

TRUPANION, INC.

Form 10-K

February 14, 2019

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UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number: 001-36537

TRUPANION, INC.

(Exact name of registrant as specified in its charter)

Delaware

83-0480694

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

6100 4th Avenue S, Suite 200

Seattle, Washington 98108

(855) 727 - 9079

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Name of Exchange on Which Registered</u>
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Common Stock, \$0.00001 par value per share	NASDAQ Stock Market LLC
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Securities registered pursuant to Section 12(g) of the Act: None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

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of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if smaller reporting company) Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

The aggregate market value of the registrant's common stock held by non-affiliates as of June 30, 2018, the last business day of the registrant's most recently completed second fiscal quarter, was approximately \$1,190,862,535 using the closing price on that day of \$38.60.

As of February 7, 2019, there were approximately 34,332,607 shares of the registrant's common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE Part III incorporates certain information by reference from the definitive proxy statement to be filed by the registrant in connection with the 2018 Annual Meeting of Stockholders (Proxy Statement). The Proxy Statement will be filed by the registrant with the Securities and Exchange Commission pursuant to Regulation 14A not later than 120 days after the end of the registrant's fiscal year ended December 31, 2018.

TRUPANION, INC.
Annual Report on Form 10-K
For the Fiscal Year Ended December 31, 2018
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Note About Forward-Looking Statements

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and section 27A of the Securities Act of 1933, as amended (Securities Act). All statements contained in this Annual Report on Form 10-K other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans and our objectives for future operations, are forward-looking statements. The words “believe,” “may,” “will,” “potentially,” “estimate,” “target,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan” and “expect,” and similar expressions that convey uncertainty of future events or outcomes, are intended to identify forward-looking statements.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in Part I. Item 1A. “Risk Factors” and elsewhere in this Annual Report on Form 10-K. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this Annual Report on Form 10-K may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely on forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. We undertake no obligation to update publicly any forward-looking statements for any reason, except as required by law.

Unless otherwise stated or the context otherwise indicates, references to “we,” “us,” “our” and similar references refer to Trupanion, Inc. and its subsidiaries taken as a whole.

PART I

Item 1. Business

Our Mission

Our mission is to help the pets we all love receive the best veterinary care.

Our Company and Approach

We provide medical insurance for cats and dogs throughout the United States, Canada and Puerto Rico. Our data-driven, vertically-integrated approach enables us to provide pet owners with what we believe is the highest value medical insurance for the life of their pets, priced specifically for each pet's unique characteristics. Our growing and loyal member base provides us with highly predictable and recurring revenue. We operate our business similar to other subscription-based businesses, with a focus on maximizing the lifetime value of each pet while sustaining a favorable ratio of lifetime value relative to acquisition cost, based on our desired return on investment.

Our target market is large and under-penetrated. We have pioneered a unique solution that sits at the center of the pet medical ecosystem, meeting the needs of pets, pet owners and veterinarians, and we believe we are uniquely positioned to continue to drive market penetration. Our aggregate total pets enrolled grew from 31,207 pets on January 1, 2010 to 521,326 pets on December 31, 2018, which represents a compound annual growth rate of 37%.

Total Revenue by New and Existing Pets Enrolled

(in millions)

It is very difficult for pet owners to budget for their pet becoming sick or injured when they don't know whether their pet's health will be average, lucky, or unlucky, and the cost of medical care varies dramatically by geography and pet breed. A pet owner budgeting for average medical care costs is not an effective solution for an unlucky pet.

Additionally, the timing of accidents or illnesses may not align with the owner's budgeting approach. Our cost-plus model is designed to spread the risk evenly within each category of pets. Our goal is to charge each pet the appropriate amount for their specific circumstances (*e.g.*, breed, age at enrollment, geography, etc.) so that each pet receives the same value proposition, and, in aggregate, the extra amount paid by lucky pets covers the veterinary costs incurred by unlucky pets. To an informed, responsible, and loving pet owner, Trupanion is a hedge to help them budget for the unexpected cost and variable timing of necessary veterinary care.

We provide our members with a high-quality medical plan for the life of their cat or dog. Our product is simple, fair, and covers all unexpected illnesses and injuries, including those that are most likely to occur with particular breeds of pet, which other insurance providers may label as congenital or hereditary conditions. We pay 90% of actual veterinary costs if a pet becomes sick or injured, including all diagnostic tests, surgeries, and medications. In general, only certain taxes, examination fees, and medical issues existing prior to enrollment are not included. Once enrolled in our subscription, we pay for the veterinary costs for the pet's entire life, and pet owners are free to use any licensed veterinarian in the United States and Canada, including any referral or specialty hospital. We aim to pay veterinarians directly, within five minutes of the veterinary invoice being created and prior to the pet owner checking out, eliminating the traditional reimbursement model and providing our members the convenience of not having to pay out of pocket or confirm treatment.

Veterinarians are able to recommend treatment to Trupanion members without having their decisions dictated by costs or the financial burden of the pet owner. Veterinarians, as a result, are able to establish stronger relationships and better alignment with pet owners who are protected by Trupanion. Our members tend to visit veterinarians more frequently and select the best course of treatment for their pet regardless of cost.

We generate revenue primarily from our members' subscription fees. Fees are paid at the beginning of each subscription period, which automatically renews on a monthly basis. Since 2010, at least 88% of our subscription business revenue every quarter has come from existing members who had active subscriptions at the beginning of the quarter. Due to our focus on providing a superior value proposition and member experience, our members are very loyal, as evidenced by our 98.5% average monthly retention rate since 2010. For more information regarding average monthly retention, including an explanation of how we calculate this metric, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Operating Metrics."

We enrolled our first pet in Canada in 2000 and our first pet in the United States in 2008. Our revenue for the year ended December 31, 2018 was \$304.0 million, representing a compound annual growth rate of 41% from our revenue of \$19.1 million for the year ended December 31, 2010. We have made and expect to continue to make substantial investments in member acquisition and in expanding our operations to support our expected growth. For the year ended December 31, 2018, we had a net loss of \$0.9 million and our accumulated deficit was \$83.7 million at December 31, 2018.

Our Strategy

We are focused on attracting and retaining members by providing a best-in-class value and member experience by focusing on the following strategies:

Increase the number of referring veterinary practices. We intend to increase the number of veterinary practices that are actively introducing Trupanion to their clients.

Increase the number of referrals from active veterinary practices. We intend to continue increasing the number and quality of interactions that we have with veterinarians to accelerate the rate at which active veterinary practices refer us leads.

Increase the number of third-party referrals from members. We believe that it is critical to our long-term success that existing members add a pet or refer their friends and family to Trupanion, so we focus on improving the member experience. For example, Trupanion Express[®] is designed to directly pay veterinary invoices, eliminating the reimbursement model and transforming the payment process to simplify the administrative hassle for our members.

Improve online lead generation and conversion. We are investing in our online marketing capabilities, and intend to continue to do so in order to fully capture the online opportunity. Our online marketing initiatives have played an integral role in converting leads to enrolled pets and also, to a lesser extent, in generating new leads.

Explore other member acquisition channels. We regularly evaluate new member acquisition channels. We intend to aggressively pursue those channels that we believe could, over time, generate an attractive ratio of lifetime value relative to acquisition cost, based on our desired return on investment.

Expand internationally. While we are primarily focused on capturing the large opportunity in the U.S. and Canadian markets, we are in the process of entering the Australian market and may choose to explore other international expansion in the future.

Pursue other revenue opportunities. We may opportunistically engage in other revenue opportunities. For example, our wholly-owned insurance subsidiary, American Pet Insurance Company, has partnered with unaffiliated general agents offering pet insurance products since 2012.

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Sales and Marketing

Marketing to Veterinarians

Veterinary practices represent our largest referral source, and combined with referrals from members, accounted for approximately 73% of our leads in 2018. Our Territory Partner model was designed to facilitate frequent, in-person, face-to-face communications with veterinarians and their staff about the benefits of Trupanion and high-quality medical insurance for the life of a pet. The most important job of a Territory Partner is to build strong relationships with each veterinary hospital, so the staff can trust and recommend Trupanion. Alignment with veterinarians is critical for a positive member experience, long-term retention, and pet owner referrals. We strongly believe that earning the trust of veterinarians and their staff is the first step to successfully capturing more of the North American market. The current market for veterinary services is highly fragmented and includes many sole-owner veterinary practices and small veterinary practices that are difficult to reach. We believe that no pet insurance company has a resource that compares in scale to our Territory Partners and that it would be extremely difficult, costly and time consuming to replicate. Our Territory Partners are independent contractors who market our product and are paid fees based on activity in their regions. Their role is not to sell or solicit policies directly to pet owners. Their role is instead to communicate and to build relationships with veterinarians and their staff, primarily through face-to-face interactions. We believe this structure aligns our interests and provides a platform that we can leverage over time.

Sales and Marketing to Pet Owners

We generate leads through a diverse set of third-party referrals and online member acquisition channels, which we then convert into members through our contact center and website.

Referrals from third-parties. We actively promote the value of Trupanion to veterinarians, veterinary affiliates (including purchasing groups and other veterinary membership organizations), corporate employee benefit providers, and shelters and breeders so they can inform their clients on the benefits of Trupanion. For the year ended December 31, 2018, 65% of our new pet enrollments were generated from these third-party referrals (excluding referral from existing members).

Referrals from existing members. For the year ended December 31, 2018, 26% of our new pet enrollments were generated from existing members adding a pet or referring their friends and family.

Online. We believe many of our members spend some time researching options before deciding to purchase our subscription. A significant portion of the members we acquire from online leads come through our paid search marketing, email marketing, social media marketing and search engine optimization initiatives.

Competition

We compete with consumers that self-fund veterinary costs with cash or credit, as well as traditional "pet insurance" providers and new entrants to our market. The vast majority of pet owners in the United States and Canada do not currently have medical insurance for their pets. We are primarily focused on expanding the overall size of the market by improving the value proposition for consumers. We view our primary competitive challenge as educating pet owners on why Trupanion is a better alternative to self-funding.

In addition, new entrants backed by large insurance companies with substantial financial resources have attempted to enter the market in the past and may do so again in the future. Further, traditional providers may consolidate, resulting in the emergence of new providers that are vertically integrated or able to create other operational efficiencies, which could lead to increased competition. We believe that we have competitive strengths that position us favorably related to existing and potential competitors. These include: a superior value proposition for pet owners due, in part, to our vertically integrated structure that reduces frictional costs; a unique member acquisition strategy, which we have developed using Territory Partners; a proprietary database containing historical data since the year 2000, which provides actionable data insights; a powerful technology infrastructure; and an experienced management team.

Intellectual Property

We rely on federal, state, common law, and international rights, as well as contractual restrictions, to protect our intellectual property. We control access to our proprietary technology, software, and documentation by entering into confidentiality and invention assignment agreements with our employees and partners, and confidentiality agreements with third parties, such as service providers, vendors, individuals and entities that may be exploring a business relationship with us. We also rely on a combination of intellectual property rights, including trade secrets, patents, copyrights, trademarks, and domain names to establish and protect our intellectual property. We seek to protect our proprietary position by filing patent applications in the United States and in jurisdictions outside of the United States related to our technology, inventions, and improvements that are important to our business. We hold two U.S. patents related to the technology underlying our proprietary Trupanion Express platform, one patent for the design of the platform, and we have additional patent applications pending in the United States and in other jurisdictions. We additionally rely on data and market exclusivity, and patent term extensions when available. Our ability to protect and enforce our intellectual property rights is subject to risk and may adversely impact our business.

Employees

We highly value our company culture. We are a mission-driven company and attract employees that share our passion for pets. Our culture enables our employees to channel that passion collectively toward our goals and is key to our success. As of December 31, 2018, we had 586 employees.

Regulation

Each U.S. state, the District of Columbia and U.S. territories and possessions, as well as all of the Canadian provinces, have insurance laws that apply to companies licensed to transact insurance business in the jurisdiction. The primary regulator of an insurance company, however, is located in its state of domicile. Our insurance subsidiary, American Pet Insurance Company (APIC), is domiciled in New York State and its primary regulator is therefore the New York Department of Financial Services (NY DFS). APIC is currently licensed to do business in all 50 states, Puerto Rico and the District of Columbia in the United States. As such, APIC is subject to comprehensive regulation and supervision under U.S. state and federal laws.

State insurance regulators have broad authority with respect to all aspects of the insurance industry, including the following:

- licensing to transact business, and approval and issuance of certificates of authority;
- revoking or suspending previously issued certificates of authority;
- assessing the officers and directors to ensure a minimum level of competency and trustworthiness;
- licensing of individual producers and agents and business entities marketing and selling insurance products;
- licensing of claims adjusters and third-party administrators;
- penalizing for noncompliance with respect to licensing requirements and regulations;
- admitting assets to statutory surplus and regulating the nature of investments;
- regulating premium rate levels for the insurance products offered;
- approving policy forms;
- regulating claims practices; and
- establishing reserve requirements and solvency standards.

Regulators also have broad authority to perform on-site market conduct examinations of our management and operations, marketing and sales, underwriting, customer service, claims handling and licensing. Market conduct examinations can involve direct, on-site contact with a company to identify potential regulatory violations, discussion and correction of an identified problem, or obtaining a better understanding of how the company is operating in the marketplace.

State insurance laws and regulations in the United States require APIC to file financial statements with state insurance regulators everywhere it is licensed and its operations and accounts are subject to examination at any time. APIC's statutorily required financial statements are available to the public. APIC prepares statutory financial statements in accordance with accounting practices and procedures prescribed or permitted by these regulators. The National Association of Insurance Commissioners (NAIC) has approved a series of uniform statutory accounting principles

(SAP) that have been adopted, in some cases with minor modifications, by all state insurance regulators. As a basis of accounting, SAP was developed to monitor and regulate the solvency of insurance companies. In developing SAP, insurance regulators were primarily concerned with assuring an insurer's ability to pay all its current and future obligations to policyholders. As a result, statutory accounting focuses on conservatively valuing the assets and liabilities of insurers, generally in accordance with standards specified by the insurer's domiciliary state. The values for assets, liabilities and equity reflected in financial statements prepared in accordance with U.S. generally accepted accounting principles are usually different from those reflected in financial statements prepared under SAP.

In Canada, our medical insurance is written by an unaffiliated Canadian-licensed insurer, Omega General Insurance Company (Omega). Under the terms of our agreements with Omega, our subsidiary Trupanion Brokers Ontario acts as a general agent through a fronting and reinsurance agreement with Omega pursuant to which, we retain any financial risk associated with our Canadian business. Effective January 1, 2015, these agreements were restructured to include our segregated cell business, Wyndham Segregated Account AX (WICL), located in Bermuda. These restructured agreements automatically renew annually, but may be terminated by either party with one year's written notice. Omega's Canadian insurance operations are supervised and regulated by the Canadian federal, provincial and territorial governments. Omega is a fully licensed insurer in all of the Canadian provinces and territories in which we do business.

Though we are not directly regulated by the Bermuda Monetary Authority (BMA), WICL's regulation and compliance impacts us as it could have an adverse impact on the ability of WICL to pay dividends. WICL is regulated by the BMA under the Insurance Act of 1978 (Insurance Act) and the Segregated Accounts Company Act of 2000. The Insurance Act imposes on Bermuda insurance companies solvency and liquidity standards, certain restrictions on the declaration and payment of dividends and distributions, certain restrictions on the reduction of statutory capital, and auditing and reporting requirements, and grants BMA the powers to supervise and, in certain circumstances, to investigate and intervene in the affairs of insurance companies. Under the Insurance Act, WICL as a class 3 insurer is required to maintain available statutory capital and surplus at a level equal to or in excess of a prescribed minimum established by reference to net written premiums and loss reserves.

Under the Bermuda Companies Act of 1981, as amended, a Bermuda company may not declare or pay a dividend or make a distribution out of contributed surplus if there are reasonable grounds for believing that: (a) the company is, or would be after the payment, unable to pay its liabilities as they become due; or (b) the realizable value of the company's assets would thereby be less than its liabilities. The Segregated Accounts Company Act of 2000 further requires that dividends out of a segregated account can only be paid to the extent that the cell remains solvent. The value of its assets must remain greater than the aggregate of its liabilities, issued share capital, and share premium accounts. Per our contractual agreements with WICL, the allowable dividend to be paid by WICL is equivalent to the positive undistributed profit attributable to the shares.

Insurance Holding Company Regulation

APIC is subject to laws governing insurance holding companies in New York, its state of domicile. These laws impact us in a number of ways, including the following:

- We must file periodic information reports with the NY DFS, including information concerning our capital structure, ownership, financial condition and general business operations.

- New York regulates certain transactions between APIC and our other affiliated entities, including the fee levels payable by APIC to affiliates that provide services to APIC.

New York law restricts the ability of any one person to acquire certain levels of our voting securities without prior regulatory approval. State insurance holding company regulations generally provide that no person, corporation or other entity may acquire control of an insurance company, or a controlling interest in any parent company of an insurance company, without the prior approval of such insurance company's domiciliary state insurance regulator. Any person acquiring, directly or indirectly, 10% or more of the voting securities of an insurance company is presumed to have acquired "control" of the company. To obtain approval of any change in control, the proposed acquirer must file with the applicable insurance regulator an application disclosing, among other information, its background, financial condition, the financial condition of its affiliates, the source and amount of funds by which it will effect the acquisition, the criteria used in determining the nature and amount of consideration to be paid for the acquisition, proposed changes in the management and operations of the insurance company and other related matters. In considering an application to acquire control of an insurer, the insurance commissioner generally will consider such factors as the experience, competence and financial strength of the applicant, the integrity of the applicant's board of directors and executive officers, the acquirer's plans for the management and operation of the insurer and any anti-competitive results that may arise from the acquisition.

New York law restricts the ability of APIC to pay dividends to its holding company parent. These restrictions are based in part on the prior year's statutory income and surplus. In general, dividends up to specified levels are

considered ordinary and may be paid without prior approval, and dividends in larger amounts, or extraordinary dividends, are subject to approval by the NY DFS. An extraordinary dividend or distribution is defined as a dividend or distribution that, in the aggregate in any 12-month period, exceeds the lesser of (i) 10% of surplus as of the preceding December 31 or (ii) the insurer's adjusted net investment income for such 12-month period, not including realized capital gains.

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Financial Regulation of Insurers

Risk-Based Capital Requirements

The NAIC has adopted risk-based capital requirements for life, health and property and casualty insurance companies. Refer to Item 1A. “Risk Factors” for details of these requirements.

NAIC Insurance Regulatory Information System Ratios

The NAIC has developed a set of financial relationships or tests known as the Insurance Regulatory Information System, or IRIS, to assist state regulators in monitoring the financial condition of U.S. insurance companies and identifying companies requiring special attention or action. IRIS consists of a statistical phase and an analytical phase whereby financial examiners review insurers’ annual statements and financial ratios. The statistical phase consists of 12 key financial ratios based on year-end data that are generated from the NAIC database annually; each ratio has a “usual range” of results. For IRIS ratio purposes, APIC submits data annually to state insurance regulators who then analyze our data using prescribed financial data ratios. A ratio falling outside the prescribed “usual range” is not considered a failing result. Rather, unusual values are viewed as part of the regulatory early monitoring system. In many cases, it is not unusual for financially sound companies to have one or more ratios that fall outside the usual range. As of December 31, 2018, APIC had four such ratios outside the usual range, relating to net premiums written to surplus, change in policyholders’ surplus, and investment yield.

