than 150% of the theneffective conversion price for each of 20 days of any 30 consecutive trading day period immediately preceding our optional redemption notice; and
  - o on or after November 30, 2021, if the closing sale price per share of our common stock is greater than 125% of the theneffective conversion price for each of 20 days of any 30 consecutive trading day period immediately preceding our optional redemption notice;
- · include a limitation on our ability and the ability of our subsidiaries to incur additional indebtedness, other than permitted debt (as defined below under "—Limitation on Incurrence of Additional Indebtedness");
- · include a limitation on our ability and the ability of our subsidiaries to make certain payments, including the repurchase of our securities and the payment of dividends as described below under "—Limitation on Certain Payments;"
- · include a limitation on our ability to restrict our subsidiaries from making dividend and other payments as described below under "—Limitation on Dividend and Other Payment Restrictions;"
- · include a limitation on our ability and the ability of our subsidiaries to sell assets as described below under "—Limitation on Asset Sales:"
- · include a limitation on our ability and the ability of our subsidiaries to engage in certain transactions with our affiliates as described under "—Limitation on Transactions with Affiliates;"

- · include a limitation on liens, other than permitted liens as described under "—Limitation on Liens;"
- · require us and our subsidiaries to maintain our properties and insurance to the extent described under "—Maintenance of Properties and Insurance:"
- · include a limitation on the issuance or sale of our subsidiaries' capital stock as described under "—Issuance or Sale of Subsidiary Stock;"
- · include a limitation on the businesses in which we and our subsidiaries engage other than permitted businesses and require us and our subsidiaries to keep our existence, licenses and franchises to the extent described under "—Line of Business; Corporate Existence:"
- be issued in denominations of \$1,000 and integral multiples of \$1,000; and
- be represented by one or more registered notes in global form, but in certain limited circumstances may be represented by notes in definitive form. See "Book-Entry, Settlement and Clearance."

The notes may be converted at an initial conversion rate of into shares of common stock per \$1,000 principal amount of notes (equivalent to an initial conversion price of approximately \$ per share of common stock). The conversion rate is subject to adjustment is certain events occur as described under "Conversion Rights—Conversion Rate Adjustments."

Upon conversion of a note, we will deliver shares of our common stock, together with a cash payment in lieu of delivering any fractional share, as described under "—Conversion Rights—Settlement upon Conversion". You will not receive any separate cash payment for interest, if any, accrued and unpaid to the conversion date except under the limited circumstances described below under "—Conversion Rights—General."

The indenture will limit the amount of debt that may be issued or incurred by us or our subsidiaries under the indenture or otherwise, except as specifically set forth herein under "—Limitation on Incurrence of Additional Indebtedness." The indenture also will restrict us from making certain payments, including the repurchase of our securities and the payment of dividends, as described under "—Limitation on Certain Payments." The indenture will not contain any financial covenants. Other than the restrictions described under "—Limitation on Incurrence of Additional Indebtedness," "—Limitation on Certain Payments," "—Limitation on Dividend and Other Payment Restrictions," "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" and "—Consolidation, Merger and Sale of Assets" below and except for the provisions set forth under "—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," the indenture will not contain any covenants or other provisions designed to afford holders of the notes protection in the event of a highly leveraged transaction involving us or in the event of a decline in our credit rating as the result of a takeover, recapitalization, highly leveraged transaction or similar restructuring involving us that could adversely affect such holders.

We do not intend to list the notes on any securities exchange or any automated dealer quotation system.

Except to the extent the context otherwise requires, we use the term "notes" in this offering memorandum to refer to each \$1,000 principal amount of notes. We use the term "common stock" in this offering memorandum to refer to our common stock, par value \$0.001 per share. References in this offering memorandum to a "holder" or "holders" of notes that are held through The Depository Trust Company ("DTC") are references to owners of beneficial interests in such notes, unless the context otherwise requires. However, we and the trustee will treat the person in whose name the notes are registered (Cede & Co., in the case of notes held through DTC) as the owner of such notes for all purposes. References herein to the "close of business" refer to 5:00 p.m., New York City time, and to the "open of business" refer to 9:00 a.m., New York City time.

## **Purchase and Cancellation**

We will cause all notes surrendered for payment, repurchase (but excluding notes repurchased pursuant to cash-settled swaps or other derivatives), including as described immediately below and in "—Fundamental Change Permits Holders to Require Us to Repurchase Notes," registration of transfer or exchange or conversion, if surrendered to any person that we control other than the trustee, to be delivered to the trustee for cancellation and they will no longer be considered "outstanding" under the indenture upon their payment, repurchase, registration of transfer or exchange or conversion. All notes delivered to the trustee shall be cancelled promptly by the trustee. Except for notes surrendered for registration of transfer or exchange, no notes shall be authenticated in exchange for any notes cancelled as provided in the indenture.

We may, to the extent permitted by law, and directly or indirectly (regardless of whether such notes are surrendered to us), repurchase notes in the open market or otherwise, whether by us or our subsidiaries or through a privately negotiated transaction or public tender or exchange offer or through counterparties to private agreements, including by cash-settled swaps or other derivatives, in each case, without prior notice to the holders of the notes.

## Payments on the Notes; Paying Agent and Registrar; Transfer and Exchange

We will pay or cause the paying agent to pay the principal of, and interest on, notes in global form registered in the name of or held by DTC or its nominee by wire transfer in immediately available funds to DTC or its nominee, as the case may be, as the registered holder of such global note.

We will pay or cause the paying agent to pay the principal of any certificated notes at the office or agency designated by us for that purpose. We have initially designated the trustee as our paying agent and registrar and its office described under "—Maintenance of Office or Agency" below as a place where notes may be presented for payment or for registration of transfer. We may, however, change the paying agent or registrar without giving prior notice to the holders of the notes, and we may act as paying agent or registrar. Interest on certificated notes will be payable (i) to holders holding certificated notes having an aggregate principal amount of \$2,000,000 or less, by check mailed to the holders of these notes and (ii) to holders holding certificated notes having an aggregate principal amount of more than \$2,000,000, either by check mailed to each such holder or, upon written application by such a holder to the registrar not later than the relevant regular record date, by wire transfer in immediately available funds to that holder's account within the United States if such holder has provided us, the trustee or the paying agent with the requisite information necessary to make such wire transfer, which application shall remain in effect until the holder notifies, in writing, the registrar to the contrary.

A holder of notes may transfer or exchange notes at the office of the registrar in accordance with the indenture. The registrar and the trustee may require a holder, among other things, to furnish appropriate endorsements and transfer documents. No service charge will be imposed by us, the trustee or the registrar for any registration of transfer or exchange of notes, but we may require a holder to pay a sum sufficient to cover any transfer tax or other similar governmental charge required by law or permitted by the indenture. We are not required to transfer or exchange any note surrendered for conversion or required repurchase. A holder of a beneficial interest in a note in global form may transfer or exchange such beneficial interest in accordance with the indenture and the applicable procedures of DTC. See "—Book-Entry, Settlement and Clearance."

The registered holder of a note will be treated as its owner for all purposes.

## Interest

The notes will bear interest at a rate of 6.5% per year until maturity. Interest on the notes will accrue from the date of issuance or from the most recent date on which interest has been paid or duly provided for. Interest will be payable in cash quarterly in arrears on February 28, May 31, August 31 and November 30 of each year, beginning on February 28, 2019.

Interest will be paid to the person in whose name a note is registered at the close of business on February 15, May 15, August 15 or November 15 (whether or not a business day), as the case may be, immediately preceding the relevant interest payment date (each, a "regular record date"). Interest on the notes will be computed on the basis of a 360-day year composed of 12 30-day months and, for partial months, on the basis of the number of days actually elapsed in a 30-day month.

If any interest payment date, the maturity date, the put date or any earlier required repurchase date upon a fundamental change of a note falls on a day that is not a business day, the required payment will be made on the next succeeding business day with the same force and effect as if made on such scheduled payment date, and no interest on such payment will accrue in respect of the delay. The term "business day" means, with respect to any note, any day other than a Saturday, a Sunday or a day on which the Federal Reserve Bank of New York is authorized or required by law or executive order to close or be closed or a day when the corporate trust office of the trustee or the depository is closed.

Unless the context otherwise requires, all references to interest in this offering memorandum include special interest, if any, payable as the sole remedy during certain periods for an event of default relating to the failure to comply with our reporting obligations as described under "—Events of Default."

## **Holders' Put Right**

The holders of the notes will have a one-time right, exercisable prior to November 30, 2021 (the "put date") in the manner described in the indenture, to require us to repurchase for cash all (but not less than all) of their notes on the put date at a purchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest to, and including, the put date.

We will notify all holders of the notes, the trustee, the conversion agent (if other than the trustee) and paying agent (if other than the trustee), not more than 60 days and not less than 20 business days prior to the put date, of the holders' right to require us to repurchase their notes, the repurchase price, the last date on which a holder may exercise the repurchase right, the name and address of the paying agent, and the repurchase procedures that holders must follow to require us to repurchase their notes.

We may not have sufficient future cash flow from operations to make any required repurchase in cash or the ability to arrange additional financing, if necessary, on acceptable terms. See "Risk Factors—We face several risks regarding holders' potential rights to require us to repurchase the notes on the put date or upon a fundamental change." If we fail to repurchase the notes when required following the exercise of the holders' put right, we will be in default under the indenture.

## Ranking

The notes will constitute our senior general unsecured obligation, ranking equally in right of payment with all of our existing and future senior unsecured indebtedness and ranking senior in right of payment to any of our future indebtedness that is expressly made subordinate to the notes by the terms of such indebtedness.

## **Limitation on Incurrence of Additional Indebtedness**

We will not and will not permit any of our subsidiaries to, directly or indirectly, create, incur, issue, assume, guarantee or otherwise become directly or indirectly liable, contingently or otherwise, with respect to any indebtedness (including acquired debt which, for the purposes of the indenture, will mean indebtedness of any other entity existing at the time the other entity is merged with or into or became a subsidiary of the specified entity and the indebtedness secured by a lien encumbering any real property or fixed assets acquired by the specified entity). Additionally, although we may issue shares of preferred stock, we will not issue any disqualified stock and will not permit any of our subsidiaries to issue any shares of preferred stock. However, the following indebtedness will be permitted (the "permitted debt"):

- the incurrence by us and our subsidiaries of existing indebtedness, including our Existing Notes;
- · the incurrence by us of indebtedness represented by notes issued on the date of the indenture;
- the incurrence by us or any of our subsidiaries of (x) indebtedness represented by capital lease obligations or purchase money obligations, in each case incurred for the purpose of financing the purchase price or cost of equipment used in our and our subsidiaries' production lines and (y) additional indebtedness represented by capital lease obligations, mortgage financings or purchase money obligations, in each case, incurred for the purpose of financing all or any part of the purchase price or cost of design, construction, installation or improvement of property, plant or equipment used in our or our subsidiaries permitted businesses (other than as described in clause (x)), in an aggregate principal amount, not to exceed \$1.0 million in the aggregate outstanding at any time outstanding;
- the incurrence by us or any of our subsidiaries of permitted refinancing indebtedness in exchange for, or the net proceeds of which are used to renew, refund, refinance, replace, defease or discharge certain indebtedness permitted by the indenture;
- the incurrence by us or any of our subsidiaries of indebtedness not to exceed in the aggregate at any time outstanding \$5.0 million; provided, however, that the indebtedness is expressly subordinated to the prior payment in full in cash of all obligations with respect to this indenture and the notes and matures no less than 181 days following the maturity of the notes;
- the incurrence by us or any of our subsidiaries of hedging obligations in the ordinary course of business (other than for speculative purposes);
- the incurrence by us or any of our subsidiaries of indebtedness in respect of workers' compensation claims, self-insurance obligations, bankers' acceptances, performance and surety bonds in the ordinary course of business;
- the incurrence by us or any of our subsidiaries of unsecured indebtedness not to exceed in the aggregate at any time outstanding \$1.0 million;
- · guarantees by us or our subsidiaries of indebtedness otherwise permitted under the indenture;
- the incurrence of indebtedness by us or our subsidiaries arising from agreements providing for indemnification, contribution, earnout, adjustment of purchase price or similar obligations, in each case, incurred or assumed in connection with the acquisition or disposition of any business, assets or capital stock of a subsidiary otherwise permitted under the indenture;
- the incurrence of intercompany indebtedness among us and our subsidiaries; and
- the incurrence by us or any of our subsidiaries of indebtedness arising from the honoring by a bank or other financial institution of a check, draft or similar instrument inadvertently drawn against insufficient funds, so long as such indebtedness is covered within five business days.

We will not incur any indebtedness (including permitted debt) that is contractually subordinated in right of payment to any of our other indebtedness unless such indebtedness is also contractually subordinated in right of payment to the notes on substantially identical terms. However, no indebtedness will be deemed to be contractually subordinated in right of payment to any of our other indebtedness solely by virtue of being unsecured or by virtue of being secured on a first or junior lien basis.

For purposes of determining compliance with the provisions regarding permitted debt, if an item of proposed indebtedness meets the criteria of multiple permitted debt categories, we will be permitted to classify the indebtedness on the date of its incurrence, or later reclassify all or a portion of such item of indebtedness, in any manner that complies with this covenant.

The accrual of interest, the accretion or amortization of original issue discount, the payment of interest on any indebtedness in the form of additional indebtedness with the same terms, the reclassification of preferred stock as indebtedness due to a change in accounting principles and the payment of dividends on disqualified stock in the form of additional shares of the same class of disqualified stock will not be deemed to be an incurrence of indebtedness or an issuance of disqualified stock.

The amount of any indebtedness outstanding as of any date will be the accreted value of the indebtedness, in the case of any indebtedness issued with original issue discount; the principal amount of the indebtedness, in the case of any other indebtedness; and in respect of indebtedness of another individual or entity secured by a lien on the assets of the specified individual or entity, the lesser of the fair market value of such assets at the date of determination, as determined in good faith by the board of directors (or other governing body) of the specified individual or entity and the amount of the indebtedness of the other individual or entity.

#### **Limitation on Liens**

We will not, and will not permit any of our subsidiaries, directly or indirectly, to enter into, create, incur, assume or suffer to exist any liens of any kind, on or with respect to our and our subsidiaries' assets except permitted liens.

## **Limitation on Certain Payments**

We will not and will not permit any of our subsidiaries to, directly or indirectly:

- declare or pay any dividend or make any other payment or distribution on account of its equity interests (as defined below), including any payment in connection with any merger or consolidation involving us or any of our subsidiaries, or to the direct or indirect holders of its equity interests in their capacity as such, other than dividends or distributions payable in our or our subsidiaries' equity interests other than disqualified stock (as defined below), to us or any of our subsidiaries, or, in the case of dividends or distributions payable by any of our subsidiaries, pro rata to the holders of that subsidiary's equity interests;
- purchase, redeem or otherwise acquire or retire for value (including without limitation, in connection with any merger or consolidation involving us) any of our equity interests;
- · make any payment on or with respect to, or purchase, redeem, defease or otherwise acquire or retire for value any indebtedness of us or any of our subsidiaries that are contractually subordinated to the notes (excluding any intercompany indebtedness between or among us and any of our subsidiaries), except regularly scheduled payments of interest and a payment of principal at the maturity date; or
- · make any restricted investment (as defined below).

All of the payments and other actions set forth above are collectively referred to as "restricted payments." Notwithstanding the foregoing, restricted payments shall be permitted if at the time of and after giving effect to such restricted payment:

- on o default or event of default has occurred and is continuing or would occur as a consequence of such restricted payment; and
- the restricted payment, together with the aggregate amount of all other restricted payments made by us and our subsidiaries since the date of the indenture (excluding certain permitted restricted payments described below), is less than the sum, without duplication, of:
  - o 50% of our consolidated net income (as defined below) for the period, taken as one accounting period, from the beginning of the first fiscal quarter commencing after the date of the indenture to the end of our most recently ended fiscal quarter for which internal financial statements are available at the time of the restricted payment (or, if such consolidated net income for such period is a deficit, less 100% of such deficit);
  - o 100% of the aggregate net cash proceeds received by us from and after the date of the indenture as a contribution to our common equity capital or from the issue or sale of our equity interests other than disqualified stock or from the issue or sale of convertible or exchangeable disqualified stock or our convertible or exchangeable debt securities that have been converted into or exchanged for such equity interests, other than equity interests or disqualified stock or debt securities sold to one of our subsidiaries; and

o to the extent that any restricted investment that was made after the date of the indenture is sold for cash or otherwise liquidated or repaid for cash, the lesser of (i) the cash return of capital with respect to such restricted investment (less the cost of disposition, if any) and (ii) the initial amount of such restricted investment.

For purposes of the indenture, "consolidated net income" means, with respect to any specified individual or entity for any period, the aggregate of the net income of the person and its subsidiaries for the period, on a consolidated basis, determined in accordance with GAAP; provided that:

- the net income (but not loss) of any person that is not a subsidiary or that is accounted for by the equity method of accounting will be included only to the extent of the amount of dividends or similar distributions paid in cash to the specified individual or entity or a subsidiary of the individual or entity;
- the net income of any subsidiary will be excluded to the extent that the declaration or payment of dividends or similar distributions by that subsidiary of that net income is not at the date of determination permitted without any prior governmental approval (that has not been obtained) or, directly or indirectly, by operation of the terms of its charter or any agreement, instrument, judgment, decree, order, statute, rule or governmental regulation applicable to that subsidiary or its securityholders;
- the cumulative effect of a change in accounting principles will be excluded; and
- the net income of any person acquired during the specified period for any period prior to the date of acquisition will be excluded.

As long as no event of default has occurred and is continuing or would occur as a result of the payment, the provisions described above will not prohibit:

- the payment of any dividend or the consummation of any irrevocable redemption within 60 days after the date of declaration of the dividend or giving of the redemption notice, as the case may be, if at the date of declaration or notice, the dividend or redemption payment would have complied with the provisions of the indenture;
- the making of any restricted payment (other than certain restricted payments involving making payment to purchase, redeem, defease or otherwise acquire or retire for value certain indebtedness or securities) in exchange for, or out of the net cash proceeds of the substantially concurrent sale (other than to one of our subsidiaries) of, our equity interests (other than disqualified stock) or from the substantially concurrent contribution of common equity capital to us;
- the redemption, repurchase, defeasance or other acquisition or retirement for value of indebtedness of us or one of our subsidiaries that is contractually subordinated or subordinated with respect to security interests to the notes with the net cash proceeds from a substantially concurrent incurrence of certain permitted refinancing indebtedness;
- the repurchase, redemption or other acquisition or retirement for value of any equity interests of us or any of our subsidiaries held by any of our or any of our subsidiaries' current or former officer, director, employee or contractor in order to pay or satisfy the officer's, director's, employee's or contractor's aggregate exercise price or withholding tax payment obligations or otherwise upon death, disability, retirement or termination of employment or engagement, pursuant to awards granted under our equity incentive, stock option, restricted stock or other long-term equity compensation plans; provided that the aggregate price paid for all such repurchased, redeemed, acquired or retired equity interests may not exceed \$500,000 in the aggregate in any calendar year, provided, that any unused amounts in any calendar year may be carried forward to one or more future periods;
- the repurchase of our equity interests deemed to occur upon the exercise of stock options, warrants or other convertible or exchangeable securities to the extent the equity interests represent a portion of the exercise price of the stock options, warrants or other convertible or exchangeable securities; and
- · restricted investments by us and our subsidiaries not otherwise permitted under the indenture, in an aggregate amount not to exceed \$2 million at any time outstanding.

For purposes of the indenture, "restricted investments" means, with respect to any individual or entity, all direct or indirect investments by such individual or entity in other individuals or entities (including affiliates) in the forms of loans (including guarantees or other obligations), advances or capital contributions (excluding commission, travel and similar advances to officers and employees made in the ordinary course of business), purchases or other acquisitions for consideration of indebtedness, equity interests or other securities, together with all items that are or would be classified as investments on a balance sheet prepared in accordance with GAAP. However, restricted investments will not include any "permitted investments," which under the indenture will mean the following:

- · any investment by us in ourselves or our subsidiaries;
- any investment in cash equivalents:
- any investment by us or a subsidiary in an individual or entity, if as a result of such investment such individual or entity becomes our subsidiary or such individual or entity is merged, consolidated or amalgamated with or into, or transfers or conveys substantially all of its assets to, or is liquidated into, us or a subsidiary;
- any investment made as a result of the receipt of non-cash consideration from an asset sale that was made pursuant to and in compliance with the terms of the indenture;
- any acquisition of assets or capital stock solely in exchange for the issuance of our equity interests (other than disqualified stock);
- · any investments received in compromise or resolution of litigation, arbitration or other disputes;
- · investments represented by hedging obligations; and
- · repurchases of the notes in accordance with the terms of the indenture.

The amount of all restricted payments (other than cash) will be the fair market value on the date of the restricted payment of the assets or securities to be transferred or issued by us or our subsidiaries. The fair market value of any non-cash restricted payment will be determined by the Board of Directors and their resolution with respect to the restricted payment will be delivered to the trustee in an officer's certificate.

For purposes of the indenture, "equity interests" means capital stock and all warrants, options or other rights to acquire capital stock (but excluding any debt security that is convertible into, or exchangeable for, capital stock).

For purposes of the indenture, "disqualified stock" means any capital stock that, by its terms (or by the terms of any security into which it is convertible or for which it is exchangeable, in each case, at the option of the holder of the capital stock), or upon the happening of any event, matures or is mandatorily redeemable, pursuant to a sinking fund obligation or otherwise, or redeemable at the option of the holder thereof, in whole or in part, on or prior to the date that is 91 days after the date on which the notes mature. Any capital stock that would constitute disqualified stock solely because the holders of the capital stock have the right to require us to repurchase the capital stock upon the occurrence of a fundamental change or an asset sale will not constitute disqualified stock if the terms of the capital stock provide that we may not repurchase or redeem any of the capital stock pursuant to those provisions unless the repurchase or redemption complies with the indenture. The amount of disqualified stock deemed to be outstanding at any time for purposes hereof shall be the maximum amount that we and our subsidiaries may become obligated to pay upon the maturity of, or pursuant to any mandatory redemption provisions of, such disqualified stock, exclusive of accrued dividends.

## **Limitation on Dividend and Other Payment Restrictions**

We will not and we will not permit our subsidiaries to, directly or indirectly, create or otherwise permit, cause or suffer to exist or become effective any consensual encumbrance or restriction on the ability of any subsidiary to pay dividends or to make any other distributions on its capital stock us or any of our subsidiaries or with respect to any other interest or participation in, or measured by, its profits or pay any indebtedness owed to us or any of our subsidiaries; make loans or advances to us or any of our subsidiaries; or sell, lease or transfer any of its properties or assets to us or any of our subsidiaries. However, the indenture permits such encumbrances or restrictions existing under or by reason of:

- the indenture and the notes;
- · agreements governing existing indebtedness and credit facilities as in effect on the date of the indenture and any amendments, restatements, modifications, renewals, supplements, refundings, replacements or refinancings of those agreements; provided that the amendments, restatements, modifications, renewals, supplements, refundings, replacements or refinancings are not materially more restrictive with respect to such dividend and other payment restrictions than the agreements existing on the date of the indenture;
- any instrument governing indebtedness or capital stock of a person acquired by us or any of our subsidiaries as in effect at the time of such acquisition (except to the extent the indebtedness or capital stock was incurred in connection with or in contemplation of such acquisition), which encumbrance or restriction is not applicable to any entity, or the properties or assets of any entity, other than the entity, or the property or assets of the entity, so acquired; provided that, in the case of indebtedness, the indebtedness was permitted by the terms of the indenture;
- certain purchase money obligations for property acquired in the ordinary course of business and capital lease obligations that impose restrictions on the property purchased or leased;

- · certain permitted refinancing indebtedness; provided that the restrictions contained in the agreements governing such permitted refinancing indebtedness are not materially more restrictive, taken as a whole, than those in the agreements governing the indebtedness being refinanced;
- · applicable law, rule, regulation or order;
- · customary non-assignment provisions in contracts and licenses entered into in the ordinary course of business;
- any agreement for the sale or other disposition of a subsidiary that restricts distributions by that subsidiary pending the sale or other disposition;
- · certain liens permitted to be incurred under the indenture provisions that limit the right of the debtor to dispose of the assets subject to such liens:
- provisions limiting the disposition or distribution of assets or property in joint venture agreements, asset sale agreements, sale-leaseback agreements, stock sale agreements and other similar agreements entered into with the approval of the our Board of Directors, which limitation is applicable only to the assets that are the subject of such agreements; and
- restrictions on cash or other deposits or net worth imposed by customers under contracts entered into in the ordinary course of business.

