

The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement related to these securities has been declared effective by the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and are not the solicitation of an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated May 12, 2020

PROSPECTUS SUPPLEMENT
(To Prospectus dated November 15, 2019)



[•] Shares of Common Stock

We are offering _____ shares of our common stock. Our common stock is traded on the NASDAQ Capital Market under the symbol "ATOM." On May [•], 2020, the last reported sale price of our common stock was \$[•] per share.

The offering is being underwritten on a firm commitment basis. We have granted the underwriter an option to buy up to an additional _____ shares of common stock from us to cover over-allotments. The underwriter may exercise this option at any time and from time to time during the 45-day period from the date of this prospectus supplement.

	Per Share	Total
Public offering price	\$ [•]	\$ [•]
Underwriting discounts and commissions (1)	\$ [•]	\$ [•]
Proceeds to us, before expenses	\$ [•]	\$ [•]

(1) In addition, we have agreed to reimburse the underwriter for certain expenses. See "[Underwriting](#)" on page S-17 of this prospectus supplement for additional information.

Investing in our securities involves a high degree of risk. See the section entitled "[Risk Factors](#)" commencing on page S-6 of this prospectus supplement and the accompanying base prospectus for a discussion of information that should be considered in connection with an investment in our securities.

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 supplement. Any representation to the contrary is a criminal offense.

The underwriter expects to deliver the shares of common stock to the purchasers on or about May _____, 2020.

The date of this prospectus supplement is May _____, 2020

Sole Book-Running Manager

National Securities Corporation

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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. This prospectus supplement describes the specific details regarding this offering and may add, update or change information contained in the accompanying base prospectus. The base prospectus, dated November 15, 2019, including the documents incorporated by reference therein, 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 common stock 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 provided 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 provided 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 provided 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.

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 Company-sponsored studies, independent industry publications 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 “Atomera” refer to Atomera Incorporated, a Delaware corporation. We own the U.S. trademark registration for “MST” and the U.S. trademark registration for our corporate name “Atomera.” We also own in China the registered trademark for the mark “Mears.” 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 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-6 and our 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.

Our Company

We are engaged in the business of developing, commercializing and licensing proprietary materials, processes and technologies for the \$400+ billion semiconductor industry. Our lead technology, named Mears Silicon TechnologyTM, or MST[®], is a thin film of reengineered silicon, typically 100 to 300 angstroms (or approximately 20 to 60 silicon atomic unit cells) thick. MST can be applied as a transistor channel enhancement to CMOS-type transistors, the most widely used transistor type in the semiconductor industry. MST is our proprietary and patent-protected performance enhancement technology that we believe addresses a number of key engineering challenges facing the semiconductor industry. We believe that by incorporating MST, transistors can be smaller, with increased speed, reliability and energy efficiency. In addition, since MST is an additive and low-cost technology, we believe it can be deployed on an industrial scale, with equipment commonly used in semiconductor manufacturing. We believe that MST can be widely incorporated into the most common types of semiconductor products, including analog, logic, optical and memory integrated circuits.

We do not intend to design or manufacture integrated circuits directly. Instead, we intend to develop and license technologies and processes that will offer the designers and manufacturers of integrated circuits a low-cost solution to the industry’s need for greater performance and lower power consumption. Our customers and partners include or are expected to include:

- foundries, which manufacture integrated circuits on behalf of fabless manufacturers;
- integrated device manufacturers, or IDMs, which are the fully integrated designers and manufacturers of integrated circuits;
- fabless semiconductor manufacturers, which are designers of integrated circuits that outsource the manufacture of their chips to foundries;
- original equipment manufacturers, or OEMs, which manufacture the epitaxial, or EPI, deposition machines used to deposit semiconductor layers, such as the MST film, onto the base silicon wafer; and
- electronic design automation companies, which make software tools used throughout the industry to simulate the effects of using different materials, design structures and process technologies on the performance of semiconductor products.

We currently generate revenue through licensing arrangements whereby our customers pay us a fee for their right to use MST technology in the manufacture of silicon wafers for internal testing and sampling. We intend to enter into agreements in the future pursuant to which customers will pay us (i) an upfront fee for the license to manufacture and sell MST-based silicon wafers or devices and (ii) a per-wafer (or per-device) royalty for each product sold. We also generate revenue through engineering services provided to customers during their evaluation of MST technology.

We believe the initial application of our MST will be for CMOS integrated circuits, the most widely used type of integrated circuits in the semiconductor industry. As applied to CMOS-type transistors, MST functions as a transistor channel enhancement. We believe MST has the potential to overcome the key challenges found in the implementation of next generation nano-scale semiconductor devices incorporating CMOS-type transistors, namely enhancing drive current, reducing gate leakage and reducing variability. In addition, we believe that MST has the potential to deliver these benefits through a single technology that requires relatively minor modifications to the industry standard CMOS manufacturing flow. Consequently, we believe that by incorporating MST, designers can make transistors with increased speed, reliability and energy efficiency, without significantly altering the current fabrication process or cost of production.

Our MST Solution

MST is a “silicon-on-silicon” solution that provides multiple potential benefits through a relatively simple modification to the standard CMOS manufacturing flow. MST improvements are delivered through our proprietary and patent-protected silicon band engineering approach that is based on the quantum mechanics of modern deep sub-micron devices. The MST film creates channels that allow electrons to flow more freely in the plane of the transistor, thereby enhancing drive current, while reducing electron flow or “leakage” in the transverse direction. Our MST film can also create more controlled doping profiles, which allow dopants to be held in the desired locations, thereby enabling optimized device designs, reducing variability and improving production yield.

We believe the enhancements enabled by MST, as demonstrated in simulations and on our own and our customers’ test chips, are approximately equivalent to the enhancements enabled by one-half to a full node of improvement and, therefore, can extend the productive life of capital equipment and wafer fabrication facilities. The extent of MST-enabled enhancement depends on the device technology and application. We believe that MST compares favorably to other alternatives for enhancing performance of CMOS-type transistors as follows:

- *Strained Silicon and Silicon-on-Insulator, or SOI:* Unlike strained silicon or SOI, we believe that MST delivers multiple benefits in a single film in a cost-effective manner, including enhanced transistor drive current, reduced leakage, and reduced variability. Also, strained silicon tends to lose much of its effectiveness below 45nm, constraining its scalability, while the MST thin-film approach is expected to be scalable below 22nm. Based on our own research and development and third-party evaluations, we believe that MST can deliver improved cost-benefit performance, in most cases in an additive manner, compared to already successful strain technologies, such as dual stress liners and SiGe. Work with our foundry partners and fabless licensee shows potential for additive improvements on specialized SOI wafers used by radio frequency, or RF, providers, which are also referred to as RFSOI.
- *High-K/Metal Gate, or HKMG:* Unlike HKMG, MST is silicon-based. As a “silicon-on-silicon” solution, MST does not require new materials or equipment, which in our opinion makes it much easier and less costly to adopt than HKMG for devices not requiring ultra-thin gate dielectrics. For devices with HKMG, lab tests and simulations indicate that MST benefits transistor performance and variability in a similar manner to that observed in non-HKMG devices. Testing conducted with our university research partners indicates that MST has the potential to provide additive performance benefits in devices using HKMG.

Because of its physical characteristics in the channel region of the transistor, we believe MST has the further benefit of being complementary and additive to the performance enhancing technologies noted above, making MST broadly applicable across multiple devices and process flows to meet a wide variety of customer design objectives. Given the costs of moving to more advanced technologies, we believe one of the most compelling aspects of MST is its cost/benefit profile. We believe that MST will provide a lower cost of production due to our technology’s potential to reduce die size while leveraging existing manufacturing tools, thereby providing chip makers with increased performance at all process nodes with significantly fewer disruptions to manufacturing processes and less incremental cost than other advanced technologies.

We believe MST can improve transistor performance in a variety of device types including microprocessors; logic products; DRAM, SRAM, and other memory integrated circuits; as well as analog, RF, and mixed-signal devices. We have therefore developed different MST product options that can be applied to the critical industry segments and technology nodes. As of the date of this prospectus supplement, we have done technology simulation work with universities and leading industry players at nodes from 180nm to 5nm. We have also simulated devices with leading industry research facilities and built and electrically verified test chips using MST in customer manufacturing facilities which have produced results that demonstrate many of the benefits described above.

Intellectual Property

We have been granted 93 patents in the U.S. and 55 abroad. Our core patents relating to MST cover materials, physical structures and manufacturing processes. Our core patents relating to MST were filed beginning on August 22, 2003 and have grant dates beginning on December 14, 2004. Our MST patent portfolio begins to expire commencing August 22, 2023. While we believe our core patents adequately block competitors from using our MST technology without our approval, there can be no assurance that one or more of our core patents would survive a legal challenge to their scope, validity, or enforceability, or provide significant protection for us. The failure of our patents, or the failure of trade secret laws, to adequately protect our technology, might make it easier for our competitors to offer similar products or technologies or for our potential customers to build products with methods and materials similar to MST without paying us a license fee. In addition, patents may not issue from any of our current or future applications.

We also hold registered trademarks in the United States for the marks “MST” and “Atomera” and in China for the mark “Mears”.

Recent Developments

In September and October 2018, respectively, we entered into separate integration license agreements with Asahi Kasei Microdevices, or AKM, and STMicroelectronics, or ST, both of which are leading IDMs. In October 2019, we entered into an integration license agreement with a leading fabless RF semiconductor provider. Under the integration license agreements, these customers have each agreed to pay us for the right to evaluate MST technology which is integrated onto their semiconductor wafers. We deposit MST onto the customers’ wafers and the customer has the right under the license agreement to complete the manufacturing process which enables them to evaluate our technology. These agreements do not grant the customer the right to deposit MST at their site or to sell products incorporating MST.

Our goal is for each integration license agreement to be the first of a three-stage licensing process with each of AKM, ST and our RF licensee, to be followed by manufacturing and distribution license agreements with each of them. Those manufacturing and distribution license agreements, if executed, will allow each licensee to manufacture – or in the case of our RF licensee, to have its foundry partner manufacture – MST-enabled products and to sell them to their customers. We expect that the manufacturing and distribution agreements will provide for substantially larger upfront license fee payments than the integration license fees and will require the respective licensees to make royalty payments to us based on the number and sales price of MST-enabled products they sell to their customers. However, our ability to enter into royalty-based manufacturing and distribution agreements with AKM, ST and our RF licensee will depend, in large part, on the performance of devices they build using MST and the successful integration of our MST technology on a high-volume production scale. There can be no assurance that our MST technology will deliver the performance, power or other requirements our customers seek for their products or that the integration of our technology with our customers’ manufacturing process will be successful in high volume. In addition, even if our MST technology is successfully integrated into the licensees’ products, any or all of the licensees may decide, for reasons unrelated to the price or performance of our MST technology, not to enter into manufacturing and distribution license agreements.