Regulators may investigate or monitor an insurance company if its IRIS ratios fall outside the prescribed usual range. The inquiries made by state insurance regulators into an insurance company’s IRIS ratios can take various forms. In some instances, regulators may require the insurance company to provide a written explanation as to the causes of the particular ratios being outside the usual range, management’s actions to produce results that will be within the usual range in future years and what, if any, actions the insurance company’s domiciliary state insurance regulators have taken. Regulators are not required to take action if an IRIS ratio is outside the usual range, but, depending on the nature and scope of the particular insurance company’s exception, regulators may request additional information to monitor going forward and, as a consequence, may take additional regulatory action.

Insurance Guaranty Associations, Residual Markets, Wind Pools and State-specific Reinsurance Mechanisms

Most jurisdictions in which we operate have laws or regulations that require insurance companies doing business in the state to participate in various types of guaranty associations or other similar arrangements designed to protect policyholders from losses under insurance policies issued by insurance companies that become impaired or insolvent. Typically, these associations levy assessments, up to prescribed limits, on member insurers on the basis of the member insurer’s proportionate share of the business in the relevant jurisdiction in the lines of business in which the impaired or insolvent insurer is engaged. Some jurisdictions permit member insurers to recover assessments that they paid through full or partial premium tax offsets, usually over a period of years.

Some states in which APIC operates have residual markets, wind pools or state reinsurance mechanisms. The general intent behind these is to provide insurance to individuals and businesses that cannot find appropriate insurance in the private marketplace. The intent of state-specific reinsurance mechanisms generally is to stabilize the cost of, and ensure access to, reinsurance for admitted insurers writing business in the state. Historically, APIC has had minimal financial exposure to guaranty associations, residual markets, wind pools and state-specific reinsurance mechanisms; however there is no guarantee that these items will continue to be of low financial impact to APIC.

Federal Initiatives

The U.S. federal government generally does not directly regulate the insurance business. From time to time, various regulatory and legislative changes have been proposed in the insurance industry. Among the proposals that have in the past been, or are at present may be under consideration, are the possible introduction of federal regulation in addition to, or in lieu of, the current system of state regulation of insurers. There have also been proposals in various state legislatures (some of which have been enacted) to conform portions of their insurance laws and regulations to various model acts adopted by the NAIC. The NAIC has undertaken a Solvency Modernization Initiative focused on updating the U.S. insurance solvency regulation framework, including capital requirements, governance and risk management, group supervision, accounting and financial reporting and reinsurance. The NAIC Amendments are a result of these efforts. Additional requirements are also expected.

In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) established a Federal Insurance Office within the U.S. Department of the Treasury. The Federal Insurance Office initially is charged with monitoring all aspects of the insurance industry (other than health insurance, certain long-term care insurance and crop insurance), gathering data and conducting a study on methods to modernize and improve the insurance regulatory system in the United States. It is not possible to predict whether, in what form or in what jurisdictions any of these proposals might be adopted, or the effect federal involvement in insurance will have, if any, on us.

Privacy and Data Collection Regulation

There are numerous federal, state and foreign laws regarding privacy and the protection of member data. The regulatory environment in this area for online businesses is very unsettled in the United States and internationally and new legislation is frequently being proposed and enacted.

In the area of information security and data protection, many states have passed laws requiring notification to users when there is a security breach for personal data or requiring the adoption of minimum information security standards. In addition, our operations subject us to certain payment card association operating rules, certification requirements and rules, including the Payment Card Industry Data Security Standard, a security standard for companies that collect, store or transmit certain data regarding credit and debit cards, credit and debit card holders and credit and debit card transactions.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or obtain and use our technology or data to develop products that may compete with our offerings. Policing unauthorized use of our technology or data is difficult. The laws of other countries in which we operate may offer little or no effective protection of our proprietary technology. Our competitors could also independently develop technologies equivalent to ours, and our intellectual property rights may not be broad enough for us to prevent competitors from selling products incorporating those technologies.

Companies in our industry and in other industries may own a large number of patents, copyrights and trademarks and may frequently request license agreements, threaten litigation or file suit against us based on allegations of infringement or other violations of intellectual property rights. From time to time, we face, and we expect to face in the future, allegations that we have infringed the trademarks, copyrights, patents and other intellectual property rights of third parties, including our competitors. As we face increasing competition and as our business grows, we will likely face more claims of infringement.

Corporate Information

We were founded in Canada in 2000 as Vetinsurance Ltd. In 2006, we effected a business reorganization whereby Vetinsurance Ltd. became a consolidated subsidiary of Vetinsurance International, Inc., a Delaware corporation. In 2007, we began doing business as Trupanion. In 2013, we formally changed our name from Vetinsurance International, Inc. to Trupanion, Inc. Our principal executive offices are located at 6100 4th Avenue South, Seattle, Washington 98108, and our telephone number is (855) 727-9079. Our website address is www.trupanion.com. Information contained on, or that can be accessed through, our website is not incorporated by reference, and you should not consider information on our website to be part of this Annual Report on Form 10-K.

Available Information

We are required to file annual, quarterly and other reports, proxy statements and other information with the Securities and Exchange Commission (SEC) under the Securities Exchange Act of 1934, as amended (Exchange Act). We also make available, free of charge on the investor relations portion of our website at investors.trupanion.com, our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after they are filed electronically with the SEC. The SEC also maintains an Internet website at www.sec.gov where you can obtain our SEC filings. You can also obtain paper copies of these reports, without charge, by contacting Investor Relations at InvestorRelations@Trupanion.com.

Investors and others should note that we may announce material financial information to our investors using our investor relations website, SEC filings, our annual stockholder meeting, press releases, public conference calls, investor conferences, presentations and webcasts. We use these channels, as well as social media, to communicate with our members and the public about our company, our services and other issues. It is possible that the information

we post on these channels, such as social media, could be deemed to be material information.

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Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this report and in our other filings with the SEC, in evaluating our business and before investing in our common stock. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that are not expressly stated, that we are unaware of, or that we currently believe are not material, may also become important factors that affect us. If any of the following risks occur, our business may suffer and you could lose part or all of your investment.

Risks Related to Our Business and Industry

We have incurred significant cumulative net losses since our inception and may not be able to achieve or maintain profitability in the future.

We have incurred significant cumulative net losses since our inception. We have funded our operations through equity financings, borrowings under a revolving line of credit and term loans and, more recently, positive cash flows from operations. We may not be able to achieve or maintain profitability in the future. Our recent growth, including our growth in revenue and membership, may not be sustainable or may decrease, and we may not generate sufficient revenue to achieve or maintain profitability. Additionally, our expense levels are based, in significant part, on our estimates of future revenue and many of these expenses are fixed in the short term. As a result, we may be unable to adjust our spending in a timely manner if our revenue falls short of our expectations. Accordingly, any significant shortfall of revenue in relation to our estimates could have an immediate negative effect on our financial results.

We have made and plan to continue to make significant investments to grow our member base. Our average pet acquisition cost and the number of new pets we enroll depends on a number of factors and assumptions, including the effectiveness of our sales execution and marketing initiatives, changes in costs of media, the mix of our sales and marketing expenditures and the competitive environment. Our average pet acquisition cost has in the past significantly varied and in the future may significantly vary period to period based upon specific marketing initiatives. We also regularly test new member acquisition channels and marketing initiatives, which often are more expensive than our traditional marketing channels and generally increase our average acquisition costs. We plan to expand the number of Territory Partners we use to reach veterinarians and other referral sources and to engage in other marketing activities, including direct to consumer advertising, which are likely to increase our acquisition costs.

We also expect to continue to make significant expenditures relating to the acquisition of new members, including the increase of inside account managers retention of our existing members and development and implementation of our technology platforms. These increased expenditures may not be effective and may make it more difficult for us to scale or even remain profitable. If we are unable to achieve or maintain profitability or otherwise invest in our growth, we may not be able to execute our business plan, our prospects may be harmed and our stock price could be materially and adversely affected.

We base our decisions regarding our member acquisition expenditures primarily on the projected lifetime value of the pets that we expect to acquire and the projected internal rate of return on marketing spend. Our estimates and assumptions may not accurately reflect our future results, we may overspend on member acquisition, and we may not be able to recover our member acquisition costs or generate profits from these investments.

We invest significantly in member acquisition. We spent \$23.7 million on sales and marketing to acquire new members for the year ended December 31, 2018. We expect to continue to spend significant amounts to acquire additional members. We utilize Territory Partners, who are paid fees based on activity in their regions, to communicate the benefits of our subscription to veterinarians through in-person visits. Veterinarians then educate pet owners, who visit our website or call our contact center to learn more about, and potentially enroll in, our subscription. We also invest in other third-party referrals and direct to consumer member acquisition channels, though we have limited experience with some of them.

We base our decisions regarding our member acquisition expenditures primarily on the lifetime value of the pets that we project to acquire. This analysis depends substantially on estimates and assumptions based on our historical experience with pets enrolled in earlier periods, including our key operating metrics described in “Management’s Discussion and Analysis of Financial Condition and Results of Operations-Key Operating Metrics.”

If our estimates and assumptions regarding internal rate of return and the lifetime value of the pets that we project to acquire and our related decisions regarding investments in member acquisition prove incorrect, or if our calculation of internal rate of return and lifetime value of the pets that we project to acquire differs significantly from that of pets acquired in prior periods, we may be unable to recover our member acquisition costs or generate profits from our investment in acquiring new members. Moreover, if our member acquisition costs increase or we invest in member acquisition channels that do not ultimately result in any or an adequate number of new member enrollments, the return on our investment may be lower than we anticipate irrespective of the lifetime value of the pets that we project to acquire as a result of the new members. If we cannot generate profits from this investment, we may need to alter our growth strategy, and our growth rate and operating results may be adversely affected.

If we are unable to maintain high member retention rates, our growth prospects and revenue will be adversely affected.

We have historically experienced high average monthly retention rates. For example, our average monthly retention rate between 2010 and 2018 was 98.5%. If our efforts to satisfy our existing members are not successful or if new marketing initiatives result in enrolling more pets that inherently have a lower retention rate, we may not be able to maintain our retention rates. Members we obtain through aggressive promotions or other channels that involve relatively less meaningful contact between us and the member may be more likely to terminate their subscription. In the past, we have experienced reduced retention rates during periods of rapid member growth, as our retention rate generally has been lower during the first year of member enrollment. Members may choose to terminate their subscription for a variety of reasons, including perceived or actual lack of value, delays or other unsatisfactory experiences in how we review and process veterinary invoice payments, unsatisfactory member service, an economic downturn, increased subscription fees, loss of a pet, a more attractive offer from a competitor, changes in our subscription or other reasons, including reasons that are outside of our control. Our cost of acquiring a new member is substantially greater than the cost involved in maintaining our relationship with an existing member. If we are not able to successfully retain existing members and limit terminations, our revenue and operating margins will be adversely impacted and our business, operating results and financial condition would be harmed.

The prices of our subscriptions are based on assumptions and estimates and may be subject to regulatory approvals. If our actual experience differs from these assumptions and estimates or if we are unable to obtain any necessary regulatory pricing approvals, our revenue and financial condition could be adversely affected.

The pricing of our subscriptions reflects amounts we expect to pay for a pet's medical care derived from assumptions that we make regarding a number of factors, including a pet's species, breed, age, gender and location. Factors related to pet location include the current and assumed changes in the cost and availability of veterinary technology and treatments and local veterinary practice preferences. The prices of our subscriptions also include assumptions and estimates regarding our own operating costs and expenses. We monitor and manage our pricing and overall sales mix to achieve target returns. Profitability from new members emerges over a period of years depending on the nature and length of time a pet is enrolled, and is subject to variability as actual results may differ from pricing assumptions. If the subscription fees we collect are insufficient to cover actual costs, including veterinary invoice expense, operating costs and expenses within anticipated pricing allowances, or if our member retention rates are not high enough to ensure recovery of member acquisition costs, then our gross profit could be adversely affected, and our revenue may be insufficient to achieve or maintain profitability. Conversely, if our pricing assumptions differed from actual results such that we overpriced risks, our competitiveness and growth prospects could be adversely affected. Further, even if our pricing assumptions are accurate, we may not be able to obtain the necessary regulatory approvals for any pricing changes that we may determine are appropriate based on our pricing assumptions, which could prevent us from obtaining sufficient revenue from subscriptions to cover our costs, including veterinary invoice expense, processing costs, pet acquisition costs and other expenses in any such jurisdiction unless and until such regulatory approvals are obtained in appropriate amounts.

The anticipated benefits of our analytics platform may not be fully realized.

Our analytics platform draws upon our proprietary pet data to price our subscriptions. The assumptions we make about breeds and other factors in pricing may prove to be inaccurate and, accordingly, these pricing analytics may not accurately reflect the expense that we will ultimately incur. Furthermore, if any of our competitors develop similar or

better data systems, adopt similar or better underwriting criteria and pricing models or receive our data, our competitive advantage could decline or be lost.

Our actual veterinary invoice expense may exceed our current reserve established for veterinary invoices and may adversely affect our operating results and financial condition.

Our recorded reserve for veterinary invoices is based on our best estimates of the amount of veterinary invoices we expect to pay, inclusive of an estimate for veterinary invoices we have not yet received, after considering known facts and interpretations of circumstances and the estimated cost to process and pay those veterinary invoices. We consider internal factors, including data from our proprietary data analytics platform, experience with similar cases, actual veterinary invoices paid, historical trends involving veterinary invoice payment patterns, patterns of receipt of veterinary invoices, seasonality, pending levels of unpaid veterinary invoices, veterinary invoice processing programs and contractual terms. We may also consider external factors, including changes in the law, court decisions, changes to regulatory requirements and economic conditions. Because reserves are estimates of veterinary invoices that have been incurred but are not yet submitted to us, the establishment of appropriate reserves is an inherently uncertain and complex process that involves significant subjective judgment. Further, we do not transfer or cede our risk as an insurer and, therefore, we maintain more risk than we would if we purchased reinsurance. The ultimate cost of paying veterinary invoices and the related administration may vary materially from recorded reserves, and such variance may result in adjustments to the reserve for veterinary invoices, which could have a material effect on our operating results.

We rely significantly on Territory Partners, veterinarians and other third parties to recommend us.

We rely significantly on Territory Partners and other third parties to cultivate direct veterinary relationships and build awareness of the benefits that we offer veterinarians and their clients. In turn, we rely on veterinarians to introduce and recommend Trupanion to their clients. We also rely significantly on other third parties, such as existing members, online and other businesses, animal shelters, breeders and veterinary affiliates, including veterinarian purchasing groups and associations, to help generate leads for our subscription. Veterinary referred leads represent our largest member acquisition channel. In the year ended December 31, 2018, approximately 73% of our enrollments came from referrals from veterinarians and existing members, as well as people adding pets to their existing subscription.

Many factors influence the success of our relationships with these referral sources, including:

- the continued positive market presence, reputation and growth of our company and of the referral sources;
- the effectiveness of referral sources;
- the decision of any such referral source to support one or more of our competitors;
- the interest of the referral sources' customers or clients in our subscription;
- the relationship and level of trust between Territory Partners and veterinarians, and between us and the referral source;
- the percentage of the referral sources' customers or clients that submit applications or use trial certificates to enroll through our website or contact center;
- our ability to implement or maintain any marketing programs, including trial certificates, in any jurisdiction; and
- our ability to work with the referral source to implement any changes in our marketing initiatives, including website changes, infrastructure and technology and other programs and initiatives necessary to generate positive consumer experiences.

In order for us to implement our business strategy and grow our revenue, we must effectively maintain and increase the number and quality of our relationships with Territory Partners, veterinarians and other referral sources, and continue to scale and improve our processes, programs and procedures that support them. Those processes, programs and procedures could become increasingly complex and difficult to manage. We expend significant time and resources attracting qualified Territory Partners and providing them with complete and current information about our business. Their relationship with us may be terminated at any time, and, if terminated, we may not recoup the costs associated with educating them about our subscription or be able to maintain any relationships they may have developed with veterinarians within their territories. Sometimes a single relationship may be used to cover multiple territories so that a terminated relationship could significantly impact our company. Further, if we experience an increase in the rate at which Territory Partner relationships are terminated, we may not develop or maintain relationships with veterinarians as quickly as we have in the past. If the financial cost to maintain our relationships with Territory Partners outweighs the benefits provided by Territory Partners, or if they feel unsupported or undervalued by us and terminate their relationship with us, our growth and financial performance could be adversely affected.

The success of our relationships with veterinary practices depends on the overall value we can provide to veterinarians. If the scope of our subscription is perceived to be inadequate or if our process for paying veterinary invoices is unsatisfactory to the veterinarians' clients because, for example, a service is not included in our subscription, member requests for reimbursement are denied or we fail to timely settle and pay veterinary invoices, veterinarians may be unwilling to recommend us to their clients and they may encourage their existing clients who have subscribed to stop or to purchase a competing product. If veterinarians determine our subscription is unreliable, cumbersome or otherwise does not provide sufficient value, they may terminate their relationship with us or begin recommending a competing product, which could negatively impact our ability to increase our member base and grow our business.

If we fail to establish or are unable to maintain successful relationships with Territory Partners, veterinarians and other referral sources, or experience an increase in the rate at which any of these relationships are terminated, it could negatively impact our ability to increase and retain our member base and our financial results. If we are unable to maintain our existing member acquisition channels and/or continue to add new member acquisition channels, if the cost of our existing sources increases or does not scale as we anticipate, or if we are unable to continue to use any existing channels or programs in any jurisdiction, including our trial certificate program, our member levels and sales and marketing expenses may be adversely affected.

Territory Partners are independent contractors and, as such, may pose additional risks to our business.

Territory Partners are independent contractors and, accordingly, we do not directly provide the same direction, motivation and oversight over Territory Partners as we otherwise could if Territory Partners were our own employees. Further, Territory Partners may themselves employ or engage others; we refer to these partners and their associates, collectively, as our Territory Partners. We do not control a Territory Partner's employment or engagement of others, and it is possible that the actions of their employees and/or contractors could create threatened or actual legal proceedings against us.

Territory Partners may decide not to participate in our marketing initiatives and/or training opportunities, accept our introduction of new solutions or comply with our policies and procedures applicable to them, any of which may adversely affect our ability to develop relationships with veterinarians and grow our membership. Our sole recourse against Territory Partners who fail to perform is to terminate their contract, which could also trigger contractually obligated termination payments or result in disputes, including threatened or actual legal or regulatory proceedings. We believe that Territory Partners are not and should not be classified as employees under existing interpretations of the applicable laws of the jurisdictions in which we operate. We do not pay or withhold any employment tax with respect to or on behalf of Territory Partners or extend any benefits to them that we generally extend to our employees, and we otherwise treat Territory Partners as independent contractors. Applicable authorities or the Territory Partners have in the past questioned and may in the future challenge this classification. Further, the applicable laws or regulations, including tax laws or interpretations, may change. If it were determined that we had misclassified any of our Territory Partners, we may be subjected to penalties and/or be required to pay withholding taxes, extend employee benefits, provide compensation for unpaid overtime, or otherwise incur substantially greater expenses with respect to Territory Partners.

Any of the foregoing circumstances could have a material adverse impact on our operating results and financial condition.

Our member base has grown rapidly in recent periods, and we may not be able to maintain the same rate of membership growth.

Our ability to grow our business and to generate revenue depends significantly on attracting new members. For the year ended December 31, 2018, we generated 87% of our revenue from subscriptions. In order to continue to increase our membership, we must continue to offer a superior value to our members. Our ability to continue to grow our membership will also depend in part on the effectiveness of our sales and marketing programs. Our member base may not continue to grow or may decline as a result of increased competition or the maturation of our business.

