

PROS Holdings, Inc.
 Form 424B5
 August 13, 2018
Table of Contents

Filed Pursuant to Rule 424(b)(5)
 Registration No. 333-226812

This preliminary prospectus supplement relates to an effective registration statement under the Securities Act of 1933 but is not complete and may be changed. Neither this preliminary prospectus supplement nor the accompanying prospectus is an offer to sell these securities, and we and the selling stockholders are not soliciting an offer to buy these securities, in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated August 13, 2018

Preliminary prospectus supplement

(To prospectus dated August 13, 2018)

4,000,000 Shares

Common stock

We are offering 3,800,000 shares of our common stock, and the selling stockholders named in this prospectus supplement are offering 200,000 shares of our common stock. We will not receive any proceeds from the sale of any shares of common stock by the selling stockholders.

Our common stock is listed on the New York Stock Exchange, or NYSE, under the symbol PRO. On August 10, 2018, the last reported sale price of our common stock on the NYSE was \$39.99 per share.

	Per share	Total
Public offering price	\$	\$
Underwriting discounts and commissions	\$	\$
Proceeds, before expenses, to us	\$	\$
Proceeds, before expenses, to the selling stockholders	\$	\$

The underwriters have an option for a period of up to 30 days from the date of this prospectus supplement to purchase up to 600,000 additional shares of common stock from us and the selling stockholders at the public offering price less underwriting discounts and commissions. If the underwriters exercise their option in full, the total underwriting discounts and commissions payable by us and the selling stockholders will be \$, and the total proceeds to us and the selling stockholders, before expenses, will be \$..

Investing in our common stock involves risks. See Risk factors beginning on page S-15 of this prospectus supplement and in the documents incorporated by reference into this prospectus supplement before making a decision to invest in our common stock.

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

The underwriters expect to deliver the shares of common stock against payment in New York, New York to investors on or about _____, 2018.

Joint book-running managers

J.P. Morgan

Morgan Stanley

RBC Capital Markets

Lead manager

Needham & Company

Co-managers

KeyBanc Capital Markets

Northland Capital Markets

JMP Securities Nomura

Prospectus supplement dated _____, 2018.

Table of Contents

Table of contents

Prospectus supplement

	Page
<u>Prospectus supplement summary</u>	S-3
<u>Risk factors</u>	S-15
<u>Special note regarding forward-looking information</u>	S-17
<u>Use of proceeds</u>	S-18
<u>Price range of our common stock</u>	S-19
<u>Dividend policy</u>	S-20
<u>Capitalization</u>	S-21
<u>Dilution</u>	S-22
<u>Selling stockholders</u>	S-23
<u>Material U.S. federal income tax consequences to non-U.S. holders</u>	S-24
<u>Underwriting</u>	S-28
<u>Legal matters</u>	S-39
<u>Experts</u>	S-39
<u>Where you can find additional information</u>	S-39
<u>Incorporation of certain information by reference</u>	S-40

Prospectus

	Page
<u>About this prospectus</u>	1
<u>Summary</u>	2
<u>Risk factors</u>	5
<u>Special note regarding forward-looking information</u>	6
<u>Use of proceeds</u>	7
<u>Description of capital stock</u>	8
<u>Description of debt securities</u>	12
<u>Description of warrants</u>	19
<u>Description of units</u>	21
<u>Legal ownership of securities</u>	22
<u>Selling securityholders</u>	26
<u>Plan of distribution</u>	28
<u>Legal matters</u>	30
<u>Experts</u>	30

<u>Where you can find additional information</u>	30
<u>Incorporation of certain information by reference</u>	30

Table of Contents

We have not, and the underwriters and selling stockholders have not, authorized anyone to provide to you with information different from that contained in this prospectus supplement, the accompanying prospectus or any free writing prospectus prepared by us or on our behalf, and neither we, the selling stockholders nor the underwriters take responsibility for any other information others may give you. We are not, and the underwriters or selling stockholders are not, offering to sell shares of our common stock or seeking offers to buy shares of our common stock in any jurisdictions where such offers and sales are not permitted. The information contained in this prospectus supplement, the accompanying prospectus or any free writing prospectus that we may provide to you is accurate only as of the date of each document regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or any sale of shares of our common stock. In case there are any differences or inconsistencies between this prospectus supplement, the accompanying prospectus or any free writing prospectus that we may provide to you and the information incorporated by reference in them, you should rely on the information in the document with the most recent date.

About this prospectus supplement

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part, the accompanying prospectus dated August 13, 2018, provides more general information about our common stock. To the extent the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus or the documents incorporated therein by reference, you should rely on the information in this prospectus supplement. Generally, when we refer to the prospectus, we are referring to this prospectus supplement and the accompanying prospectus combined. You should read both this prospectus supplement and the accompanying prospectus, together with the additional information described in the sections titled *Where you can find more information* and *Incorporation of certain information by reference* of this prospectus supplement, before investing in our common stock.

This prospectus supplement and the information incorporated herein by reference include trademarks, service marks, and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus supplement, the accompanying prospectus or any related free writing prospectus are the property of their respective owners.

Glossary of certain definitions

All references in this prospectus supplement to *we*, *us*, *our*, *PROS*, *the Company* and similar designations refer to PROS Holdings, Inc. and consolidated subsidiaries, unless otherwise indicated or as context otherwise requires. All references to *you* are to the purchasers of our common stock in this offering.

We have included below the definitions for certain terms used in this prospectus supplement:

AI means artificial intelligence.

B2B means business-to-business.

B2C means business-to-consumer.

Table of Contents

CRM means customer relationship management.

SaaS means software as a service.

Statement regarding industry and market data

Market data and industry statistics and forecasts, as well as our general expectations and market position, market opportunity and market size used or referred to in this prospectus supplement and in the information incorporated herein by reference are based on independent industry publications and other publicly available information as well as our own internal estimates. In presenting this information, we have also made assumptions based on such data and other similar sources, and on our knowledge of, and in our experience to date in, the markets for our services. Although we believe that these sources and estimates are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. We obtained this information and these statistics from various third-party sources and our own internal estimates. The estimates in such information involve risks and uncertainties and are subject to change based on various factors, including those discussed under the heading Risk factors. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us. Accordingly, investors should not place undue reliance on this information.

Table of Contents

Prospectus supplement summary

*This summary highlights selected information appearing elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus and does not contain all of the information that you need to consider in making your investment decision. This prospectus supplement and the accompanying prospectus include or incorporate by reference information about the shares we are offering as well as information regarding our business and detailed financial data. You should carefully read this prospectus supplement, the accompanying prospectus and the information incorporated by reference into this prospectus supplement and the accompanying prospectus in their entirety, including especially the *Risk factors* section, as well as the documents to which we have referred you under *Where you can find additional information* below, before making an investment decision.*

Overview

PROS provides end-to-end AI-powered solutions that enable fast, frictionless and personalized buying experiences for businesses to compete in today's digital economy. With the rise of digital commerce, consumers today have been trained to expect a more dynamic buying experience they want to buy what they want, when they want, and they want to be able to move seamlessly across channels. Our solutions provide actionable intelligence that enables these dynamic buying experiences for both B2B and B2C companies across industry verticals. Our end-to-end solutions drive pricing optimization, sales effectiveness and revenue management by enabling companies to create data-driven, personalized buying experiences. Companies can use our solutions to assess the market environment in real time to deliver customized prices and offers. Our solutions enable buyers to move fluidly across our customers' direct sales, online, mobile and partner channels and have personalized experiences however they choose to buy. Our data science and AI are designed to reduce time and complexity and add actionable intelligence to help our customers outperform in their markets.

We initiated our cloud first strategy in May 2015 and rapidly transformed how we create, sell and deliver our solutions. Today, we are a cloud first business. In the 12 months ended June 30, 2018, approximately 95% of our software bookings came from our SaaS offerings, which fueled rapid growth in our subscription revenue and recurring revenue. Recurring revenue as a percentage of total revenue grew from 55% in the year ended December 31, 2015 to 79% in the 12 months ending June 30, 2018, and we achieved a 32% increase in deal volume (excluding renewals) in the six months ended June 30, 2018 compared to the six months ended June 30, 2017. We offer both single-tenant and multi-tenant solutions under our SaaS model, generally via three-year subscriptions, with pricing generally based on the number of users, data volume and revenue managed by our software.

Market opportunity

The rise of the digital economy has raised the buying expectations of B2C and B2B buyers, requiring businesses to deploy AI and data science to break down the barriers that make B2B sales processes lengthy, labor-intensive and largely offline.

We believe the total addressable market for our solutions is approximately \$30 billion. We estimate that as of August 10, 2018, there are approximately 86,000 companies globally where our solutions are applicable with annual revenue of \$250 million or more, which is comparable to the revenue profile of our current customer base. We calculate the size of our addressable market by multiplying the relevant average selling prices of our solutions, which may vary depending on the size of the target company, by the total number of these companies

Table of Contents

that we believe are potential purchasers of our solutions. We focus our go-to-market efforts on a subset of strategic industries and geographies in which we have a proven track record of success, which narrows our target market to \$9 billion. These strategic industries are automotive and industrial; B2B services; cargo, freight and logistics; chemicals and energy; food and consumables; healthcare; technology and travel. We believe that our market is highly underpenetrated and that we are well positioned to capture the market for several reasons.

Our customers include many of the market leaders and well-known businesses from each of our target industries. We believe that as other companies in our target industries look to compete with industry leaders that use our products, our proven track record of driving value with those leaders will help us further penetrate these industries.

We have decades of experience refining our data science and training our AI to drive better sales decisions. We have infused our AI with deep domain knowledge of the industries that we serve to analyze industry-specific information that affects selling. Our data science and AI predict, prescribe, learn and recalibrate in areas such as commodity pricing, technology lifecycles, competition, regulation and external forces.

The use of data science and AI is becoming more mainstream in business. The rise of digital selling has created a need for data science and AI to enhance sales activities and business performance. We believe these market trends will help accelerate our growth.

Our solutions

Our solutions deliver advanced data science and AI that make it possible for companies to provide fast, frictionless and personalized buying experiences for their customers. Our algorithms mine historic sales transactions, market and other data to uncover customer buying patterns and preferences, and our solutions are designed to use this intelligence to help companies deliver winning offer, price and experiences to customers purchasing across their channels. The data science and AI embedded in our solutions also provide our customers with predictive and prescriptive guidance on key business decisions that drive improved growth and profitability, including offer optimization, product mix optimization, demand forecasting, price optimization, product configuration recommendations, cross-sell and upsell recommendations, attrition detection, and willingness to pay.

Our software operates in large, complex and demanding information technology environments. Our high-performance software architecture supports real-time, high-volume transaction processing and handles the processing and database requirements of global enterprise customers, including those who need to respond to their customers with sub-second electronic response requirements. We provide standardized configurations of our software based on the industries we serve and offer professional services to configure these solutions to meet the specific needs of each customer.

Our solutions enable a consistent buyer experience across channels and include SellingPRO, PricingPRO and RevenuePRO.

Table of Contents

Solutions for selling

Our SellingPRO solutions deliver simplicity combined with the power of AI to deliver a comprehensive set of quoting, configuration and eCommerce applications.

PROS Deal Desk accelerates responsiveness to customers by providing instant analytics that highlight responsive product and pricing opportunities to improve the profitability of each deal. Powered by AI, Deal Desk provides the tools needed to quickly analyze and model large, complex opportunities or requests and instantly create proposals with responsive products, services, terms and pricing. Deal Desk also simplifies deal approval processes and accelerates responsiveness by automating quote generation and approval workflows.

PROS Smart CPQ automates and simplifies the configuration, pricing and quoting process for sales teams, empowering them to instantly create accurate, personalized solutions for each customer. What makes Smart CPQ different is the combination of AI and guided selling with configuration and quoting capabilities.

PROS eCommerce provides offer and pricing intelligence through personalized and consistent customer experiences across sales channels such as customer partner internet portals and eCommerce websites. SellingPRO eCommerce edition also enables companies to reach new sales markets and add new sales channels from a single product and configuration repository.

PROS Opportunity Detection applies machine learning to analyze transaction activity, uncover buying behavior trends and identify new opportunities. Using techniques such as outlier detection, churn forecasting and clustering algorithms, it finds inconsistent, declining and gap purchasing behaviors at the product level for each customer. These sales opportunity recommendations are then presented to sales representatives, partners or directly to customer via digital commerce to drive instant evaluation and action.

Solutions for pricing

Our PricingPRO solutions deliver insight into pricing practices, enhance control over pricing execution and provide prescriptive pricing recommendations to the sales team. PricingPRO includes the following solutions:

PROS Control helps companies replace spreadsheets and manual updates with a single system of record for comprehensive and centralized price management, pricing strategy and execution. With this real-time solution, companies can identify revenue and margin leakages, manage and enforce pricing policies, quickly change strategies, and eliminate pricing errors.

Table of Contents

PROS Guidance provides AI-driven, market-based pricing and offers guidance to help sales teams confidently negotiate pricing on each deal.

Solutions for revenue management

Our RevenuePRO solutions are a set of integrated software solutions that enable enterprises in the travel industry, including the airline, hotel and cruise industries, to pursue revenue and profit-maximizing business strategies through the application of advanced forecasting, optimization technologies and offer-creation capabilities. These solutions are designed to empower companies to quickly adapt to changing market conditions, differentiate customers by market and sales channel, monitor pricing and revenue management performance, and increase customer loyalty by providing the right products and services to the right customer at the right time. Our RevenuePRO suite of products includes the following solutions:

PROS Revenue Management delivers algorithmic forecasting and network optimization for the travel industry. Companies leverage our demand management and forecasting capabilities to determine overbooking levels and manage fare values as pricing updates become available.

PROS Group Sales Optimizer is a comprehensive group revenue optimization solution powered by dynamic pricing science that enables companies to manage group bookings, contracts and policies in one location across all users.

PROS Real-Time Dynamic Pricing is a scalable solution that offers accurate availability across all channels, while keeping the rules, fares and other data in sync. The solution computes availability in real time and dynamically applies biases, or strategies, to seat availability so that airlines can maximize revenue and enable offer optimization.

PROS Shopping delivers fast, accurate and comprehensive flight search results to travelers.

PROS Merchandising helps airlines to increase conversion and revenues per passenger by selling extra baggage, legroom and other ancillary services dynamically. Airlines can upsell at any time in the customer journey using rich content for a superior shopping experience across direct distribution channels.

Technology

Software Architecture. Our software architecture is based on open standards such as Java, C/C++, HTML5, JavaScript, XML, and HTTP. We have created a component-based design in a service-oriented architecture to develop a flexible, layered framework. This framework supports parallel and independent evolution and innovation in technologies and product features.

Micro-services Architecture. A comprehensive web services interface is at the heart of our architecture. This interface enables extension onto other platforms and the creation of rich integrated solutions.