Plan of Operations

Our plan of operations for the 12-month period following the date of this prospectus supplement is to focus on refining the integration of MST into the processes used by our customers and continuing to develop versions of MST film that are best suited to deliver performance, power and cost advantages to the customers, with the goal of advancing existing customers to the point of executing full manufacturing and distribution licenses.

We were organized as a Delaware limited liability company under the name Nanovis LLC on November 26, 2001. On March 13, 2007, we converted to a Delaware corporation under the name Mears Technologies, Inc. On January 12, 2016, we changed our name to Atomera Incorporated. Our website is www.atomera.com. Information contained in, or accessible through, our website does not constitute part of this prospectus supplement and inclusions of our website address in this prospectus supplement are inactive textual references only.

The Offering

The following is a brief summary of some of the terms of the offering and is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus supplement and the accompanying base prospectus. For a more complete description of the terms of our common stock, see “Description of Our Capital Stock” in the accompanying base prospectus.

Common stock offered by us	shares of our common stock (shares if the underwriter exercises its over-allotment option in full).
Offering price	\$ per share of common stock.
Common stock to be outstanding after this offering	shares (shares if the underwriter exercises its over-allotment option in full).
Use of proceeds	We estimate that our net proceeds from this offering will be approximately \$ (or approximately \$ if the underwriter exercises its over-allotment option in full), after deducting the underwriting discount and the estimated offering expenses payable by us. We expect to use the net proceeds from this offering for working capital and general corporate purposes, which could include procuring additional deposition tools; wafer processing and metrology costs; and hiring additional engineering personnel. See “ Use of Proceeds ” on page S-15.
Risk factors	Investing in our common stock involves a high degree of risk. These risks include all of the risks typically relating to an early stage company, including our ability to: replicate the success we have achieved in preliminary testing of our MST technology on a large commercial scale; advance the licensing arrangements with our three initial integration licensees to manufacturing and distribution licenses; execute one or more joint development agreements; structure, negotiate and enforce license agreements in a manner that will enable us to operate on a profitable basis; protect our intellectual property rights; and raise additional funds, as and when needed. See “ Risk Factors ” beginning on page S-6 and the other 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 common stock.
NASDAQ Capital Market symbol	“ATOM”

The number of shares of our common stock expected to be outstanding after this offering is based on 17,725,435 shares of common stock outstanding as of March 31, 2020 and excludes the following:

- 3,580,701 shares of common stock issuable upon exercise of options outstanding as of March 31, 2020, which have a weighted average exercise price of \$5.94 per share;
- 1,141,770 shares of common stock reserved for issuance and available for future grant under our 2017 Stock Incentive Plan (“2017 Plan”) as of March 31, 2020; and
- 565,897 shares of common stock issuable upon exercise of warrants outstanding as of March 31, 2020, which have a weighted average exercise price of \$7.48 per share.

Unless otherwise stated or the context requires otherwise, all information in this prospectus supplement assumes that the option to purchase up to additional shares of common stock that we have granted to the underwriter is not exercised.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before purchasing our common stock, you should read and consider carefully the following risk factors as well as all other information contained and incorporated by reference in this prospectus supplement and the accompanying base 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 only recently commenced limited revenue producing operations, so it is difficult for potential investors to evaluate our business. To date, our operations have consisted of technology research and development, testing, and joint development work with customers, potential customers and strategic partners. Our business model is to derive our revenue primarily from license fees and royalties, but to date we have only recognized minimal engineering services and licensing revenues. Our limited operating history makes it difficult to evaluate the commercial value of our technology or our prospective operations. As an early stage company, we are subject to all the risks inherent in the initial organization, financing, expenditures, complications and delays in a new business, including, without limitation:

- the timing and success of our plan of commercialization and the fact that we have not entered into a royalty-based manufacturing or distribution license with a potential customer;
- our ability to replicate on a large commercial scale the benefits of our MST technology that we have demonstrated in preliminary testing;
- our ability to execute joint development agreements with potential customers;
- our ability to structure, negotiate and enforce license agreements that will allow us to operate profitably;
- our ability to advance the licensing arrangements with our initial integration licensees, Asahi Kasei Microdevices, STMicroelectronics and our RF licensee, to royalty-based manufacturing and distribution licenses;
- our ability to protect our intellectual property rights; and
- our ability to raise additional capital as and when needed.

Investors should evaluate an investment in us in light of the uncertainties encountered by developing companies in a competitive environment. There can be no assurance that our efforts will be successful or that we will ultimately be able to attain profitability.

We have a history of significant operating losses and anticipate continued operating losses for at least the near term. For the years ended December 31, 2019 and 2018, we have incurred net losses of approximately \$13.3 million and \$12.9 million, respectively, and our operations have used approximately \$10.4 million and \$9.8 million of cash, respectively. For the three months ended March 31, 2020 and 2019, we have incurred losses of \$3.6 million and \$3.5 million, respectively, and our operations have used approximately \$3.6 million and \$3.8 million of cash, respectively. As of March 31, 2020, we had an accumulated deficit of approximately \$138.9 million. We will continue to experience negative cash flows from operations until at least such time as we are able to secure manufacturing and distribution license agreements with one or more foundries, IDMs or fabless semiconductor manufacturers. While management will endeavor to generate positive cash flows from the commercialization of our MST technology, there can be no assurance that we will be successful doing so. If we are unable to generate positive cash flow within a reasonable period of time, we may be unable to further pursue our business plan or continue operations.

We may need additional financing to execute our business plan and fund operations, which additional financing may not be available on reasonable terms or at all. As of March 31, 2020, we had cash and cash equivalents of approximately \$11.4 million and working capital of approximately \$10.4 million. As of the date of this prospectus supplement, and after giving effect to the proceeds of this offering, we believe that we have sufficient capital to fund our current business plans and obligations over, at least, the 12 months following the date of this prospectus supplement. We also believe that we will have sufficient capital to enable one or more customers to enter into a manufacturing and distribution royalty-based license agreement for our technology. However, the full qualification of a new technology like MST can take up to a year or more, and we have limited ability to influence our customers' testing and qualification processes. Accordingly, we may require additional capital prior to obtaining a royalty-based license or prior to such a license generating sufficient royalty income to cover our ongoing operating expenses. In the event we require additional capital over and above the amount of our presently available working capital, we will endeavor to seek additional funds through various financing sources, including the sale of our equity and debt securities, licensing fees for our technology and joint ventures with industry partners. In addition, we will consider alternatives to our current business plan that may enable us to achieve material revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no guarantees that such funds will be available on commercially reasonable terms, if at all. If such financing is not available on satisfactory terms, we may be unable to further pursue our business plan and we may be unable to continue operations.

While we have entered into three integration license agreements, there can be no assurance that any of these relationships will lead to a royalty-based manufacturing or distribution license agreement. In September and October 2018, respectively, we entered into separate license agreements with AKM and ST, both of which are leading IDMs. In October 2019, we entered into a license agreement with a leading RF semiconductor supplier. Our licensees have paid us licensing fees for the right to build products that integrate MST technology deposited by us onto their semiconductor wafers, but the agreements do not grant the licensees the right to sell products incorporating MST. Our goal is for each license agreement to be the first of a three-stage licensing process with each of AKM, ST and our RF licensee, to be followed by manufacturing and distribution license agreements with each of them. Future licenses with our RF licensee are likely to involve their foundry partner as that licensee is a fabless supplier of RF products. If executed, those manufacturing and distribution license agreements will allow each licensee or their foundry to manufacture MST-enabled products and to sell them to their customers. We expect that the manufacturing and distribution agreements will provide for substantially larger upfront license fee payments than integration license fees and that the agreements will require the respective licensees to make royalty payments to us based the number and sales price of MST-enabled products they sell to their customers. However, our ability to enter into royalty-based manufacturing and distribution agreements with our current licensees or with new customers will depend, in large part, on the performance of devices they build using MST and the successful integration of our MST technology on a high-volume production scale. There can be no assurance that our MST technology will deliver the performance, power or other requirements our customers seek for their products or that the integration of our technology with our customers' manufacturing process will be successful in high volume. In addition, even if our MST technology is successfully integrated into the licensees' products, any or all of our licensees may decide, for reasons unrelated to the price or performance of our MST technology, not to enter into manufacturing and distribution license agreements.

We expect that our product qualification and licensing cycle will be lengthy and costly, and our marketing, engineering and sales efforts may be unsuccessful. We expect to incur significant engineering, marketing and sales expenses prior to entering into any license agreements, generating a license fee and establishing a royalty stream from each licensee. The introduction of any new process technology into semiconductor manufacturing is a lengthy process and we cannot forecast the length of time it takes to establish a new licensing relationship. Based on our engagements with potential customers to date, we believe the time from initial engagement until our customers execute a license and subsequently incorporate our technologies in their integrated circuits, can take 18 to 36 months or longer. Our integration license agreements with our current licensees do not commit either customer to manufacturing or distribution licenses and we expect both customers to perform additional tests on evaluation wafers under their respective integration licenses before deciding whether to enter the next stages of licensing MST. As such, we will incur additional expenses in our engagements with our licensees before we receive license fees, if any, for manufacturing and distribution and before any subsequent royalty stream begins. While we believe that licensing of MST with AKM, ST and our RF licensee could accelerate licensing decisions by other customers, the evaluation process for new technologies in the semiconductor industry is inherently long and complex and there can be no assurance that we will successfully convert other customer prospects into paying customers or that any of these customers will generate sufficient revenue to cover our expenses.

Our business may be adversely affected by the recent coronavirus outbreak. In December 2019, a novel strain of coronavirus, known as COVID-19, was reported to have surfaced in Wuhan, China. In January 2020, this coronavirus spread to other countries, including the United States, and efforts to contain the spread of this coronavirus intensified. Commencing in March 2020, much of the United States and certain other countries have been the subject of lock-downs and self-isolation procedures, which have significantly limited business operations and restricted internal and external meetings. As of the date of this prospectus supplement, we continue to make progress on our customer engagements and conduct internal research and development, with some minor slowdowns due to the COVID-19 pandemic. However, as of the date of this prospectus supplement, none of our customer engagements have stopped entirely. The outbreak and any future preventative or protective actions that we or our customers may take in respect of this coronavirus may result in a period of disruption to work in progress. Our customers' businesses could be disrupted, and our ongoing and future technology evaluations, contract negotiations and revenues could be negatively affected. Any resulting financial impact cannot be reasonably estimated at this time but may materially affect our business and financial condition. The extent to which the coronavirus impacts our results will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of the coronavirus, future government-mandated restrictions, and our customers' and partners' responses to such new information and restrictions, among others.