We may not maintain our current rate of revenue growth.

Our revenue has increased quickly and substantially in recent periods. We believe that our continued revenue growth will depend on, among other factors, our ability to:

- improve our market penetration through efficient and effective sales and marketing programs to attract new members;
- convert leads into enrollments;
- maintain high retention rates;
- increase the lifetime value per pet to, in turn, enable us to spend more on sales and marketing programs;
- maintain positive relationships with veterinarians and other referral sources;
- maintain positive relationships with and increase the number and efficiency of Territory Partners;
 - continue to offer a superior value with competitive features and rates;

- accurately price our subscriptions in relation to actual member costs and operating expenses and achieve required regulatory approval for pricing changes;
- provide our members with superior member service, including timely and efficient payment of veterinary invoices, and by recruiting, integrating and retaining skilled and experienced personnel who can appropriately and efficiently review veterinary invoices and process payments;
- generate new and maintain existing relationships and programs in our other business segment;
- recruit, integrate and retain skilled, qualified and experienced sales department professionals who can demonstrate our value proposition to new and existing members;
- react to changes in technology and challenges in the industry, including from existing and new competitors;
- increase awareness of and positive associations with our brand; and
- successfully respond to any regulatory matters and defend any litigation.

You should not rely on our historical rate of revenue growth as an indication of our future performance.

Our use of capital may be constrained by risk-based capital regulations or contractual obligations.

Our subsidiary, American Pet Insurance Company, is subject to risk-based capital regulations that require us to maintain certain levels of surplus to support our overall business operations in consideration of our size and risk profile. We have in the past and may in the future fail to maintain the amount of risk-based capital required to avoid additional regulatory oversight, which was \$53.4 million as of December 31, 2018. To comply with these regulations and our related contractual obligations, we may be required to maintain capital that we would otherwise invest in our growth and operations, which may require us to modify our operating plan or marketing initiatives, delay the implementation of new solutions or development of new technologies, decrease the rate at which we hire additional personnel and enter into relationships with Territory Partners, incur indebtedness or pursue equity or debt financings or otherwise modify our business operations, any of which could have a material adverse effect on our operating results and financial condition.

We are also subject to a contractual obligation related to our reinsurance agreement with Omega General Insurance Company (Omega). Under this agreement, we are required to fund a Canadian Trust account in accordance with Canadian regulations. As of December 31, 2018, the account held CAD \$3.5 million.

Unexpected increases in the number or amounts of veterinary invoices received, or that we expect to receive, may negatively impact our operating results.

Unexpected changes in the number or amounts of veterinary invoices received, or that we expect to receive, may negatively impact our operating results. Rising costs of veterinary care and the increasing availability and usage of more expensive, technologically advanced medical treatments may increase the amounts of veterinary invoices we receive. Increases in the number of veterinary invoices we receive could arise from unexpected events that are inherently difficult to predict, such as a pandemic that spreads through the pet population, tainted pet food or supplies or an unusually high number of serious injuries or illnesses. We may experience volatility in the number of veterinary invoices we receive from time to time, and short-term trends may not continue over the longer term. The number of veterinary invoices may be affected by the level of care and attentiveness an owner provides to the pet, the pet's breed and age and other factors outside of our control, as well as fluctuations in member retention rates and by new member initiatives that encourage an increase in veterinary invoices and other new member acquisition activities. A significant increase in the number or amounts of veterinary invoices could increase our cost of revenue and have a material adverse effect on our financial condition.

Our success depends on our ability to review, process, and pay veterinary invoices timely and accurately.

We must accurately evaluate and pay veterinary invoices timely in a manner that gives our members high satisfaction. Many factors can affect our ability to do this, including the training, experience and skill of our personnel, our ability to reduce the number of payment requests made for services not included in our subscription, the department's culture and the effectiveness of its management, our ability to develop or select and implement appropriate procedures, supporting technologies and systems, and changes in our policy. Our failure to fairly pay veterinary invoices, accurately and in a timely manner, or to deploy resources appropriately, could result in unanticipated costs to us, lead to material litigation, undermine member goodwill and our reputation, and impair our brand image and, as a result, materially and adversely affect our competitiveness, financial results, prospects and liquidity.

We may not identify fraudulent or improperly inflated veterinary invoices.

It is possible that a member, or a third-party actually or purportedly on behalf of the member, could submit a veterinary invoice which we would then pay that appears authentic but in fact does not reflect services provided or products purchased for which the member paid. It is also possible that veterinarians will charge insured customers higher amounts than they would charge their non-insured clients for the same service or product. Such activity could lead to unanticipated costs to us and/or to time and expense to recover such costs. They could also lead to strained relationships with veterinarians and/or members, and could adversely affect our competitiveness, financial results and liquidity.

Changes in the foreign exchange rates may adversely affect our revenue and operating results.

We offer our subscription in Canada, and in the future may offer it in other countries, which exposes us to the risk of changes in currency exchange rates. For the year ended December 31, 2018, approximately 19% of our total revenue was generated in Canada. Fluctuations in the relative strength of the US dollar has in the past and could in the future adversely affect our revenue and operating results.

We are and will continue to be faced with many competitive challenges, any of which could adversely affect our prospects, operating results and financial condition.

We compete with pet owners that self-finance unexpected veterinary invoices with savings or credit, as well as traditional "pet insurance" providers and relatively new entrants into our market. The vast majority of pet owners in the United States and Canada do not currently have medical insurance for their pets. We are focused primarily on expanding our share of the overall market, and we view our primary competitive challenge as educating pet owners on why our subscription is a better alternative to self-financing.

Additionally, there are traditional insurance companies that provide pet insurance products, either as a stand-alone product or along with a broad range of other insurance products. In addition, new entrants backed by large insurance companies have attempted to enter the pet insurance market in the past and may do so again in the future. Further, traditional "pet insurance" providers may consolidate or take other actions to mimic the efficiencies from our vertically-integrated structure or create other operational efficiencies, which could lead to increased competition. Some of our current and potential competitors have longer operating histories, larger customer bases, greater brand recognition and significantly greater financial, technical, marketing and other resources than we do. Some of our competitors may be able to undertake more extensive marketing initiatives for their brands and services, devote more resources to website and systems development and make more attractive offers to potential employees, referral sources and third-party service providers.

To compete effectively, we will need to continue to invest significant resources in sales and marketing, in improving our member service levels, in the online experience and functionalities of our website and in other technologies and infrastructure. Failure to compete effectively against our current or future competitors could result in loss of current or potential members, subscription terminations or a reduction in member retention rates, which could adversely affect our pricing, lower our revenue and prevent us from maintaining profitability. We may not be able to compete effectively for members in the future against existing or new competitors, and the failure to do so could result in loss of existing or potential members, increased sales and marketing expenses or diminished brand strength, any of which could harm our business.

If we are not successful in cost-effectively converting visitors to our website and contact center into members, our business and operating results would be harmed.

Our growth depends in large part upon growth in our member base. We seek to convert consumers who visit our website and call our contact center into members. The rate at which consumers visiting our website and contact center considering enrollment in our subscription are converted into members is a significant factor in the growth of our member base. A number of factors have influenced, and could in the future influence, the conversion rates for any given period, some of which are outside of our control. These factors include:

- the competitiveness of our subscription, including its perceived value, simplicity, and fairness;
- changes in consumer shopping behaviors due to circumstances outside of our control, such as economic conditions and consumers' ability or willingness to pay for our product;
- the quality of and changes to the consumer experience when speaking with us on the phone or using our website;

regulatory requirements, including those that make the experience on our website cumbersome or difficult to navigate or that hinder our ability to speak with potential members quickly and in a way that is conducive to converting leads, enrolling new pets, and/or resolving member concerns;

system failures or interruptions in the operation of our abilities to write policies or operate our website or contact center; and

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changes in the mix of consumers who are referred to us through various member acquisition channels, such as veterinary referrals, existing members adding a pet and referring their friends and family members and other third-party referrals and direct-to-consumer acquisition channels.

Our ability to convert consumers into members can be impacted by a change in the mix of referrals received through our member acquisition channels. In addition, changes to our website or contact center, or other programs or initiatives we undertake, may adversely impact our ability to convert consumers into members at our current rate, or at all. These changes may have the unintended consequence of adversely impacting our conversion rates. A decline in the percentage of members who enroll in our subscription on our website or by calling our contact center also could result in increased member acquisition costs. To the extent the rate at which we convert consumers into members suffers, the growth rate of our member base may decline, which would harm our business, operating results and financial condition.

We have made and plan to continue to make substantial investments in features and functionality for our website and training and staffing for our contact center that are designed to generate traffic, increase member engagement and improve new and existing member service. These activities do not directly generate revenue, however, and we may never realize any benefit from these investments. If the expenses that we incur in connection with these activities do not result in sufficient growth in members to offset the cost, our business, operating results and financial condition will be adversely affected.

If we are unable to maintain and enhance our brand recognition and reputation, our business and operating results will be harmed.

We believe that maintaining and enhancing our brand recognition and reputation is critical to our relationships with existing members, Territory Partners, veterinarians and other referral sources, and to our ability to attract new members, new Territory Partners, additional supportive veterinarians and other referral sources. We also believe that the importance of our brand recognition and reputation will continue to increase as competition in our market continues to develop and mature. Our success in this area will depend on a wide range of factors, some of which are out of our control, including the following:

- the efficacy and viability of our sales and marketing programs;
- the perceived value of our subscription;
- quality of service provided, including the fairness, ease and timeliness of reviewing and paying veterinary invoices;
- actions of our competitors, Territory Partners, veterinarians and other referral sources;
- positive or negative publicity, including regulatory pronouncements and material on the Internet or social media;
- regulatory and other government-related developments; and
- litigation-related developments.

The promotion of our brand may require us to make substantial investments, and we anticipate that, as our market becomes increasingly competitive, these branding initiatives may become increasingly difficult and expensive. Our brand promotion activities may not be successful or yield increased revenue, and to the extent that these activities result in increased revenue, the increased revenue may not offset the expenses we incur and our operating results could be harmed. If we do not successfully maintain and enhance our brand, our business may not grow and our relationships with veterinarians and other referral sources could be terminated, which would harm our business, operating results and financial condition.

Furthermore, negative publicity, whether or not justified, relating to events or activities attributed to us, our employees, our strategic partners, our affiliates, or others associated with any of these parties, may tarnish our reputation and reduce the value of our brands. Damage to our reputation and loss of brand equity may reduce demand for our services and have an adverse effect on our business, operating results, and financial condition. Moreover, any attempts to rebuild our reputation and restore the value of our brands may be costly and time consuming, and such efforts may not ultimately be successful.

Our business depends on our ability to maintain and scale the infrastructure necessary to operate our technology platform and could be adversely affected by a system failure.

Our business depends on our ability to maintain and scale the infrastructure necessary to operate our technology platform, which includes our analytics and pricing engine, systems for managing veterinary invoice payments, customer relationship management system, billing system, contact center phone system and website. We use these technology frameworks to price our subscriptions, enroll members, engage with current members and pay veterinary invoices. Our members review and purchase subscriptions through our website and contact center, and we receive and pay veterinarian invoices directly through our software. Our reputation and ability to acquire, retain and serve our members depends on the reliable performance of our technology platform and the underlying network systems and infrastructure, and on providing best-in-class member service, including through our contact center and website. As our member base continues to grow, the amount of information collected and stored on the systems and infrastructure supporting our technology platform will continue to grow, and we expect to require an increasing amount of network capacity, computing power and information technology personnel to develop and maintain our technology platform and service our departments involved in member interaction.

We have made, and expect to continue to make, substantial investments in equipment and related network infrastructure to handle the operational demands on our technology platform, including increasing data collection, software development, traffic on our website and the volume of calls at our contact center. The operation of the systems and infrastructure supporting our technology platform is expensive and complex and could experience operational failures. In the event that our data collection, member base or amount of traffic on these systems grows more quickly than anticipated, we may be required to incur significant additional costs to increase the capacity in our systems. Any system failure that causes an interruption in or decreases the responsiveness of our services could impair our revenue-generating capabilities, harm our business and operating results and damage our reputation. In addition, any loss or mishandling of data could result in breach of confidence, competitive disadvantage or loss of members, and subject us to potential liability. Any failure of the systems and infrastructure that we rely on could negatively impact our enrollments as well as our relationship with members. If we do not maintain or expand the systems and infrastructure underlying our technology platform successfully, or if we experience operational failures, our reputation could be harmed and we could lose current and potential members, which could harm our operating results and financial condition.

We have made, and expect to continue to make, significant investments in new solutions and enhancements to our technology platform. These new solutions and enhancements may not be successful, and we may not recognize the expected benefits.

We have a team of product and engineering professionals dedicated in part to enhancing our technology platform and developing new solutions. We have made, and expect to continue to make, significant investments in these new solutions and enhancements. For example, we have made significant investments in our software, which is designed to facilitate the direct payment of invoices to veterinary practices. These development and implementation activities may not be successful, and we may incur delays or cost overruns or elect to curtail our currently planned expenditures related to them. Further, if or when these new solutions or enhancements are introduced, they may not be well received by veterinarians or by new or existing members, particularly if they are costly, cumbersome or unreliable. Even if they are well-received, they may be or become obsolete due to technological reasons or to the availability of alternative solutions in the marketplace. If new solutions and enhancements are not successful on a long-term basis, we may not realize benefits from these investments, and our business and financial condition could be adversely affected.

If we fail to effectively manage our growth, our business, operating results and financial condition may suffer.

We have recently experienced, and expect to continue to experience, significant growth, which has placed, and may continue to place, significant demands on our management and our operational and financial systems and infrastructure. We expect that our growth strategy will require us to commit substantial financial, operational and technical resources. It may also result in increased costs, including unexpected increases in our underlying costs (such as member acquisition costs or increases in the number or amounts of veterinary invoices received) generated by our new business, which could prevent us from remaining profitable and could impair our ability to compete effectively

for business. Additionally, we have in the past, and may in the future, experience increases in terminations as our membership grows, which negatively affects our retention rate. If we do not effectively manage growth at any time, our financial condition could be harmed and the quality of our services could suffer.

In order to successfully expand our business, we need to hire, integrate and retain highly skilled and motivated employees. We also need to continue to improve our existing systems for operational and financial management. These improvements could require significant capital expenditures and place increasing demands on our management. We may not be successful in managing or expanding our operations or in maintaining adequate financial and operating systems and controls. If we do not successfully implement improvements in these areas, our business, operating results and financial condition will be harmed.

Our operating results may vary, which could cause the trading price of our stock to fluctuate or decline, make period-to-period comparisons less meaningful, and make our future results difficult to predict.

We may experience fluctuations in our revenue, expenses and operating results in future periods. Our operating results may fluctuate in the future as a result of a number of factors, many of which are beyond our control. These fluctuations may lead analysts to change their long-term models for valuing our common stock, cause us to face short-term liquidity issues, impact our ability to retain or attract key personnel or cause other unanticipated issues, all of which could result in declines in our stock price. Moreover, these fluctuations may make comparing our operating results on a period-to-period basis less meaningful and make our future results difficult to predict. You should not rely on our past results as an indication of our future performance. In addition, if revenue levels do not meet our expectations, our operating results and ability to execute on our business plan are likely to be harmed. In addition to the other factors listed in this “Risk Factors” section, factors that could affect our operating results include the following:

- our ability to retain our current members and grow our member base;
- the level of operating expense we elect to incur related to sales and marketing and technology and development initiatives that are discretionary in nature;
- the effectiveness of our sales and marketing programs;
- our ability to improve veterinarians’ and other third-parties’ willingness to recommend our subscription;
- the timing, volume and amount of veterinary invoices and the adequacy of our related reserve;
- our ability to accurately price our subscription and achieve required regulatory pricing approvals;
- regulatory limitations or other constraints on our ability or our willingness to implement pricing changes;
- the level of demand for and cost of our subscription or competing products;
- fluctuations in applicable foreign currency exchange rates;
- the perceived value of our subscription to veterinarians and pet owners;
- spending decisions by our members and prospective members;
- our costs and expenses, including pet acquisition costs and costs to pay and process veterinary invoices;
- our ability to expand the scope and efficiency of our Territory Partner group;
- our ability to effectively manage our growth;
- the effects of increased competition in our business;
- our ability to keep pace with changes in technology and our competitors;
- the impact of any security incidents or service interruptions;
- costs associated with defending any regulatory action or litigation or with enforcing our intellectual property, contractual or other rights;
- the impact of economic conditions on our revenue and expenses; and
- changes in government regulation affecting our business.

Seasonal or periodic variations in the behavior of our members also may cause fluctuations in our financial results. Enrollment in our subscription tends to be discretionary in nature and may be sporadic, reflecting overall economic conditions, budgeting constraints, pet-buying patterns and a variety of other factors, many of which are outside our control. For example, we expect to experience some effects of seasonal trends in visits to veterinarians in the fourth quarter and in the beginning of the first quarter of each year in connection with the traditional holiday season. While we believe seasonal trends have affected and will continue to affect our quarterly results, our growth may have overshadowed these effects to date. We believe that our business will continue to be subject to seasonality in the future, which may result in fluctuations in our financial results.

Due to these and other factors, our financial results for any quarterly or annual period may not meet our expectations or the expectations of investors or analysts that follow our stock and may not be meaningful indications of our future performance.

Our vertical integration may result in higher costs.

We manage all aspects of our business, including operating our own insurance subsidiary, implementing our own national independent referral group of Territory Partners, pricing our subscriptions with our in-house actuarial team, processing and paying veterinary invoices, operating our own contact center and owning our own brand. While we believe this vertically integrated approach reduces frictional costs and enhances members' experiences, third-party providers may, now or in the future, be able to replicate this model, partially or entirely, on a more efficient and effective basis. If our in-house services are or become less efficient or less effective than the same services provided by a third party, we may not realize the related cost savings and may be unable to provide a superior membership experience, which may have an adverse effect on our operating results.

Medical insurance for cats and dogs is an evolving industry, which makes it difficult to evaluate our near- and long-term business prospects.

Medical insurance for cats and dogs continues to develop as an industry, and it is difficult to assess the future of the industry, including future penetration rates. As an evolving industry, the marketplace is subject to significant challenges and new competitors, and as a result the future revenue, income and growth potential of our business is uncertain.

Mergers or other strategic transactions in the animal health industry or among our competitors could adversely affect our ability to compete effectively and harm our results of operations.

It is probable that the veterinary industry will experience further consolidation in the future, which could result in more veterinarians' practices regarding communicating with pet owners about medical insurance being determined at a group level. Such consolidation could negatively impact our business. In addition, the animal health industry in general could experience future consolidation, which could negatively impact our relationships with participants in the industry. Moreover, some of our competitors may enter into new alliances with each other, or may establish or strengthen cooperative relationships with industry participants. Any of these developments could adversely affect our ability to compete effectively and lead to pricing pressure and our loss of market share and could result in a competitor with greater financial, technical, marketing, service and other resources, all of which could harm our business, financial condition, cash flows and results of operations.

Our forecasts of market growth may prove to be inaccurate, and even if the market for medical insurance for cats and dogs in North America achieves the forecasted growth, our business may not grow at similar rates, if at all.

Growth forecasts are subject to significant uncertainty and are based on assumptions and estimates, which may not prove to be accurate. Although we believe that the North American market for pet medical insurance will grow over time if consumers are offered a high-value product, the market in North America has been historically growing slowly, if at all, and may not be capable of growing further. Even if this market experiences significant growth, we may not grow our business at similar rates, or at all. For example, the market for medical insurance for cats and dogs in North America has been highly fragmented and competitive and may become even more so in the future. Our growth is subject to many factors, including our success in implementing our business strategy and maintaining our position in a highly competitive market, which are subject to many risks and uncertainties.