#### **Limitation on Asset Sales**

We will not and will not permit any of our subsidiaries to sell, lease, convey or otherwise dispose of any assets or rights other than the sale, lease, conveyance or other disposition of all or substantially all of the assets of us and our subsidiaries taken as a whole or to issue equity interests in any of the subsidiaries or sell equity interests in any of its subsidiaries (each of the foregoing, but expressly excluding any condemnation or other government taking, an "asset sale"). However, certain asset sales will be permitted (each a "permitted asset sale") as set forth below. It will be a permitted asset sale if we or our subsidiary, as the case may be, receives consideration at the time of the asset sale at least equal to the fair market value of the assets or equity interests issued or sold or otherwise disposed of; and at least 75% of the consideration received is in cash; provided, however, that the amounts of the following will be deemed to be cash for purposes of this provision: (i) any liabilities shown on our most recent consolidated balance sheet or in the notes thereto, for us or any of our subsidiaries (other than contingent liabilities or liabilities that are by their terms subordinated in right of payment or as to security interests to the notes) that are assumed by the transferee of any such assets pursuant to a customary novation agreement that releases us or our subsidiary from further liability, (ii) any securities, notes or other obligations received by us or any of our subsidiaries from such transferee that are contemporaneously, subject to ordinary settlement periods, converted by us or the subsidiary into cash (to the extent of the cash received in that conversion) and (iii) any stock or assets received by us or any subsidiary used to acquire all or substantially all of the assets of, or any capital stock of, another permitted business if, after giving effect to any such acquisition of capital stock, the permitted business is or becomes our subsidiary and a guarantor or other assets that are not classified as current assets under GAAP and that are used or useful in a permitted business.

Additionally, the following transactions will be considered permitted asset sales: any single or series of related transactions that involves assets having an aggregate fair market value less than \$1.0 million; the transfer, sale or lease of products, services or accounts receivable by us or any subsidiary in the ordinary course of business and any sale or other disposition of damaged, worn-out, replaced, retired or obsolete assets by us or any subsidiary in the ordinary course of business; the sale or other disposition by us or any subsidiary of cash or cash equivalents; a transfer of assets by us to a subsidiary or by a subsidiary to us or another subsidiary; an issuance of equity interests by a subsidiary to us or to another of our subsidiaries; and any restricted payment, permitted investment or permitted lien that is permitted under the indenture; leases or subleases in the ordinary course of business to third persons not interfering in any material respect with our business and otherwise not prohibited by the indenture; dispositions of accounts receivable in connection with the collection or compromise thereof in the ordinary course of business; licensing of intellectual property in accordance with industry practice in the ordinary course of business.

We or our subsidiaries may apply the net cash proceeds from the permitted asset sale for the following purposes: to repay indebtedness and other obligations under a credit facility, and if the indebtedness repaid is revolving credit indebtedness, to correspondingly reduce facility commitments; to repay indebtedness and correspondingly permanently reduce commitments with respect thereto; to acquire all or substantially all of the assets of, or any capital stock of, another permitted business if, after giving effect to any such acquisition of capital stock, the permitted business is or becomes a subsidiary and a guarantor; to make capital expenditures in a permitted business of a subsidiary; or to acquire other assets that are not classified as current assets under GAAP and that are used or useful in a permitted business of us or a subsidiary.

Pending the application of any net cash proceeds from an asset sale, we may temporarily invest such net proceeds in cash or cash equivalents.

#### **Limitation on Transactions with Affiliates**

We will not and will not permit any of our subsidiaries to, make any payment to, or sell, lease, transfer or otherwise dispose of any of its properties or assets to, or purchase any property or assets from, or enter into or make or amend any contract, agreement, understanding, loan, advance, transaction or guarantee with, or for the benefit of, any of our affiliates (each of the foregoing, an "affiliate transaction"), unless the affiliate transaction is on terms that are not materially less favorable to us or our subsidiary than those that could reasonably have been obtained in a comparable transaction by us or our subsidiary with an unrelated individual or entity and we deliver to the trustee with respect to any affiliate transaction or series of related affiliate transactions involving aggregate consideration in excess of \$1.0 million, a resolution of the Board of Directors set forth in an officers' certificate certifying that such affiliate transaction complies with the above requirements and that such affiliate transaction has been approved by a majority of the disinterested members of our Board of Directors; with respect to any affiliate transaction or series of related affiliate transactions involving aggregate consideration in excess of \$1.0 million; provided, however, that we will not be required to comply with requirements in certain circumstances set forth below.

The following circumstances are excluded from the application of the preceding paragraph: any employment agreement, employee benefit plan, officer or director indemnification agreement or any similar arrangement entered into by us or any of our subsidiaries in the ordinary course of business and payments made pursuant thereto; transactions between or among us and/or our subsidiaries; restricted payments other than permitted investments that do not violate certain provisions of the indenture; transactions with an individual or entity that is our affiliate solely because we own, directly or through a subsidiary, an equity interest in, or controls, such individual or entity; payment of reasonable directors' fees to an individual who is not otherwise our affiliate; loans or advances to employees for expenses incurred or to be incurred in connection with the permitted business and such employee's employment in the ordinary course of business not to exceed \$250,000 in the aggregate at any time outstanding, in each case. As used in the indenture, "permitted business" means any business similar in nature to any business conducted by us or our subsidiaries on the date of the indenture and any business reasonably ancillary, incidental, complementary or related thereto or a reasonable extension, development or expansion thereof, in each case, as determined in good faith by our Board of Directors.

## **Optional Redemption**

We may not redeem the notes before November 30, 2019. At any time on or after November 30, 2019, we may redeem the notes, in whole or in part, at 100% of the principal amount plus accrued and unpaid interest on such principal, if any, up to the redemption date, as follows:

- on or after November 30, 2019, if the closing sale price per share of our common stock is greater than 175% of the theneffective conversion price for each of 20 days of any 30 consecutive trading day period immediately preceding our optional redemption notice:
- on or after November 30, 2020, if the closing sale price per share of our common stock is greater than 150% of the theneffective conversion price for each of 20 days of any 30 consecutive trading day period immediately preceding our optional redemption notice; and
- on or after November 30, 2021, if the closing sale price per share of our common stock is greater than 125% of the theneffective conversion price for each of 20 days of any 30 consecutive trading day period immediately preceding our optional redemption notice.

## Interest Make-Whole Payment

If we redeem notes as described above, we will make an interest make-whole payment to the holders of the notes redeemed equal to the sum of the remaining scheduled payments of interest that would have been made on the notes to be redeemed had such notes remained outstanding from the conversion date through, and including, the maturity date (the "interest make-whole payment").

If a redemption date occurs after the close of business on a regular record date but prior to the open of business on the interest payment date corresponding to such regular record date, the interest make-whole payment will not include the accrued interest to any holder of notes called for redemption and instead we will pay the full amount of the relevant interest payment on such interest payment date to the holder of record on such regular record date. In such case, the interest make-whole payment to such holders will equal the value of all remaining interest payments, starting with the next interest payment date for which interest has not been provided for through the maturity date.

We will pay any such interest make-whole payment in cash; *provided, however*, that, so long as the Make-Whole VWAP Price (as defined below) is not less than \$ per share (as appropriately adjusted for any stock split, reverse stock split, stock dividend or other reclassification or combination of our common stock occurring after the date of issuance of the notes offered hereby), we will have the option to pay such interest make-whole payment by delivering to the holder a number of freely tradable shares of our common stock equal to the amount of the interest make-whole payment to be paid in common stock to such holder, divided by the product of (x) 95% and (y) the simple average of the daily VWAP (as defined below) of the shares for the ten consecutive trading days ending on and including the trading day immediately preceding the conversion date (such product, the "Make-Whole VWAP Price").

The "daily VWAP" means, for each of the ten consecutive trading days for the calculation of the interest make-whole payment, the per share volume-weighted average price as displayed under the heading "Bloomberg VWAP" on Bloomberg page "AKTS <equity> AQR" (or its equivalent successor if such page is not available) in respect of the period from the scheduled open of trading until the scheduled close of trading of the primary trading session on such trading day (or if such volume-weighted average price is unavailable, the market value of one share of our common stock on such trading day determined, using a volume-weighted average method, by a nationally recognized independent investment banking firm retained for this purpose by us). The "daily VWAP" will be determined without regard to after-hours trading or any other trading outside of the regular trading session trading hours.

For the purposes of determining the number of shares deliverable in respect of the interest make-whole payment only, "trading day" means a scheduled trading day on which (i) there is no "market disruption event" (as defined below) and (ii) trading in our common stock generally occurs on the relevant stock exchange on which our common stock is then listed or, if our common stock is not then listed on a U.S. national or regional securities exchange, on the principal other market on which our common stock is then listed or admitted for trading. If our common stock is not so listed or admitted for trading, "trading day" means a "business day." "Relevant stock exchange" means the NASDAQ Capital Market or, if our common stock is not then listed on the NASDAQ Capital Market, the principal other U.S. national or regional securities exchange or market on which our common stock is listed or admitted for trading.

"Scheduled trading day" means a day that is scheduled to be a trading day on the relevant stock exchange. If our common stock is not listed or admitted for trading on any U.S. national or regional securities exchange, "scheduled trading day" means a "business day."

"Market disruption event" means (i) a failure by the relevant stock exchange to open for trading during its regular trading session or (ii) the occurrence or existence prior to 1:00 p.m., New York City time, on any scheduled trading day for our common stock for more than one half-hour period in the aggregate during regular trading hours of any suspension or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the relevant stock exchange or otherwise) in our common stock or in any options contracts or futures contracts relating to our common stock.

## Notices to Trustee and Notice of Redemption

If we elect to exercise our optional redemption right, we will notify the trustee in writing of the optional redemption date, the principal amount of the notes to be redeemed and the amount of the interest make-whole payment and will deliver an officers' certificate stating that all conditions precedent for the redemption have been satisfied and the redemption will comply with the provisions of the indenture.

We will give such notice to each of the trustee and the registrar at least 5 days prior to the date that any optional redemption notice is to be sent to holders unless the trustee consents to a shorter period.

At least 30 days but not more than 60 days before an optional redemption date, we will deliver a notice of redemption (an "optional redemption notice") to each holder of the notes that we intend to redeem at the holder's registered address. We will also deliver a copy of the optional redemption notice to the trustee prior to delivery to the holders of the notes. At our request, the trustee will give the optional redemption notice in our name and at our expense and, in that case, we will provide the trustee with the information required to be in that notice.

The optional redemption notice will identify the notes to be redeemed and will state:

- each date when we elect to redeem the notes in whole or in part (the "optional redemption date");
- · the optional redemption price;
- the conversion price;
- $\cdot$   $\;$  the amount, form and procedures for payment of the interest make-whole payment;
- the name and address of the paying agent where the notes are to be surrendered;
- that notes called for redemption may be converted at any time before the close of business on the business day immediately preceding the optional redemption date;
- that notes called for redemption must be surrendered to the paying agent to collect the optional redemption price and the interest make-whole payment;
- · if fewer than all the outstanding notes are to be redeemed, the identification and principal amounts of the particular notes to be redeemed;

- that, unless we default in making a redemption payment or an interest make-whole payment, the interest on the notes or the portion thereof called for redemption will cease to accrue on and after the optional redemption date; and
- the CUSIP number or ISIN number, if any, printed on the notes being redeemed.

## Effect of Notice of Redemption

Once an optional redemption notice is delivered to the holders, the notes or portions thereof called for redemption will become irrevocably due and payable on the optional redemption date and at the optional redemption price stated in the optional redemption notice including the interest make-whole payment stated therein. The optional redemption notice may not be conditional and will be irrevocable. Upon surrender to the paying agent, the notes will be paid at the optional redemption price stated in the optional redemption notice together with the interest make-whole payment specified therein. Even if the notes are surrendered, if the optional redemption date is on or after a regular record date and on or prior to the interest payment date, the accrued and unpaid interest will be payable to the holder of the redeemed notes registered on the relevant record date. Failure to give notice or the existence of any defect in the notice to any holder will not affect the validity of the notice to any other holder.

## Deposit of Redemption Price and Interest Make-Whole Payment

We will deposit with the paying agent money sufficient to pay the redemption price and any cash interest make-whole payment on all notes to be redeemed on the applicable redemption date other than notes or portions of the notes called for redemption that are owned by us or one of our subsidiaries and have been delivered by us or one of our subsidiaries to the trustee for cancellation no later than 11:00 a.m., New York City time on the business day prior to the date on which any redemption price on any note is due and payable. If we or our subsidiary is the paying agent, we will segregate the money to pay the redemption price and any cash interest make-whole payment and hold it in trust. If we comply with the foregoing requirements, then on and after the applicable redemption date, interest will cease to accrue on the notes or portions of the note called for redemption.

## Notes Redeemed in Part

Upon cancellation of a note that is redeemed in part, at our expense, we will issue and the trustee will authenticate for the holder a new note equal in principal amount to the unredeemed portion of the note surrendered. The trustee will notify the registrar of the issuance of such new note.

If less than all of the outstanding notes are to be redeemed, notes shall be selected, with respect to global notes, in accordance with DTC's applicable policies and procedures and, with respect to certificated notes, by lot, pro rata or by such other method as the trustee deems fair and reasonable. The notes or portions of them selected will be redeemed in principal amounts of \$1,000 or whole multiples of \$1,000. If a portion of a holder's notes is selected for partial redemption and such holder converts a portion of its notes before termination of the conversion right in respect to the portion of the note selected, the converted portion will be deemed to be of the portion selected for redemption and the amount designated for partial redemption will be reduced by the converted amount.

We may not redeem the notes if we have failed to pay any interest or premium on the notes and such failure to pay is continuing. We will issue a press release if we redeem the notes.

# **Conversion Rights**

# General

Holders may convert all or any portion of their notes at their option at any time prior to the close of business on the business day immediately preceding the maturity date.

The conversion rate will initially be shares of common stock per \$1,000 principal amount of notes (equivalent to a conversion price of approximately \$ per share of common stock). The conversion rate is subject to adjustment if certain events occur. The conversion price at any given time will be computed by dividing \$1,000 by the applicable conversion rate at such time. Accordingly, an adjustment to the conversion rate will result in a corresponding (but inverse) adjustment to the conversion price.

Upon conversion of a note, we will satisfy our conversion obligation by delivering shares of our common stock, together with a cash payment in lieu of delivering any fractional share, as set forth below under "—Settlement upon Conversion." We will settle our conversion obligation on the second business day immediately following the relevant conversion date. The trustee will initially act as the conversion agent.

A holder may convert fewer than all of such holder's notes so long as the notes converted are an integral multiple of \$1,000 principal amount.

Upon conversion, you will not receive any separate cash payment for accrued and unpaid interest, if any. We will not issue fractional shares of our common stock upon conversion of notes. Instead, we will pay cash in lieu of delivering any fractional share as described under "—Settlement upon Conversion." Our delivery to you of the full number of shares, together with a cash payment for any fractional share, into which a note is convertible will be deemed to satisfy in full our obligation to pay:

- the principal amount of the note; and
- · accrued and unpaid interest, if any, to, but not including, the relevant conversion date.

As a result, accrued and unpaid interest, if any, to, but not including, the relevant conversion date will be deemed to be paid in full rather than cancelled, extinguished or forfeited.

Notwithstanding the immediately preceding paragraph, if notes are converted after the close of business on a regular record date for the payment of interest, but prior to the open of business on the immediately following interest payment date, holders of such notes at the close of business on such regular record date will receive the full amount of interest payable on such notes on the corresponding interest payment date notwithstanding the conversion. However, notes surrendered for conversion during the period from the close of business on any regular record date to the open of business on the immediately following interest payment date must be accompanied by funds equal to the amount of interest payable on the notes so converted on the corresponding interest payment date (regardless of whether the holder was the holder of record on the corresponding regular record date); *provided* that no such payment need be made:

- · for conversions following the regular record date immediately preceding the maturity date;
- if we have specified a fundamental change repurchase date that is after a regular record date and on or prior to the business day immediately following the corresponding interest payment date, in respect of notes converted; or
- to the extent of any overdue interest, if any overdue interest exists at the time of conversion with respect to such note.

Therefore, for the avoidance of doubt, all record holders on the regular record date immediately preceding the maturity date and any fundamental change repurchase date described in the second bullet in the immediately preceding paragraph will receive the full interest payment due on the maturity date or other applicable interest payment date in cash regardless of whether their notes have been converted or repurchased following such regular record date.

"Trading day" means a day on which (i) trading in our common stock (or other security for which a closing sale price must be determined) generally occurs on the NASDAQ Capital Market or, if our common stock (or such other security) is not then listed on the NASDAQ Capital Market, on the principal other U.S. national or regional securities exchange on which our common stock (or such other security) is then listed or, if our common stock (or such other security) is not then listed on a U.S. national or regional securities exchange, on the principal other market on which our common stock (or such other security) is then traded, and (ii) a last reported sale price for our common stock (or closing sale price for such other security) is available on such securities exchange or market. If our common stock (or such other security) is not so listed or traded, "trading day" means a "business day."

# **Conversion Procedures**

If you hold a beneficial interest in a global note, to convert you must comply with DTC's procedures for converting a beneficial interest in a global note and, if required, pay funds equal to interest payable on the next interest payment date to which you are not entitled and, if required, pay all transfer or similar taxes, if any. As such, if you are a beneficial owner of the notes, you must allow for sufficient time to comply with DTC's procedures if you wish to exercise your conversion rights. Your exercise of such conversion rights shall be irrevocable.

If you hold a certificated note, to convert you must:

- · complete and manually sign the conversion notice on the back of the note, or a facsimile of the conversion notice;
- deliver the conversion notice, which is irrevocable, and the note to the conversion agent;
- · if required, furnish appropriate endorsements and transfer documents;
- · if required, pay funds equal to the interest payable on the next interest payment date to which you are not entitled; and
- · if required, pay all transfer or similar taxes, if any.

We will pay any documentary, stamp or similar issue or transfer tax on the issuance of the shares of our common stock upon conversion of the notes, unless the tax is due because the holder requests such shares to be issued in a name other than the holder's name, in which case the holder must pay the tax.

We refer to the date you comply with the relevant procedures for conversion described above as the "conversion date."

If a holder has already delivered a repurchase notice as described under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" with respect to a note, the holder may not surrender that note for conversion until the holder has withdrawn the repurchase notice in accordance with the relevant provisions of the indenture. If a holder submits its notes for required repurchase, the holder's right to withdraw the repurchase notice and convert the notes that are subject to repurchase will terminate at the close of business on the business day immediately preceding the relevant fundamental change repurchase date.

## Settlement upon Conversion

Upon conversion, we will deliver to holders in respect of each \$1,000 principal amount of notes being converted a number of shares of our common stock equal to the conversion rate, together with a cash payment, if applicable, in lieu of delivering any fractional share of common stock issuable upon conversion based on the last reported sale price of our common stock on the relevant conversion date and a qualifying fundamental change payment, if applicable. We will deliver the consideration due in respect of conversion on the second business day immediately following the relevant conversion date.

Each conversion will be deemed to have been effected as to any notes surrendered for conversion on the conversion date, and the person in whose name the shares of our common stock shall be issuable upon such conversion will become the holder of record of such shares as of the close of business on such conversion date.

The "last reported sale price" of our common stock on any date means, as determined by us, the closing sale price per share (or if no closing sale price is reported, the average of the bid and ask prices or, if more than one in either case, the average of the average bid and the average ask prices) on that date as reported in composite transactions for the principal U.S. national or regional securities exchange on which our common stock is traded. If our common stock is not listed for trading on a U.S. national or regional securities exchange on the relevant date, the "last reported sale price" will be the last quoted bid price for our common stock in the over-the-counter market on the relevant date as reported by OTC Markets Group Inc. or a similar organization. If our common stock is not so quoted, the "last reported sale price" will be the average of the midpoint of the last bid and ask prices for our common stock on the relevant date from each of at least three nationally recognized independent investment banking firms selected by us for this purpose.

## **Conversion Limitation**

We will not effect any conversion of a note and no holder will have the right to convert any portion of a note to the extent that after giving effect to such conversion, the holder (together with the holder's affiliates) would beneficially own in excess of 4.99% of the number of shares of our common stock outstanding immediately after giving effect to such conversion (the "conversion limitation"). The number of shares of common stock beneficially owned by a holder and its affiliates will include the number of shares of common stock issuable upon the conversion of a note with respect to which the determination is being made. The number of shares of common stock beneficially owned by a holder and its affiliates will exclude the number of shares of common stock which would be issuable upon (i) conversion of the remaining, nonconverted portion of any note beneficially owned by the holder or any of its affiliates and (ii) exercise or conversion of the unexercised or nonconverted portion of any of our other securities subject to a limitation on conversion or exercise analogous to the conversion limitation beneficially owned by such holder or any of its affiliates. For purposes of the indenture, beneficial ownership will be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended.

In determining the number of outstanding shares of our common stock, the holder may rely on the number of outstanding shares of common stock reflected in our most recent annual, quarterly or current report on Form 10- K, Form 10-Q or Form 8-K, respectively, as the case may be; a more recent public announcement by us or any other notice by us setting forth the number of shares of our common stock outstanding. For any reason at any time, upon the written or oral request of a holder, we will within two business days confirm orally and in writing to the holder the number of shares of common stock then outstanding. In any case, the number of outstanding shares of common stock will be determined after giving effect to the conversion or exercise of our securities, including the note, by the holder or its affiliates since the date as of which such number of outstanding shares of common stock was reported. By written notice to us, any holder may increase or decrease the conversion limitation to any other percentage not in excess of 9.99% specified in such notice; provided that any such increase will not be effective until the 61st day after the notice of the change in the conversion limitation is delivered to us and any such increase or decrease will apply only to the holder sending such notice and not to any other holder of the notes. The conversion limitation will not be applicable on any of the ten trading days up to and including the maturity date on November 30, 2023, or on any of the ten trading days up to and including the effective date of a fundamental change or during the period between the date that the fundamental change notice is sent and the fundamental change repurchase date.

## Conversion Rate Adjustments

The conversion rate will be adjusted by us as described below, except that we will not make any adjustments to the conversion rate if holders of the notes participate (other than in the case of (x) a share split or share combination or (y) a tender or exchange offer), at the same time and upon the same terms as holders of our common stock and solely as a result of holding the notes, in any of the transactions described below without having to convert their notes as if they held a number of shares of our common stock equal to the conversion rate, *multiplied by* the principal amount (expressed in thousands) of notes held by such holder.

(1) If we exclusively issue shares of our common stock as a dividend or distribution on shares of our common stock, or if we effect a share split or share combination, the conversion rate will be adjusted based on the following formula:

$$CR_1 = CR_0 \times \frac{OS_1}{OS_0}$$

where,

CR<sub>0</sub> = the conversion rate in effect immediately prior to the close of business on the record date (as defined below) of such dividend or distribution, or immediately prior to the open of business on the effective date of such share split or share combination, as applicable;

CR<sub>1</sub> = the conversion rate in effect immediately after the close of business on such record date or immediately after the open of business on such effective date, as applicable;

OS<sub>0</sub> = the number of shares of our common stock outstanding immediately prior to the close of business on such record date or immediately prior to the open of business on such effective date, as applicable (before giving effect to any such dividend, distribution, share split or share combination); and

OS<sub>1</sub> = the number of shares of our common stock outstanding immediately after giving effect to such dividend, distribution, share split or share combination.

Any adjustment made under this clause (1) shall become effective immediately after the close of business on the record date for such dividend or distribution, or immediately after the open of business on the effective date for such share split or share combination, as applicable. If any dividend or distribution of the type described in this clause (1) is declared but not so paid or made, the conversion rate shall be immediately readjusted, effective as of the date our board of directors or a committee thereof determines not to pay such dividend or distribution, to the conversion rate that would then be in effect if such dividend or distribution had not been declared.

(2) If we distribute to all or substantially all holders of our common stock any rights, options or warrants (other than pursuant to a stockholder rights plan) entitling them, for a period of not more than 45 calendar days after the announcement date of such distribution, to subscribe for or purchase shares of our common stock at a price per share that is less than the average of the last reported sale prices of our common stock for the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement of such distribution, the conversion rate will be increased based on the following formula:

$$CR_1 = CR_0 \times \frac{OS_0 + X}{OS_0 + Y}$$

where,

CR<sub>0</sub> = the conversion rate in effect immediately prior to the close of business on the record date for such distribution;

CR<sub>1</sub> = the conversion rate in effect immediately after the close of business on such record date;

OS<sub>0</sub> = the number of shares of our common stock outstanding immediately prior to the close of business on such record date:

X = the total number of shares of our common stock distributable pursuant to such rights, options or warrants; and

Y = the number of shares of our common stock equal to the aggregate price payable to exercise such rights, options or warrants, *divided by* the average of the last reported sale prices of our common stock over the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement of the distribution of such rights, options or warrants.