Embedded Science. Our robust science-based capabilities such as forecasting, optimization, segmentation and price guidance allow us to leverage the deep expertise and research of our science and research group in our solutions. These capabilities are industry-independent and are validated using our proprietary verification and testing processes.

Scalability. We leverage modern big-data technologies such as MapReduce and Hadoop®, NoSQL databases such as Cassandra and MongoDB®, and in-memory and column-oriented data stores to scale to large data volumes

Table of Contents

and high user request rates. The scalability of our software solutions has been tested and validated in conjunction with third-party vendors.

Data Integration. The data needed to execute and optimize sales, quoting, pricing, rebate and revenue management functionality typically resides in multiple sources, such as a company's enterprise resource planning, supply chain management, CRM reservations and inventory systems, third-party data sources and industry-specific transaction systems. Our data integration capabilities utilize web services and file-based data interfacing to bring data from disparate sources together into a single cohesive database, both in real time and through scheduled batch tasks. We also provide certified content for integration with SAP as well as integration development services using industry standard tools.

User Interface. Our technology provides a rich, browser-based interface that supports both local and remote users. This interface supports a wide variety of interactive charts and other data views, and provides a comprehensive data security model based on user role and scope of responsibility. We also offer capabilities for multiple mobile devices, tablets, CRM systems and client applications.

Cloud Infrastructure. Our SaaS solutions are fully architected, scaled and managed to meet enterprise-class data demands. We currently deliver our solutions from enterprise cloud computing platform providers, including Microsoft Azure and IBM Bluemix, as well as from secure co-location data centers operated by third parties. Our infrastructure is designed to achieve high levels of security, scalability, performance and availability. We provide a highly secure computing environment as well as high application availability.

Subscription services

Our subscription services provide customers with access to our software within a cloud-based IT environment that we manage and offer to customers on a subscription basis and allow our customers to benefit from our latest cloud innovations and to reduce infrastructure, installation and ongoing administration requirements. We also offer cloud-based services to existing customers who previously purchased licenses to our software to access that software within a cloud-based IT environment that we manage. This allows those customers to reduce infrastructure and ongoing administration requirements as an alternative to their on-premises deployment of our software. We generally offer these services via 24- to 60-month contracts with pricing based on the data volumes, number of users and service levels requested.

Sales and marketing

We sell and market our software solutions primarily through our direct global sales force and indirectly through resellers and systems integrators. Our sales force is organized by our target markets, including automotive and industrial, cargo and logistics, chemicals and energy, food and beverage, healthcare, high tech and travel. Our sales force is responsible for the worldwide sale of our solutions to new and existing customers.

Our marketing activities consist of a variety of programs designed to generate sales leads and build awareness of our solutions. We host conferences for sales, pricing, and revenue management professionals, host informational webinars and participate in and sponsor other industry and trade conferences and organizations. We also increasingly use digital channels including search and content syndication to reach our target market.

Professional services

We provide software-related professional services, including implementation and configuration services, consulting and training.

Table of Contents

Implementation and configuration

Our software solution implementations have a standardized and tested implementation process developed through years of experience implementing our software solutions in global enterprises across multiple industries. Our professional services team works closely with our customers to develop an integrated project plan to help them accelerate time to value. Pursuant to these plans, we provide configuration services related to our solutions. In addition to our own internal professional services team, we also work with a team of globally diverse partners who have been certified to implement our software.

Strategic services

Our strategic services include discovery and insight consulting to analyze a customer's current pricing processes and data, identifying and prioritizing specific high-value pricing opportunities, and recommending pricing best practices and strategic pricing services. We also offer change management, pricing process redesign, pricing organizational design, opportunity assessment and performance management consulting. These strategic services enhance our partnerships with our customers and help them achieve their specific pricing goals.

Training

We offer training to both our customers and partners to increase the knowledge and skills to deploy and use the full functionality of our software solutions. We offer an array of live and virtual classroom training, as well as tailored, private on-site classroom training. Our courses include training on all aspects of our software solutions, from introductory on-demand mini-courses to multi-day hands-on deep technical classroom sessions.

Maintenance and support

We offer ongoing maintenance and support services for our software solutions using a global model to support our customers across major geographies. Maintenance enrollment entitles a customer to solicit support through a web-based interface which allows the customer to submit and track issues, access our online knowledge base and receive unspecified upgrades, maintenance releases and bug fixes during the term of the support period on a when-and-if-available basis. In addition, our customer support personnel respond to customer issues using an escalation process that prioritizes reported issues based on a defined set of severity levels, as well as assists customers in deploying our standard releases for each software solution by providing release web seminars and documentation. Maintenance fees are an important source of recurring revenue, and we invest significant resources in providing these services. Revenue from maintenance and support services comprised 41%, 45%, and 38% of our total revenue in 2017, 2016 and 2015, respectively. We expect our maintenance revenue will decrease over time as a result of existing customers migrating from our on-premises solutions to our cloud solutions and customers purchasing fewer licenses to our software as a result of our cloud strategy.

Customers

We sell our software solutions to customers across many industries, including manufacturing, distribution, and services industries, including automotive and industrial; B2B services; cargo, freight and logistics; chemicals and energy; consumer goods; insurance; food and consumables; healthcare; technology; and travel. Our customers are generally large global enterprises, although we also have customers that are much smaller in scope of operations. In each of 2017, 2016 and 2015, we had no single customer that accounted for 10% or more of revenue.

Table of Contents

International operations

We are a global company that conducts sales, sales support, professional services, product development and support, and marketing around the world. Our headquarters is located in Houston, Texas, and we have additional field operations through our operating subsidiaries in Australia, Bulgaria, Canada, France, Germany, Ireland, United Arab Emirates, United Kingdom and the United States. We conduct development activities predominantly in Bulgaria, France and the United States, and also utilize third-party contractors in Bolivia, Colombia and India. We plan to continue to expand our operations in international locations to meet the strategic objectives of our business.

Approximately 63%, 63% and 62% of our total revenue came from customers outside the U.S. for the years ended December 31, 2017, 2016 and 2015, respectively.

Employees

As of June 30, 2018, we had 1,097 full-time personnel, including employees and outsourced personnel.

Corporate information

We were incorporated in Texas in 1985. We reincorporated as a Delaware corporation in 1998. In 2002, we reorganized as a holding company in Delaware. Our principal executive offices are located at 3100 Main Street, Suite 900, Houston, Texas 77002. We report as one operating segment with our Chief Executive Officer acting as our chief operating decision maker. Our telephone number is (713) 335-5151. Our website is www.pros.com. Our website and the information contained therein or connected thereto are not intended to be incorporated into this prospectus.

Table of Contents

The offering

Issuer	PROS Holdings, Inc.
Common stock offered by us	3,800,000 shares (or 4,200,000 shares if the underwriters exercise their option to purchase additional shares in full)
Common stock offered by the selling stockholders	200,000 shares (or 400,000 shares if the underwriters exercise their option to purchase additional shares in full)
Common stock to be outstanding after this offering	36,511,339 shares (or 36,911,339 shares if the underwriters exercise their option to purchase additional shares in full)
Option to purchase additional shares of common stock	We and the selling stockholders have granted the underwriters an option to purchase up to 600,000 additional shares of our common stock. This option is exercisable, in whole or in part, for a period of 30 days from the date of this prospectus supplement.

Use of proceeds

We estimate that the net proceeds from this offering to us will be approximately \$144.9 million, or \$160.2 million if the underwriters exercise in full their option to purchase additional shares, based on an assumed public offering price of \$39.99 per share, which is the last reported sale price of our common stock on the NYSE on August 10, 2018, in each case after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We intend to use the net proceeds to us from this offering for general corporate purposes, including research and development, acquisitions, the development of our products, sales and marketing initiatives, expansion of our commercial organization, general administrative expenses, working capital and capital expenditures. We may also use a portion of the net proceeds to us of this offering to repay certain of our outstanding 2.00% Convertible Senior Notes due December 1, 2019. See Use of proceeds.

We will not receive any proceeds from the sale of shares of our common stock by the selling stockholders.

Edgar Filing: PROS Holdings, Inc. - Form 424B5

Risk factors

Investing in our common stock involves a high degree of risk. See **Risk factors** beginning on page S-15 and in the documents incorporated by reference into this prospectus supplement and accompanying prospectus for a discussion of some of the factors you should carefully consider before deciding to invest in shares of our common stock.

NYSE symbol

PRO

S-10

Table of Contents

Unless otherwise indicated, all information in this prospectus supplement relating to the number of shares of common stock that will be outstanding after this offering is based on 32,711,339 shares of common stock outstanding at June 30, 2018, and excludes any securities convertible into or exercisable for our common stock. See Note 2 to our unaudited condensed consolidated financial statements included in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, which is incorporated by reference into this prospectus supplement, along with the other documents to which we have referred you under "Where you can find additional information," for more information regarding outstanding securities convertible into or exercisable for our common stock as well as the number of shares of common stock reserved for future issuance under our equity incentive plans.

Unless otherwise noted, the information in this prospectus supplement assumes the underwriters do not exercise their option to purchase additional shares and no settlement of any securities convertible into our common stock.

S-11

Table of Contents**Summary consolidated financial and other data**

The following tables summarize our consolidated financial and other data. We have derived the consolidated statements of operations data for the years ended December 31, 2015, 2016 and 2017 and the consolidated balance sheet data as of December 31, 2015, 2016 and 2017 from our audited consolidated financial statements incorporated by reference into this prospectus supplement. The summary consolidated statement of operations data for the six months ended June 30, 2018 and the summary consolidated balance sheet data as of June 30, 2018 have been derived from our unaudited interim consolidated financial statements incorporated by reference into this prospectus supplement. The summary consolidated statement of operations data for the last 12 months ended June 30, 2018 have been derived by combining our statement of operations data for the six months ended June 30, 2018 with such data for the year ended December 31, 2017, and subtracting our statement of operations data for the six months ended June 30, 2017.

We have included, in our opinion, all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair presentation of the financial information set forth in those statements. Our historical results are not necessarily indicative of the results that should be expected in the future, and our interim results for the six months ended June 30, 2018 are not necessarily indicative of the results that should be expected for the full year 2018 or any other period.

You should read this summary consolidated financial data together with Management's Discussion and Analysis of Financial Condition and Results of Operations and our audited and unaudited consolidated financial statements and related notes, included in our Annual Report on Form 10-K for the year ended December 31, 2017 and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, respectively, each incorporated by reference into this prospectus supplement.

(in thousands, except per share data)	Last 12 months ended June 30, 2018	Six months ended June 30, 2018 (unaudited)	2017	Year ended December 31, 2016 2015	
Selected consolidated statement of operations data:					
Total revenue	\$ 183,617	\$ 95,336	\$ 168,816	\$ 153,276	\$ 168,246
Gross profit	109,501	57,091	100,250	89,923	106,836
Loss from operations	(58,305)	(27,740)	(64,943)	(65,398)	(55,497)
Net loss	\$ (73,906)	\$ (35,700)	\$ (77,926)	\$ (75,225)	\$ (65,811)
Net loss attributable to common stockholders per share:					
Basic and diluted	\$ (2.29)	\$ (1.10)	\$ (2.46)	\$ (2.47)	\$ (2.23)
Weighted average number of shares:					
Basic and diluted	32,206	32,514	31,627	30,395	29,578

Table of Contents

(in thousands)	Last 12 months ended June 30, 2018	Six months ended June 30, 2018 (unaudited)	2017	Year ended December 31, 2016 2015	
Revenue					
Subscription	\$ 77,879	\$ 42,988	\$ 60,539	\$ 38,158	\$ 28,989
Maintenance & support	66,999	32,799	69,408	68,565	63,666
Subtotal	144,878	75,787	129,947	106,723	92,655
License	4,043	1,761	5,562	11,814	32,716
Services	34,696	17,788	33,307	34,739	42,875
Total	\$ 183,617	\$ 95,336	\$ 168,816	\$ 153,276	\$ 168,246

(in thousands)	Last 12 months ended June 30, 2018	Six months ended June 30, 2018 (unaudited)	2017	Year ended December 31, 2016 2015	
Cost of revenue					
Subscription	\$ 33,376	\$ 17,255	\$ 27,858	\$ 17,379	\$ 12,786
Maintenance & support	11,576	5,910	11,693	13,681	12,173
Subtotal	44,952	23,165	39,551	31,060	24,959
License	282	137	282	246	304
Services	28,882	14,943	28,733	32,047	36,147
Total	\$ 74,116	\$ 38,245	\$ 68,566	\$ 63,353	\$ 61,410

(in thousands)	As of June 30, 2018 (unaudited)	2017	As of December 31, 2016 2015	
Selected consolidated balance sheet data:				
Cash and cash equivalents	\$ 141,867	\$ 160,505	\$ 118,039	\$ 161,770
Working capital	74,572	100,031	76,936	124,571
Total assets	281,440	288,683	227,654	263,211
Long-term obligations	234,884	233,637	134,327	121,443
Total stockholders (deficit) equity	(68,659)	(46,979)	(3,394)	55,414

(in thousands)	Last 12 months ended June 30, 2018	Six months ended June 30, 2018 (unaudited)	2017	Year ended December 31, 2016 2015	
Free cash flow(1)					
Free cash flow	\$ (18,190)	\$ (11,981)	\$ (29,521)	\$ (24,259)	\$ 8,505

Edgar Filing: PROS Holdings, Inc. - Form 424B5

Reconciliation					
Net cash used in operating activities	\$ (12,314)	\$ (8,310)	\$ (25,313)	\$ (14,345)	\$ 15,532
Property, plant and equipment	(1,778)	(1,187)	(1,286)	(7,241)	(6,794)
Capitalized internal-use software development costs	(3,973)	(2,484)	(2,797)	(1,048)	(233)
Purchase of intangible assets	(125)		(125)	(1,625)	
Free cash flow	\$ (18,190)	\$ (11,981)	\$ (29,521)	\$ (24,259)	\$ 8,505

- (1) Free cash flow is a non-GAAP financial measure defined as net cash provided or used by operating activities, less additions to property, plant and equipment, capitalized internal-use software development costs and purchases of other (non-acquisition-related) intangible assets. We believe free cash flow may be useful to investors and others in evaluating the amount of cash generated (used) by our business operations. You should not consider free cash flow in isolation, or as a substitute for analysis of our results as reported under U.S. GAAP. To properly and prudently evaluate our business, we encourage you to review our consolidated financial statements incorporated by reference in this prospectus supplement and not to rely on any single financial measure to evaluate our business.