We depend on key personnel to operate our business and, if we are unable to retain, attract and integrate qualified personnel, our ability to develop and successfully grow our business could be harmed.

Our success depends to a significant extent on the continued services of our current management team, including Darryl Rawlings, our founder and Chief Executive Officer. The loss of Mr. Rawlings or several other key executives or employees within a short time frame could have a material adverse effect on our business. We employ all of our executive officers and key employees on an at-will basis, and their employment can be terminated by us or them at any time, for any reason and without notice, subject, in certain cases, to severance payment rights. We maintain no "key man" insurance. Additionally, if we were to lose a large percentage of our current employees in a relatively short time period, or our employees were to engage in a work stoppage or unionize, we may be unable to hire and train new employees quickly enough to prevent disruptions in our operations, which may result in the loss of members, Territory Partners or referral sources.

Our success also depends on our ability to attract, retain and motivate additional skilled management personnel. We plan to continue to expand our work force, which we believe will enhance our business and operating results. We believe that there is significant competition for qualified personnel with the skills and knowledge that we require. Many of the other companies with which we compete for qualified personnel have greater financial and other resources than we do. They also may provide more diverse opportunities and better chances for career advancement. Some of these characteristics may be more appealing to high-quality candidates than those we have to offer. In order to retain valuable employees, in addition to salary and cash incentives, we have provided and in the future expect to provide stock options and restricted stock that vest over time and may in the future grant equity awards tied to company performance. The value to employees of stock options and restricted stock that vest over time will be significantly affected by movements in our stock price that are beyond our control and may at any time be insufficient to maintain their retention benefit or counteract offers from other companies. If we are unable to attract and retain the necessary qualified personnel to accomplish our business objectives, we may experience constraints that will significantly impede the achievement of our business objectives and our ability to pursue our business strategy. New hires require significant training and, in most cases, take significant time before they achieve full productivity. New employees may not become as productive as we expect, and we may be unable to hire or retain sufficient numbers of qualified individuals. If our recruiting, training and retention efforts are not successful or do not generate a corresponding increase in revenue, our business will be harmed.

If we cannot maintain our corporate culture as we grow, we could lose the innovation, teamwork and focus that contribute crucially to our business.

Our culture is fundamental to our success and defines who we are and how we operate our business. We were founded on a deep appreciation of the special relationship between pet owners, their beloved pets and their trusted veterinarians. We have invested substantial time, energy and resources in developing a culture that fosters teamwork, innovation, creativity and a focus on providing value for our members as well as for Territory Partners and veterinarians. As we develop our infrastructure while we grow, we may find it difficult to maintain these valuable aspects of our corporate culture. Any failure to preserve our culture could negatively impact our future success, including our ability to attract and retain personnel, encourage innovation and teamwork and effectively focus on and pursue our corporate objectives.

We depend on relationships with strategic partners, and our inability to maintain our existing and secure new relationships with strategic partners could harm our revenue and operating results.

A portion of our revenue is attributable to a variety of different types of strategic partnership arrangements. These partnerships involve various risks, depending on their structure, including the following:

- we may be unable to maintain or secure favorable relationships with strategic partners;
- our strategic partners may not be successful in creating leads;
- we may be unable to convert leads from our strategic partners into enrolled pets;
- our strategic partners could terminate their relationships with us;
- we may not experience a consistent correlation between revenues and expenditures related to the partnership, and bad publicity and other issues faced by our strategic partners could negatively impact us.

Our business and financial condition is subject to risks related to our writing of policies pursuant to contractual relationships with unaffiliated third parties.

Our other business segment generally includes revenues and expenses involving contractual relationships with unaffiliated third parties and marketing to enterprises. We have relatively limited experience in writing policies for unaffiliated third parties. This business is not expected to grow at the same rate as our core business and may have different financial and operational impacts. Changes to this business may be volatile due to the nature of the relationships. Further, this business historically has had, and we expect it to continue to have, lower margins than our core business. As a result of this line of business, we are subject to additional regulatory requirements and scrutiny, which increase our costs, risks and may have an adverse effect on our operations. Further, administration of this business and any similar business in the future may divert our time and attention away from our core business, which could adversely affect our operating results in the aggregate.

For example, we have written pet insurance policies for general agents since 2012. These policies are subject to materially different terms and conditions than our subscription. Further, the unaffiliated general agents administer these policies and market them to consumers. For the year ended December 31, 2018, premiums from these policies accounted for 11% of our total revenue. These relationships can be terminated by either party and, if terminated, would result in a reduction in our revenue to the extent we cannot enter other relationships and generate equivalent revenues with different general agents. In addition, the general agents control trust accounts they maintain on our behalf. If the general agents make operating decisions that adversely affect its business or brand, our business or brand could also be adversely affected.

In Canada, our medical plan is written by Omega General Insurance Company. If Omega were to terminate its underwriting arrangement with us, our business could be adversely affected.

In Canada, our medical plan is written by Omega, and we assume all premiums written by Omega and the related veterinary invoice expense through an agency agreement and a fronting and administration agreement. These agreements may be terminated by either party with one year's prior written notice. If Omega were to terminate our agreement or be unable to write insurance for regulatory or other reasons, we may have to terminate subscriptions with our existing members, or suspend member enrollment and renewals, in Canada until we entered into a relationship with another third party to write our subscription, which may take a significant amount of time and require significant expense. We may not be able to enter into a new relationship, and any new relationship would likely be on less favorable terms. Any delay in entry into a new relationship or suspension of member enrollment and renewals could have a material adverse effect on our operating results and financial condition.

We may operate multiple insurance subsidiaries, which may complicate our business and harm our results of operations.

Currently, American Pet Insurance Company (APIC), our wholly owned subsidiary, underwrites subscriptions for our U.S. product, and Omega underwrites subscriptions for our Canadian product. In the future, we may set up and operate additional wholly-owned insurance companies in the U.S., Canada, or a different country. These efforts may require investment of resources and we may not achieve any or all of the anticipated benefits. In addition, we may require additional capital to meet our risk-based capital requirements for the new insurance subsidiaries and could be subject to additional regulatory scrutiny in the jurisdictions in which the insurance subsidiary is formed and operates.

If we are unable to implement and maintain effective internal control over financial reporting in the future, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock may be negatively affected.

We are required to maintain internal control over financial reporting and to report any material weaknesses in such internal control. Section 404 of the Sarbanes-Oxley Act of 2002 (the Sarbanes-Oxley Act) requires that we evaluate and determine the effectiveness of our internal control over financial reporting and provide a management report on the internal control over financial reporting, which must be attested to by our independent registered public accounting firm.

We may not detect errors on a timely basis and our financial statements may be materially misstated. We have had in the past, and may have in the future, material weaknesses and significant deficiencies in our internal control over financial reporting. No evaluation or assessment of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. Over time, controls may become inadequate because of changes in circumstance. If we or our independent registered public accounting firm identify future material weaknesses in our internal control over financial reporting, we are unable to comply with the requirements of Section 404 in a timely manner, we are unable to assert that our internal control over financial reporting is effective or our independent registered public accounting firm is unable to express an opinion as to the effectiveness of our internal control over financial reporting, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our common stock could be negatively affected. We could also become subject to investigations by the stock exchange on which our securities are listed, the SEC or other regulatory authorities, which could require additional financial and management resources.

If our security measures are breached and unauthorized access is obtained to our data, including our members' data, we may lose our competitive advantage, our systems may be perceived as not being secure and we may incur third-party liability.

Our data repository contains proprietary information that we believe gives us a competitive advantage, including data on veterinary invoices received and other data with respect to members, Territory Partners, veterinarians and other third parties. Security breaches could expose us to a risk of loss of our data and/or disclosure of this data, either publicly or to a third party who could use the information to gain a competitive advantage. In the event of a loss of our systems or data, we could experience increased costs, delays legal liability, and reputational harm, which in turn may harm our financial condition, damage our brand and result in the loss of members. Such a disclosure also could lead to litigation and possible liability.

In the course of operating our business, we may store and/or transmit our members' confidential information. Security breaches could expose us to a risk of loss of this information, litigation and possible liability. Our payment services may be susceptible to credit card and other payment fraud schemes, including unauthorized use of credit cards, debit cards or bank account information, identity theft or merchant fraud.

If our security measures are breached as a result of third-party action, employee error, malfeasance or otherwise, and, as a result, someone obtains unauthorized access to our data, including data of our members, our reputation may be damaged, our business may suffer and we could incur significant liability. Because techniques used to obtain unauthorized access or to sabotage systems change frequently and generally are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. If an actual or perceived breach of our security occurs, the public perception of the effectiveness of our security measures could be harmed and we could lose members, which would adversely affect our business.

Any legal liability, regulatory penalties or negative publicity we encounter, including based on the information on our website or that we otherwise distribute or provide, directly or through Territory Partners or other referral sources, could harm our business, operating results and financial condition.

Any legal disputes or regulatory penalties involving us may be publicly announced, which could materially harm our reputation and adversely affect our business. We also provide information on our website, through our contact center and in other ways regarding pet health, the pet insurance industry in general and our subscription, including information relating to subscription fees, benefits, exclusions, limitations, availability and medical plan comparisons. A significant amount of both automated and manual effort is required to maintain the information on our website. Separately, from time to time, we use the information provided on our website and otherwise collected by us to publish reports designed to educate consumers. For example, we produce a significant amount of marketing materials regarding our subscription. If the information we provide on our website, through our contact centers or otherwise is not accurate or is construed as misleading, or if we improperly assist individuals in purchasing subscriptions, our members, competitors or others could attempt to hold us liable for damages, our relationships with veterinarians and other referral sources could be terminated and regulators could attempt to subject us to penalties, revoke our licenses to transact business in one or more jurisdictions or compromise the status of our licenses to transact our business in other jurisdictions, which could result in our loss of revenue. In the ordinary course of operating our business, we may receive complaints that the information we provided was not accurate or was misleading. These types of claims could be time-consuming and expensive to defend, could divert our management's attention and other resources and could cause a loss of confidence in our business. As a result, whether or not we are able to successfully resolve these claims, they could harm our business, operating results and financial condition.

We are subject to a number of risks related to accepting automatic fund transfers and credit card and debit card payments.

We accept payments of subscription fees from our members through automatic fund transfers and credit and debit card transactions. For credit and debit card payments, we pay interchange and other fees, which may increase over time. An increase in the number of members who utilize credit and debit cards to pay their subscription fees or related credit and debit card fees would reduce our margins and could require us to increase subscription fees, which could cause us to lose members and revenue, or suffer an increase in our operating expenses, either of which could adversely affect our operating results.

If we, or any of our processing vendors or banks have problems with our billing software, or if the billing software malfunctions, it could have an adverse effect on our member satisfaction and could cause one or more of the major credit card companies or banks to disallow our continued use of their payment products. In addition, if our billing software fails to work properly and, as a result, we do not automatically charge our members' credit cards on a timely basis or at all, or a bank withdraws the incorrect amount or fails to timely transfer the correct amount to us, we could lose revenue and harm our member experience, which could adversely affect our business and operating results. Moreover, a vendor could fail to process payments, or could process payments in the wrong amounts, which could result in us failing to collect premiums, could result in increased cancellations and could adversely affect our reputation.

We are also subject to payment card association operating rules, certification requirements and rules governing electronic funds transfers, including the Payment Card Industry Data Security Standard (PCI DSS), a security standard applicable to companies that collect, store or transmit certain data regarding credit and debit cards, holders and transactions. In the past we may not have been and in the future we may not be, fully or materially compliant with PCI DSS, or other payment card operating rules. Any failure to comply fully or materially with the PCI DSS now or at any

point in the future may violate payment card association operating rules, federal and state laws and regulations, and the terms of our contracts with payment processors and merchant banks. Such failure to comply fully or materially also may subject us to fines, penalties, damages and civil liability, and may result in the loss of our ability to accept credit and debit card payments. In addition, there is no guarantee that PCI DSS compliance will prevent illegal or improper use of our payment systems or the theft, loss or misuse of data pertaining to credit and debit cards, credit and debit card holders and credit and debit card transactions.

If we fail to adequately control fraudulent credit card transactions, we may face civil liability, diminished public perception of our security measures and significantly higher credit card-related costs, each of which could adversely affect our business, operating results and financial condition.

If we are unable to maintain our chargeback rate at acceptable levels, our credit card fees for chargeback transactions, or our fees for many or all categories of credit and debit card transactions, credit card companies and debit card issuers may increase our fees or terminate their relationship with us. Any increases in our credit card and debit card fees could adversely affect our operating results, particularly if we elect not to raise our subscription fees. The termination of our ability to process payments on any major credit or debit card would significantly impair our ability to operate our business.

We have no experience owning an office building and may face unexpected costs.

We used \$55 million of the net proceeds from the June 2018 follow-on public offering to help fund the purchase of our home office building, which closed in August 2018. Before then, we leased our current home office since July 2016, and we had no experience owning an office building. While we believe our home office building is in reasonable condition, it is difficult to predict all costs associated with maintaining the building and ensuring it is suitable for our use and that of other tenants. It is possible that the other current tenants in the building may decide to move to newer facilities, wind up operations, or otherwise cease to rent space in the building, which would decrease rental income we expect to receive from them. Tenants may also negotiate tenant improvements, requiring capital expenditures that may adversely impact our financial position. In addition, we may identify structural defects or other conditions, or we may determine that remodeling or renovations are necessary given our business operations and objectives. Managing tenants, maintaining the building, and otherwise facing the costs and responsibilities of being the owner of a building may be a distraction from our core business and cause our performance to suffer.

Our building acquisition may not result in a meaningful or long-term ability to increase our cash.

We acquired our home office building because a portion of the value of the building may be used as an admitted asset on the balance sheet of American Pet Insurance Company (APIC). Over time, if APIC continues to grow its operations and increase its admitted assets, this percentage of admitted assets may result in an increasingly larger dollar amount being invested in our home office building. While the New York Department of Financial Services (NY DFS) approved the use of up to 10% of APIC's admitted assets to own the building, the NY DFS is not prevented from subsequently reducing the percentage of admitted assets that we may use or completely withdrawing its approval. Any such action could reduce the percentage of APIC's admitted assets that could be invested in our home office building to between 1% and 5%, according to current regulations. If the amount of admitted assets invested in our home office decreases, we may be required to meet our risk-based capital obligations using other forms of capital that we would otherwise invest in our growth and operations. This may require us to modify our operating plan or marketing initiatives, delay the implementation of new initiatives and solutions or development of new technologies, decrease the rate at which we hire additional personnel and enter into relationships with Territory Partners, incur additional indebtedness or pursue equity or debt financings or otherwise modify our business operations, any of which could have a material adverse effect on our operating results and financial condition.

Failure to adequately protect our intellectual property could substantially harm our business and operating results.

We rely on a combination of intellectual property rights, including trade secrets, patents, copyrights, trademarks and domain names, as well as contractual restrictions, to establish and protect our intellectual property. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy our digital content, pricing analytics, technology, software, branding and functionality, or obtain and use information that we consider proprietary. Moreover, policing our proprietary rights is difficult and may not always be effective. If we continue to expand internationally, we may need to enforce our rights under the laws of countries that do not protect proprietary rights to as great an extent as do the laws of the United States, which may be expensive and divert management's attention away from other operations.

Our Trupanion Express software is protected by patents. These patents may not be sufficient to maintain effective product exclusivity because patent rights are limited in time and do not always provide effective protection. Furthermore, our efforts to enforce or protect our patent rights may be ineffective, could result in substantial costs and diversion of resources and could substantially harm our operating results. Even where our patents rights are enforced, legal remedies available for harm caused to us by infringing products may be inadequate to make us whole. Further, our successful assertion of our patent against one competing product is not necessarily predictive of our future success or failure in asserting the same patent against a second competing product. In addition, patents have a limited lifespan.

In the United States, the natural expiration of a patent is generally 20 years after it is filed. Various extensions may be available however the life of a patent, and the protection it affords, is limited. Once the patent life has expired for our software, our competitors will be able to use our patented technology.

Our digital content is not protected by any registered copyrights or other registered intellectual property. Rather, our digital content is protected by statutory and common law rights, user agreements that limit access to and use of our data and by technological measures. Compliance with use restrictions is difficult to monitor, and our proprietary rights in our digital content databases may be more difficult to enforce than other forms of intellectual property rights.

We currently hold several registered trademarks, including “Trupanion”. Trademark protection may not always be available, or sought by us, in every country in which our subscription is available. Competitors may adopt names similar to ours, or purchase our trademarks and confusingly similar terms as keywords in Internet search engine advertising programs, thereby impeding our ability to build brand identity and possibly confusing members. Moreover, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate marks similar to our trademarks.

We may take action, including initiating litigation, to protect our intellectual property rights and the integrity of our brand, and these efforts may prove costly, ineffective and increase the likelihood of counterclaims against us. We currently hold the “Trupanion.com” Internet domain name and numerous other related domain names. Domain names generally are regulated by Internet regulatory bodies. If we lose the ability to use a domain name in the United States, Canada or any other country, we may be forced to acquire domain names at significant cost or, in the alternative, be forced to incur significant additional expenses to market our subscription, including the development of a new brand and the creation of new promotional materials, which could substantially harm our business and operating results. The regulation of domain names in the United States, Canada and in other foreign countries is subject to change. Regulatory bodies could establish additional top-level domains, appoint additional domain name registrars or modify the requirements for holding domain names. As a result, we may not be able to acquire or maintain the domain names that utilize the “Trupanion” name in all of the countries in which we currently intend to conduct business.

We seek to control access to our proprietary technology, software and documentation by entering into confidentiality and invention assignment agreements with our employees and partners, confidentiality agreements or license agreements with third parties, such as service providers, vendors, individuals and entities that may be exploring a business relationship with us, and terms of use with third parties, such as veterinary hospitals desiring to use our technology, software and documentation. These agreements may not prevent disclosure of intellectual property, trade secrets and/or other confidential information, and may not provide an adequate remedy in the event of misappropriation of trade secrets or any unauthorized disclosure of trade secrets and other confidential information. In addition, others may independently discover trade secrets and confidential information and, in such cases, we may not be able to assert any trade secret rights against such parties. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our intellectual property rights and related confidentiality, license and nondisclosure provisions, and failure to obtain or maintain trade secret protection, or our competitors being able to obtain our trade secrets or to independently develop technology similar to ours or competing technologies, could adversely affect our competitive business position.

Litigation or proceedings before the U.S. Patent and Trademark Office or other governmental authorities and administrative bodies in the United States and abroad may be necessary in the future to enforce our intellectual property rights, to protect our domain names and to determine the validity and scope of the proprietary rights of others. Our efforts to enforce or protect our proprietary rights may be ineffective, could result in substantial costs and diversion of resources and could substantially harm our operating results.

Assertions by third parties of infringement or other violation by us of their intellectual property rights could result in significant costs and substantially harm our business and operating results.

Third parties have in the past and may in the future claim that our services infringe or otherwise violate their intellectual property rights. We may be subject to legal proceedings and claims, including claims of alleged infringement by us of the intellectual property rights of third parties. Any dispute or litigation regarding intellectual property could be expensive and time consuming, regardless of the merits of any claim, and could divert our management and key personnel from our operations.