Any increase made under this clause (2) will be made successively whenever any such rights, options or warrants are distributed and shall become effective immediately after the close of business on such record date for such distribution. To the extent that such rights, options or warrants are not exercised prior to their expiration or shares of our common stock are not delivered after the expiration of such rights, options or warrants, the conversion rate shall be decreased to the conversion rate that would then be in effect had the increase with respect to the distribution of such rights, options or warrants been made on the basis of delivery of only the number of shares of common stock actually delivered. If such rights, options or warrants are not so distributed or if no such rights, options or warrants are not exercised prior to their expiration, the conversion rate shall be decreased to the conversion rate that would then be in effect if such record date for such distribution had not occurred.

For the purpose of this clause (2), in determining whether any rights, options or warrants entitle the holders to subscribe for or purchase shares of our common stock at less than such average of the last reported sale prices for the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement of such distribution, and in determining the aggregate offering price of such shares of our common stock, there shall be taken into account any consideration received by us for such rights, options or warrants and any amount payable on exercise or conversion thereof, the value of such consideration, if other than cash, to be determined by us in good faith and in a commercially reasonable manner.

- (3) If we distribute shares of our capital stock, evidences of our indebtedness, other assets or property of ours or rights, options or warrants to acquire our capital stock or other securities, to all or substantially all holders of our common stock, excluding:
  - · dividends, distributions or issuances as to which an adjustment was effected or will be so effected in accordance with the 1% provision (as defined below) pursuant to clause (1) or (2) above:
  - · except as otherwise described below, rights issued pursuant to any stockholder rights plan of ours then in effect;
  - · dividends or distributions paid exclusively in cash as to which the provisions set forth in clause (4) below shall apply;
  - any dividends or distributions of reference property issued in exchange for our common stock as described under "— Recapitalizations, Reclassifications and Changes of Our Common Stock;" and
  - · spin-offs as to which the provisions set forth below in this clause (3) shall apply;

then the conversion rate will be increased based on the following formula:

$$CR_1 = CR_0 \times \frac{SP_0}{SP_0 - FMV}$$

where,

CR<sub>0</sub> = the conversion rate in effect immediately prior to the close of business on such record date for the distribution;

 $CR_1$  = the conversion rate in effect immediately after the close of business on such record date;

SP<sub>0</sub> = the average of the last reported sale prices of our common stock over the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the ex-dividend date for such distribution; and

FMV = the fair market value (as determined by us in good faith and in a commercially reasonable manner) of the shares of capital stock, evidences of indebtedness, assets, property, rights, options or warrants distributed with respect to each outstanding share of our common stock on the record date for such distribution.

Any increase made under the portion of this clause (3) above will become effective immediately after the close of business on the record date for such distribution. If such distribution is not so paid or made, the conversion rate shall be decreased to be the conversion rate that would then be in effect if such distribution had not been declared. In the case of any distribution of rights, options or warrants, to the extent such rights options or warrants expire unexercised, the applicable conversion rate shall be immediately readjusted to the applicable conversion rate that would then be in effect had the increase made for the distribution of such rights, options or warrants been made on the basis of delivery of only the number of shares of our common stock actually delivered upon exercise of such rights, options or warrants. Notwithstanding the foregoing, if "FMV" (as defined above) is equal to or greater than " $SP_0$ " (as defined above), in lieu of the foregoing increase, each holder of a note shall receive, in respect of each \$1,000 principal amount thereof, at the same time and upon the same terms as holders of our common stock, the amount and kind of our capital stock, evidences of our indebtedness, other assets or property of ours or rights, options or warrants to acquire our capital stock or other securities that such holder would have received if such holder owned a number of shares of common stock equal to the conversion rate in effect on the record date for the distribution.

With respect to an adjustment pursuant to this clause (3) where there has been a payment of a dividend or other distribution on our common stock of shares of capital stock of any class or series, or similar equity interest, of or relating to a subsidiary or other business unit, that are, or, when issued, will be, listed or admitted for trading on a U.S. national securities exchange, which we refer to as a "spin-off," the conversion rate will be increased based on the following formula:

$$CR_1 = CR_0 \times \frac{FMV_0 + MP_0}{MP_0}$$

where.

 $CR_0$  = the conversion rate in effect immediately prior to the end of the valuation period (as defined below);

 $CR_1$  = the conversion rate in effect immediately after the end of the valuation period;

FMV<sub>0</sub> = the average of the last reported sale prices of the capital stock or similar equity interest distributed to holders of our common stock applicable to one share of our common stock (determined by reference to the definition of last reported sale price set forth under "—Settlement upon Conversion" as if references therein to our common stock were to such capital stock or similar equity interest) over the first 10 consecutive trading day period after, and including, the ex-dividend date of the spin-off (the "valuation period"); and

MP<sub>0</sub> = the average of the last reported sale prices of our common stock over the valuation period.

The increase to the conversion rate under the preceding paragraph will occur at the close of business on the last trading day of the valuation period; *provided* that in respect of any conversion of notes, if the relevant conversion date occurs during the valuation period, the reference to "10" in the preceding paragraph shall be deemed replaced with such lesser number of trading days as have elapsed between the ex-dividend date for such spin-off and such conversion date in determining the conversion rate. If any dividend or distribution that constitutes a spin-off is declared but not so paid or made, the conversion rate shall be immediately decreased, effective as of the date our board of directors or a committee thereof determines not to pay or make such dividend or distribution, to the conversion rate that would then be in effect if such dividend or distribution had not been declared or announced.

(4) If we pay or make any cash dividend or distribution to all or substantially all holders of our common stock, the conversion rate will be adjusted based on the following formula:

$$CR_1 = CR_0 \times \frac{SP_0}{SP_0 - C}$$

where.

CR<sub>0</sub> = the conversion rate in effect immediately prior to the close of business on the record date for such dividend or distribution:

CR<sub>1</sub> = the conversion rate in effect immediately after the close of business on such record date for such dividend or distribution;

SP<sub>0</sub> = the last reported sale price of our common stock on the trading day immediately preceding the ex-dividend date for such dividend or distribution; and

C = the amount in cash per share we distribute to all or substantially all holders of our common stock.

Any increase to the conversion rate made under this clause (4) shall become effective immediately after the close of business on the record date for such dividend or distribution. If such dividend or distribution is not so paid, the conversion rate shall be decreased, effective as of the date our board of directors or a committee thereof determines not to make or pay such dividend or distribution, to be the conversion rate that would then be in effect if such dividend or distribution had not been declared. Notwithstanding the foregoing, if "C" (as defined above) is equal to or greater than " $SP_0$ " (as defined above), in lieu of the foregoing increase, each holder of a note shall receive, for each \$1,000 principal amount of notes, at the same time and upon the same terms as holders of shares of our common stock, the amount of cash that such holder would have received if such holder owned a number of shares of our common stock equal to the conversion rate on the record date for such cash dividend or distribution.

(5) If we or any of our subsidiaries make a payment pursuant to a tender or exchange offer for our common stock that is subject to the then-applicable tender offer rules under the Securities Exchange Act of 1934, as amended (the "Exchange Act") (other than any odd-lot tender offer), to the extent that the cash and value of any other consideration included in the payment per share of our common stock exceeds the average of the last reported sale prices of our common stock over the 10 consecutive trading day period commencing on, and including, the trading day next succeeding the last date on which tenders or exchanges may be made pursuant to such tender or exchange offer, the "expiration date"), the conversion rate will be increased based on the following formula:

$$CR_1 = CR_0 \times \frac{AC + (SP_1 \times OS_1)}{OS_0 \times SP_1}$$

where,

CR<sub>0</sub> = the conversion rate in effect immediately prior to the close of business on the 10th trading day immediately following, and including, the trading day next succeeding the expiration date;

CR<sub>1</sub> = the conversion rate in effect immediately after the close of business on the 10th trading day immediately following, and including, the trading day next succeeding the expiration date;

AC = the aggregate value of all cash and any other consideration (as determined by us in good faith and in a commercially reasonable manner) paid or payable for shares purchased or exchanged in such tender or exchange offer:

OS<sub>0</sub> = the number of shares of our common stock outstanding immediately prior to the expiration date (prior to giving effect to the purchase or exchange of all shares accepted for purchase or exchange in such tender or exchange offer);

OS<sub>1</sub> = the number of shares of our common stock outstanding immediately after the expiration date (after giving effect to the purchase or exchange of all shares accepted for purchase or exchange in such tender or exchange offer); and

SP<sub>1</sub> = the average of the last reported sale prices of our common stock over the 10 consecutive trading day period commencing on, and including, the trading day next succeeding the expiration date.

The increase to the conversion rate under the preceding paragraph will occur at the close of business on the 10th trading day immediately following, and including, the trading day next succeeding the date such tender or exchange offer expires; *provided* that in respect of any conversion of notes, if the relevant conversion date occurs during the 10 trading days immediately following, and including, the trading day next succeeding the expiration date of any tender or exchange offer, references to "10" or "10th" in the preceding paragraph shall be deemed replaced with such lesser number of trading days as have elapsed between the expiration date of such tender or exchange offer and such conversion date in determining the conversion rate.

In the event that we or one of our subsidiaries is obligated to purchase shares of our common stock pursuant to any such tender offer or exchange offer described in clause (5), but we are, or such subsidiary is, permanently prevented by applicable law from effecting any such purchase or all such purchases are rescinded, then the conversion rate shall again be adjusted to be the conversion rate that would then be in effect if such tender offer or exchange offer had not been made or had been made only in respect of the purchases that have been effected.

Except as stated herein, we will not adjust the conversion rate for the issuance of shares of our common stock or any securities convertible into or exchangeable for shares of our common stock or the right to purchase shares of our common stock or such convertible or exchangeable securities.

As used in this section, "ex-dividend date" means the first date on which the shares of our common stock trade on the applicable exchange or in the applicable market, regular way, without the right to receive the issuance, dividend or distribution in question, from us or, if applicable, from the seller of our common stock on such exchange or market (in the form of due bills or otherwise) as determined by such exchange or market, and "effective date" means the first date on which the shares of our common stock trade on the applicable exchange or in the applicable market, regular way, reflecting the relevant share split or share combination, as applicable. For the avoidance of doubt, any alternative trading convention on the applicable exchange or market in respect of shares of our common stock under a separate ticker symbol or CUSIP number will not be considered "regular way" for this purpose.

As used in this section, "record date" means, with respect to any dividend, distribution or other transaction or event in which the holders of our common stock (or other applicable security) have the right to receive any cash, securities or other property or in which our common stock (or such other security) is exchanged for or converted into any combination of cash, securities or other property, the date fixed for determination of holders of our common stock (or such other security) entitled to receive such cash, securities or other property (whether such date is fixed by our board of directors or a duly authorized committee thereof, statute, contract or otherwise).

We are permitted to increase the conversion rate of the notes by any amount for a period of at least 20 business days if we determine that such increase would be in our best interest. We may also (but are not required to) increase the conversion rate to avoid or diminish income tax to holders of our common stock or rights to purchase shares of our common stock in connection with a dividend or distribution of shares (or rights to acquire shares) or similar event.

A holder may, in some circumstances, including a distribution of cash dividends to holders of our shares of common stock, be deemed to have received a distribution subject to U.S. federal income tax as a result of an adjustment or the nonoccurrence of an adjustment to the conversion rate. For a discussion of the U.S. federal income tax treatment of an adjustment to the conversion rate, see "Material U.S. Federal Income Tax Considerations."

If we have a rights plan in effect upon conversion of the notes into common stock, you will receive, in addition to the shares of common stock received in connection with such conversion, the rights under the rights plan. However, if, prior to any conversion, the rights have separated from the shares of common stock in accordance with the provisions of the applicable rights plan, the conversion rate will be adjusted at the time of separation as if we distributed to all or substantially all holders of our common stock, shares of our capital stock, evidences of indebtedness, assets, property, rights, options or warrants as described in clause (3) above, subject to readjustment in the event of the expiration, termination or redemption of such rights.

Notwithstanding any of the foregoing, the conversion rate will not be adjusted:

- upon the issuance of shares of our common stock at a price below the conversion price or otherwise, other than any such issuance described in clause (1), (2) or (3) above;
- upon the issuance of any shares of our common stock pursuant to any present or future plan providing for the reinvestment of dividends or interest payable on our securities and the investment of additional optional amounts in shares of our common stock under any plan;
- · upon the issuance of any shares of our common stock or options or rights to purchase those shares pursuant to any present or future employee, director or consultant benefit plan or program of or assumed by us or any of our subsidiaries;
- · upon the issuance of any shares of our common stock pursuant to any option, warrant, right or exercisable, exchangeable or convertible security not described in the preceding bullet and outstanding as of the date the notes were first issued;
- for a third-party tender offer by any party other than a tender offer by one or more of our subsidiaries as described in clause (5) above;
- upon the repurchase of any of shares of our common stock pursuant to an open market share purchase program or other buy-back transaction, including structured or derivative transactions such as accelerated share repurchase transactions or similar forward derivatives, or other buy-back transaction, that is not a tender offer or exchange offer of the kind described under clause (5) above;
- · solely for a change in the par value of our common stock; or
- · for accrued and unpaid interest, if any.

There shall be no adjustment pursuant to any of clauses (1) through (5) above if such adjustment would result in shares of common stock being issued or being deemed to have been issued below \$ (as appropriately adjusted to give effect to any stock splits, reverse stock splits, stock combinations, reclassifications, reorganizations or other similar transactions occurring after the closing date of this offering) for purposes of NASDAQ Rule 5635(d) (or any successor to such rule).

If an adjustment to the conversion rate otherwise required by the provisions described above would result in a change of less than 1% to the conversion rate, then, notwithstanding the foregoing, we may, at our election, defer and carry forward such adjustment, except that all such deferred adjustments must be given effect immediately upon the earliest to occur of the following: (i) when all such deferred adjustments would result in an aggregate change of at least 1% to the conversion rate, and (ii) on the conversion date for any notes, in each case, unless the adjustment has already been made. The provisions described in the preceding sentence are referred to herein as the "1% provision."

Adjustments to the conversion rate will be calculated by us to the nearest 1/10,000th of a share.

# Recapitalizations, Reclassifications and Changes of Our Common Stock

In the case of:

- · any recapitalization, reclassification or change of our common stock (other than a change to par value, or from par value to no par value, or changes resulting from a share split or share combination),
- · any consolidation, merger or combination involving us,
- · any sale, lease or other transfer to a third party of all or substantially all of our and our subsidiaries' consolidated assets, taken as a whole, or
- · any statutory share exchange,

in each case, as a result of which our common stock would be converted into, or exchanged for, stock, other securities, other property or assets (including cash or any combination thereof) (any such event, a "share exchange event"), then we or the successor or acquiring company, as the case may be, will execute with the trustee, without the consent of the holders, a supplemental indenture providing that, at and after the effective time of the share exchange event, the right to convert each \$1,000 principal amount of notes will be changed into a right to convert such principal amount of notes into the kind and amount of shares of stock, other securities or other property or assets (including cash or any combination thereof) that a holder of a number of shares of common stock equal to the conversion rate immediately prior to such share exchange event would have owned or been entitled to receive (the "reference property") upon such share exchange event. However, at and after the effective time of the share exchange event, the number of shares of our common stock otherwise deliverable upon conversion of the notes as set forth under "-Settlement upon Conversion," and "-Optional Redemption-Interest Make-Whole Payment" above will be deliverable in the amount and type of reference property that a holder of that number of shares of our common stock would have received in such transaction. If the share exchange event causes our common stock to be converted into, or exchanged for, the right to receive more than a single type of consideration (determined based in part upon any form of stockholder election), the reference property into which the notes will be convertible will be deemed to be (i) the weighted average of the types and amounts of consideration received by the holders of our common stock that affirmatively make such an election or (ii) if no holders of our common stock affirmatively make such an election, the types and amounts of consideration actually received by the holders of our common stock. We will notify holders, the trustee and the conversion agent (if other than the trustee) in writing of the weighted average as soon as practicable after such determination is made.

If the reference property in respect of any share exchange event includes, in whole or in part, shares of common equity, the supplemental indenture providing that the notes will be convertible into reference property will also provide for antidilution and other adjustments that are as nearly equivalent as possible to the adjustments described under "—Conversion Rate Adjustments" above with respect to the portion of the reference property consisting of such common equity. If the reference property in respect of any such share exchange event includes shares of stock, securities or other property or assets (other than cash and/or cash equivalents) of a company other than us or the successor or purchasing company, as the case may be, in such share exchange event, such other company, if an affiliate of us or the successor or acquiring company, will also execute such supplemental indenture, and such supplemental indenture will contain such additional provisions to protect the interests of the holders, including the right of holders to require us to repurchase their notes upon a fundamental change as described under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" below, as we in good faith reasonably consider necessary by reason of the foregoing. We will agree in the indenture not to become a party to any such share exchange event unless its terms are consistent with the foregoing.

# Adjustments of Prices

Whenever any provision of the indenture requires us to calculate the last reported sale prices over a span of multiple days (including, without limitation, the period, if any, for determining "stock price" for purposes of a qualifying fundamental change), we will make appropriate adjustments in good faith and in a commercially reasonable manner (to the extent no corresponding adjustment is otherwise made pursuant to the provisions described under "—Conversion Rate Adjustments" above) to each to account for any adjustment to the conversion rate that becomes effective, or any event requiring an adjustment to the conversion rate where the ex-dividend date, effective date or expiration date of the event occurs, at any time during the period when the last reported sale prices are to be calculated.

For the avoidance of doubt, the adjustments made pursuant to the foregoing paragraph will be made, solely to the extent we determine in good faith and in a commercially reasonable manner that any such adjustment is appropriate, without duplication of any adjustment made pursuant to the provision set forth under "—Conversion Rate Adjustments."

# Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change

If the "effective date" (as hereinafter defined) of a "qualifying fundamental change" (as hereinafter defined) occurs prior to the maturity date of the notes and a holder elects to convert its notes in connection with such qualifying fundamental change, we will, under certain circumstances, make a payment to the holder of the notes so surrendered for conversion equal to \$130 per \$1,000 of aggregate principal of notes surrendered for conversion (a "qualifying fundamental change payment"). A "qualifying fundamental change" means any transaction or event that constitutes a fundamental change defined below in clause (1), (2) or (4) of the definition of "fundamental change" under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes", after giving effect to any exceptions or exclusions from such definition, but without regard to the proviso in clause (2) of the definition thereof. A conversion of notes will be deemed for these purposes to be "in connection with" such qualifying fundamental change if the relevant conversion date occurs during the period from, and including, the effective date of the qualifying fundamental change up to, and including, the business day immediately prior to the related fundamental change repurchase date (or, in the case of a qualifying fundamental change that would have been a fundamental change but for the proviso in clause (2) of the definition thereof, the 35th trading day immediately following the effective date of such qualifying fundamental change period").

Upon surrender of notes for conversion in connection with a qualifying fundamental change we will deliver shares of common stock as described under "Settlement upon Conversion." However, for any conversion of notes following the effective date of such qualifying fundamental change, the conversion obligation will be calculated by us based solely on the "stock price" (as defined below) for the transaction and will be deemed to be an amount of cash per \$1,000 principal amount of converted notes equal to the conversion rate, multiplied by such stock price. We will notify the trustee, the conversion agent (if other than the trustee) and holders, in writing, of the effective date of any qualifying fundamental change no later than five business days after such effective date. If the holders of our common stock receive in exchange for their common stock only cash in a qualifying fundamental change described in clause (2) of the definition of fundamental change, the stock price shall be the cash amount paid per share. Otherwise, the stock price shall be the average of the closing sale prices of our common stock over the five consecutive trading day period ending on, and including, the trading day immediately preceding the relevant effective date.

We will pay any such qualifying fundamental change payment in cash; provided, however, that, so long as the stock price (determined as described above) is not less than \$ per share (as appropriately adjusted for any stock split, reverse stock split, stock dividend or other reclassification or combination of our common stock occurring after the date of issuance of the notes offered hereby), we will have the option to pay such qualifying fundamental change payment by delivering to the holder a number of freely tradable shares of our common stock valued at 95% of such stock price.

Our obligation to make a qualifying fundamental change payment for notes converted in connection with a qualifying fundamental change could be considered a penalty, in which case the enforceability thereof would be subject to general principles of reasonableness and equitable remedies.

# Fundamental Change Permits Holders to Require Us to Repurchase Notes

If a "fundamental change" (as defined below in this section) occurs at any time prior to the maturity date, holders will have the right, at their option, to require us to repurchase for cash all of their notes, or any portion of the principal amount thereof that is equal to \$1,000 or an integral multiple of \$1,000. The fundamental change repurchase date will be a date specified by us that is not less than 20 or more than 35 business days following the date of our fundamental change notice as described below.

The fundamental change repurchase price we are required to pay will be equal to 100% of the principal amount of the notes to be repurchased, *plus* accrued and unpaid interest to, but excluding, the fundamental change repurchase date (unless the fundamental change repurchase date falls after a regular record date but on or prior to the interest payment date to which such regular record date relates, in which case we will instead pay the full amount of accrued and unpaid interest (to, but not including, such interest payment date) to the holder of record on such regular record date, and the fundamental change repurchase price will be equal to 100% of the principal amount of the notes to be repurchased).

A "fundamental change" will be deemed to have occurred at the time after the notes are originally issued if any of the following occurs:

(1) a "person" or "group" within the meaning of Section 13(d) of the Exchange Act, other than us, our wholly owned subsidiaries and our and their employee benefit plans, files a Schedule TO (or any successor schedule, form or report) or any schedule, form or report under the Exchange Act that discloses that such person or group has become the direct or indirect "beneficial owner," as defined in Rule 13d-3 under the Exchange Act, of our common stock representing more than 50% of the voting power of our common stock, unless such beneficial ownership arises solely as a result of a revocable proxy delivered in response to a public proxy or consent solicitation made pursuant to the applicable rules and regulations under the Exchange Act; *provided* that no person or group shall be deemed to be the beneficial owner of any securities tendered pursuant to a tender or exchange offer made by or on behalf of such person or group until such tendered securities are accepted for purchase or exchange under such offer;

- the consummation of (A) any recapitalization, reclassification or change of our common stock (other than changes resulting from a subdivision or combination or solely a change in par value) as a result of which our common stock would be converted into, or exchanged for, stock, other securities, other property or assets; (B) any share exchange, consolidation or merger of us pursuant to which our common stock will be converted into cash, securities or other property or assets; or (C) any sale, lease or other transfer in one transaction or a series of transactions of all or substantially all of the consolidated assets of us and our subsidiaries, taken as a whole, to any person other than one or more of our direct or indirect wholly owned subsidiaries; *provided*, *however*, that a transaction described in clauses (A) or (B) in which the holders of all classes of our common equity immediately prior to such transaction own, directly or indirectly, more than 50% of all classes of common equity of the continuing or surviving company or transferee or the parent thereof immediately after such transaction in substantially the same proportions (relative to each other) as such ownership immediately prior to such transaction shall not be a fundamental change pursuant to this clause (2);
  - (3) our stockholders approve any plan or proposal for our liquidation or dissolution; or
- (4) our common stock (or other common stock, American depositary receipts, ordinary shares or other common equity interests underlying the notes) ceases to be listed or quoted on any of the NASDAQ Capital Market, the NYSE American, The New York Stock Exchange, The NASDAQ Global Select Market or The NASDAQ Global Market (or any of their respective successors) or an established over-the-counter trading market in the United States.

A transaction or transactions described in clause (1) or clause (2) above will not constitute a fundamental change, however, if at least 90% of the consideration received or to be received by our common stockholders, excluding cash payments for fractional shares and cash payments made pursuant to dissenters' appraisal rights, in connection with such transaction or transactions consists of shares of common stock, American depositary receipts, ordinary shares or other common equity interests, in each case, that are listed or quoted on any of the NASDAQ Capital Market, the NYSE American, The New York Stock Exchange, The NASDAQ Global Select Market or The NASDAQ Global Market (or any of their respective successors) or an established over-the-counter trading market in the United States or will be so listed or quoted when issued or exchanged in connection with such transaction or transactions and as a result of such transaction or transactions such consideration becomes reference property for the notes, excluding cash payments for fractional shares and cash payments made pursuant to dissenters' appraisal rights (subject to the provisions set forth above under "—Conversion Rights—Settlement upon Conversion").

Any event, transaction or series of related transactions that constitute a fundamental change under both clause (1) and clause (2) above (determined without regard to the proviso in clause (2) above) will be deemed to be a fundamental change solely under clause (2) above.

If any transaction in which our common stock is replaced by the securities of another entity occurs, following completion of any related qualifying fundamental change period (or, in the case of a transaction that would have been a fundamental change or a qualifying fundamental change but for the immediately preceding paragraph, following the effective date of such transaction), references to us in the definition of "fundamental change" above shall instead be references to such other entity.