Table of Contents

(in thousands)	Six months ended June 30,		2017 (unaudited)	Year ended December 31,	
	2018	2017		2016	2015
Adjusted EBITDA(1)					
Adjusted EBITDA	\$ (12,111)	\$ (19,587)	\$ (33,693)	\$ (35,403)	\$ (12,116)
Reconciliation					
Loss from operations	\$ (27,740)	\$ (34,378)	\$ (64,943)	\$ (65,398)	\$ (55,497)
Acquisition-related expenses	95		720		1,373
Amortization of acquisition-related intangibles	3,912	1,349	5,174	2,971	4,840
Accretion expense for acquisition-related contingent consideration					22
Share-based compensation	11,398	12,094	22,796	20,466	27,864
Impairment of internal-use software					2,890
Recovery of bankruptcy claim					(626)
Severance				1,070	1,696
Depreciation	2,708	2,656	5,357	6,536	5,555
Capitalized internal-use software development costs	(2,484)	(1,308)	(2,797)	(1,048)	(233)
Adjusted EBITDA	\$ (12,111)	\$ (19,587)	\$ (33,693)	\$ (35,403)	\$ (12,116)

- (1) Adjusted EBITDA is a non-GAAP financial measure defined as GAAP loss from operations before interest expense, provision for income taxes, depreciation and amortization, as adjusted to eliminate the effect of stock-based compensation cost, amortization of acquisition-related intangibles, depreciation and amortization, integration costs, severance costs, one-time bankruptcy recovery and other one-time direct costs associated with our acquisitions, and capitalized internal-use software development costs. Adjusted EBITDA should not be considered as an alternative to net income (loss) as an indicator of our operating performance. We believe Adjusted EBITDA may be useful to investors and others in evaluating our ongoing operational performance. You should not consider Adjusted EBITDA in isolation, or as a substitute for analysis of our results as reported under U.S. GAAP. To properly and prudently evaluate our business, we encourage you to review our consolidated financial statements incorporated by reference in this prospectus supplement and not to rely on any single financial measure to evaluate our business.

Table of Contents**Risk factors**

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks and uncertainties discussed below and under the sections titled "Risk factors" contained in our most recent Annual Report on Form 10-K for the year ended December 31, 2017, or the Annual Report, and Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus supplement in their entirety, together with other information in this prospectus supplement and the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus that we may authorize for use in connection with this offering. The risks described in these documents are not the only ones we face. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our securities to decline, resulting in a loss of all or part of your investment. Please also read carefully "Special note regarding forward-looking information" below.

Risks relating to this offering

You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase. You may also experience future dilution as a result of future equity offerings or other issuances of common stock.

Since the price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on an assumed public offering price of \$39.99 per share, which is the last reported sale price of our common stock on the NYSE on August 10, 2018, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, and based on a net tangible book value of our common stock of \$(3.97) per share as of June 30, 2018, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$39.58 per share in the net tangible book value of common stock. See "Dilution" for a more detailed discussion of the dilution you will incur if you purchase shares of common stock in this offering.

In addition, we have restricted stock units, warrants and other equity awards outstanding, and, in order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that may not be the same as the price per share in this offering. In the event that the outstanding restricted stock units, warrants or other equity awards are exercised or settled, or that we make additional issuances of common stock or other convertible or exchangeable securities, you could experience additional dilution. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders, including investors who purchase shares of common stock in this offering. The price per share at which we sell additional shares of our common stock or securities convertible into common stock in future transactions may be higher or lower than the price per share in this offering.

Table of Contents

We may invest or spend the proceeds of this offering in ways with which you may not agree or in ways that may not yield a return.

We currently intend to use the net proceeds to us of this offering for general corporate purposes, including research and development, acquisitions, the development of our products, sales and marketing initiatives, expansion of our commercial organization, general administrative expenses, working capital and capital expenditures. We may also use a portion of the net proceeds to us from this offering to repay outstanding indebtedness. However, as of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Our management will have considerable discretion in the application of the net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds may be invested with a view toward long-term benefits for our stockholders, and this may not increase our operating results or market value. Until the net proceeds are used, they may be placed in investments that do not produce significant income or that may lose value.

S-16

Table of Contents

Special note regarding forward-looking information

This prospectus supplement, the accompanying prospectus and the documents incorporated herein by reference contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on our management's current beliefs, expectations and assumptions about future events, conditions and results and on information currently available to us. Discussions containing these forward-looking statements may be found, among other places, in the sections titled Business, Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations incorporated by reference from our Annual Report and in our subsequent filings with the SEC incorporated by reference herein, as well as any amendments thereto. This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein also contain estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

All statements, other than statements of historical fact, included or incorporated herein regarding our strategy, future operations, financial position, future net sales, projected costs, plans, prospects and objectives are forward-looking statements. Words such as expect, anticipate, intend, plan, believe, seek, estimate, think, may, could, will, would, should, continue, potential, likely, opportunity, variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements. Additionally, statements concerning future matters such as our expectations of business and market conditions, expansion of our customer base and market opportunity, development and commercialization of new products, enhancements of existing products or technologies, and other statements regarding matters that are not historical are forward-looking statements. Such statements are based on currently available operating, financial and competitive information and are subject to various risks, uncertainties and assumptions that could cause actual results to differ materially from those anticipated or implied in our forward-looking statements due to a number of factors, including, but not limited to, those set forth above under Risk factors in this prospectus supplement. Given these risks, uncertainties and other factors, many of which are beyond our control, you should not place undue reliance on these forward-looking statements.

In addition, statements that we believe and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus supplement, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to revise any forward-looking statements to reflect events or developments occurring after the date of this prospectus supplement, even if new information becomes available in the future.

Table of Contents

Use of proceeds

We estimate that the net proceeds from the sale of 3,800,000 shares of common stock by us in this offering will be approximately \$144.9 million, or \$160.2 million if the underwriters exercise in full their option to purchase additional shares, based on an assumed public offering price of \$39.99 per share, which is the last reported sale price of our common stock on the NYSE on August 10, 2018, in each case after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We will retain broad discretion over the use of the net proceeds to us from this offering. We currently intend to use the net proceeds to us from this offering for general corporate purposes, including research and development, acquisitions, the development of our products, sales and marketing initiatives, expansion of our commercial organization, general administrative expenses, working capital and capital expenditures. We may also use a portion of the net proceeds to us from this offering to repay certain of our outstanding 2.00% Convertible Senior Notes due December 1, 2019. Pending these uses, we intend to invest the net proceeds in short-term investments, including marketable securities. We have no current commitments or agreements with respect to any acquisitions as of the date hereof.

We will not receive any proceeds from the sale of shares of our common stock by the selling stockholders.

Table of Contents**Price range of our common stock**

Our common stock is listed on the NYSE under the symbol PRO. The following table sets forth, for the periods indicated, the high and low closing prices of our common stock, as reported by the NYSE.

Fiscal year	Low	High
2016		
Quarter ended March 31, 2016	\$ 9.28	\$ 22.20
Quarter ended June 30, 2016	\$ 10.74	\$ 17.53
Quarter ended September 30, 2016	\$ 17.06	\$ 22.79
Quarter ended December 31, 2016	\$ 20.76	\$ 25.55
2017		
Quarter ended March 31, 2017	\$ 20.56	\$ 24.28
Quarter ended June 30, 2017	\$ 22.51	\$ 29.87
Quarter ended September 30, 2017	\$ 23.41	\$ 29.47
Quarter ended December 31, 2017	\$ 22.45	\$ 28.29
2018		
Quarter ended March 31, 2018	\$ 26.76	\$ 34.80
Quarter ended June 30, 2018	\$ 29.52	\$ 38.00
Quarter ending September 30, 2018 (through August 10, 2018)	\$ 37.01	\$ 39.99

On August 10, 2018, the closing price of our common stock was \$39.99 per share.

Table of Contents

Dividend policy

Since 2007, we have not declared or paid any dividends on our common stock. We currently expect to retain all remaining available funds and any future earnings for use in the operation and development of our business. Accordingly, we do not anticipate declaring or paying cash dividends on our common stock in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and will depend upon a number of factors, including our results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant.

S-20

Table of Contents**Capitalization**

The following table sets forth our cash and cash equivalents and our capitalization as of June 30, 2018:

on an actual basis; and

on an as adjusted basis to give effect to the sale by us pursuant to this offering of 3,800,000 shares of our common stock at an assumed public offering price of \$39.99 per share, which is the last reported sale price of our common stock on the NYSE on August 10, 2018, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table in conjunction with the section titled "Management's Discussion and Analysis of Financial Conditions and Results of Operations" and our consolidated financial statements and the related notes thereto appearing in our Annual Report and our Quarterly Report on Form 10-Q for the quarter ended June 30, 2018, both of which are incorporated by reference herein, as well as the other documents incorporated by reference in this prospectus supplement and accompanying prospectus.

(in thousands, except par value and share data)	As of June 30, 2018	
	Actual	As adjusted(1)
Cash and cash equivalents	\$ 141,867	\$ 286,721
Convertible debt, net(2)	\$ 219,108	\$ 219,108
Stockholders' (deficit) equity:		
Preferred stock, \$0.001 par value, 5,000,000 shares authorized; none issued, actual and as adjusted		
Common stock, \$0.001 par value, 75,000,000 shares authorized; 37,128,924 and 32,711,339 shares issued and outstanding, respectively, actual; 40,928,924 and 36,511,339 shares issued and outstanding, respectively, as adjusted(3)	37	41
Additional paid-in capital	212,481	357,331
Treasury stock, at cost, 4,417,585 common shares	(13,938)	(13,938)
Accumulated deficit	(264,161)	(264,161)
Accumulated other comprehensive loss	(3,078)	(3,078)
Total stockholders' (deficit) equity	(68,659)	76,195
Total capitalization	\$ 150,449	\$ 295,303

(1) If the underwriters exercise in full their option to purchase up to an additional 600,000 shares of our common stock, (i) an additional 400,000 shares of common stock would be issued and we would receive approximately \$15.3 million in additional net proceeds, based on an assumed public offering price of \$39.99 per share, which is the last reported sale price of our common stock on the NYSE on August 10, 2018, after deducting underwriting discounts and commissions and estimated offering expenses payable by us; and (ii) cash and cash equivalents, total stockholders' equity and total capitalization would each also increase by approximately \$15.3 million.

(2) Excludes debt discount and issuance costs (net of amortization) of approximately \$31.0 million.

(3) The number of shares of common stock that will be outstanding after this offering does not include any securities convertible into or exercisable for common stock.

Table of Contents**Dilution**

If you purchase our common stock in this offering, your interest will be immediately diluted to the extent of the difference between the public offering price per share and the as adjusted net tangible book value per share of our common stock immediately after this offering.

Our net tangible book value (deficit) at June 30, 2018, was \$(130) million, or \$(3.97) per share, based on 32,711,339 shares of our common stock outstanding as of that date. Net tangible book value (deficit) per share is calculated by subtracting our total liabilities from our total tangible assets, which is total assets less intangible assets, and dividing this amount by the number of shares of our common stock outstanding.

After giving effect to the sale of 3,800,000 shares of common stock by us at an assumed public offering price of \$39.99 per share, which is the last reported sale price of our common stock on the NYSE on August 10, 2018, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2018, would have been \$14.8 million, or \$0.41 per share. This represents an immediate increase in the net tangible book value of \$4.38 per share to existing stockholders and immediate dilution of \$39.58 per share to investors in this offering, as illustrated by the following table:

Assumed public offering price per share	\$ 39.99
Net tangible book value (deficit) per share as of June 30, 2018	\$ (3.97)
Increase in as adjusted net tangible book value per share attributable to investors participating in this offering	4.38
As adjusted net tangible book value per share after giving effect to this offering	0.41
Dilution per share to investors in this offering	\$ 39.58

If the underwriters exercise in full their option to purchase 400,000 additional shares from us at an assumed public offering price of \$39.99 per share, which is the last reported sale price of our common stock on the NYSE on August 10, 2018, the as adjusted net tangible book value per share after this offering would be \$0.82 per share, the increase in as adjusted net tangible book value per share to existing stockholders would be \$4.79 per share and the dilution to new investors purchasing shares in this offering would be \$39.17 per share.

For purposes of the above calculation, the number of shares of common stock to be outstanding after this offering is based on 32,711,339 shares outstanding on June 30, 2018 and excludes any securities convertible into or exercisable for our common stock.

The above illustration of dilution per share to investors participating in this offering assumes no settlement of outstanding equity awards. To the extent that any outstanding awards are settled, there will be further dilution to new investors.

Table of Contents**Selling stockholders**

The following table and footnotes set forth information with respect to the beneficial ownership of our common stock by each of the selling stockholders as of August 10, 2018, subject to certain assumptions set forth in the footnotes and as adjusted to reflect the sale of the shares of common stock offered in the public offering under this prospectus supplement for each of the selling stockholders.

Beneficial ownership of shares is determined under the rules of the SEC and generally includes any shares over which a person exercises sole or shared voting or investment power and includes shares issuable upon exercise of options held by the person that may be exercised or converted within 60 days of August 10, 2018. Except as indicated by footnote, and subject to applicable community property laws, we believe each person identified in the table possesses sole voting and investment power with respect to all shares of common stock beneficially owned by such person. Shares of common stock subject to options currently exercisable or exercisable within 60 days of August 10, 2018, are deemed to be outstanding for calculating the number and percentage of outstanding shares of the person holding such options but are not deemed to be outstanding for calculating the percentage ownership of any other person.

Applicable percentage ownership in the following table is based on 32,758,852 shares of common stock outstanding as of August 10, 2018.

Unless otherwise noted below, the address of each person listed on the table is c/o PROS Holdings, Inc., 3100 Main Street, Suite 900, Houston, Texas 77002. When we refer to the selling stockholders in this prospectus supplement, we mean those persons listed in the table below as offering shares, as well as the pledgees, donees, assignees, transferees, successors and others who may hold any of the selling stockholders interest.

Name of selling stockholder	Shares beneficially owned prior to the offering(1)		Number of shares offered(3)	Shares beneficially owned after the offering		Number of shares to be sold if underwriters option is exercised in full(4)	Shares beneficially owned after the offering if underwriters option is exercised in full	
	Shares	Percentage		Shares	Percentage		Shares	Percentage
Mariette M. Woestemeyer(2)	3,870,801	11.8%	200,000	3,670,801	10.0%	400,000	3,470,801	9.4%
Ronald F. Woestemeyer(2)	3,870,801	11.8%	200,000	3,670,801	10.0%	400,000	3,470,801	9.4%

(1) Includes shares held and stock options and restricted stock units that may be exercised or settled within 60 days of August 10, 2018.

(2) Mr. and Mrs. Woestemeyer jointly beneficially own an aggregate of 3,870,801 shares, which include shares held by various trusts for the benefit of certain family members.

(3) Includes (i) 50,000 shares to be sold by RMW 2009 Gift Trust LLC and (ii) 150,000 shares to be sold by Romaka, LLC.