If we were to discover or be notified that our services potentially infringe or otherwise violate the intellectual property rights of others, we may need to obtain licenses from these parties in order to avoid infringement. We may not be able to obtain the necessary licenses on acceptable terms, or at all, and any such license may substantially restrict our use of the intellectual property. Moreover, if we are sued for infringement and lose the lawsuit, we could be required to pay substantial damages or be enjoined from offering the infringing services. Any of the foregoing could cause us to incur significant costs and prevent us from selling or properly administering subscriptions or performing under our

other contractual relationships.

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We rely on third parties to provide intellectual property and technology necessary for the operation of our business.

We utilize intellectual property and technology owned by third parties in developing and operating our technology platform and operating our business. From time to time, we may be required to renegotiate with these third parties or negotiate with other third parties to include or continue using their intellectual property or technology in our existing technology platform or business operations or in modifications or enhancements to our technology platform or business operations. We may not be able to obtain the necessary rights from these third parties on commercially reasonable terms, or at all, and the third-party intellectual property and technology we use or desire to use may not be appropriately supported, maintained or enhanced by the third parties. If we are unable to obtain the rights necessary to use or continue to use third-party intellectual property and technology in our operations, or if those third parties are unable to support, maintain and enhance their intellectual property and technology, we could experience increased costs or delays, which in turn may harm our financial condition, damage our brand and result in the loss of members. Our technology platform and our data are also hosted by a third-party service provider. The terms under which such third-party service provider provides us services may change and we may be required to renegotiate with that third party. If we are unable to renegotiate satisfactory terms, we may not be able to transition to an alternative service provider without interrupting the availability of our technology platform and any interruption could materially and adversely affect our business. Additionally, if our third-party service provider experiences any disruptions, outages or catastrophes, or if it ceases to conduct business for any reason, we could experience an interruption in our business, which in turn may damage our brand, result in a loss of members and harm our financial condition.

The outcome of litigation or regulatory proceedings could subject us to significant monetary damages, restrict our ability to conduct our business, harm our reputation and otherwise negatively impact our business.

From time to time, we have been, and in the future may become, subject to litigation, claims and regulatory proceedings and inquiries, including market conduct examinations and investigations by state insurance regulatory agencies and threatened or filed lawsuits by, among others, government agencies, employees, competitors, current or former members, or business partners.

We cannot predict the outcome of these actions or proceedings, and the cost of defending such actions or proceedings could be material. Further, defending such actions or proceedings could divert our management and key personnel from our business operations. If we are found liable in any action or proceeding, we may have to pay substantial damages or fines, or change the way we conduct our business, either of which may have a material adverse effect on our business, operating results, financial condition and prospects. There may also be negative publicity associated with litigation or regulatory proceedings that could harm our reputation or decrease acceptance of our services. These claims may be costly to defend and may result in assessment of damages, adverse tax consequences and harm to our reputation.

Covenants in the credit agreement governing our revolving line of credit may restrict our operations, and if we do not effectively manage our business to comply with these covenants, our financial condition could be adversely affected.

The credit agreement governing our revolving line of credit contains various restrictive covenants, including restrictions on our ability to dispose of our assets, change the name, location, office or executive management of our business, merge with or acquire other entities, incur other indebtedness, incur encumbrances, pay dividends or make distributions to holders of our capital stock, make investments, engage in transactions with our affiliates, permit withdrawals from APIC (with certain exceptions) and conduct operations in certain of our Canadian subsidiaries. Our credit agreement also contains certain financial covenants, including having APIC maintain statutory capital and surplus at all times of not less than the greater of the amount required by regulatory statute or 110% of the highest amount of statutory capital and surplus required in any state in which APIC is licensed; maintaining a minimum cash balance of \$1.4 million in our account at Western Alliance Bank (WAB) and/or WAB affiliates and other cash or investments of \$2.1 million in our accounts at Pacific Western Bank (PWB); maintaining all of our depository and operating accounts at PWB and/or WAB; maintaining certain investment accounts at PWB and/or PWB affiliates; achieving certain quarterly revenue levels and claims ratio thresholds; maintaining greater than negative \$1.0 million net total of operating cash flow and capital expenditures quarterly; and remaining within certain monthly maximum EBITDA loss levels. EBITDA is defined as earnings, plus an amount equal to the sum of (i) tax, plus (ii) depreciation

and amortization, plus (iii) interest and non-cash expenses, plus (iv) any non-cash stock-based compensation expense, plus (v) (gain)/loss from equity method investments. Our ability to meet these restrictive covenants can be affected by events beyond our control, and we have been in the past, and may be in the future, unable to do so. In addition, our failure to maintain effective internal controls to measure compliance with our financial covenants could affect our ability to take corrective actions on a timely basis and could result in our being in breach of these covenants. Our credit agreement provides that our breach or failure to satisfy certain covenants constitutes an event of default. Upon the occurrence of an event of default, our lenders could elect to declare any future amounts outstanding under our credit agreement to be immediately due and payable. If we are unable to repay those amounts, our financial condition could be adversely affected.

Any indebtedness we incur could adversely affect our business and limit our ability to expand our business or respond to changes, and we may be unable to generate sufficient cash flow to satisfy any of our debt service obligations.

As of December 31, 2018, we had \$13 million outstanding indebtedness under our revolving line of credit. We may incur indebtedness in the future, including any additional borrowings available under our revolving line of credit. Any substantial indebtedness and the fact that a substantial portion of our cash flow from operating activities could be needed to make payments on this indebtedness could have adverse consequences, including the following:

- reducing the availability of our cash flow for our operations, capital expenditures, future business opportunities and other purposes;
- limiting our flexibility in planning for, or reacting to, changes in our business and the industries in which we operate, which could place us at a competitive disadvantage compared to our competitors that may have less debt;
- limiting our ability to borrow additional funds; and
- increasing our vulnerability to general adverse economic and industry conditions.

Our ability to borrow any funds needed to operate and expand our business will depend in part on our ability to generate cash. Our ability to generate cash is subject to the performance of our business, as well as general economic, financial, competitive, legislative, regulatory and other factors that are beyond our control. We may also need to use operating funds to support risk-based capital requirements and borrow additional funds to support our growth. If our business does not generate sufficient cash flow from operating activities or if future borrowings are not available to us, under our revolving credit facility or otherwise, in amounts sufficient to enable us to fund our liquidity needs, our operating results, financial condition and ability to expand our business and meet our risk-based capital requirements may be adversely affected.

Our financial results may be negatively affected if we are required to pay income tax, premium tax, transaction tax or other taxes in jurisdictions where we are currently not collecting and reporting tax.

We currently pay income tax, premium tax, transaction tax and other taxes in certain jurisdictions in which we do business. A successful assertion by one or more jurisdictions that we should be paying income, premium, transaction or other taxes on our income or in connection with enrollment or intercompany services, or the enactment of new laws requiring the payment of income, premium, transfer or other taxes in connection with our business operations, including enrollment or intercompany services, could result in substantial tax liabilities.

We may have additional tax liabilities.

We are subject to income tax and other taxes in the U.S. and foreign jurisdictions. Significant judgment is required in determining our provision for income taxes. In the ordinary course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. Further, we often make elections for tax purposes which may ultimately not be upheld. Although we believe our tax estimates are reasonable, the final determination of tax audits and any related litigation in the jurisdictions where we are subject to taxation could be materially different from our historical income tax provisions and accruals. The results of an audit or litigation could have a material effect on our consolidated financial statements in the period or periods in which that determination is made.

If consumer acceptance of the Internet as an acceptable marketplace for our subscription does not continue to increase, our growth prospects will be harmed.

Our success depends in part on widespread consumer acceptance of the Internet as a marketplace for the purchase of medical insurance for cats and dogs. Internet use may not continue to develop at historical rates, and consumers may not continue to use the Internet to research, select and purchase insurance. In addition, the Internet may not be accepted as a viable resource for a number of reasons, including lack of security of information or privacy protection, possible disruptions, computer viruses or other damage to Internet servers or to users' computers, and excessive governmental regulation.

Our success will depend, in large part, on third parties maintaining the Internet infrastructure to provide a reliable network backbone with the speed, data capacity, security and hardware necessary for reliable Internet access and services.

If we do not prominently appear in Internet search engine results, third party sites or other Internet resources, our new member growth could decline, and our business and operating results could be harmed.

We derive a significant amount of traffic to our website from consumers who search for pet medical insurance through Internet search engines, such as Google, Bing and Yahoo!. A critical factor in attracting consumers searching for pet medical insurance on the Internet to our website is whether we are prominently displayed in response to an Internet search relating to pet insurance. Algorithmic search result listings are determined and displayed in accordance with a set of formulas or algorithms developed by the particular Internet search engine, which may change from time to time. If we are listed less prominently in, or removed altogether from, search result listings for any reason, the traffic to our websites would decline and we may not be able to replace this traffic, which in turn would harm our business, operating results and financial condition. If we decide to attempt to replace this traffic, we may be required to increase our sales and marketing expenditures, including by utilizing paid search advertising, which would also increase our pet acquisition costs and harm our business, operating results and financial condition.

Changes in the economy may negatively impact our business, operating results and financial condition.

Our business may be affected by changes in the economic environment. Medical insurance for cats and dogs is a discretionary purchase, and members may reduce or eliminate their discretionary spending during an economic downturn, resulting in an increase in terminations and a reduction in the number of new member enrollments. We may experience a material increase in terminations or a material reduction in our member retention rate in the future, especially in the event of a prolonged recessionary period or a downturn in economic conditions. Conversely, consumers may have more income to pay veterinary costs out-of-pocket and less desire to purchase our subscription during a period of economic growth. In addition, media prices may increase during a period of economic growth, which could increase our sales and marketing expenses. As a result, our business, operating results and financial condition may be significantly affected by changes in the economic environment.

We have and may continue to create, invest in or acquire businesses, products and technologies, which could divert our management's attention, result in additional dilution to our stockholders, otherwise disrupt our operations or harm our operating results.

We have and may continue to create, invest in or acquire businesses, products and technologies. Our ability to successfully evaluate and manage investment opportunities, or make and integrate acquisitions or products, is unproven. The pursuit of potential new products, investments or acquisitions may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable opportunities, whether or not they are consummated. Further, even if we successfully invest in or acquire additional businesses or technologies, we may not achieve the anticipated benefits from the transaction. The investment or acquisition may also expose us to additional risks, including from unknowingly inheriting liabilities that are not adequately covered by indemnities. Acquisitions or investments could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. If an investment or acquisition fails to meet our expectations, our business, operating results and financial condition may suffer.

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

As of December 31, 2018, we had U.S. federal net operating loss carryforwards of approximately \$121.1 million that will begin to expire in 2027. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended (the Code), if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes, such as research tax credits, to offset its post-change income and taxes may be limited. In general, an "ownership change" generally occurs if there is a cumulative change in our ownership by "5-percent stockholders" that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. Pursuant to Sections 382 and 383 of the Code, annual use of our net operating loss carryforwards and credit carryforwards may be limited if we experience an ownership change. We believe the utilization of approximately \$0.5 million of net operating losses are subject to limitation as a result of prior ownership changes based on our Section 382 study performed as of September 30, 2018. We note subsequent ownership changes may have already and may further affect the limitation in future years.

We are expanding our operations internationally, and we may therefore become subject to a number of risks associated with international expansion and operations.

As part of our growth plan, we have explored, and expect to continue to explore, opportunities to expand our operations internationally. We are in the process of entering the Australian market and we may launch similar processes in other countries. We have no history of marketing, selling, administrating and supporting our subscription for consumers outside of the United States, Canada and Puerto Rico. International sales and operations are subject to a number of risks, including the following:

- regulatory rules and practices, foreign exchange controls, tariffs, tax laws and treaties that are different than those we operate under in the United States, Canada and Puerto Rico and that carry a greater risk of unexpected changes;
- the costs and resources required to modify our technology and sell our subscription in non-English speaking countries;

- the costs and resources required to modify our subscription appropriately to suit the needs and expectations of residents and veterinarians in such foreign countries;
- our data analytics platform may have limited applicability in foreign countries, which may impact our ability to develop adequate underwriting criteria and accurately price subscriptions in such countries;
- increased expenses incurred in establishing and maintaining office space and equipment for our international operations;
- technological incompatibility;
- fluctuations in exchange rates between the U.S. dollar and foreign currencies in markets where we do business;
- difficulties in attracting and retaining personnel with experience in international operations;
- difficulties in modifying our business model in a manner suitable for any particular foreign country, including any modifications to our Territory Partner model to the extent we determine that our existing model is not suitable for use in foreign countries;
- our lack of experience in marketing to consumers and veterinarians, and encouraging online marketing, in foreign countries;
- our relative lack of industry connections in many foreign countries;
- difficulties in managing operations due to language barriers, distance and time zone differences, staffing, cultural differences and business infrastructure constraints, including difficulty in obtaining foreign and domestic visas;
- application of foreign laws and regulations to us, including more stringent or materially different insurance, employment, consumer and data protection laws;
- the uncertainty of protection for intellectual property rights in some countries;
- greater risk of a failure of foreign employees to comply with applicable U.S. and foreign laws, including antitrust regulations, the U.S. Foreign Corrupt Practices Act and any trade regulations ensuring fair trade practices; and
- general economic and political conditions in these foreign markets.

These factors and other factors could harm our ability to gain future international revenue and, consequently, materially impact our business and operating results. The expansion of our existing international operations and entry into additional international markets will require significant management attention and financial resources, detracting from management attention and financial resources otherwise available to our existing business. Our failure to successfully manage our international operations and the associated risks effectively could limit the future growth of our business and could have an adverse effect on our operating results and financial condition.

A downgrade in the financial strength rating of our insurance company may have an adverse effect on our competitive position, the marketability of our subscription, and/or on our liquidity, access to and cost of borrowing, operating results and financial condition.

Although we do not believe that the financial strength rating of APIC is material for customers or to understand our business beyond what is already publicly available, financial strength ratings can be important factors in establishing the competitive position of insurance companies and generally have an effect on an insurance company's business. On an ongoing basis, rating agencies review the financial performance and condition of APIC and could downgrade or change the outlook on its ratings due to, for example, a change in its statutory capital, a change in the rating agency's determination of the amount of risk-based capital required to maintain a particular rating or a reduced confidence in management or its business strategy, as well as a number of other considerations that may or may not be under our control. The insurance financial strength rating of APIC is subject to quarterly review, and APIC may not retain the current rating. A downgrade in this or any future ratings could have a material effect on our sales, our competitiveness, the marketability of our subscription, our liquidity, access to and cost of borrowing, operating results and financial condition.

Our business is subject to the risks of earthquakes, floods, fires and other natural catastrophic events and to interruption by man-made problems such as computer viruses or terrorism.

Our systems and operations are vulnerable to damage or interruption from earthquakes, human error, intentional bad acts, hurricanes, floods, fires, power losses, telecommunications failures, hardware and system failures, terrorist attacks, acts of war, break-ins or similar events. For example, our corporate headquarters and facilities are located in Seattle, Washington near known earthquake fault zones and are vulnerable to significant damage from earthquakes. In addition, cyber-attacks or acts of terrorism could cause disruptions in our business or the economy as a whole. Our servers and systems may also be vulnerable to computer viruses, break-ins and similar disruptions from unauthorized tampering with our computer systems, which could lead to interruptions, delays, loss of critical data or the unauthorized disclosure of confidential member data. We currently have limited disaster recovery capability, and our business interruption insurance may be insufficient to compensate us for losses that may occur. Such disruptions could negatively impact our ability to run our business, which could have an adverse effect on our operating results and financial condition.

Risks Related to Compliance with Laws and Regulations

We may not maintain the amount of risk-based capital required to avoid additional regulatory oversight, which may adversely affect our ability to operate our business.

Memberships in our U.S. subscription are written by APIC. APIC is an insurance company domiciled in the state of New York and licensed by the New York Department of Financial Services. Regulators in the states in which we do business impose risk-based capital requirements on APIC that generally are approved by the National Association of Insurance Commissioners to ensure APIC maintains reasonably appropriate levels of surplus to protect our members against adverse developments in APIC's financial circumstances, taking into account the risk characteristics of our assets, liabilities and certain other items. Generally, the NY DFS will compare, on an annual basis as of December 31 or more often as deemed necessary, an insurer's total adjusted capital and surplus against what is referred to as an "Authorized Control Level" of risk-based capital that is calculated based on a formula designed to estimate an insurer's capital adequacy. There generally are five outcomes possible from this comparison, depending on the insurer's level of risk-based capital as compared to the applicable Authorized Control Level.

No Action Level: Insurer's total adjusted capital is equal to or greater than 200% of the Authorized Control Level.

Company Action Level: Insurer's total adjusted capital is less than 200% but greater than 150% of the Authorized Control Level. When at this level, an insurer must prepare and submit a financial plan to the NY DFS for review and approval. Generally, a risk-based capital plan would identify the conditions that contributed to the Company Action Level and include the insurer's proposed plans for increasing its risk-based capital in order to satisfy the No Action Level. The failure to provide the NY DFS with a risk-based capital plan on a timely basis or the inability of the NY DFS and the insurer to mutually agree on an appropriate risk-based capital plan could trigger a Regulatory Action Level outcome, subject to the insurer's right to a hearing on the issue.

Regulatory Action Level: Insurer's total adjusted capital is less than 150% but greater than 100% of the Authorized Control Level. When at this level, an insurer generally must provide a risk-based capital plan to the NY DFS and be subject to examination or analysis by the NY DFS to the extent it deems necessary, including such corrective actions as the NY DFS may require.

Authorized Control Level: Insurer's total adjusted capital is less than 100% but greater than 70% of the Authorized Control Level. At this level, the NY DFS generally could take remedial actions that it determines necessary to protect the insurer's assets, including placing the insurer under regulatory control.

Mandatory Control Level: Insurer's total adjusted capital is less than 70% of the Authorized Control Level. At this level, the NY DFS generally is required to take steps to place the insurer under regulatory control, even if the insurer is still solvent.

As of December 31, 2018, APIC was required to maintain at least \$53.4 million of risk-based capital to satisfy the No Action Level (the highest of the above levels). As of December 31, 2018, APIC maintained \$56.2 million of risk-based capital. The NY DFS may increase the required levels of risk-based capital in the future, and we anticipate that we will need to maintain greater amounts of risk-based capital if our pet enrollment continues to grow.

Additionally, if our risk-based capital falls below the Company Action Level, we may be in breach of various contractual relationships, including, for example, with the unaffiliated general agents for which we write pet insurance policies, which may give such parties the ability to cancel their contracts with us and/or sue us for damages related to our risk-based capital levels, which could have a material adverse effect on our financial condition.

We may require additional capital to meet our risk-based capital requirements, pursue our business objectives and respond to business opportunities, challenges or unforeseen circumstances. If capital is not available to us at any time, our business, operating results and financial condition may be harmed.

We may require additional capital to meet our risk-based capital requirements, operate or expand our business or respond to unforeseen circumstances. Additional funds may not be available when we need them, on terms that are acceptable to us, or at all. If we raise additional funds through the issuance of equity or convertible securities, the percentage ownership of holders of our common stock could be significantly diluted and these newly issued securities may have rights, preferences or privileges senior to those of holders of our common stock. Further, volatility in the credit or equity markets may have an adverse effect on our ability to obtain debt or equity financing or the cost of such financing. Similarly, our access to funds may be impaired if regulatory authorities or rating agencies take negative actions against us. If a combination of these factors were to occur, our internal sources of liquidity may prove to be insufficient and, in such case, we may not be able to successfully obtain additional financing on favorable terms. If funds are unavailable to us on reasonable terms when we need them, we may be unable to meet our risk-based capital requirements, train and support our employees, support Territory Partners, maintain the competitiveness of our technology, pursue business opportunities, service our existing debt, pay veterinary invoices or acquire new members, any of which could have an adverse effect on our business, operating results and financial condition.