On or before the 20th business day after the occurrence of a fundamental change, we will provide to all holders of the notes, the trustee, the conversion agent (if other than the trustee) and paying agent (if other than the trustee) a notice of the occurrence of the fundamental change and of the resulting repurchase right. Such notice shall state, among other things:

- · the events causing a fundamental change;
- · the effective date of the fundamental change;
- the last date on which a holder may exercise the repurchase right;
- · the fundamental change repurchase price;
- · the fundamental change repurchase date;
- the name and address of the paying agent and the conversion agent, if applicable;
- · if applicable, the conversion rate and any adjustments to the conversion rate;
- that the notes with respect to which a fundamental change repurchase notice has been delivered by a holder may be converted only if the holder withdraws the fundamental change repurchase notice in accordance with the terms of the indenture; and
- the procedures that holders must follow to require us to repurchase their notes.

If notes are held in certificated form, to exercise the fundamental change repurchase right, holders of certificated notes must deliver, prior to the close of business on the business day immediately preceding the fundamental change repurchase date, the notes to be repurchased, duly endorsed for transfer, together with a written repurchase notice, to the paying agent. Each repurchase notice must state:

- · if certificated, the certificate numbers of your notes to be delivered for repurchase;
- the portion of the principal amount of notes to be repurchased, which must be \$1,000 or an integral multiple thereof; and
- that the notes are to be repurchased by us pursuant to the applicable provisions of the notes and the indenture.

If the notes are not in certificated form, such repurchase notice must comply with applicable DTC procedures.

Holders of certificated notes may withdraw any repurchase notice (in whole or in part) by a written notice of withdrawal delivered to the paying agent prior to the close of business on the 2<sup>nd</sup> business day immediately preceding the fundamental change repurchase date. The notice of withdrawal shall state:

- the principal amount of the withdrawn notes, which must be \$1,000 aggregate principal amount or an integral multiple thereof;
- · if certificated notes have been issued, the certificate numbers of the withdrawn notes; and
- the principal amount, if any, which remains subject to the repurchase notice, which must be \$1,000 aggregate principal amount or an integral multiple thereof.

If the notes are not in certificated form, such notice of withdrawal must comply with applicable DTC procedures.

We will be required to repurchase the notes on the fundamental change repurchase date, subject to postponement to comply with applicable law. Holders who have exercised the repurchase right will receive payment of the fundamental change repurchase price on the later of (i) the fundamental change repurchase date and (ii) the time of book-entry transfer or the delivery of the notes. If the paying agent holds money sufficient to pay the fundamental change repurchase price of the notes on the fundamental change repurchase date, then, with respect to the notes that have been properly surrendered for repurchase and have not been validly withdrawn:

- the notes will cease to be outstanding and interest will cease to accrue (whether or not book-entry transfer of the notes is made or whether or not the notes are delivered to the paying agent); and
- all other rights of the holder will terminate (other than the right to receive the fundamental change repurchase price).

In connection with any repurchase offer pursuant to a fundamental change repurchase notice, we will, if required:

- comply with the tender offer rules under the Exchange Act that may then be applicable;
- file a Schedule TO or any other required schedule under the Exchange Act; and
- otherwise comply in all material respects with all federal and state securities laws in connection with any offer by us to repurchase the notes;

in each case, so as to permit the rights and obligations under this "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" to be exercised in the time and in the manner specified in the indenture.

No notes may be repurchased by us on any date at the option of holders upon a fundamental change if the principal amount of the notes has been accelerated, and such acceleration has not been rescinded, on or prior to such date (except in the case of an acceleration resulting from a default by us in the payment of the fundamental change repurchase price with respect to such notes).

The repurchase rights of the holders upon a fundamental change could discourage a potential acquirer of us. The fundamental change repurchase feature, however, is not the result of management's knowledge of any specific effort to obtain control of us by any means or part of a plan by management to adopt a series of anti-takeover provisions.

Notwithstanding anything to the contrary in the foregoing, we will not be required to repurchase or make an offer to repurchase the notes upon a fundamental change if a third party makes such an offer in the same manner, at the same time and otherwise in compliance with the requirements for an offer made by us as set forth in the indenture and such third party purchases all notes properly surrendered and not validly withdrawn under its offer in the same manner, at the same time and otherwise in compliance with the requirements for an offer made by us as set forth in the indenture.

To the extent that the provisions of any securities laws or regulations conflict with the provisions of the indenture relating to our obligations to repurchase the notes upon a fundamental change, we will comply with the applicable securities laws and regulations and will not be deemed to have breached our obligations under such provisions of the indenture by virtue of such conflict.

The term fundamental change is limited to specified transactions and may not include other events that might adversely affect our financial condition. In addition, the requirement that we offer to repurchase the notes upon a fundamental change may not protect holders in the event of a highly leveraged transaction, reorganization, merger or similar transaction involving us.

Furthermore, holders may not be entitled to require us to repurchase their notes upon a fundamental change or entitled to a qualifying fundamental change payment upon conversion as described under "—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change" in circumstances involving a significant change in the composition of our board, unless such change is in connection with a fundamental change or qualifying fundamental change, as the case may be, as described herein.

The definition of fundamental change includes a phrase relating to the sale, lease or other transfer of "all or substantially all" of the consolidated assets of us and our subsidiaries, taken as a whole. There is no precise, established definition of the phrase "substantially all" under applicable law. Accordingly, the ability of a holder of the notes to require us to repurchase its notes as a result of the sale, lease or other transfer of less than all of the consolidated assets of us and our subsidiaries, taken as a whole may be uncertain.

We may not have sufficient future cash flow from operations to make any required repurchase in cash or the ability to arrange additional financing, if necessary, on acceptable terms. See "Risk Factors—We face several risks regarding holders' potential rights to require us to repurchase the notes on the put date or upon a fundamental change." If we fail to repurchase the notes when required following a fundamental change, we will be in default under the indenture.

## Consolidation, Merger and Sale of Assets

The indenture will provide that we shall not consolidate with or merge with or into, or sell, convey, transfer or lease all or substantially all of the consolidated properties and assets of us and our direct or indirect subsidiaries, taken as a whole, to another person (other than one or more of our direct or indirect wholly owned subsidiaries), unless (i) the resulting, surviving or transferee person (if not us) is a corporation organized and existing under the laws of the United States of America, any State thereof or the District of Columbia, and such corporation (if not us) expressly assumes by supplemental indenture all of our obligations under the notes and the indenture; and (ii) immediately after giving effect to such transaction, no default or event of default has occurred and is continuing under the indenture. Upon any such consolidation, merger or sale, conveyance, transfer or lease, the resulting, surviving or transferee person (if not us or any of our direct or indirect wholly owned subsidiaries) shall succeed to, and may exercise every right and power of, ours under the notes and the indenture, and we shall be discharged from our obligations under the notes and the indenture except in the case of any such lease.

Although these types of transactions will be permitted under the indenture, certain of the foregoing transactions could constitute a fundamental change permitting each holder to require us to repurchase the notes of such holder as described above.

This covenant includes a phrase relating to the sale, conveyance, transfer and lease of "all or substantially all" of the consolidated assets of us and our subsidiaries. There is no precise, established definition of the phrase "all or substantially all" under applicable law. Accordingly, whether a sale, conveyance, transfer or lease of less than all of the consolidated assets of us and our subsidiaries, taken as a whole, constitutes a sale or other disposition of "all or substantially all" may be uncertain.

# **Additional Covenants**

# Maintenance of Properties and Insurance

We will and will cause each of our subsidiaries to maintain all material properties in good working order and condition in all material respects (subject to ordinary wear and tear) and make all necessary repairs, renewals, replacements, additions, betterments and improvements thereto and actively conduct and carry on its business. However, this will not prevent us or our subsidiaries from discontinuing the operation and maintenance of any of its properties if discontinuance is, in the good faith judgment of our Board of Directors or other governing body of us or the subsidiary concerned desirable in the conduct of our business and is not disadvantageous in any material respect to the holders.

We will agree to maintain insurance (including appropriate self-insurance) against loss or damage of the kinds that, in our good faith judgment, are adequate and appropriate for the conduct of our and our subsidiaries' business in a prudent manner, with reputable insurers or with the U.S. government or an agency or instrumentality thereof, in amounts, with deductibles, and by such methods as will be customary, in our good faith judgment, for companies similarly situated in the industry.

## Issuance or Sale of Subsidiary Stock

We will not and will not permit any of our subsidiaries to sell any capital stock of a subsidiary, except to us or to one of our wholly owned subsidiaries, unless we and our subsidiaries, as the case may be, sell 100% of the capital stock of the subsidiary that we own in accordance with the applicable indenture requirements. In addition, none of our subsidiaries will issue any capital stock, other than to us or one of our subsidiaries.

## Line of Business; Corporate Existence

We will not and will not permit any of our subsidiaries to, engage in any business other than permitted businesses, except to such extent as would not be material to us or our subsidiaries taken as a whole. As used in the indenture, "permitted business" means any business similar in nature to any business conducted by us and our subsidiaries on the date of the indenture and any business reasonably ancillary, incidental, complementary or related thereto or a reasonable extension, development or expansion thereof, in each case, as determined in good faith by our Board of Directors.

We will do or cause to be done all things necessary to preserve and keep in full force and effect our corporate existence, and the corporate, partnership or other existence of each of our subsidiaries, in accordance with the respective organizational documents (as the same may be amended from time to time) of us and each subsidiary and our and our subsidiaries' rights (charter and statutory), licenses and franchises. However, we will not be required to preserve any such right, license or franchise, or the corporate, partnership or other existence of any of our subsidiaries, if the preservation thereof is no longer desirable in the conduct of the business, taken as a whole, and that the loss thereof would not reasonably be expected to have a material adverse effect.

#### Taxes

We will pay and will cause each of our subsidiaries to pay, prior to delinquency, all material taxes, assessments, and governmental levies except such as are contested in good faith and by appropriate proceedings or where the failure to effect such payment would not reasonably be expected to have a material adverse effect.

#### **Events of Default**

An "event of default" means any of the following events:

- our failure to comply with our obligation to convert the notes in accordance with the indenture upon exercise of a holder's conversion right, including the payment of any qualifying fundamental change payment, and such failure continues for a period of five (5) business days;
- our common stock is not listed on an eligible market;
- · we default in the payment when due of interest on the notes and such default continues for a period of 30 days;
- we default in the payment when due of principal of or premium, if any, on the notes when the same becomes due and payable at maturity, upon redemption or repurchase or otherwise, including the payment of any interest-make whole payment upon optional redemption of the notes;
- we or any of our subsidiaries fail to comply with certain provisions regarding restricted payments, incurrence of indebtedness and issuance of preferred stock, asset sales, liens, offers to repurchase upon a change of control and merger, consolidation or sale of assets:
- · our failure to give a fundamental change notice as described under "—Fundamental Change Permits Holders to Require Us to Repurchase Notes" or notice of a qualifying fundamental change as described under "—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," in each case, when due and such failure continues for three (3) business days after the due date for such notice;
- we fail to observe or perform any covenant, representation, warranty or other agreement in the indenture (other than a default specified above) or the notes for 30 days after notice to us by the trustee or the holders of at least 25% in aggregate principal amount of the notes then outstanding voting as a single class;
- a default occurs under any mortgage, indenture or instrument under which there may be issued or by which there may be secured or evidenced any indebtedness for money borrowed by us or any of our subsidiaries (or the payment of which is guaranteed by us or any of our subsidiaries), whether such indebtedness or guarantee now exists, or is created after the date of the indenture, which default is caused by a failure to pay principal of, or interest or premium, if any, on such indebtedness prior to the expiration of the grace period provided in such indebtedness on the date of such default (a "payment default") or results in the acceleration of the indebtedness prior to its express maturity and, in each case, the principal amount of the indebtedness, together with the principal amount of any other such indebtedness under which there has been a payment default or the maturity of which has been so accelerated, aggregates \$1 million or more, in any such case, after notice to us by the trustee or the holders of at least 25% in aggregate principal amount of the notes then outstanding voting as a single class;

- a final judgment or final judgments for the payment of money are entered by a court or courts of competent jurisdiction against us or any of our subsidiaries and the judgment or judgments remain undischarged, unpaid or unstayed for a period (during which execution will not be effectively stayed) of 60 days, provided that the aggregate of all such undischarged judgments exceeds \$1 million (excluding amounts covered by insurance), after notice to us by the trustee or the holders of at least 25% in aggregate principal amount of the notes then outstanding voting as a single class; or
- we, any of our significant subsidiaries (as defined in Rule 1-02 of Regulation S-X under the Securities Act and Exchange Act or any successor rule) or any group of subsidiaries that, taken as a whole, would constitute a significant subsidiary, under bankruptcy law commences a voluntary case, consents to the entry of an order for relief against it in an involuntary case, consents to the appointment of a custodian, receiver, trustee, assignee, liquidator or similar official under bankruptcy law of it or for all or substantially all of its property, makes a general assignment for the benefit of its creditors, or generally is not paying its debts as they become due; or a court of competent jurisdiction enters an order or decree under any bankruptcy law that is for relief against any of the aforementioned entities in an involuntary case; appoints a custodian, receiver, trustee, assignee, liquidator or similar official under bankruptcy law of any of the aforementioned entities or for all or substantially all of the property of any of the aforementioned entities; or orders the liquidation of any of the aforementioned entities and the order or decree remains unstayed and in effect for 60 consecutive days.

## Acceleration and Other Remedies

If any event of default (other than an event of default relating to bankruptcy law specified above), occurs and is continuing, the trustee or the holders of at least 25% in principal amount of the then outstanding notes may declare all the notes to be due and payable immediately (the "event of default redemption price"). Upon any such declaration, the notes will become due and payable immediately. Notwithstanding the foregoing, if an event of default relating to bankruptcy law specified above occurs with respect to us, any of our significant subsidiaries or any group of our subsidiaries that, taken as a whole, would constitute a significant subsidiary, all outstanding notes will be due and payable immediately without further action or notice.

The majority holders (which mean the holders of a majority in aggregate principal amount of notes outstanding at any time) by written notice to the trustee may, on behalf of all of the holders, rescind an acceleration and its consequences if the rescission would not conflict with any judgment or decree and if all existing events of default (except nonpayment of principal, interest or premium that has become due solely because of the acceleration) have been cured or waived.

In the event of a declaration of acceleration of the notes solely because an event of default described in clause (viii) above has occurred and is continuing, the declaration of acceleration of the notes shall be automatically rescinded and annulled if the payment default or acceleration triggering such event of default pursuant to clause (viii) shall be remedied or cured or waived by the holders of the relevant debt within 20 business days after the declaration of acceleration with respect thereto and if the rescission and annulment of the acceleration of the notes would not conflict with any judgment or decree of a court of competent jurisdiction obtained by the trustee for the payment of amounts due on the notes.

If an event of default occurs and is continuing, the trustee may pursue any available remedy to collect the payment of principal, premium, if any, and interest on the notes then due or to enforce the performance of any provision of the notes or the indenture. The trustee may maintain a proceeding even if it does not possess any of the notes or does not produce any of them in the proceeding. A delay or omission by the trustee or any holder in exercising any right or remedy accruing upon an event of default will not impair the right or remedy or constitute a waiver of or acquiescence in the event of default and all remedies will be cumulative to the extent permitted by law.

However, the sole remedy for an event of default relating to any failure by us to comply with the indenture reporting requirements will, for the first 180 days after the occurrence of the event of default, consist exclusively of the right to receive special interest ("special interest") on the notes at an annual rate equal to 0.50% of the principal amount of the notes. Such special interest will be paid quarterly in arrears on each interest payment date, with the first quarterly payment due on the first interest payment date following the date on which such special interest began to accrue on the notes and shall cease to accrue upon the cure or waiver of such event of default. Special interest will accrue on all outstanding notes from and including the date on which an event of default relating to any failure by us to comply with the indenture reporting requirements first occurs to but not including the 180th day thereafter (or such earlier date on which such event of default will have been cured or waived). On the 180th day (or earlier, if such event of default is earlier cured or waived), the special interest will cease to accrue and, if the event of default relating to the reporting failure shall not have been cured or waived prior to such 180th day, the notes will be subject to acceleration. The limitation on remedies related to reporting requirements will not affect the rights of holders in the event of the occurrence of any other event of default. Upon the occurrence of an event of default giving rise to the obligation to pay special interest, all references herein to interest accrued or payable on any date will include any special interest accrued or payable.

# Waiver of Past Defaults

The majority holders by notice to the trustee may on behalf of the holders of all of the notes waive an existing default and its consequences, except a default or event of default relating to bankruptcy or in respect of a covenant or provision of the indenture that cannot be modified or amended without the consent of the holder of each outstanding note affected (in which case such notice to waive such existing default and its consequences under the indenture shall be given to the trustee by all holders of affected notes). Upon any such waiver, the default will cease to exist, and any event of default arising therefrom will be deemed to have been cured for every purpose of the indenture but the waiver will not extend to any subsequent or other default or impair any right consequent thereon.

## Control by Majority

Subject to the rights of the trustee to abstain from exercising certain of its rights under the indenture, the majority holders will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee, provided that such direction will not be in conflict with any rule of law or the indenture, the trustee may take any other action deemed proper by the trustee which is not inconsistent with such direction. The trustee may refuse to follow any direction that conflicts with law or that the trustee determines may involve the trustee in personal liability or may be prejudicial to the rights of the holders of notes.

## Limitation on Suits

No holder will have any right to institute any proceeding, judicial or otherwise with respect to the indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder (other than in the case of an event of default relating to bankruptcy law), unless such holder gives the trustee written notice of a continuing event of default; the holders of at least 25% in principal amount of the then outstanding notes make a written request to the trustee to pursue the remedy; the holder or holders of the notes offer and, if requested, provide the trustee indemnity reasonably satisfactory to the trustee against any loss, liability or expense; the trustee does not comply with the request within 60 days after receipt of the request and the offer and, if requested, the provision of indemnity; and during such 60-day period the majority holders do not give the trustee a direction inconsistent with the request.

No holders will have any right to avail itself of any provision of the indenture in a manner that will affect, disturb or prejudice the rights of any other holders, or to obtain or to seek to obtain priority or preference over any other holders or to enforce any right under the indenture, except in the manner herein provided and for the equal and ratable benefit of all the holders.

# Unconditional Rights of Holders of Notes to Receive Payment

The right of any holder to receive payment of the principal, the redemption price, or interest, in respect of the notes held by the holder, on or after the respective due dates expressed in the notes or any redemption date, as applicable, and to convert the notes, or to bring suit for the enforcement of any payment on or after such respective dates or the right to convert, will not be impaired or affected adversely without the consent of such holder.

# Collection Suit and Proofs of Claim filed by Trustee

If an event of default relating to our failure to make certain payments of interest, principal, premium or other payments occurs and is continuing, the trustee is authorized to recover judgment in its own name and as trustee of an express trust against us and our subsidiaries for the whole amount of principal of, premium, if any, redemption price, interest and any other amounts remaining unpaid on the notes and interest on overdue principal and, to the extent lawful, interest and such further amount as will be sufficient to cover the costs and expenses of collection, including the reasonable compensation, expenses, disbursements and advances of the trustee, its agents and counsel.

The trustee is authorized to file such proofs of claim and other papers or documents as may be necessary or advisable in order to have the claims of the trustee (including any claim for the reasonable compensation, expenses, disbursements and advances of the trustee, its agents and counsel), and the holders of the notes allowed in any judicial proceedings relative to us, its creditors or its property and will be entitled and empowered to collect, receive and distribute any money or other property payable or deliverable on any such claims and any custodian in any such judicial proceeding is authorized by each holder to make such payments to the trustee, and in the event that the trustee will consent to the making of such payments directly to the holders, to pay to the trustee any amount due to it for the reasonable compensation, expenses, disbursements and advances of the trustee, its agents and counsel, and any other amounts due the trustee. To the extent that the payment of any such compensation, expenses, disbursements and advances of the trustee and its agents and counsel, and any other amounts due the trustee out of the estate in any such proceeding, is denied for any reason, payment of the same will be secured by a lien on, and will be paid out of, any and all distributions, dividends, money, securities and other properties that the holders may be entitled to receive in such proceeding whether in liquidation or under any plan of reorganization or arrangement or otherwise. The trustee is not authorized to authorize or consent to or accept or adopt on behalf of any holder any plan of reorganization, arrangement, adjustment or composition affecting the notes or the rights of any holder, or to vote in respect of the claim of any holder in any such proceeding.

#### **Priorities**

If the trustee collects any money with respect to an event of default, it will pay out the money first to the trustee and its agents and attorneys for amounts due to each under the indenture, including payment of all compensation, expense and liabilities incurred, and all advances made, by the trustee and the costs and expenses of collection. Second, the money will be paid to holders of notes for amounts due and unpaid on the notes for principal, premium, if any, and interest, ratably, without preference or priority of any kind, according to the amounts due and payable on the notes for principal, premium, if any, interest and any other amounts due, respectively. Finally, the remainder will be paid to us or to another party as a court of competent jurisdiction will direct. The trustee may fix a record date and payment date for any payment to holders of notes.

# **Undertaking for Costs**

In any suit for the enforcement of any right or remedy under the indenture or in any suit against the trustee for any action taken or omitted by it as trustee, in either case in respect of the notes, a court may require any party litigant in such suit to file an undertaking to pay the costs of the suit. The court may also assess reasonable costs, including reasonable attorney's fees, and expenses, against any party litigant in the suit having due regard to the merits and good faith of the claims or defenses made by the party litigant. However, the undertaking allowance will not apply to any suit instituted by us, to any suit instituted by the trustee, to any suit instituted by any holder, or group of holders, holding in the aggregate more than 10% in aggregate principal amount of the outstanding notes, or to any suit instituted by any holder for the enforcement of the payment of the principal amount or interest, on any note on or after the stated maturity of such note or applicable redemption price on or after the applicable redemption date.

## Waiver of Stay or Extension of Laws

We covenant (to the extent that we may lawfully do so) that we will not at any time insist upon, or plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, or extension law that may affect the covenants or the performance of the indenture. We to the extent that we may lawfully do so expressly waive all benefit or advantage of any such law and we covenant that we will not hinder, delay or impede the execution of any power granted to the trustee by the indenture.

# **Modification and Amendment**

We and the trustee may amend or supplement the indenture and the notes with the consent of the majority holders voting as a single class, any existing default or event of default (other than in the payment of the principal of, premium, if any, interest or any other amounts due on the notes, except a payment default resulting from an acceleration that has been rescinded) or compliance with any provision of the indenture and the notes may be waived with the consent of the majority holders voting as a single class (including consents obtained in connection with a tender offer or exchange offer for, or purchase of, the notes), subject to certain conditions.

We will send a notice to the affected holders briefly describing the amendment, supplement or waiver. If we fail to send the notice or the notice is deficient, it will not impair or affect the validity of any amended or supplemented document or waiver. Without the consent of each holder affected, an amendment or waiver may not with respect to a non-consenting holder's notes:

- (i) reduce the principal amount of notes whose holders must consent to an amendment, supplement or waiver;
- (ii) reduce the principal of, redemption price of, interest, premium, or any other amounts due under the indenture or change the fixed maturity of any note or alter or waive any of the provisions with respect to the redemption of the notes except as otherwise provided in the indenture;
  - (iii) reduce the rate of or change the time for payment of interest on any note;
- (iv) waive a default or event of default in the payment of principal of or premium, if any, interest or any other amounts due on the notes (except a rescission of acceleration of the notes by the majority holders and a waiver of the payment default that resulted from such acceleration);
  - (v) make any note payable in money or currency other than that stated in the notes;

- (vi) make any change in the provisions of this indenture relating to waivers of past defaults or the rights of holders of notes to receive payments of principal or interest or premium, if any, or any other amounts due on the notes;
  - (vii) make any change in certain provisions relating to events of default and the amendment and waiver provisions;
  - (viii) impair the right to institute suit for the enforcement of any payment on or conversion of any note;
- (ix) modify our obligation to purchase notes at the option of holders or our right to redeem the notes, in a manner adverse to the holders:
  - (x) make any change that adversely affects the repurchase option of holders upon a fundamental change;
- (xi) reduce the percentage in aggregate principal amount of notes outstanding necessary to modify or amend this indenture or to waive any past default;
  - (xii) modify the provisions requiring notice to the trustee in any manner adverse to holders;
  - (xiii) reduce the quorum or voting requirements under this indenture;
- (xiv) modify in any manner the calculation of the interest make-whole payment or the qualifying fundamental change payment;
  - (xv) change the ranking of the notes in a manner adverse to the holders; or
  - (xvi) adversely affect the conversion rights of the holders of the notes.

