

The information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated June 16, 2020

Preliminary prospectus supplement
(To Prospectus Dated June 16, 2020)

1,700,000 Shares



Common Stock

We are offering 1,700,000 shares of our common stock.

Our common stock is listed on the Nasdaq Global Select Market under the symbol "SWAV." On June 15, 2020, the last reported sale price of our common stock as reported on the Nasdaq Global Select Market was \$45.61 per share.

We are an emerging growth company under U.S. federal securities laws and are subject to reduced public company reporting requirements. See "Prospectus Summary—Implications of Being an Emerging Growth Company."

Investing in our common stock involves a high degree of risk. See "[Risk Factors](#)" beginning on page S-13 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement before investing in our securities.

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

(1) See "Underwriters" for additional disclosure regarding the underwriting discounts and commissions and estimated offering expenses.

We have granted the underwriters the right to purchase up to an additional 255,000 shares of our common stock from us at the public offering price, less the underwriting discounts and commissions, within 30 days from the date of this prospectus supplement.

The underwriters expect to deliver the shares against payment on or about _____, 2020.

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

Morgan Stanley

BofA Securities

, 2020

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About the Prospectus Supplement

This document consists of two parts. The first part is this prospectus supplement, which describes the specific terms of this common stock offering and also adds to and updates the information contained or incorporated by reference in the accompanying prospectus. The second part is the prospectus, which describes more general information regarding our securities, some of which does not apply to this offering. You should read both this prospectus supplement and the accompanying prospectus, together with additional information described under the heading “Where You Can Find More Information” in this prospectus supplement and the accompanying prospectus. If the information set forth in this prospectus supplement differs in any way from the information set forth in the accompanying prospectus, the information contained in this prospectus supplement shall control.

In this prospectus supplement, as permitted by law, we “incorporate by reference” information from other documents that we file with the U.S. Securities and Exchange Commission (the “SEC”). This means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus supplement and should be read with the same care. When we update the information contained in documents that have been incorporated by reference by making future filings with the SEC, the information incorporated by reference in this prospectus supplement is considered to be automatically updated and superseded. In other words, in case of a conflict or inconsistency between information contained in this prospectus supplement and information incorporated by reference into this prospectus supplement, you should rely on the information contained in the most recent document that was filed with the SEC.

We and the underwriters have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus supplement or the accompanying prospectus or in any free writing prospectuses we have prepared. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may provide you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in or incorporated by reference in this prospectus supplement and the accompanying prospectus is accurate only as of the date appearing on the front cover of this prospectus supplement or the date of the accompanying prospectus or the applicable incorporated document, regardless of the time of delivery of such document. Our business, financial condition, results of operations and prospects may have changed since that date. It is important that you read and consider all of the information contained in or incorporated by reference into this prospectus supplement and the information contained in or incorporated by reference into the accompanying prospectus in making your investment decision.

We are not, and the underwriters are not, making an offer to sell our common stock in any jurisdiction where the offer or sale is not permitted. Neither this prospectus supplement nor the accompanying prospectus constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation. You must comply with all applicable laws and regulations in force in any applicable jurisdiction and you must obtain any consent, approval or permission required by you for the purchase, offer or sale of the common stock under the laws and regulations in force in the jurisdiction to which you are subject or in which you make your purchase, offer or sale, and neither we nor the underwriters will have any responsibility therefor.

We reserve the right to withdraw this offering of our common stock at any time. We and the underwriters also reserve the right to reject any offer to purchase, in whole or in part, for any reason, or to sell less than the amount of common stock offered hereby.

This prospectus supplement includes industry and market data that we obtained from periodic industry publications, third-party studies and surveys, filings of public companies in our industry and internal company surveys. These sources may include government and industry sources. Industry publications and surveys

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generally state that the information contained therein has been obtained from sources believed to be reliable. Although we believe the industry and market data to be reliable as of the date of this prospectus supplement, this information could prove to be inaccurate. Industry and market data could be wrong because of the method by which sources obtained their data and because information cannot always be verified with complete certainty due to the limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties. In addition, we do not know all of the assumptions regarding general economic conditions or growth that were used in preparing the forecasts from the sources relied upon or cited herein.

Certain market and industry data used in this prospectus supplement, where noted, is attributable to Millennium Research Group, Inc. (“MRG”). MRG asserts copyright protection over the use of such information and reserves all rights with respect to its use. This information has been reprinted with MRG’s permission and the reproduction, distribution, transmission or publication of such information is prohibited without its consent.

We use “Shockwave,” “Shockwave M5,” “Shockwave C2,” “Shockwave S4” and other marks as trademarks in the United States and other countries. This prospectus supplement and the accompanying prospectus contain references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus supplement and the accompanying prospectus, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our right or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other entities’ trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in or incorporated by reference into this prospectus supplement or the accompanying prospectus. This summary may not contain all of the information that you should consider before deciding to invest in our common stock. Before you decide to invest in our securities, you should carefully read the entire prospectus supplement and the accompanying prospectus and the documents incorporated by reference herein and therein, including the risk factors and the financial statements and related notes incorporated by reference herein and therein. Except as otherwise indicated herein or as the context otherwise requires, “Shockwave Medical,” “Shockwave Medical, Inc.,” the “Company,” “we,” “us” and “our” refer to Shockwave Medical, Inc. and its consolidated subsidiary.

Company Overview

We are a medical device company focused on developing and commercializing products intended to transform the way calcified cardiovascular disease is treated. We aim to establish a new standard of care for medical device treatment of atherosclerotic cardiovascular disease (“atherosclerosis”) through our differentiated and proprietary local delivery of sonic pressure waves for the treatment of calcified plaque, which we refer to as intravascular lithotripsy (“IVL”). Our IVL system (our “IVL System”), which leverages our IVL technology (our “IVL Technology”), is a minimally invasive, easy-to-use and safe way to significantly improve patient outcomes.

Our Shockwave M5 IVL catheter (“M5 catheter”) was CE-Marked in April 2018 and cleared by the U.S. Food and Drug Administration (“FDA”) in July 2018 for use in our IVL System for the treatment of peripheral artery disease (“PAD”).

Our Shockwave C2 IVL catheter (“C2 catheter”), which we are currently marketing in Europe, was CE-Marked in June 2018 for use in our IVL System for the treatment of coronary artery disease (“CAD”). In August 2019, we received the Breakthrough Device Designation from the FDA for our C2 catheters using our IVL System for the treatment of CAD.

The second version of our Shockwave S4 IVL catheter (“S4 catheter”) was cleared by the FDA for the treatment of PAD in August 2019. We commenced a full commercial launch of our S4 catheter in the second half of 2019 in select approved geographies. In May 2020, BSI Group, our notified body in Europe, agreed that our S4 catheter could be implemented under the Medical Device Directive regulations. We are currently preparing for the European launch.

We also have ongoing clinical programs across several products and indications, which, if successful, will allow us to expand commercialization of our products into new geographies and indications. Importantly, we are undertaking ongoing clinical trials of our C2 catheter intended to support a pre-market application (“PMA”) in the United States and a Shonin submission in Japan for the treatment of CAD. In October 2018, we received staged Investigational Device Exemption (“IDE”) approval for our DISRUPT CAD III global study, which began enrollment in 2019. This study is designed to support U.S. PMA approval for our C2 catheters. We anticipate having final data from these ongoing clinical trials intended to support a U.S. launch of our C2 catheter in the first quarter of 2021 and a Japan launch in the first half of 2022.

The Opportunity

Atherosclerosis is a common disease of aging in which arteries become narrowed (“stenotic”) and the supply of oxygenated blood to the affected organ is reduced by the progressive growth of plaque. Atherosclerotic plaque is comprised of fibrous tissue, lipids (fat) and, when it progresses, calcium. This calcium is present both deep within the walls of the artery (“deep” or “medial” calcium) and close to the inner surface of the artery (“superficial” or “intimal” calcium).

The first two indications we are targeting with our IVL System are occlusive PAD, the narrowing or blockage of vessels that carry blood from the heart to the extremities, and CAD, the narrowing or blockage of the arteries that supply blood to the heart. In the future, we see significant opportunity in the potential treatment of aortic stenosis (“AS”), a condition in which the heart’s aortic valve becomes increasingly calcified with age, causing it to narrow and obstruct blood flow from the heart.

The PAD population in the United States has been estimated to be at least eight million people, according to the National Institutes of Health. The global PAD device market size for treatment of occlusive disease is estimated at approximately \$2.9 billion and is expected to grow approximately 3% annually due to the fundamental drivers of an aging population and increasing prevalence of diabetes. The “calcium” segment of the PAD market represents a significant percentage of the market, with 50% or more of the population having moderate-to-severe calcium in their vessels, according to our estimates. Current technologies are often not able to safely and effectively treat heavily calcified vessels. Accordingly, we believe our IVL System to treat PAD has a total addressable market opportunity of over \$1.7 billion.

The global device market in coronary intervention for CAD is estimated to be nearly \$10 billion, according to MRG. The most common treatment for patients is percutaneous coronary intervention (“PCI”). This involves a suite of devices to facilitate successful angioplasty and stenting, the most commonly used device being drug-eluting stents (“DES”). Moreover, there are nearly four million PCI procedures performed globally every year, and prior to the onset of the COVID-19 pandemic, the number of PCI procedures was growing at a rate of more than 5% annually. We believe our IVL System can help grow this market through the improved treatment of patients undergoing PCI in whom the currently available solutions pose a higher degree of clinical risk, as well as through increased adoption of IVL by cardiologists compared to currently available plaque modification devices. A study published in the American Journal of Cardiology in 2014 demonstrated that more than 30% of patients undergoing PCI have calcified lesions and this percentage is growing. Minimizing complications is particularly important in the coronary vessels, but current plaque modification devices carry meaningful safety risks and are inherently challenging to use, which is why these devices are used very sparingly for PCI procedures in patients with calcified coronary disease. Despite significant under-penetration of the market, these devices still represented a market of nearly \$100 million in 2018 within the United States alone, according to MRG; we believe this market is significantly larger globally. Due to the increasing prevalence of calcified cardiovascular disease, the market growth for plaque modification devices exceeds that of PCI procedure growth. We believe the safety, simplicity of use and efficient impact on calcium of our IVL System will result in rapid adoption and market expansion in markets where our C2 catheter is introduced. We believe there is an over \$2 billion total addressable market opportunity for our IVL System to treat CAD.

The global market for aortic valve replacement (“AVR”), the main treatment for AS, is growing rapidly, and is dominated by the emergence of transcatheter AVR (“TAVR”) devices. TAVR has rapidly developed into a multibillion-dollar market globally. According to an article published in the Journal of Thoracic Disease in 2017, the global market for TAVR was over 125,000 procedures performed worldwide in 2018 and is expected to grow to nearly 300,000 by 2025. We believe our IVL System may be able to improve the treatment of AS among patients in whom currently available solutions are inadequate. We are currently developing an IVL catheter which we believe will be able to safely and effectively treat patients with AS. If successful, this represents a potential total addressable market of over \$3 billion for our IVL System to treat AS.

Current Challenges

The primary approaches to treat vascular disease are angioplasty balloons (“balloons”), drug-coated balloons (“DCB”), bare metal stents and DES. These devices all work by using pressurized balloons to expand the diseased blood vessels. Calcified plaque creates challenges for these therapies in achieving optimal outcomes in treating PAD and CAD because the calcified vessels fail to expand under safe pressures. This, in turn, can lead

to acute failure, damage to the blood vessel, which increases the rate of restenosis (re-occlusion of the vessel following endovascular treatment) or complications requiring adjunctive tools, future re-interventions or conversion to bypass surgery. These complications are significantly increased when treating calcified cardiovascular disease and include dissections, embolization, restenosis, vessel perforations and vessel recoil.

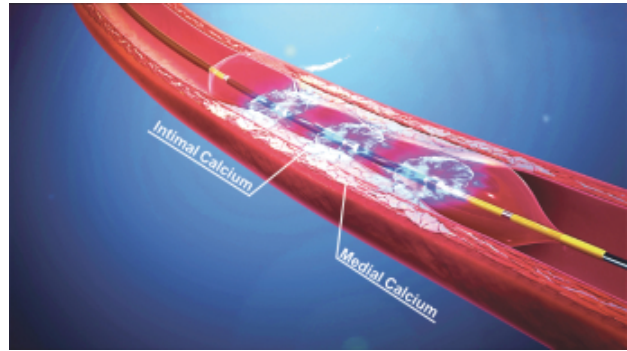
Plaque modification devices (including atherectomy and specialty balloons) have enhanced the treatment of some moderately calcified cardiovascular lesions by improving the ability of stent and balloon therapies to effectively expand in the vessel. Atherectomy devices are designed to break or remove superficial calcium by cutting or sanding the calcium in order to improve vessel expansion. Specialty balloon devices incorporate metallic elements like wires and cutting blades onto standard angioplasty balloons; these devices are intended to make discreet cuts in the plaque and surrounding tissue in order to improve vessel expansion. Despite improvements in plaque modification devices, significant limitations remain, including being difficult to use and creating complications and inconsistent efficacy. Further, because medial calcium is encased in the vessel wall, the existing plaque modification devices are unable to impact medial calcium without damaging the vessel. Combined, these limitations decrease the utilization of plaque modification devices for treating calcified cardiovascular disease, thereby reducing the clinical benefit of angioplasty and stent therapies compared to their use in non-calcified anatomies.

Calcified iliac and femoral arteries can hinder the delivery of large endovascular devices for other catheter-based procedures, including those that treat aortic aneurysms (endovascular aneurysm repair and thoracic endovascular aneurysm repair procedures), severe aortic stenosis treated with TAVR and cardiac support devices for high-risk PCI (e.g., Abiomed's Impella). The standard practice for these procedures is to gain vascular access in the femoral artery and insert large diameter sheaths that facilitate the delivery of the treatment devices to the aorta or the heart. However, when significant calcium is present in these arteries, it can prevent delivery of the devices, and thus may require more invasive treatments, increase complications or prevent the device from being used altogether. For example, in up to 20% of patients, the transfemoral approach through the iliac and femoral arteries is not viable for TAVR delivery or creates risk of vessel trauma due to the extent of vascular calcification, according to a 2018 study in the Journal of the American College of Cardiology.

Our Solution

We have adapted the use of lithotripsy to the cardiovascular field with the aim of creating what we believe can become the safest, most effective means of addressing the growing challenge of cardiovascular calcification. Lithotripsy has been used to successfully treat kidney stones (deposits of hardened calcium) for over 30 years. By integrating lithotripsy into a device that resembles a standard balloon catheter, physicians can prepare, deliver and treat calcified lesions using a familiar form factor, without disruption to their standard procedural workflow. Our differentiated IVL System works by delivering shockwaves through the entire depth of the artery wall, modifying calcium in the medial layer of the artery, not just in the intimal layer. The shockwaves crack this calcium and enable the stenotic artery to expand at low pressures, thereby minimizing complications inherent to traditional balloon dilations, such as dissections or tears. Preparing the vessel with IVL facilitates optimal outcomes with other therapies, including stents and drug-eluting technologies. Using IVL also avoids complications associated with atherectomy devices such as dissection, perforation and embolism. When followed by an anti-proliferative therapy such as a DCB or DES, the micro-fractures may enable better drug penetration into the arterial wall and improve drug uptake, thereby improving the effectiveness of the combination treatment.