(4) Includes (i) 50,000 additional shares to be sold by RMW 2009 Gift Trust, LLC and (ii) 150,000 additional shares to be sold by RMW 2007 ILIT, LLC. Except as follows and as described in the information incorporated by reference into this prospectus, no affiliate of any of the selling stockholders has held any position or office with us or any of our affiliates, and no selling stockholder has had any other material relationship with us or any of our affiliates within the past three years other than as a result of such selling stockholder's ownership of shares of equity securities.

Mariette M. Woestemeyer currently serves on our Board of Directors; and

Ronald F. Woestemeyer currently serves on our Board of Directors, and previously served as our Executive Vice President, Strategic Business Planning, until his retirement in July 2015.

S-23

Table of Contents

Material U.S. federal income tax consequences to non-U.S. holders

The following discussion is a summary of the material U.S. federal income tax consequences to Non-U.S. Holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or the IRS, in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a Non-U.S. Holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the purchase, ownership and disposition of our common stock. Tax reforms in the United States may result in significant changes in the rules governing U.S. federal income taxation. Such changes may affect the U.S. federal tax consequences of the purchase, ownership and disposition of the common stock discussed herein.

This discussion is limited to Non-U.S. Holders that hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a Non-U.S. Holder's particular circumstances, including the impact of the Medicare contribution tax on net investment income. In addition, it does not address consequences relevant to Non-U.S. Holders subject to special rules, including, without limitation:

U.S. expatriates and former citizens or long-term residents of the United States;

persons subject to the alternative minimum tax;

persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;

banks, insurance companies, and other financial institutions;

brokers, dealers or traders in securities;

controlled foreign corporations, passive foreign investment companies, and corporations that accumulate earnings to avoid U.S. federal income tax;

partnerships or other entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);

tax-exempt organizations or governmental organizations;

persons deemed to sell our common stock under the constructive sale provisions of the Code;

persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation;

tax-qualified retirement plans; and

qualified foreign pension funds as defined in Section 897(1)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds.

S-24

Table of Contents

If an entity treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATION PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a non-U.S. holder

For purposes of this discussion, a Non-U.S. Holder is any beneficial owner of our common stock that is neither a U.S. person nor an entity treated as a partnership for U.S. federal income tax purposes. A U.S. person is any person that, for U.S. federal income tax purposes, is or is treated as any of the following:

an individual who is a citizen or resident of the United States;

a corporation created or organized under the laws of the United States, any state thereof, or the District of Columbia;

an estate, the income of which is subject to U.S. federal income tax regardless of its source; or

a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more United States persons (within the meaning of Section 7701(a)(30) of the Code), or (2) has a valid election in effect to be treated as a United States person for U.S. federal income tax purposes.

Distributions

As described in Dividend policy above, we do not anticipate declaring or paying dividends to holders of our common stock in the foreseeable future. However, if we make distributions of cash or property on our common stock, such 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. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a Non-U.S. Holder's adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below under Sale or other taxable disposition.

Subject to the discussion below on effectively connected income, dividends paid to a Non-U.S. Holder of our common stock will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty, provided the Non-U.S. Holder furnishes a valid IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) certifying qualification for the lower treaty rate). A Non-U.S. Holder that does not timely furnish the required documentation, but that qualifies for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. Non-U.S. Holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

If dividends paid to a Non-U.S. Holder are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder

Table of Contents

maintains a permanent establishment in the United States to which such dividends are attributable), the Non-U.S. Holder will be exempt from the U.S. federal withholding tax described above. To claim the exemption, the Non-U.S. Holder must furnish to the applicable withholding agent a valid IRS Form W-8ECI, certifying that the dividends are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States.

Any such effectively connected dividends will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation for U.S. federal income tax purposes also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected dividends, as adjusted for certain items. Non-U.S. Holders should consult their tax advisors regarding any applicable tax treaties that may provide for different rules.

Sale or other taxable disposition

A Non-U.S. Holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other taxable disposition of our common stock unless:

the gain is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the Non-U.S. Holder maintains a permanent establishment in the United States to which such gain is attributable);

the Non-U.S. Holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or

our common stock constitutes a U.S. real property interest, or USRPI, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. Holder that is a corporation for U.S. federal income tax purposes also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected gain, as adjusted for certain items.

Gain described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty), which may be offset by U.S. source capital losses of the Non-U.S. Holder (even though the individual is not considered a resident of the United States), provided the Non-U.S. Holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we currently are not, and do not anticipate becoming, a USRPHC. Because the determination of whether we are a USRPHC depends, however, on the fair market value of our USRPIs relative to the fair market value of our non-U.S. real property interests and our other business assets, there can be no assurance we currently are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a Non-U.S. Holder of our common stock will not be subject to U.S. federal income tax if our common stock is regularly traded, as defined by applicable Treasury Regulations, on an established securities market, and such Non-U.S. Holder owned, actually and constructively, 5% or less of our common stock throughout the shorter of the five-year period ending on the date of the sale or other taxable disposition or the Non-U.S. Holder's holding period.

Non-U.S. Holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Table of Contents

Information reporting and backup withholding

Payments of dividends on our common stock will not be subject to backup withholding, provided the applicable withholding agent does not have actual knowledge or reason to know the holder is a United States person and the holder either certifies its non-U.S. status, such as by furnishing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or otherwise establishes an exemption. However, information returns are required to be filed with the IRS in connection with any dividends on our common stock paid to the Non-U.S. Holder, regardless of whether any tax was actually withheld. In addition, proceeds of the sale or other taxable disposition of our common stock within the United States or conducted through certain U.S.-related brokers generally will not be subject to backup withholding or information reporting, if the applicable withholding agent receives the certification described above and does not have actual knowledge or reason to know that such holder is a United States person, or the holder otherwise establishes an exemption. Proceeds of a disposition of our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Copies of information returns that are filed with the IRS may also be made available under the provisions of an applicable treaty or agreement to the tax authorities of the country in which the Non-U.S. Holder resides or is established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a Non-U.S. Holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional withholding tax on payments made to foreign accounts

Withholding taxes may be imposed under Sections 1471 to 1474 of the Code (such Sections commonly referred to as the Foreign Account Tax Compliance Act, or FATCA) on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or gross proceeds from the sale or other disposition of, our common stock paid to a foreign financial institution or a non-financial foreign entity (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any substantial United States owners (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain specified United States persons or United States owned foreign entities (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends on our common stock, and will apply to payments of gross proceeds from the sale or other disposition of such stock on or after January 1, 2019.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

Table of Contents**Underwriting**

We and the selling stockholders are offering the shares of common stock described in this prospectus supplement through a number of underwriters. J.P. Morgan Securities LLC, Morgan Stanley & Co. LLC and RBC Capital Markets, LLC are acting as joint book-running managers of the offering and as representatives of the underwriters. We and the selling stockholders have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we and the selling stockholders have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less underwriting discounts and commissions set forth on the cover page of this prospectus supplement, the number of shares of common stock listed next to its name in the following table:

Name	Number of shares
J.P. Morgan Securities LLC	
Morgan Stanley & Co. LLC	
RBC Capital Markets, LLC	
Needham & Company, LLC	
KeyBanc Capital Markets Inc.	
Northland Securities, Inc.	
JMP Securities LLC	
Nomura Securities International, Inc.	
Total	4,000,000

The underwriters are committed to purchase all the shares of common stock offered by us and the selling stockholders if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of common stock directly to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$ per share. Any such dealers may resell shares to certain other brokers or dealers at a discount of up to \$ per share from the public offering price. After the initial offering of the shares to the public, if all of the shares of common stock are not sold at the public offering price, the underwriters may change the offering price and the other selling terms. Sales of shares made outside of the United States may be made by affiliates of the underwriters.

The underwriters have an option to buy up to 600,000 additional shares of common stock from us and the selling stockholders, collectively, to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus supplement to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

Table of Contents

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us and the selling stockholders per share of common stock. The underwriting fee is \$ _____ per share. The following table shows the per share and total underwriting discounts and commissions to be paid by us and the selling stockholders to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	Paid by us		Paid by the selling stockholders		Total With
	Without	With	Without	With	
	option to purchase	option to purchase	option to purchase	option to purchase	option to purchase
	additional shares	additional shares	additional shares	additional shares	additional shares
	exercise	exercise	exercise	exercise	exercise
Per share	\$	\$	\$	\$	\$
Total	\$	\$	\$	\$	\$

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding underwriting discounts and commissions, will be approximately \$650,000. The underwriters have agreed to reimburse us for a portion of our out-of-pocket expenses incurred in connection with the offering.

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

We have agreed that we will not (i) offer, pledge, announce the intention to sell, 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 or otherwise dispose of, directly or indirectly, or file with the SEC a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, or (ii) enter into any swap or other arrangement that transfers all or a portion of the economic consequences associated with the ownership of any shares of common stock or any such other securities (regardless of whether any of these transactions are to be settled by the delivery of shares of common stock or such other securities, in cash or otherwise), in each case without the prior written consent of the representatives for a period of 90 days after the date of this prospectus supplement, other than the shares of our common stock to be sold hereunder and certain other exceptions.

Our directors and executive officers and the selling stockholders have entered into lock-up agreements with the representatives prior to the commencement of this offering pursuant to which each of these persons or entities, with limited exceptions, for a period of 90 days after the date of this prospectus supplement, may not, without the prior written consent of the representatives, (1) offer, pledge, announce the intention to sell, 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, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock (including, without limitation, common stock or such other securities which may be deemed to be beneficially owned by such directors, executive officers, managers and members in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant) or (2) enter into any swap or

Table of Contents

other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock or such other securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise, or (3) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock. One of our executive officers has established a trading plan pursuant to Rule 10b5-1 under the Exchange Act and may sell, pledge, transfer or otherwise dispose, directly or indirectly, shares of our common stock pursuant to such plan during the 90-day lock-up period.

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

Our common stock is listed on the New York Stock Exchange under the trading symbol **PRO**.

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be covered shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares referred to above, or may be naked shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. 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 that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay underwriting discounts and commissions received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on the New York Stock Exchange, in the over-the-counter market or otherwise.

Selling restrictions

General

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus supplement and the accompanying prospectus in any

Table of Contents

jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement and the accompanying prospectus may not be offered or sold, directly or indirectly, nor may this prospectus supplement and the accompanying prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus supplement and the accompanying prospectus come are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement and the accompanying prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Notice to prospective investors in the EEA

In relation to each Member State of the European Economic Area (each, a Relevant Member State), no offer of shares of common stock may be made to the public in that Relevant Member State other than:

- A. to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- B. to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives; or
- C. in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares shall require the Company or the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the representatives and the Company that it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an offer of shares to the public in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression Prospectus Directive means Directive 2003/71/EC (as amended by Directive 2010/73/EU), and includes any relevant implementing measure in the Relevant Member State.

Notice to prospective investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are qualified investors (as defined in the

Table of Contents

Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the Order) and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as relevant persons).

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

Notice to prospective investors in Australia

This prospectus supplement and the accompanying prospectus:

do not constitute a product disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth) (the Corporations Act);

have not been, and will not be, lodged with the Australian Securities and Investments Commission (ASIC), as a disclosure document for the purposes of the Corporations Act and do not purport to include the information required of a disclosure document under Chapter 6D.2 of the Corporations Act;

do not constitute or involve a recommendation to acquire, an offer or invitation for issue or sale, an offer or invitation to arrange the issue or sale, or an issue or sale, of interests to a retail client (as defined in section 761G of the Corporations Act and applicable regulations) in Australia; and

may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, or Exempt Investors, available under section 708 of the Corporations Act.

The common stock may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the common stock may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any common shares may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the common shares, you represent and warrant to us that you are an Exempt Investor.

As any offer of common stock under this document will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the common stock, you undertake to us that you will not, for a period of 12 months from the date of issue of the common stock, offer, transfer, assign or otherwise alienate those securities to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

Notice to prospective investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to professional investors as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a prospectus as defined in the Companies (Winding Up and Miscellaneous Provisions)

Table of Contents

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 has been or may be issued or has been or may be in the possession of any person for the purposes of issue, 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 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.

Notice to prospective investors in Japan

The shares have not been and will not be registered pursuant to Article 4, Paragraph 1 of the Financial Instruments and Exchange Act. Accordingly, none of the shares nor any interest therein may be offered or sold, directly or indirectly, 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 resale, directly or indirectly, in Japan or to or for the benefit of a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and any other applicable laws, regulations and ministerial guidelines of Japan in effect at the relevant time.

Notice to prospective investors in Singapore

This prospectus supplement has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (1) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (2) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A) and in accordance with the conditions specified in Section 275 of the SFA or (3) otherwise pursuant to and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to compliance with conditions set forth in the SFA.

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

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

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,
shares, debentures and units of shares and debentures 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 pursuant to an offer made under Section 275 of the SFA except:

to an institutional investor (for corporations, under Section 274 of the SFA) or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than \$200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets and further for corporations, in accordance with the conditions specified in Section 275 of the SFA;

where no consideration is or will be given for the transfer;

Table of Contents

where the transfer is by operation of law; or

as specified in Section 276(7) of the SFA; or

as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Notice to prospective investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (SIX) or on any other stock exchange or regulated trading facility in Switzerland. This document does not constitute a prospectus within the meaning of and 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 this Offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to this Offering, the Company, 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 (FINMA) and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to prospective investors in 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 (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

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

Notice to Prospective Investors in the Dubai International Financial Centre (DIFC)

This document relates to an Exempt Offer in accordance with the Markets Rules 2012 of the Dubai Financial Services Authority (DFSA). This document is intended for distribution only to persons of a type specified in the Markets Rules 2012 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

Table of Contents

responsibility for this document. The securities to which this document relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this document you should consult an authorized financial advisor.

In relation to its use in the DIFC, this document is strictly private and confidential and is being distributed to a limited number of investors and must not be provided to any person other than the original recipient, and may not be reproduced or used for any other purpose. The interests in the securities may not be offered or sold directly or indirectly to the public in the DIFC.

Notice to Prospective Investors in the United Arab Emirates

The shares have not been, and are not being, publicly offered, sold, promoted or advertised in the United Arab Emirates (including the Dubai International Financial Centre) other than in compliance with the laws of the United Arab Emirates (and the Dubai International Financial Centre) governing the issue, offering and sale of securities. Further, this prospectus does not constitute a public offer of securities in the United Arab Emirates (including the Dubai International Financial Centre) and is not intended to be a public offer. This prospectus supplement has not been approved by or filed with the Central Bank of the United Arab Emirates, the Securities and Commodities Authority or the Dubai Financial Services Authority.