Upon the satisfaction of and subject to certain conditions, the trustee will join us in the execution of such amended or supplemental indenture or the notes.

We are permitted to modify certain provisions of the indenture without the consent of the holders of the notes.

Neither we nor any of our subsidiaries will, directly or indirectly, pay or cause to be paid any consideration to or for the benefit of any holder of the notes for or as an inducement to any consent, waiver or amendment of any of the terms or provisions of the indenture or the notes unless such consideration is offered to be paid or is paid to all holders of the notes that consent, waive or agree to amend in the time frame in solicitation documents relating to the consent, waiver or agreement.

# Discharge

We may satisfy and discharge our obligations under the notes and the indenture by delivering to the securities registrar for cancellation all outstanding notes or by depositing with the trustee or delivering to the holders, as applicable, after the notes have become due and payable, whether at maturity, at any fundamental change repurchase date, upon conversion or otherwise, cash and/or (in the case of conversion) shares of common stock sufficient to pay all of the outstanding notes and paying all other sums payable under the indenture by us. Such discharge is subject to terms contained in the indenture.

# **Calculations in Respect of Notes**

Except as otherwise provided above, we will be responsible for making all calculations called for under the notes. These calculations include, but are not limited to, determinations of the stock price, the last reported sale prices of our common stock, accrued interest payable on the notes, the interest make-whole payment, the qualifying fundamental change payment, the daily VWAP and the conversion rate of the notes (including any adjustments thereof). We will make all these calculations in good faith and, absent manifest error, our calculations will be final and binding on holders of notes. We will provide a schedule of our calculations to each of the trustee and the conversion agent, and each of the trustee and the conversion agent is entitled to rely conclusively upon the accuracy of our calculations without independent verification. The trustee will forward our calculations to any holder of notes upon the written request of that holder.

## Reports

The indenture will provide that any annual or quarterly reports (on Form 10-K or Form 10-Q or any respective successor form) that we are required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act (excluding, for the avoidance of doubt, any such information, documents or reports, or portions thereof, subject to confidential treatment and any correspondence with the SEC) must be filed by us with the trustee within 15 days after the same are required to be filed with the SEC (giving effect to any grace period provided by Rule 12b-25 under the Exchange Act (or any successor rule)). Documents filed by us with the SEC via the EDGAR system (or any successor thereto) will be deemed to be delivered and filed with the trustee as of the time such documents are filed via EDGAR (or any successor thereto) it being understood that the trustee shall have no responsibility to determine if such filings have been made.

Notwithstanding the foregoing, at any time we are otherwise not required to file documents or reports with the SEC pursuant to Section 13 or 15(d) of the Exchange Act and the conversion obligation for the notes may be satisfied by the delivery of reference property consisting of, in whole or in part, another entity's common stock, American depositary receipts, ordinary shares or other common equity, as the case may be, we may satisfy our obligations under this covenant by delivering or filing the financial information of such entity within the same time periods and in the same manner described above. Delivery of reports to the trustee is for information purposes only, and the trustee's receipt thereof shall not constitute actual or constructive notice of any information contained therein including our compliance with any covenants under the indenture (as to which the trustee is entitled to certificates).

# **Compliance Certificate**

We and each guarantor will deliver to the trustee, within 90 days after the end of each fiscal year, an officers' certificate, one of the signatories of which will be our chief executive officer, chief financial officer or chief accounting officer, stating that a review of our activities and the activities of our subsidiaries during the preceding fiscal year has been made under the supervision of the signing officers with a view to determining whether we have kept, observed, performed and fulfilled our obligations under the indenture. The officers' certificate will also state, as to each such officer signing the certificate, that to the best of his or her knowledge we have kept, observed, performed and fulfilled each and every covenant contained in the indenture and the notes and are not in default in the performance or observance of any of the terms, provisions and conditions of this indenture or the notes (or, if a default or event of default will have occurred, describing all such defaults or events of default of which he or she may have knowledge and what action we are taking or proposes to take with respect thereto) and that to the best of his or her knowledge no event has occurred and remains in existence by reason of which payments on account of the principal of, interest or any other amounts due, if any, on the notes is prohibited or if such event has occurred, a description of the event and what action we are taking or propose to take with respect thereto.

As long as any of the notes are outstanding, we will deliver to the trustee, an officers' certificate specifying any event of default of which the officer becomes aware and specifying the event of default and what action we are taking or we propose to take with respect to the event of default.

## Trustee

We have appointed The Bank of New York Mellon Trust Company, N.A., the trustee under the indenture, as paying agent, conversion agent, note registrar and custodian for the notes. Currently, the trustee also serves as the trustee under the indenture governing the Existing Notes, and as the paying agent, conversion agent, note registrar and custodian for the Existing Notes. The trustee or its affiliates may provide banking and other services to us in the ordinary course of their business. The indenture contains certain limitations on the rights of the trustee, as long as it or any of its affiliates remains our creditor, to obtain payment of claims in certain cases or to realize on certain property received on any claim as security or otherwise. The trustee and its affiliates will be permitted to engage in other transactions with us. However, if the trustee or any affiliate continues to have any conflicting interest and a default occurs with respect to the notes, the trustee must eliminate such conflict or resign.

# Maintenance of Office or Agency

We will maintain in the Borough of Manhattan, The City of New York, an office or agency (which may be an office of the trustee or an affiliate of the trustee, registrar or co-registrar) where the notes may be surrendered for registration of transfer or for exchange. Notices and demands to or upon us in respect of the notes or the indenture may also be served at that office or agency. We will give prompt written notice to the trustee of the location, and any change in the location, of the office or agency in the Borough of Manhattan and any other designation or rescission of any other office or agency. If we fail to maintain the required office or agency or we fail to furnish the trustee with the address of that office or agency, such presentations, surrenders, notices and demands may be made or served at the corporate trust office of the trustee. We may also designate one or more other offices or agencies where the notes may be presented or surrendered for any or all such purposes and may from time to time rescind such designations. However, no additional designation or rescission will relieve us of our obligation to maintain an office or agency in the Borough of Manhattan, The City of New York. We have initially designated the office of the trustee, presently located at 101 Barclay Street, New York, NY 10286, as one such office or agency.

#### **Notices**

Any notice or communication by us, any guarantor or the trustee to the others is duly given if in writing and delivered in person or mailed by first class mail (registered or certified, return receipt requested), telecopier or overnight air courier guaranteeing next day delivery, to the addresses set forth in the indenture or as otherwise later designated.

All notices and communications (other than those sent to holders) will be deemed to have been duly given: at the time delivered by hand, if personally delivered; five business days after being deposited in the mail, postage prepaid, if mailed; when receipt acknowledged, if telecopied; and the next business day after timely delivery to the courier, if sent by overnight air courier guaranteeing next day delivery.

Any notice of communication to a holder will be with respect to global notes, sent in accordance with DTC's customary policies and procedures and, with respect to certificated notes, mailed by first class mail, certified or registered, return receipt requested, or by overnight air courier guaranteeing next day delivery to its address shown in the registrar's records. Failure to mail a notice or communication to a holder or any defect in it shall not affect its sufficiency with respect to other holders.

If we or a guarantor mails a notice or communication to holders, we or our guarantor will mail a copy to the trustee and each agent at the same time.

# **Governing Law**

The indenture will provide that it and the notes, and any claim, controversy or dispute arising under or related to the indenture or the notes, will be governed by and construed in accordance with the laws of the State of New York.

## **Book-Entry, Settlement and Clearance**

## The Global Notes

The notes will be initially issued in the form of one or more registered notes in global form, without interest coupons (the "global notes"). Upon issuance, each of the global notes will be deposited with the trustee as custodian for DTC and registered in the name of Cede & Co., as nominee of DTC.

Ownership of beneficial interests in a global note will be limited to persons who have accounts with DTC ("DTC participants") or persons who hold interests through DTC participants. We expect that under procedures established by DTC:

- upon deposit of a global note with DTC's custodian, DTC will credit portions of the principal amount of the global note to the accounts of the DTC participants designated by the underwriter; and
- ownership of beneficial interests in a global note will be shown on, and transfer of ownership of those interests will be effected only through, records maintained by DTC (with respect to interests of DTC participants) and the records of DTC participants (with respect to other owners of beneficial interests in the global note).

Beneficial interests in global notes may not be exchanged for notes in physical, certificated form except in the limited circumstances described below.

# Book-Entry Procedures for the Global Notes

All interests in the global notes will be subject to the operations and procedures of DTC and, therefore, you must allow for sufficient time in order to comply with these procedures if you wish to exercise any of your rights with respect to the notes. We provide the following summary of those operations and procedures solely for the convenience of investors. The operations and procedures of DTC are controlled by that settlement system and may be changed at any time. Neither we nor the underwriter are responsible for those operations or procedures.

# DTC has advised us that it is:

- a limited purpose trust company organized under the laws of the State of New York;
- · a "banking organization" within the meaning of the New York State Banking Law;
- · a member of the Federal Reserve System;
- a "clearing corporation" within the meaning of the Uniform Commercial Code; and
- a "clearing agency" registered under Section 17A of the Exchange Act.

DTC was created to hold securities for its participants and to facilitate the clearance and settlement of securities transactions between its participants through electronic book-entry changes to the accounts of its participants. DTC's participants include securities brokers and dealers, including the underwriter; banks and trust companies; clearing corporations and other organizations. Indirect access to DTC's system is also available to others such as banks, brokers, dealers and trust companies; these indirect participants clear through or maintain a custodial relationship with a DTC participant, either directly or indirectly. Investors who are not DTC participants may beneficially own securities held by or on behalf of DTC only through DTC participants or indirect participants in DTC.

So long as DTC's nominee is the registered owner of a global note, that nominee will be considered the sole owner or holder of the notes represented by that global note for all purposes under the indenture. Except as provided below, owners of beneficial interests in a global note:

- · will not be entitled to have notes represented by the global note registered in their names;
- · will not receive or be entitled to receive physical, certificated notes; and
- · will not be considered the owners or holders of the notes under the indenture for any purpose, including with respect to the giving of any direction, instruction or approval to the trustee under the indenture.

As a result, each investor who owns a beneficial interest in a global note must rely on the procedures of DTC to exercise any rights of a holder of notes under the indenture (and, if the investor is not a participant or an indirect participant in DTC, on the procedures of the DTC participant through which the investor owns its interest). Neither we nor the trustee, paying agent or conversion agent has any responsibility or liability for any act or omission of DTC.

Payments of principal and interest with respect to the notes represented by a global note will be made by the trustee to DTC's nominee as the registered holder of the global note. Neither we nor the trustee will have any responsibility or liability for the payment of amounts to owners of beneficial interests in a global note, for any aspect of the records relating to or payments made on account of those interests by DTC, or for maintaining, supervising or reviewing any records of DTC relating to those interests.

Payments by participants and indirect participants in DTC to the owners of beneficial interests in a global note will be governed by standing instructions and customary industry practice and will be the responsibility of those participants or indirect participants and DTC.

Transfers between participants in DTC will be effected under DTC's procedures and will be settled in same-day funds.

# **Certificated Notes**

Notes in physical, certificated form will be issued and delivered to each person that DTC identifies as a beneficial owner of the related notes only if:

- DTC notifies us at any time that it is unwilling or unable to continue as depositary for the global notes and a successor depositary is not appointed within 90 days;
- DTC ceases to be registered as a clearing agency under the Exchange Act and a successor depositary is not appointed within 90 days; or
- · an event of default with respect to the notes has occurred and is continuing and such beneficial owner requests that its notes be issued in physical, certificated form.

## MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

This section is a summary of certain material U.S. federal income tax considerations relating to the ownership and disposition of the notes and any shares of our common stock into which the notes may be converted. This summary does not provide a complete analysis of all potential tax considerations. The information provided below is based on existing U.S. federal income tax authorities, all of which are subject to change or differing interpretations, possibly with retroactive effect. There can be no assurance that the Internal Revenue Service (the "IRS") will not challenge one or more of the tax consequences described herein, and we have not obtained, and do not intend to obtain, a ruling from the IRS with respect to the U.S. federal income tax consequences of owning or disposing of the notes or common stock. The summary generally applies only to beneficial owners of the notes that purchase their notes in this offering for an amount equal to the "issue price" of the notes, which is the first price at which a substantial amount of the notes is sold for money to the public (not including sales to bond houses, brokers or similar persons or organizations acting in the capacity of underwriters, initial purchasers, placement agents or wholesalers), and that hold the notes and common stock as "capital assets" (generally, held for investment). This discussion does not purport to deal with all aspects of U.S. federal income taxation that may be relevant to a particular beneficial owner in light of the beneficial owner's circumstances (for example, persons subject to the alternative minimum tax provisions of the Internal Revenue Code of 1986, as amended (the "Code"), a U.S. holder (as defined below) whose "functional currency" is not the U.S. dollar or purchasers of notes in this offering whose shares of common stock we are repurchasing in certain privately negotiated transactions). Also, this discussion is not intended to be wholly applicable to all categories of investors, some of which may be subject to special rules (such as dealers in securities, traders in securities that elect to use a mark-to-market method of accounting, banks, thrifts, regulated investment companies, real estate investment trusts, insurance companies, tax-exempt entities, tax-deferred or other retirement accounts, certain former citizens or residents of the United States, persons holding notes or common stock as part of a conversion or integrated transaction or straddle, or persons deemed to sell notes or common stock under the constructive sale provisions of the Code). Finally, the summary does not address the potential application of the Medicare contribution tax, the effects of U.S. federal estate and gift tax laws or the effects of any applicable non-U.S., state or local laws.

INVESTORS CONSIDERING THE PURCHASE OF NOTES SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE CONSEQUENCES OF U.S. FEDERAL ESTATE OR GIFT TAX LAWS, NON-U.S., STATE AND LOCAL LAWS, AND TAX TREATIES.

As used herein, the term "U.S. holder" means a beneficial owner of notes or the common stock into which the notes may be converted that, for U.S. federal income tax purposes, is (1) a citizen or individual resident of the United States, (2) a corporation created or organized in or under the laws of the United States or any state of the United States, including the District of Columbia, (3) an estate the income of which is subject to U.S. federal income taxation regardless of its source, or (4) a trust if it (x) is subject to the primary supervision of a U.S. court and the control of one of more U.S. persons or (y) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

A "non-U.S. holder" is a beneficial owner (other than a partnership for U.S. federal income tax purposes) of notes or the common stock into which the notes may be converted that is not a U.S. holder.

If a partnership for U.S. federal income tax purposes is a beneficial owner of a note or shares of our common stock acquired upon conversion of a note, the tax treatment of a partner in the partnership will depend upon the status of the partner and the activities of the partnership. A beneficial owner of notes or shares of our common stock acquired upon conversion of a note that is a partnership, and partners in such a partnership, should consult their own tax advisors about the U.S. federal income tax consequences of owning and disposing of the notes and the shares of our common stock into which the notes may be converted.

## **U.S. Holders**

The following discussion is limited to the U.S. federal income tax consequences relevant to a U.S. holder (as defined above).

## Issue Price and Basis in the Notes

The "issue price" of a note is generally the first price at which a substantial portion of the notes is sold to persons other than bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers. In general, if the stated principal amount of a debt instrument exceeds its issue price by at least a statutorily defined *de minimis* amount, a U.S. holder will be required to include such excess in income as "original issue discount" over the term of the instrument in accordance with a constant-yield method, irrespective of the holder's regular method of tax accounting. Generally, original issue discount is considered to be *de minimis* if it is less than 0.25% of the instrument's stated principal amount multiplied by the number of complete years from the issue date to maturity. We anticipate, and therefore this discussion assumes, that the notes will not be issued with original issue discount for U.S. federal income tax purposes.

If the IRS were to successfully challenge our determination of the issue price for the notes, the income tax consequences for a U.S. holder might be materially different than as described below. For example, the notes may be considered to have original issue discount (or a greater amount of original issue discount) which may adversely affect the market value of the notes. U.S. holders should consult their own tax advisors as to the income tax consequences to them of such a successful challenge under the circumstances of this offering.

A U.S. holder's initial tax basis in the notes should be equal to the price paid by the holder (excluding any amounts attributable to pre-purchase accrued interest (as defined below)).

#### Interest

A U.S. holder will be required to recognize as ordinary income any stated interest paid or accrued on the notes and should be required to recognize as ordinary income any interest make-whole payment, as described above under "Description of Notes—Optional Redemption—Interest Make-Whole Payment" and any payment made upon a conversion in connection with a qualifying fundamental change, as described above under "Description of Notes—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," whether in cash or shares of our common stock, in accordance with such holder's regular method of tax accounting.

We may be required to make payments of additional interest to holders of the notes if we do not make certain filings, as described under "Description of Notes-Events of Default-Acceleration and Other Remedies," or if we exercise our optional right to redeem the notes and are required to make an interest make-whole payment, as described under "Description of Notes—Optional Redemption—Interest Make-Whole Payment" or upon certain conversions of the notes, as described under "Description of Notes-Conversion Rights-Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change," above. Due to a lack of relevant authority regarding certain of these payments, the applicability to the notes of U.S. Treasury regulations governing "contingent payment debt instruments" is uncertain. Although not free from doubt, we believe that there is only a remote possibility that we would be required to pay such additional interest and therefore we do not intend to treat the notes as subject to the special rules governing contingent payment debt instruments (which, if applicable, would affect the timing, amount and character of income with respect to a note). Our determination in this regard, while not binding on the IRS, is binding on U.S. holders unless they disclose their contrary position in the manner prescribed under applicable U.S. Treasury regulations. If the IRS successfully challenged this position, and the notes were treated as contingent payment debt instruments, U.S. holders would, among other things, be required to accrue interest income at a higher rate than the stated interest rate on the notes and to treat any gain recognized on the sale or other disposition of a note (including gain realized on the conversion of a note) as ordinary income rather than as capital gain. In the event we pay additional interest on the notes, U.S. holders should consult their own tax advisors regarding the treatment of such amounts. The remainder of this discussion assumes that the notes are not treated as contingent payment debt instruments.

For investors who purchase their notes after the date of original issuance of the notes a portion of the first stated interest payment received on the notes issued pursuant to this offering will be allocable to interest that accrued prior to the date acquired by such holder ("pre-purchase accrued interest"). A U.S. holder may treat this portion as a non-taxable return of capital. All references to interest in the remainder of this discussion exclude pre-purchase accrued interest except where explicitly stated.

# Sale, Exchange, Redemption or Other Taxable Disposition of the Notes

A U.S. holder generally will recognize capital gain or loss if such holder disposes of a note in a sale, exchange, redemption or other taxable disposition (other than the conversion of a note, the U.S. federal income tax consequences of which are described under "— Conversion of Notes" below). The U.S. holder's gain or loss generally will equal the difference between the amount realized by it (other than amounts attributable to accrued and unpaid interest and any interest make-whole payment) and its tax basis in the note. The U.S. holder's tax basis in the note generally will equal the amount it paid for the note. The portion of any amount realized that is attributable to accrued interest or any interest make-whole payment will not be taken into account in computing the U.S. holder's capital gain or loss. Instead, the portion attributable to accrued and unpaid interest will be recognized as ordinary interest income to the extent that the U.S. holder has not previously included the accrued interest in income and the portion attributable to any interest make-whole payment should be recognized as ordinary interest income. The gain or loss recognized by the U.S. holder on the disposition of the note will be long-term capital gain or loss if it has held the note for more than one year, or short-term capital gain or loss if it has held the note for one year or less, at the time of the disposition. Long-term capital gains of non-corporate taxpayers currently are taxed at preferential rates. Short-term capital gains are taxed at ordinary income rates. The deductibility of capital losses is subject to limitations.

Any portion of our common stock that is attributable to any interest make-whole payment made in connection with our optional right to redeem the notes should be taxed to such U.S. holder as ordinary income. A U.S. holder's basis in any shares of our common stock attributable to any interest make-whole payment will equal the fair market value of such shares when received. A U.S. holder's holding period in any shares of common stock attributable to any interest make-whole payment made in connection with out optional right to redeem the notes will begin on the day after they are received.

# Conversion of Notes

A U.S. holder generally should not recognize any gain or loss on the conversion of a note solely into shares of our common stock, except with respect to the fair market value of any cash or common stock attributable to (i) accrued and unpaid interest, and/or (ii) any payment made upon a conversion in connection with a qualifying fundamental change as described in "Description of Notes—Conversion Rights—Qualifying Fundamental Change Payment Upon Conversion in Connection With a Qualifying Fundamental Change." The U.S. holder's tax basis in the common stock received (excluding shares attributable to accrued and unpaid interest or any payment made upon a conversion in connection with a qualifying fundamental change) generally will equal its tax basis in the converted note. The U.S. holder's holding period in the common stock (other than shares attributable to accrued and unpaid interest or any payment made upon a conversion in connection with a qualifying fundamental change) will include the holding period in the converted note.

Any portion of our common stock that is attributable to accrued and unpaid interest on the notes not yet included in income by a U.S. holder will be taxed as ordinary income, and any portion of our common stock that is attributable to any payment made upon a conversion in connection with a qualifying fundamental change should be taxed to such U.S. holder as ordinary income. A U.S. holder's basis in any shares of common stock attributable to accrued and unpaid interest or any payment made upon conversion in connection with a qualifying fundamental change will equal the fair market value of such shares when received. A U.S. holder's holding period in any shares of common stock attributable to accrued and unpaid interest or any payment made upon conversion in connection with a qualifying fundamental change will begin on the day after they are received.

If we undergo a transaction of the type described under "Description of Notes—Conversion Rights—Recapitalizations, Reclassifications and Changes of our Common Stock," the conversion obligation may be adjusted so that holders would be entitled to convert the notes into the type of consideration that they would have been entitled to receive upon such transaction had the notes been converted into shares of our common stock immediately prior to such transaction. Depending on the facts and circumstances at the time of such transaction, such adjustment may result in a deemed exchange of the outstanding notes, which may be a taxable event for U.S. federal income tax purposes. U.S. holders are urged to consult their tax advisors regarding the U.S. federal income tax consequences of such an adjustment.

# Distributions

If, after a U.S. holder acquires shares of our common stock upon a conversion of a note, we make a distribution in respect of such common stock from our current or accumulated earnings and profits (as determined for U.S. federal income tax purposes), the distribution will be treated as a dividend and will be includible in a U.S. holder's income as ordinary income when received. If the distribution exceeds our current and accumulated earnings and profits, the excess will be treated first as a tax-free return of the U.S. holder's tax basis in its shares of common stock and any remaining excess will be treated as capital gain from the sale or exchange of the common stock. If the U.S. holder is a U.S. corporation, it generally will be able to claim a dividends-received deduction on a portion of any distribution taxed as a dividend, provided that certain holding period requirements are satisfied. Subject to certain exceptions, dividends received by certain non-corporate U.S. holders currently are taxed at the preferential rates applicable to long-term capital gains, provided that certain holding period requirements are met.

## Constructive Distributions

The terms of the notes allow for changes in the conversion rate of the notes under certain circumstances. A change in conversion rate that allows beneficial owners of notes to receive more shares of common stock on conversion may increase such beneficial owners' proportionate interests in our earnings and profits or assets. In that case, the beneficial owners of notes may be treated as though they received a taxable distribution in the form of our common stock or additional rights to acquire our common stock. A taxable constructive distribution would result, for example, if the conversion rate is adjusted to compensate beneficial owners of notes for distributions of cash or property to our stockholders. If an event occurs that dilutes the interests of stockholders or increases the interests of beneficial owners of the notes and the conversion rate of the notes is not adjusted (or not adequately adjusted), this also could be treated as a taxable stock distribution to beneficial owners of the notes. Conversely, if an event occurs that dilutes the interests of beneficial owners of the notes and the conversion rate is not adjusted (or not adequately adjusted), the resulting increase in the proportionate interests of our stockholders could be treated as a taxable stock distribution to the stockholders. Not all changes in the conversion rate that result in beneficial owners of notes receiving more common stock on conversion, however, increase such beneficial owners' proportionate interests in us. For instance, a change in conversion rate could simply prevent the dilution of the beneficial owners' interests upon a stock split or other change in capital structure. Changes to the conversion rate made pursuant to a bona fide reasonable adjustment formula are not treated as constructive distributions. Any taxable constructive distribution would be treated for U.S. federal income tax purposes in the same manner as an actual distribution on our common stock, as described in "-Distributions" above. It would result in a taxable dividend to the beneficial owners to the extent of our current or accumulated earnings and profits (with the beneficial owner's tax basis in its note or common stock (as the case may be) being increased by the amount of such dividend), with any excess treated first as a tax-free return of the beneficial owner's tax basis in its note or common stock (as the case may be) and then as capital gain. Non-corporate U.S. holders should consult their tax advisors regarding whether any taxable constructive dividend would be eligible for the preferential rates and corporate holders should consult their tax advisors regarding the dividends-received deduction, both described in "—Distributions" above.