Qualification of our MST technology requires access to our potential customers' manufacturing tools and facilities, as well as to leased tools and facilities, which may not be available on a timely basis or at all. The qualification of a new process technology like MST entails the integration of our MST film into the complex manufacturing processes employed by our potential customers. In order to validate the benefits of MST, our customer engagement process involves fabrication of wafers that incorporate MST deposited by us using our epitaxial deposition tools and then completing the manufacturing of the wafers in our customers' facilities using their tools. Despite a contraction from a record level in 2018, the semiconductor industry in 2019 exceeded \$400 billion in sales, and in recent months sales have begun to trend upward again, resulting in continuing tight capacity among our potential customers. Accordingly, we have experienced delays in completing the processing of evaluation wafers by our customers as those customers prioritize utilization of their equipment for production use. If our customers do not dedicate their equipment and facilities to testing our products in a timely fashion, we may experience delays that will increase our expenses and delay our customers' decisions on entering into a commercial license with us. Additionally, we conduct our ongoing research and development and portions of our customer evaluation activities using a leased epitaxial (epi) deposition tool. We recently entered into a lease for a new epi tool that we believe will accelerate internal development work and customer engagements. However, epi tools require ongoing, complex maintenance and they have been and will continue to be subject to both planned and unplanned downtime. Any interruption in our epi tool availability may negatively impact the progress of customer work as well as our internal research and development and accordingly could delay or prevent customers from entering into commercial licenses.

The long-term success of our business is dependent on a royalty-based business model, which is inherently risky. The long-term success of our business is dependent on future royalties paid to us by licensee-customers, whose business requires them to market products to their end customers. Royalty payments under our licenses may be based, among other things, upon the number of wafers onto which our MST is deposited or a percentage of the net sales of MST-enabled products. We will depend upon our ability to structure, negotiate and enforce agreements for the determination and payment of royalties, as well as upon our licensees' compliance with their agreements. We face risks inherent in a royalty-based business model, many of which are outside of our control, such as the following:

- the rate of adoption and incorporation of our technology by semiconductor designers and manufacturers and the manufacturers of semiconductor fabrication equipment;
- customers' willingness to agree to an ongoing royalty model, which may impact their wafer or chip costs and margins;
- our licensee customer's ability to successfully market MST-enabled products to their end customers;

- the length of the design cycle and the ability to successfully integrate our MST technology into integrated circuits;
- the demand for products incorporating semiconductors that use our licensed technology;
- the cyclical nature of supply and demand for products using our licensed technology;
- the impact of economic downturns; and
- the timing of receipt of royalty reports and the applicable revenue recognition criteria, which may result in fluctuation in our results of operations.

Our revenues may be concentrated in a few customers and if we lose any of these customers, or these customers do not pay us, our revenues could be materially adversely affected. If we are able to secure the adoption of our MST by one or more foundries, IDMs or fabless semiconductor manufacturers, we expect that for at least the first few years substantially all of our revenue will be generated from license fees and engineering services before customers commence royalty-bearing shipments. Due to the concentration and ongoing consolidation within the semiconductor industry, we may also find that over the longer term our royalty-based revenues are dependent on a relatively few customers. If we lose any of these customers, or these customers do not pay us, our revenues could be materially adversely affected.

It may be difficult for us to verify royalty amounts owed to us under our licensing agreements, and this may cause us to lose revenues. We will endeavor to provide that the terms of our license agreements require our licensees to document their use of our technology and report related data to us on a regular basis. We will endeavor to provide that the terms of our license agreements give us the right to audit books and records of our licensees to verify this information, however audits can be expensive, time consuming, and may not be cost justified based on our understanding of our licensees' businesses. We will endeavor to audit certain licensees to review the accuracy of the information contained in their royalty reports in an effort to decrease the likelihood that we will not receive the royalty revenues to which we are entitled under the terms of our license agreements, but we cannot give assurances that such audits will be effective to that end.

Our business operations could suffer in the event of information technology systems' failures or security breaches. While we believe that we have implemented adequate security measures within our internal information technology and networking systems, our information technology systems may be subject to security breaches, damages from computer viruses, natural disasters, terrorism, and telecommunication failures. Any system failure or security breach could cause interruptions in our operations, including but not limited to our technology computer- aided design, or TCAD, modeling using Synopsys software, in addition to the possibility of losing proprietary information and trade secrets. To the extent that any disruption or security breach results in inappropriate disclosure of our confidential information, our competitive position may be adversely affected, and we may incur liability or additional costs to remedy the damages caused by these disruptions or security breaches.

If we fail to protect and enforce our intellectual property rights and our confidential information, our business will suffer. We rely primarily on a combination of nondisclosure agreements and other contractual provisions and patent, trade secret and copyright laws to protect our technology and intellectual property. If we fail to protect our technology and intellectual property, our licensees and others may seek to use our technology and intellectual property without the payment of license fees and royalties, which could weaken our competitive position, reduce our operating results and increase the likelihood of costly litigation. The growth of our business depends in large part on our ability to secure intellectual property rights in a timely manner, our ability to convince third parties of the applicability of our intellectual property rights to their products, and our ability to enforce our intellectual property rights. In certain instances, we attempt to obtain patent protection for portions of our technology, and our license agreements typically include both issued patents and pending patent applications as well as our proprietary know-how. If we fail to obtain patents in a timely manner or if the patents issued to us do not cover all of the inventions disclosed in our patent applications, others could use portions of our technology and intellectual property without the payment of license fees and royalties.

We also rely on trade secret laws rather than patent laws to protect other portions of our proprietary technology. However, trade secrets can be difficult to protect. The misappropriation of our trade secrets or other proprietary information could seriously harm our business. We protect our proprietary technology and processes, in part, through confidentiality agreements with our employees, consultants, suppliers and customers. We cannot be certain that these contracts have not been and will not be breached, that we will be able to timely detect unauthorized use or transfer of our technology and intellectual property, that we will have adequate remedies for any breach, or that our trade secrets will not otherwise become known or be independently discovered by competitors. If we fail to use these mechanisms to protect our technology and intellectual property, or if a court fails to enforce our intellectual property rights, our business will suffer. We cannot be certain that these protection mechanisms can be successfully asserted in the future or will not be invalidated or challenged.

Further, the laws and enforcement regimes of certain countries do not protect our technology and intellectual property to the same extent as do the laws and enforcement regimes of the U.S. In certain jurisdictions, we may be unable to protect our technology and intellectual property adequately against unauthorized use, which could adversely affect our business.

A court invalidation or limitation of our key patents could significantly harm our business. Our patent portfolio contains some patents that are particularly significant to our MST technology. If any of these key patents are invalidated, or if a court limits the scope of the claims in any of these key patents, the likelihood that companies will take new licenses and that any current licensees will continue to agree to pay under their existing licenses could be significantly reduced. The resulting loss in license fees and royalties could significantly harm our business. Moreover, our stock price may fluctuate based on developments in the course of ongoing litigation.

We may become involved in material legal proceedings in the future to enforce or protect our intellectual property rights, which could harm our business. From time to time, we may identify products that we believe infringe our patents. In that event, we expect to initially seek to license the manufacturer of the infringing products, however if the manufacturer is unwilling to enter into a license agreement, we may have to initiate litigation to enforce our patent rights against those products. Litigation stemming from such disputes could harm our ability to gain new customers, who may postpone licensing decisions pending the outcome of the litigation or who may, as a result of such litigation, choose not to adopt our technologies. Such litigation may also harm our relationships with existing licensees, who may, as a result of such litigation, cease making royalty or other payments to us or challenge the validity and enforceability of our patents or the scope of our license agreements.

In addition, the costs associated with legal proceedings are typically high, relatively unpredictable and not completely within our control. These costs may be materially higher than expected, which could adversely impair our working capital, affect our operating results and lead to volatility in the price of our common stock. Whether or not determined in our favor or ultimately settled, litigation would divert our managerial, technical, legal and financial resources from our business operations. Furthermore, an adverse decision in any of these legal actions could result in a loss of our proprietary rights, subject us to significant liabilities, require us to seek licenses from others, limit the value of our licensed technology or otherwise negatively impact our stock price or our business and financial position, results of operations and cash flows.

Even if we prevail in our legal actions, significant contingencies may exist to their settlement and final resolution, including the scope of the liability of each party, our ability to enforce judgments against the parties, the ability and willingness of the parties to make any payments owed or agreed upon and the dismissal of the legal action by the relevant court, none of which are completely within our control. Parties that may be obligated to pay us royalties could be insolvent or decide to alter their business activities or corporate structure, which could affect our ability to collect royalties from such parties.

Our technologies may infringe on the intellectual property rights of others, which could lead to costly disputes or disruptions. The semiconductor industry is characterized by frequent allegations of intellectual property infringement. Any allegation of infringement could be time consuming and expensive to defend or resolve, result in substantial diversion of management resources, cause suspension of operations or force us to enter into royalty, license, or other agreements rather than dispute the merits of such allegation. Furthermore, third parties making such claims may be able to obtain injunctive or other equitable relief that could block our ability to further develop or commercialize some or all of our technologies, and the ability of our customers to develop or commercialize their products incorporating our technologies, in the U.S. and abroad. If patent holders or other holders of intellectual property initiate legal proceedings, we may be forced into protracted and costly litigation. We may not be successful in defending such litigation and may not be able to procure any required royalty or license agreements on acceptable terms or at all.

If we are unable to manage future expansion effectively, our business, operations and financial condition may suffer significantly, resulting in decreased productivity. If our MST proves to be commercially valuable, it is likely that we will experience a rapid growth phase that could place a significant strain on our managerial, administrative, technical, operational and financial resources. Our organization, procedures and management may not be adequate to fully support the expansion of our operations or the efficient execution of our business strategy. If we are unable to manage future expansion effectively, our business, operations and financial condition may suffer significantly, resulting in decreased productivity.

If integrated circuits incorporating our technologies are used in defective products, we may be subject to product liability or other claims. If our MST technology is used in defective or malfunctioning products, we could be sued for damages, especially if the defect or malfunction causes physical harm to people. While we will endeavor to carry product liability insurance, contractually limit our liability and obtain indemnities from our customers, there can be no assurance that we will be able to obtain insurance at satisfactory rates or in adequate amounts or that any insurance and customer indemnities will be adequate to defend against or satisfy any claims made against us. The costs associated with legal proceedings are typically high, relatively unpredictable and not completely within our control. Even if we consider any such claim to be without merit, significant contingencies may exist, similar to those summarized in the above risk factor concerning intellectual property litigation, which could lead us to settle the claim rather than incur the cost of defense and the possibility of an adverse judgment. Product liability claims in the future, regardless of their ultimate outcome, could have a material adverse effect on our business, financial condition and reputation, and on our ability to attract and retain licensees and customers.

Risks Related to Owning Our Common Stock

Our stock price has been volatile and thinly traded. Our common stock has traded on the Nasdaq Capital Market since August 5, 2016. Our common stock has been relatively thinly traded, with an average daily trading volume of approximately 87,239 shares during the quarter ended March 31, 2020 and prices ranging from a low of \$2.53 to high of \$6.37 in the same period. There can be no assurance that the market for our common shares will become more liquid. The stock market in general, and early stage public companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of such companies. If we are unable to increase the trading volume for our common shares, you may not be able to sell your common shares at prices you consider to be fair or at times that are convenient for you, or at all.

We are an “emerging growth company” under the JOBS Act of 2012 and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors. We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (“JOBS Act”), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements;
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments; and
- extended transition periods available for complying with new or revised accounting standards.