Notice to Prospective Investors in Bermuda

Shares may be offered or sold in Bermuda only in compliance with the provisions of the Investment Business Act of 2003 of Bermuda which regulates the sale of securities in Bermuda. Additionally, non-Bermudian persons (including companies) may not carry on or engage in any trade or business in Bermuda unless such persons are permitted to do so under applicable Bermuda legislation.

Notice to Prospective Investors in Saudi Arabia

This document may not be distributed in the Kingdom of Saudi Arabia except to such persons as are permitted under the Offers of Securities Regulations as issued by the board of the Saudi Arabian Capital Market Authority (CMA) pursuant to resolution number 2-11-2004 dated 4 October 2004 as amended by resolution number 1-28-2008, as amended (the CMA Regulations). The CMA does not make any representation as to the accuracy or completeness of this document and expressly disclaims any liability whatsoever for any loss arising from, or incurred in reliance upon, any part of this document. Prospective purchasers of the securities offered hereby should conduct their own due diligence on the accuracy of the information relating to the securities. If you do not understand the contents of this document, you should consult an authorised financial adviser.

Notice to Prospective Investors in the British Virgin Islands

The shares are not being, and may not be offered to the public or to any person in the British Virgin Islands for purchase or subscription by or on behalf of the Company. The shares may be offered to companies incorporated under the BVI Business Companies Act, 2004 (British Virgin Islands) (BVI Companies), but only where the offer will be made to, and received by, the relevant BVI Company entirely outside of the British Virgin Islands.

This prospectus supplement has not been, and will not be, registered with the Financial Services Commission of the British Virgin Islands. No registered prospectus has been or will be prepared in respect of the shares for the purposes of the Securities and Investment Business Act, 2010 (SIBA) or the Public Issuers Code of the British Virgin Islands.

Table of Contents

Notice to Prospective Investors in China

This prospectus supplement does not constitute a public offer of shares, whether by sale or subscription, in the People's Republic of China (the PRC). The shares are not being offered or sold directly or indirectly in the PRC to or for the benefit of, legal or natural persons of the PRC.

Further, no legal or natural persons of the PRC may directly or indirectly purchase any of the shares or any beneficial interest therein without obtaining all prior PRC's governmental approvals that are required, whether statutorily or otherwise. Persons who come into possession of this document are required by the issuer and its representatives to observe these restrictions.

Notice to Prospective Investors in Korea

The shares have not been and will not be registered under the Financial Investments Services and Capital Markets Act of Korea and the decrees and regulations thereunder (the FSCMA), and the shares have been and will be offered in Korea as a private placement under the FSCMA. None of the shares may be offered, sold or delivered directly or indirectly, or offered or sold to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea except pursuant to the applicable laws and regulations of Korea, including the FSCMA and the Foreign Exchange Transaction Law of Korea and the decrees and regulations thereunder (the FETL). The shares have not been listed on any of securities exchanges in the world including, without limitation, the Korea Exchange in Korea. Furthermore, the purchaser of the shares shall comply with all applicable regulatory requirements (including but not limited to requirements under the FETL) in connection with the purchase of the shares. By the purchase of the shares, the relevant holder thereof will be deemed to represent and warrant that if it is in Korea or is a resident of Korea, it purchased the shares pursuant to the applicable laws and regulations of Korea.

Notice to Prospective Investors in Malaysia

No prospectus or other offering material or document in connection with the offer and sale of the shares has been or will be registered with the Securities Commission of Malaysia (Commission) for the Commission's approval pursuant to the Capital Markets and Services Act 2007. Accordingly, this prospectus supplement and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Malaysia other than (i) a closed end fund approved by the Commission; (ii) a holder of a Capital Markets Services Licence; (iii) a person who acquires the shares, as principal, if the offer is on terms that the shares may only be acquired at a consideration of not less than RM250,000 (or its equivalent in foreign currencies) for each transaction; (iv) an individual whose total net personal assets or total net joint assets with his or her spouse exceeds RM3 million (or its equivalent in foreign currencies), excluding the value of the primary residence of the individual; (v) an individual who has a gross annual income exceeding RM300,000 (or its equivalent in foreign currencies) per annum in the preceding twelve months; (vi) an individual who, jointly with his or her spouse, has a gross annual income of RM400,000 (or its equivalent in foreign currencies), per annum in the preceding twelve months; (vii) a corporation with total net assets exceeding RM10 million (or its equivalent in a foreign currencies) based on the last audited accounts; (viii) a partnership with total net assets exceeding RM10 million (or its equivalent in foreign currencies); (ix) a bank licensee or insurance licensee as defined in the Labuan Financial Services and Securities Act 2010; (x) an Islamic bank licensee or takaful licensee as defined in the Labuan Financial Services and Securities Act 2010; and (xi) any other person as may be specified by the Commission; provided that, in the each of the preceding categories (i) to (xi), the distribution of the shares is made by a holder of a Capital Markets Services Licence who carries on the business of dealing in securities. The distribution in Malaysia of

Table of Contents

this prospectus supplement is subject to Malaysian laws. This prospectus supplement does not constitute and may not be used for the purpose of public offering or an issue, offer for subscription or purchase, invitation to subscribe for or purchase any securities requiring the registration of a prospectus with the Commission under the Capital Markets and Services Act 2007.

Notice to Prospective Investors in Taiwan

The shares have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorised to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the shares in Taiwan.

Notice to Prospective Investors in South Africa

Due to restrictions under the securities laws of South Africa, the shares are not offered, and the offer shall not be transferred, sold, renounced or delivered, in South Africa or to a person with an address in South Africa, unless one or other of the following exemptions applies:

- i the offer, transfer, sale, renunciation or delivery is to:
 - (a) persons whose ordinary business is to deal in securities, as principal or agent;
 - (b) the South African Public Investment Corporation;
 - (c) persons or entities regulated by the Reserve Bank of South Africa;
 - (d) authorised financial service providers under South African law;
 - (e) financial institutions recognised as such under South African law;
 - (f) a wholly-owned subsidiary of any person or entity contemplated in (c), (d) or (e), acting as agent in the capacity of an authorised portfolio manager for a pension fund or collective investment scheme (in each case duly registered as such under South African law); or
 - (g) any combination of the person in (a) to (f); or
 - ii the total contemplated acquisition cost of the securities, for any single addressee acting as principal is equal to or greater than ZAR1,000,000.
- No offer to the public (as such term is defined in the South African Companies Act, No. 71 of 2008 (as amended or re-enacted) (the South African Companies Act)) in South Africa is being made in connection with the issue of the shares. Accordingly, this document does not, nor is it intended to, constitute a registered prospectus (as that term is defined in the South African Companies Act) prepared and registered under the South African Companies Act and has not been approved by, and/or filed with, the South African Companies and Intellectual Property Commission or any other regulatory authority in South Africa. Any issue or offering of the shares in South Africa constitutes an offer of the shares in South Africa for subscription or sale in South Africa only to persons who fall within the exemption from offers to the public set out in section 96(1)(a) of the South African Companies Act. Accordingly, this document must not be acted on or relied on by persons in South Africa

Edgar Filing: PROS Holdings, Inc. - Form 424B5

who do not fall within section 96(1)(a) of the South African Companies Act (such persons being referred to as SA Relevant Persons). Any investment or investment activity to which this document relates is available in South Africa only to SA Relevant Persons and will be engaged in South Africa only with SA relevant persons.

S-37

Table of Contents

Other relationships

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

S-38

Table of Contents

Legal matters

DLA Piper LLP (US), Austin, Texas, will pass for us upon the validity of the securities being offered by this prospectus supplement. Certain legal matters in connection with this offering will be passed upon for the underwriters by Cooley LLP, Palo Alto, California.

Experts

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2017 have been so incorporated in reliance on the report which contains an explanatory paragraph on the effectiveness of internal control over financial reporting due to the exclusion of certain elements of the internal control over financial reporting of the Vayant business we acquired during 2017 of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Where you can find additional information

We have filed with the SEC a registration statement on Form S-3 under the Securities Act, of which this prospectus supplement and the accompanying prospectus form a part. The rules and regulations of the SEC allow us to omit from this prospectus supplement and accompanying prospectus certain information included in the registration statement. For further information about us and the securities we are offering under this prospectus supplement and the accompanying prospectus, you should refer to the registration statement and the exhibits and schedules filed with the registration statement. With respect to the statements contained in this prospectus supplement and the accompanying prospectus regarding the contents of any agreement or any other document, in each instance, the statement is qualified in all respects by the complete text of the agreement or document, a copy of which has been filed as an exhibit to the registration statement.

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC's Public Reference Room at 100 F Street NE, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, where our SEC filings are also available. The address of the SEC's web site is <http://www.sec.gov>. We maintain a website at <http://www.pros.com>. Information contained in or accessible through our website does not constitute a part of this prospectus.

Table of Contents

Incorporation of certain information by reference

The SEC allows us to incorporate by reference information that we file with it into this prospectus supplement and accompanying prospectus, 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 accompanying prospectus. Information in this prospectus supplement supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus supplement, while information that we file later with the SEC will automatically update and supersede the information in this prospectus supplement. We incorporate by reference into this registration statement and prospectus the following documents, and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus but prior to the termination of the offering of the securities covered by this prospectus supplement (other than current reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits related to such items):

our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on February 15, 2018, including the information specifically incorporated by reference into the Annual Report on Form 10-K from our definitive proxy statement for the 2018 Annual Meeting of Stockholders filed with the SEC on March 30, 2018;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018, filed with the SEC on May 1, 2018 and July 26, 2018, respectively;

our Current Reports on Form 8-K filed with the SEC on January 4, 2018 (excluding Item 7.01 and Exhibit 99.1 thereto) and May 11, 2018; and

the description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on June 21, 2007, and any amendment or report filed with the SEC for the purpose of updating the description.

We will provide each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference into this prospectus but not delivered with this prospectus upon written or oral request at no cost to the requester. Requests should be directed to: PROS Holdings, Inc., Attn: Corporate Secretary, 3100 Main Street, Ste. 900, Houston, Texas 77002, telephone: (713) 335-5151.

Table of Contents

PROSPECTUS

PROS HOLDINGS, INC.

Common Stock

Preferred Stock

Debt Securities

Warrants

Units

Offered, from time to time, by PROS Holdings, Inc.

and

3,808,240 Shares of Common Stock

Offered, from time to time, by the Selling Stockholders

We or selling securityholders may, from time to time, offer and sell any combination of the securities described in this prospectus, either individually or in units, and at prices and on terms described in one or more supplements to this prospectus.

This prospectus describes some of the general terms that may apply to an offering of our securities. We will provide the specific terms of these offerings and securities in one or more supplements to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as the documents incorporated by reference into this prospectus and the applicable prospectus supplement and any free writing prospectus, before buying any of the securities being offered.

In addition, the selling stockholders identified in this prospectus may, from time to time, offer and sell up to 3,808,240 shares of our common stock that were previously issued to the selling stockholders prior to our initial public offering. The registration of these shares of our common stock does not necessarily mean that any of our common stock will be sold by the selling stockholders. We will not receive any proceeds from the resale of shares of common stock from time to time by the selling stockholders, but we have agreed to pay substantially all of the expenses incidental to the registration, offering and sale of the common stock by the selling stockholders, except that we will not bear any brokers' or underwriters' discounts and commissions, fees and expenses of counsel to underwriters or brokers, transfer

taxes or transfer fees relating to the sale of shares of our common stock by the selling stockholders.

Securities may be sold by us or selling securityholders through underwriters or dealers, directly to purchasers or through designated agents from time to time. For additional information on the methods of sale, you should refer to the section titled "Plan of Distribution" in this prospectus and in the applicable prospectus supplement. If any underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such underwriters and any applicable discounts or commissions and options to purchase additional securities will be listed in a prospectus supplement. The price to the public of such securities and the net proceeds we or the selling securityholders expect to receive from such sale will also be listed in a prospectus supplement. Unless the applicable prospectus supplement provides otherwise, we will not receive any proceeds from the sale of securities by selling securityholders.

Our common stock is listed on the New York Stock Exchange under the symbol "PRO". On August 10, 2018, the last reported sale price of our common stock on the New York Stock Exchange was \$39.99 per share.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described in the section titled "Risk Factors" included in, or incorporated by reference into, this prospectus on page 5, the applicable prospectus supplement and in any free writing prospectuses we have authorized for use in connection with a specific offering, and under similar headings in the other documents that are incorporated by reference into this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of 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 August 13, 2018.

Table of Contents

TABLE OF CONTENTS

	Page
<u>ABOUT THIS PROSPECTUS</u>	1
<u>SUMMARY</u>	2
<u>RISK FACTORS</u>	5
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION</u>	6
<u>USE OF PROCEEDS</u>	7
<u>DESCRIPTION OF CAPITAL STOCK</u>	8
<u>DESCRIPTION OF DEBT SECURITIES</u>	12
<u>DESCRIPTION OF WARRANTS</u>	19
<u>DESCRIPTION OF UNITS</u>	21
<u>LEGAL OWNERSHIP OF SECURITIES</u>	22
<u>SELLING SECURITYHOLDERS</u>	26
<u>PLAN OF DISTRIBUTION</u>	28
<u>LEGAL MATTERS</u>	30
<u>EXPERTS</u>	30
<u>WHERE YOU CAN FIND ADDITIONAL INFORMATION</u>	30
<u>INCORPORATION OF CERTAIN INFORMATION BY REFERENCE</u>	30

We have not authorized anyone, including the selling stockholders, to provide to you with information other than that contained or incorporated by reference in this prospectus, any prospectus supplement or any free writing prospectus prepared by or on behalf of us or to which we have referred you, and you should not rely on any information not contained in or incorporated by reference into this prospectus or any free writing prospectus that we may provide you. Neither we nor the selling securityholders take responsibility for, and can provide any assurance as to the reliability of, any other information that others may give you. Neither we nor the selling stockholders are offering to sell our securities or seeking offers to buy our securities in any jurisdictions where offers and sales are not permitted. The information contained in this prospectus or any free writing prospectus that we may provide to you is accurate only as of the date of each document regardless of the time of delivery of this prospectus or any sale of our securities. In case there are any differences or inconsistencies between this prospectus, any prospectus supplement or any free writing prospectus that we may provide to you and the information incorporated by reference in them, you should rely on the information in the document with the most recent date.

Table of Contents

ABOUT THIS PROSPECTUS

This prospectus is part of an automatic registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration process as a well-known seasoned issuer as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act. Under this shelf registration process, from time to time, we may offer and sell the securities described in this prospectus in one or more offerings, and the selling stockholders may sell up to 3,808,240 shares of common stock in one or more offerings.

