
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2016

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: 001-35198

Pandora Media, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

**2101 Webster Street, Suite 1650
Oakland, CA**

(Address of principal executive offices)

94-3352630

(I.R.S. Employer
Identification No.)

94612

(Zip Code)

(510) 451-4100

(Registrant's telephone number, including area code)

Securities registered pursuant to section 12(g) of the Act:

Title of each class	Name of each exchange on which registered
Common stock, \$0.0001 par value	The New York Stock Exchange

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 and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (Section 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (Section 229.405 of this chapter) is not contained herein, and will not be contained, to the best of 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 a check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

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 voting common stock held by non-affiliates of the registrant as of June 30, 2016 (the last business day of the registrant's most recently completed second quarter), based on the closing price of such stock on The New York Stock Exchange on such date was approximately \$2,088 million. This calculation excludes the shares of common stock held by executive officers, directors and stockholders whose ownership exceeds 5% outstanding at June 30, 2016. This calculation does not reflect a determination that such persons are affiliates for any other purposes.

On February 13, 2017 the registrant had 235,287,441 shares of common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the registrant's 2017 Annual Meeting of Stockholders (the "Proxy Statement"), to be filed within 120 days of the end of the fiscal year ended December 31, 2016, are incorporated by reference in Part III hereof. Except with respect to information specifically incorporated by reference in this Annual Report on Form 10-K, the Definitive Proxy Statement is not deemed to be filed as part of this Annual Report on Form 10-K.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND INDUSTRY DATA

This Annual Report on Form 10-K contains "forward-looking statements" that involve substantial risks and uncertainties. The statements contained in this Annual Report on Form 10-K that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including, but not limited to, statements regarding our expectations, beliefs, intentions, strategies, future operations, future financial position, future revenue, projected expenses and plans and objectives of management. In some cases, you can identify forward-looking statements by terms such as "anticipate," "believe," "estimate," "expect," "intend," "may," "might," "plan," "project," "will," "would," "should," "could," "can," "predict," "potential," "continue," "objective," or the negative of these terms, and similar expressions intended to identify forward-looking statements. However, not all forward-looking statements contain these identifying words. These forward-looking statements reflect our current views about future events and involve known risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievement to be materially different from those expressed or implied by the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in Item 1A—"Risk Factors" included in this Annual Report on Form 10-K. Furthermore, such forward-looking statements speak only as of the date of this report. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements. We qualify all of our forward-looking statements by these cautionary statements. In addition, the industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors including those described in the section entitled "Risk Factors." These and other factors could cause our results to differ materially from those expressed in this Annual Report on Form 10-K.

Some of the industry and market data contained in this Annual Report on Form 10-K are based on independent industry publications, including those generated by Triton Digital Media or "Triton," International Data Corporation or "IDC," eMarketer or other publicly available information. This information involves a number of assumptions and limitations. Although we believe that each source is reliable as of its respective date, we have not independently verified the accuracy or completeness of this information.

As used herein, "Pandora," the "Company," "we," "our," and similar terms refer to Pandora Media, Inc. and, where appropriate, its wholly owned subsidiaries, unless the context indicates otherwise.

"Pandora" and other trademarks of ours appearing in this report are our property. This report contains additional trade names and trademarks of other companies. We do not intend our use or display of other companies' trade names or trademarks to imply an endorsement or sponsorship of us by such companies, or any relationship with any of these companies.

EXPLANATORY NOTE REGARDING THE ANNUAL REPORT

We changed our fiscal year from the year ending January 31 to the calendar year ending December 31, effective beginning with the period ended December 31, 2013. As a result, the period ended December 31, 2013 was shortened from a year to an eleven-month transition period.

PART I

ITEM 1. BUSINESS

Overview

Pandora—Internet Radio Service

Pandora is the world’s most powerful music discovery platform, offering a personalized experience for each of our listeners wherever and whenever they want to listen to music—whether through earbuds, car speakers or live on stage. Our vision is to be the definitive source of music discovery and enjoyment for billions. Pandora is available as an ad-supported service or as a subscription service, which we call Pandora Plus. The majority of our listener hours occur on mobile devices, with the majority of our revenue generated from advertising on our ad-supported service on these devices. We offer both local and national advertisers the opportunity to deliver targeted messages to our listeners using a combination of audio, display and video advertisements. We also generate revenue from subscriptions to Pandora Plus. Founded by musicians, Pandora also empowers artists with valuable data and tools to help grow their careers and connect with their fans.

For the year ended December 31, 2016, we streamed 21.96 billion hours of internet radio, and as of December 31, 2016, we had 81.0 million active users during the prior 30-day period. Since we first launched our ad-supported service in 2005, our listeners have created over 11 billion stations.