Our IVL System



*(Left) Our IVL System consisting of a generator, connector cable and IVL catheter.
(Right) Our IVL System delivering lithotripsy directly to a calcified vessel.*

Our IVL System includes a generator, connector cable and a variety of IVL catheters designed to treat PAD and CAD. Our IVL System employs our IVL Technology to crack calcium through short, microsecond bursts of sonic pressure waves, which are generated within the IVL catheter, travel through the vessel and crack calcium with an effective pressure of up to 50 atmospheres (“atm”) (a unit of pressure) without harming the soft tissue. Our IVL catheters utilize multiple lithotripsy emitters that are integrated into a standard, semi-compliant balloon-catheter platform. The IVL catheter is advanced to the target lesion and the integrated balloon is inflated with fluid at a low pressure to make contact with the arterial wall. IVL is then activated through the generator with the touch of a button, creating a small bubble within the catheter balloon which rapidly expands and collapses. The rapid expansion and collapse of the bubble creates sonic pressure waves that travel through the vessel wall soft tissue and crack the calcium, allowing the blood vessel to expand under low static pressure.

We believe there is a significant opportunity to apply our IVL Technology as a platform to treat a wide array of indications throughout the cardiovascular system. Ultimately, our plan is to have a family of IVL catheters that can treat calcium-related diseases across a wide variety of vasculatures and structures.

Our Products and Ongoing Development

The interchangeability of specific catheters enables delivery of IVL therapy of diseased vasculature throughout the body. Our IVL catheters are cleared or approved for use in a number of geographies. Development programs are underway to expand indications and geographies:

- M5 catheters (“medium” vessel, five-emitters): for treating above-the-knee PAD in the United States and internationally.
- C2 catheters (coronary arteries, two-emitters): for treating CAD in select international markets. We received IDE approval to conduct a pivotal global study, which is intended to support U.S. FDA and Japanese Shonin approval of the device. We commenced enrollment of the study in early 2019.
- S4 catheters (“small” vessel, four-emitters): for treating PAD Below-the-Knee (“BTK”) in the United States, Europe and other select international markets. We commenced a full commercial launch of our S4 catheter in the United States in the second half of 2019. We are currently preparing to launch in Europe in the second half of 2020, as we have obtained CE Mark approval.

Our IVL catheters resemble in form a standard balloon angioplasty catheter, the device most commonly used by interventionalists. This familiarity makes our IVL System easy to learn, adopt and use on a day-to-day basis.

A development program and initial clinical work are also currently underway to explore the ability of our IVL Technology to directly treat calcified aortic valves to safely reduce the symptoms of and potentially delay or negate valve replacement treatment for AS.

Since inception, we have focused on generating clinical data to demonstrate the safety and effectiveness of our IVL Technology. These initial studies have consistently delivered low rates of complications regardless of which vessel was being studied. In addition to gaining regulatory approvals or clearances, the data from our clinical studies strengthen our ability to drive adoption of IVL Technology across multiple therapies in existing and new market segments. Our past studies have demonstrated that our IVL Technology reduces residual stenosis and vascular complications in infrapopliteal and femoropopliteal PAD, with outstanding durability and sustained improvement in functional outcome in 115 patients. Our past studies have also guided optimal IVL procedure technique and informed the design of our IVL System and future products in development. In the treatment of CAD, our past studies have demonstrated both safety and effectiveness of our IVL System in heavily calcified coronary lesions prior to stenting in 180 patients. Feasibility studies have been conducted to assess the ability of our transcatheter aortic valve lithotripsy system (our "TAVL System") to safely improve the aortic valve area and reduce transvalvular gradients in AS. We are currently enrolling patients in multiple studies to support applications for and clearances in a variety of indications and geographies, as well as a randomized trial to assess the combination of IVL with DCB for treating PAD.

We market our IVL System to hospitals whose interventional cardiologists, vascular surgeons and interventional radiologists treat patients with PAD and CAD. We have dedicated meaningful resources to establish direct sales capability in the United States, Germany, Austria and Switzerland, which we have complemented with distributors covering more than 45 countries. We are actively expanding our international field presence through new distributors, additional sales and clinical personnel, and are adding new U.S. sales territories.

For the treatment of CAD, our C2 catheter has a CE Mark that indicates its use in calcified, stenotic de novo coronary arteries prior to stenting. For the treatment of PAD, our M5 and S4 catheters have a CE Mark and have FDA clearances that indicate their use in calcified, stenotic peripheral arteries in patients who are candidates for percutaneous therapy. Our products are not indicated for the treatment of cerebrovascular or carotid arteries; our M5 and S4 catheters are not indicated for the treatment of coronary arteries.

While we believe that, from a technological or medical perspective, there are no material disadvantages to the use of our products in comparison to other commercially available alternative products, our products are relatively new, we currently have limited commercialization, sales and marketing experience and our products compete against alternative products that are well-established and are widely accepted by physicians, patients and third-party payors. Many of our competitors are large, well-capitalized companies with significantly greater market share and resources than we have. Our success will depend in part on our ability to increase adoption of our products, expand existing relationships with our customers, obtain regulatory clearances or approvals for our planned or future products, maintain existing reimbursement and obtain reimbursement where it does not currently exist, and develop new products or add new features to our existing products.

Why Shockwave?

Safe - Simple - Effective

- Treatment of both superficial and deep calcium.
- Improved safety through unique mechanism of action.
- Improved efficacy for angioplasty, stents and drug-eluting technologies.

- Seamless integration into interventional practice with exceptional ease-of-use.
- Expanded access to interventional techniques for patients.

Our Growth Strategy

Our mission is to provide safe, effective and easy-to-use treatments to optimize outcomes for calcified cardiovascular disease. We believe the following strategies will advance our mission and will contribute to our future success and growth.

- Address unmet clinical needs in multiple large markets.
- Advance our IVL System as a common treatment for calcified PAD and CAD.
- Grow our specialized sales force across indications and geographies to foster deep relationships with physicians and drive revenue growth.
- Execute on our clinical program to expand indications and build a robust body of clinical evidence.
- Leverage our IVL Technology to develop new products that satisfy significant unmet clinical needs.
- Drive profitability by scaling our business operations to achieve cost and production efficiencies.

Recent Developments

New Reimbursement Codes for IVL Procedures

On June 8, 2020, we announced that the Centers for Medicare & Medicaid Services (“CMS”) had issued new reimbursement codes for IVL procedures performed in peripheral arteries in both the hospital outpatient and inpatient settings. The new Healthcare Common Procedure Coding System (“HCPCS”) outpatient and International Classification of Diseases, Tenth Revision, Procedure Coding System (“ICD-10-PCS”) inpatient codes are expected to go into effect on July 1 and October 1, 2020, respectively.

Under these new codes, CMS payment rates for IVL procedures performed in the hospital outpatient and inpatient settings will be consistent with current payment levels for other similar peripheral artery interventional procedures. We believe that these new codes will also enable the collection of cost data specific to IVL procedures, which is information CMS utilizes when making future adjustments to procedure payment levels.

Any reimbursement coding, coverage or payment information is subject to change without notice, and we cannot guarantee that any provider will be successful in obtaining third-party insurance reimbursement using the new CMS codes or otherwise. Third-party payment for medical procedures is affected by numerous factors, and it is the provider’s responsibility to determine the most appropriate codes, charges and modifiers to submit for reimbursement in respect of services that are rendered.

Impact of the COVID-19 Pandemic

The COVID-19 pandemic began adversely impacting interventional procedures using our products beginning in March 2020, resulting in many procedures being cancelled or deferred. Our revenues were affected by a global decrease in the number of daily procedures using our products, and our average daily sales, at their lowest point in mid-April, were more than 60% below our average daily sales in late February. Since mid-April, the number of procedures using our products and our corresponding global sales have increased in a gradual, non-linear fashion, but have not reached the pre-COVID-19 global sales and procedure levels of late February.

The timing, extent and continuation of any further increase in procedures, and any corresponding increase in sales of our products, and whether there could in fact be a future decrease in the current level of procedures, remain uncertain and are subject to a variety of factors, including the following:

- The return of elective procedures is more rapid in some locations than others due to the extent and impact of the COVID-19 pandemic, and varying degrees of ongoing local restrictions related to the COVID-19 pandemic.
- A material increase in COVID-19 cases in one or more locations would result in an increase in hospitalizations and a corresponding decrease in elective procedures in such impacted locations.
- Individual physicians and hospitals may continue to postpone elective procedures as a result of reduced availability of physicians or lab space to treat patients, different treatment prioritizations, increased cost pressures and burdens on the overall healthcare infrastructure.
- Patients may elect to defer or avoid treatment for elective procedures due to concerns about being exposed to COVID-19 in hospital settings, loss of employer-sponsored health insurance related to the high levels of unemployment in the United States or other reasons.
- Hospitals may reserve increased space for potential COVID-19 patients, especially if the number of COVID-19 cases spikes, limiting the space allocated to inpatient and outpatient elective procedures.
- Our personnel and the personnel of our distribution partners are experiencing, and expect to continue to experience, restrictions on access to many customers, hospitals, labs and other medical facilities for sales activities, training and case support as they have been deemed to be “non-essential” personnel by those facilities or applicable local regulations.
- Our customers may continue to preserve cash and may not immediately replenish their inventories of our products, which would impact our future sales and revenue.

In addition to the foregoing, see “Risk Factors—Risks Related to Our Business from COVID-19” for a further discussion of the risks and business disruptions we face related to the COVID-19 pandemic.

The COVID-19 pandemic is continuing globally and preliminary indications of an increase in procedure volumes and related product sales are not necessarily indicative of the results that may be reported for the quarter ending June 30, 2020, the remainder of fiscal 2020, or any future periods. We are unable to predict how the COVID-19 pandemic will impact procedure volumes or product sales in the future, or the extent, duration or recurrence of the COVID-19 pandemic in any location. We are, therefore, unable to predict the impact of the COVID-19 pandemic on our sales, revenues, financial condition, capital resources and results of operations. However, the COVID-19 pandemic is continuing to adversely impact the number of procedures being performed using our devices and therefore we anticipate our sales and results of operations for the quarter ending June 30, 2020, will be adversely impacted.

Corporate Information

We were incorporated in 2009 as a Delaware corporation under the name Shockwave Medical, Inc. Our principal executive offices are located at 5403 Betsy Ross Drive, Santa Clara, California 95054, and our telephone number is (510) 279-4262. Our website address is www.shockwavemedical.com. The information on, or that can be accessed through, our website is not part of this prospectus supplement or the accompanying prospectus. We have included our website address as an inactive textual reference only.

Implications of Being an Emerging Growth Company

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”). We will remain an emerging growth company until the earliest to occur of: the last day of the

fiscal year in which we have more than \$1.07 billion in annual revenue; the date on which we are deemed to be a large accelerated filer (this means the market value of shares of our common stock that are held by non-affiliates exceeds \$700 million as of the end of the second quarter of that fiscal year); the issuance, in any three-year period, by us of more than \$1 billion in non-convertible debt securities; and the last day of the fiscal year ending after the fifth anniversary of our initial public offering. Any reference herein to “emerging growth company” has the meaning ascribed to it in the JOBS Act.

An emerging growth company may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- being permitted to present only two years of audited consolidated financial statements and only two years of related Management’s Discussion and Analysis of Financial Condition and Results of Operations in the registration statement filed under the Securities Act of 1933, as amended (the “Securities Act”), for an IPO of common equity securities;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

We have elected to take advantage of certain of the reduced disclosure obligations in this prospectus supplement and may elect to take advantage of other reduced reporting requirements in our future filings with the SEC. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

The JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

THE OFFERING

The following is a brief summary of certain terms of this offering. For a more complete description of the terms of the common stock offered hereby, see the section titled “Description of Capital Stock” in the accompanying prospectus.

Common stock offered by us	1,700,000 shares.
Underwriters’ option to purchase additional shares offered by us	255,000 shares.
Common stock to be outstanding immediately after this offering	33,527,606 shares (or 33,782,606 shares, if the underwriters exercise their option to purchase additional shares of common stock in full).
Use of proceeds	<p>We estimate that the net proceeds from the sale of shares of our common stock that we are selling in this offering will be approximately \$72.1 million, based on an assumed public offering price of \$45.61 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on June 15, 2020, after deducting the underwriting discounts and commissions and estimated offering expenses.</p> <p>We expect to use the net proceeds from this offering for sales and marketing activities to support the ongoing commercialization of our IVL System, including the expansion of our sales force, additional medical affairs and educational efforts and the expansion of our international sales presence, for research and development and clinical studies and for working capital and general corporate purposes. We may also use a portion of the net proceeds of this offering for acquisitions or strategic transactions, though we have not entered into any agreements or commitments with respect to any specific transactions and have no understandings or agreements with respect to any such transactions at this time. See the section titled “Use of Proceeds” for additional information.</p>
Risk factors	Investing in our common stock involves a high degree of risk. See “Risk Factors” beginning on page S-13 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement.
Nasdaq Global Select Market symbol	“SWAV.”

The number of shares of our common stock to be outstanding immediately after this offering is based upon 31,827,606 shares outstanding as of March 31, 2020, and excludes:

- 2,945,534 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2020, with a weighted-average exercise price of \$5.33 per share;
- 722,409 shares of our common stock issuable from time to time upon the settlement of restricted stock units (“RSUs”) outstanding as of March 31, 2020;

- 2,660,928 additional shares of our common stock reserved for future issuance under our 2019 Equity Incentive Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance pursuant to this plan; and
- 590,407 shares of our common stock reserved for issuance under our Employee Stock Purchase Plan (the “ESPP”), as well as any automatic increases in the number of shares of our common stock reserved for future issuance pursuant to this plan.

Unless otherwise indicated, this prospectus supplement reflects and assumes the following:

- no exercise of outstanding options or settlement of unvested RSUs; and
- no exercise by the underwriters of their option to purchase up to an additional 255,000 shares of our common stock.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables summarize our consolidated financial data. We have derived the summary consolidated statement of operations data for the years ended December 31, 2017, 2018 and 2019 from our audited consolidated financial statements incorporated by reference in this prospectus supplement and the accompanying prospectus. We have derived the unaudited summary consolidated statement of operations data for the three months ended March 31, 2019 and 2020 and the unaudited summary consolidated balance sheet data as of March 31, 2020 from our unaudited interim condensed consolidated financial statements incorporated by reference in this prospectus supplement and the accompanying prospectus and which, in the opinion of management, include all adjustments, consisting only of normal recurring adjustments, necessary for a fair statement of the results for the unaudited interim periods. Our historical results are not necessarily indicative of the results that may be expected in the future, and our interim results are not necessarily indicative of the results that may be expected for the full year. The following summary consolidated financial data should be read in conjunction with the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes that are incorporated by reference into this prospectus supplement and the accompanying prospectus.

	Years Ended December 31,			Three Months Ended March 31,	
	2017	2018	2019	2019 (unaudited)	2020 (unaudited)
(in thousands, except share and per share data)					
Consolidated Statement of Operations Data:					
Product revenue	\$ 1,719	\$ 12,263	\$ 42,927	\$ 7,269	\$ 15,197
Operating expenses:					
Cost of product revenue	2,836	7,250	17,159	3,072	5,651
Research and development	17,963	22,698	32,853	7,484	11,890
Sales and marketing	6,363	17,536	30,620	5,871	10,411
General and administrative	5,422	5,979	14,134	3,001	6,224
Total operating expenses	32,584	53,463	94,766	19,428	34,176
Loss from operations	(30,865)	(41,200)	(51,839)	(12,159)	(18,979)
Interest and other income, net	276	136	792	(633)	227
Net loss before taxes	(30,589)	(41,064)	(51,047)	(12,792)	(18,752)
Income tax provision	26	38	62	7	23
Net loss	\$ (30,615)	\$ (41,102)	\$ (51,109)	\$ (12,799)	\$ (18,707)
Net loss per share, basic and diluted	\$ (19.71)	\$ (23.39)	\$ (2.14)	\$ (1.37)	\$ (0.59)
Weighted-average shares used in computing net loss per share, basic and diluted	1,553,365	1,757,102	23,904,828	9,364,755	31,644,041

	As of March 31, 2020	
	Actual	As Adjusted(1)
	(unaudited)	
	(in thousands)	
Consolidated Balance Sheet Data:		
Cash, cash equivalents and short-term investments	\$ 170,389	\$ 242,529
Working capital	178,843	250,983
Total assets	220,738	292,878
Long-term debt, current and non-current	16,126	16,126
Accumulated deficit	(196,749)	(196,749)
Total stockholders' equity	177,772	249,912

(1) The as adjusted column gives effect to the assumed sale and issuance by us of 1,700,000 shares of our common stock in this offering based on the assumed public offering price of \$45.61 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on June 15, 2020 and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as those described under “Risk Factors” in our most recent Annual Report on Form 10-K and subsequent Quarterly Report on Form 10-Q, as well as all of the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus, including our financial statements and related notes, before investing in our common stock. While we believe that the risks and uncertainties described below are the material risks currently facing us, additional risks that we do not yet know of or that we currently think are immaterial may also arise and materially affect our business. If any of the following risks materialize, our business, financial condition and results of operations could be materially and adversely affected. In that case, the trading price of our common stock could decline, and you may lose some or all of your investment.