We have chosen to “opt out” of the extended transition periods available for complying with new or revised accounting standards, but we intend to take advantage of all of the other benefits available under the JOBS Act, including the exemptions discussed above. If some investors find our common stock less attractive as a result of our reliance on these exemptions, there may be a less active trading market for our common stock and our stock price may be more volatile.

We will remain an “emerging growth company” until December 31, 2021, although we will lose that status sooner if our revenues exceed \$1.07 billion, if we issue more than \$1 billion in non-convertible debt in a three-year period, or if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of any June 30.

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. Because of the exemptions from various reporting requirements provided to us as an “emerging growth company,” we may be less attractive to investors and it may be difficult for us to raise additional capital when we need it or on favorable terms. 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.

We have not paid dividends in the past and have no immediate plans to pay dividends. We plan to reinvest all of our earnings, to the extent we have earnings, to cover operating costs and otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on our common stock.

You will experience immediate dilution in the book value per share of the common stock you purchase. Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. If you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$ _____ per share in the net tangible book value of the common stock you purchase in this offering. See “Dilution” for a more detailed discussion of the dilution you will incur if you purchase shares of our common stock in this offering.

Shares eligible for future sale may adversely affect the market for our common stock. Of the 17,725,435 shares of our common stock outstanding as of March 31, 2020, approximately 16,013,415 shares are held by “non-affiliates” and are freely tradable. Any substantial sale of the 1,712,020 shares of our common stock that are “restricted” securities pursuant to Rule 144 or pursuant to any resale prospectus may have a material adverse effect on the market price of our common stock.

We expect to continue to incur significant increased costs as a result of being a public company that reports to the Securities and Exchange Commission and our management will be required to devote substantial time to meet compliance obligations. As a public company reporting to the Securities and Exchange Commission, we incur significant legal, accounting and other expenses that we did not incur as a private company. We are subject to reporting requirements of the Exchange Act and the Sarbanes-Oxley Act of 2002, as well as rules subsequently implemented by the Securities and Exchange Commission that impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. In addition, on July 21, 2010, the Dodd-Frank Wall Street Reform and Protection Act was enacted. There are significant corporate governance and executive compensation-related provisions in the Dodd-Frank Act that increased our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and may also place undue strain on our personnel, systems and resources. Our management and other personnel devote a substantial amount of time to these compliance initiatives. In addition, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

Our charter documents and Delaware law may inhibit a takeover that stockholders consider favorable. Provisions of our certificate of incorporation and bylaws and applicable provisions of Delaware law may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. The provisions in our certificate of incorporation and bylaws:

- limit who may call stockholder meetings;
- do not permit stockholders to act by written consent;
- allow us to issue blank check preferred stock without stockholder approval;
- do not provide for cumulative voting rights; and
- provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

In addition, Section 203 of the Delaware General Corporation Law may limit our ability to engage in any business combination with a person who beneficially owns 15% or more of our outstanding voting stock unless certain conditions are satisfied. This restriction lasts for a period of three years following the share acquisition. These provisions may have the effect of entrenching our management team and may deprive you of the opportunity to sell your shares to potential acquirers at a premium over prevailing prices. This potential inability to obtain a control premium could reduce the price of our common stock.

Our bylaws designate the Court of Chancery of the State of Delaware 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, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) 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, (iii) any action asserting a claim against us or any our directors, officers or other employees arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (iv) any action asserting a claim against us or any our directors, officers or other employees 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.

Our board of directors may issue blank check preferred stock, which may affect the voting rights of our holders and could deter or delay an attempt to obtain control of us. Our board of directors is authorized, without stockholder approval, to issue preferred stock in series and to fix and state the voting rights and powers, designation, preferences and relative, participating, optional or other special rights of the shares of each such series and the qualifications, limitations and restrictions thereof. Preferred stock may rank prior to our common stock with respect to dividends rights, liquidation preferences, or both, and may have full or limited voting rights. If issued, such preferred stock would increase the number of outstanding shares of our capital stock, adversely affect the voting power of holders of our common stock, and could have the effect of deterring or delaying an attempt to obtain control of us.

FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying base prospectus and the 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 Securities Exchange Act of 1934, as amended (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. Forward-looking statements concern our current plans, intentions, beliefs, expectations and statements of future economic performance. Statements containing terms such as “will,” “may,” “believe,” “do not believe,” “plan,” “expect,” “intend,” “estimate,” “anticipate” and other phrases of similar meaning are considered to be forward-looking statements.

Forward-looking statements are based on our assumptions and are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from those reflected in or implied by these forward-looking statements. Factors that might cause actual results to differ include, among others, those set forth under “Risk Factors” in this prospectus supplement and those discussed in “Management’s Discussion and Analysis of Financial Condition and Results of Operation” in our most recent Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q and in our future periodic reports filed with the SEC, all of which are incorporated by reference herein. Readers are cautioned not to place undue reliance on any forward-looking statements contained in this prospectus supplement, the accompanying base prospectus or the documents we have filed with the SEC that are incorporated by reference herein and therein, which reflect management’s views and opinions only as of their respective dates. We assume no obligation to update forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting such forward-looking statements, except to the extent required by applicable securities laws. You are advised, however, to consult any additional disclosures we have made or will make in the filings we make with the SEC, including reports on Forms 10-K, 10-Q and 8-K. All subsequent forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements contained in this prospectus supplement, the accompanying base prospectus or any related issuer free writing prospectus.

USE OF PROCEEDS

We estimate that our net proceeds from this offering will be approximately \$ (or approximately \$ if the underwriter exercises its over-allotment option in full), after deducting the underwriting discount and estimated offering expenses payable by us.

We expect to use the net proceeds from this offering for working capital and general corporate purposes, which could include capital and/or operating expenditures related to epitaxial deposition tools we may acquire or lease; wafer processing and metrology costs for internal R&D and customer evaluations; and increased engineering personnel supporting MST development and customer integration. This represents our best estimate of the manner in which we will use the net proceeds we receive from this offering based upon the current status of our business, but we have not reserved or allocated amounts for specific purposes and we cannot specify with certainty how or when we will use any of the net proceeds. Amounts and timing of our actual expenditures will depend on numerous factors, including the timeline in our product qualification and licensing cycle and the amount of cash we use in our operations. Our management will have broad discretion in applying 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.

DILUTION

If you invest in our common stock, you will experience immediate dilution to the extent of the difference between the price per share you pay in this offering and the net tangible book value per share of our common stock after this offering.

Our net tangible book value as of March 31, 2020 was approximately \$11.1 million, or approximately \$0.62 per share. 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. After giving effect to the sale of _____ shares of our common stock in this offering at the public offering price of \$ _____ per share, and after deducting the underwriting discount and estimated offering expenses payable by us, our adjusted net tangible book value as of March 31, 2020 would have been approximately \$ _____, or approximately \$ _____ per share. This represents an immediate increase in net tangible book value of approximately \$ _____ per share to our existing stockholders and an immediate dilution in net tangible book value of approximately \$ _____ per share to investors participating in this offering. The following table illustrates this calculation on a per share basis:

Public offering price per share of common stock		\$
Net tangible book value per share as of March 31, 2020	\$	0.62
Increase per share attributable to investors participating in this offering	\$	
Adjusted net tangible book value per share after giving effect to this offering		\$
Dilution per share to investors participating in this offering		\$

If the underwriter exercises in full its option to purchase an additional _____ shares of common stock at the public offering price of \$ _____ per share, our adjusted net tangible book value as of March 31, 2020, after giving effect to this offering, would have been approximately \$ _____ per share, representing an increase in net tangible book value of approximately \$ _____ per share to existing stockholders and immediate dilution in net tangible book value of approximately \$ _____ per share to investors participating in this offering.

The number of shares of our common stock expected to be outstanding after this offering is based on 17,725,435 shares of common stock outstanding as of March 31, 2020 and excludes the following:

- 3,580,701 shares of common stock issuable upon exercise of options outstanding as of March 31, 2020, which have a weighted average exercise price of \$5.94 per share;
- 1,141,770 shares of common stock reserved for issuance and available for future grant under our 2017 Stock Incentive Plan (“2017 Plan”) as of March 31, 2020; and
- 565,897 shares of common stock issuable upon exercise of warrants outstanding as of March 31, 2020, which have a weighted average exercise price of \$7.48 per share.

Unless otherwise stated or the context requires otherwise, all information in this prospectus supplement assumes that the option to purchase up to additional shares of common stock that we have granted to the underwriter is not exercised.

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. The exercise of outstanding options or warrants having an exercise price less than the offering price would increase 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.

UNDERWRITING

We have entered into an underwriting agreement with National Securities Corporation, who we refer to as the underwriter, dated May , 2020. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriter the _____,000 shares of common stock offered hereby, and the underwriter has agreed to purchase, at the public offering price, less the underwriting discount set forth on the cover page of this prospectus supplement, such shares.

The underwriter is committed to purchase all the shares of common stock offered by us other than those covered by the option to purchase additional shares described below. The obligation of the underwriter may be terminated upon the occurrence of certain events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the underwriter's obligation is subject to customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriter of officers' certificates and legal opinions.

We have agreed to indemnify the underwriter against specified liabilities, including liabilities under the Securities Act of 1933, as amended, or the Securities Act, and to contribute to payments the underwriter may be required to make in respect thereof. The underwriter is offering the shares, subject to prior sale, when, as and if issued to and accepted by it, subject to approval of legal matters by its counsel and other conditions specified in the underwriting agreement. The underwriter reserves the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

The underwriter proposes to offer the shares of common stock to the public at the public offering price set forth on the cover page of this prospectus supplement. In addition, the underwriter may offer some of the shares of common stock to other securities dealers at such price less a concession of \$ per share. If all of the shares of common stock are not sold at the public offering price, the underwriter may change the offering price and other selling terms by means of a further supplement to this prospectus supplement.

We have granted the underwriter an over-allotment option. This option, which is exercisable for up to 45 days after the closing date of this offering, permits the underwriter to purchase a maximum of _____,000 additional shares of common stock from us to cover over-allotments, if any. If the underwriter exercises all or part of this option, it will purchase shares covered by the option at the public offering price that appears on the cover page of this prospectus supplement, less the underwriting discount. If this option is exercised in full, the total price to the public will be approximately \$ _____ and the total proceeds to us, before expenses, will be approximately \$ _____.

Discount. The following table shows the public offering price, underwriting discount and proceeds, before expenses, to us. The information assumes either no exercise or full exercise by the underwriter of its over-allotment option.

	Per Share	Total With No Exercise	Total With Full Exercise
Public offering price	\$	\$	\$
Underwriting discount (6%)	\$	\$	\$
Proceeds to us, before expenses	\$	\$	\$

We expect that the total offering expenses payable by us, including a non-accountable expense allowance payable to the underwriter of \$35,000, will be approximately \$ _____,000.

Discretionary Accounts. The underwriter does not intend to confirm sales of the common stock offered hereby to any accounts over which it has discretionary authority.