Each time we or the selling stockholders offer and sell securities under this prospectus, we will provide a prospectus supplement that will include more specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. In a prospectus supplement or free writing prospectus, we may also add, update or change any of the information contained in this prospectus or in the documents we have incorporated by reference into this prospectus. This prospectus, together with the applicable prospectus supplement, any related free writing prospectus, and the documents incorporated by reference into this prospectus and the applicable prospectus supplement and any free writing prospectus, will include all material information relating to the applicable offering. Before buying any of the securities being offered, you should carefully read both this prospectus and the applicable prospectus supplement and any related free writing prospectus, together with the additional information described in the section titled **Where You Can Find Additional Information** in this prospectus.

This prospectus or any prospectus supplement or free writing prospectus may contain estimates and information concerning our industry, including market size and growth rates of the markets in which we participate, that are based on industry publications and reports. This information involves many assumptions and limitations, and you are cautioned not to give undue weight to these estimates. We have not independently verified the accuracy or completeness of the data contained in these industry publications and reports. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section titled **Risk Factors** in this prospectus, that could cause results to differ materially from those expressed in these publications and reports.

This prospectus includes summaries of certain provisions contained in some of the documents described in this prospectus, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed, or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described in the section titled **Where You Can Find Additional Information** in this prospectus.

All references in this prospectus supplement to **we**, **us**, **our**, **PROS**, **the Company** and similar designations refer to PROS Holdings, Inc. and its consolidated subsidiaries, unless otherwise indicated or as context otherwise requires. All references to **you** are to the purchasers of our securities under this prospectus.

This prospectus, any applicable prospectus supplement, any related free writing prospectus, and any information incorporated herein or therein by reference include trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included or incorporated by reference into this prospectus, any applicable prospectus supplement, or any related free writing prospectus are the property of their respective owners.

Table of Contents

SUMMARY

This summary highlights selected information from this prospectus and the documents incorporated herein by reference and does not contain all of the information that you need to consider in making your investment decision. You should carefully read this prospectus and the information incorporated herein by reference, including all information about the securities we are offering as well as information regarding our business and detailed financial data, in their entirety, including especially the section titled "Risk Factors" in this prospectus, as well as the documents to which we have referred you under the section titled "Where You Can Find Additional Information" in this prospectus, before making an investment decision.

Business Overview

PROS provides enterprise revenue and profit realization software solutions designed to help business-to-business and business-to-consumer companies accelerate sales, formulate winning pricing strategies and align product, demand and availability. Our revenue and profit realization software solutions assist our customers in growing revenue, supporting profitability and modernizing their business processes. We also provide professional services to implement our software solutions. We have completed over 800 implementations of our solutions in more than 55 countries.

Corporate Information

We were incorporated in Texas in 1985. We reincorporated as a Delaware corporation in 1998. In 2002, we reorganized as a holding company in Delaware. Our principal executive offices are located at 3100 Main Street, Suite 900, Houston, Texas 77002. We report as one operating segment with our Chief Executive Officer acting as our chief operating decision maker. Our telephone number is (713) 335-5151. Our website is www.pros.com. Our website and the information contained therein or connected thereto are not intended to be incorporated into this prospectus.

Securities We May Offer

We may offer shares of our common stock and preferred stock, various series of debt securities and warrants to purchase any of such securities, either individually or in units, from time to time under this prospectus, together with any applicable prospectus supplement and related free writing prospectus, at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

designation or classification;

aggregate principal amount or aggregate offering price;

maturity, if applicable;

original issue discount, if any;

rates and times of payment of interest or dividends, if any;

redemption, conversion, exchange or sinking fund terms, if any;

conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;

ranking;

restrictive covenants, if any;

Table of Contents

voting or other rights, if any; and

a discussion of material U.S. federal income tax considerations.

The applicable prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents we have incorporated by reference.

We may sell the securities directly to investors or to or through agents, underwriters, or dealers. We, and our agents, underwriters, or dealers reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities to or through agents, underwriters or dealers, we will include in the applicable prospectus supplement:

the names of those agents, underwriters, or dealers;

applicable fees, discounts, and commissions to be paid to them;

details regarding options to purchase additional securities, if any; and

the net proceeds to us.

THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

Common Stock

We or selling securityholders may offer shares of our common stock, par value \$0.001 per share, from time to time. Holders of our common stock are entitled to dividends as our board of directors may declare from time to time out of legally available funds, subject to the preferential rights of the holders of any shares of our preferred stock that are outstanding or that we may issue in the future. Currently, we do not pay any dividends and we do not have any issued and outstanding preferred stock. Each holder of our common stock is entitled to one vote per share. In this prospectus, we provide a general description of, among other things, our dividend policy and the rights and restrictions that apply to holders of our common stock. Our common stock is described in greater detail in the section titled "Description of Our Common Stock" in this prospectus.

Preferred Stock

We may offer shares of our preferred stock, par value \$0.001 per share, from time to time, in one or more series. Under our certificate of incorporation, our board of directors currently has the authority to designate preferred stock in one or more series and to fix the privileges, preferences and rights of each series of preferred stock, any or all of which may be greater than the rights of the common stock. Our preferred stock is described in greater detail in the section titled "Description of Capital Stock - Convertible Preferred Stock" in this prospectus. We urge you to read the prospectus supplements and any free writing prospectus that we may authorize to be provided to you related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock. In a report filed with the SEC, we will incorporate by reference into the

registration statement of which this prospectus is a part the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock.

Debt Securities

We may offer debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The debt securities will be issued under one or more documents called indentures, which are contracts between us and a trustee for the holders of the debt securities. The senior

Table of Contents

debt securities will rank equally with any other unsubordinated debt that we may have and may be secured or unsecured. The subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner described in the instrument governing the debt, to all or some portion of our indebtedness. Any convertible debt securities that we issue will be convertible into or exchangeable for our common stock or other securities of ours. Conversion may be mandatory or at the holder's option and would be at prescribed conversion rates. We have summarized the debt securities in the section titled "Description of Debt Securities" in this prospectus. We urge you, however, to read the prospectus supplements and any free writing prospectus that we may authorize to be provided to you related to the series of debt securities being offered, as well as the complete indentures that contain the terms of the debt securities. In a report filed with the SEC we will incorporate by reference into this registration statement of which this prospectus is a part the form of any indenture, supplemental indenture and debt security containing the terms of debt securities being offered before the issuance of the debt securities.

Warrants

We may offer warrants for the purchase of our common stock, preferred stock and/or debt securities in one or more series, from time to time. The warrants will be evidenced by warrant certificates issued under one or more warrant agreements, which are contracts between us and an agent for the holders of the warrants. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from those securities. We have summarized the warrants in the section titled "Description of Warrants" in this prospectus. We urge you, however, to read the prospectus supplements and any free writing prospectus that we may authorize to be provided to you related to the series of warrants being offered, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants. In a report filed with the SEC we will incorporate by reference into this registration statement of which this prospectus is a part the form of warrant agreement, including a form of warrant certificate, containing the terms of a particular series of warrants being offered before the issuance of the related series of warrants.

Units

We may offer units consisting of common stock, preferred stock, debt securities and/or warrants to purchase any of such securities in one or more series. We will evidence each series of units by unit certificates that we will issue under a separate agreement. We will enter into the unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units. We have summarized certain general features of the units under the section titled "Description of Units" in this prospectus. We urge you, however, to read the prospectus supplements and any free writing prospectus that we may authorize to be provided to you related to the series of units being offered, as well as the unit agreements that contain the terms of the units. In a report filed with the SEC we will incorporate by reference into this registration statement of which this prospectus is a part the form of unit agreement and any supplemental agreements that describe the terms of the series of units we are offering before the issuance of the related series of units.

Table of Contents

RISK FACTORS

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks and uncertainties discussed below and under the sections titled Risk Factors contained in our most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus in their entirety, together with other information in this prospectus, the applicable prospectus supplement, any free writing prospectus that we may authorize for use in connection with a specific offering and the documents incorporated by reference herein and therein. The risks described in these documents are not the only ones we face, but those that we consider to be material. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our securities to decline, resulting in a loss of all or part of your investment. Please also read carefully the section titled Special Note Regarding Forward-looking Information in this prospectus.

Sale of our common stock by existing stockholders, or the perception that these sales may occur, especially by our directors, executive officers or significant stockholders, may cause our stock price to decline.

If our existing stockholders, in particular our directors, executive officers or other affiliates, sell substantial amounts of our common stock in the public market, or are perceived by the public market as intending to sell, the trading price of our common stock could decline. In addition, sales of these shares of common stock could impair our ability to raise capital, should we wish to do so. Up to 3,808,240 shares of our common stock may be sold pursuant to this prospectus by the selling stockholders, which represents approximately 11.6% of our outstanding common stock as of August 10, 2018. We cannot predict the timing or amount of future sales of our common stock by selling stockholders named in this prospectus, but such sales, or the perception that such sales could occur, may adversely affect prevailing market prices for our common stock.

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus and the documents incorporated herein by reference contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on our management's current beliefs, expectations and assumptions about future events, conditions and results and on information currently available to us. Discussions containing these forward-looking statements may be found, among other places, in the sections titled Business Overview, Risk Factors and Management's Discussion and Analysis of Financial Condition and Results of Operations incorporated by reference from our Annual Report and in our subsequent filings with the SEC incorporated by reference herein, as well as any amendments thereto. This prospectus and the documents incorporated by reference herein also contain estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we operate are necessarily subject to a high degree of uncertainty and risk.

All statements, other than statements of historical fact, included or incorporated herein regarding our strategy, future operations, financial position, future revenues, projected costs, plans, prospects and objectives are forward-looking statements. Words such as expect, anticipate, intend, plan, believe, seek, estimate, think, may, could, should, continue, potential, likely, opportunity and similar expressions or variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements. Additionally, statements concerning future matters such as our expectations of business and market conditions, development and commercialization of new products, enhancements of existing products or technologies, and other statements regarding matters that are not historical are forward-looking statements. Such statements are based on currently available operating, financial and competitive information and are subject to various risks, uncertainties and assumptions that could cause actual results to differ materially from those anticipated or implied in our forward-looking statements due to a number of factors including, but not limited to, those set forth above in the section titled Risk Factors in this prospectus and any accompanying prospectus supplement. Given these risks, uncertainties and other factors, many of which are beyond our control, you should not place undue reliance on these forward-looking statements.

In addition, statements that we believe and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus supplement, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to revise any forward-looking statements to reflect events or developments occurring after the date of this prospectus, even if new information becomes available in the future.

Table of Contents**RATIO OF EARNINGS TO FIXED CHARGES**

The following table sets forth our ratios of earnings to fixed charges and to combined fixed charges and preferred stock dividends on a historical basis for each of the periods presented. These ratios should be read in connection with our consolidated financial statements, including the notes to those statements, incorporated by reference in this prospectus.

	Year Ended December 31,				
	2013	2014	2015	2016	2017
Ratio of earnings to fixed charges(1)(2)	5.8	N/A	N/A	N/A	N/A
Ratio of earnings to combined fixed charges and preferred stock dividends(1)(3)	5.8	N/A	N/A	N/A	N/A

- (1) We reported a net loss for the years ended December 31, 2014, 2015, 2016, and 2017 and would have needed to generate additional income of approximately \$25.1 million, \$65.1 million, \$74.8 million, and \$77.8 million, respectively, to cover our fixed charges and combined fixed charges and preferred stock dividends of approximately \$1.6 million, \$10.1 million, \$10.7 million, and \$14.5 million.
- (2) For purposes of computing the ratio of earnings to fixed charges, earnings consist of net loss before taxes plus fixed charges. Fixed charges consist of convertible debt interest and amortization of debt expense plus the portion of rent expense that we determine represents interest expense (33% of rent expense). In each of the periods presented other than the year ended December 31, 2013, earnings were insufficient to cover fixed charges.
- (3) For purposes of computing the ratio of earnings to combined fixed charges and preferred stock dividends, earnings consist of net loss before taxes. Combined fixed charges and preferred stock dividends consist of convertible debt interest and amortization of debt expense plus the portion of rent expense that we determine represents interest expense (33% of rent expense). For the periods presented, we had no shares of preferred stock outstanding, and consequently, our ratio of earnings to combined fixed charges and preferred share dividends is the same as the ratio of earnings to fixed charges.

USE OF PROCEEDS

We will retain broad discretion over the use of the net proceeds from the sale of the securities offered hereby. Except as described in any applicable prospectus supplement or in any free writing prospectuses in connection with a specific offering, we currently intend to use the net proceeds from any sale by us of the securities offered hereby, if any, for general corporate purposes, including research and development, acquisitions, the development of our products, sales and marketing initiatives, expansion of our commercial organization, general administrative expenses, working capital and capital expenditures. We may invest the net proceeds temporarily in short-term investments, including marketable securities, until we use them for their stated purpose. If we decide to use the net proceeds from a particular offering of securities for a specific purpose, we will describe that purpose in the applicable prospectus supplement and/or free writing prospectus.

Unless the applicable prospectus supplement provides otherwise, we will not receive any proceeds from any sale of securities by selling securityholders, including the selling stockholders named in this prospectus.

Table of Contents

DESCRIPTION OF CAPITAL STOCK

The following description, together with the additional information we include in any applicable prospectus supplements or free writing prospectuses, summarizes the material terms of our capital stock. The description of our capital stock is qualified by reference to our certificate of incorporation, as amended, and our bylaws, as amended, which are incorporated by reference as exhibits into the registration statement of which this prospectus is a part.

As of the date of this prospectus, our certificate of incorporation authorizes us to issue 75,000,000 shares of common stock, par value \$0.001 per share, and 5,000,000 shares of preferred stock, par value \$0.001 per share. As of August 10, 2018, 32,758,852 shares of common stock were outstanding, and no shares of preferred stock were outstanding.

Common Stock

The holders of common stock possess exclusive voting rights in us, except to the extent our board of directors specifies voting power with respect to any other class of securities issued in the future. Each holder of our common stock is entitled to one vote for each share held of record on each matter submitted to a vote of stockholders, including the election of directors. Stockholders do not have any right to cumulate votes in the election of directors.

Subject to preferences that may be granted to the holders of preferred stock, each holder of our common stock is entitled to share ratably in distributions to stockholders and to receive ratably such dividends as may be declared by our board of directors out of funds legally available therefor. In the event of our liquidation, dissolution or winding up, the holders of our common stock will be entitled to receive, after payment of all of our debts and liabilities and of all sums to which holders of any preferred stock may be entitled, the distribution of any of our remaining assets. Holders of our common stock have no conversion, exchange, sinking fund, redemption or appraisal rights (other than such as may be determined by our board of directors in its sole discretion) and have no preemptive rights to subscribe for any of our securities.

All of the outstanding shares of our common stock are, and the shares of common stock offered by this prospectus will be, fully paid and non-assessable.