Risks Related to Our Business from COVID-19

The impact of the COVID-19 pandemic and the measures implemented to contain the spread of the virus have had, and are expected to continue to have, a material adverse impact on our business and results of operations

The global COVID-19 pandemic presents significant risks to us, not all of which we are able to fully evaluate or even to foresee at the current time. The COVID-19 pandemic and related containment measures adversely affected our financial results and business operations for the quarter ended March 31, 2020, and are expected to continue to adversely impact our financial results and business operations.

The extent to which the pandemic will continue to materially adversely affect our business and results of operations will depend on numerous evolving factors and future developments that we are not able to predict, including the duration, spread and severity of the outbreak, the nature, extent and effectiveness of containment measures, the extent and duration of the effect on the economy, and how quickly and to what extent normal economic and operating conditions can resume. The COVID-19 pandemic and containment measures have contributed to, among other things:

- Adverse impacts on our daily business operations and our colleagues’ ability to perform necessary business functions, including as a result of illness or as a result of restrictions on movement.
- Increased challenges in managing clinical trials and product development, including delays in clinical trial enrollment and difficulties in monitoring enrolled patients.
- Decreased sales of our products as our hospital customers allocate resources to care of patients with COVID-19 and defer treatment of procedures utilizing our products.
- Decreased utilization of our products as patients elect to defer treatment for procedures utilizing our products due to real or perceived concerns about the potential spread of COVID-19 in hospital settings.
- Increased challenges in growing our customer base due to the elimination of travel and in-person meetings due to shelter-in-place measures and demands on hospital customers in managing COVID-19 concerns.
- Diversion of time among our executive team on planning efforts to (i) manage the impacts of the COVID-19 pandemic on the our employees, including changes to manufacturing facilities, and efforts to better manage telecommuting among those employees able to do so, (ii) attempt to avoid supply-chain disruptions, and (iii) preserve liquidity, which could impact a variety of business operations.
- Increased spending on our business continuity efforts for our headquarters and manufacturing operations, our supply chain, and readiness efforts for returning to our offices, which may in turn require that we further cut or defer costs and investments in other areas.
- Increased risk of an information or cyber-security incident, fraud, a failure to maintain the uninterrupted operation of our information systems due to, among other things, an increase in remote work.

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In addition to potentially amplifying the foregoing and the other risk factors described in our Annual Report on Form 10-K for the year ended December 31, 2019, which is incorporated by reference in this prospectus supplement, a prolonged or recurrent COVID-19 pandemic could result in the following, which would materially and adversely impact our business operations and financial results:

- Material disruption of our supply of product components or ability to distribute our products, despite our efforts to manage potential supply-chain disruption.
- An outbreak occurs at our headquarters and manufacturing operations for a sustained period of time, resulting in material business and manufacturing disruption.
- Delays and disruptions of our research and development and product approval processes.
- Volatility in customer orders and purchases and declines in our collections of accounts receivable.

All of these factors may have far reaching impacts on our business, operations, and financial results and conditions, directly and indirectly, including without limitation impacts on the health of the our management and employees, manufacturing, distribution, marketing and sales operations, customer and patient behaviors, and on the overall economy and economic and social conditions generally. The scope and nature of these impacts, most of which are beyond our control, continue to evolve and the outcomes are uncertain, and such impacts could exist for an extended period of time even after the pandemic might end.

Risks Related to this Offering and Ownership of Our Common Stock

The market price of our common stock has been and may continue to be highly volatile, and you may not be able to resell your shares at or above the public offering price.

The trading price of our common stock has been and may continue to be highly volatile and could be subject to wide fluctuations in price in response to various factors, many of which are beyond our control. Since our initial public offering which occurred in March 2019 through June 15, 2020, the closing price of our common stock has ranged from \$23.16 per share to \$66.02 per share. The market price for our common stock may be influenced by many factors, including:

- the sales level for our products;
- the failure by our customers to obtain coverage and adequate reimbursements or reimbursement levels that would be sufficient to support product sales to our customers;
- unanticipated serious safety concerns related to the use of our products;
- introduction of new products or services offered by us or our competitors;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- announcements of technological or medical innovations for the treatment of vascular disease;
- our ability to effectively manage our growth;
- the size and growth of our target markets;
- actual or anticipated quarterly variations in our or our competitors' results of operations;
- failure to meet estimates or recommendations by securities analysts who cover our stock;
- failure to meet our own financial estimates;
- accusations that we have violated a law or regulation;
- recalls of our products;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain, maintain, protect and enforce patent protection and other intellectual property rights for our technologies and products;

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- significant litigation, including stockholder litigation or litigation related to intellectual property;
- our cash position;
- any delay in any regulatory filings for our planned or future products and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such products;
- adverse regulatory decisions, including failure to receive regulatory approval or clearance of our planned and future products or maintain regulatory approval or clearance for our existing products;
- changes in laws or regulations applicable to our products;
- adverse developments concerning our suppliers or distributors;
- our inability to obtain adequate supplies and components for our products or inability to do so at acceptable prices;
- our inability to establish and maintain collaborations if needed;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of large blocks of our common stock, including sales by our executive officers, directors and significant stockholders;
- trading volume of our common stock;
- additions or departures of key scientific or management personnel;
- changes in accounting principles;
- ineffectiveness of our internal controls;
- actual or anticipated changes in healthcare policy and reimbursement levels;
- the impact of the global COVID-19 pandemic on our business, operations and financial condition;
- general market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, particularly in light of the current global COVID-19 pandemic, and the market for medical device companies in particular have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of those companies. These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. In the past, following periods of volatility in the market, securities class action litigation has often been instituted against companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management's attention and resources, which could materially adversely affect our business, financial condition and results of operations.

An active trading market for our common stock may not be sustained.

Our common stock is currently listed on the Nasdaq Global Select Market under the symbol "SWAV" and trades on that market. We cannot assure you that an active trading market for our common stock will be sustained. Accordingly, we cannot assure you of the liquidity of any trading market, your ability to sell your shares of our common stock when desired, or the prices that you may obtain for your shares.

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We do not intend to pay dividends on our common stock, so any returns will be limited to increases, if any, in our stock's value. Your ability to achieve a return on your investment will depend on appreciation, if any, in the price of our common stock.

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on, among other factors, our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant. Any return to stockholders will therefore be limited to the appreciation in the value of their stock, if any.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

As of December 31, 2019, we had net operating loss ("NOL") carryforwards of approximately \$180.3 million for federal income tax purposes, and \$40.4 million for California and \$153.5 million for other state income tax purposes. The federal NOLs generated prior to 2018 begin expiring in 2030, the California NOLs begin expiring in 2031 and other state NOL carryforwards begin expiring in 2029. Utilization of these NOLs depends on many factors, including our future income, which cannot be assured. Some of these NOLs could expire unused and be unavailable to offset our future income tax liabilities. In addition, under Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), and corresponding provisions of state law, if a corporation undergoes an "ownership change," which is generally defined as a greater than 50% change, by value, in its equity ownership by 5% stockholders over a three-year period, the corporation's ability to use its pre-change NOLs and other pre-change tax attributes to offset its post-change income may be limited. We have not determined if we have experienced Section 382 ownership changes in the past and if a portion of our NOLs is subject to an annual limitation under Section 382. In addition, we may experience ownership changes in the future as a result of subsequent changes in our stock ownership, some of which may be outside of our control. If we determine that an ownership change has occurred and our ability to use our historical NOLs is materially limited, it could harm our future operating results by effectively increasing our future tax obligations. Under the TCJA (as defined below), as modified by the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act"), our federal NOLs generated in taxable years beginning after December 31, 2017 may be carried forward indefinitely. In addition, under the TCJA, as modified by the CARES Act, for taxable years beginning after December 31, 2020, the deductibility of federal NOLs generated in taxable years beginning after December 31, 2017 is limited to 80% of current year taxable income. It is uncertain if and to what extent various states will conform to the TCJA, as modified by the CARES Act.

Changes in tax laws or regulations that are applied adversely to us or our customers may have a material adverse effect on our business, cash flow, financial condition or results of operations.

Legislation enacted in 2017, informally known as the Tax Cuts and Jobs Act ("TCJA"), as modified by the CARES Act, enacted many significant changes to the U.S. tax laws, and we are still awaiting guidance from the IRS and other tax authorities on some of the TCJA changes that may affect us. Changes in corporate tax rates, the realization of net deferred tax assets relating to our U.S. operations, the taxation of foreign earnings and the deductibility of expenses contained in the TCJA or future tax reform legislation could have a material impact on the value of our deferred tax assets, could result in significant one-time charges in the current or future taxable years and could increase our future U.S. tax expense. The foregoing items, as well as any future changes in tax laws, could have a material adverse effect on our business, cash flow, financial condition or results of operations. In addition, it is uncertain if and to what extent various states will conform to the TCJA or any newly enacted federal tax legislation.

Our principal stockholders and management own a significant percentage of our stock and will be able to exercise significant influence over matters subject to stockholder approval.

As of December 31, 2019, our executive officers, directors and 5% stockholders beneficially owned approximately 56.9% of the outstanding shares of capital stock. As of December 31, 2019, we had 31,446,787 shares of common stock outstanding. Of these shares, the 9,409,048 shares of common stock sold in our March 2019 initial public offering and November 2019 underwritten public offering are freely tradeable.

As of December 31, 2019, our executive officers and directors held options to purchase an aggregate of 2,158,122 shares of our common stock at a weighted-average exercise price of \$4.88 per share and 29,000 shares of common stock underlying outstanding RSUs. We have registered all of the shares of common stock issuable upon the exercise of outstanding options, upon the vesting of outstanding restricted stock and upon exercise or settlement of any other equity incentives we may grant in the future, for public resale under the Securities Act. Accordingly, these shares may be freely sold in the public market upon issuance as permitted by any applicable vesting requirements. Furthermore, holders of approximately 3,156,652 shares of our common stock have certain rights with respect to the registration of such shares under the Securities Act.

Sales of substantial amounts of our common stock in the public markets, or the perception that such sales could occur, could reduce the market price of our common stock.

Sales of a substantial number of shares of our common stock in the public market, or the perception that such sales could occur, could adversely affect the market price of our common stock. The 1,700,000 shares of common stock sold in this offering (or 1,955,000 shares if the underwriters exercise their option to purchase additional shares) will be freely tradable immediately upon consummation of this offering. In addition, we may raise money through additional public or private offerings of our equity securities or equity-linked securities. Any sales of our equity or equity-linked securities could have a material adverse effect on the market price of our common stock.

In connection with this offering, we and our directors and executive officers and funds currently affiliated with our directors have entered into lock-up agreements for a period of 75 days following this offering. The lock-up agreements are subject to various exceptions, and we and our directors and executive officers and funds currently affiliated with our directors may be released from the lock-up agreements prior to the expiration of the lock-up period at the sole discretion of the representatives. See “Underwriters.” Upon expiration or earlier release of the lock-up agreements, we and our directors and executive officers and funds currently affiliated with our directors may sell shares into the market, which could adversely affect the market price of shares of our common stock.

In addition, as of March 31, 2020 there were 2,945,534 shares of common stock subject to outstanding options and 722,409 shares of common stock to be issued upon the vesting of outstanding RSUs. We have registered all of the shares of common stock issuable upon the exercise of outstanding options, upon the vesting of outstanding restricted stock and upon exercise or settlement of any other equity incentives we may grant in the future, for public resale under the Securities Act. Accordingly, these shares may be freely sold in the public market upon issuance as permitted by any applicable vesting requirements, in certain cases, subject to the lock-up agreements described above and compliance with applicable securities laws. Furthermore, holders of approximately 3,156,652 shares of our common stock have certain rights with respect to the registration of such shares under the Securities Act.

We are an emerging growth company, and we cannot be certain if the reduced reporting 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 JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are

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applicable to other public companies that are not emerging growth companies, including 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 and exemptions from the requirements of holding nonbinding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years following the year in which we completed our initial public offering, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (i) the last day of the fiscal year (a) following the fifth anniversary of the completion of our initial public offering, (b) in which we have total annual gross revenue of at least \$1.07 billion or (c) in which we are deemed to be a large accelerated filer, which requires the market value of our common stock that is held by non-affiliates to exceed \$700.0 million as of the prior June 30th, and (ii) the date on which we have issued more than \$1.0 billion in non-convertible debt during the prior three-year period.

We will incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will continue to incur significant legal, accounting and other expenses that we did not incur as a private company. We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), which requires, among other things, that we file with the SEC, annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes-Oxley Act of 2002, as amended (the “Sarbanes-Oxley Act”), as well as rules subsequently adopted by the SEC and the Nasdaq Global Select Market to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring that we evaluate and determine the effectiveness of our internal control over financial reporting, beginning with our annual report for the year ending December 31, 2020, which must be attested to by our independent registered public accounting firm to the extent we are no longer an “emerging growth company,” as defined by the JOBS Act, or a smaller reporting company under the Securities Act. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”), was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas such as “say on pay” and proxy access. Emerging growth companies are permitted to implement many of these requirements over a longer period and up until March 6, 2024, which is five years from the pricing of our initial public offering. We intend to take advantage of this legislation but cannot guarantee that we will not be required to implement these requirements sooner than anticipated or planned and thereby incur unexpected expenses. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to continue to increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our products or services. For example, 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 incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

If we have material weaknesses in our internal control over financial reporting, we may not detect errors on a timely basis and our financial statements may be materially misstated. We are in the process of designing and

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implementing our internal control over financial reporting in which the process will be time-consuming, costly and complicated. Until such time as we are no longer an “emerging growth company,” our auditors will not be required to attest as to our internal control over financial reporting. If we identify material weaknesses in our internal control over financial reporting, if we are unable to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, if we are unable to assert that our internal control over financial reporting is effective or, once required, if our independent registered public accounting firm is unable to attest that our internal control over financial reporting is effective, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could decrease. We could also become subject to stockholder or other third-party litigation, as well as investigations by the stock exchange on which our securities are listed, the SEC or other regulatory authorities, which could require additional financial and management resources and could result in fines, trading suspensions or other remedies.

If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares. You will likely experience further dilution if we issue shares in future financing transactions or upon exercise of options or vesting of RSUs or other equity awards.

The public offering price in this offering is substantially higher than the net tangible book value per share of our common stock. Investors purchasing common stock in this offering will pay a price per share that substantially exceeds the book value of our tangible assets after subtracting our liabilities. As a result, investors purchasing common stock in this offering will incur immediate dilution of \$38.16 per share, based on an assumed public offering price of \$45.61 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on June 15, 2020. This dilution is due to our investors who purchased shares prior to this offering having paid substantially less when they purchased their shares than the price offered to the public in this offering. To the extent outstanding options are exercised or RSUs or other equity awards vest, there will be further dilution to new investors. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. For a further description of the dilution that you will experience immediately after this offering, see the section titled “Dilution.”

If we raise additional funds by issuing additional common stock, or securities convertible into or exchangeable or exercisable for common stock, our stockholders will experience additional dilution, and new investors could have rights superior to existing stockholders.