Electronic Offer, Sale and Distribution of Shares. A prospectus supplement in electronic format may be made available on the websites maintained by the underwriter, and the underwriter may distribute prospectus supplements electronically. Other than the prospectus supplement in electronic format, the information on these websites is not part of this prospectus supplement or the registration statement of which this prospectus supplement forms a part, has not been approved or endorsed by us or the underwriter in its capacity as underwriter, and should not be relied upon by investors.

Other Relationships. The underwriter and its affiliates may in the future provide various investment banking, commercial banking and other financial services for us and our affiliates for which they may receive customary fees; however, except as disclosed in this prospectus supplement, we have no present arrangements with the underwriter for any further services.

Stabilization. In connection with this offering, the underwriter may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions, penalty bids and purchases to cover positions created by short sales.

- Stabilizing transactions permit bids to purchase shares so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the shares while the offering is in progress.
- Over-allotment transactions involve sales by the underwriter of shares in excess of the number of shares the underwriter is obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriter is not greater than the number of shares that they may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriter may close out any short position by exercising its over-allotment option and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of shares in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriter will consider, among other things, the price of shares available for purchase in the open market as compared with the price at which they may purchase shares through exercise of the over-allotment option. If the underwriter sells more shares than could be covered by exercise of the over-allotment option and, therefore, have a naked short position, the position can be closed out only by buying shares in the open market. A naked short position is more likely to be created if the underwriter is concerned that, after pricing, there could be downward pressure on the price of the shares in the open market, which could adversely affect investors who purchase in the offering.
- Penalty bids permit the underwriter to reclaim a selling concession from a syndicate member when the shares originally sold by that syndicate member are purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriter make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on the Nasdaq Capital Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Passive Market Making. In connection with this offering, the underwriter may engage in passive market making transactions in our common stock on the Nasdaq Capital Market in accordance with Rule 103 of Regulation M under the Exchange Act during a period before the commencement of offers or sales of the shares and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Offer restrictions outside the United States

Other than in the United States, no action has been taken by us or the underwriter that would permit a public offering of the securities offered by this prospectus supplement in any jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement and the accompanying prospectus may not be offered or sold, directly or indirectly, nor may this prospectus supplement or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus supplement comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement. This prospectus supplement does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement in any jurisdiction in which such an offer or a solicitation is unlawful.

LEGAL MATTERS

The validity of the securities offered by this prospectus supplement will be passed upon for us by Greenberg Traurig, LLP, Irvine, California. Golenbock Eiseman Assor Bell & Peskoe LLP, New York, New York, is acting as counsel for the underwriter in connection with this offering.

EXPERTS

The consolidated financial statements of Atomera Incorporated as of December 31, 2019 and 2018 and for each of the two years in the period ended December 31, 2019, incorporated by reference into this prospectus supplement from the Company's Annual Report on Form 10-K for the year ended December 31, 2019, have been audited by Marcum LLP, an independent registered public accounting firm, as stated in their 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 DOCUMENTS 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 (other than the portions thereof deemed to be furnished to the SEC pursuant to Item 9 or Item 12) until we terminate the offering of these securities:

- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2019, which was filed on March 13, 2020;
- Our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2020, which was filed on May 11, 2020;
- The description of our common stock in our [Form 8-A12B](#), which was filed on August 2, 2016, and any amendments or reports filed for the purpose of updating this 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 and prior to the termination of this offering made by way of this prospectus.

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.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Atomera Incorporated
Attn: Investor Relations
750 University Avenue, Suite 280
Los Gatos, California 95032
(408) 442-5248

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement under the Securities Act (SEC File No. 333-234382) 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.atomera.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.

PROSPECTUS

\$50,000,000

ATOMERA INCORPORATED

**Common Stock
Preferred Stock
Debt Securities
Warrants
Units**

We may issue securities from time to time in one or more offerings of up to \$50,000,000 in aggregate offering price. This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide the specific terms of these securities in supplements to this prospectus. The prospectus supplements will also describe the specific manner in which these securities will be offered and may also supplement, update or amend information contained in this document. You should read this prospectus and any applicable prospectus supplement before you invest.

We may offer these securities in amounts, at prices and on terms determined at the time of offering. The securities may be sold directly to you, through agents, or through underwriters and dealers. If agents, underwriters or dealers are used to sell the securities, we will name them and describe their compensation in a prospectus supplement.

Our common stock is listed on The NASDAQ Capital Market under the symbol "ATOM". On October 28, 2019, the last reported sale price of our common stock on The NASDAQ Capital Market was \$3.94 per share.

On October 28, 2019, the aggregate market value of our outstanding common stock held by non-affiliates was \$61,565,486. We have not previously offered pursuant to General Instruction I.B.6. of Form S-3 any securities during the prior twelve calendar month period that ends on, and includes, the date of this prospectus.

Investing in these securities involves significant risks. See "[Risk Factors](#)" included in any accompanying prospectus supplement and in the documents incorporated by reference in this prospectus for a discussion of the factors you should carefully consider before deciding to purchase these securities.

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 _____, 2019

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the “SEC,” utilizing a “shelf” registration process. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings for an aggregate initial offering price of up to \$50,000,000.

This prospectus provides you with a general description of the securities we may offer. From time to time, we may provide one or more prospectus supplements that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any accompanying prospectus supplement together with the additional information described under the heading “Where You Can Find More Information” beginning on page 17 of this prospectus.

We have not authorized anyone to provide you with information different from that contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We do not take any responsibility for, and cannot provide any assurance as to the reliability of, any information other than the information contained or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. Neither this prospectus nor any accompanying prospectus supplement constitutes an offer to sell or the solicitation of an offer to buy any securities other than the securities described in the accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless the context otherwise indicates, references in this prospectus to “we,” “our” and “us” refer, collectively, to Atomera Incorporated, a Delaware corporation, and its subsidiaries.

ABOUT ATOMERA INCORPORATED

We are engaged in the business of developing, commercializing and licensing proprietary processes and technologies for the \$450+ billion semiconductor industry. Our lead technology, named Mears Silicon Technology™, or MST[®], is a thin film of reengineered silicon that can be applied as a transistor channel enhancement to CMOS-type transistors, the most widely used transistor type in the semiconductor industry. MST[®] is our proprietary and patent-protected performance enhancement technology that we believe addresses a number of key engineering challenges facing the semiconductor industry. We believe that by incorporating MST[®], transistors can be smaller, with increased speed, reliability and energy efficiency. In addition, since MST[®] is an additive and low cost technology, it can be deployed on an industrial scale, with machines commonly used in semiconductor manufacturing. We believe that MST[®] can be widely incorporated into the most common types of semiconductor products, including analog, logic, memory and optical integrated circuits.

We do not intend to design or manufacture integrated circuits directly. Instead, we intend to develop and license technologies and processes that will offer the designers and manufacturers of integrated circuits a low-cost solution to the industry’s need for greater performance and lower power consumption. Our customers and partners are expected to include:

- foundries, which manufacture integrated circuits on behalf of fabless manufacturers;
- integrated device manufacturers, or IDMs, which are the fully integrated designers and manufacturers of integrated circuits;
- fabless semiconductor manufacturers, which are designers of integrated circuits that outsource the manufacture of their chips to foundries;
- original equipment manufacturers, or OEMs, which manufacture the epitaxial, or EPI, deposition machines used to deposit semiconductor layers, such as MST[®], onto the base silicon wafer; and
- electronic design automation companies, which make tools used throughout the industry to simulate the performance of semiconductor products using different materials, design structures and process technologies.

We intend to generate revenue through licensing arrangements whereby foundries and IDMs pay us a license fee for their use of MST[®] technology in the manufacture of silicon wafers as well as a royalty for each silicon wafer or device they sell that incorporates our MST[®] technology. We also intend to enter into licensing arrangements with fabless semiconductor manufacturers pursuant to which we will charge them a royalty for each device they sell that incorporates our MST[®] technology.

Our principal executive offices are located at 750 University Avenue, Suite 280, Los Gatos, California 95032, and our telephone number is (408) 442-5248.

RISK FACTORS

Investing in our securities involves significant risks. You should carefully consider the risks and uncertainties described in this prospectus and any accompanying prospectus supplement, including the risk factors in our most recent Annual Report on Form 10-K, any subsequently filed Quarterly Report on Form 10-Q or Current Report on Form 8-K, together with all of the other information appearing in or incorporated by reference into this prospectus and any applicable prospectus supplement, before making an investment decision pursuant to this prospectus and any accompanying prospectus supplement relating to a specific offering.

Our business, financial condition and results of operations could be materially and adversely affected by any or all of these risks or by additional risks and uncertainties not presently known to us or that we currently deem immaterial that may adversely affect us in the future.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains, and any accompanying prospectus supplement will contain, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1993. Also, documents that we incorporate by reference into this prospectus, including documents that we subsequently file with the SEC, will contain forward-looking statements. Forward-looking statements are those that predict or describe future events or trends and that do not relate solely to historical matters. You can generally identify forward-looking statements as statements containing the words “may,” “will,” “could,” “should,” “expect,” “anticipate,” “intend,” “estimate,” “believe,” “project,” “plan,” “assume” or other similar expressions, or negatives of those expressions, although not all forward-looking statements contain these identifying words. All statements contained or incorporated by reference in this prospectus and any prospectus supplement regarding our business strategy, future operations, projected financial position, potential strategic transactions, proposed licensing arrangements, projected sales growth, estimated future revenues, cash flows and profitability, projected costs, potential outcome of litigation, potential sources of additional capital, future prospects, future economic conditions, the future of our industry and results that might be obtained by pursuing management’s current plans and objectives are forward-looking statements.

You should not place undue reliance on our forward-looking statements because the matters they describe are subject to certain risks, uncertainties and assumptions that are difficult to predict. Our forward-looking statements are based on the information currently available to us and speak only as of the date on the cover of this prospectus, the date of any prospectus supplement, or, in the case of forward-looking statements incorporated by reference, the date of the filing that includes the statement. Over time, our actual results, performance or achievements may differ from those expressed or implied by our forward-looking statements, and such difference might be significant and materially adverse to our security holders. Except as required by law, we undertake no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

We have identified some of the important factors that could cause future events to differ from our current expectations and they are described in this prospectus and supplements to this prospectus under the caption “Risk Factors,” as well as in our most recent Annual Report on Form 10-K, including under the captions “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and in other documents that we may file with the SEC, all of which you should review carefully. Please consider our forward-looking statements in light of those risks as you read this prospectus and any prospectus supplement.

THE SECURITIES WE MAY OFFER

We may offer and sell, from time to time in one or more offerings, any combination of common stock, preferred stock, warrants, units and debt securities having an aggregate initial offering price not exceeding \$50,000,000. In this prospectus, we refer to the common stock, preferred stock, warrants, debt securities and units that we may offer collectively as “securities.”