If we fail to comply with the numerous laws and regulations that are applicable to the sale of medical insurance for cats and dogs, our business and operating results could be harmed.

The sale of medical insurance for cats and dogs, which is considered a type of property and casualty insurance in most jurisdictions, is heavily regulated by each state in the United States, in the District of Columbia, in Puerto Rico and by Canadian federal, provincial and territorial governments. In the United States, state insurance regulators are charged with protecting policyholders and have broad regulatory, supervisory and administrative powers over our business practices. Because we do business in all 50 states, the District of Columbia, all Canadian provinces and territories and Puerto Rico, compliance with insurance-related laws, rules and regulations is difficult and imposes significant costs on our business. Each jurisdiction's insurance department typically has the power, among other things, to:

- grant and revoke licenses to transact insurance business;
- conduct inquiries into the insurance-related activities and conduct of agents and agencies and others in the sales, marketing and promotional channels;
- require and regulate disclosure in connection with the sale and solicitation of insurance policies;
- authorize how, by which personnel and under what circumstances insurance premiums can be quoted and published and an insurance policy sold;
- regulate which entities or individuals can be incentivized and the circumstances under which this may occur;
- regulate the content of insurance-related advertisements, including web pages, and other marketing practices;
- approve policy forms, require specific benefits and benefit levels and regulate premium rates;
- impose fines and other penalties; and
- impose continuing education requirements.

While the U.S. federal government does not directly regulate the insurance industry, federal legislation and administrative policies can also affect us. Congress and various federal agencies periodically discuss proposals that would provide for federal oversight of insurance companies. We cannot predict whether any such laws will be enacted or the effect that such laws would have on our business. We also do business in all ten provinces and three territories of Canada. The provincial and territorial insurance regulators have the power to regulate the market conduct of insurers and insurance intermediaries, and the licensing and supervision of insurance agents, and brokers, along with enforcement rights, including the right to assess administrative monetary penalties in certain provinces.

Insurance companies are also regulated at the federal level in Canada, and the Insurance Companies Act prohibits a foreign entity from insuring risks in Canada unless it is authorized by an Order made by the Superintendent of Financial Institutions (Canada) permitting it to do so.

Due to the complexity, periodic modification and differing interpretations of insurance laws and regulations, we have not always been, and we may not always be, in compliance with them. New insurance laws, regulations and guidelines also may not be compatible with the manner in which we market and sell subscriptions in all of our jurisdictions and member acquisition channels, including over the Internet. Failure to comply with insurance laws, regulations and guidelines or other laws and regulations applicable to our business could result in significant liability, additional department of insurance licensing requirements, the revocation of licenses in a particular jurisdiction or our inability to sell subscriptions, which could significantly increase our operating expenses, result in the loss of our revenue and otherwise harm our business, operating results and financial condition.

Moreover, an adverse regulatory action in one jurisdiction could result in penalties and adversely affect our license status or reputation in other jurisdictions, including due to the current requirement that adverse regulatory actions in one jurisdiction be reported to other jurisdictions. Even if the allegations in any regulatory or other action against us ultimately are determined to be unfounded, we could incur significant time and expense defending against the allegations, and any related negative publicity could harm consumer and third-party confidence in us, which could significantly damage our brand.

In addition, we have received, and may in the future receive, inquiries from regulators regarding our marketing and business practices. These inquiries may include investigations regarding a number of our business practices, including the manner in which we market and sell subscriptions, the manner in which we write policies for any unaffiliated general agent, and whether any amounts we pay to hospitals or hospital groups is appropriate. Any modification of our marketing or business practices in response to regulatory inquiries could harm our business, operating results or financial condition and lead to reputational harm.

A regulatory environment that limits rate increases may adversely affect our operating results and financial condition.

Many states, including New York, have adopted laws or are considering proposed legislation that, among other things, limit the ability of insurance companies to effect rate increases or to cancel, reduce or not renew existing policies, and many state regulators have the power to reduce, or to disallow increases in premium rates. Most states, including New York, require licensure and regulatory approval prior to marketing new insurance products. Our practice has been to regularly reevaluate the price of our subscriptions, with any pricing changes implemented at least annually, subject to the review and approval of the state regulators, who may reduce or disallow our pricing changes. Such review has often in the past resulted, and may in the future result, in delayed implementation of pricing changes and prevent us from making changes we believe are necessary to achieve our targeted payout ratio, which could adversely affect our operating results and financial condition. In addition, we may be prevented by regulators from limiting significant pricing changes, requiring us to raise rates more quickly than we otherwise may desire. This could damage our reputation with our members and reduce our retention rates, which could significantly damage our brand, result in the loss of expected revenue and otherwise harm our business, operating results and financial condition.

In addition to regulating rates, certain states have enacted laws that require a property-casualty insurer, which includes a pet insurance company, conducting business in that state to participate in assigned risk plans, reinsurance facilities, joint underwriting associations (JUAs), Fair Access to Insurance Requirements (FAIR) plans and wind pools. In these markets, if the state reinsurance facilities, wind pools, FAIR plans or JUAs recognize a financial deficit, they may in turn have the ability to assess participating insurers, adversely affecting our operating results and financial condition if we are a part of such state reinsurance facilities, wind pools, FAIR plans or JUAs. Additionally, certain states require insurers to participate in guaranty funds for impaired or insolvent insurance companies. These funds periodically assess losses against all insurance companies doing business in the state. Our operating results and financial condition could be adversely affected by any of these factors.

Regulations that require individuals or entities to be insurance licensed may be interpreted to apply to our business more broadly than we expect them to, which could require us to modify our business practices, create liabilities, damage our reputation, and harm our business.

We may not interpret and apply regulations requiring insurance licenses in the same manner as all applicable regulators, and even if we have, the requirements or regulatory interpretations of those requirements may change. Insurance regulations generally require that each individual or entity who sells, solicits or negotiates insurance

business on our behalf, or who receives an insurance commission, must maintain a valid license in one or more jurisdictions. Regulations may also require certain individuals who process claims to be licensed. These requirements are subject to a variety of interpretations between jurisdictions. Regulators have in the past and may in the future determine that certain individuals or entities who have relationships with us were required to be licensed but were not. If such persons were not in fact licensed in any such jurisdiction, we could face liability, including the imposition of significant monetary penalties or other sanctions. We would also likely be required to modify our business practices and/or sales and marketing programs, or license the affected individuals, which may be impractical or costly and time-consuming to implement. Any modification of our business or marketing practices in response to regulatory licensing requirements could harm our business, operating results or financial condition.

We are subject to numerous laws and regulations, and compliance with one law or regulation may result in non-compliance with another.

We are subject to numerous laws and regulations that are administered and enforced by a number of different governmental authorities, each of which exercises a degree of interpretive latitude, including, in the United States, state insurance regulators, state securities administrators, state attorneys general and federal agencies including the SEC, Internal Revenue Service and the U.S. Department of Justice. Consequently, we are subject to the risk that compliance with any particular regulator's or enforcement authority's interpretation of a legal issue may not result in compliance with another's interpretation of the same issue, particularly when compliance is judged in hindsight. In addition, there is risk that laws and regulations or any particular regulator's or enforcement authority's interpretation of a legal issue may change over time to our detriment, or that changes in the overall legal environment may, even absent any particular regulator's or enforcement authority's interpretation of a legal issue changing, cause us to change our views regarding the actions we need to take from a legal risk management perspective, thus necessitating changes to our practices that may, in some cases, increase our costs and limit our ability to grow or to improve the profitability of our business. Further, in some cases, these laws and regulations are designed to protect or benefit the interests of a specific constituency rather than a range of constituencies. For example, state insurance laws and regulations generally are intended to protect or benefit purchasers or users of insurance products, not holders of securities, which generally is the jurisdiction of the SEC. In many respects, these laws and regulations limit our ability to grow or to improve the profitability of our business.

Regulation of the sale of medical insurance for cats and dogs is subject to change, and future regulations could harm our business and operating results.

The laws and regulations governing the offer, sale and purchase of medical insurance for cats and dogs are subject to change, and future changes may be adverse to our business. For example, if a jurisdiction were to increase our risk-based capital requirements or alter the requirements for obtaining or maintaining an agent's license in connection with the enrollment of a member, it could have a material adverse effect on our operations. Some states in the United States have adopted, and others are expected to adopt, new laws and regulations related to the insurance industry. It is difficult to predict how these or any other new laws and regulations will impact our business, but, in some cases, changes in insurance laws, regulations and guidelines may be incompatible with various aspects of our business and require that we make significant modifications to our existing technology or practices, which may be costly and time-consuming to implement and could also harm our business, operating results and financial condition.

Failure to comply with federal, state and provincial laws and regulations relating to privacy and security of personal information, and civil liabilities relating to breaches of privacy and security of personal information, could create liabilities for us, damage our reputation and harm our business.

A variety of U.S. and Canadian federal, state and provincial laws and regulations govern the collection, use, retention, sharing and security of personal information. We collect and utilize demographic and other information from and about our members when they visit our website, call our contact center and apply for enrollment. Further, we use tracking technologies, including "cookies," to help us manage and track our members' interactions and deliver relevant advice and advertising. Claims or allegations that we have violated applicable laws or regulations related to privacy and data security could in the future result in negative publicity and a loss of confidence in us by our members and our participating service providers, and may subject us to fines by credit card companies and the loss of our ability to accept credit and debit card payments. In addition, we have posted privacy policies and practices concerning the collection, use and disclosure of member data on our website. Several Internet companies have incurred penalties for failing to abide by the representations made in their privacy policies and practices. In addition, our use and retention of personal information could lead to civil liability exposure in the event of any disclosure of such information due to hacking, viruses, inadvertent action or other use or disclosure. Several companies have been subject to civil actions, including class actions, relating to this exposure.

We have incurred, and will continue to incur, expenses to comply with privacy and security standards and protocols for personal information imposed by law, regulation, self-regulatory bodies, industry standards and contractual obligations. Such laws, standards and regulations, however, are evolving and subject to potentially differing interpretations, and federal, state and provincial legislative and regulatory bodies may expand current or enact new

laws or regulations regarding privacy matters. We are unable to predict what additional legislation, standards or regulation in the area of privacy and security of personal information could be enacted or its effect on our operations and business.

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Laws and regulations regarding phone solicitation, the Internet, email and texting could adversely affect our business.

The laws governing general commerce on the Internet remain unsettled and it may take years to fully determine whether and how existing laws such as those governing insurance, intellectual property, privacy and taxation apply to the Internet. In addition, the growth and development of the market for electronic commerce and Internet-related pet insurance advertisements and transactions may prompt calls for more stringent consumer protection laws that may impose additional burdens on companies conducting business and selling subscriptions over the Internet. Any new laws or regulations or new interpretations of existing laws or regulations relating to the Internet could harm our business and we could be forced to incur substantial costs in order to comply with them, which would harm our business, operating results and financial condition.

Additionally, we use phone solicitation, email and texting to market our services to potential members and as a means of communicating with our existing members. The laws and regulations governing the use of phone solicitation, email and texting continue to evolve, and the growth and development of the market for commerce over the Internet may lead to the adoption of additional legislation. Failure to comply with existing or new laws regarding phone solicitation, text or electronic communications with members could lead to significant damages. We have incurred, and will continue to incur, expenses to comply with electronic messaging laws. If new laws or regulations are adopted, or existing laws and regulations are interpreted, to impose additional restrictions on our ability to send email to our members or potential members, we may not be able to communicate with them in a cost-effective manner. In addition to legal restrictions on the use of email for commercial purposes, Internet and email service providers and others attempt to block the transmission of unsolicited email, commonly known as “spam.” Many service providers have relationships with organizations whose purpose it is to detect and notify the Internet and email service providers of entities that the organization believes are sending unsolicited email. If an Internet or email service provider identifies messaging and email from us as “spam” as a result of reports from these organizations or otherwise, we could be placed on a restricted list that will block our emails to members or potential members. If we are restricted or unable to communicate by phone, text or email with our members and potential members as a result of legislation, blockage or otherwise, our business, operating results and financial condition would be harmed.

Applicable insurance laws regarding the change in control of our company may impede potential acquisitions that our stockholders might consider to be desirable.

We are subject to statutes and regulations of the state of New York that generally require that any person or entity desiring to acquire direct or indirect control of APIC obtain prior regulatory approval. These laws may discourage potential acquisition proposals and may delay, deter or prevent a change in control of our company, including through transactions, and in particular unsolicited transactions, that some of our stockholders might consider to be desirable. Similar laws or regulations may also apply in other states in which we may operate.

Our segregated account in Bermuda, WICL segregated account AX, could be adversely impacted by regulatory compliance of a third party.

Wyndham Insurance Company (SAC) Limited (WICL) is a class 3 insurer regulated by the Bermuda Monetary Authority (BMA). WICL's ability to continue operations and pay dividends could impact the ability of our segregated account to do the same. WICL's failure to meet regulatory requirements set forth by the BMA could result in our inability to transact business with WICL segregated account AX. Further, WICL could be limited from allowing dividends to be paid out of segregated account AX in the event of adverse regulatory actions.

We will continue to incur significantly increased costs and devote substantial management time as a result of operating as a public company.

As a public company, we incur significant legal, accounting and other expenses that we did not incur as a private company. For example, we are subject to the reporting requirements of the Exchange Act, and are required to comply with the applicable requirements of the Sarbanes-Oxley Act, and the Dodd-Frank Wall Street Reform and Consumer Protection Act, as well as rules and regulations subsequently implemented by the SEC and the stock exchange on which our common stock is listed, including the establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Compliance with these requirements has and may continue to increase our legal and financial compliance costs and will make some activities more time consuming and costly. In

addition, from time to time, our management and other personnel need to divert attention from operational and other business matters to devote substantial time to these public company requirements. In particular, we have and will continue to incur significant expenses and devote substantial management effort toward ensuring compliance with the requirements of Section 404 of the Sarbanes-Oxley. We cannot predict or estimate the amount of additional costs we may incur as a result of being a public company or the timing of such costs.

Our reported financial results may be adversely affected by changes in accounting principles generally accepted in the United States.

Generally accepted accounting principles in the United States are subject to interpretation by the Financial Accounting Standards Board, the SEC and various bodies formed to promulgate and interpret appropriate accounting principles. A change in these principles or interpretations could have a significant effect on our reported financial results, could affect the reporting of transactions completed before the announcement of a change and could affect our compliance with financial debt covenants.

Risks Related to Ownership of Our Common Stock

Our actual operating results may differ significantly from our guidance.

From time to time we have released, and may continue to release, guidance in our quarterly earnings conference call, quarterly earnings releases, or otherwise, regarding our future performance that represents our management's estimates as of the date of release. This guidance, which includes forward-looking statements, has been and will be based on projections prepared by our management. These projections are not prepared with a view toward compliance with published guidelines of the American Institute of Certified Public Accountants, and neither our independent registered public accounting firm nor any other independent expert or outside party compiles or examines the projections. Accordingly, no such person expresses any opinion or any other form of assurance with respect to the projections. Projections are based upon a number of assumptions and estimates that, while presented with numerical specificity, are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond our control and are based upon specific assumptions with respect to future business decisions, some of which will change. We intend to state possible outcomes as high and low ranges which are intended to provide a sensitivity analysis as variables are changed but are not intended to imply that actual results could not fall outside of the suggested ranges. The principal reason that we release guidance is to provide a basis for our management to discuss our business outlook with analysts and investors. We do not accept any responsibility for any projections or reports published by any such third parties.

Guidance is necessarily speculative in nature, and it can be expected that some or all of the assumptions underlying the guidance furnished by us will not materialize or will vary significantly from actual results. Accordingly, our guidance is only an estimate of what management believes is realizable as of the date of release. Actual results may vary from our guidance and the variations may be material. In light of the foregoing, investors are urged not to rely upon our guidance in making an investment decision regarding our common stock.

Any failure to successfully implement our operating strategy or the occurrence of any of the events or circumstances set forth in this report or our other reports filed with the SEC could result in the actual operating results being different from our guidance, and the differences may be adverse and material.

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

The trading market for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. If one or more of the securities or industry analysts who publish research about us or our business downgrade our stock or publish inaccurate or unfavorable evaluations of our company or our stock, the price of our stock could decline. If one or more of these analysts cease coverage of our company, our stock may lose visibility in the market, which in turn could cause our stock price to decline.

The market price of our common stock has been and is likely to continue to be volatile, and you may be unable to sell your shares at or above the price at which you purchased them.

The market price of our common stock has been and is likely to continue to fluctuate widely. Factors affecting the market price of our common stock include:

- variations in our operating results, earnings per share, cash flows from operating activities, and key operating metrics, and how those results compare to analyst expectations;
- forward-looking guidance that we provide to the public and industry and financial analysts related to future revenue and profitability, and any change in that guidance or our failure to achieve the results reflected in that guidance;
- the net increases in the number of members, either independently or as compared with published expectations of industry, financial or other analysts that cover our company;

• changes in the estimates of our operating results or changes in recommendations by securities analysts that elect to follow our common stock;
• announcements of changes to our subscription, strategic alliances or significant agreements by us or by our competitors;

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announcements by us or by our competitors of mergers or other strategic acquisitions, or rumors of such transactions involving us or our competitors;

- recruitment or departure of key personnel;
- the economy as a whole and market conditions in our industry;
- trading activity by a limited number of stockholders who together beneficially own a majority of our outstanding common stock;
- the number of shares of our stock trading on a regular basis; and
- any other factors discussed in these risk factors and elsewhere in this report.

In addition, if the market for stock in our industry or the stock market in general experiences uneven investor confidence, the market price of our common stock could decline for reasons unrelated to our business, operating results or financial condition. The market price of our common stock might also decline in reaction to events that affect other companies within, or outside, our industry even if these events do not directly affect us. Some companies that have experienced volatility in the trading price of their stock have been the subject of securities class action litigation. If we are the subject of such litigation, it could result in substantial costs and a diversion of our management's attention and resources.

We do not intend to pay dividends on our common stock and, therefore, any returns will be limited to the value of our stock.

We have never declared or paid any cash dividends on our common stock. We currently intend to retain all available funds and any future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. In addition, our ability to pay cash dividends on our common stock is limited by the terms of our credit agreement, APIC's ability to pay dividends is limited by New York state insurance laws, and WICL Segregated Account AX's ability to pay dividends is limited by our agreements with WICL as well as WICL's regulatory requirements. Any return to stockholders will therefore be limited to the increase, if any, of our stock price.

Our directors and principal stockholders own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Our directors, five percent or greater stockholders and their respective affiliates beneficially hold a significant amount of our outstanding voting stock. Therefore, these stockholders have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you or other stockholders may feel are in your or their best interest as one of our stockholders.

Provisions in our restated certificate of incorporation, restated bylaws and Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the market price of our common stock.

Our restated certificate of incorporation and restated bylaws contain provisions that could depress the market price of our common stock by acting to discourage, delay or prevent a change in control of our company or changes in our management that the stockholders of our company may deem advantageous. These provisions, among other things:

- establish a classified board of directors so that not all members of our board are elected at one time;
- permit only the board of directors to establish the number of directors and fill vacancies on the board;
- provide that directors may only be removed "for cause" and only with the approval of two-thirds of our stockholders;
- require super-majority voting to amend some provisions in our restated certificate of incorporation and restated bylaws;
- authorize the issuance of "blank check" preferred stock that our board could use to implement a stockholder rights plan (also known as a "poison pill");
- eliminate the ability of our stockholders to call special meetings of stockholders;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;

prohibit cumulative voting; and
• establish advance notice requirements for nominations for election to our board or for proposing matters that can be acted upon by stockholders at annual stockholder meetings.