On April 12, 2016, the IRS issued proposed regulations that address the amount and timing of constructive distributions, obligations of withholding agents and filing and notice obligations of issuers. The proposed regulations, if adopted as proposed, would provide generally that (1) the amount of a constructive distribution is the excess of (a) the fair market value of the right to acquire shares immediately after an "applicable adjustment," over (b) the fair market value of the right to acquire shares without the adjustment, (2) the constructive distribution occurs at the earlier of (a) the date the adjustment occurs under the terms of the notes, and (b) the date of the actual distribution of cash or property that results in the constructive distribution, and (3) information reporting is required regarding the amount of any constructive distribution. Although the regulations would be effective for constructive distributions occurring on or after the date on which the regulations are adopted as final regulations, investors and withholding agents may rely on them prior to that date under certain circumstances. Any backup withholding required with respect to such a constructive distribution may be satisfied by withholding such amounts from shares or current or subsequent payments of cash payable to such U.S. holder.

## Sale, Exchange or Other Disposition of Common Stock

A U.S. holder generally will recognize capital gain or loss on a sale, exchange or other disposition of shares of our common stock. The U.S. holder's gain or loss will equal the difference between the amount realized by the holder and its tax basis in the shares of common stock. The amount realized by the U.S. holder will include the amount of any cash and the fair market value of any other property received for the shares of common stock. The gain or loss recognized by a U.S. holder on a sale, exchange or other disposition of shares of our common stock will be long-term capital gain or loss if its holding period in the shares of common stock is more than one year, or short-term capital gain or loss if its holding period in the shares of common stock is one year or less, at the time of the transaction. Long-term capital gains of non-corporate taxpayers are currently taxed at preferential rates. Short-term capital gains are taxed at ordinary income rates. The deductibility of capital losses is subject to limitations.

## Non-U.S. Holders

The following discussion is limited to the U.S. federal income tax consequences relevant to a non-U.S. holder (as defined above).

## Interest

Subject to the discussions below regarding FATCA and under "—Income or Gains Effectively Connected with a U.S. Trade or Business," payments of interest on the notes to non-U.S. holders generally will qualify as "portfolio interest," and thus will be exempt from U.S. federal income tax, including withholding of such tax, if the non-U.S. holder certifies its non-U.S. status as described below.

The portfolio interest exemption will not apply to payments of interest to a non-U.S. holder that:

- · owns, actually or constructively, shares of our stock representing at least 10% of the total combined voting power of all classes of our stock entitled to vote; or
- · is a "controlled foreign corporation" that is related, directly or indirectly, to us through sufficient actual or constructive stock ownership.

The portfolio interest exemption applies only if the non-U.S. holder certifies its non-U.S. status. A non-U.S. holder can meet this certification requirement by providing a properly completed and executed IRS Form W-8BEN or W-8BEN-E or appropriate substitute form prior to the payment. If the non-U.S. holder holds the note through a financial institution or other agent acting on its behalf, it will be required to provide appropriate documentation to the agent. Special certification rules apply to non-U.S. holders that are pass-through entities.

#### Dividends

Subject to the discussion below under "-Income or Gains Effectively Connected with a U.S. Trade or Business" and the discussions below regarding backup withholding and FATCA, dividends paid to a non-U.S. holder on shares of our common stock received on conversion of a note, as well as any taxable constructive dividends resulting from certain adjustments (or failures to make adjustments) to the number of shares of common stock to be issued on conversion of a note (as described under "-U.S. Holders--Constructive Distributions" above), generally will be subject to U.S. withholding tax at a 30% rate. The withholding tax on dividends (including any taxable constructive dividends), however, may be reduced under the terms of an applicable income tax treaty between the United States and the non-U.S. holder's country of residence. A non-U.S. holder should demonstrate its eligibility for a reduced rate of withholding under an applicable income tax treaty by timely delivering a properly completed and executed IRS Form W-8BEN or W-8BEN-E or appropriate substitute form. A non-U.S. holder that is eligible for a reduced rate of withholding under the terms of an applicable income tax treaty may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Because a taxable constructive dividend received by a non-U.S. holder would not give rise to any cash from which any applicable withholding tax could be satisfied, if a withholding agent pays withholding taxes on the non-U.S. holder's behalf with respect to amounts which are includible in the non-U.S. holder's income but which are not paid in cash, the withholding agent may set off any such withholding tax against any other payments owed to the non-U.S. holder, including cash payments of interest payable on the notes, shares of our common stock upon conversion, or proceeds from a sale subsequently paid or credited to the non-U.S. holder. Non-U.S. holders should consult their tax advisors as to whether they can obtain a refund for all or a portion of any tax withheld.

## Sale, Exchange, Redemption, Conversion or Other Taxable Dispositions of Notes or Common Stock

Subject to the discussions below regarding backup withholding and FATCA, non-U.S. holders generally will not be subject to U.S. federal income or withholding tax on any gain realized on the sale, exchange, redemption, conversion or other disposition of notes or shares of our common stock (other than with respect to payments attributable to accrued interest, any interest make-whole payment, or any payment made upon conversion in connection with a qualifying fundamental change which will be taxed as described under "—Interest" above) unless:

- the gain is effectively connected with the conduct by the non-U.S. holder of a U.S. trade or business (and, generally, if required by an applicable income tax treaty, is attributable to a U.S. permanent establishment or fixed base maintained by the non-U.S. holder), in which case the gain would be subject to tax as described below under "—Income or Gains Effectively Connected with a U.S. Trade or Business";
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the year of disposition and certain other conditions apply, in which case, except as otherwise provided by an applicable income tax treaty, the gain, which may be offset by certain U.S.-source capital losses, would be subject to a flat 30% tax, even though the individual is not considered a resident of the United States; or
- the rules of the Foreign Investment in Real Property Tax Act (or "FIRPTA") (described below) treat the gain as effectively connected with a U.S. trade or business.

The FIRPTA rules may apply to a sale, exchange or other disposition of notes or shares of our common stock by a non-U.S. holder if, at any time during the five-year period ending on the date of the sale, exchange or other disposition (or, if shorter, the non-U.S. holder's holding period for the notes or common stock disposed of), we are or were a "U.S. real property holding corporation" (or "USRPHC") for U.S. federal income tax purposes. In general, we would be a USRPHC if interests in U.S. real estate composed at least 50% of the fair market value of our worldwide real property interests and assets used or held for use in a trade or business. We believe that we currently are not, and will not become in the future, a USRPHC.

## Income or Gains Effectively Connected with a U.S. Trade or Business

If any interest or constructive dividends on the notes, dividends on shares of our common stock, or gain from the sale, exchange, redemption, conversion or other disposition of the notes or shares of our common stock is effectively connected with a U.S. trade or business conducted by a non-U.S. holder, then the income or gain will be subject to U.S. federal income tax on a net-income basis at the regular graduated rates and generally in the same manner applicable to U.S. holders. If the non-U.S. holder is eligible for the benefits of a tax treaty between the United States and its country of residence, any "effectively connected" income or gain generally will be subject to U.S. federal income tax on a net-income basis only if it is also attributable to a permanent establishment or fixed base maintained by it in the United States. Payments of interest or dividends that are effectively connected with a U.S. trade or business conducted by the non-U.S. holder (and, if an applicable tax treaty requires, attributable to a U.S. permanent establishment or fixed base), and therefore included in the gross income of a non-U.S. holder, will not be subject to 30% withholding, provided that it claims exemption from withholding by timely filing a properly completed and executed IRS Form W-8ECI, or any appropriate substitute or successor form as the IRS designates, as applicable, prior to payment. If the non-U.S. holder is a corporation for U.S. federal income tax purposes, that portion of its earnings and profits that is effectively connected with its U.S. trade or business generally will also be subject to a "branch profits tax." The branch profits tax rate is generally 30%, although an applicable income tax treaty might provide for a lower rate.

## **Backup Withholding and Information Reporting**

The Code and the U.S. Treasury regulations generally require persons who make specified payments to report the payments to the IRS. Among the specified payments are interest, dividends, and proceeds paid by brokers to their customers. This reporting regime is reinforced by "backup withholding" rules, which generally require the payor to withhold from payments subject to information reporting if the recipient has failed to provide a taxpayer identification number to the payor, furnished an incorrect identification number, failed to comply with applicable certification requirements or been repeatedly notified by the IRS that it has failed to report interest or dividends on its U.S. federal income tax returns. The backup withholding rate is currently 24%.

Payments of interest or dividends (including constructive dividends) to U.S. holders of notes or shares of our common stock and payments made to U.S. holders by a broker upon a sale of notes or common stock generally will be subject to information reporting and backup withholding, unless the U.S. holder (1) is an exempt recipient, or (2) in the case of backup withholding, provides the payor with a correct taxpayer identification number and complies with applicable certification requirements. If a sale is made through a foreign office of a foreign broker, however, the sale generally will not be subject to either information reporting or backup withholding. This exception may not apply if the foreign broker is owned or controlled by U.S. persons, or is engaged in a U.S. trade or business.

The applicable withholding agent must report annually to the IRS the interest and/or dividends (including constructive dividends) paid to each non-U.S. holder and the amount of tax withheld, if any, with respect to such interest and/or dividends, including any tax withheld pursuant to the rules described under "—Non-U.S. Holders—Interest" and "—Non-U.S. Holders—Dividends" above and "—FATCA" below. Copies of these reports may be made available to tax authorities in the country where the non-U.S. holder resides. Payments to non-U.S. holders of dividends on our common stock or interest or constructive dividends on the notes may be subject to backup withholding unless the non-U.S. holder certifies its non-U.S. status on a properly completed and executed IRS Form W-8BEN or W-8BEN-E or appropriate substitute form. Payments made to non-U.S. holders by a broker upon a sale of the notes or our common stock will not be subject to information reporting (except to the extent such payments are subject to withholding under FATCA, discussed below) or backup withholding as long as the non-U.S. holder certifies its non-U.S. status or otherwise establishes an exemption.

Any amounts withheld from a payment to a U.S. holder or non-U.S. holder with respect to the notes or shares of our common stock under the backup withholding rules generally will be allowed as a refund or can be credited against any U.S. federal income tax liability of the holder, provided the required information is timely furnished to the IRS.

# **FATCA**

Provisions commonly referred to as FATCA generally impose a 30% U.S. withholding tax on certain U.S.- source payments, including interest (including original issue discount), dividends and other fixed or determinable annual or periodical gain, profits, and income, and on the gross proceeds from a sale or other disposition after December 31, 2018 of property of a type which can produce U.S.-source interest or dividends ("Withholdable Payments"), if paid to a foreign financial institution (whether as a beneficial owner or intermediary), unless such institution (i) enters into an agreement with the Treasury Department to collect and provide to the Treasury Department substantial information regarding its U.S. account holders, including certain account holders that are foreign entities with U.S. owners, (ii) satisfies the requirements of an intergovernmental agreement entered into by such institution's country of residence and the United States or (iii) qualifies for an exemption. The legislation also generally imposes a withholding tax of 30% on Withholdable Payments made to a non-financial foreign entity unless such entity provides the withholding agent with a certification that it does not have any substantial U.S. owners or a certification identifying the direct and indirect substantial U.S. owners of the entity, or unless an exemption applies. An intergovernmental agreement between the United States and the non-U.S. entity's jurisdiction may modify these requirements.

These withholding requirements generally currently apply to payments of interest and dividends (including constructive dividends) on the notes or shares of our common stock. They will apply to payments of gross proceeds from a sale or other disposition of notes or shares of our common stock after December 31, 2018. If FATCA withholding is imposed, a beneficial owner (other than certain foreign financial institutions) generally will be entitled to a refund of any amounts withheld by filing a U.S. federal income tax return and, in the case of a non-financial foreign entity, providing the IRS with certain information regarding its substantial U.S. owners (unless an exception applies). Holders are urged to consult their tax advisors regarding the possible implications of FATCA on their ownership and disposition of the notes and any shares of our common stock.

# **Dividend Equivalents**

Section 871(m) of the Code requires withholding (of up to 30%, depending on whether a treaty applies) on certain financial instruments to the extent that the payments or deemed payments on the financial instruments are treated as being contingent upon or determined by reference to U.S.-source dividends. Under Treasury regulations and other guidance issued in connection with Section 871(m), Section 871(m) will apply to financial instruments issued in 2018 only if they are "delta-one." A "delta-one" instrument is one in which, the ratio of the change in the fair market value of the instrument to a small change in the fair market value of the property referenced by the instrument is equal to 1.00. We do not believe that the notes should be treated as delta-one instruments. Accordingly, non-U.S. holders of the notes should not be subject to tax under Section 871(m). Non-U.S. holders should consult with their tax advisors regarding the application of Section 871(m) and the regulations thereunder in respect of their acquisition and ownership of the notes.

## UNDERWRITING

We entered into an underwriting agreement with Oppenheimer & Co. Inc., which we refer to as the underwriter, on October , 2018. The underwriting agreement provides for the purchase of the aggregate principal amount of the notes offered hereby by the underwriter. Subject to the terms and conditions of the underwriting agreement, the underwriter has agreed to purchase the principal amount of notes set forth opposite its name below:

|                        | Principal       |
|------------------------|-----------------|
| Underwriter            | Amount of Notes |
| Oppenheimer & Co. Inc. | \$              |
|                        |                 |
| Total                  | \$              |

The underwriter has agreed to purchase all of the notes offered by this prospectus supplement if any are purchased.

The notes offered hereby are expected to be ready for delivery against payment therefor in book-entry form through the facilities of the Depository Trust Company on or about October , 2018.

The underwriter is offering the notes subject to various conditions and may reject all or part of any order. The underwriter has advised us that it proposes to offer the notes directly to the public at the public offering price that appears on the cover page of this prospectus supplement. After the notes are released for sale to the public, the underwriter may change the offering price and other selling terms at various times.

The following table provides information regarding the amount of the discount to be paid to the underwriter by us, before expenses:

|                                  | Per  |       |
|----------------------------------|------|-------|
|                                  | Note | Total |
| Public offering price            | \$   | \$    |
| Underwriting discount            | \$   | \$    |
| Proceeds, before expenses, to us | \$   | \$    |

We estimate that our total expenses of the offering, excluding the estimated underwriting discount, will be approximately \$460,000, which includes the fees and expenses for which we have agreed to reimburse the underwriter, provided that any such fees and expenses (together with any such fees and expenses reimbursed pursuant to the common stock offering) may not exceed \$250,000 in the aggregate without our prior approval (such approval not to be unreasonably withheld, conditioned or delayed).

We have agreed to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act.

We and our officers and directors have agreed to a 90-day "lock-up" with respect to shares of our common stock and other of our securities that we and they beneficially own, including securities that are convertible into shares of common stock and securities that are exchangeable or exercisable for shares of common stock. This means that, subject to certain exceptions, for a period of 90 days following the date of this prospectus supplement, we and such persons may not offer, sell, pledge or otherwise dispose of these securities without the prior written consent of the underwriter.

The underwriter has advised us that it does not expect to engage in any over-allotment or stabilization transactions in connection with the offering of the notes.

Electronic Delivery of Preliminary Prospectus: A prospectus supplement in electronic format may be delivered to potential investors by the underwriter. The prospectus supplement in electronic format will be identical to the paper version of such preliminary prospectus supplement. Other than the prospectus supplement in electronic format, the information on the underwriter's website and any information contained in any other website maintained by the underwriter is not part of this prospectus supplement, the accompanying prospectus or the registration statement of which this prospectus supplement and the accompanying prospectus form a part.

From time to time, the underwriter and its affiliates have provided, and may in the future provide, various investment banking, financial advisory and other services to us and our affiliates for which services they have received, and may in the future receive, customary fees. In the course of their businesses, the underwriter and its affiliates may actively trade our securities or loans for their own account or for the accounts of customers, and, accordingly, the underwriter and its affiliates may at any time hold long or short positions in such securities or loans. Except for services provided in connection with this offering and except as described below, the underwriter has not provided any investment banking or other financial services during the 180-day period preceding the date of this prospectus supplement and we do not expect to retain any underwriter to perform any investment banking or other financial services for at least 90 days after the date of this prospectus supplement. The underwriter acted as an initial purchaser in our May 2018 offering of senior secured convertible notes and in connection therewith received a discount of \$468,750, reimbursement of out-of-pocket expenses of \$300,000 and a ten-month right of first refusal to act as lead bookrunning underwriter, lead initial purchaser, lead placement agent/selling agent, or lead arranger, on any financing conducted by us. The underwriter is also acting as the sole book-running manager of the common stock offering and will receive a pro rata portion of the 6.25% discount of the gross proceeds of the common stock offering and reimbursement of its out-of-pocket fees and expenses, provided that any such fees and expenses (together with any such fees and expenses reimbursed pursuant to this offering) may not exceed \$250,000 in the aggregate without our prior approval (such approval not to be unreasonably withheld, conditioned or delayed).

# Notice to Non-U.S. Investors

Canada. The common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriter is not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

United Kingdom. The underwriter has represented and agreed that:

- it has not made or will not make an offer of the securities to the public in the United Kingdom within the meaning of section 102B of the Financial Services and Markets Act 2000 (as amended) (FSMA) except to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities or otherwise in circumstances which do not require the publication by us of a prospectus pursuant to the Prospectus Rules of the Financial Services Authority (FSA);
- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) to persons who have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 or in circumstances in which section 21 of FSMA does not apply to us; and
- it has complied with and will comply with all applicable provisions of FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

*Switzerland*. The securities will not be offered, directly or indirectly, to the public in Switzerland and this prospectus does not constitute a public offering prospectus as that term is understood pursuant to article 652a or 1156 of the Swiss Federal Code of Obligations.

European Economic Area. In relation to each Member State of the European Economic Area (the "EEA") which has implemented the European Prospectus Directive (each, a "Relevant Member State"), an offer of our shares may not be made to the public in a Relevant Member State other than:

to any legal entity which is a qualified investor, as defined in the European Prospectus Directive;

- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150 natural or legal persons (other than qualified investors as defined in the European Prospectus Directive), subject to obtaining the prior consent of the relevant dealer or dealers nominated by us for any such offer; or
- in any other circumstances falling within Article 3(2) of the European Prospectus Directive, provided that no such offer of our shares shall require us or any underwriter to publish a prospectus pursuant to Article 3 of the European Prospectus Directive or supplement prospectus pursuant to Article 16 of the European Prospectus Directive

For the purposes of this description, the expression an "offer to the public" in relation to the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe for the securities, as the expression may be varied in that Relevant Member State by any measure implementing the European Prospectus Directive in that member state, and the expression "European Prospectus Directive" means Directive 2003/71/EC (and amendments hereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State) and includes any relevant implementing measure in each Relevant Member State. The expression 2010 PD Amending Directive means Directive 2010/73/EU.

Israel. In the State of Israel this prospectus shall not be regarded as an offer to the public to purchase shares of common stock under the Israeli Securities Law, 5728 – 1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728–1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions (the "Addressed Investors"); or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728 – 1968, subject to certain conditions (the "Qualified Investors"). The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728 – 1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for our common stock to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors.

Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728 – 1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728 – 1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728 – 1968 and the regulations promulgated thereunder in connection with the offer to be issued common stock; (iv) that the shares of common stock that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728 – 1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728 – 1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor's name, address and passport number or Israeli identification number.

We have not authorized and do not authorize the making of any offer of securities through any financial intermediary on our behalf, other than offers made by the underwriter and its respective affiliates, with a view to the final placement of the securities as contemplated in this document. Accordingly, no purchaser of the shares, other than the underwriter, is authorized to make any further offer of shares on our behalf or on behalf of the underwriter.

#### LEGAL MATTERS

The validity of the securities offered by this prospectus supplement will be passed upon for us by K&L Gates, LLP, Charlotte, North Carolina. Lowenstein Sandler LLP, New York, New York, is acting as counsel for the underwriter in connection with this offering.

#### **EXPERTS**

The consolidated financial statements of Akoustis Technologies, Inc. and its wholly-owned subsidiaries included in the Company's Annual Report on Form 10-K for the fiscal year ended June 30, 2018 have been audited by Marcum LLP, an independent registered public accounting firm, as stated in its report which is incorporated by reference herein, and has been so incorporated in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC permits us to "incorporate by reference" the information and reports we file with it. This means that we can disclose important information to you by referring to another document. The information that we incorporate by reference is considered to be part of this prospectus supplement, and later information that we file with the SEC automatically updates and supersedes this information. We incorporate by reference the documents listed below, except to the extent information in those documents is different from the information contained in this prospectus supplement, and all future documents filed with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act until we terminate the offering of these securities:

- · our Annual Report on Form 10-K for the fiscal year ended June 30, 2018, which was filed on August 29, 2018;
- · our Current Reports on Form 8-K, which were filed on July 27, 2018 and October 1, 2018 (except with respect to Item 7.01);
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended June 30, 2018 from our definitive proxy statement on Schedule 14A (other than information furnished rather than filed), filed with the SEC on September 18, 2018;
- the description of our common stock contained in our Registration Statement on Form 8-A (File No. 001-38029) filed with the SEC on March 10, 2017, including any amendment or report filed for the purpose of updating such description; and
- · all documents we file with the SEC under Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus supplement and prior to the termination of this offering made by way of this prospectus supplement.

To the extent that any statement in this prospectus supplement is inconsistent with any statement that is incorporated by reference and that was made on or before the date of this prospectus supplement, the statement in this prospectus supplement shall supersede such incorporated statement. The incorporated statement shall not be deemed, except as modified or superseded, to constitute a part of this prospectus supplement or the registration statement. Statements contained in this prospectus supplement as to the contents of any contract or other document are not necessarily complete and, in each instance, we refer you to the copy of each contract or document filed as an exhibit to our various filings made with the SEC.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents to:

Akoustis Technologies, Inc. 9805 Northcross Center Court, Suite A Huntersville, North Carolina 28078 Attention: Corporate Secretary Telephone: (704) 997-5735

Copies of the above reports may also be accessed from our web site at www.akoustis.com. We have authorized no one to provide you with any information that differs from that contained in this prospectus supplement. Accordingly, you should not rely on any information that is not contained in this prospectus supplement. You should not assume that the information in this prospectus supplement is accurate as of any date other than the date of the front cover of this prospectus supplement.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus supplement will be deemed modified, superseded or replaced for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement modifies, supersedes or replaces such statement.

# WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement under the Securities Act (SEC File No. 333- 227637) that registers the securities offered hereby. The registration statement, including the exhibits and schedules attached thereto and the information incorporated by reference therein, contains additional relevant information about the securities and our company, which we are allowed to omit from this prospectus supplement pursuant to the rules and regulations of the SEC. In addition, we file annual, quarterly and current reports and proxy statements and other information with the SEC. You may read and copy any document that we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. Our SEC filings are also available on the SEC's website at www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at www.akoustis.com. We have not incorporated by reference into this prospectus supplement the information on our website and it is not a part of this document.



# Akoustis Technologies, Inc.

**Prospectus** 

\$100,000,000

Common Stock Preferred Stock Debt Securities Warrants Rights Units

This prospectus relates to common stock, preferred stock, debt securities, warrants, rights and units that Akoustis Technologies, Inc. may sell from time to time in one or more offerings on terms to be determined at the time of sale. We will provide specific terms of these securities in supplements to this prospectus. You should read this prospectus and any supplement carefully before you invest. This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement for those securities.

These securities may be sold directly by us, through dealers or agents designated from time to time, to or through underwriters or through a combination of these methods. See "Plan of Distribution" in this prospectus. We may also describe the plan of distribution for any particular offering of these securities in any applicable prospectus supplement. If any agents, underwriters or dealers are involved in the sale of any securities in respect of which this prospectus is being delivered, we will disclose their names and the nature of our arrangements with them in a prospectus supplement. The net proceeds we expect to receive from any such sale will also be included in a prospectus supplement.

Our common stock trades on the Nasdaq Capital Market under the symbol "AKTS." On September 27, 2018, the last reported sale price for our common stock was \$8.33 per share.

INVESTING IN OUR SECURITIES INVOLVES RISKS. YOU SHOULD REVIEW CAREFULLY THE RISKS AND UNCERTAINTIES DESCRIBED UNDER THE HEADING "RISK FACTORS" CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT AND ANY RELATED FREE WRITING PROSPECTUS, AND UNDER SIMILAR HEADINGS IN OTHER DOCUMENTS THAT ARE INCORPORATED BY REFERENCE INTO THIS PROSPECTUS OR ANY SUCH PROSPECTUS SUPPLEMENT. SEE "RISK FACTORS" ON PAGE 3 OF THIS PROSPECTUS.

| Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or |
|---|
| passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.                    |

The date of this prospectus is October 5, 2018.