Common Stock

We are authorized to issue 47,500,000 shares of \$0.001 par value common stock. Holders of shares of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders generally. Stockholders are entitled to receive such dividends as may be declared from time to time by the board of directors out of funds legally available therefor, and in the event of liquidation, dissolution or winding up of the company to share ratably in all assets remaining after payment of liabilities. The holders of shares of common stock have no preemptive, conversion, subscription rights or cumulative voting rights.

This prospectus provides a general description of the securities we may offer other than our common stock. Each time we sell any of our securities under this prospectus, we will, to the extent required by law, provide a prospectus supplement that will contain specific information about the terms of the offering. The prospectus supplement may also add, update or change information in this prospectus. For more information, see “[About this Prospectus](#).”

Preferred Stock

We are authorized to issue 2,500,000 shares of \$0.001 par value preferred stock. Pursuant to our certificate of incorporation, our board of directors has the authority, without further action by the stockholders (unless such stockholder action is required by applicable law or the rules of The Nasdaq Stock Market), to designate and issue up to 2,500,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the designations, powers, preferences and rights of the shares of each wholly unissued series, and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding. Shares of our preferred stock, if issued, will be fully paid and non-assessable.

We will fix the designations, powers, preferences and rights of the preferred stock of each series, as well as the qualifications, limitations or restrictions thereon, in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;

- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;
- whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange price, or how it will be calculated, and the exchange period;
- voting rights, if any, of the preferred stock;
- preemptive rights, if any;
- restrictions on transfer, sale or other assignment, if any;
- whether interests in the preferred stock will be represented by depositary shares;
- a discussion of any material United States federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;
- any limitations on the issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

The General Corporation Law of the State of Delaware, or DGCL, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class (or, in some cases, as a series) on an amendment to our certificate of incorporation if the amendment would change the par value or, unless the certificate of incorporation provided otherwise, the number of authorized shares of the class or change the powers, preferences or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. Preferred stock could be issued quickly with terms designed to delay or prevent a change in control of our company or make removal of management more difficult. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of our common stock.

Description of Debt Securities

We may offer debt securities which may be senior or subordinated. We refer to the senior debt securities and the subordinated debt securities collectively as debt securities. The following description summarizes the general terms and provisions of the debt securities. We will describe the specific terms of the debt securities and the extent, if any, to which the general provisions summarized below apply to any series of debt securities in the prospectus supplement relating to the series and any applicable free writing prospectus that we authorize to be delivered.

We may issue senior debt securities from time to time, in one or more series, which may be issued under a senior indenture to be entered into between us and a senior trustee to be named in a prospectus supplement, which we refer to as the senior trustee. We may issue subordinated debt securities from time to time, in one or more series, which may be issued under a subordinated indenture to be entered into between us and a subordinated trustee to be named in a prospectus supplement, which we refer to as the subordinated trustee. While it is highly likely that any debt securities we issue will be issued under an indenture, we reserve the right to issue debt securities other than under an indenture pursuant to an exemption from the indenture requirement under the Trust Indenture Act of 1939. Any debt securities issued by us other than pursuant to an indenture will subject the purchasers of such debt securities to certain unique risks arising from the lack of a trustee charged with the responsibility of monitoring the debt securities and enforcing the rights of the holders of such debt securities, which will be set forth in a prospectus supplement filed with regard to such unindentured debt securities.

The forms of senior indenture and subordinated indenture are filed as exhibits to the registration statement of which this prospectus forms a part. Together, the senior indenture and the subordinated indenture are referred to as the indentures and, together, the senior trustee and the subordinated trustee are referred to as the trustees. This prospectus briefly outlines some of the provisions of the indentures. The following summary of the material provisions of the indentures is qualified in its entirety by the provisions of the indentures, including definitions of certain terms used in the indentures. Wherever we refer to particular sections or defined terms of the indentures, those sections or defined terms are incorporated by reference in this prospectus or the applicable prospectus supplement. You should review any indentures that are filed as exhibits to the registration statement of which this prospectus forms a part for additional information.

If we issue debt securities other than under an indenture, we will likely be limited to issuing a maximum of \$50 million of such debt securities and it is also likely that such debt securities will be unsecured and subordinated. Any indenture regarding debt securities issued by us will not limit the amount of debt securities that we may issue. The debt securities or applicable indenture, if any, will provide that debt securities may be issued up to an aggregate principal amount authorized from time to time by us and may be payable in any currency or currency unit designated by us or in amounts determined by reference to an index.

General

The following is a summary of the general terms of the debt securities we may issue under an indenture or otherwise, except as otherwise described in a prospectus supplement.

The senior debt securities will constitute our unsubordinated general obligations and will rank pari passu with our other unsubordinated obligations. The subordinated debt securities will constitute our subordinated general obligations and will be junior in right of payment to our senior indebtedness (including senior debt securities).

The debt securities will be our unsecured obligations unless otherwise specified in the applicable prospectus supplement. Any secured debt or other secured obligations will be effectively senior to the debt securities to the extent of the value of the assets securing such debt or other obligations.

The applicable prospectus supplement and any free writing prospectus will include any additional or different terms of the debt securities or any series being offered, including the following terms:

- the title and type of the debt securities;
- whether the debt securities will be issued under an indenture;
- whether the debt securities will be senior or subordinated debt securities, and, with respect to subordinated debt securities, the terms on which they are subordinated;
- the aggregate principal amount of the debt securities;
- the price or prices at which we will sell the debt securities;

- the maturity date or dates of the debt securities and the right, if any, to extend such date or dates;
- the rate or rates, if any, per year, at which the debt securities will bear interest, or the method of determining such rate or rates;
- the date or dates from which such interest will accrue, the interest payment dates on which such interest will be payable or the manner of determination of such interest payment dates and the related record dates;
- the right, if any, to extend the interest payment periods and the duration of that extension;
- the manner of paying principal and interest and the place or places where principal and interest will be payable;
- provisions for a sinking fund, purchase fund or other analogous fund, if any;
- any redemption dates, prices, obligations and restrictions on the debt securities;
- the currency, currencies or currency units in which the debt securities will be denominated and the currency, currencies or currency units in which principal and interest, if any, on the debt securities may be payable;
- any conversion or exchange features of the debt securities;
- whether and upon what terms the debt securities may be defeased;
- any events of default or covenants in addition to or in lieu of those set forth in the indenture;
- whether the debt securities will be issued in definitive or global form or in definitive form only upon satisfaction of certain conditions;
- whether the debt securities will be guaranteed as to payment or performance;
- if the debt securities of the series will be secured by any collateral and, if so, a general description of the collateral and the terms and provisions of such collateral security, pledge or other agreements; and
- any other material terms of the debt securities.

The applicable prospectus supplement will also describe any applicable material U.S. federal income tax consequences. When we refer to “principal” in this section with reference to the debt securities, we are also referring to “premium, if any.”

We may from time to time, without notice to or the consent of the holders of any series of debt securities, create and issue further debt securities of any such series ranking equally with the debt securities of such series in all respects (or in all respects other than (1) the payment of interest accruing prior to the issue date of such further debt securities or (2) the first payment of interest following the issue date of such further debt securities). Such further debt securities may be consolidated and form a single series with the debt securities of such series and have the same terms as to status, redemption or otherwise as the debt securities of such series.

You may present debt securities for exchange and you may present debt securities for transfer in the manner, at the places and subject to the restrictions set forth in the debt securities and the applicable prospectus supplement. We will provide you those services without charge, although you may have to pay any tax or other governmental charge payable in connection with any exchange or transfer, as set forth in the debt securities or any indenture.

Debt securities may bear interest at a fixed rate or a floating rate. Debt securities bearing no interest or interest at a rate that at the time of issuance is below the prevailing market rate (original issue discount securities) may be sold at a discount below their stated principal amount.

We may issue debt securities with the principal amount payable on any principal payment date, or the amount of interest payable on any interest payment date, to be determined by reference to one or more currency exchange rates, securities or baskets of securities, commodity prices or indices. You may receive a payment of principal on any principal payment date, or a payment of interest on any interest payment date, that is greater than or less than the amount of principal or interest otherwise payable on such dates, depending on the value on such dates of the applicable currency, security or basket of securities, commodity or index. Information as to the methods for determining the amount of principal or interest payable on any date, the currencies, securities or baskets of securities, commodities or indices to which the amount payable on such date is linked.

Certain Terms of the Senior Debt Securities

The following is a summary of the general terms of the senior debt securities we may issue under a senior indenture, except as otherwise described in a prospectus supplement.

Covenants. Unless we indicate otherwise in a prospectus supplement, the senior debt securities will not contain any financial or restrictive covenants, including covenants restricting either us or any of our subsidiaries from incurring, issuing, assuming or guaranteeing any indebtedness secured by a lien on any of our or our subsidiaries' property or capital stock, or restricting either us or any of our subsidiaries from entering into sale and leaseback transactions.

Consolidation, Merger and Sale of Assets. Unless we indicate otherwise in a prospectus supplement, we may not consolidate with or merge into any other person, in a transaction in which we are not the surviving corporation, or convey, transfer or lease our properties and assets substantially as an entirety to any person, in either case, unless:

- the successor entity, if any, is a U.S. corporation, limited liability company, partnership or trust (subject to certain exceptions provided for in the senior indenture);
- the successor entity assumes our obligations on the senior debt securities and under the senior indenture;
- immediately after giving effect to the transaction, no default or event of default shall have occurred and be continuing; and
- certain other conditions are met.

No Protection in the Event of a Change in Control. Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the senior debt securities will not contain any provisions that may afford holders of the senior debt securities protection in the event we have a change in control or in the event of a highly leveraged transaction (whether or not such transaction results in a change in control).

Events of Default. Unless we indicate otherwise in a prospectus supplement with respect to a particular series of senior debt securities, the following are events of default under the senior indenture for any series of senior debt securities:

- failure to pay interest on any senior debt securities of such series when due and payable, if that default continues for a period of 90 days (or such other period as may be specified for such series);
- failure to pay principal on the senior debt securities of such series when due and payable whether at maturity, upon redemption, by declaration or otherwise (and, if specified for such series, the continuance of such failure for a specified period);

- default in the performance of or breach of any of our covenants or agreements in the senior indenture applicable to senior debt securities of such series, other than a covenant breach which is specifically dealt with elsewhere in the senior indenture, and that default or breach continues for a period of 90 days after we receive written notice from the trustee or from the holders of 25% or more in aggregate principal amount of the senior debt securities of such series;
- certain events of bankruptcy or insolvency, whether or not voluntary; and
- any other event of default provided for in such series of senior debt securities as may be specified in the applicable prospectus supplement.

Unless we indicate otherwise in a prospectus supplement, the default by us under any other debt, including any other series of debt securities, is not a default under the senior indenture.

If an event of default other than an event of default specified in the fourth bullet point above occurs with respect to a series of senior debt securities and is continuing under the senior indenture, then, and in each such case, either the trustee or the holders of not less than 25% in aggregate principal amount of such series then outstanding under the senior indenture (each such series voting as a separate class) by written notice to us and to the trustee, if such notice is given by the holders, may, and the trustee at the request of such holders shall, declare the principal amount of and accrued interest on such series of senior debt securities to be immediately due and payable, and upon this declaration, the same shall become immediately due and payable.