Pursuant to our 2019 Equity Incentive Plan, our management is authorized to grant stock options, RSUs and other equity awards to our employees, directors and consultants. You will incur dilution upon exercise of any outstanding stock options or any vesting of RSUs or other equity awards.

We have broad discretion in the application of the net proceeds from this offering and our investment of these proceeds may not yield a favorable return.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section titled “Use of Proceeds,” and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment. We expect to use the net proceeds from this offering to expand our direct sales force and marketing of our products, to support clinical studies for new products and product enhancements, including expanded indications, and to support other research and development activities, working capital and general corporate purposes. We may also use a portion of the net proceeds of this offering for acquisitions or strategic transactions. We have not entered into any agreements or commitments with respect to any specific transactions and have no understandings or agreements with respect to any such transactions at this time. The failure by our management to apply these funds effectively

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could harm our business. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade or interest-bearing securities. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

We are at risk of securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because medical device companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

Our stock price and trading volume is heavily influenced by the way analysts and investors interpret our financial information and other disclosures. If securities or industry analysts do not publish research or reports about our business, delay publishing reports about our business or publish negative reports about our business, regardless of accuracy, our stock price and trading volume could decline.

The trading market for our common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. A limited number of analysts are currently covering our company. If the number of analysts that cover us declines, demand for our common stock could decrease and our common stock price and trading volume may decline.

Even if our common stock is actively covered by analysts, we do not have any control over the analysts or the measures that analysts or investors may rely upon to forecast our future results. Over-reliance by analysts or investors on any particular metric to forecast our future results may result in forecasts that differ significantly from our own.

Regardless of accuracy, unfavorable interpretations of our financial information and other public disclosures could have a negative impact on our stock price. If our financial performance fails to meet analyst estimates, for any of the reasons discussed above or otherwise, or one or more of the analysts who cover us downgrade our common stock or change their opinion of our common stock, our stock price would likely decline.

Our restated certificate of incorporation, our amended and restated bylaws and Delaware law contain provisions that could discourage another company from acquiring us and may prevent attempts by our stockholders to replace or remove our current management.

Provisions of Delaware law (where we are incorporated), our restated certificate of incorporation and amended and restated bylaws may discourage, delay or prevent a merger or acquisition that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace or remove our board of directors. These provisions include:

- authorizing the issuance of "blank check" preferred stock without any need for action by stockholders;
- requiring supermajority stockholder voting to effect certain amendments to our restated certificate of incorporation and amended and restated bylaws;
- eliminating the ability of stockholders to call and bring business before special meetings of stockholders;

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- prohibiting stockholder action by written consent;
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings;
- dividing our board of directors into three classes so that only one third of our directors will be up for election in any given year; and
- providing that our directors may be removed by our stockholders only for cause.

In addition, we are subject to Section 203 of the Delaware General Corporation Law, which may have an anti-takeover effect with respect to transactions not approved in advance by our board of directors, including discouraging takeover attempts that could have resulted in a premium over the market price for shares of our common stock.

These provisions apply even if a takeover offer may be considered beneficial by some stockholders and could delay or prevent an acquisition that our board of directors determines is not in our and our stockholders' best interests and could also affect the price that some investors are willing to pay for our common stock. See the section of the accompanying prospectus titled "Description of Capital Stock."

Our restated certificate of incorporation provides that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our restated certificate of incorporation or our amended and restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. This exclusive forum provision will not apply to suits brought to enforce a duty or liability created by the Securities Act or the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction.

Furthermore, the enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. For example, the Court of Chancery of the State of Delaware previously determined that the exclusive forum provision of federal district courts of the United States for resolving any complaint asserting a cause of action arising under the Securities Act is not enforceable. However, on March 18, 2020, this decision was ultimately overturned by the Delaware Supreme Court. If a court were to find the choice of forum provision contained in our restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business and financial condition.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein and therein, contain forward-looking statements within the meaning of Section 27A of the Securities Act. In some cases, you can identify these statements by forward-looking words such as “may,” “might,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue,” the negative of these terms and other comparable terminology. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, may include projections of our future financial performance, our anticipated growth strategies and anticipated trends in our business. Forward-looking statements contained in this prospectus supplement include, but are not limited to statements about:

- the impact of the COVID-19 pandemic on our operations, financial results, and liquidity and capital resources, including on sales, expenses, supply chain, manufacturing, research and development activities, clinical trials and employees;
- our ability to design, develop, manufacture and market innovative products to treat patients with challenging medical conditions, particularly in peripheral artery disease, coronary artery disease and aortic stenosis;
- our expected future growth, including growth in international sales;
- the size and growth potential of the markets for our products, and our ability to serve those markets;
- the rate and degree of market acceptance of our products;
- coverage and reimbursement for procedures performed using our products;
- the performance of third parties in connection with the development of our products, including third-party suppliers;
- regulatory developments in the United States and foreign countries;
- our ability to obtain and maintain regulatory approval or clearance of our products on expected timelines;
- our plans to research, develop and commercialize our products and any other approved or cleared product;
- our ability to scale our organizational culture of cooperative product development and commercial execution;
- the development, regulatory approval, efficacy and commercialization of competing products;
- the loss of key scientific or management personnel;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act;
- our ability to develop and maintain our corporate infrastructure, including our internal controls;
- our use of the proceeds from this offering;
- our financial performance and capital requirements; and
- our expectations regarding our ability to obtain and maintain intellectual property protection for our products, as well as our ability to operate our business without infringing the intellectual property rights of others.

These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements, including those factors discussed in the section titled “Risk Factors.” You should specifically consider the numerous risks outlined under “Risk Factors.”

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Forward-looking statements involve numerous risks and uncertainties and depend on assumptions, data or methods that may be incorrect or imprecise. Our actual results and the timing of certain events may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such a discrepancy include, but are not limited to, those discussed in the “Risk Factors” section of this prospectus supplement and under the heading “Risk Factors” in the documents incorporated by reference herein. We claim the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995 for all forward-looking statements. All forward-looking statements contained in this prospectus supplement and the accompanying prospectus or incorporated by reference herein or therein are based on information available to us as of the date of such statements and we assume no obligation to update any such forward-looking statements.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of shares of our common stock that we are selling in this offering will be approximately \$72.1 million, based on an assumed public offering price of \$45.61 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on June 15, 2020, after deducting the underwriting discounts and commissions and estimated offering expenses.

We expect to use the net proceeds from this offering for sales and marketing activities to support the ongoing commercialization of our IVL System, including the expansion of our sales force, additional medical affairs and educational efforts and the expansion of our international sales presence, for research and development and clinical studies and for working capital and general corporate purposes. We may also use a portion of the net proceeds of this offering for acquisitions or strategic transactions, though we have not entered into any agreements or commitments with respect to any specific transactions and have no understandings or agreements with respect to any such transactions at this time.

We cannot specify with certainty the particular uses of the net proceeds that we will receive from this offering. Accordingly, we will have broad discretion in using these proceeds. Pending the use of proceeds from this offering as described above, we plan to invest the net proceeds that we receive in this offering in short-term and long-term interest-bearing obligations, including government and investment-grade debt securities and money market funds.

DIVIDEND POLICY

We have never paid any dividends on shares of our common stock or any of our other securities. We currently anticipate that we will retain all available funds for use in the operation and expansion of our business, and do not anticipate paying any cash dividends in the foreseeable future. Any future determination to pay cash dividends will be at the discretion of our board of directors and will be dependent upon our financial condition, results of operations, capital requirements, restrictions under any future indebtedness and other factors the board of directors deems relevant. In addition, the terms of our Loan and Security Agreement with Silicon Valley Bank restrict our ability to pay dividends to limited circumstances.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of March 31, 2020:

- on an actual basis; and
- on an as adjusted basis to give effect to the sale and issuance of 1,700,000 shares of our common stock offered by us in this offering, based on the assumed public offering price of \$45.61 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on June 15, 2020, after deducting the estimated underwriting discounts and commissions and estimated offering expenses.

This table should be read in conjunction with our financial statements and related notes incorporated by reference in this prospectus supplement and the accompanying prospectus. For more details on how you can obtain our SEC reports and other information, you should read the section of the prospectus supplement entitled “Where You Can Find More Information.”

	March 31, 2020 (unaudited) (in thousands, except share and per share data)	
	Actual	As Adjusted
Cash, cash equivalents and short-term investments	\$ 170,389	\$ 242,529
Long-term debt, current and non-current	\$ 16,126	\$ 16,126
Stockholders' equity:		
Preferred stock, \$0.001 par value per share, 5,000,000 shares authorized, no shares issued and outstanding, actual and as adjusted	—	—
Common stock, \$0.001 par value per share, 281,274,838 shares authorized, 31,827,606 shares issued and outstanding, actual, 281,274,838 shares authorized, 33,527,606 shares issued and outstanding, as adjusted	32	34
Additional paid-in capital	374,386	446,524
Accumulated other comprehensive income	103	103
Accumulated deficit	(196,749)	(196,749)
Total stockholders' equity	\$ 177,772	\$ 249,912
Total capitalization	\$ 193,898	\$ 266,038

The number of shares of our common stock issued and outstanding actual and as adjusted in the table above is based on 31,827,606 shares outstanding as of March 31, 2020, and excludes:

- 2,945,534 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2020, with a weighted-average exercise price of \$5.33 per share;
- 722,409 shares of our common stock issuable from time to time upon the settlement of RSUs outstanding as of March 31, 2020;
- 2,660,928 additional shares of our common stock reserved for future issuance under our 2019 Equity Incentive Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance pursuant to this plan; and
- 590,407 shares of our common stock reserved for issuance under our ESPP, as well as any automatic increases in the number of shares of our common stock reserved for future issuance pursuant to this plan.

DILUTION

If you invest in our common stock you will experience immediate dilution in the as adjusted net tangible book value of your shares of common stock. Dilution in as adjusted net tangible book value represents the difference between the public offering price per share of our common stock and the as adjusted net tangible book value per share of our common stock.

As of March 31, 2020, we had a historical net tangible book value of \$177.8 million, or \$5.59 per share of common stock, based on 31,827,606 shares of our common stock outstanding. Our historical net tangible book value per share represents the amount of our tangible assets, less liabilities, divided by the total number of shares of our common stock outstanding at March 31, 2020.

After giving effect to the sale and issuance of 1,700,000 shares of our common stock offered by us in this offering based on the assumed public offering price of \$45.61 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on June 15, 2020, after deducting the estimated underwriting discounts and commissions and estimated offering expenses, our as adjusted net tangible book value as of March 31, 2020 would be \$249.9 million, or \$7.45 per share. This represents an immediate increase in as adjusted net tangible book value to our existing stockholders of \$1.86 per share and an immediate dilution to new investors of \$38.16 per share. Dilution per share to new investors represents the difference between the price per share to be paid by new investors for the shares of common stock sold in this offering and the as adjusted net tangible book value per share immediately after this offering. The following table illustrates this per share dilution:

Assumed public offering price per share		\$45.61
Net tangible book value per share as of March 31, 2020	\$5.59	
Increase in as adjusted net tangible book value per share attributable to new investors participating in this offering	<u>1.86</u>	
As adjusted net tangible book value per share immediately after this offering		<u>7.45</u>
Dilution per share to new investors participating in this offering		<u>\$38.16</u>

If the underwriters exercise their option to purchase 255,000 additional shares of our common stock from us in full in this offering, the as adjusted net tangible book value after the offering would be \$7.72 per share, the increase in as adjusted net tangible book value per share to existing stockholders would be \$2.13 per share and the dilution per share to new investors would be \$37.89 per share, in each case assuming a public offering price of \$45.61 per share, which was the last reported sale price of our common stock on the Nasdaq Global Select Market on June 15, 2020.

The foregoing table and calculations (other than the historical net tangible book value calculation) are based on 31,827,606 shares outstanding as of March 31, 2020, and excludes:

- 2,945,534 shares of our common stock issuable upon the exercise of options outstanding as of March 31, 2020, with a weighted-average exercise price of \$5.33 per share;
- 722,409 shares of our common stock issuable from time to time upon the settlement of RSUs outstanding as of March 31, 2020;
- 2,660,928 additional shares of our common stock reserved for future issuance under our 2019 Equity Incentive Plan, as well as any automatic increases in the number of shares of our common stock reserved for future issuance pursuant to this plan; and
- 590,407 shares of our common stock reserved for issuance under our ESPP, as well as any automatic increases in the number of shares of our common stock reserved for future issuance pursuant to this plan.

To the extent that any outstanding options are exercised or RSUs or other equity awards vest and are settled or exercised, new investors will experience further dilution.

MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSEQUENCES FOR NON-U.S. HOLDERS OF COMMON STOCK

The following are the material U.S. federal income and estate tax consequences of the ownership and disposition of our common stock acquired in this offering by a “Non-U.S. Holder” that does not own, and has not owned, actually or constructively, more than 5% of our common stock. You are a Non-U.S. Holder if for U.S. federal income tax purposes you are a beneficial owner of our common stock that is:

- a nonresident alien individual;
- a foreign corporation; or
- a foreign estate or trust.

You are not a Non-U.S. Holder if you are a nonresident alien individual present in the United States for 183 days or more in the taxable year of disposition, or if you are a former citizen or former resident of the United States for U.S. federal income tax purposes. If you are such a person, you should consult your tax adviser regarding the U.S. federal income tax consequences of the ownership and disposition of our common stock.

If you are a partnership for U.S. federal income tax purposes, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and your activities.

This discussion is based on the Internal Revenue Code of 1986, as amended to the date hereof (the “Code”), administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, changes to any of which subsequent to the date of this prospectus supplement may affect the tax consequences described herein, possibly with retroactive effect. This discussion does not describe all of the tax consequences that may be relevant to you in light of your particular circumstances, including alternative minimum tax and Medicare contribution tax consequences and does not address any aspect of state, local or non-U.S. taxation, or any taxes other than income and estate taxes. You should consult your tax adviser with regard to the application of the U.S. federal tax laws to your particular situation, as well as any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

Dividends

As discussed under “Dividend Policy” above, we do not currently expect to make distributions on our common stock. In the event that we do make distributions of cash or other property, those distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed our current and accumulated earnings and profits, they will constitute a return of capital, which will first reduce your basis in our common stock, but not below zero, and then will be treated as gain from the sale of our common stock, as described below under “—Gain on Disposition of Our Common Stock.”

Dividends paid to you generally will be subject to withholding tax at a 30% rate or a reduced rate specified by an applicable income tax treaty. In order to obtain a reduced rate of withholding (subject to the discussion below under “—FATCA”), you will be required to provide a properly executed applicable Internal Revenue Service (“IRS”) Form W-8 certifying your entitlement to benefits under a treaty.

If dividends paid to you are effectively connected with your conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment or fixed base maintained by you in the United States), you will generally be taxed on the dividends in the same manner as a U.S. person. In this case, you will be exempt from the withholding tax discussed in the preceding paragraph, although you will be required to provide a properly executed IRS Form W-8ECI in order to claim an exemption from withholding. You should consult your tax adviser with respect to other U.S. tax consequences of the ownership and disposition of our common stock, including the possible imposition of a branch profits tax at a rate of 30% (or a lower treaty rate) if you are a corporation.

Gain on Disposition of Our Common Stock

Subject to the discussions below under “—Information Reporting and Backup Withholding” and “—FATCA,” you generally will not be subject to U.S. federal income or withholding tax on gain realized on a sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with your conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by you in the United States), or
- we are or have been a “United States real property holding corporation,” as defined in the Code, at any time within the five-year period preceding the disposition or your holding period, whichever period is shorter, and our common stock has ceased to be regularly traded on an established securities market as defined by applicable Treasury Regulations.

We believe that we are not, and do not anticipate becoming, a United States real property holding corporation.