# Table of Contents

|  | Page |
|--|------|
| ABOUT THIS PROSPECTUS  | 1    |
| FORWARD-LOOKING STATEMENTS   | 1    |
| THE COMPANY  | 2    |
| RISK FACTORS   | 3    |
| USE OF PROCEEDS  | 3    |
| DESCRIPTION OF COMMON STOCK WE MAY OFFER   | 3    |
| DESCRIPTION OF PREFERRED STOCK WE MAY OFFER  | 4    |
| DESCRIPTION OF DEBT SECURITIES WE MAY OFFER  | 6    |
| DESCRIPTION OF WARRANTS WE MAY OFFER   | 15   |
| DESCRIPTION OF UNITS WE MAY OFFER  | 17   |
| DESCRIPTION OF RIGHTS WE MAY OFFER   | 17   |
| CERTAIN PROVISIONS OF DELAWARE LAW AND OF THE COMPANY'S CERTIFICATE OF INCORPORATION |      |
| AND BY-LAWS  | 19   |
| PLAN OF DISTRIBUTION   | 20   |
| LEGAL MATTERS  | 21   |
| EXPERTS  | 21   |
| WHERE YOU CAN FIND MORE INFORMATION  | 22   |
| INCORPORATION BY REFERENCE   | 22   |

#### ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC, utilizing a "shelf' registration process. Under this shelf process, we may from time to time sell any combination of securities described in this prospectus in one or more offerings.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities under this shelf registration process, we will provide a prospectus supplement that will contain specific information about the terms of the securities being offered. That prospectus supplement may include a discussion of any risk factors or other special considerations that apply to those securities. The prospectus supplement may also add, update or change information contained in this prospectus. If there is any inconsistency between the information in this prospectus and a prospectus supplement, you should rely on the information in that prospectus supplement. You should read both this prospectus and any applicable prospectus supplement together with additional information described below under the headings "Where You Can Find More Information" and "Incorporation by Reference."

When acquiring any securities discussed in this prospectus, you should rely on the information provided in this prospectus and the prospectus supplement, including the information incorporated by reference. Neither we, nor any underwriters or agents, have authorized anyone to provide you with different information. We are not offering the securities in any state where such an offer is prohibited. You should not assume that the information in this prospectus, any prospectus supplement, or any document incorporated by reference, is truthful or complete at any date other than the date mentioned on the cover page of those documents. You should also carefully review the section entitled "Risk Factors", which highlights certain risks associated with an investment in our securities, to determine whether an investment in our securities is appropriate for you.

Unless otherwise stated or the context requires otherwise, references to "Akoustis", the "Company," "we," "us" or "our" are to Akoustis Technologies, Inc and its wholly owned consolidated subsidiary, Akoustis, Inc., each a Delaware corporation.

#### FORWARD-LOOKING STATEMENTS

Certain information set forth in this prospectus or incorporated by reference in this prospectus may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are intended to be covered by the "safe harbor" created by those sections. Forward-looking statements include information concerning our possible future results of operations, business strategies, competitive position, potential growth opportunities, potential market opportunities and the effects of competition. Forward-looking statements include all statements that are not historical facts and can be identified by terms such as "anticipates," "believes," "could," "seeks," "estimates," "expects," "forecasts, "may" "intends," "may," "plans," "potential," "predicts," "projects," "should," "will," "would" or similar expressions and the negatives of those terms.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We discuss these risks in greater detail in the "Risk Factors" section and elsewhere in this prospectus. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, forward-looking statements represent our management's beliefs and assumptions only as of the date of this prospectus. You should read this prospectus and the documents that we have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

#### THE COMPANY

Akoustis® is a development-stage company focused on developing, designing, and manufacturing innovative radio frequency ("RF") filter products for the mobile wireless device industry, including for products such as smartphones and tablets, cellular infrastructure equipment, and WiFi premise equipment. Located between the device's antenna and its digital backend, the RF front-end ("RFFE") is the circuitry that performs the analog signal processing and contains components such as amplifiers, filters and switches. To construct the resonators that are the building blocks for the RF filter, we have developed a new and proprietary microelectromechanical systems MEMS-based bulk acoustic wave ("BAW") technology and unique manufacturing flow, called XBAW. Our XBAW process incorporates high purity piezoelectric materials to explore high power, high frequency and wide bandwidth applications. Filters are critical in selecting and rejecting signals, and their performance enables differentiation in the modules defining the RFFE. We currently build pre-production RF filter circuits, using our first generation XBAW wafer process, in our 122,000-square foot wafer-manufacturing plant located in Canandaigua, New York, which we acquired in June 2017.

#### Corporate Information

Our principal executive offices are located at 9805 Northcross Center Court, Suite A, Huntersville, North Carolina 28078. Our telephone number is (704) 997-5735. Our website address is www.akoustis.com. The information on, or that can be accessed through, our website is not part of this prospectus.

#### RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully consider the risk factors described in our Annual Report on Form 10-K for our most recent fiscal year (together with any material changes thereto contained in subsequent filed Quarterly Reports on Form 10-Q) and those contained in our other filings with the SEC, which are incorporated by reference in this prospectus and any accompanying prospectus supplement.

The prospectus supplement applicable to each type or series of securities we offer may contain a discussion of risks applicable to the particular types of securities that we are offering under that prospectus supplement. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the caption "Risk Factors" in the applicable prospectus supplement, together with all of the other information contained in the prospectus supplement or appearing or incorporated by reference in this prospectus. These risks could materially affect our business, results of operations or financial condition and cause the value of our securities to decline. You could lose all or part of your investment.

#### USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, the net proceeds from the sale of the securities will be used for working capital and general corporate purposes, which may include acquisitions, retirement of debt and other business opportunities.

#### DESCRIPTION OF COMMON STOCK WE MAY OFFER

The following summary description of our common stock is based on the provisions of our certificate of incorporation (the "Certificate of Incorporation") and by-laws (the "By-Laws"), and the applicable provisions of the General Corporation Law of the State of Delaware (the "DGCL"). This information may not be complete in all respects and is qualified entirely by reference to the provisions of our Certificate of Incorporation and our By-Laws and the DGCL. For information on how to obtain copies of our Certificate of Incorporation and By-Laws, see the discussion below under the heading "Where You Can Find More Information."

We may offer our common stock issuable upon the conversion of debt securities or preferred stock and upon the exercise of warrants.

#### **Authorized Capital**

We currently have authority to issue 45,000,000 shares of our common stock, par value of \$0.001 per share. As of September 21, 2018, 22,292,547 shares of our common stock were issued and outstanding.

## **Voting Rights**

Except as otherwise required by Delaware law, at every annual or special meeting of stockholders, every holder of common stock is entitled to one vote per share. There is no cumulative voting in the election of directors.

#### **Dividend and Liquidation Rights**

The holders of outstanding shares of common stock are entitled to receive dividends out of assets or funds legally available for the payment of dividends at such times and in such amounts as the Company's board of directors (the "Board of Directors") from time to time may determine. We have never paid any cash dividends on our common stock and do not anticipate paying any cash dividends on our common stock in the foreseeable future. We intend to retain future earnings to fund ongoing operations and future capital requirements. Any future determination to pay dividends will be at the discretion of our Board of Directors and will be dependent upon financial condition, results of operations, capital requirements and such other factors as the Board of Directors deems relevant.

The common stock is not entitled to pre-emptive rights and is not subject to conversion or redemption. Upon liquidation, dissolution or winding up of our company, the assets legally available for distribution to stockholders are distributable ratably among the holders of the common stock after payment of liquidation preferences, if any, on any outstanding payment of other claims of creditors.

Our shares of common stock are listed on the Nasdaq Capital Market under the symbol "AKTS."

#### DESCRIPTION OF PREFERRED STOCK WE MAY OFFER

This section describes the general terms and provisions of the preferred stock we may offer. This information may not be complete in all respects and is qualified entirely by reference to our Certificate of Incorporation or certificate of designations, with respect to each series of preferred stock. The specific terms of any series will be described in a prospectus supplement. Those terms may differ from the terms discussed below. Any series of preferred stock we issue will be governed by our Certificate of Incorporation and by the certificate of designations relating to that series. We will file the certificate of designations with the SEC and incorporate it by reference as an exhibit to our registration statement at or before the time we issue any preferred stock of that series.

#### **Authorized Preferred Stock**

Our Certificate of Incorporation authorizes us to issue 5,000,000 shares of preferred stock, par value \$0.001 per share. As of September 21, 2018, we had no shares of preferred stock issued and outstanding. Our authorized but unissued shares of preferred stock are available for issuance without further action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange or automated quotation system on which our securities may be listed or traded.

Our Board of Directors has the authority to issue preferred stock in one or more series, each of which will have such distinctive designation or title as shall be determined by our Board of Directors prior to the issuance of any shares thereof. Preferred stock will have such voting powers, whole or limited, or no voting powers, and such preferences and relative, participating, optional or other special rights and such qualifications, limitations or restrictions thereof, as shall be stated in such resolution or resolutions providing for the issue of such class or series of preferred stock as may be adopted from time to time by the Board of Directors prior to the issuance of any shares thereof. The designations, powers, rights and preferences of the preferred stock could include voting rights, dividend rights, dissolution rights, conversion rights, exchange rights, redemption rights, liquidation preferences, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing change in our control or other corporate action. No shares of our preferred stock are currently issued and outstanding.

# Specific Terms of a Series of Preferred Stock

The preferred stock we may offer will be issued in one or more series. A prospectus supplement will discuss the following features of the series of preferred stock to which it relates:

• the designations and stated value per share;

- the number of shares offered;
- the amount of liquidation preference per share;
- the public offering price at which the preferred stock will be issued;
- the dividend rate, the method of its calculation, the dates on which dividends would be paid and the dates, if any, from which dividends would cumulate;
- any redemption or sinking fund provisions;
- any conversion or exchange rights; and
- any additional voting, dividend, liquidation, redemption, sinking fund and other rights, preferences, privileges, limitations and restrictions.

#### Rank

Unless otherwise stated in the prospectus supplement, the preferred stock will have priority over our common stock with respect to dividends and distribution of assets, but will rank junior to all our outstanding indebtedness for borrowed money. Any series of preferred stock could rank senior, equal or junior to our other capital stock, as may be specified in a prospectus supplement, as long as our amended and restated certificate of incorporation so permits.

#### **Dividends**

Holders of each series of preferred stock shall be entitled to receive cash dividends to the extent specified in the prospectus supplement when, as and if declared by our Board of Directors, from funds legally available for the payment of dividends. The rates and dates of payment of dividends of each series of preferred stock will be stated in the prospectus supplement. Dividends will be payable to the holders of record of preferred stock as they appear on our books on the record dates fixed by our Board of Directors. Dividends on any series of preferred stock may be cumulative or non-cumulative, as discussed in the applicable prospectus supplement.

### Convertibility

Shares of a series of preferred stock may be exchangeable or convertible into shares of our common stock, another series of preferred stock or other securities or property. The conversion or exchange may be mandatory or optional. The prospectus supplement will specify whether the preferred stock being offered has any conversion or exchange features, and will describe all the related terms and conditions.

# Redemption

The terms, if any, on which shares of preferred stock of a series may be redeemed will be discussed in the applicable prospectus supplement.

#### Liquidation

Upon any voluntary or involuntary liquidation, dissolution or winding up of the affairs of Akoustis, holders of each series of preferred stock will be entitled to receive distributions upon liquidation in the amount described in the related prospectus supplement. These distributions will be made before any distribution is made on any securities ranking junior to the preferred stock with respect to liquidation, including our common stock. If the liquidation amounts payable relating to the preferred stock of any series and any other securities ranking on a parity regarding liquidation rights are not paid in full, the holders of the preferred stock of that series will share ratably in proportion to the full liquidation preferences of each security. If the liquidation amounts payable are insufficient to pay any distribution to the preferred stock of any series and any other securities ranking on a parity regarding liquidation rights, the holders of the preferred stock of that series will receive nothing. Holders of our preferred stock will not be entitled to any other amounts from us after they have received their full liquidation preference.

#### Voting

The holders of preferred stock of each series will have no voting rights, except as required by law and as described below or in a prospectus supplement. Our Board of Directors may, upon issuance of a series of preferred stock, grant voting rights to the holders of that series to elect additional board members if we fail to pay dividends in a timely fashion.

Without the affirmative vote of a majority of the shares of preferred stock of any series then outstanding, we may not:

- increase or decrease the aggregate number of authorized shares of that series'
- increase or decrease the par value of the shares of that series; or
- alter or change the powers, preferences or special rights of the shares of that series so as to affect them adversely

#### No Other Rights

The shares of a series of preferred stock will not have any preferences, voting powers or relative, participating, optional or other special rights except:

- as discussed above or in the prospectus supplement;
- as provided in our Certificate of Incorporation and in any certificate of designation; or
- as otherwise required by law.

#### DESCRIPTION OF DEBT SECURITIES WE MAY OFFER

## General

The debt securities that we may issue will constitute debentures, notes, bonds or other evidences of indebtedness of Akoustis, to be issued in one or more series, which may include senior debt securities, subordinated debt securities and senior subordinated debt securities. The particular terms of any series of debt securities we offer, including the extent to which the general terms set forth below may be applicable to a particular series, will be described in a prospectus supplement relating to such series.

Debt securities that we may issue will be issued under an indenture between us and a trustee qualified to act as such under the Trust Indenture Act of 1939. We have filed the form of the indenture as an exhibit to the registration statement of which this prospectus is a part. When we refer to the "indenture" in this prospectus, we are referring to the indenture under which the debt securities are issued as supplemented by any supplemental indenture applicable to the debt securities. We will provide the name of the trustee in any prospectus supplement related to the issuance of debt securities, and we will also provide certain other information related to the trustee, including describing any relationship we have with the trustee, in such prospectus supplement.

THE FOLLOWING DESCRIPTION IS A SUMMARY OF THE MATERIAL PROVISIONS OF THE INDENTURE. IT DOES NOT RESTATE THE INDENTURE IN ITS ENTIRETY. THE INDENTURE IS GOVERNED BY THE TRUST INDENTURE ACT OF 1939. THE TERMS OF THE DEBT SECURITIES INCLUDE THOSE STATED IN THE INDENTURE AND THOSE MADE PART OF THE INDENTURE BY REFERENCE TO THE TRUST INDENTURE ACT. WE URGE YOU TO READ THE INDENTURE BECAUSE IT, AND NOT THIS DESCRIPTION, DEFINES YOUR RIGHTS AS A HOLDER OF THE DEBT SECURITIES.

#### **Information You Will Find in the Prospectus Supplement**

The indenture provides that we may issue debt securities from time to time in one or more series and that we may denominate the debt securities and make them payable in foreign currencies. The indenture does not limit the aggregate principal amount of debt securities that can be issued thereunder. The prospectus supplement for a series of debt securities will provide information relating to the terms of the series of debt securities being offered, which may include:

- the title and denominations of the debt securities of the series;
- any limit on the aggregate principal amount of the debt securities of the series;
- the date or dates on which the principal and premium, if any, with respect to the debt securities of the series are payable or the method of determination thereof;
- the rate or rates, which may be fixed or variable, at which the debt securities of the series shall bear interest, if any, or the method of calculating and/or resetting such rate or rates of interest;
- the dates from which such interest shall accrue or the method by which such dates shall be determined and the duration of the extensions and the basis upon which interest shall be calculated;
- the interest payment dates for the series of debt securities or the method by which such dates will be determined, the terms of any deferral of interest and any right of ours to extend the interest payment periods;
- the place or places where the principal and interest on the series of debt securities will be payable;
- the terms and conditions upon which debt securities of the series may be redeemed, in whole or in part, at our option or otherwise;
- our obligation, if any, to redeem, purchase, or repay debt securities of the series pursuant to any sinking fund or other specified event or at the option of the holders and the terms of any such redemption, purchase, or repayment;
- the terms, if any, upon which the debt securities of the series may be convertible into or exchanged for other securities, including, among other things, the initial conversion or exchange price or rate and the conversion or exchange period;

- if the amount of principal, premium, if any, or interest with respect to the debt securities of the series may be determined with reference to an index or formula, the manner in which such amounts will be determined;
- if any payments on the debt securities of the series are to be made in a currency or currencies (or by reference to an index or formula) other than that in which such securities are denominated or designated to be payable, the currency or currencies (or index or formula) in which such payments are to be made and the terms and conditions of such payments;
- any changes or additions to the provisions of the indenture dealing with defeasance, including any additional covenants that may be subject to our covenant defeasance option;
- the currency or currencies in which payment of the principal and premium, if any, and interest with respect to debt securities of the series will be payable, or in which the debt securities of the series shall be denominated, and the particular provisions applicable thereto in accordance with the indenture;
- the portion of the principal amount of debt securities of the series which will be payable upon declaration of acceleration or provable in bankruptcy or the method by which such portion or amount shall be determined;
- whether the debt securities of the series will be secured or guaranteed and, if so, on what terms;
- any addition to or change in the events of default with respect to the debt securities of the series;
- the identity of any trustees, authenticating or paying agents, transfer agents or registrars;
- the applicability of, and any addition to or change in, the covenants currently set forth in the indenture;
- the subordination, ranking or priority, if any, of the debt securities of the series and terms of the subordination;
- any other terms of the debt securities of the series which are not prohibited by the indenture; and

Holders of debt securities may present debt securities for exchange in the manner, at the places, and subject to the restrictions set forth in the debt securities, the indenture, and the prospectus supplement. We will provide these services without charge, other than any tax or other governmental charge payable in connection therewith, but subject to the limitations provided in the indenture, any board resolution establishing such debt securities and any applicable indenture supplement.

#### **Senior Debt**

We may issue senior debt securities under the indenture. Unless otherwise set forth in the applicable indenture supplement and described in a prospectus supplement, the senior debt securities will be senior unsecured obligations, ranking equally with all of our existing and future senior unsecured debt. The senior debt securities will be senior to all of our subordinated debt and junior to any secured debt we may incur as to the assets securing such debt.

# **Subordinated Debt**

We may issue subordinated debt securities under the indenture. These subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner set forth in the indenture and any applicable indenture supplement, to all of our senior indebtedness.

If this prospectus is being delivered in connection with a series of subordinated debt securities, the accompanying prospectus supplement or the information incorporated by reference will set forth the approximate amount of senior indebtedness outstanding as of the end of the most recent fiscal quarter.

#### **Senior Subordinated Debt**

We may issue senior subordinated debt securities under the indenture. These senior subordinated debt securities will be, to the extent and in the manner set forth in the applicable indenture supplement, subordinate and junior in right of payment to all of our "senior indebtedness" and senior to our other subordinated debt. See the discussions above under "—Senior Debt" and "—Subordinated Debt" for a more detailed explanation of our senior and subordinated indebtedness.

#### **Interest Rate**

Debt securities that bear interest will do so at a fixed rate or a variable rate. We may sell, at a discount below the stated principal amount, any debt securities which bear no interest or which bear interest at a rate that at the time of issuance is below the prevailing market rate. The relevant prospectus supplement will describe the special United States federal income tax considerations applicable to:

- any discounted debt securities; and
- any debt securities issued at par which are treated as having been issued at a discount for United States federal income tax purposes.

#### **Registered Global Securities**

We may issue registered debt securities of a series in the form of one or more fully registered global securities. We will deposit the registered global security with a depository or with a nominee for a depository identified in the prospectus supplement relating to such series. The global security or global securities will represent and will be in a denomination or aggregate denominations equal to the portion of the aggregate principal amount of outstanding registered debt securities of the series to be represented by the registered global security or securities. Unless it is exchanged in whole or in part for debt securities in definitive registered form, a registered global security may not be transferred, except as a whole in three cases:

- by the depository for the registered global security to a nominee of the depository;
- by a nominee of the depository to the depository or another nominee of the depository; and
- by the depository or any nominee to a successor of the depository or a nominee of the successor.

The prospectus supplement relating to a series of debt securities will describe the specific terms of the depository arrangement concerning any portion of that series of debt securities to be represented by a registered global security. We anticipate that the following provisions will generally apply to all depository arrangements.

Upon the issuance of a registered global security, the depository will credit, on its book-entry registration and transfer system, the principal amounts of the debt securities represented by the registered global security to the accounts of persons that have accounts with the depository. These persons are referred to as "participants." Any underwriters, agents or dealers participating in the distribution of debt securities represented by the registered global security will designate the accounts to be credited. Only participants or persons that hold interests through participants will be able to beneficially own interests in a registered global security. The depository for a global security will maintain records of beneficial ownership interests in a registered global security for participants. Participants or persons that hold through participants will maintain records of beneficial ownership interests in a global security for persons other than participants. These records will be the only means to transfer beneficial ownership in a registered global security.

The laws of some states may require that specified purchasers of securities take physical delivery of the securities in definitive form. These laws may limit the ability of those persons to own, transfer or pledge beneficial interests in global securities.

So long as the depository, or its nominee, is the registered owner of a registered global security, the depository or its nominee will be considered the sole owner or holder of the debt securities represented by the registered global security for all purposes under the indenture. Except as set forth below, owners of beneficial interests in a registered global security:

- may not have the debt securities represented by a registered global security registered in their names;
- will not receive or be entitled to receive physical delivery of debt securities represented by a registered global security in definitive form; and
- will not be considered the owners or holders of debt securities represented by a registered global security under the indenture.

Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depository for the registered global security and, if the person is not a participant, on the procedures of the participant through which the person owns its interests, to exercise any rights of a holder under the indenture applicable to the registered global security.

We understand that, under existing industry practices, if we request any action of holders, or if an owner of a beneficial interest in a registered global security desires to give or take any action which a holder is entitled to give or take under the indenture, the depository for the registered global security would authorize the participants holding the relevant beneficial interests to give or take the action, and the participants would authorize beneficial owners owning through the participants to give or take the action or would otherwise act upon the instructions of beneficial owners holding through them.

## Payment of Interest on and Principal of Registered Global Securities

We will make principal, premium, if any, and interest payments on debt securities represented by a registered global security registered in the name of a depository or its nominee to the depository or its nominee as the registered owner of the registered global security. None of Akoustis, the trustee, or any paying agent for debt securities represented by a registered global security will have any responsibility or liability for:

- any aspect of the records relating to, or payments made on account of, beneficial ownership interests in such registered global security;
- maintaining, supervising, or reviewing any records relating to beneficial ownership interests;
- the payments to beneficial owners of the global security of amounts paid to the depository or its nominee; or
- any other matter relating to the actions and practices of the depository, its nominee or any of its participants.

We expect that the depository, upon receipt of any payment of principal, premium or interest in respect of the global security, will immediately credit participants' accounts with payments in amounts proportionate to their beneficial interests in the principal amount of a registered global security as shown on the depository's records. We also expect that payments by participants to owners of beneficial interests in a registered global security held through participants will be governed by standing instructions and customary practices. This is currently the case with the securities held for the accounts of customers registered in "street name." Such payments will be the responsibility of participants.

#### **Exchange of Registered Global Securities**

We may issue debt securities in definitive form in exchange for the registered global security if both of the following occur:

- the depository for any debt securities represented by a registered global security is at any time unwilling or unable to continue as depository or ceases to be a clearing agency registered under the Exchange Act; and
- we do not appoint a successor depository within 90 days.

In addition, we may, at any time, determine not to have any of the debt securities of a series represented by one or more registered global securities. In this event, we will issue debt securities of that series in definitive form in exchange for all of the registered global security or securities representing those debt securities.

## **Covenants by Akoustis**

The indenture includes covenants by us, including among other things that we will make all payments of principal and interest at the times and places required. The supplemental indenture establishing each series of debt securities may contain additional covenants, including covenants which could restrict our right to incur additional indebtedness or liens and to take certain actions with respect to our businesses and assets.

#### **Events of Default**

Unless otherwise indicated in the applicable prospectus supplement, the following will be events of default under the indenture with respect to each series of debt securities issued under the indenture:

- failure to pay when due any interest on any debt security of that series, continued for 30 days;
- failure to pay when due the principal of, or premium, if any, on, any debt security of that series;
- failure to perform any other covenant or agreement of ours under the indenture or the supplemental indenture with respect to that series or the debt securities of that series, continued for 90 days after written notice to us by the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the series to which the covenant or agreement relates;
- certain events of bankruptcy, insolvency or similar proceedings affecting us; and
- any other event of default specified in any supplemental indenture under which such series of debt securities is issued.

Except as to certain events of bankruptcy, insolvency or similar proceedings affecting us and except as provided in the applicable prospectus supplement, if any event of default shall occur and be continuing with respect to any series of debt securities under the indenture, either the trustee or the holders of at least 25% in aggregate principal amount of outstanding debt securities of such series may accelerate the maturity of all debt securities of such series. Upon certain events of bankruptcy, insolvency or similar proceedings affecting us, the principal, premium, if any, and interest on all debt securities of each series shall be immediately due and payable.