If an event of default specified in the fourth bullet point above occurs with respect to us and is continuing, the entire principal amount of and accrued interest, if any, on each series of senior debt securities then outstanding shall become immediately due and payable.

Unless otherwise specified in the prospectus supplement relating to a series of senior debt securities originally issued at a discount, the amount due upon acceleration shall include only the original issue price of the senior debt securities, the amount of original issue discount accrued to the date of acceleration and accrued interest, if any.

Upon certain conditions, declarations of acceleration may be rescinded and annulled and past defaults may be waived by the holders of a majority in aggregate principal amount of all the senior debt securities of such series affected by the default, each series voting as a separate class. Furthermore, prior to a declaration of acceleration and subject to various provisions in the senior indenture, the holders of a majority in aggregate principal amount of a series of senior debt securities, by notice to the trustee, may waive an existing default or event of default with respect to such senior debt securities and its consequences, except a default in the payment of principal of or interest on such senior debt securities or in respect of a covenant or provision of the senior indenture which cannot be modified or amended without the consent of the holders of each such senior debt security. Upon any such waiver, such default shall cease to exist, and any event of default with respect to such senior debt securities shall be deemed to have been cured, for every purpose of the senior indenture; but no such waiver shall extend to any subsequent or other default or event of default or impair any right consequent thereto. For information as to the waiver of defaults, see “—Modification and Waiver.”

The holders of a majority in aggregate principal amount of a series of senior debt securities may 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 with respect to such senior debt securities. However, the trustee may refuse to follow any direction that conflicts with law or the senior indenture, that may involve the trustee in personal liability or that the trustee determines in good faith may be unduly prejudicial to the rights of holders of such series of senior debt securities not joining in the giving of such direction and may take any other action it deems proper that is not inconsistent with any such direction received from holders of such series of senior debt securities. A holder may not pursue any remedy with respect to the senior indenture or any series of senior debt securities unless:

- the holder gives the trustee written notice of a continuing event of default;
- the holders of at least 25% in aggregate principal amount of such series of senior debt securities make a written request to the trustee to pursue the remedy in respect of such event of default;

- the requesting holder or holders offer the trustee indemnity satisfactory to the trustee against any costs, liability or expense;
- the trustee does not comply with the request within 60 days after receipt of the request and the offer of indemnity; and
- during such 60-day period, the holders of a majority in aggregate principal amount of such series of senior debt securities do not give the trustee a direction that is inconsistent with the request.

These limitations, however, do not apply to the right of any holder of a senior debt security to receive payment of the principal of and interest, if any, on such senior debt security in accordance with the terms of such debt security, or to bring suit for the enforcement of any such payment in accordance with the terms of such debt security, on or after the due date for the senior debt securities, which right shall not be impaired or affected without the consent of the holder.

The senior indenture requires certain of our officers to certify, on or before a fixed date in each year in which any senior debt security is outstanding, as to their knowledge of our compliance with all covenants, agreements and conditions under the senior indenture.

Satisfaction and Discharge. We can satisfy and discharge our obligations to holders of any series of senior debt securities if:

- we pay or cause to be paid, as and when due and payable, the principal of and any interest on all senior debt securities of such series outstanding under the senior indenture; or
- all senior debt securities of such series have become due and payable or will become due and payable within one year (or are to be called for redemption within one year) and we deposit in trust a combination of cash and U.S. government or U.S. government agency obligations that will generate enough cash to make interest, principal and any other payments on the debt securities of that series on their various due dates.

Under current U.S. federal income tax law, the deposit and our legal release from the senior debt securities would be treated as a taxable event, and beneficial owners of such debt securities would generally recognize any gain or loss on such senior debt securities. Purchasers of the senior debt securities should consult their own advisers with respect to the tax consequences to them of such deposit and discharge, including the applicability and effect of tax laws other than the U.S. federal income tax law.

Defeasance. Unless the applicable prospectus supplement provides otherwise, the following discussion of legal defeasance and discharge and covenant defeasance will apply to any senior series of senior debt securities issued under the indentures.

Legal Defeasance. We can legally release ourselves from any payment or other obligations on the senior debt securities of any series (called “legal defeasance”) if certain conditions are met, including the following:

- We deposit in trust for your benefit and the benefit of all other direct holders of the senior debt securities of the same series a combination of cash and U.S. government or U.S. government agency obligations that will generate enough cash to make interest, principal and any other payments on the senior debt securities of that series on their various due dates.
- There is a change in current U.S. federal income tax law or an IRS ruling that lets us make the above deposit without causing you to be taxed on the senior debt securities any differently than if we did not make the deposit and instead repaid the senior debt securities ourselves when due.
- We deliver to the trustee a legal opinion of our counsel confirming the tax law change or ruling described above.

If we ever did accomplish legal defeasance, as described above, you would have to rely solely on the trust deposit for repayment of the debt securities. You could not look to us for repayment in the event of any shortfall.

Covenant Defeasance. Without any change of current U.S. federal tax law, we can make the same type of deposit described above and be released from some of the covenants in the senior debt securities (called “covenant defeasance”). In that event, you would lose the protection of those covenants but would gain the protection of having money and securities set aside in trust to repay the senior debt securities. In order to achieve covenant defeasance, we must do the following (among other things):

- We must deposit in trust for your benefit and the benefit of all other direct holders of the senior debt securities of the same series a combination of cash and U.S. government or U.S. government agency obligations that will generate enough cash to make interest, principal and any other payments on the senior debt securities of that series on their various due dates.
- We must deliver to the trustee a legal opinion of our counsel confirming that under current U.S. federal income tax law we may make the above deposit without causing you to be taxed on the senior debt securities any differently than if we did not make the deposit and instead repaid the senior debt securities ourselves when due.

If we accomplish covenant defeasance, you can still look to us for repayment of the senior debt securities if there were a shortfall in the trust deposit. In fact, if one of the events of default occurred (such as our bankruptcy) and the debt securities become immediately due and payable, there may be such a shortfall. Depending on the events causing the default, you may not be able to obtain payment of the shortfall.

Modification and Waiver. We and the trustee may amend or supplement the senior indenture or the senior debt securities without the consent of any holder:

- to comply with the requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act;
- to convey, transfer, assign, mortgage or pledge any assets as security for the senior debt securities of one or more series;
- to evidence the succession of a corporation, limited liability company, partnership or trust to us, and the assumption by such successor of our covenants, agreements and obligations under the senior indenture;
- to add to our covenants such new covenants, restrictions, conditions or provisions for the protection of the holders, and to make the occurrence, or the occurrence and continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default;
- to cure any ambiguity, defect or inconsistency in the senior indenture or in any supplemental indenture or to conform the senior indenture or the senior debt securities to the description of senior debt securities of such series set forth in this prospectus or any applicable prospectus supplement;
- to provide for or add guarantors with respect to the senior debt securities of any series;
- to establish the form or forms or terms of the senior debt securities as permitted by the senior indenture;

- to evidence and provide for the acceptance of appointment under the senior indenture by a successor trustee, or to make such changes as shall be necessary to provide for or facilitate the administration of the trusts in the senior indenture by more than one trustee;
- to add to, delete from or revise the conditions, limitations and restrictions on the authorized amount, terms, purposes of issue, authentication and delivery of any series of senior debt securities;
- to make any change to the senior debt securities of any series so long as no senior debt securities of such series are outstanding; or
- to make any change that does not adversely affect the rights of any holder in any material respect.

Other amendments and modifications of the senior indenture or the senior debt securities issued may be made, and our compliance with any provision of the senior indenture with respect to any series of senior debt securities may be waived, with the consent of the holders of a majority of the aggregate principal amount of the outstanding senior debt securities of all series affected by the amendment or modification (voting together as a single class); provided, however, that each affected holder must consent to any modification, amendment or waiver that:

- extends the final maturity of any senior debt securities of such series;
- reduces the principal amount of any senior debt securities of such series;
- reduces the rate or extends the time of payment of interest on any senior debt securities of such series;
- reduces the amount payable upon the redemption of any senior debt securities of such series;
- changes the currency of payment of principal of or interest on any senior debt securities of such series;
- reduces the principal amount of original issue discount securities payable upon acceleration of maturity or the amount provable in bankruptcy;
- waives a default in the payment of principal of or interest on the senior debt securities;
- changes the provisions relating to the waiver of past defaults or changes or impairs the right of holders to receive payment or to institute suit for the enforcement of any payment or conversion of any senior debt securities of such series on or after the due date therefor;
- modifies any of the provisions of these restrictions on amendments and modifications, except to increase any required percentage or to provide that certain other provisions cannot be modified or waived without the consent of the holder of each senior debt security of such series affected by the modification; or
- reduces the above-stated percentage of outstanding senior debt securities of such series whose holders must consent to a supplemental indenture or to modify or amend or to waive certain provisions of or defaults under the senior indenture.

It shall not be necessary for the holders to approve the particular form of any proposed amendment, supplement or waiver, but it shall be sufficient if the holders' consent approves the substance thereof. After an amendment, supplement or waiver of the senior indenture in accordance with the provisions described in this section becomes effective, the trustee must give to the holders affected thereby certain notice briefly describing the amendment, supplement or waiver. Any failure by the trustee to give such notice, or any defect therein, shall not, however, in any way impair or affect the validity of any such amendment, supplemental indenture or waiver.

No Personal Liability of Incorporators, Stockholders, Officers, Directors. The senior indenture provides that no recourse shall be had under any obligation, covenant or agreement of ours in the senior indenture or any supplemental indenture, or in any of the senior debt securities or because of the creation of any indebtedness represented thereby, against any of our incorporators, stockholders, officers or directors, past, present or future, or of any predecessor or successor entity thereof under any law, statute or constitutional provision or by the enforcement of any assessment or by any legal or equitable proceeding or otherwise. Each holder, by accepting the senior debt securities, waives and releases all such liability.

Concerning the Trustee. The senior indenture provides that, except during the continuance of an event of default, the trustee will not be liable except for the performance of such duties as are specifically set forth in the senior indenture. If an event of default has occurred and is continuing, the trustee will exercise such rights and powers vested in it under the senior indenture and will use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

The senior indenture and the provisions of the Trust Indenture Act incorporated by reference therein contain limitations on the rights of the trustee thereunder, should it become a creditor of ours or any of our subsidiaries, to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claims, as security or otherwise. The trustee is permitted to engage in other transactions, provided that if it acquires any conflicting interest (as defined in the Trust Indenture Act), it must eliminate such conflict or resign.

We may have normal banking relationships with the senior trustee in the ordinary course of business.

Unclaimed Funds. All funds deposited with the trustee or any paying agent for the payment of principal, premium, interest or additional amounts in respect of the senior debt securities that remain unclaimed for two years after the date upon which such principal, premium or interest became due and payable will be repaid to us. Thereafter, any right of any holder of senior debt securities to such funds shall be enforceable only against us, and the trustee and paying agents will have no liability therefor.