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In addition, Section 203 of the Delaware General Corporation Law may discourage, delay or prevent a change in control of our company. Section 203 imposes certain restrictions on mergers, business combinations and other transactions between us and holders of 15% or more of our common stock.

Our restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our restated certificate of incorporation provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim for breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our restated certificate of incorporation or our restated bylaws, (iv) any action to interpret, apply, enforce or determine the validity of our restated certificate of incorporation or restated bylaws, or (v) any action asserting a claim against us governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Stockholders who do bring a claim in the Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near the State of Delaware. The Court of Chancery may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. Alternatively, if a court were to find the choice of forum provision contained in our restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our principal executive offices are located at 6100 4th Avenue South, Seattle, Washington. We purchased the building in August 2018 and occupy 91,437 square feet. We also occupy 1,600 s

Item 3. Legal Proceedings

Information with respect to this item may be found in Note 8 of Item 8, "Financial Statements and Supplementary Data", under the caption, "Legal Proceedings" which information is incorporated herein by reference.

Item 4. Mine Safety Disclosures

Not applicable.

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PART II

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

Market for our Common Stock

Our common stock began trading on the New York Stock Exchange (NYSE) under the symbol “TRUP” on July 18, 2014. Prior to that time, there was no public market for our common stock. On June 17, 2016, we voluntarily transferred the listing of our common stock from the NYSE to the NASDAQ Global Market of the NASDAQ Stock Market LLC (NASDAQ) where our common stock continues to be traded under the symbol “TRUP”.

Dividend Policy

We have never declared or paid cash dividends on our capital stock. We currently intend to retain any future earnings for use in the operation of our business and do not intend to declare or pay any cash dividends in the foreseeable future. Any further determination to pay dividends on our capital stock will be at the discretion of our board of directors, subject to applicable laws and restrictions in our outstanding credit agreement, and will depend on our financial condition, results of operations, capital requirements, general business conditions and other factors that our board of directors considers relevant.

Holders of Record

As of February 7, 2019, there were 44 stockholders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, whose shares are held of record by banks, brokers, and other financial institutions.

Securities Authorized for Issuance under Equity Compensation Plans

The information called for by this item is incorporated by reference to our Proxy Statement for the Annual Meeting of Stockholders to be held in 2019. See Part III, Item 12 “Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.”

Stock Performance Graph

The following shall not be deemed “filed” for purposes of Section 18 of the Exchange Act, or incorporated by reference into any of our other filings under the Exchange Act or the Securities Act, except to the extent we specifically incorporate it by reference into such filing.

This chart compares the stockholder return on an investment of \$100 at the close of market on July 18, 2014 for (1) our common stock, (2) the S&P Small Cap 600 Index, (3) the NASDAQ-100 Technology Sector Index, and (4) the Russell 2000 Index. All values assume the reinvestment of any dividends; however, no dividends have been declared on our common stock to date. The stockholder return on the following graph is not necessarily indicative of future performance.

	7/18/2014	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
Trupanion Inc.	\$ 100.00	\$ 60.79	\$ 85.61	\$ 136.14	\$ 256.75	\$ 223.33
S&P Small Cap 600 Index	\$ 100.00	\$ 104.67	\$ 101.16	\$ 126.19	\$ 140.99	\$ 127.24
NASDAQ-100 Technology Sector Index	\$ 100.00	\$ 108.80	\$ 106.25	\$ 131.81	\$ 180.16	\$ 170.27
Russell 2000 Index	\$ 100.00	\$ 104.61	\$ 98.63	\$ 117.85	\$ 133.34	\$ 117.10

Use of Proceeds from Registered Securities

In June 2018, we completed a follow-on public offering whereby we sold 2,090,909 shares of common stock at a price to the public of \$33.00 per share. We received aggregate net proceeds of \$65.7 million, reflecting gross proceeds of \$69.0 million, reduced by underwriting discounts and commissions and offering expenses payable by us. The shares sold in the follow-on public offering were registered under the Securities Act pursuant to a registration statement on Form S-3 (File No. 333-225760), which became effective immediately upon filing with the SEC on June 20, 2018 (the "Registration Statement"). The proceeds were primarily used to purchase real estate consisting of properties in use as our home office. In August 2018, we issued additional 303,030 shares of common stock via a private placement under Section 4(a)(2) of the Securities Act to an accredited investor as a portion of the purchase price for the real estate.

Item 6. Selected Financial Data

The selected statements of operations, balance sheet, and other data presented below should be read with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes included elsewhere in this report. The selected statements of operations and balance sheet data are derived from our audited consolidated financial statements included elsewhere in this report and our previously audited financial statements that are not included herein. Our historical results are not necessarily indicative of the results to be expected in any future period.

	Year Ended December 31,				
	2018	2017	2016	2015	2014
	(in thousands)				
Consolidated statements of operations data:					
Revenue:					
Subscription business	\$263,738	\$218,354	\$173,356	\$133,406	\$103,502
Other business	40,218	24,313	14,874	13,557	12,408
Total revenue	303,956	242,667	188,230	146,963	115,910
Cost of revenue:					
Subscription business ⁽¹⁾	215,992	176,883	141,321	109,428	85,169
Other business	36,598	22,734	13,621	12,306	10,867
Total cost of revenue	252,590	199,617	154,942	121,734	96,036
Gross profit:					
Subscription business	47,746	41,471	32,035	23,978	18,333
Other business	3,620	1,579	1,253	1,251	1,541
Total gross profit	51,366	43,050	33,288	25,229	19,874
Operating expenses:					
Technology and development ⁽¹⁾	9,248	9,768	9,534	11,215	9,899
General and administrative ⁽¹⁾	18,164	16,820	15,205	15,558	14,312
Sales and marketing ⁽¹⁾	24,999	19,104	15,247	15,231	11,608
Total operating expenses	52,411	45,692	39,986	42,004	35,819
Operating loss	(1,045)	(2,642)	(6,698)	(16,775)	(15,945)
Interest expense	1,198	533	218	325	6,726
Other (income) expense, net	(1,309)	(1,244)	(58)	(9)	(1,487)
Loss before income taxes	(934)	(1,931)	(6,858)	(17,091)	(21,184)
Income tax (benefit) expense	(7)	(428)	38	114	(7)
Net loss	\$(927)	\$(1,503)	\$(6,896)	\$(17,205)	\$(21,177)

(1) Includes stock-based compensation expense as follows:

	Year Ended December 31,				
	2018	2017	2016	2015	2014
	(in thousands)				
Cost of revenue	\$927	\$594	\$275	\$263	\$315
Technology and development	209	216	246	404	461
General and administrative	2,304	1,887	1,893	1,889	2,755
Sales and marketing	1,335	722	532	446	553
Total stock-based compensation expense	\$4,775	\$3,419	\$2,946	\$3,002	\$4,084

	December 31,				
	2018	2017	2016	2015	2014
	(in thousands)				
Consolidated balance sheet data:					
Cash and cash equivalents	\$26,552	\$25,706	\$23,637	\$17,956	\$53,098
Short-term investments	54,559	37,590	29,570	25,288	22,371
Working capital	54,773	40,692	34,729	30,016	62,111
Total assets	207,510	105,859	82,345	70,917	98,306
Current and long-term debt	12,862	9,324	4,767	—	14,900
Total liabilities	78,337	57,425	37,630	25,561	39,031
Common stock and additional paid-in capital	219,838	134,511	129,574	122,844	119,045
Accumulated deficit	(83,711)	(82,784)	(81,281)	(74,385)	(57,180)
Total stockholders' equity	129,173	48,434	44,715	45,356	59,275
	Year Ended December 31,				
	2018	2017	2016	2015	2014
Other operational data⁽¹⁾:					
Total pets enrolled (at period end)	521,326	423,194	343,649	291,818	232,450
Total subscription pets enrolled	430,770	371,683	323,233	272,636	215,491
Monthly average revenue per pet	\$54.34	\$52.07	\$47.82	\$45.04	\$44.14
Lifetime value of a pet (LVP)	\$710	\$727	\$631	\$591	\$591
Average pet acquisition cost (PAC) ⁽²⁾	\$164	\$152	\$123	\$132	\$121
Average monthly retention	98.60 %	98.63 %	98.60 %	98.64 %	98.69 %

(1) For more information about how we calculate total pets enrolled, total subscription pets enrolled, monthly average revenue per pet, lifetime value of a pet, average pet acquisition cost and average monthly retention, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Operating Metrics."

(2) Average pet acquisition cost is calculated in part based on net acquisition cost, a non-GAAP financial measure. For more information about net acquisition cost and a reconciliation of sales and marketing expenses to net acquisition cost, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Non-GAAP

Financial Measures.”

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Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**Overview**

We provide medical insurance for cats and dogs throughout the United States, Canada and Puerto Rico. Our data-driven, vertically-integrated approach enables us to provide pet owners with what we believe is the highest value medical insurance for their pets, priced specifically for each pet's unique characteristics. Our growing and loyal member base provides us with highly predictable and recurring revenue. We operate our business similar to other subscription-based businesses, with a focus on maximizing the lifetime value of each pet while sustaining a favorable ratio of lifetime value relative to pet acquisition cost, based on our desired return on investment.

We operate in two business segments: subscription business and other business. We generate revenue in our subscription business segment primarily from subscription fees for our medical insurance, which we market to consumers. Fees are paid at the beginning of each subscription period, which automatically renews on a monthly basis. We generate revenue in our other business segment writing policies on behalf of third parties, where we do not undertake the marketing, and have more of a business-to-business relationship. Our other business segment consists of companies or organizations that choose to provide medical insurance for cats and dogs as a benefit to their employees or members, and contracts include multiple pets. The policies in our other business segment may be materially different from our subscription business. Our ultimate goal is to build the Trupanion brand by continuing to offer the highest value proposition in the industry and maintain strong alignment with the veterinary community. We believe our activities in our other business segment benefit the overall market for pet medical insurance by expanding upon product options and distribution models within other market niches.

We generate leads for our subscription business through both third-party referrals and direct-to-consumer acquisition channels, which we then convert into members through our website and contact center. Veterinary practices represent our largest referral source. We engage our Territory Partners to have face-to-face visits with veterinarians and their staff. Territory Partners are dedicated to cultivating direct veterinary relationships and building awareness of the benefits of our subscription to veterinarians and their clients. Veterinarians then educate pet owners, who visit our website or call our contact center to learn more about, and potentially enroll in, Trupanion. We pay Territory Partners fees based on activity in their regions. We also receive a significant number of new leads from existing members adding pets and referring their friends and family members. Our direct-to-consumer acquisition channels serve as important resources for pet owner education and drive new member leads and conversion. We continuously evaluate the effectiveness of our member acquisition channels and marketing initiatives based upon their return on investment, which we measure by comparing the ratio of the lifetime value of a pet generated through each specific channel or initiative to the related acquisition cost.

Key Operating Metrics

The following tables set forth our key operating metrics for our subscription business and total enrolled pets for the periods ended December 31, 2018, 2017 and 2016, and for each of the last eight fiscal quarters.

	Year Ended December 31,		
	2018	2017	2016
Total pets enrolled (at period end)	521,326	423,194	343,649
Total subscription pets enrolled (at period end)	430,770	371,683	323,233
Monthly average revenue per pet	\$54.34	\$52.07	\$47.82
Lifetime value of a pet (LVP)	\$710	\$727	\$631
Average pet acquisition cost (PAC)	\$164	\$152	\$123
Average monthly retention	98.60 %	98.63 %	98.60 %

	Period Ended							
	Dec. 31, 2018	Sept. 30, 2018	Jun. 30, 2018	Mar. 31, 2018	Dec. 31, 2017	Sept. 30, 2017	Jun. 30, 2017	Mar. 31, 2017
Total pets enrolled (at period end)	521,326	497,942	472,480	446,533	423,194	404,069	383,293	364,259
Total subscription pets enrolled (at period end)	430,770	416,527	401,033	385,640	371,683	359,102	346,409	334,909
Monthly average revenue per pet	\$55.15	\$54.55	\$53.96	\$53.62	\$53.17	\$52.95	\$51.47	\$50.50
Lifetime value of a pet (LVP)	\$710	\$714	\$732	\$727	\$727	\$701	\$654	\$637
Average pet acquisition cost (PAC)	\$186	\$155	\$150	\$165	\$184	\$151	\$143	\$128
Average monthly retention	98.60 %	98.61 %	98.64 %	98.63 %	98.63 %	98.61 %	98.57 %	98.58 %

Total pets enrolled. Total pets enrolled reflects the number of subscription pets or pets enrolled in one of the insurance products offered in our other business segment at the end of each period presented. We monitor total pets enrolled because it provides an indication of the growth of our consolidated business.

Total subscription pets enrolled. Total subscription pets enrolled reflects the number of pets in active memberships at the end of each period presented. We monitor total subscription pets enrolled because it provides an indication of the growth of our subscription business.

Monthly average revenue per pet. Monthly average revenue per pet is calculated as amounts billed in a given period for subscriptions divided by the total number of subscription pet months in the period. Total subscription pet months in a period represents the sum of all subscription pets enrolled for each month during the period. We monitor monthly average revenue per pet because it is an indicator of the per pet unit economics of our subscription business.

Lifetime value of a pet. Lifetime value of a pet (LVP) is a business operating metric that we believe reflects the lifetime value we might expect from a new subscription pet enrollment. We calculate LVP based on gross profit from our subscription business segment for the 12 months prior to the period end date excluding stock-based compensation expense related to cost of revenue from our subscription business segment, sign-up fee revenue and the change in deferred revenue between periods, multiplied by the implied average subscriber life in months. Implied average subscriber life in months is calculated as the quotient obtained by dividing one by one minus the average monthly retention rate. We monitor LVP to assess how much lifetime value we might expect from new pets over their implied average subscriber life in months and to evaluate the amount of sales and marketing expenses we may want to incur to attract new subscription pet enrollments, based on our targeted internal rate of return.

Average pet acquisition cost. Average pet acquisition cost (PAC) is calculated as net acquisition cost divided by the total number of new subscription pets enrolled in that period. Net acquisition cost, a non-GAAP financial measure, is calculated in a reporting period as sales and marketing expense, excluding stock-based compensation expense and other business segment sales and marketing expense, offset by sign-up fee revenue. We exclude stock-based compensation expense because the amount varies from period to period based on number of awards issued and market-based valuation inputs. We offset sign-up fee revenue because it is a one-time charge to new members collected at the time of enrollment used to partially offset initial setup costs, which are included in sales and marketing expenses. We exclude other business segment sales and marketing expense because that does not relate to subscription enrollments. We monitor average pet acquisition cost to evaluate the efficiency of our sales and marketing programs in acquiring new members and measure effectiveness using the ratio of our lifetime value of a pet to average pet acquisition cost, based on our desired return on investment.

Average monthly retention. Average monthly retention is measured as the monthly retention rate of enrolled subscription pets for each applicable period averaged over the 12 months prior to the period end date. As such, our average monthly retention rate as of December 31, 2018 is an average of each month's retention from January 1, 2018 through December 31, 2018. We calculate monthly retention as the number of pets that remain after subtracting all pets that cancel during a month, including pets that enroll and cancel within that month, divided by the total pets enrolled at the beginning of that month. We monitor average monthly retention because it provides a measure of member satisfaction and allows us to calculate the implied average subscriber life in months.

Non-GAAP Financial Measures

We believe that using net acquisition cost to calculate and present certain of our other key metrics is helpful to our investors and an important tool for financial and operational decision-making and evaluating our operating results over different periods of time. Measuring net acquisition cost by removing stock-based compensation expense and other business segment sales and marketing expense offset by sign-up fee revenue provides for a more comparable metric across periods.

This measure, which is a non-GAAP financial measure, may not provide information that is directly comparable to that provided by other companies in our industry. In addition, this measure excludes stock-based compensation expense, which has been, and is expected to continue to be for the foreseeable future, a significant recurring component of our sales and marketing expense. The presentation and utilization of non-GAAP financial measures is not meant to be considered in isolation or as a substitute for the directly comparable financial measures prepared in accordance with GAAP.

The following tables reflect the reconciliation of net acquisition cost to sales and marketing expense (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Sales and marketing expense	\$24,999	\$19,104	\$15,247
Net of sign-up fee revenue	(2,587)	(2,169)	(2,073)
Excluding:			
Stock-based compensation expense	(1,335)	(722)	(532)
Other business segment sales and marketing expense	(377)	(218)	(218)
Net acquisition cost	\$20,700	\$15,995	\$12,424

	Period Ended							
	Dec. 31, 2018	Sept. 30, 2018	Jun. 30, 2018	Mar. 31, 2018	Dec. 31, 2017	Sept. 30, 2017	Jun. 30, 2017	Mar. 31, 2017
Sales and marketing expense	\$6,994	\$6,365	\$5,702	\$5,938	\$5,781	\$4,862	\$4,372	\$4,089
Net of sign-up fee revenue	(655)	(693)	(624)	(616)	(550)	(558)	(517)	(544)
Excluding:								
Stock-based compensation expense	(355)	(358)	(349)	(273)	(172)	(165)	(198)	(187)
Other business segment sales and marketing expense	(102)	(99)	(88)	(87)	(56)	(51)	(63)	(48)
Net acquisition cost	\$5,882	\$5,215	\$4,641	\$4,962	\$5,003	\$4,088	\$3,594	\$3,310

Components of Operating Results

General

We operate in two business segments: subscription business and other business. Our subscription business segment includes revenue and expenses related to monthly subscriptions for pet medical insurance, which we market to consumers. When we do not directly market and sell to consumers, we classify the related revenue and expenses in our other business segment.

Revenue

We generate revenue in our subscription business segment primarily from subscription fees for our pet medical insurance. Fees are paid at the beginning of each subscription period, which automatically renews on a monthly basis. In most cases, our members authorize us to directly charge their credit card, debit card or bank account through automatic funds transfer. Subscription revenue is recognized on a pro rata basis over the monthly enrollment term. Membership may be canceled at any time without penalty, and we issue a refund for the unused portion of the canceled membership.

We generate revenue in our other business segment primarily from writing policies on behalf of third parties where we do not undertake the direct consumer marketing. This segment includes the writing of policies that may be materially different from our subscription.

Cost of Revenue

Cost of revenue in each of our segments is comprised of the following:

Veterinary invoice expense

Veterinary invoice expense includes our costs to review veterinary invoices, administer the payments, and provide member services, and other operating expenses directly or indirectly related to this process. We also accrue for veterinary invoices that have been incurred but not yet received. This also includes amounts paid by unaffiliated general agents, and an estimate of amounts incurred and not yet paid for our other business segment.

Other cost of revenue

Other cost of revenue for the subscription business segment includes direct and indirect member service expenses, Territory Partner renewal fees, credit card transaction fees and premium tax expenses. Other cost of revenue for the other business segment includes the commissions we pay to unaffiliated general agents, costs to administer the programs in the other business segment and premium taxes on the sales in this segment.

Operating Expenses

Our operating expenses are classified into three categories: technology and development, general and administrative, and sales and marketing. For each category, the largest component is personnel costs, which include salaries, employee benefit costs, bonuses and stock-based compensation expense.

Technology and Development

Technology and development expenses primarily consist of personnel costs and related expenses for our technology staff, which includes information technology development and infrastructure support and third-party services, as well as depreciation of hardware and capitalized software.