After any such acceleration, but before a judgment or decree based on acceleration has been obtained by the trustee, the holders of a majority in aggregate principal amount of each affected series of debt securities may waive all defaults with respect to such series and rescind and annul such acceleration if all events of default, other than the non-payment of accelerated principal, have been cured, waived or otherwise remedied.

No holder of any debt securities will have any right to institute any proceeding with respect to the indenture or for any remedy under the indenture, unless such holder shall have previously given to the trustee written notice of a continuing event of default and the holders of at least 25% in aggregate principal amount of the outstanding debt securities of the relevant series shall have made written request and offered indemnity satisfactory to the trustee to institute such proceeding as trustee, and the trustee shall not have received from the holders of a majority in aggregate principal amount of the outstanding debt securities of such series a direction inconsistent with such request and shall have failed to institute such proceeding within 60 days. However, such limitations do not apply to a suit instituted by a holder of a debt security for enforcement of payment of the principal of and premium, if any, or interest on such debt security on or after the respective due dates expressed in such debt security.

# **Supplemental Indentures**

We and the trustee may, at any time and from time to time, without prior notice to or consent of any holders of debt securities, enter into one or more indentures supplemental to the indenture, among other things:

- to add guarantees to or secure any series of debt securities;
- to provide for the succession of another person pursuant to the provisions of the indenture relating to consolidations, mergers and sales of assets and the assumption by such successor of our covenants, agreements, and obligations, or to otherwise comply with the provisions of the indenture relating to consolidations, mergers, and sales of assets;
- to surrender any right or power conferred upon us under the indenture or to add to our covenants further covenants, restrictions, conditions or provisions for the protection of the holders of all or any series of debt securities;
- to cure any ambiguity or to correct or supplement any provision contained in the indenture, in any supplemental indenture or in any debt securities that may be defective or inconsistent with any other provision contained therein;
- to modify or amend the indenture in such a manner as to permit the qualification of the indenture or any supplemental indenture under the Trust Indenture Act;
- to add to or change any of the provisions of the indenture to supplement any of the provisions of the indenture in order to permit the defeasance and discharge of any series of debt securities pursuant to the indenture, so long as any such action does not adversely affect the interests of the holders of debt securities of any series in any material respect;
- to add to, change, or eliminate any of the provisions of the indenture with respect to one or more series of debt securities, so long as any such addition, change or elimination shall not apply to any debt securities of any series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision;

- to evidence and provide for the acceptance of appointment by a successor or separate trustee; and
- to establish the form or terms of debt securities of any series and to make any change that does not adversely affect the interests of the holders of debt securities.

With the consent of the holders of at least a majority in principal amount of debt securities of each series affected by such supplemental indenture (each series voting as one class), we and the trustee may enter into one or more supplemental indentures for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of the indenture or modifying in any manner the rights of the holders of debt securities of each such series.

Notwithstanding our rights and the rights of the trustee to enter into one or more supplemental indentures with the consent of the holders of debt securities of the affected series as described above, no such supplemental indenture shall, without the consent of the holder of each outstanding debt security of the affected series, among other things:

- change the final maturity of the principal of, or any installment of interest on, any debt securities;
- reduce the principal amount of any debt securities or the rate of interest on any debt securities;
- change the currency in which any debt securities are payable;
- impair the right of the holders to conduct a proceeding for any remedy available to the trustee;
- reduce the percentage in principal amount of any series of debt securities whose holders must consent to an amendment or supplemental indenture;
- modify the ranking or priority of the securities; or
- reduce any premium payable upon the redemption of any debt securities.

## Satisfaction and Discharge of the Indenture; Defeasance

Except to the extent set forth in a supplemental indenture with respect to any series of debt securities, we, at our election, may discharge the indenture and the indenture shall generally cease to be of any further effect with respect to that series of debt securities if (a) we have delivered to the trustee for cancellation all debt securities of that series (with certain limited exceptions) or (b) all debt securities of that series not previously delivered to the trustee for cancellation shall have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year, and we have deposited with the trustee the entire amount sufficient to pay at maturity or upon redemption all such debt securities.

In addition, we have a "legal defeasance option" (pursuant to which we may terminate, with respect to the debt securities of a particular series, all of our obligations under such debt securities and the indenture with respect to such debt securities) and a "covenant defeasance option" (pursuant to which we may terminate, with respect to the debt securities of a particular series, our obligations with respect to such debt securities under certain specified covenants contained in the indenture). If we exercise our legal defeasance option with respect to a series of debt securities, payment of such debt securities may not be accelerated because of an event of default. If we exercise our covenant defeasance option with respect to a series of debt securities, payment of such debt securities may not be accelerated because of an event of default related to the specified covenants.

We may exercise our legal defeasance option or our covenant defeasance option with respect to the debt securities of a series only if we irrevocably deposit in trust with the trustee cash or U.S. government obligations (as defined in the indenture) for the payment of principal, premium, if any, and interest with respect to such debt securities to maturity or redemption, as the case may be. In addition, to exercise either of our defeasance options, we must comply with certain other conditions, including the delivery to the trustee of an opinion of counsel to the effect that the holders of debt securities of such series will not recognize income, gain or loss for Federal income tax purposes as a result of such defeasance and will be subject to Federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such defeasance had not occurred (and, in the case of legal defeasance only, such opinion of counsel must be based on a ruling from the Internal Revenue Service or other change in applicable Federal income tax law).

The trustee will hold in trust the cash or U.S. government obligations deposited with it as described above and will apply the deposited cash and the proceeds from deposited U.S. government obligations to the payment of principal, premium, if any, and interest with respect to the debt securities of the defeased series.

### Mergers, Consolidations and Certain Sales of Assets

We may not:

- consolidate with or merge into any other person or entity or permit any other person or entity to consolidate with or merge into us in a transaction in which we are not the surviving entity, or
- transfer, lease or dispose of all or substantially all of our assets to any other person or entity,

unless:

- o the resulting, surviving or transferee entity shall be a corporation organized and existing under the laws of the United States or any state thereof and such resulting, surviving or transferee entity shall expressly assume, by supplemental indenture, executed and delivered in form satisfactory to the trustee, all of our obligations under the debt securities and the indenture;
- o immediately after giving effect to such transaction (and treating any indebtedness which becomes an obligation of the resulting, surviving or transferee entity as a result of such transaction as having been incurred by such entity at the time of such transaction), no default or event of default would occur or be continuing; and
- we shall have delivered to the trustee an officers' certificate and an opinion of counsel, each stating that such consolidation, merger or transfer and such supplemental indenture (if any) comply with the indenture.

The phrase "substantially all" of our assets will likely be interpreted under applicable state law and will be dependent upon particular facts and circumstances. As a result, there may be a degree of uncertainty in ascertaining whether a sale or transfer of "substantially all" of our assets has occurred.

## **Governing Law**

The indenture and the debt securities will be governed by the laws of the State of New York.

#### No Personal Liability of Directors, Officers, Employees and Stockholders

No director, officer, incorporator or stockholder of Akoustis, as such, shall have any liability for any obligations of Akoustis under the debt securities or the indenture or for any claim based on, in respect of, or by reason of, such obligations or their creation, solely by reason of his, her, or its status as director, officer, incorporator or stockholder of Akoustis. By accepting a debt security, each holder waives and releases all such liability, but only such liability. The waiver and release are part of the consideration for issuance of the debt securities. Nevertheless, such waiver may not be effective to waive liabilities under the federal securities laws and it has been the view of the SEC that such a waiver is against public policy.

#### Conversion or Exchange Rights

Any debt securities offered hereby may be convertible into or exchangeable for shares of our equity or other securities. The terms and conditions of such conversion or exchange will be set forth in the applicable prospectus supplement. Such terms may include, among others, the following:

- the conversion or exchange price;
- the conversion or exchange period;
- provisions regarding our ability or that of the holder to convert or exchange the debt securities;
- events requiring adjustment to the conversion or exchange price; and
- provisions affecting conversion or exchange in the event of our redemption of such debt securities.

#### **Concerning the Trustee**

The indenture provides that there may be more than one trustee with respect to one or more series of debt securities. If there are different trustees for different series of debt securities, each trustee will be a trustee of a trust under a supplemental indenture separate and apart from the trust administered by any other trustee under such indenture. Except as otherwise indicated in this prospectus or any prospectus supplement, any action permitted to be taken by a trustee may be taken by the trustee only with respect to the one or more series of debt securities for which it is the trustee under an indenture. Any trustee under the indenture or a supplemental indenture may resign or be removed with respect to one or more series of debt securities. All payments of principal of, premium, if any, and interest on, and all registration, transfer, exchange authentication and delivery (including authentication and delivery on original issuance of the debt securities) of, the debt securities of a series will be effected by the trustee with respect to such series at an office designated by the trustee.

The indenture contains limitations on the right of the trustee, should it become a creditor of Akoustis, to obtain payment of claims in certain cases or to realize on certain property received in respect of any such claim as security or otherwise. If the trustee acquires an interest that conflicts with any duties with respect to the debt securities, the trustee is required to either resign or eliminate such conflicting interest to the extent and in the manner provided by the indenture.

#### DESCRIPTION OF WARRANTS WE MAY OFFER

We may issue warrants for the purchase of debt securities, preferred stock or common stock. Warrants may be issued independently or together with debt securities, preferred stock or common stock and may be attached to or separate from any offered securities. Any issue of warrants will be governed by the terms of the applicable form of warrant and any related warrant agreement which we will file with the SEC and they will be incorporated by reference to the registration statement of which this prospectus is a part on or before the time we issue any warrants.

The particular terms of any issue of warrants will be described in the prospectus supplement relating to the issue. Those terms may include:

- the title of such warrants;
- the aggregate number of such warrants;
- the price or prices at which such warrants will be issued;
- the currency or currencies (including composite currencies) in which the price of such warrants may be payable;
- the terms of the securities purchasable upon exercise of such warrants and the procedures and conditions relating to the exercise of such warrants;
- the price at which the securities purchasable upon exercise of such warrants may be purchased;
- the date on which the right to exercise such warrants will commence and the date on which such right shall expire;
- any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants or the exercise price of the warrants;
- if applicable, the minimum or maximum amount of such warrants that may be exercised at any one time;
- if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;
- if applicable, the date on and after which such warrants and the related securities will be separately transferable;
- information with respect to book-entry procedures, if any; and
- any other terms of such warrants, including terms, procedures and limitations relating to the exchange or exercise of such warrants.

The prospectus supplement relating to any warrants to purchase equity securities may also include, if applicable, a discussion of certain U.S. federal income tax and ERISA considerations.

Warrants for the purchase of preferred stock and common stock will be offered and exercisable for U.S. dollars only.

Each warrant will entitle its holder to purchase the principal amount of debt securities or the number of shares of preferred stock or common stock at the exercise price set forth in, or calculable as set forth in, the applicable prospectus supplement.

After the close of business on the expiration date, unexercised warrants will become void. We will specify the place or places where, and the manner in which, warrants may be exercised in the applicable prospectus supplement.

Prior to the exercise of any warrants to purchase debt securities, preferred stock or common stock, holders of the warrants will not have any of the rights of holders of the debt securities, preferred stock or common stock purchasable upon exercise.

As of September 21, 2018, we have issued warrants to purchase a total of 728,493 shares of common stock at a weighted average exercise price of \$3.93 per share. Warrants to purchase a total of 248,529 shares of common stock expire in May through June 2020 and have an exercise price of \$1.50 per share. Warrants to purchase a total of 102,151 shares of common stock expire in April 2021 and have an exercise price of \$1.60 per share. Warrants to purchase a total of 177,226 shares of common stock expire in December 2021 through February 2022 and have an exercise price of \$5.00 per share. Warrants to purchase a total of 46,410 shares of common stock expire in May 2022 and have an exercise price of \$9.00 per share. Warrants to purchase (i) a total of 88,507 shares of common stock at an exercise price of \$5.50 per share and (ii) a total of 65,670 shares of common stock at an exercise price of \$8.16 per share expire in June 2023.

#### DESCRIPTION OF UNITS WE MAY OFFER

We may issue units composed of any combination of our debt securities, common stock, preferred stock and warrants. We will issue each unit so that the holder of the unit is also the holder of each security included in the unit. As a result, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

The following description is a summary of selected provisions relating to units that we may offer. The summary is not complete. When units are offered in the future, a prospectus supplement, information incorporated by reference or a free writing prospectus, as applicable, will explain the particular terms of those securities and the extent to which these general provisions may apply. The specific terms of the units as described in a prospectus supplement or free writing prospectus will supplement and, if applicable, may modify or replace the general terms described in this section.

The specific terms of any units offered will be set forth in a unit agreement, collateral arrangements and depositary arrangements, if applicable. We will file each of these documents, as applicable, with the SEC and they will be incorporated by reference to the registration statement of which this prospectus is a part on or before the time we issue a series of units. See "Where You Can Find More Information" and "Incorporation by Reference" below for information on how to obtain a copy of a document when it is filed.

The applicable prospectus supplement or free writing prospectus may describe:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provisions for the issuance, payment, settlement, transfer, or exchange of the units or of the securities composing the units;
- whether the units will be issued in fully registered or global form; and
- any other terms of the units.

The applicable provisions described in this section, as well as those described under "— Description of Debt Securities We May Offer," "— Description of Common Stock We May Offer," "— Description of Preferred Stock We May Offer" and "— Description of Warrants We May Offer" above, will apply to each unit and to each security included in each unit, respectively.

# DESCRIPTION OF RIGHTS WE MAY OFFER

We may issue rights to purchase our debt securities, common stock, preferred stock or other securities. These rights may be issued independently or together with any other security offered hereby and may or may not be transferable by the stockholder receiving the rights in such offering. In connection with any offering of such rights, we may enter into a standby arrangement with one or more underwriters or other purchasers pursuant to which the underwriters or other purchasers may be required to purchase any securities remaining unsubscribed for after such offering.

Each series of rights will be issued under a separate rights agreement which we will enter into with a bank or trust company, as rights agent, all which will be set forth in the relevant offering material. The rights agent will act solely as our agent in connection with the certificates relating to the rights and will not assume any obligation or relationship of agency or trust with any holders of rights certificates or beneficial owners of rights.

The following description is a summary of selected provisions relating to rights that we may offer. The summary is not complete. When rights are offered in the future, a prospectus supplement, information incorporated by reference or a free writing prospectus, as applicable, will explain the particular terms of those securities and the extent to which these general provisions may apply. The specific terms of the rights as described in a prospectus supplement or free writing prospectus will supplement and, if applicable, may modify or replace the general terms described in this section.

The specific terms of any units offered will be set forth in a rights agreement and the rights certificate, as applicable. We will file each of these documents, as applicable, with the SEC and they will be incorporated by reference to the registration statement of which this prospectus is a part on or before the time we issue a series of rights. See "Where You Can Find More Information" and "Incorporation by Reference" below for information on how to obtain a copy of a document when it is filed.

The applicable prospectus supplement or free writing prospectus may describe:

- in the case of a distribution of rights to our stockholders, the date of determining the stockholders entitled to the rights distribution;
- in the case of a distribution of rights to our stockholders, the number of rights issued or to be issued to each stockholder;
- the exercise price payable for the underlying debt securities, common stock, preferred stock or other securities upon the exercise of the rights;
- the number and terms of the underlying debt securities, common stock, preferred stock or other securities which may be purchased per each right;
- the extent to which the rights are transferable;
- the date on which the holder's ability to exercise the rights shall commence, and the date on which the rights shall expire;
- the extent to which the rights may include an over-subscription privilege with respect to unsubscribed securities;
- if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of such rights; and
- any other terms of the rights, including, but not limited to, the terms, procedures, conditions and limitations relating to the exchange and exercise of the rights.

The provisions described in this section, as well as those described under "— Description of Debt Securities We May Offer," "— Description of Common Stock We May Offer" and "— Description of Preferred Stock We May Offer" above, will apply, as applicable, to any rights we offer.

# CERTAIN PROVISIONS OF DELAWARE LAW AND OF THE COMPANY'S CERTIFICATE OF INCORPORATION AND BY-LAWS

The following paragraphs regarding certain provisions of the DGCL, our Certificate of Incorporation, and our By-Laws are summaries of the material terms thereof and do not purport to be complete. We urge you to read the applicable prospectus supplements, any related free writing prospectuses related to a security that we may offer under this prospectus, the DGCL, and our Certificate of Incorporation and By-Laws. Copies of our Certificate of Incorporation and By-Laws are on file with the SEC as exhibits to filings previously made by us. See "Where You Can Find More Information."

#### General

The provisions of the DGCL, and our Certificate of Incorporation and By-Laws could have the effect of discouraging others from attempting an unsolicited offer to acquire our company. Such provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

#### **Authorized but Unissued Shares**

The authorized but unissued shares of our common stock and our preferred stock are available for future issuance without any further vote or action by our stockholders. These additional shares may be utilized for a variety of corporate purposes, including future public or private offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of our common stock and our preferred stock could render more difficult or discourage an attempt to obtain control over us by means of a proxy contest, tender offer, merger or otherwise.

### Special Meeting of Stockholders and Advance Notice Requirements for Stockholder Proposals

Our By-Laws require that special meetings of stockholders be called only by a majority of our Board of Directors, by the chairman of the board, the Chief Executive Officer, the President, or the Secretary. In addition, our By-Laws provide that candidates for director may be nominated and other business brought before an annual meeting only by the Board of Directors or by a stockholder who gives written notice to us not less than 90 days, nor more than 120 days, prior to the one year anniversary of the date of the annual meeting of the previous year. These provisions may have the effect of deterring unsolicited offers to acquire our company or delaying stockholder actions, even if they are favored by the holders of a majority of our outstanding voting securities.

### **Business Combinations**

The DGCL generally prohibits a corporation from engaging in any business combination with any interested stockholder for a three-year period following the time that the stockholder became an interested stockholder, unless:

- prior to such time, our Board of Directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding certain shares; or

• at or subsequent to that time, the business combination is approved by our board of directors and by the affirmative vote of holders of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Generally, a "business combination" includes a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, an "interested stockholder" is a person who, together with that person's affiliates and associates, owns, or within the previous three years owned, 15% or more of our voting stock.

Under certain circumstances, this provision could make it more difficult for a person who would be an "interested stockholder" to effect various business combinations with a corporation for a three-year period. However, this provision generally does not apply to a corporation that does not have a class of voting stock that is listed on a national securities exchange or held of record by more than 2,000 stockholders. Accordingly, this provision does not currently apply to us.

### PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus to one or more underwriters or dealers for public offering, through agents, directly to purchasers or through a combination of any such methods of sale. The name of any such underwriters, dealers or agents involved in the offer and sale of the securities, the amounts underwritten and the nature of its obligation to take the securities will be specified in the applicable prospectus supplement. We have reserved the right to sell the securities directly to investors on our own behalf in those jurisdictions where we are authorized to do so. The sale of the securities may be effected in transactions (a) on any national or international securities exchange or quotation service on which the securities may be listed or quoted at the time of sale, (b) in the over-the-counter market, (c) in transactions otherwise than on such exchanges or in the over-the-counter market or (d) through the writing of options.

We and our agents and underwriters may offer and sell the securities at a fixed price or prices that may be changed, at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices. The securities may be offered on an exchange, which will be disclosed in the applicable prospectus supplement. We may, from time to time, authorize dealers, acting as our agents, to offer and sell the securities upon such terms and conditions as set forth in the applicable prospectus supplement.

If we use underwriters to sell securities, we will enter into an underwriting agreement with them at the time of the sale to them. In connection with the sale of the securities, underwriters may receive compensation from us in the form of underwriting discounts or commissions and may also receive commissions from purchasers of the securities for whom they may act as agent. Any underwriting compensation paid by us to underwriters or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers, will be set forth in the applicable prospectus supplement to the extent required by applicable law. Underwriters may sell the securities to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions (which may be changed from time to time) from the purchasers for whom they may act as agents.

Dealers and agents participating in the distribution of the securities may be deemed to be underwriters, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act. Unless otherwise indicated in the applicable prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase debt securities as a principal, and may then resell the debt securities at varying prices to be determined by the dealer.

If so indicated in the prospectus supplement, we will authorize underwriters, dealers or agents to solicit offers by certain specified institutions to purchase offered securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. Such contracts will be subject to any conditions set forth in the applicable prospectus supplement and the prospectus supplement will set forth the commission payable for solicitation of such contracts. The underwriters and other persons soliciting such contracts will have no responsibility for the validity or performance of any such contracts.

Underwriters, dealers and agents may be entitled, under agreements entered into with us, to indemnification against and contribution towards certain civil liabilities, including any liabilities under the Securities Act.

To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain, or otherwise affect the price of the securities. These may include over-allotment, stabilization, syndicate short covering transactions and penalty bids. Over-allotment involves sales in excess of the offering size, which creates a short position. Stabilizing transactions involve bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Syndicate short covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. Penalty bids permit the underwriters to reclaim selling concessions from dealers when the securities originally sold by the dealers are purchased in covering transactions to cover syndicate short positions. These transactions may cause the price of the securities sold in an offering to be higher than it would otherwise be. These transactions, if commenced, may be discontinued by the underwriters at any time.

Any securities other than our common stock issued hereunder may be new issues of securities with no established trading market. Any underwriters or agents to or through whom such securities are sold for public offering and sale may make a market in such securities, but such underwriters or agents will not be obligated to do so and may discontinue any market making at any time without notice. No assurance can be given as to the liquidity of the trading market for any such securities. The amount of expenses expected to be incurred by us in connection with any issuance of securities will be set forth in the applicable prospectus supplement. Certain of the underwriters, dealers or agents and their associates may engage in transactions with, and perform services for, us and certain of our affiliates in the ordinary course of business.

During such time as we may be engaged in a distribution of the securities covered by this prospectus we are required to comply with Regulation M promulgated under the Exchange Act. With certain exceptions, Regulation M precludes us, any affiliated purchasers, and any broker-dealer or other person who participates in such distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase, any security which is the subject of the distribution until the entire distribution is complete. Regulation M also restricts bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of our shares of common stock.

## LEGAL MATTERS

The validity and legality of the securities offered hereby and certain other legal matters will be passed upon for the Company by K&L Gates LLP, Charlotte, North Carolina.

#### **EXPERTS**

Marcum LLP, independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended June 30, 2018, which is incorporated by reference into this prospectus and elsewhere in the registration statement of which this prospectus is a part. Our financial statements are incorporated by reference in reliance on Marcum LLP's report, given on their authority as experts in accounting and auditing.

#### WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. You can inspect and copy these reports, proxy statements and other information at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D. C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. The SEC also maintains a web site that contains reports, proxy and information statements and other information regarding issuers, such as Akoustis Technologies, Inc. (www.sec.gov). Our web site is located at www.akoustis.com. The information contained on, or that may be obtained from, our website is not, and shall not be deemed to be, a part of this prospectus.

We will provide, upon written or oral request, without charge to you, including any beneficial owner to whom this prospectus is delivered, a copy of any or all of the documents incorporated herein by reference other than the exhibits to those documents, unless the exhibits are specifically incorporated by reference into the information that this prospectus incorporates. You should direct a request for copies to Akoustis Technologies, Inc., 9805 Northcross Center Court, Suite A, Huntersville, North Carolina 28078; Telephone: (704) 997-5735.

#### INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus.

We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC:

- Annual Report on Form 10-K for the fiscal year ended June 30, 2018 filed with the SEC on August 29, 2018;
- Current Report on Form 8-K filed with the SEC on July 27, 2018;
- Definitive Proxy Statement on Schedule 14A related to our 2018 Annual Meeting of Stockholders, filed with the SEC on September 18, 2018; and
- The description of our common stock contained in our Registration Statement on Form 8-A (File No. 001-38029) filed with the SEC on March 10, 2017, including any amendment or report filed for the purpose of updating such description.

We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made on or after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement, until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus and will become a part of this prospectus from the date that such documents are filed with the SEC. Information in such future filings updates and supplements the information provided in this prospectus. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents to Akoustis Technologies, Inc., 9805 Northcross Center Court, Suite A, Huntersville, North Carolina 28078; Telephone: (704) 997-5735. Copies of the above reports may also be accessed from our web site at *www.akoustis.com*. We have authorized no one to provide you with any information that differs from that contained in this prospectus. Accordingly, you should not rely on any information that is not contained in this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date of the front cover of this prospectus.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other subsequently filed document which also is or is deemed to be incorporated by reference in this prospectus modifies or supersedes that statement. Any statement that is modified or superseded will not constitute a part of this prospectus, except as modified or superseded.



6.5% Convertible Senior Notes due 2023

# PRELIMINARY PROSPECTUS SUPPLEMENT

# Oppenheimer & Co.

October , 2018