Unlike traditional radio stations that broadcast the same content at the same time to all of their listeners, we enable each of our listeners to create personalized stations. The Music Genome Project and our content programming algorithms power our ability to predict listener music preferences, play music content suited to the tastes of each individual listener and introduce listeners to music we think they will love. When a listener enters a single song, artist, comedian or genre to start a station—a process we call seeding—the Pandora service instantly generates a station that plays music we think that listener will enjoy. Based on listener reactions to the songs we pick, we further tailor the station to match the listener's preferences. Listeners also have the ability to add variety to and rename stations, which further allows for the personalization of our service.

We currently provide the Pandora service through two models and have announced an additional service model to be launched in 2017:

- *Ad-Supported Service.* Our ad-supported service allows listeners to access our music and comedy catalogs and personalized playlist generating system for free across all of our delivery platforms. Beginning on September 15, 2016, our ad-supported service includes new features, such as the ability to obtain more skips and replay tracks by watching an advertisement.
- *Subscription Service—Pandora Plus.* Our new subscription service, Pandora Plus, launched in the United States on September 15, 2016. Prior to the launch of Pandora Plus, we operated a subscription service called Pandora One. Pandora Plus and Pandora One are premium monthly or annual paid versions of the Pandora service, which include ad-free access, higher quality audio on supported devices and longer timeout-free listening. Pandora Plus includes additional features, such as replays, additional skipping and offline listening.
- *Subscription Service—Pandora Premium.* In December 2016, we unveiled our new on-demand music subscription service, Pandora Premium, which will launch to users in 2017. Pandora Premium will be a paid version of the Pandora service that will offer a unique, on-demand experience, providing users with the ability to search, play and collect songs and albums, build playlists on their own or with the tap of a button and automatically generate playlists based on the user’s listening activity.

Beyond song delivery, listeners can discover more about the music they hear by reading the history of their favorite artists, viewing artist photos and linking from Pandora to Amazon or iTunes to purchase and download albums and songs. Our service also incorporates community social networking features. Our music feed feature enables a real-time, centralized stream for listeners to view the music that their social connections are experiencing and to provide and receive recommendations for songs, albums and artists. Listeners can also share their stations through social media, messaging apps and email by using our share feature or by distributing our individualized station URLs.

Ticketing Service

We operate our ticketing service through our subsidiary Ticketfly, a leading live events technology company that provides ticketing and marketing software and services for our clients, which are venues and event promoters, across North America. Ticketfly's ticketing, digital marketing and analytics software helps promoters book talent, sell tickets and drive in-venue revenue, while Ticketfly's consumer tools help fans find and purchase tickets to events. Tickets are primarily sold through the Ticketfly platform but are also sold through other channels such as box offices. For the year ended December 31, 2016, Ticketfly provided ticketing services for approximately 115,000 live events on sale, for which approximately 15.2 million tickets, excluding box office sales, were sold to approximately 5.3 million unique ticket buyers, which resulted in more than \$615.0 million in gross transaction value, excluding box office sales.

Our Technologies

Pandora—Internet Radio Service

At the heart of our service is our set of proprietary personalization technologies, including the Music Genome Project and our playlist generating algorithms. When a listener enters a single song, artist, comedian or genre to start a station, the Pandora service instantly generates a station that plays music or comedy we think that listener will enjoy. Based on listener reactions to the recordings we pick, we further tailor the station to match the listener's preferences. Listeners also have the ability to add variety to and rename stations, which further allows for the personalization of our service.

Music Genome Project

The Music Genome Project is a database of over 1,000,000 uniquely analyzed songs from over 150,000 artists, spanning over 600 genres and sub-genres, which we develop one song at a time by evaluating and cataloging each song's particular attributes. Once we select music to become part of our catalog, our music analysts genotype the music by examining up to 450 attributes including objectively observable metrics such as tone and tempo, as well as subjective characteristics, such as lyrics, vocal texture and emotional intensity. We employ rigorous hiring and training standards for selecting our music analysts, who typically have four-year degrees in music theory, composition or performance, and we provide them with intensive training in the Music Genome Project's precise methodology.

Comedy Genome Project

Our Comedy Genome Project leverages similar technology to that underlying the Music Genome Project, allowing a listener to choose a favorite comedian or a genre as a seed to start a station and then give feedback to personalize that station. Our comedy collection includes content from more than 3,000 comedians with more than 35,000 tracks.

Our Other Core Innovations

In addition to the Music Genome Project, we have developed other proprietary technologies to improve delivery of the Pandora service, enhance the listener experience and expand our reach. Our other core innovations include:

Playlist Generating Algorithms. We have developed complex algorithms that determine which songs play and in what order on each personalized station. Developed since 2004, these algorithms combine the Music Genome Project with the individual and collective feedback we receive from our listeners in order to deliver a personalized listening experience.