Convertible Preferred Stock

Our board of directors is authorized, subject to limitations prescribed by Delaware law, to issue convertible preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each series and any of its qualifications, limitations or restrictions, in each case without further vote or action by our stockholders. Our board of directors may increase or decrease the number of shares of any series of convertible preferred stock, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of convertible preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and might adversely affect the market price of our common stock and the voting and other rights of the holders of our common stock. We have no current plan to issue any shares of convertible preferred stock.

Future Preferred Stock. Our board of directors will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus

supplements in the certificate of designation relating to that series. We will incorporate by reference into the

Table of Contents

registration statements of which this prospectus is a part the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. This description will include:

the title and stated value;

the number of shares we are offering;

the liquidation preference per share;

the purchase price per share;

the dividend rate per share, dividend period and payment dates and method of calculation for dividends;

whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;

our right, if any, to defer payment of dividends and the maximum length of any such deferral period;

the procedures for any auction and remarketing, if any;

the provisions for a sinking fund, if any;

the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;

any listing of the preferred stock on any securities exchange or market;

whether the preferred stock will be convertible into our common stock or other securities of ours, including warrants, and, if applicable, the conversion period, the conversion price, or how it will be calculated, and under what circumstances it may be adjusted;

whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange period, the exchange price, or how it will be calculated, and under what circumstances it may be adjusted;

voting rights, if any, of the preferred stock;

preemption rights, if any;

restrictions on transfer, sale or other assignment, if any;

a discussion of any material or special United States federal income tax considerations applicable to the preferred stock;

the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;

any limitations on issuances of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock being issued as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and

any other specific terms, rights, preferences, privileges, qualifications or restrictions of the preferred stock. When we issue shares of preferred stock under this prospectus, the shares will be fully paid and non-assessable and will not have, or be subject to, any preemptive or similar rights.

The Delaware General Corporation Law, or the DGCL, provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Table of Contents

Possible Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Provisions of the DGCL and our certificate of incorporation and bylaws could make it more difficult to acquire us by means of a tender offer, a proxy contest or otherwise, or to remove incumbent officers and directors. These provisions, summarized below, are expected to discourage certain types of coercive takeover practices and takeover bids that our board of directors may consider inadequate and 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 of our ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging takeover or acquisition proposals because, among other things, negotiation of these proposals could result in an improvement of their terms.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the DGCL, an anti-takeover statute. In general, Section 203 of the DGCL prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the time the person became an interested stockholder, unless the business combination or the acquisition of shares that resulted in a stockholder becoming an interested stockholder is approved in a prescribed manner. Generally, a business combination includes a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. Generally, an interested stockholder is a person who, together with affiliates and associates, owns (or within three years prior to the determination of interested stockholder status did own) 15% or more of a corporation's voting stock. The existence of this provision would be expected to have an anti-takeover effect with respect to transactions not approved in advance by our board of directors, including discouraging attempts that might result in a premium over the market price for the shares of common stock held by our stockholders.

Classified Board

Our certificate of incorporation and our bylaws provide that our board of directors is divided into three classes, each comprised of three directors. The directors designated as Class I directors have a term expiring at our annual meeting of stockholders in 2020. The directors designated as Class II directors have a term expiring at our annual meeting of stockholders in 2021. The directors designated as Class III directors have a term expiring at our annual meeting of stockholders in 2019. Directors for each class will be elected at the annual meeting of stockholders held in the year in which the term for that class expires and thereafter will serve for a term of three years. At any meeting of stockholders for the election of directors at which a quorum is present, the election will be determined by a plurality of the votes cast by the stockholders entitled to vote at the election. Under the classified board provisions, it will take at least two elections of directors for any individual or group to gain control of our board. Accordingly, these provisions could discourage a third party from initiating a proxy contest, making a tender offer or otherwise attempting to gain control of us.

Removal of Directors

Our bylaws provide that our stockholders may only remove our directors with cause and with the affirmative vote of the holder of a majority of our voting stock then outstanding.

Amendment

Our certificate of incorporation and our bylaws provide that the affirmative vote of the holders of at least two-thirds of our voting stock then outstanding is required to amend any provision of either document.

Size of Board and Vacancies

Our certificate of incorporation provides that the number of directors on our board of directors is fixed exclusively by our board of directors. Newly created directorships resulting from any increase in our authorized

Table of Contents

number of directors will be filled by a majority of our board of directors then in office, provided that a majority of the entire board of directors, or a quorum, is present and any vacancies in our board of directors resulting from death, resignation, retirement, disqualification, removal from office or other cause will be filled generally by the majority vote of our remaining directors in office, even if less than a quorum is present.

Special Stockholder Meetings

Our bylaws provide that only the Chairman of our board of directors, our Chief Executive Officer or our board of directors pursuant to a resolution adopted by a majority of the entire board of directors may call special meetings of our stockholders.

Stockholder Action by Unanimous Written Consent

Our certificate of incorporation expressly eliminates the right of our stockholders to act by written consent other than by unanimous written consent. Stockholder action must take place at the annual or a special meeting of our stockholders or be effected by unanimous written consent.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our bylaws establish advance notice procedures with respect to stockholder proposals and nomination of candidates for election as directors other than nominations made by or at the direction of our board of directors or a committee of our board of directors.

No Cumulative Voting

The DGCL provides that stockholders are denied the right to cumulate votes in the election of directors unless our certificate of incorporation provides otherwise. Our certificate of incorporation does not provide for cumulative voting.

Undesignated Preferred Stock

The authority that will be possessed by our board of directors to issue preferred stock could potentially be used to discourage attempts by third parties to obtain control of our company through a merger, tender offer, proxy contest or otherwise by making such attempts more difficult or more costly. Our board of directors may issue preferred stock with voting rights or conversion rights that, if exercised, could adversely affect the voting power of the holders of our common stock.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock will be available for future issuance without stockholder approval. We may use additional shares for a variety of purposes, including future public offerings to raise additional capital, to fund acquisitions and as employee compensation. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

The above provisions may deter a hostile takeover or delay a change in control or management of us.

Transfer Agent and Registrar

The transfer agent and registrar for our capital stock is Computershare Trust Company, N.A., and the transfer agent's address is 250 Royall Street, Canton, MA 02021.

Table of Contents

Listing on the New York Stock Exchange

Our common stock is listed on the New York Stock Exchange, or NYSE, under the trading symbol PRO. The applicable prospectus supplement will contain information, where applicable, as to other listings, if any, on the New York Stock Exchange or other securities exchange of the shares of our common stock covered by the applicable prospectus supplement.

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplements or free writing prospectuses, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus. We may issue debt securities, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. As of the date of this prospectus, we have no outstanding registered debt securities.

While the material terms we have summarized below will apply generally to any future debt securities we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement and/or free writing prospectus. The following summaries of debt securities debt securities and the indentures are subject to, and qualified in their entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. The terms of any debt securities we offer under a prospectus supplement may differ from the terms we describe below. However, no prospectus supplement or free writing prospectus will fundamentally change the terms that are set forth in this prospectus or offer a debt security that is not registered and described in this prospectus at the time of its effectiveness. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical. Unless the context requires otherwise, whenever we refer to the indentures, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue any senior debt securities under the senior indenture that we will enter into with the trustee named in the senior indenture. We will issue any subordinated debt securities under the subordinated indenture that we will enter into with the trustee named in the subordinated indenture. We have filed forms of these documents as exhibits to the registration statement, of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The indentures will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We use the term trustee to refer to either the trustee under the senior indenture or the trustee under the subordinated indenture, as applicable.

The terms of each series of debt securities will be established by or pursuant to a resolution of our board of directors and set forth or determined in the manner provided in an officers certificate or by a supplement indenture. Debt securities may be issued in separate series without limitation as to aggregate principal amount. We may specify a maximum aggregate principal amount for the debt securities of any series. We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

the title;

the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;

any limit on the amount that may be issued;

whether or not we will issue the series of debt securities in global form, and, if so, the terms and who the depository will be;

Table of Contents

the maturity date;

whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;

the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;

the terms of the subordination of any series of subordinated debt;

the place where payments will be payable;

restrictions on transfer, sale or other assignment, if any;

our right, if any, to defer payment of interest and the maximum length of any such deferral period;

the date, if any, after which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;

the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option, to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;

whether the indenture will restrict our ability or the ability of our subsidiaries to:

incur additional indebtedness;

issue additional securities;

create liens;

pay dividends or make distributions in respect of our capital stock or the capital stock of our subsidiaries;

redeem capital stock;

place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;

make investments or other restricted payments;

sell or otherwise dispose of assets;

enter into sale leaseback transactions;

engage in transactions with stockholders or affiliates;

issue or sell stock of our subsidiaries; or

effect a consolidation or merger;

whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;

a discussion of certain material or special United States federal income tax considerations applicable to the debt securities;

information describing any book-entry features;

provisions for a sinking fund purchase or other analogous fund, if any;

Table of Contents

the applicability of the provisions in the indenture on discharge;

whether the debt securities are to be offered at a price such that they will be deemed to be offered at an original issue discount as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;

the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;

the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any additional events of default or covenants provided with respect to the debt securities, and any terms that may be required by us or advisable under applicable laws or regulations.

Conversion or Exchange Rights

We will set forth in the applicable prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our common stock, our preferred stock or other securities (including securities of a third party). We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock, our preferred stock or other securities (including securities of a third-party) that the holders of the series of debt securities receive would be subject to adjustment.

Consolidation, Merger or Sale

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indentures will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor to or acquirer of such assets must assume all of our obligations under the indentures or the debt securities, as appropriate. If the debt securities are convertible into or exchangeable for our other securities or securities of other entities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default under the Indenture

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the following are events of default under the indentures with respect to any series of debt securities that we may issue:

if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended;

if we fail to pay the principal, premium or sinking fund payment, if any, when due and payable at maturity, upon redemption or repurchase or otherwise, and the time for payment has not been extended;

if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the trustee or we and the trustee receive notice from the holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and

if specified events of bankruptcy, insolvency or reorganization occur.

Table of Contents

We will describe in each applicable prospectus supplement any additional events of default relating to the relevant series of debt securities.

If an event of default with respect to any series of debt securities occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the unpaid principal, premium, if any, and accrued interest, if any, of each issue of debt securities then outstanding will be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver will cure the default or event of default.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity or security satisfactory to it against any loss, liability or expense. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

the direction so given by the holder is not in conflict with any law or the applicable indenture; and

subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

The indentures provide that if an event of default has occurred and is continuing, the trustee will be required in the exercise of its powers to use the degree of care that a prudent person would use in the conduct of its own affairs. The trustee, however, may refuse to follow any direction that conflicts with law or the indenture, or that the trustee determines is unduly prejudicial to the rights of any other holder of the relevant series of debt securities, or that would involve the trustee in personal liability. Prior to taking any action under the indentures, the trustee will be entitled to indemnification against all costs, expenses and liabilities that would be incurred by taking or not taking such action.

A holder of the debt securities of any series will have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies only if:

the holder has given written notice to the trustee of a continuing event of default with respect to that series;

the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the trustee or security

satisfactory to it against any loss, liability or expense or to be incurred in compliance with instituting the proceeding as trustee; and

the trustee does not institute the proceeding and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

Table of Contents

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities, or other defaults that may be specified in the applicable prospectus supplement.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indentures.

The indentures provide that if a default occurs and is continuing and is actually known to a responsible officer of the trustee, the trustee must mail to each holder notice of the default within the earlier of 90 days after it occurs and 30 days after it is known by a responsible officer of the trustee or written notice of it is received by the trustee, unless such default has been cured or waived. Except in the case of a default in the payment of principal or premium of or interest on any debt security or certain other defaults specified in an indenture, the trustee will be protected in withholding such notice if and so long as the board of directors, the executive committee or a trust committee of directors, or responsible officers of the trustee, in good faith determine that withholding notice is in the best interests of holders of the relevant series of debt securities.

Modification of Indenture; Waiver

Subject to the terms of the indenture for any series of debt securities that we may issue, we and the trustee may change an indenture without the consent of any holders with respect to the following specific matters:

to fix any ambiguity, defect or inconsistency in the indenture;

to comply with the provisions described in the section titled "Description of Debt Securities - Consolidation, Merger or Sale" in this prospectus;

to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act;

to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;

to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as described in the section titled "Description of Debt Securities" in this prospectus or any similarly titled section in any prospectus supplement relating to a series of debt securities, to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;

to evidence and provide for the acceptance of appointment hereunder by a successor trustee;

to provide for uncertificated debt securities and to make all appropriate changes for such purpose;

to add to our covenants such new covenants, restrictions, conditions or provisions for the benefit of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred to us in the indenture; or

to change anything that does not adversely affect the interests of any holder of debt securities of any series in any material respect.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, subject to the terms of the indenture for any series of debt securities that we may issue or otherwise provided in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may only make the following changes with the consent of each holder of any outstanding debt securities affected:

extending the stated maturity of the series of debt securities;

Table of Contents

reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption or repurchase of any debt securities; or

reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

Each indenture provides that, subject to the terms of the indenture and any limitation otherwise provided in the prospectus supplement applicable to a particular series of debt securities, we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

register the transfer or exchange of debt securities of the series;

replace stolen, lost or mutilated debt securities of the series;

maintain paying agencies;

hold monies for payment in trust;

recover excess money held by the trustee;

compensate and indemnify the trustee; and

appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company or another depository named by us and identified in a prospectus supplement with respect to that series. See the section titled **Legal Ownership of Securities** in this prospectus for a further description of the terms relating to any book-entry securities.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate

Table of Contents

additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or

register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Trustee

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture and is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur. However, upon an event of default under an indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

Ranking Debt Securities

The subordinated debt securities will be unsecured and will be subordinate and junior in priority of payment to certain other indebtedness to the extent described in a prospectus supplement. The subordinated indenture does not limit the amount of subordinated debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

Table of Contents

The senior debt securities will be unsecured and will rank equally in right of payment to all our other senior unsecured debt. The senior indenture does not limit the amount of senior debt securities that we may issue. It also does not limit us from issuing any other secured or unsecured debt.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements and free writing prospectuses, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which may consist of warrants to purchase common stock, preferred stock or debt securities and may be issued in one or more series. We will issue the warrants under a warrant agreement that we will enter into with a warrant agent to be selected by us. The warrant agent will act solely as an agent of ours in connection with the warrants and will not act as an agent for the holders or beneficial owners of the warrants. Warrants may be offered independently or together with common stock, preferred stock or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities.