If you recognize gain on a sale or other disposition of our common stock that is effectively connected with your conduct of a trade or business in the United States (and if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by you in the United States), you will generally be taxed on such gain in the same manner as a U.S. person. You should consult your tax adviser with respect to other U.S. tax consequences of the ownership and disposition of our common stock, including the possible imposition of a branch profits tax at a rate of 30% (or a lower treaty rate) if you are a corporation.

Information Reporting and Backup Withholding

Information returns are required to be filed with the IRS in connection with payments of dividends on our common stock. Unless you comply with certification procedures to establish that you are not a U.S. person, information returns may also be filed with the IRS in connection with the proceeds from a sale or other disposition of our common stock. You may be subject to backup withholding on payments on our common stock or on the proceeds from a sale or other disposition of our common stock unless you comply with certification procedures to establish that you are not a U.S. person or otherwise establish an exemption. Your provision of a properly executed applicable IRS Form W-8 certifying your non-U.S. status will permit you to avoid backup withholding. Amounts withheld under the backup withholding rules are not additional taxes and may be refunded or credited against your U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

FATCA

Provisions of the Code commonly referred to as “FATCA” require withholding of 30% on payments of dividends on our common stock, as well as, subject to the discussion of certain proposed U.S. Treasury regulations below, of gross proceeds of dispositions occurring after December 31, 2018, of our common stock, to “foreign financial institutions” (which is broadly defined for this purpose and in general includes investment vehicles) and certain other non-U.S. entities unless various U.S. information reporting and due diligence requirements (generally relating to ownership by U.S. persons of interests in or accounts with those entities) have been satisfied, or an exemption applies. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. If FATCA withholding is imposed, a beneficial owner that is not a foreign financial institution generally may obtain a refund of any amounts withheld by filing a U.S. federal income tax return (which may entail significant administrative burden). The U.S. Treasury released proposed regulations which, if finalized in their present form, would eliminate the federal withholding tax of 30% applicable to the gross proceeds of a sale or other disposition of our common stock. In its preamble to such proposed regulations, the U.S. Treasury stated that taxpayers may generally rely on the proposed regulations until

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final regulations are issued. You should consult your tax adviser regarding the effects of FATCA on your investment in our common stock, and the possible impact of these rules on the entities through which you hold our common stock, including, without limitation, the process and deadlines for meeting the applicable requirements to prevent the imposition of this 30% withholding tax.

Federal Estate Tax

Individual Non-U.S. Holders and entities the property of which is potentially includible in such an individual's gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers), should note that, absent an applicable treaty exemption, our common stock will be treated as U.S.-situs property subject to U.S. federal estate tax.

UNDERWRITERS

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus supplement, the underwriters named below, for whom Morgan Stanley & Co. LLC and BofA Securities, Inc. are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, severally, the number of shares indicated below:

<u>Name</u>	<u>Number of Shares</u>
Morgan Stanley & Co. LLC	
BofA Securities, Inc.	
Total:	

The underwriters and the representatives are collectively referred to as the “underwriters” and the “representatives,” respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus supplement are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus supplement if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters’ option to purchase additional shares described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus supplement and part to certain dealers. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase up to additional shares of common stock at the public offering price listed on the cover page of this prospectus supplement, less underwriting discounts and commissions. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter’s name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters’ option to purchase up to an additional shares of common stock.

	<u>Per Share</u>	<u>Total</u>	
		<u>No Exercise</u>	<u>Full Exercise</u>
Public offering price	\$	\$	\$
Underwriting discounts and commissions to be paid by us			
Proceeds, before expenses, to us	\$	\$	\$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately \$745,000. We have agreed to reimburse the underwriters for expense relating to clearance of this offering with the Financial Industry Regulatory Authority up to \$15,000.

Our common stock is listed on the Nasdaq Global Select Market under the trading symbol “SWAV”.

We and all of our directors and executive officers and funds currently affiliated with our directors have agreed that, without the prior written consent of Morgan Stanley & Co. LLC and BofA Securities, Inc. on behalf

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of the underwriters, we and they will not, and will not publicly disclose an intention to, during the period ending 75 days after the date of this prospectus supplement (the “restricted period”):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- file any registration statement with the SEC relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock;

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each such person agrees that, without the prior written consent of Morgan Stanley & Co. LLC and BofA Securities, Inc. on behalf of the underwriters, we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph do not apply to our directors, officers and securityholders with respect to, among other things:

- (a) transactions relating to shares of common stock or other securities acquired in open market transactions after the completion of this offering, provided that no filing under Section 16(a) of the Exchange Act or other public announcement shall be required or shall be voluntarily made in connection with subsequent sales of common stock or other securities acquired in such open market transactions during the restricted period;
- (b) transfers of shares of common stock or any security convertible into common stock (i) as a bona fide gift, (ii) to an immediate family member or a trust for the direct or indirect benefit of the securityholder or such immediate family member of the securityholder, (iii) if the securityholder is a trust, to a trustor or beneficiary of the trust or to the estate of a beneficiary of such trust, (iv) if the securityholder is a corporation, partnership, limited liability company, investment fund or other entity, distributions of shares of common stock or any security convertible into shares of common stock to stockholders, limited partners, members or affiliates or to any other entity that is controlled or managed by, or under common control or management with, the securityholder or (v) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the securityholder; provided that in the case of any transfer or distribution pursuant to this clause, (i) each donee or distributee shall sign and deliver a lock-up agreement, (ii) no filing under Section 16(a) of the Exchange Act or other public announcement, reporting a reduction in beneficial ownership of shares of common stock, shall be required or shall be voluntarily made during the restricted period and (iii) such transfer shall not involve a disposition for value;
- (c) transfers of shares of common stock or any securities convertible into or exercisable or exchangeable for common stock that occur by operation of law pursuant to a qualified domestic order or in connection with a divorce settlement, provided that (i) each transferee shall sign and deliver a lock-up agreement, (ii) any public report or filing required to be made under Section 16(a) of the Exchange Act shall clearly indicate in the footnotes thereto that such transfer is pursuant to a qualified domestic order or in connection with a divorce settlement and (iii) such transfer shall not involve a disposition for value, and provided, further that no other public announcement shall be required or shall be made voluntarily in connection with such transfer;
- (d) transfers of shares of common stock or any securities convertible into or exercisable or exchangeable for common stock to us pursuant to agreements entered into pursuant to a stock incentive plan

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disclosed in this prospectus supplement and in effect on the date of this prospectus supplement under which we have the option to repurchase such shares or securities upon termination of service of the securityholder, provided that if the securityholder is required to file a report under Section 16(a) of the Exchange Act during the restricted period, the securityholder shall clearly indicate in the footnotes thereto that such transfer is pursuant to the circumstances described in this clause, and provided, further that no other public announcement shall be made voluntarily in connection with such transfer;

- (e) the exercise of outstanding warrants by the securityholder described in this prospectus supplement or any stock option by the securityholder that was granted under a stock incentive plan or stock purchase plan described in this prospectus supplement, provided that the shares received upon exercise shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement and provided, further that if the securityholder is required to file a report under Section 16(a) of the Exchange Act during the restricted period, the securityholder shall clearly indicate in the footnotes thereto that the filing relates to the exercise of a stock option or warrant, that no shares were sold by the reporting person and that the shares received upon exercise of the stock option or warrant are subject to a lock-up agreement, and provided, further that no other public announcement shall be made voluntarily in connection with such exercise;
- (f) the transfer of shares of common stock or any security convertible into common stock to us upon the exercise of options or warrants to purchase our securities outstanding or pursuant to a stock incentive plan or stock purchase plan described in this prospectus supplement, on a “cashless” or “net exercise” basis, provided that the shares received upon exercise shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement and provided, further that if the securityholder is required to file a report under Section 16(a) of the Exchange Act during the restricted period, the securityholder shall clearly indicate in the footnotes thereto that the filing relates to the “cashless” or “net” exercise of a stock option or warrant, that no shares were sold by the reporting person and that the shares received upon exercise of the stock option or warrant are subject to a lock-up agreement, and provided, further that no other public announcement shall be made voluntarily in connection with such transfer;
- (g) the transfer of shares of common stock or any security convertible into common stock to us, or the withholding of shares of common stock by us, in connection with a vesting event of our securities granted pursuant to a stock incentive plan or stock purchase plan described in this prospectus supplement, to cover tax withholding obligations or the payment of taxes due in connection with the vesting event, provided that if the securityholder is required to file a report under Section 16(a) of the Exchange Act during the restricted period, the securityholder shall clearly indicate in the footnotes thereto that the purpose of such transfer is to cover such tax withholding obligations or the payment of taxes due in connection with the vesting event, and provided, further that no other public announcement shall be made voluntarily in connection with such transfer;
- (h) a merger, consolidation or other similar transaction involving a change of control of our company after the closing of this offering and approved by our board of directors, provided that in the event that such change of control is not completed, the securityholder’s shares shall remain subject to the restrictions contained in the lock-up agreement and title to the securityholder’s shares shall remain with the securityholder;
- (i) the transfer of shares of common stock under a trading plan pursuant to Rule 10b5-1 under the Exchange Act, provided that, to the extent a public announcement or filing under the Exchange Act, if any, is required by or on behalf of the securityholder or the Company regarding such transfer, such announcement or filing shall include a statement that such transfer is in accordance with an established trading plan; and
- (j) the transfer of shares of common stock pursuant to a trading plan established pursuant to Rule 10b5-1, provided that such plan was established by the securityholder prior to the date of the lock-up agreement (such trading plan, an “Existing Plan”), provided further, that if the securityholder reports any such sale or transfer on a Form 4 under Section 16(a) of the Exchange Act, the securityholder shall cause such

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Form 4 to include a statement that such transfer was effected pursuant to such Existing Plan; and provided further that the securityholder shall not, without the prior written consent of the representatives, amend any Existing Plan to permit any sales or transfers of additional shares during the restricted period unless such transfer is otherwise permitted by the lock-up agreement.

In our case, such restrictions shall not apply to:

- (a) the shares of our common stock to be sold in this offering;
- (b) any shares of our common stock issued upon the exercise of options or warrants or the conversion of a security outstanding on the date of the underwriting agreement of which Morgan Stanley & Co. LLC and BofA Securities, Inc. have been advised in writing;
- (c) the grant of options or the issuance of shares of common stock by us to our employees, officers, directors, advisors or consultants pursuant to employee benefit plans in effect on the date of the underwriting agreement and as described herein;
- (d) the filing by us of a registration statement with the SEC on Form S-8 in respect of any shares issued under or the grant of any award pursuant to an employee benefit plan described herein; or
- (e) the sale or issuance of or entry into an agreement to sell or issue shares of our common stock or securities convertible into or exercisable or exchangeable for our common stock in connection with any (1) mergers, (2) acquisition of securities, businesses, property or other assets, (3) joint ventures, (4) strategic alliances, (5) partnerships with experts or other talent to develop or provide content, (6) equipment leasing arrangements or (7) debt financing, provided that the aggregate number of shares of our common stock or securities convertible into or exercisable for common stock (on an as-converted or as-exercised basis, as the case may be) that we may sell or issue or agree to sell or issue as described in this bullet point shall not exceed 5% of the total number of shares of our common stock issued and outstanding immediately following the completion of this offering, and provided, further, that each recipient of shares of our common stock or securities convertible into or exercisable for our common stock pursuant to this bullet point shall execute and deliver to Morgan Stanley & Co. LLC and BofA Securities, Inc. a lock-up agreement.

Morgan Stanley & Co. LLC and BofA Securities, Inc., in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the option to purchase additional shares. The underwriters can close out a covered short sale by exercising the option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the option to purchase additional shares. The underwriters may also sell shares in excess of the option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

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A prospectus supplement in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representative to underwriters that may make Internet distributions on the same basis as other allocations.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have, from time to time, performed, and may in the future perform, various financial advisory and investment banking services for us, for which they received or will receive customary fees and expenses. For example, certain of the underwriters also served as underwriters in our initial public offering in March 2019 and our public offering in November 2019.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area and the United Kingdom (each, a “Relevant State”), no securities have been offered or will be offered pursuant to the offering to the public in that Relevant State prior to the publication of a prospectus in relation to the securities which has been approved by the competent authority in that Relevant State or, where appropriate, approved in another Relevant State and notified to the competent authority in that Relevant State, all in accordance with the Prospectus Regulation, except that offers of securities may be made to the public in that Relevant State at any time under the following exemptions under the Prospectus Regulation:

- (a) to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined under the Prospectus Regulation), subject to obtaining the prior consent of the representatives; or
- (c) in any other circumstances falling within Article 1(4) of the Prospectus Regulation,

provided that no such offer of shares shall require us or any of our representatives to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation.

For the purposes of this provision, the expression an “offer to the public” in relation to any shares in any Relevant State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase any shares, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129 (as amended).

United Kingdom

Each underwriter has represented and agreed that:

- (a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (“FSMA”) received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- (b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Canada

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

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

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Russia

Under Russian law, shares of common stock may be considered securities of a foreign issuer. Neither we, nor this prospectus supplement, nor shares of our common stock have been, or are intended to be, registered with the Central Bank of the Russian Federation under the Federal Law No. 39-FZ “On Securities Market” dated April 22, 1996 (as amended, the “Russian Securities Law”), and none of the shares of our common stock are intended to be, or may be offered, sold or delivered, directly or indirectly, or offered or sold to any person for reoffering or re-sale, directly or indirectly, in the territory of the Russian Federation or to any resident of the Russian Federation, except pursuant to the applicable laws and regulations of the Russian Federation.

The information provided in this prospectus supplement does not constitute any representation with respect to the eligibility of any recipients of this prospectus supplement to acquire shares of our common stock under the laws of the Russian Federation, including, without limitation, the Russian Securities Law and other applicable legislation.

This prospectus supplement is not to be distributed or reproduced (in whole or in part) in the Russian Federation by the recipients of this prospectus supplement. Recipients of this prospectus supplement undertake not to offer, sell or deliver, directly or indirectly, or offer or sell to any person for reoffering or re-sale, directly or indirectly, shares of our common stock in the territory of the Russian Federation or to any resident of the Russian Federation, except pursuant to the applicable laws and regulations of the Russian Federation.

Recipients of this prospectus supplement understand that respective receipt/acquisition of shares of our common stock is subject to restrictions and regulations applicable from the Russian law perspective.

Switzerland

The shares of common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland. Neither this document nor any other offering or marketing material relating to the offering, us, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, or FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Dubai International Financial Centre

This prospectus supplement relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority, or DFSA. This prospectus supplement is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for the prospectus supplement. The shares to which this prospectus supplement relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus supplement you should consult an authorized financial advisor.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission, or ASIC, in relation to the offering. This prospectus supplement does not constitute a prospectus supplement, product disclosure statement or other disclosure document under the Corporations Act 2001, or the Corporations Act, and does not purport to include the information required for a prospectus supplement, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons, or the Exempt Investors, who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus supplement contains general information only and does not take into account the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities

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recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus supplement is appropriate for their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

New Zealand

The shares of common stock offered hereby have not been offered or sold, and will not be offered or sold, directly or indirectly in New Zealand and no offering materials or advertisements have been or will be distributed in relation to any offer of shares in New Zealand, in each case other than:

- (a) to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money; or
- (b) to persons who in all the circumstances can properly be regarded as having been selected otherwise than as members of the public; or
- (c) to persons who are each required to pay a minimum subscription price of at least NZ\$500,000 for the shares before the allotment of those shares (disregarding any amounts payable, or paid, out of money lent by the issuer or any associated person of the issuer); or
- (d) in other circumstances where there is no contravention of the Securities Act 1978 of New Zealand (or any statutory modification or re-enactment of, or statutory substitution for, the Securities Act 1978 of New Zealand).

Hong Kong

The shares of common stock have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (i) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (ii) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares of common stock has been or may be issued or has been or may be in the possession of any person for the purposes of issuance, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Japan

No registration pursuant to Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended), or the FIEL, has been made or will be made with respect to the solicitation of the application for the acquisition of the shares of common stock.