Governing Law. The senior indenture and the senior debt securities will be governed by, and construed in accordance with, the internal laws of the State of New York.

Certain Terms of the Subordinated Debt Securities

The following is a summary of the general terms of the subordinated debt securities we may issue under a subordinated indenture, except as otherwise described in a prospectus supplement.

Other than the terms of the subordinated indenture and subordinated debt securities relating to subordination or otherwise as described in the prospectus supplement relating to a particular series of subordinated debt securities, the terms of the subordinated indenture and subordinated debt securities are identical in all material respects to the terms of the senior indenture and senior debt securities.

Additional or different subordination terms may be specified in the prospectus supplement applicable to a particular series.

Subordination. The indebtedness evidenced by the subordinated debt securities is subordinate to the prior payment in full of all of our senior indebtedness, as defined in the subordinated indenture. During the continuance beyond any applicable grace period of any default in the payment of principal, premium, interest or any other payment due on any of our senior indebtedness, we may not make any payment of principal or interest on the subordinated debt securities (except for certain sinking fund payments). In addition, upon any payment or distribution of our assets upon any dissolution, winding-up, liquidation or reorganization, the payment of the principal of and interest on the subordinated debt securities will be subordinated to the extent provided in the subordinated indenture in right of payment to the prior payment in full of all our senior indebtedness. Because of this subordination, if we dissolve or otherwise liquidate, holders of our subordinated debt securities may receive less, ratably, than holders of our senior indebtedness. The subordination provisions do not prevent the occurrence of an event of default under the subordinated indenture.

The term “senior indebtedness” of a person means with respect to such person the principal of, premium, if any, interest on, and any other payment due pursuant to any of the following, whether outstanding on the date of the subordinated indenture or incurred by that person in the future:

- all of the indebtedness of that person for money borrowed;
- all of the indebtedness of that person evidenced by notes, debentures, bonds or other securities sold by that person for money;
- all of the lease obligations that are capitalized on the books of that person in accordance with generally accepted accounting principles;
- all indebtedness of others of the kinds described in the first two bullet points above and all lease obligations of others of the kind described in the third bullet point above that the person, in any manner, assumes or guarantees or that the person in effect guarantees through an agreement to purchase, whether that agreement is contingent or otherwise; and
- all renewals, extensions or refundings of indebtedness of the kinds described in the first, second or fourth bullet point above and all renewals or extensions of leases of the kinds described in the third or fourth bullet point above;

unless, in the case of any particular indebtedness, renewal, extension or refunding, the instrument creating or evidencing it or the assumption or guarantee relating to it expressly provides that such indebtedness, renewal, extension or refunding is not superior in right of payment to the subordinated debt securities. Our senior debt securities constitute senior indebtedness for purposes of the subordinated debt indenture.

Description of Warrants

We may issue warrants for the purchase of shares of common stock, debt securities, and/or units from time to time. We may issue warrants independently or together with common stock and/or debt securities, and the warrants may be attached to or separate from those securities. If we issue warrants, they will be evidenced by warrant agreements or warrant certificates issued under one or more warrant agreements, which will be contracts between us and the holders of the warrants or an agent for the holders of the warrants. We encourage you to read the prospectus supplement that relates to any warrants we may offer, as well as the complete warrant agreement or warrant certificate that contain the terms of the warrants. If we issue warrants, the forms of warrant agreements and warrant certificates, as applicable, relating to the warrants will be filed as exhibits to the registration statement that includes this prospectus, or as an exhibit to a filing with the SEC that is incorporated by reference into this prospectus.

Description of Units

We may issue units comprised of one or more of the other securities described in this prospectus in any combination from time to time. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. If we issue units, they will be evidenced by unit agreements or unit certificates issued under one or more unit agreements, which will be contracts between us and the holders of the units or an agent for the holders of the units. 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. We encourage you to read the prospectus supplement that relates to any units we may offer, as well as the complete unit agreement or unit certificate that contain the terms of the units. If we issue units, the forms of unit agreements and unit certificates, as applicable, relating to the units will be filed as exhibits to the registration statement that includes this prospectus, or as an exhibit to a filing with the SEC that is incorporated by reference into this prospectus.

PLAN OF DISTRIBUTION

We may sell our securities from time to time in any manner permitted by the Securities Act of 1933, as amended, or the Securities Act, including any one or more of the following ways:

- through agents;
- to or through underwriters;
- to or through broker-dealers (acting as agent or principal);
- in “at the market” offerings, within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise; and/or
- directly to purchasers, through a specific bidding or auction process or otherwise.

The securities may be sold at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, at prices relating to the prevailing market prices or at negotiated prices.

Offers to purchase offered securities may be solicited by agents designated by us from time to time. Any agent involved in the offer or sale of the offered securities in respect of which this prospectus is delivered will be named, and any commissions payable by us will be set forth, in the applicable prospectus supplement. Unless otherwise set forth in the applicable prospectus supplement, any agent will be acting on a reasonable best efforts basis for the period of its appointment. Any agent may be deemed to be an underwriter, as that term is defined in the Securities Act, of the offered securities so offered and sold.

We will set forth in a prospectus supplement the terms of the offering of our securities, including:

- the name or names of any agents, underwriters or dealers;
- the purchase price of our securities being offered and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and commissions and other items constituting agents’ or underwriters’ compensation;
- the public offering price;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any securities exchanges on which such securities may be listed.

If offered securities are sold to the public by means of an underwritten offering, either through underwriting syndicates represented by managing underwriters or directly by the managing underwriters, we will execute an underwriting agreement with an underwriter or underwriters, and the names of the specific managing underwriter or underwriters, as well as any other underwriters, will be set forth in the applicable prospectus supplement. In addition, the terms of the transaction, including commissions, discounts and any other compensation of the underwriters and dealers, if any, will be set forth in the applicable prospectus supplement, which prospectus supplement will be used by the underwriters to make resales of the offered securities. If underwriters are utilized in the sale of the offered securities, the offered securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including:

- transactions on The NASDAQ Capital Market or any other organized market where the securities may be traded;
- in the over-the-counter market;
- in negotiated transactions; or
- under delayed delivery contracts or other contractual commitments.

We may grant to the underwriters options to purchase additional offered securities to cover over-allotments, if any, at the public offering price with additional underwriting discounts or commissions, as may be set forth in the applicable prospectus supplement. If we grant any over-allotment option, the terms of the over-allotment option will be set forth in the applicable prospectus supplement.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase 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. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may indemnify agents, underwriters and dealers against specified liabilities, including liabilities incurred under the Securities Act, or to contribution by us to payments they may be required to make in respect of such liabilities. Agents, underwriters or dealers, or their respective affiliates, may be customers of, engage in transactions with or perform services for us or our respective affiliates, in the ordinary course of business.

Unless otherwise specified in the applicable prospectus supplement, each class or series of securities will be a new issue with no established trading market, other than our common stock, which is traded on The NASDAQ Capital Market. We may elect to list any other class or series of securities on any exchange and, in the case of our common stock, on any additional exchange. However, unless otherwise specified in the applicable prospectus supplement, we will not be obligated to do so. It is possible that one or more underwriters may make a market in a class or series of securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We cannot give any assurance as to the liquidity of the trading market for any of the offered securities.

Any underwriter may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934, as amended. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the over-allotment option or in the open market after the distribution is completed, to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

To comply with the securities laws of certain states, if applicable, the securities offered by this prospectus will be offered and sold in those states only through registered or licensed brokers or dealers.

In compliance with guidelines of the Financial Industry Regulatory Authority, or FINRA, the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

LEGAL MATTERS

The validity of the issuance of the securities offered by this prospectus has been passed upon for us by Greenberg Traurig, LLP, Irvine, California.

EXPERTS

The financial statements as of December 31, 2018 and 2017 and for the two years in the period ended December 31, 2018 incorporated by reference in this Prospectus have been so incorporated in reliance on the report of Marcum LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports and other information with the SEC. You may read and copy any document we file at the SEC's Public Reference Room located at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. Our filings with the SEC also are available from the SEC's internet site at <http://www.sec.gov>, which contains reports, proxy and information statements, and other information regarding issuers that file electronically.

This prospectus is part of a registration statement that we filed with the SEC. As permitted by SEC rules, this prospectus and any accompanying prospectus supplement that we may file, which form a part of the registration statement, do not contain all of the information that is included in the registration statement. The registration statement contains more information regarding us and our securities, including certain exhibits. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's website.

INCORPORATION OF CERTAIN DOCUMENTS 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, 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, and all future documents filed with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act (other than the portions thereof deemed to be furnished to the SEC pursuant to Item 9 or Item 12) until we terminate the offering of these securities:

- Our [Annual Report on Form 10-K](#) for the fiscal year ended December 31, 2018, which was filed on March 11, 2019;
- Our [Quarterly Report on Form 10-Q](#) for the quarter ended March 31, 2019, which was filed on May 8, 2019;
- Our [Quarterly Report on Form 10-Q](#) for the quarter ended June 30, 2019, which was filed on August 9, 2019;
- Our Current Reports on Form 8-K, which were filed on [May 8, 2019](#), [May 29, 2019](#) and [October 30, 2019](#);

- The description of our common stock in our Form 8-A12B, which was filed on August 2, 2016, and any amendments or reports filed for the purpose of updating this 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 and prior to the termination of this offering made by way of this prospectus.

To the extent that any statement in this prospectus is inconsistent with any statement that is incorporated by reference and that was made on or before the date of this prospectus, the statement in this prospectus shall supersede such incorporated statement. The incorporated statement shall not be deemed, except as modified or superseded, to constitute a part of this prospectus or the registration statement. Statements contained in this prospectus 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.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

Atomera Incorporated
Attn: Investor Relations
750 University Avenue, Suite 280
Los Gatos, California 95032
(408) 442-5248

INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Delaware General Corporation Law provides that corporations may include a provision in their certificate of incorporation relieving directors of monetary liability for breach of their fiduciary duty as directors, provided that such provision shall not eliminate or limit the liability of a director (i) for any breach of the director's duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for unlawful payment of a dividend or unlawful stock purchase or redemption, or (iv) for any transaction from which the director derived an improper personal benefit. Our amended and restated certificate of incorporation provides that directors are not liable to us or our stockholders for monetary damages for breach of their fiduciary duty as directors to the fullest extent permitted by Delaware law. In addition to the foregoing, our amended and restated certificate of incorporation provides that we may indemnify directors and officers to the fullest extent permitted by law and we have entered into indemnification agreements with each of our directors and executive officers.

The above provisions in our amended and restated certificate of incorporation may have the effect of reducing the likelihood of derivative litigation against directors and may discourage or deter stockholders or management from bringing a lawsuit against directors for breach of their fiduciary duty, even though such an action, if successful, might otherwise have benefited us and our stockholders. However, we believe that the foregoing provisions are necessary to attract and retain qualified persons as directors.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.



Shares of Common Stock

PRELIMINARY PROSPECTUS SUPPLEMENT

Sole Book-Running Manager

National Securities Corporation

May , 2020