General and Administrative

General and administrative expenses consist primarily of personnel costs and related expenses for our finance, actuarial, human resources, regulatory, legal and general management functions, as well as facilities and professional services.

Sales and Marketing

Sales and marketing expenses primarily consist of the cost to educate veterinarians and consumers about the benefits of Trupanion, to generate leads and to convert leads into enrolled pets, as well as print, online and promotional advertising costs, and employee compensation and related costs. Sales and marketing expenses are driven primarily by investments to acquire new members.

Factors Affecting Our Performance

Average monthly retention. Our performance depends on our ability to continue to retain our existing and newly enrolled pets and is impacted by our ability to provide a best-in-class value and member experience. Our ability to retain enrolled pets depends on a number of factors, including the actual and perceived value of our services and the quality of our member experience, the ease and transparency of the process for reviewing and paying veterinary invoices for our members, and the competitive environment. In addition, other initiatives across our business may temporarily impact retention and make it difficult for us to improve or maintain this metric. For example, if the number of new pets enrolled increases at a faster rate than our historical experience, our average monthly retention rate could be adversely impacted, as our retention rate is generally lower during the first year of member enrollment.

Investment in pet acquisition. We have made and plan to continue to make significant investments to grow our member base. Our net acquisition cost and the number of new members we enroll depends on a number of factors, including the amount we elect to invest in sales and marketing activities in any particular period in the aggregate and by channel, the frequency of existing members adding a pet or referring their friends or family, effectiveness of our sales execution and marketing initiatives, changes in costs of media, the mix of our sales and marketing expenditures and the competitive environment. Our average pet acquisition cost has in the past significantly varied, and in the future may significantly vary, from period to period based upon specific marketing initiatives and the actual or expected relationship to LVP and estimated rates of return on pet acquisition spend. We also regularly test new member acquisition channels and marketing initiatives, which may be more expensive than our traditional marketing channels and may increase our average acquisition costs. We continually assess our sales and marketing activities by monitoring the ratio of LVP to PAC and the return on PAC spend both on a detailed level by acquisition channel and in the aggregate.

Timing of initiatives. Over time we plan to implement new initiatives to improve our member experience, make modifications to our subscription plan and find other ways to maintain a strong value proposition for our members. These initiatives will sometimes be accompanied by price adjustments, in order to compensate for an increase in benefits received by our members. The implementation of such initiatives may not always coincide with the timing of price adjustments, resulting in fluctuations in revenue and gross profit in our subscription business segment.

Geographic mix of sales. The relative mix of our business between the United States and Canada impacts the monthly average revenue per pet we receive. Prices for our plan in Canada are generally higher than in the United States (in local currencies), which is consistent with the relative cost of veterinary care in each country. As our mix of business between the United States and Canada changes, our metrics, such as our monthly average revenue per pet, and our exposure to foreign exchange fluctuations will be impacted.

Other business segment. Our other business segment primarily includes revenue and expenses related to policies written on behalf of third parties. This segment includes the writing of policies that may be materially different from our subscription. Our relationships in our other business segment are generally subject to termination provisions and are non-exclusive. Accordingly, we cannot control the volume of business, even if a contract is not terminated. Loss of an entire program via contract termination could result in the associated policies and revenues being lost over a period of 12 to 18 months, which could have a material impact on our results of operations. We may enter into additional relationships in the future to the extent we believe they will be profitable to us, which could also impact our operating results.

Results of Operations

The following tables set forth our results of operations for the periods presented both in absolute dollars and as a percentage of total revenue for those periods. The period-to-period comparison of financial results is not necessarily indicative of future results.

	Year Ended December 31,		
	2018	2017	2016
	(in thousands)		
Revenue:			
Subscription business	\$263,738	\$218,354	\$173,356
Other business	40,218	24,313	14,874
Total revenue	303,956	242,667	188,230
Cost of revenue:			
Subscription business ⁽¹⁾	215,992	176,883	141,321
Other business	36,598	22,734	13,621
Total cost of revenue	252,590	199,617	154,942
Gross profit:			
Subscription business	47,746	41,471	32,035
Other business	3,620	1,579	1,253
Total gross profit	51,366	43,050	33,288
Operating expenses:			
Technology and development ⁽¹⁾	9,248	9,768	9,534
General and administrative ⁽¹⁾	18,164	16,820	15,205
Sales and marketing ⁽¹⁾	24,999	19,104	15,247
Total operating expenses	52,411	45,692	39,986
Operating loss	(1,045)	(2,642)	(6,698)
Interest expense	1,198	533	218
Other income, net	(1,309)	(1,244)	(58)
Loss before income taxes	(934)	(1,931)	(6,858)
Income tax (benefit) expense	(7)	(428)	38
Net loss	\$(927)	\$(1,503)	\$(6,896)

(1) Includes stock-based compensation expense as follows:

	Year Ended December 31,		
	2018	2017	2016
	(in thousands)		
Cost of revenue	\$927	\$594	\$275
Technology and development	209	216	246
General and administrative	2,304	1,887	1,893
Sales and marketing	1,335	722	532
Total stock-based compensation expense	\$4,775	\$3,419	\$2,946

	Year Ended December 31,		
	2018	2017	2016
	(as a percentage of revenue)		
Revenue	100 %	100 %	100 %
Cost of revenue	83	82	82
Gross profit	17	18	18
Operating expenses:			
Technology and development	3	4	5
General and administrative	6	7	8
Sales and marketing	8	8	8
Total operating expenses	17	19	21
Operating loss	—	(1)	(4)
Interest expense	—	—	—
Other (income) expense, net	—	(1)	—
Loss before income taxes	—	(1)	(4)
Income tax (benefit) expense	—	—	—
Net loss	— %	(1)%	(4)%
	Year Ended December 31,		
	2018	2017	2016
	(as a percentage of subscription revenue)		
Subscription business revenue	100 %	100 %	100 %
Subscription business cost of revenue	82	81	82
Subscription business gross profit	18 %	19 %	18 %

Comparison of the years ended December 31, 2018, 2017, and 2016

Revenue

	Year Ended December 31,			Change	
	2018	2017	2016	2018 vs. 2017	2017 vs. 2016
	(in thousands, except percentages, pet and per pet data)				
Revenue:					
Subscription business	\$263,738	\$218,354	\$173,356	21%	26%
Other business	40,218	24,313	14,874	65	63
Total revenue	\$303,956	\$242,667	\$188,230	25	29
Percentage of Revenue by Segment:					
Subscription business	87	% 90	% 92	%	
Other business	13	10	8		
Total revenue	100	% 100	% 100	%	
Total pets enrolled (at period end)	521,326	423,194	343,649	23	23
Total subscription pets enrolled (at period end)	430,770	371,683	323,233	16	15
Monthly average revenue per pet	\$54.34	\$52.07	\$47.82	4	9
Average monthly retention	98.60	% 98.63	% 98.60	%	

Year ended December 31, 2018 compared to year ended December 31, 2017. Total revenue increased by \$61.3 million to \$304.0 million for the year ended December 31, 2018, or 25%. Revenue from our subscription business segment increased by \$45.4 million to \$263.7 million for the year ended December 31, 2018, or 21%. This increase in subscription business revenue was primarily due to a 16% increase in total subscription pets enrolled as of December 31, 2018 compared to December 31, 2017, and increased average revenue per pet of 4% for the same period. Increases in pricing were due to the increased cost and utilization of veterinary care. Revenue from our other business segment increased \$15.9 million to \$40.2 million for the year ended December 31, 2018, or 65%, due to an increase in enrolled pets in this segment.

Year ended December 31, 2017 compared to year ended December 31, 2016. Total revenue increased by \$54.4 million to \$242.7 million for the year ended December 31, 2017, or 29%. Revenue for our subscription business segment increased by \$45.0 million to \$218.4 million for the year ended December 31, 2017, or 26%. This increase in subscription business revenue was primarily due to a 15% increase in total subscription pets enrolled as of December 31, 2017 compared to December 31, 2016, and increased average revenue per pet of 9% for the same period. Increases in pricing were due to the increased cost of veterinary care and more accurately pricing to our cost-plus margin structure by subcategory. Revenue from our other business segment increased \$9.4 million to \$24.3 million for the year ended December 31, 2017, or 63%, due to an increase in enrolled pets in this segment.

Cost of Revenue

	Year Ended December 31,			Change	
	2018	2017	2016	2018 vs. 2017	2017 vs. 2016
	(in thousands, except percentages, pet and per pet data)				
Cost of Revenue:					
Subscription business:					
Veterinary invoice expense	\$191,051	\$155,554	\$124,636	23%	25%
Other cost of revenue	24,941	21,329	16,685	17	28
Total cost of revenue	215,992	176,883	141,321	22	25
Gross profit	47,746	41,471	32,035	15	29
Other business:					
Veterinary invoice expense	23,488	14,568	8,898	61	64
Other cost of revenue	13,110	8,166	4,723	61	73
Total cost of revenue	36,598	22,734	13,621	61	67
Gross profit	3,620	1,579	1,253	129	26

Percentage of Revenue by Segment:

Subscription business:					
Veterinary invoice expense	72	% 71	% 72	%	
Other cost of revenue	9	10	10		
Total cost of revenue	82	81	82		
Gross profit	18	19	18		
Other business:					
Veterinary invoice expense	58	60	60		
Other cost of revenue	33	34	32		
Total cost of revenue	91	94	92		
Gross profit	9	6	8		
Total pets enrolled (at period end)	521,326	423,194	343,649	23	23
Total subscription pets enrolled (at period end)	430,770	371,683	323,233	16	15
Monthly average revenue per pet	\$54.34	\$52.07	\$47.82	4	9

Year ended December 31, 2018 compared to year ended December 31, 2017. Cost of revenue for our subscription business segment was \$216.0 million, or 82% of revenue, for the year ended December 31, 2018, compared to \$176.9 million, or 81%, of revenue for the year ended December 31, 2017. This \$39.1 million increase in subscription cost of revenue was primarily the result of a 23% increase in veterinary invoice expense. As a percentage of revenue, these costs increased to 72% for the year ended December 31, 2018 from 71% for the year ended December 31, 2017, due to the increases in monthly average revenue per pet lagging slightly behind increases in veterinary invoice expense increases. Cost of revenue for our other business segment increased \$13.9 million to \$36.6 million for the year ended December 31, 2018, due to an increase in enrolled pets in this segment.

Year ended December 31, 2017 compared to year ended December 31, 2016. Cost of revenue for our subscription business segment was \$176.9 million, or 81% of revenue, for the year ended December 31, 2017, compared to \$141.3 million, or 82% of revenue, for the year ended December 31, 2016. This \$35.6 million increase in subscription cost of revenue was primarily the result of a 15% increase in subscription pets enrolled, resulting in a 25% increase in veterinary invoice expense and related internal processing costs. As a percentage of revenue, these costs decreased to 71% for the year ended December 31, 2017 from 72% for the year ended December 31, 2016, due to the increase in monthly average revenue per pet outpacing the cost of veterinary care for certain subcategories as we more accurately priced those subcategories. Cost of revenue for our other business segment increased \$9.1 million to \$22.7 million for the year ended December 31, 2017, due to an increase in enrolled pets in this segment.

Technology and Development Expenses

	Year Ended December 31,			Change	
	2018	2017	2016	2018 vs. 2017	2017 vs. 2016
	(in thousands, except percentages)				
Technology and development	\$9,248	\$9,768	\$9,534	(5)%	2%
Percentage of total revenue	3	% 4	% 5	%	

Year ended December 31, 2018 compared to year ended December 31, 2017. Technology and development expenses decreased \$0.5 million, or 5%, to \$9.2 million for the year ended December 31, 2018. This decrease was partially due to a \$0.1 million decrease in amortization expense and a \$0.1 million decrease in infrastructure-related costs compared to the same period in the prior year. In addition, more resources were dedicated to capital projects, resulting in a higher proportion of costs being capitalized in 2018.

Year ended December 31, 2017 compared to year ended December 31, 2016. Technology and development expenses increased \$0.2 million, or 2%, to \$9.8 million for the year ended December 31, 2017. This increase was primarily due to a \$0.5 million increase in amortization expense related to projects placed in service in late 2016. This was offset by a \$0.3 million decrease in infrastructure related costs compared to the same period in the prior year.

General and Administrative Expenses

	Year Ended December 31,			Change	
	2018	2017	2016	2018 vs. 2017	2017 vs. 2016
	(in thousands, except percentages)				
General and administrative	\$ 18,164	\$ 16,820	\$ 15,205	8%	11%
Percentage of total revenue	6	% 7	% 8	%	

Year ended December 31, 2018 compared to year ended December 31, 2017. General and administrative expenses increased \$1.4 million, or 8%, to \$18.2 million for the year ended December 31, 2018. This increase was primarily due to increases of compensation expense by \$1.0 million and professional service fees by \$0.6 million, partially offset by lower expenses as a result of owning our corporate headquarters building. General and administrative expenses decreased from 7% to 6% as a percentage of revenue for the year ended December 31, 2018, as we experienced scale in our support functions.

Year ended December 31, 2017 compared to year ended December 31, 2016. General and administrative expenses increased \$1.6 million, or 11%, to \$16.8 million for the year ended December 31, 2017. This was primarily due to an

increase of \$1.0 million related to higher rent and occupancy costs after our move to a new building in the third quarter of 2016. General and administrative expenses decreased from 8% to 7% as a percentage of revenue for the year ended December 31, 2017, as we experienced scale in our support functions.

Sales and Marketing Expenses

	Year Ended December 31,			Change	
	2018	2017	2016	2018 vs. 2017	2017 vs. 2016
	(in thousands, except pet and per pet data)				
Sales and marketing	\$24,999	\$19,104	\$15,247	31%	25%
Subscription Business:					
Total subscription pets enrolled (at period end)	430,770	371,683	323,233	16	15
Average pet acquisition cost (PAC)	\$164	\$152	\$123	8	24

Year ended December 31, 2018 compared to year ended December 31, 2017. Sales and marketing expense increased \$5.9 million, or 31%, to \$25.0 million, while gross subscription new pets increased 20%, to 126,182, and PAC increased 8% for the year ended December 31, 2018. The increase in expense consisted primarily of an additional \$3.5 million in compensation expense, due to a 27% increase in headcount, and \$2.0 million related to new marketing initiatives.

Year ended December 31, 2017 compared to year ended December 31, 2016. Sales and marketing expenses increased \$3.9 million, or 25%, to \$19.1 million for the year ended December 31, 2017. PAC increased 24% from December 31, 2016, to \$152 for the year ended December 31, 2017, as a result of \$1.8 million in additional testing of new marketing initiatives. Additionally, compensation and related expenses increased by \$2.0 million due to a 21% increase in headcount in the year ended December 31, 2017.

Total Other (Income) Expense, Net

	Year Ended December 31,		
	2018	2017	2016
	(in thousands)		
Interest expense	\$1,198	\$533	\$218
Other income, net	(1,309)	(1,244)	(58)
Total other (income) expense, net	\$(111)	\$(711)	\$160

Year ended December 31, 2018 compared to year ended December 31, 2017. Total other (income) expense, net decreased by \$0.6 million primarily due to a \$1.0 million gain related to the sale of our equity method investment during prior year, partially offset by higher interest expense in the year ended December 31, 2018, primarily due to higher average debt balances.

Year ended December 31, 2017 compared to year ended December 31, 2016. Total other (income) expense, net improved by \$0.9 million due to a \$1.0 million gain related to the sale of our equity method investment in the second quarter of 2017.

Income Tax (Benefit) Expense

	Year Ended December 31,		
	2018	2017	2016
	(in thousands, except percentages)		
Income tax (benefit) expense	\$(7)	\$(428)	\$38
Effective tax rate	0.8 %	22.2 %	(0.6)%

Year ended December 31, 2018 compared to year ended December 31, 2017. In December 2017, the U.S. government enacted the Tax Cuts and Jobs Act (the Tax Act). The Tax Act makes broad and complex changes to the Code, including reducing the corporate tax rate to 21% effective January 1, 2018. As a result, we recorded a decrease of \$0.6 million to our net deferred tax liability recorded on our consolidated balance sheet, with a corresponding adjustment to income tax benefit for the year ended December 31, 2017. No additional adjustments were made to our net deferred tax liability as a result of finalizing our analysis of the impact of the Tax Act in 2018. As such, the effective tax rate for 2018 is the result of maintaining a full valuation allowance on our reported U.S. federal deferred tax assets.

Year ended December 31, 2017 compared to year ended December 31, 2016. As a result of the Tax Act, we recorded a decrease of \$0.6 million to our net deferred tax liability recorded on our consolidated balance sheet, with a corresponding adjustment to income tax benefit for the year ended December 31, 2017. This tax benefit represents our best estimate of the impact of the Tax Act in accordance with our understanding of the Tax Act and available guidance as of our date of filing.

The Tax Act makes additional significant changes to the Code, such as, (1) imposing a mandatory one-time tax on accumulated earnings of foreign subsidiaries and transitioning U.S. international taxation from a worldwide tax system to a territorial system with base erosion rules; (2) imposing changes on the utilization of net operating losses; (3) other general changes to the taxation of corporations, including changes to cost recovery rules, changes to the deductibility of interest expense, and elimination of the performance-based compensation exception for executive compensation. The overall impact of the Tax Act on our future results of operations is uncertain at this time. We intend to continue to reinvest all of our foreign earnings indefinitely outside of the U.S.

Quarterly Results of Operations

The following tables contain selected quarterly financial information for the years ended December 31, 2018 and 2017. The unaudited quarterly information has been prepared on a basis consistent with the audited consolidated financial statements and includes all adjustments that we consider necessary for a fair presentation of the information shown. These quarterly operating results for any fiscal quarter are not necessarily indicative of the operating results for any full fiscal year or future period.

	Consolidated Statements of Operations Data: Three Months Ended							
	Dec. 31, 2018	Sept. 30, 2018	Jun. 30, 2018	Mar. 31, 2018	Dec. 31, 2017	Sept. 30, 2017	Jun. 30, 2017	Mar. 31, 2017
	(in thousands)							
Revenue:								
Subscription business	\$70,933	\$67,421	\$63,867	\$61,517	\$58,991	\$56,493	\$52,641	\$50,229
Other business	11,707	10,743	9,525	8,243	7,554	6,625	5,634	4,500
Total revenue	82,640	78,164	73,392	69,760	66,545	63,118	58,275	54,729
Cost of revenue:								
Subscription business ⁽¹⁾	57,892	54,753	52,333	51,014	47,831	45,215	42,591	41,246
Other business	10,543	9,667	8,706	7,682	6,977	6,096	5,333	4,328
Total cost of revenue	68,435	64,420	61,039	58,696	54,808	51,311	47,924	45,574
Gross profit:								
Subscription business	13,041	12,668	11,534	10,503	11,160	11,278	10,050	8,983
Other business	1,164	1,076	819	561	577	529	301	172
Total gross profit	14,205	13,744	12,353	11,064	11,737	11,807	10,351	9,155
Operating expenses:								
Technology and development ⁽¹⁾	2,487	2,299	2,298	2,164	2,572	2,471	2,322	2,403
General and administrative ⁽¹⁾	4,922	4,174	4,610	4,458	4,546	4,017	4,245	4,012
Sales and marketing ⁽¹⁾	6,994	6,365	5,702	5,938	5,781	4,862	4,372	4,089
Total operating expenses	14,403	12,838	12,610	12,560	12,899	11,350	10,939	10,504
Operating (loss) income	(198)	906	(257)	(1,496)	(1,162)	457	(588)	(1,349)
Interest expense	311	336	332	219	163	124	109	137