Accordingly, the shares of common stock have not been, directly or indirectly, offered or sold and will not be, directly or indirectly, offered or sold in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan) or to others for re-offering or re-sale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements, and otherwise in compliance with, the FIEL and the other applicable laws and regulations of Japan.

For Qualified Institutional Investors, or QII

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a “QII only private placement”

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or a “QII only secondary distribution” (each as described in Paragraph 1, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred to QIIs.

For Non-QII Investors

Please note that the solicitation for newly-issued or secondary securities (each as described in Paragraph 2, Article 4 of the FIEL) in relation to the shares of common stock constitutes either a “small number private placement” or a “small number private secondary distribution” (each as is described in Paragraph 4, Article 23-13 of the FIEL). Disclosure regarding any such solicitation, as is otherwise prescribed in Paragraph 1, Article 4 of the FIEL, has not been made in relation to the shares of common stock. The shares of common stock may only be transferred en bloc without subdivision to a single investor.

Singapore

This prospectus supplement has not been registered as a prospectus supplement with the Monetary Authority of Singapore. Accordingly, the shares of common stock were not offered or sold or caused to be made the subject of an invitation for subscription or purchase and will not be offered or sold or caused to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this prospectus supplement or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of common stock, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289) of Singapore, as modified or amended from time to time (the “SFA”)) pursuant to Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- (a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities or securities-based derivatives contracts (each term as defined in Section 2(1) of the SFA) of that corporation or the beneficiaries’ rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of common stock pursuant to an offer made under Section 275 of the SFA except:

- (a) to an institutional investor or to a relevant person, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i) (B) of the SFA;
- (b) where no consideration is or will be given for the transfer;
- (c) where the transfer is by operation of law; or
- (d) as specified in Section 276(7) of the SFA.

In connection with Section 309B of the SFA and the Capital Markets Products (the “CMP”) Regulations 2018, the shares of common stock are prescribed capital markets products (as defined in the CMP Regulations 2018) and Excluded Investment Products (as defined in Monetary Authority of Singapore Notice SFA 04-N12: Notice on the Sale of Investment Products and Monetary Authority of Singapore Notice FAA-N16: Notice on Recommendations on Investment Products).

LEGAL MATTERS

The validity of the issuance of the shares of common stock offered hereby will be passed upon for us by Davis Polk & Wardwell LLP, Menlo Park, California. Cooley LLP, San Francisco, California, is representing the underwriters.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019, as set forth in their report, which is incorporated by reference in this prospectus supplement and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains an Internet site at <http://www.sec.gov>, that contains reports, proxy and information statements and other information we have filed electronically with the SEC.

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus supplement, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and all documents we file pursuant to Section 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended on or after the date of this prospectus supplement and prior to the termination of the offering under this prospectus supplement (other than, in each case, documents or information deemed to have been furnished and not filed in accordance with SEC rules):

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2019;
- our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2020;
- our Definitive Proxy Statement on [Schedule 14A](#) filed on April 28, 2020, to the extent specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2019; and
- our Current Report on [Form 8-K](#) filed on February 13, 2020.

You may request, and we will provide you with, a copy of these filings, at no cost, by calling us at (510) 279-4262 or by writing to us at the following address:

Shockwave Medical, Inc.
5403 Betsy Ross Drive
Santa Clara, CA 95054
Attn: Investor Relations.

Information about us, including copies of our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K filed with the SEC, is also available at our website at www.shockwavemedical.com. However, the information on or accessible through our website is not a part of, or incorporated by reference in, this prospectus supplement or any additional prospectus supplement that we file and should not be relied upon in determining whether to make an investment in our securities.

PROSPECTUS



**DEBT SECURITIES
COMMON STOCK
PREFERRED STOCK
DEPOSITARY SHARES
WARRANTS
PURCHASE CONTRACTS
UNITS**

We may offer from time to time debt securities, common stock, preferred stock, depositary shares, warrants, purchase contracts or units. In addition, certain selling securityholders to be identified in a prospectus supplement may use this prospectus from time to time to offer shares of common stock. Specific terms of these securities will be provided in supplements to this prospectus. You should read this prospectus and any supplement carefully before you invest.

Investing in these securities involves certain risks. See “Risk Factors” beginning on page 17 of our Annual Report on Form 10-K for the year ended December 31, 2019 and in Part II, Item 1A of our Quarterly Report on Form 10-Q for the three months ended March 31, 2020, which are incorporated by reference herein.

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

The date of this prospectus is June 16, 2020

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Neither we nor any selling securityholders to be identified in a supplement to this prospectus have authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and any selling securityholders to be identified in a supplement to this prospectus take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. Neither we nor any selling securityholders to be identified in a supplement to this prospectus are making an offer of these securities in any state where the offer is not permitted. You should not assume that the information contained in or incorporated by reference in this prospectus or any prospectus supplement or in any such free writing prospectus is accurate as of any date other than their respective dates.

The terms “Shockwave,” the “Company,” “we,” “us” and “our” refer to Shockwave Medical, Inc. and its consolidated subsidiaries, unless expressly indicated or the context requires otherwise.

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THE COMPANY

We are a medical device company focused on developing and commercializing products intended to transform the way calcified cardiovascular disease is treated. We aim to establish a new standard of care for medical device treatment of atherosclerotic cardiovascular disease (“atherosclerosis”) through our differentiated and proprietary local delivery of sonic pressure waves for the treatment of calcified plaque, which we refer to as intravascular lithotripsy (“IVL”). Our IVL system (our “IVL System”), which leverages our IVL technology (our “IVL Technology”), is a minimally invasive, easy-to-use and safe way to significantly improve patient outcomes.

Our Shockwave M5 IVL catheter (“M5 catheter”) was CE-Marked in April 2018 and cleared by the U.S. Food and Drug Administration (“FDA”) in July 2018 for use in our IVL System for the treatment of peripheral artery disease (“PAD”).

Our Shockwave C2 IVL catheter (“C2 catheter”), which we are currently marketing in Europe, was CE-Marked in June 2018 for use in our IVL System for the treatment of coronary artery disease (“CAD”). In August 2019, we received the Breakthrough Device Designation from the FDA for our C2 catheters using our IVL System for the treatment of CAD.

The second version of our Shockwave S4 IVL catheter (“S4 catheter”) was cleared by the FDA for the treatment of PAD in August 2019. We commenced a full commercial launch of our S4 catheter in the second half of 2019 in select approved geographies. In May 2020, BSI Group, our notified body in Europe, agreed that our S4 catheter could be implemented under the Medical Device Directive regulations. We are currently preparing for the European launch.

We also have ongoing clinical programs across several products and indications, which, if successful, will allow us to expand commercialization of our products into new geographies and indications. Importantly, we are undertaking ongoing clinical trials of our C2 catheter intended to support a pre-market application (“PMA”) in the United States and a Shonin submission in Japan for the treatment of CAD. In October 2018, we received staged Investigational Device Exemption (“IDE”) approval for our DISRUPT CAD III global study, which began enrollment in 2019. This study is designed to support U.S. PMA approval for our C2 catheters. We anticipate having final data from these ongoing clinical trials intended to support a U.S. launch of our C2 catheter in the first quarter of 2021 and a Japan launch in the first half of 2022.

We were incorporated in 2009 as a Delaware corporation under the name Shockwave Medical, Inc. Our principal executive offices are located at 5403 Betsy Ross Drive, Santa Clara, California 95054, and our telephone number is (510) 279-4262. Our website address is www.shockwavemedical.com. The information on, or that can be accessed through, our website is not part of this registration statement. We have included our website address as an inactive textual reference only.

We use “Shockwave,” “Shockwave M5,” “Shockwave C2,” “Shockwave S4” and other marks as trademarks in the United States and other countries. This registration statement contains references to our trademarks and service marks and to those belonging to other entities. Solely for convenience, trademarks and trade names referred to in this registration statement, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our right or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other entities’ trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

About this Prospectus

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission (the “SEC”) utilizing a “shelf” registration process. Under this shelf process, we may sell any combination of the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading “Where You Can Find More Information.”

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains an Internet site at <http://www.sec.gov>, that contains reports, proxy and information statements and other information we have filed electronically with the SEC.

The SEC allows us to “incorporate by reference” the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and all documents we file pursuant to Section 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) on or after the date of this prospectus and prior to the termination of the offering under this prospectus and any prospectus supplement (other than, in each case, documents or information deemed to have been furnished and not filed in accordance with SEC rules):

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2019;
- our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2020;
- our Definitive Proxy Statement on [Schedule 14A](#) filed on April 28, 2020, to the extent specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2019; and
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You may request, and we will provide you with, a copy of these filings, at no cost, by calling us at (510) 279-4262 or by writing to us at the following address:

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the documents incorporated by reference herein and therein, contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), and within the meaning of Section 21E of the the Exchange Act. In some cases, you can identify these statements by forward-looking words such as “may,” “might,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue,” the negative of these terms and other comparable terminology. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, may include projections of our future financial performance, our anticipated growth strategies and anticipated trends in our business. Forward-looking statements contained in this prospectus include, but are not limited to statements about:

- the impact of the COVID-19 pandemic on our operations, financial results, and liquidity and capital resources, including on sales, expenses, supply chain, manufacturing, research and development activities, clinical trials and employees;
- our ability to design, develop, manufacture and market innovative products to treat patients with challenging medical conditions, particularly in peripheral artery disease, coronary artery disease and aortic stenosis;
- our expected future growth, including growth in international sales;
- the size and growth potential of the markets for our products, and our ability to serve those markets;
- the rate and degree of market acceptance of our products;
- coverage and reimbursement for procedures performed using our products;
- the performance of third parties in connection with the development of our products, including third-party suppliers;
- regulatory developments in the United States and foreign countries;
- our ability to obtain and maintain regulatory approval or clearance of our products on expected timelines;
- our plans to research, develop and commercialize our products and any other approved or cleared product;
- our ability to scale our organizational culture of cooperative product development and commercial execution;
- the development, regulatory approval, efficacy and commercialization of competing products;
- the loss of key scientific or management personnel;
- our expectations regarding the period during which we qualify as an emerging growth company under the JOBS Act;
- our ability to develop and maintain our corporate infrastructure, including our internal controls;
- our use of the proceeds from this offering;
- our financial performance and capital requirements; and
- our expectations regarding our ability to obtain and maintain intellectual property protection for our products, as well as our ability to operate our business without infringing the intellectual property rights of others.

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These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements, including those factors discussed in the section titled “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2019 and in Part II, Item 1A of our Quarterly Report on Form 10-Q for the three months ended March 31, 2020, which are incorporated by reference herein. Although we believe the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, level of activity, performance or achievements. We undertake no obligation to update any of these forward-looking statements for any reason, even if new information becomes available in the future, except as may be required by law.

USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, the net proceeds from the sale of the securities covered by this prospectus will be used for general corporate purposes, including working capital, continued development of our products, including research and development and clinical trials, the expansion of our international sales presence and personnel, potential acquisitions, and other business opportunities. We will not receive any proceeds from sales of securities offered by any selling securityholders under this prospectus.

DESCRIPTION OF CAPITAL STOCK

The following descriptions are summaries of the material terms of our restated certificate of incorporation, amended and restated bylaws, the amended and restated investor rights agreement to which we and certain of our stockholders are parties and of the Delaware General Corporation Law. Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our restated certificate of incorporation, amended and restated bylaws and amended and restated investor rights agreement, copies of which have been filed as exhibits to the registration statement of which this prospectus is part.

General

Our authorized capital stock consists of 281,274,838 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of undesignated preferred stock, par value \$0.001 per share.

Common Stock

Common stock. As of April 30, 2020, there were 31,861,618 shares of our common stock issued and outstanding, held by 30 stockholders of record, and no shares of preferred stock issued or outstanding. All outstanding shares of common stock are fully paid and non-assessable, and all of the shares of common stock or preferred stock that may be offered with this prospectus will be fully paid and non-assessable.

Voting rights. The holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders.

Dividend rights. Subject to preferences that may be applicable to any series of outstanding preferred stock, the holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by our board of directors, out of funds legally available therefor.

Rights upon liquidation. In the event of liquidation, dissolution or winding up of the company, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of any series of preferred stock, if any, then outstanding.

Other rights. The holders of our common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

Preferred Stock

As of April 30, 2020, no shares of preferred stock were outstanding. Under our restated certificate of incorporation, our board of directors has the authority to issue up to 5,000,000 shares of undesignated preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof, including dividend rights, dividend rates, conversion rights, voting rights, terms of redemption, redemption prices, liquidation preferences and the number of shares constituting any series or the designation of such series, without further vote or action by the stockholders.

The existence of authorized but unissued and unreserved shares of capital stock may make it more difficult for or discourage an attempt by a potential acquirer to obtain control of our company by means of a merger, tender offer, proxy contest or otherwise, and the issuance of preferred stock may have the effect of delaying, deferring or preventing a change in control of Shockwave without further action by the stockholders. The issuance of preferred stock may also adversely affect the voting and other rights of the holders of common stock.

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When we offer to sell a particular series of preferred stock, including preferred stock to be represented by depositary shares, we will describe the specific terms of the securities in a supplement to this prospectus. The preferred stock will be issued under a certificate of designations relating to each series of preferred stock and is also subject to our restated certificate of incorporation.

The transfer agent for each series of preferred stock and any exchange on which we plan to list a series of preferred stock will be described in the applicable prospectus supplement.

Registration Rights

Certain holders of our common stock are entitled to rights with respect to the registration of their shares under the Securities Act pursuant to our amended and restated investor rights agreement as described in additional detail below (“registrable securities”). In an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include.

Demand Registration Rights

The holders of approximately 3,156,652 shares of our common stock are entitled to certain demand registration rights. The holders of at least 40% of the registrable securities have the right to require us, on not more than two occasions, to file a registration statement under the Securities Act in order to register the resale of their shares of common stock, *provided* that such registration of shares would result in aggregate proceeds (after deducting the estimated underwriting discounts and commissions) of at least \$10.0 million. We may, in certain circumstances, defer such registrations and the underwriters have the right, subject to certain limitations, to limit the number of shares included in such registrations.

Piggyback Registration Rights

If we propose to register the offer and sale of any of our securities under the Securities Act, in connection with the public offering of such securities the holders of approximately 3,156,652 shares of our common stock are entitled to certain “piggyback” registration rights, allowing the holders to include their shares in such registration, subject to certain limitations. If our proposed registration involves an underwriting, the managing underwriter of such offering will have the right to limit the number of shares to be underwritten for reasons related to the marketing of the shares. In connection with this registration statement, the holders of registrable securities were entitled to, and the necessary percentage of holders waived, their rights to notice of this registration statement and to include their shares of registrable securities in this registration statement.

S-3 Registration Rights

We are required to use commercially reasonable efforts to qualify for registration on Form S-3. As we are currently qualified for registration on Form S-3, the holders of approximately 3,156,652 shares of our common stock may make a written request that we register the offer and sale of their shares on Form S-3, *provided* that such registration of shares would result in an aggregate price to the public of not less than \$2,000,000 and we have not effected two such registrations in the last 12 months. We may, in certain circumstances, defer such registrations and the underwriters have the right, subject to certain limitations, to limit the number of shares included in such registrations.

Expenses

Subject to specified conditions and limitations, we are required to pay all expenses, other than underwriting discounts and commissions and stock transfer taxes, incurred in connection with any exercise of these registration rights.

Indemnification

Our amended and restated investor rights agreement contains customary cross-indemnification provisions, pursuant to which we are obligated to indemnify the selling holders of registrable securities in the event of either material misstatements or omissions in the applicable registration statement attributable to us or our violation of the Securities Act, and the selling stockholders are obligated to indemnify us for material misstatements or omissions in the registration statement attributable to them, subject to certain limitations.