While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants that we may offer in more detail in the applicable prospectus supplement and any applicable free writing prospectus. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to a particular series of warrants. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of warrant agreement, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering before the issuance of the related series of warrants. We urge you to read the applicable prospectus supplement and any applicable free writing prospectus related to the particular series of warrants that we sell under this prospectus, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms relating to a series of warrants, including:

the offering price and aggregate number of warrants offered;

the currency for which the warrants may be purchased;

if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;

if applicable, the date on and after which the warrants and the related securities will be separately transferable;

in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;

in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;

Table of Contents

the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;

the terms of any rights to redeem or call the warrants;

any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;

the dates on which the right to exercise the warrants will commence and expire;

the manner in which the warrant agreements and warrants may be modified;

United States federal income tax consequences of holding or exercising the warrants;

the terms of the securities issuable upon exercise of the warrants; and

any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or

in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be

required to deliver to the warrant agent.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Enforceability of Rights by Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

Table of Contents

DESCRIPTION OF UNITS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the units that we may offer under this prospectus. We may issue units comprising one or more debt securities, shares of common stock, shares of preferred stock and warrants in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. The terms of any units offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we sell under this prospectus, as well as the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

We will describe in the applicable prospectus supplement the terms of the series of units, including:

the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;

any provisions of the governing unit agreement that differ from those described below; and

any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities constituting the units.

The provisions described in this section, as well as those described under the sections titled **Description of Capital Stock**, **Description of Debt Securities** and **Description of Warrants** in this prospectus will apply to each unit and to any common stock, preferred stock, debt security or warrant included in each unit, respectively.

Issuance in Series

We may issue units in such amounts and in numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

Table of Contents

We, the unit agents and any of their agents may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purpose and as the person entitled to exercise the rights attaching to the units so requested, despite any notice to the contrary. See Legal Ownership of Securities.

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee or depository or warrant agent maintain for this purpose as the holders of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as indirect holders of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

Book-Entry Holders

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depository on behalf of other financial institutions that participate in the depository's book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Global securities will be registered in the name of the depository or its participants. Consequently, for global securities, we will recognize only the depository as the holder of the securities, and we will make all payments on the securities to the depository. The depository passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depository and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a global security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depository's book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not legal holders, of the securities.

Street Name Holders

We may terminate a global security or issue securities that are not issued in global form. In these cases, investors may choose to hold their securities in their own names or in street name. Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we or any applicable trustee or depository will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we or any such trustee or depository will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold

securities in street name will be indirect holders, not holders, of those securities.

Table of Contents

Legal Holders

Our obligations, as well as the obligations of any applicable trustee or third party or agent employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means, including 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. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for the payment or notice even if that holder is required, under agreements with its participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of an indenture, or for other purposes. In such an event, we would seek approval only from the legal holders, and not the indirect holders, of the securities. Whether and how the holders contact the indirect holders is up to the legal holders.

Special Considerations for Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form because the securities are represented by one or more global securities or in street name, you should check with your own institution to find out:

how it handles securities payments and notices;

whether it imposes fees or charges;

how it would handle a request for the holders' consent, if ever required;

whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;

how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and

if the securities are in book-entry form, how the depository's rules and procedures will affect these matters.

Global Securities

A global security is a security that represents one or any other number of individual securities held by a depository. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we issue to, deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depository. Unless we specify otherwise in the applicable prospectus supplement, The Depository Trust Company, New York, New York, known as DTC, will be the depository for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depository, its nominee or a successor depository, unless special termination situations arise. We describe those situations below under the subsection titled Special Situations When a Global Security Will Be Terminated. As a result of these arrangements, the depository, or its nominee, will be the sole registered owner and legal holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a

Table of Contents

global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depository or with another institution that does. Thus, an investor whose security is represented by a global security will not be a legal holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued as a global security, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations for Global Securities

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depository, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depository that holds the global security.

If securities are issued only as global securities, an investor should be aware of the following:

an investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;

an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;

an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;

an investor may not be able to pledge his or her interest in the global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;

the depository's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in the global security. We and any applicable trustee have no responsibility for any aspect of the depository's actions or for its records of ownership interests in the global security. We and the trustee also do not supervise the depository in any way;

the depository may, and we understand that DTC will, require that those who purchase and sell interests in the global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and

financial institutions that participate in the depositary's book-entry system, and through which an investor holds its interest in the global security, may also have their own policies affecting payments, notices and other matters relating to the securities. There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special Situations When a Global Security Will Be Terminated

In a few special situations described below, a global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own names, so that they will be direct holders. We have described the rights of holders and street name investors above.

Table of Contents

A global security will terminate when the following special situations occur:

if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;

if we notify any applicable trustee that we wish to terminate that global security; or

if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The applicable prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depositary, and neither we nor any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

Table of Contents

SELLING SECURITYHOLDERS

Information about selling securityholders, where applicable, other than the selling stockholders named in this prospectus, will be set forth in a prospectus supplement, in a post-effective amendment or in filings we make with the SEC under the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are incorporated by reference.

The selling stockholders named below may, from time to time, offer or sell pursuant to this prospectus up to an aggregate of 3,808,240 shares of common stock. The table below describes, as of August 10, 2018, each selling stockholder's beneficial ownership of shares of our common stock according to the information available to us as of such date and assuming each selling stockholder has sold all of its shares of common stock pursuant to this prospectus. As of August 10, 2018, we had 32,758,852 shares of common stock outstanding.

Information in the table below with respect to beneficial ownership has been furnished by each of the selling stockholders. The selling stockholders listed in the table below may have sold, transferred, otherwise disposed of or purchased, or may sell, transfer, otherwise dispose of or purchase, at any time and from time to time, shares of our common stock in transactions exempt from the registration requirements of the Securities Act or in the open market after the date on which they provided the information set forth in the table below. We do not know which (if any) of the selling stockholders named below actually will offer to sell shares pursuant to this prospectus, or the number of shares that each of them will offer.

Because the selling stockholders may sell, transfer or otherwise dispose of all, some or none of the shares of our common stock covered by this prospectus, we cannot determine the number of such shares that will be sold, transferred or otherwise disposed of by the selling stockholders, or the amount or percentage of shares of our common stock that will be held by the selling stockholders upon termination of any particular offering or sale. See the section titled "Plan of Distribution" in this prospectus. When we refer to the selling stockholders in this prospectus, we mean the individual and entities listed in the table below, as well as their pledgees, donees, assignees, transferees and successors in interest.

The number of shares beneficially owned by each stockholder is determined under rules issued by the SEC and includes voting or investment power with respect to securities. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options, or other rights, including the redemption right described above, held by such person that are currently exercisable or will become exercisable within 60 days, are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. Each of the stockholders listed has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Any selling stockholder may be deemed to be an "underwriter" within the meaning of the Securities Act. Based upon the applicable facts and circumstances, including when and how each selling stockholder's respective shares of common stock were acquired, none of the selling stockholders believes that such selling stockholder should be considered an "underwriter" within the meaning of such term under the Securities Act.

Information concerning the selling stockholders may change from time to time. Any changes to the information provided below will be set forth in a prospectus supplement if and when necessary.

Table of Contents

Unless otherwise noted below, the address of each person listed on the table is c/o PROS Holdings, Inc., 3100 Main Street, Suite 900, Houston, Texas 77002.

Name of Selling Stockholder	Shares Beneficially Owned Prior to the Offering(1)		Number of Shares Offered	Shares Beneficially Owned After the Offering	
	Shares	Percentage		Shares	Percentage
Mariette M. Woestemeyer(2)	3,870,801	11.8%	3,808,240	62,561	*
Ronald F. Woestemeyer(2)	3,870,801	11.8%	3,808,240	62,561	*

* Represents beneficial ownership of less than 1%.

Assumes the sale by the selling stockholders of all shares of common stock registered pursuant to this prospectus.

- (1) Includes shares held and stock options and restricted stock units that may be exercised or settled within 60 days of August 10, 2018.
- (2) Includes (i) 131,934 shares held by Ronald F. Woestemeyer and Mariette M. Woestemeyer as tenants in common; (ii) 419,351 shares held in RMW 2007 ILIT, LLC; (iii) 950,000 shares held in RMW 2009 Gift Trust, LLC; (iv) 603,548 shares held in RMW-R 2007 Trust, LLC; (v) 225,522 shares held in RMW 2012 Dynasty Trust, LLC; (vi) 236,266 shares held in RMW 2012 Legacy Trust, LLC; (vii) 690,619 shares held in RMW-M 2007 Trust, LLC; and (viii) 550,000 shares held in Romaka, LLC. The names assigned to these beneficially owned accounts may be different than the names appearing on the face of the original stock certificates. Certain of the originally named accounts have been combined (in whole or in part), and/or converted to trust LLCs, but the tax numbers assigned to each current listed account have remained the same since issuance of the original stock certificates. Mrs. Woestemeyer disclaims beneficial ownership of the shares held in the RMW 2012 Legacy Trust, LLC, and sole beneficial ownership in the RMW 2009 Gift Trust, LLC. Mr. Woestemeyer disclaims beneficial ownership of the shares held in the RMW M 2007 Trust LLC, sole beneficial ownership in the RMW 2009 Gift Trust, LLC, and the shares issuable upon the exercise of stock options held by Mrs. Woestemeyer.

Except as follows and as described in the information incorporated by reference into this prospectus, no affiliate of any of the selling stockholders has held any position or office with us or any of our affiliates, and no selling stockholder has had any other material relationship with us or any of our affiliates within the past three years other than as a result of such selling stockholder's ownership of shares of equity securities:

Mariette M. Woestemeyer currently serves on our board of directors; and

Ronald F. Woestemeyer currently serves on our board of directors, and previously served as our Executive Vice President, Strategic Business Planning, until his retirement in July 2015.

Table of Contents

PLAN OF DISTRIBUTION

We or the selling securityholders, including the selling stockholders named in this prospectus, may sell the offered securities in one or more of the following ways from time to time:

through agents to the public or to investors;

to underwriters for resale to the public or to investors;

in at the market offerings, within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market on an exchange or otherwise;

directly to investors;

through a combination of any of these methods of sale; or

any other method permitted under applicable law.

A prospectus supplement or supplements (and any free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

the name or names of any agents or underwriters;

the purchase price of the securities being offered and the proceeds we will receive from the sale;

any over-allotment options under which underwriters may purchase additional securities from us;

any agency fees or underwriting discounts and other items constituting agents or underwriters compensation;

any initial public offering price;

any discounts or concessions allowed or reallocated or paid to dealers; and

any securities exchanges or markets on which such securities may be listed.

We or the selling securityholders may sell securities directly or through agents we designate from time to time. The prospectus supplement will identify any agent involved in the offering and sale of securities and describe in the any commissions to be paid to the agent. Unless the prospectus supplement states otherwise, our or the selling securityholders agent will act on a best-efforts basis for the period of its appointment, and the obligations of any underwriters to purchase any securities will be conditioned on customary closing conditions.

Some of the shares of common stock covered by this prospectus may be sold by the selling stockholders in private transactions or under Rule 144 under the Securities Act rather than pursuant to this prospectus.

We or the selling securityholders may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. Subject to certain conditions set forth in the applicable underwriting agreement, the underwriters will be obligated to purchase all of the securities offered by the applicable prospectus supplement. The prospectus supplement will identify any underwriters involved in the offering and sale of securities and describe their compensation. Only underwriters identified in the prospectus supplement are underwriters of the securities offered by the prospectus supplement. Underwriters and agents that participate in the distribution of the securities may be underwriters as defined in the Securities Act, and any discounts or commissions they receive and any profit on their resale of the securities may be treated as underwriting discounts and commissions under the Securities Act. We or the selling securityholders may use underwriters with whom we have a material relationship. The prospectus supplement will describe the nature of any such relationship. We may have agreements with underwriters to indemnify them against specified civil liabilities, including liabilities under the Securities Act. The prospectus supplement will describe the nature of any such indemnification obligations.

Table of Contents

If the selling stockholders sell shares to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the shares for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of shares or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the shares in the course of hedging in positions they assume. The selling stockholders may also sell shares short and deliver shares covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge shares to broker-dealers that in turn may sell such shares.

The selling stockholders may pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time pursuant to this prospectus or any prospectus supplement under Rule 424(b) or other applicable provision under the Securities Act, amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the shares of common stock in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

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

Any underwriters who are qualified market makers on the NYSE may engage in passive market making transactions in the securities on the NYSE in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security. If all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Each series of securities other than our common stock, which is listed on the NYSE, will be a new issue of securities and will have no established trading market. Any underwriters to whom securities are sold for public offering and sale may make a market in the securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. The securities, other than our common shares, may or may not be listed on a national securities exchange.

Under the securities laws of some states, the shares of common stock may be sold in such states only through registered or licensed brokers or dealers.

There can be no assurance that any selling stockholders will sell any or all of the shares of common stock covered by this prospectus.

Table of Contents

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, DLA Piper LLP (US), Austin, Texas, will pass for us upon the validity of the securities offered by this prospectus and any supplement thereto. Additional legal matters may be passed upon for us or any underwriters, dealers or agents, by counsel to be named in the applicable prospectus supplement.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2017 have been so incorporated in reliance on the report which contains an explanatory paragraph on the effectiveness of internal control over financial reporting due to the exclusion of certain elements of the internal control over financial reporting of the Vayant business the registrant acquired during 2017 of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

This prospectus is part of the registration statement on Form S-3 we filed with the SEC under the Securities Act. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You should rely only on the information contained in this prospectus or incorporated by reference. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front page of this prospectus, regardless of the time of delivery of this prospectus or any sale of the securities offered by this prospectus.

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC's Public Reference Room at 100 F Street NE, Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, where our SEC filings are also available. The address of the SEC's web site is <http://www.sec.gov>. We maintain a website at <http://www.pros.com>. Information contained in or accessible through our website does not constitute a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference information that we file with it into this prospectus, 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. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference into this registration statement and prospectus the following documents, and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement of

which this prospectus forms a part but prior to the termination

Table of Contents

of the offering of the securities covered by this prospectus and any prospectus supplement (other than current reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K and related exhibits):

our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on February 15, 2018, including the information specifically incorporated by reference into the Annual Report on Form 10-K from our definitive proxy statement for the 2018 Annual Meeting of Stockholders;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018, filed with the SEC on May 1, 2018 and July 26, 2018, respectively;

our Current Reports on Form 8-K filed with the SEC on January 4, 2018 (excluding Item 7.01 and Exhibit 99.1 thereto) and May 11, 2018; and

the description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on June 21, 2007, and any amendment or report filed with the SEC for the purpose of updating the description.

We will provide each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference into this prospectus but not delivered with this prospectus upon written or oral request at no cost to the requester. Requests should be directed to: PROS Holdings, Inc., Attn: Corporate Secretary, 3100 Main Street, Ste. 900, Houston, TX 77002, telephone: (713) 335-5151.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION

FOR SECURITIES ACT LIABILITY

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

Table of Contents

4,000,000 Shares

Common stock

Joint book-running managers

J.P. Morgan

Morgan Stanley

RBC Capital Markets

Lead manager

Needham & Company

Co-managers

KeyBanc Capital Markets

Northland Capital Markets

JMP Securities

Nomura

, 2018