Termination

The registration rights terminate upon the earliest of: (i) such date on which all shares of registrable securities may be sold during any 90 day period pursuant to Rule 144 of the Securities Act, (ii) the fifth anniversary of the completion of our initial public offering, (iii) the occurrence of a deemed liquidation event or (iv) the date that no registrable securities remain outstanding that have not previously been sold to the public pursuant to a registration or in reliance on Rule 144 of the Securities Act. In addition, the right of any holder of registrable securities to request registration or inclusion in any registration shall terminate on such date on which all shares of registrable securities held by such holder may immediately be sold under Rule 144 during any 90-day period.

Anti-Takeover Effects of our Certificate of Incorporation and our Bylaws

Election and Removal of Directors

Our board of directors consists of seven directors. The exact number of directors will be fixed from time to time by resolution of the board. No director may be removed except for cause, and directors may be removed for cause by an affirmative vote of shares representing a majority of the shares then entitled to vote at an election of directors. Any vacancy occurring on the board of directors and any newly created directorship may be filled only by a majority of the remaining directors in office.

Staggered Board

Our board of directors is divided into three classes serving staggered three-year terms. Class I, Class II and Class III directors will serve until our annual meetings of stockholders in 2020, 2021 and 2022, respectively. At each annual meeting of stockholders, directors will be elected to succeed the class of directors whose terms have expired. This classification of our board of directors could have the effect of increasing the length of time necessary to change the composition of a majority of the board of directors. In general, at least two annual meetings of stockholders will be necessary for stockholders to effect a change in a majority of the members of the board of directors.

Limits on Written Consents

Our restated certificate of incorporation and our amended and restated bylaws provide that holders of our common stock are not able to act by written consent without a meeting, unless such consent is unanimous.

Stockholder Meetings

Our restated certificate of incorporation and our amended and restated bylaws provide that special meetings of our stockholders may be called only by the chairman of our board of directors or a majority of the directors. Our restated certificate of incorporation and bylaws specifically deny any power of any other person to call a special meeting.

Amendment of Certificate of Incorporation

The provisions of our restated certificate of incorporation described under “Election and Removal of Directors,” “Stockholder Meetings” and “Limits on Written Consents” may be amended only by the affirmative

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vote of holders of at least 75% of the voting power of our outstanding shares of voting stock, voting together as a single class. The affirmative vote of holders of at least a majority of the voting power of our outstanding shares of stock are generally required to amend other provisions of our restated certificate of incorporation.

Amendment of Bylaws

Our amended and restated bylaws may generally be altered, amended or repealed, and new bylaws may be adopted, with:

- the affirmative vote of a majority of directors present at any regular or special meeting of the board of directors called for that purpose, provided that any alteration, amendment or repeal of, or adoption of any bylaw inconsistent with, specified provisions of the bylaws, including those related to special and annual meetings of stockholders, action of stockholders by written consent, classification of the board of directors, nomination of directors, special meetings of directors, removal of directors, committees of the board of directors and indemnification of directors and officers, requires the affirmative vote of at least 75% of all directors in office at a meeting called for that purpose; or
- the affirmative vote of holders of 75% of the voting power of our outstanding shares of voting stock, voting together as a single class.

Other Limitations on Stockholder Actions

Our amended and restated bylaws also impose some procedural requirements on stockholders who wish to:

- make nominations in the election of directors;
- propose that a director be removed;
- propose any repeal or change in our bylaws; or
- propose any other business to be brought before an annual or special meeting of stockholders.

Under these procedural requirements, in order to bring a proposal before a meeting of stockholders, a stockholder must deliver timely notice of a proposal pertaining to a proper subject for presentation at the meeting to our corporate secretary along with the following:

- a description of the business or nomination to be brought before the meeting and the reasons for conducting such business at the meeting;
- the stockholder's name and address;
- any material interest of the stockholder in the proposal;
- the number of shares beneficially owned by the stockholder and evidence of such ownership; and
- the names and addresses of all persons with whom the stockholder is acting in concert and a description of all arrangements and understandings with those persons, and the number of shares such persons beneficially own.

To be timely, a stockholder must generally deliver notice:

- in connection with an annual meeting of stockholders, not less than 120 nor more than 180 days prior to the date on which the annual meeting of stockholders was held in the immediately preceding year, but in the event that the date of the annual meeting is more than 30 days before or more than 60 days after the anniversary date of the preceding annual meeting of stockholders, a stockholder notice will be timely if received by us not later than the close of business on the later of (1) the 120th day prior to the annual meeting and (2) the 10th day following the day on which we first publicly announce the date of the annual meeting; or

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- in connection with the election of a director at a special meeting of stockholders, not less than 40 nor more than 60 days prior to the date of the special meeting, but in the event that less than 55 days' notice or prior public disclosure of the date of the special meeting of the stockholders is given or made to the stockholders, a stockholder notice will be timely if received by us not later than the close of business on the 10th day following the day on which a notice of the date of the special meeting was mailed to the stockholders or the public disclosure of that date was made.

In order to submit a nomination for our board of directors, a stockholder must also submit any information with respect to the nominee that we would be required to include in a proxy statement, as well as some other information. If a stockholder fails to follow the required procedures, the stockholder's proposal or nominee will be ineligible and will not be voted on by our stockholders.

Limitation of Liability of Directors and Officers

Our restated certificate of incorporation contains provisions that limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. Consequently, our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

Our restated certificate of incorporation provides that we may indemnify our directors and officers, in each case to the fullest extent permitted by Delaware law. Our amended and restated bylaws also provides that we are obligated to indemnify our directors and officers to the fullest extent permitted by Delaware law and advance expenses incurred by a director or officer in advance of the final disposition of any action or proceeding and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. We have entered into agreements to indemnify our directors, executive officers and other employees as determined by our board of directors. With specified exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe these limitations of liability provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our restated certificate of incorporation, amended and restated bylaws and indemnification agreements may discourage stockholders from bringing a lawsuit against our directors and officers for breach of their fiduciary duty. Our restated certificate of incorporation provides that any such lawsuit must be brought in the Court of Chancery of the State of Delaware. The foregoing provisions may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. Insofar as indemnification for liabilities arising under the Securities Act 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. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought, and we are not aware of any threatened litigation that may result in claims for indemnification.

Forum Selection

The Court of Chancery of the State of Delaware is the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the company, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of the company to the company or the company's stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or (iv) any action asserting a claim governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the company shall be deemed to have notice of and consented to the foregoing forum selection provisions. The provision would not apply to suits brought to enforce a duty or liability created by the Securities Act and Exchange Act. In addition, our amended and restated bylaws provides that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act.

Delaware Business Combination Statute

We have elected to be subject to Section 203 of the Delaware General Corporation Law, which regulates corporate acquisitions. Section 203 prevents an "interested stockholder," which is defined generally as a person owning 15% or more of a corporation's voting stock, or any affiliate or associate of that person, from engaging in a broad range of "business combinations" with the corporation for three years after becoming an interested stockholder unless:

- the board of directors of the corporation had previously approved either the business combination or the transaction that resulted in the stockholder's becoming an interested stockholder;
- upon completion of the transaction that resulted in the stockholder's becoming an interested stockholder, that person owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, other than statutorily excluded shares; or
- following the transaction in which that person became an interested stockholder, the business combination is approved by the board of directors of the corporation and holders of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

Under Section 203, the restrictions described above also do not apply to specific business combinations proposed by an interested stockholder following the announcement or notification of designated extraordinary transactions involving the corporation and a person who had not been an interested stockholder during the previous three years or who became an interested stockholder with the approval of a majority of the corporation's directors, if such extraordinary transaction is approved or not opposed by a majority of the directors who were directors prior to any person becoming an interested stockholder during the previous three years or were recommended for election or elected to succeed such directors by a majority of such directors.

Section 203 may make it more difficult for a person who would be an interested stockholder to effect various business combinations with a corporation for a three-year period. Section 203 also may have the effect of preventing changes in our management and could make it more difficult to accomplish transactions that our stockholders may otherwise deem to be in their best interests.

Anti-Takeover Effects of Some Provisions

Some provisions of our restated certificate of incorporation and bylaws could make the following more difficult:

- acquisition of control of us by means of a proxy contest or otherwise, or
- removal of our incumbent officers and directors.

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These provisions, as well as our ability to issue preferred stock, are designed to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection give us the potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us, and that the benefits of this increased protection outweigh the disadvantages of discouraging those proposals, because negotiation of those proposals could result in an improvement of their terms.

Listing

Our common stock is listed on the Nasdaq Global Select Market under the symbol "SWAV."

Transfer Agent and Registrar

The transfer agent and registrar for the common stock is Computershare Trust Company, N.A. The transfer agent and registrar's address is 250 Royall St., Canton, Massachusetts 02021.

DESCRIPTION OF DEPOSITARY SHARES REPRESENTING PREFERRED STOCK

The applicable prospectus supplement will include a description of the material terms of any depositary shares representing preferred stock offered hereby.

DESCRIPTION OF DEBT SECURITIES

The following descriptions of the debt securities that may be offered under this prospectus do not purport to be complete and are subject to and qualified in their entirety by reference to the indenture, a form of which has been incorporated by reference in the registration statement of which this prospectus is a part. Any future supplemental indenture or similar document also will be so filed. You should read the indenture and any supplemental indenture or similar document because they, and not this description, define your rights as holder of our debt securities. All capitalized terms have the meanings specified in the indenture.

As used in this prospectus, “debt securities” means the debentures, notes, bonds and other evidences of indebtedness that we may issue separately or upon exercise of a debt warrant from time to time. The debt securities may either be senior debt securities or subordinated debt securities. The debt securities we offer will be issued under an indenture between us and a trustee to be named therein. Debt securities, whether senior or subordinated, may be issued as convertible debt securities or exchangeable debt securities.

As used in this “Description of Debt Securities,” the terms “Shockwave,” “we,” “our,” and “us” refer to Shockwave Medical, Inc. and do not, unless otherwise specified, include our subsidiaries.

General Terms of the Indenture

The debt securities will be our direct unsecured obligations. The senior debt securities will rank equally with all of our other senior unsecured and unsubordinated debt. The subordinated debt securities will be subordinate and junior in right of payment to all of our present and future senior indebtedness to the extent and in the manner described in the prospectus supplement and, if applicable, in a pricing supplement, and as set forth in the supplemental indenture, board resolution or officers’ certificate relating to such offering.

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit designated by us. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to afford holders of any debt securities protection with respect to our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as “discount securities,” which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may, for U.S. federal income tax purposes, be treated as if they were issued with “original issue discount,” because of interest payment and other characteristics. Special U.S. federal income tax considerations applicable to debt securities issued with original issue discount will be described in more detail in any applicable prospectus supplement or pricing supplement, if any.

The applicable prospectus supplement for a series of debt securities that we issue, together with a pricing supplement, if any, will describe, among other things, the following terms of the offered debt securities:

- the title;
- the aggregate principal amount;

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- whether issued in fully registered form without coupons or in a form registered as to principal only with coupons or in bearer form with coupons;
- whether issued in the form of one or more global securities and whether all or a portion of the principal amount of the debt securities is represented thereby;
- the price or prices at which the debt securities will be issued;
- the date or dates on which principal is payable;
- the place or places where and the manner in which principal, premium or interest will be payable and the place or places where the debt securities may be presented for transfer and, if applicable, conversion or exchange;
- interest rates, and the dates from which interest, if any, will accrue, and the dates when interest is payable;
- the right, if any, to extend the interest payment periods and the duration of the extensions;
- our rights or obligations to redeem or purchase the debt securities, including sinking fund or partial redemption payments;
- conversion or exchange provisions, if any, including conversion or exchange prices or rates and adjustments thereto;
- the currency or currencies of payment of principal or interest;
- the terms applicable to any debt securities issued at a discount from their stated principal amount;
- the terms, if any, pursuant to which any debt securities will be subordinate to any of our other debt;
- if the amount of payments of principal or interest is to be determined by reference to an index or formula, or based on a coin or currency other than that in which the debt securities are stated to be payable, the manner in which these amounts are determined and the calculation agent, if any, with respect thereto;
- if other than the entire principal amount of the debt securities when issued, the portion of the principal amount payable upon acceleration of maturity as a result of a default on our obligations;
- any provisions for the remarketing of the debt securities;
- if applicable, covenants affording holders of debt protection with respect to our operations, financial condition or transactions involving us; and
- any other specific terms of any debt securities.

The applicable prospectus supplement or pricing supplement, if any, will set forth certain U.S. federal income tax considerations for holders of any debt securities and the securities exchange or quotation system on which any debt securities are listed or quoted, if any.

Debt securities issued by us will be structurally subordinated to all indebtedness and other liabilities of our subsidiaries.

Unless otherwise provided in the applicable prospectus supplement, all securities of any one series need not be issued at the same time and may be issued from time to time without consent of any holder.

Subordination

The prospectus supplement or pricing supplement, if any, relating to any offering of subordinated debt securities will describe the specific subordination provisions, including the extent of subordination of payments by us of the principal of, premium, if any, and interest on such subordinated debt securities.

Conversion or Exchange Rights

Debt securities may be convertible into or exchangeable for our other securities or property. The terms and conditions of conversion or exchange will be set forth in the applicable prospectus supplement or pricing supplement, if any. The terms will include, among others, the following:

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

Consolidation, Merger or Sale

We cannot consolidate with or merge into, or convey, transfer or lease all or substantially all of our properties and assets to, any person unless (1) we will be the continuing corporation or (2) the successor corporation or person to which our assets are conveyed, transferred or leased is a corporation, partnership, trust or other entity organized and validly existing under the laws of the United States, any state of the United States or the District of Columbia and it expressly assumes our obligations on the debt securities and under the indenture. In addition, we cannot effect such a transaction unless immediately after giving effect to such transaction, no default or event of default under the indenture shall have occurred and be continuing. Subject to certain exceptions, when the person to whom our assets are transferred or leased has assumed our obligations under the debt securities and the indenture, we shall be discharged from all our obligations under the debt securities and the indenture, except in limited circumstances.

This covenant would not apply to any recapitalization transaction, a change of control of us or a highly leveraged transaction, unless the transaction or change of control were structured to include a merger or consolidation or transfer or lease of all or substantially all of our assets.

Events of Default

Unless otherwise indicated, the term “Event of Default,” when used in the indenture, means any of the following:

- failure to pay interest for 30 days after the date payment is due and payable; provided that, an extension of an interest payment period in accordance with the terms of the debt securities shall not constitute a failure to pay interest;
- failure to pay principal or premium, if any, on any debt security when due, either at maturity, upon any redemption, by declaration or otherwise;
- failure to make sinking fund payments when due;
- failure to perform any other covenant for 90 days after notice that performance was required;
- certain events relating to bankruptcy, insolvency or reorganization; or
- any other Event of Default provided in the applicable resolution of our board of directors or the officers’ certificate or supplemental indenture under which we issue a series of debt securities.

An Event of Default for a particular series of debt securities does not necessarily constitute an Event of Default for any other series of debt securities issued under the indenture. If an Event of Default relating to the payment of interest, principal or any sinking fund installment involving any series of debt securities has occurred and is continuing, the trustee or the holders of not less than 25% in aggregate principal amount of the debt securities of each affected series may declare the entire principal of all the debt securities of that series to be due and payable immediately.

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If an Event of Default relating to the performance of other covenants has occurred and is continuing for a period of 90 days after notice of such, or involves all of the series of senior debt securities, then the trustee or the holders of not less than 25% in aggregate principal amount of all of the series of senior debt securities may declare the entire principal amount of all of the series of senior debt securities due and payable immediately.

Similarly, if an Event of Default relating to the performance of other covenants has occurred and is continuing for a period of 90 days after notice of such, or involves all of the series of subordinated debt securities, then the trustee or the holders of not less than 25% in aggregate principal amount of all of the series of subordinated debt securities may declare the entire principal amount of all of the series of subordinated debt securities due and payable immediately.

If, however, the Event of Default relating to the performance of other covenants or any other Event of Default that has occurred and is continuing is for less than all of the series of senior debt securities or subordinated debt securities, as the case may be, then, the trustee or the holders of not less than 25% in aggregate principal amount of each affected series of the senior debt securities or the subordinated debt securities, as the case may be, may declare the entire principal amount of all debt securities of such affected series due and payable immediately. The holders of not less than a majority in aggregate principal amount of the debt securities of a series may, after satisfying conditions, rescind and annul any of the above-described declarations and consequences involving the series.

If an Event of Default relating to events in bankruptcy, insolvency or reorganization occurs and is continuing, then the principal amount of all of the debt securities outstanding, and any accrued interest, will automatically become due and payable immediately, without any declaration or other act by the trustee or any holder.

The indenture provides that the trustee shall within 90 days after the occurrence of default (or 30 days after it is known by the trustee) with respect to a particular series of debt securities, give the holders of the debt securities of such series notice of such default known to it; provided that, except in the case of a default or Event of Default in payment of the principal, premium, if any, of, or interest on, any debt security of such series or in the payment of any redemption obligation, the trustee may withhold the notice if, and so long as, it in good faith determines that withholding the notice is in the interests of the holders of debt securities of that series.

The indenture imposes limitations on suits brought by holders of debt securities against us. Except as provided below, no holder of debt securities of any series may institute any action against us under the indenture unless:

- the holder has previously given to the trustee written notice of default and the continuance of that default;
- the holders of at least 25% in principal amount of the outstanding debt securities of the affected series have requested that the trustee institute the action;
- the requesting holders have offered the trustee reasonable security or indemnity satisfactory to it for expenses and liabilities that may be incurred by bringing the action;
- the trustee has not instituted the action within 60 days of the request; and
- the trustee has not received inconsistent direction by the holders of a majority in principal amount of the outstanding debt securities of the series.

Notwithstanding the foregoing, each holder of debt securities of any series has the right, which is absolute and unconditional, to receive payment of the principal of and premium and interest, if any, on such debt securities when due and to institute suit for the enforcement of any such payment, and such rights may not be impaired without the consent of that holder of debt securities.

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We will be required to file annually with the trustee a certificate, signed by one of our officers, stating whether or not the officer knows of any default by us in compliance with any condition or covenant of the indenture.

Registered Global Securities

We may issue the debt securities of a series in whole or in part in the form of one or more fully registered global securities that we will deposit with a depository or with a nominee for a depository identified in the applicable prospectus supplement or pricing supplement, if any, and registered in the name of such depository or nominee. See “Forms of Securities.”

We may also issue bearer debt securities of a series in the form of one or more global securities, referred to as “bearer global securities.” We will deposit these bearer global securities with a common depository for Euroclear Bank S.A./N.V., as operator of the Euroclear System, known as “Euroclear” and Clearstream Banking, société anonyme, Luxembourg, known as “Clearstream”, or with a nominee for the depository identified in the prospectus supplement or pricing supplement, if any, relating to that series. The prospectus supplement or pricing supplement, if any, relating to a series of debt securities represented by a bearer global security will describe the specific terms and procedures, including the specific terms of the depository arrangement and any specific procedures for the issuance of debt securities in definitive form in exchange for a bearer global security, with respect to the portion of the series represented by a bearer global security.

Discharge, Defeasance and Covenant Defeasance

We can discharge or defease our obligations under the indenture as set forth below. Unless otherwise set forth in the applicable prospectus supplement or pricing supplement, if any, the subordination provisions applicable to any subordinated debt securities will be expressly made subject to the discharge and defeasance provisions of the indenture.

We may discharge our obligations to holders of any series of debt securities that have not already been delivered to the trustee for cancellation and that have either become due and payable or are by their terms to become due and payable within one year (or are scheduled for redemption within one year). We may effect a discharge by irrevocably depositing with the trustee cash or U.S. government obligations or foreign government obligations, as applicable, as trust funds, in an amount certified to be sufficient to pay when due, whether at maturity, upon redemption or otherwise, the principal of, premium, if any, and interest on the debt securities and any mandatory sinking fund payments.

Unless otherwise provided in the applicable prospectus supplement or pricing supplement, if any, we may also discharge any and all of our obligations to holders of any series of debt securities at any time (“legal defeasance”). We also may be released from the obligations imposed by any covenants of any outstanding series of debt securities and provisions of the indenture, and we may omit to comply with those covenants without creating an Event of Default (“covenant defeasance”). We may effect legal defeasance and covenant defeasance only if, among other things:

- we irrevocably deposit with the trustee cash or U.S. government obligations or foreign government obligations, as applicable, as trust funds, in an amount certified to be sufficient to pay at maturity (or upon redemption) the principal, premium, if any, and interest on all outstanding debt securities of the series; and
- we deliver to the trustee an opinion of counsel from a nationally recognized law firm to the effect that the beneficial owners of the series of debt securities will not recognize income, gain or loss for U.S. federal income tax purposes as a result of the legal defeasance or covenant defeasance and that legal defeasance or covenant defeasance will not otherwise alter the beneficial owners’ U.S. federal income tax treatment of principal, premium, if any, and interest payments on the series of debt securities,

which opinion, in the case of legal defeasance, must be based on a ruling of the Internal Revenue Service issued, or a change in U.S. federal income tax law.

Although we may discharge or defease our obligations under the indenture as described in the two preceding paragraphs, we may not avoid, among other things, our duty to register the transfer or exchange of any series of debt securities, to replace any temporary, mutilated, destroyed, lost or stolen series of debt securities or to maintain an office or agency in respect of any series of debt securities.

Modification of the Indenture

The indenture provides that we and the trustee may enter into supplemental indentures without the consent of the holders of debt securities to:

- secure any debt securities;
- evidence the assumption by a successor corporation of our obligations;
- add covenants for the protection of the holders of debt securities;
- add one or more guarantees;
- cure any ambiguity or correct any inconsistency in the indenture;
- establish the forms or terms of debt securities of any series;
- conform any provision of the indenture to this description of debt securities, the description of the notes included in the applicable prospectus supplement or any other relevant section of the applicable prospectus supplement describing the terms of the debt securities;
- evidence and provide for the acceptance of appointment by a successor trustee;
- to provide for uncertificated debt securities in addition to or in place of certificated debt securities;
- make any change that does not materially adversely affect the right of any holder; and
- comply with requirements of the SEC in order to effect or maintain the qualification of the indenture under the Trust Indenture Act of 1939, as amended.

The indenture also provides that we and the trustee may, with the consent of the holders of not less than a majority in aggregate principal amount of debt securities of all series of senior debt securities or subordinated debt securities, as the case may be, then outstanding and affected (voting as one class), add any provisions to, or change in any manner, or eliminate any of the provisions of, the indenture or any supplemental indenture or modify in any manner the rights of the holders of the affected debt securities.

We and the trustee may not, however, without the consent of the holder of each outstanding debt security affected thereby:

- extend the final maturity of any debt security;
- reduce the principal amount or premium, if any;
- reduce the rate or extend the time of payment of interest;
- reduce any amount payable on redemption;
- change the currency in which the principal (other than as may be provided otherwise with respect to a series), premium, if any, or interest is payable;
- reduce the amount of the principal of any debt security issued with an original issue discount that is payable upon acceleration or provable in bankruptcy;

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- modify any of the subordination provisions or the definition of senior indebtedness applicable to any subordinated debt securities in a manner adverse to the holders of those securities;
- alter provisions of the indenture relating to the debt securities not denominated in U.S. dollars;
- impair the right to institute suit for the enforcement of any payment on any debt security when due;
- reduce the percentage of holders of debt securities of any series whose consent is required for any modification of the indenture, or the consent of whose holders is required for any waiver (of compliance with certain provisions of the indenture or certain defaults thereunder and their consequences) provided for in the indenture; or
- modify any provisions set forth in this paragraph.

Concerning the Trustee

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

The indenture contains limitations on the right of the trustee, should it become a creditor of us, to obtain payment of claims in some cases or to realize on certain property received in respect of any such claim as security or otherwise. The trustee may engage in other transactions. If it acquires any conflicting interest relating to any duties with respect to the debt securities, however, it must eliminate the conflict or resign as trustee.

The holders of a majority in aggregate principal amount of any series of debt securities then outstanding will have the right to direct the time, method and place of conducting any proceeding for exercising any remedy available to the trustee with respect to such series of debt securities, provided that, the direction would not conflict with any rule of law or with the indenture, would not be unduly prejudicial to the rights of another holder of the debt securities, and would not involve any trustee in personal liability. The indenture provides that in case an Event of Default shall occur and be known to any trustee and not be cured, the trustee must use the same degree of care as a prudent person would use in the conduct of his or her own affairs in the exercise of the trustee's power. Subject to these provisions, the trustee will be under no obligation to exercise any of its rights or powers under the indenture at the request of any of the holders of the debt securities, unless they shall have offered to the trustee security and indemnity satisfactory to the trustee.

No Individual Liability of Incorporators, Stockholders, Officers or Directors

The indenture provides that no incorporator and no past, present or future stockholder, officer or director, of us or any successor corporation in their capacity as such shall have any individual liability for any of our obligations, covenants or agreements under the debt securities or the indenture.

Governing Law

The indenture and the debt securities will be governed by, and construed in accordance with, the laws of the State of New York, including, without limitation, Sections 5-1401 and 5-1402 of the New York General Obligations Law and New York Civil Practice Law and Rules 327(b).

DESCRIPTION OF WARRANTS

We may issue warrants to purchase our debt or equity securities or securities of third parties or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing. Warrants may be issued independently or together with any other securities and may be attached to, or separate from, such securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent. The terms of any warrants to be issued and a description of the material provisions of the applicable warrant agreement will be set forth in the applicable prospectus supplement.

The applicable prospectus supplement will describe the following terms of any warrants in respect of which this prospectus is being delivered:

- the title of such warrants;
- the aggregate number of such warrants;
- the price or prices at which such warrants will be issued;
- the currency or currencies in which the price of such warrants will be payable;
- the securities or other rights, including rights to receive payment in cash or securities based on the value, rate or price of one or more specified commodities, currencies, securities or indices, or any combination of the foregoing, purchasable upon exercise of such warrants;
- the price at which and the currency or currencies in which the securities or other rights purchasable upon exercise of such warrants may be purchased;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such warrants which may be exercised at any one time;
- if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;
- if applicable, the date on and after which such warrants and the related securities will be separately transferable;
- information with respect to book-entry procedures, if any;
- if applicable, a discussion of any material United States Federal income tax considerations; and
- any other terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

DESCRIPTION OF PURCHASE CONTRACTS

We may issue purchase contracts for the purchase or sale of:

- debt or equity securities issued by us or securities of third parties, a basket of such securities, an index or indices or such securities or any combination of the above as specified in the applicable prospectus supplement;
- currencies; or
- commodities.

Each purchase contract will entitle the holder thereof to purchase or sell, and obligate us to sell or purchase, on specified dates, such securities, currencies or commodities at a specified purchase price, which may be based on a formula, all as set forth in the applicable prospectus supplement. We may, however, satisfy our obligations, if any, with respect to any purchase contract by delivering the cash value of such purchase contract or the cash value of the property otherwise deliverable or, in the case of purchase contracts on underlying currencies, by delivering the underlying currencies, as set forth in the applicable prospectus supplement. The applicable prospectus supplement will also specify the methods by which the holders may purchase or sell such securities, currencies or commodities and any acceleration, cancellation or termination provisions or other provisions relating to the settlement of a purchase contract.

The purchase contracts may require us to make periodic payments to the holders thereof or vice versa, which payments may be deferred to the extent set forth in the applicable prospectus supplement, and those payments may be unsecured or prefunded on some basis. The purchase contracts may require the holders thereof to secure their obligations in a specified manner to be described in the applicable prospectus supplement. Alternatively, purchase contracts may require holders to satisfy their obligations thereunder when the purchase contracts are issued. Our obligation to settle such pre-paid purchase contracts on the relevant settlement date may constitute indebtedness. Accordingly, pre-paid purchase contracts will be issued under either the senior indenture or the subordinated indenture.

DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue units consisting of one or more purchase contracts, warrants, debt securities, shares of preferred stock, shares of common stock or any combination of such securities. The applicable supplement will describe:

- the terms of the units and of the warrants, debt securities and common stock comprising the units, including whether and under what circumstances the securities comprising the units may be traded separately;
- a description of the terms of any unit agreement governing the units; and
- a description of the provisions for the payment, settlement, transfer or exchange of the units.

FORMS OF SECURITIES

Each debt security, warrant and unit offered hereunder will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Certificated securities in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the trustee, registrar, paying agent or other agent, as applicable. Global securities name a depository or its nominee as the owner of the debt securities, warrants and units represented by these global securities. The depository maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Global Securities

Registered Global Securities. We may issue the registered debt securities, warrants and units offered under this prospectus in the form of one or more fully registered global securities that will be deposited with a depository or its nominee identified in the applicable prospectus supplement and registered in the name of that depository or nominee. In those cases, one or more registered global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by registered global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a registered global security may not be transferred except as a whole by and among the depository for the registered global security, the nominees of the depository or any successors of the depository or those nominees.

If not described below, any specific terms of the depository arrangement with respect to any securities to be represented by a registered global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depository arrangements.

Ownership of beneficial interests in a registered global security will be limited to persons, called participants, that have accounts with the depository or persons that may hold interests through participants. Upon the issuance of a registered global security, the depository will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any dealers, underwriters or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a registered global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depository, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in registered global securities.

So long as the depository, or its nominee, is the registered owner of a registered global security, that depository or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the registered global security for all purposes under the applicable indenture, warrant agreement, guaranteed trust preferred security or unit agreement. Except as described below, owners of beneficial interests in a registered global security will not be entitled to have the securities represented by the registered global security registered in their names, will not receive or be entitled to receive physical delivery of the securities in definitive form and will not be considered the owners or holders of the securities under the applicable indenture, warrant agreement, guaranteed trust preferred security or unit agreement. Accordingly, each person owning a beneficial interest in a registered global security must rely on the procedures of the depository for that registered global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable indenture, warrant agreement, guaranteed

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

Principal, premium, if any, and interest payments on debt securities, and any payments to holders with respect to warrants, guaranteed trust preferred securities or units, represented by a registered global security registered in the name of a depositary or its nominee will be made to the depositary or its nominee, as the case may be, as the registered owner of the registered global security. None of Shockwave, the trustees, the warrant agents, the unit agents or any other agent of Shockwave, agent of the trustees or agent of the warrant agents or unit agents will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the registered global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depositary for any of the securities represented by a registered global security, upon receipt of any payment of principal, premium, interest or other distribution of underlying securities or other property to holders on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that registered global security as shown on the records of the depositary. We also expect that payments by participants to owners of beneficial interests in a registered global security held through participants will be governed by standing customer instructions and customary practices, as is now the case with the securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of those participants.

If the depositary for any of these securities represented by a registered global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Exchange Act, and a successor depositary registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the registered global security that had been held by the depositary. Any securities issued in definitive form in exchange for a registered global security will be registered in the name or names that the depositary gives to the relevant trustee, warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depositary's instructions will be based upon directions received by the depositary from participants with respect to ownership of beneficial interests in the registered global security that had been held by the depositary.

SELLING SECURITYHOLDERS

Information about selling security holders, if any, will be set forth in a prospectus supplement, in a post-effective amendment to the registration statement of which this prospectus is a part or in filings we make with the SEC under the Exchange Act, which are incorporated by reference herein.

VALIDITY OF SECURITIES

The validity of the securities in respect of which this prospectus is being delivered will be passed on for us by Davis Polk & Wardwell LLP, Menlo Park, California.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2019, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

1,700,000 Shares



Common Stock

Prospectus Supplement

Morgan Stanley

BofA Securities

, 2020