Pandora User Experience. We have invested in ways to enable us to reach our audience anytime, anywhere that they enjoy radio. To this end, we have developed a number of innovative approaches, including our autocomplete station creation feature, which predicts and generates a list of the most likely musical starting points as a listener begins to enter a favorite station, song or artist. In 2016, we undertook a complete rebuild of the Pandora web interface, which included a redesign of our systems, graphics and functionality for the end user.

Royalties Ingestion and Matching. We have developed a system to ingest ownership information from rightsholders and to match ingested ownership information with the tracks in our catalog for our ad-supported and subscription services.

Pandora Mobile Streaming. We have designed a sophisticated system for streaming content to mobile devices. This system involves a combination of music coding programs that are optimized for mobile devices as well as algorithms designed to address the intricacies of reliable delivery over diverse mobile network technologies. For example, these algorithms are designed to maintain a continuous stream to a listener even in circumstances where the mobile data network may be unreliable. Our subscription service now includes predictive offline listening which detects when a mobile device has lost its signal and automatically transitions the listener to one of their top recent stations.

Pandora Automotive Protocol. We have developed an automotive protocol to facilitate increased availability of the Pandora service in automobiles. Through this automotive protocol, certain automobile manufacturers, their suppliers and makers of aftermarket audio systems can easily connect dash-mounted interface elements to the Pandora app running on a smartphone. This allows us to deliver the Pandora service to listeners via their existing smartphone, while leveraging the automobile itself for application command, display and control functionalities.

Pandora API. As part of our effort to make the Pandora service available everywhere our listeners want it, we have developed an application programming interface, which we call the Pandora API. Through our partnerships with manufacturers of consumer electronics products, we have used this technology to bring the Pandora experience to connected devices throughout the home.

tv.pandora.com. We have developed a standards-based HTML5 website called tv.pandora.com that allows users to stream music content on next generation TV, game consoles and set top box architectures that support open web standards. tv.pandora.com features streamlined navigation with controls and displays designed specifically for larger screens.

Next Big Sound ("NBS")

NBS Platform. NBS is the leading provider of online music analytics and insights tracking hundreds of thousands of artists around the world. NBS was founded in 2009 and tracks social, streaming and video data in one centralized platform. Sources range from Facebook and Twitter to Wikipedia, YouTube, Vevo, Instagram and many others. The NBS platform complements Pandora's Artist Marketing Platform ("AMP") and expands the suite of data-driven products that Pandora offers music makers and direct deal partners.

Ticketing Service

Fully-Integrated Cloud Ticketing Platform. Ticketfly has developed a fully-integrated cloud ticketing platform for live events. The ticketing and marketing software powers the event lifecycle for venues and event promoters, including the booking of acts, the building and marketing of events and fan customer relationship management after the event.

Distribution and Partnerships

Pandora—Internet Radio Service

A key element of our strategy is to make the Pandora service available everywhere that there is internet connectivity. To this end, we make the Pandora service available through a variety of distribution channels. In addition to streaming our service to computers, we have developed Pandora mobile device applications ("apps") for smartphones and mobile operating systems, such as the iPhone and Android, and for tablets, including the iPad and Android tablets. We distribute those mobile apps free to listeners via app stores.

Pandora is integrated with connected devices, including automobiles, automotive aftermarket devices and consumer electronic devices. Currently, most automobile integrations rely on smartphones for internet connectivity, which has enabled Pandora to be available in the ten best-selling passenger vehicles in the United States. Some automobiles are now using embedded, built-in internet connectivity to power the Pandora experience. These native integrations, whether using embedded or phone-based connectivity, allow drivers to control the service via in-dash entertainment systems. As part of this ongoing effort to extend our reach in the car, we also built support for Android Auto and Apple CarPlay into our mobile applications in 2015. While these platforms are still nascent, we expect these platforms will develop and grow significantly and help broaden our reach and provide consumers with additional flexibility for accessing Pandora in the car. As of December 31, 2016, approximately 24.9 million unique users have activated Pandora through a native integration in 27 major automobile brands and 8 automotive aftermarket manufacturers. We view the integration of the Pandora service into automobiles as an area of potential growth for the service, as a large portion of terrestrial radio listening occurs in automobiles.

Ticketing Service

Our ticketing services are available through multiple distribution channels, including the Ticketfly website, the websites of Ticketfly's venue and promoter clients, box offices, the Ticketfly mobile app and the Ticketfly website optimized for mobile devices. Tickets for events are delivered to fans through a variety of delivery methods, including mail, will call, print at home and mobile tickets, which are delivered electronically and presented by fans on their smartphones upon arrival to the venues. In 2016, we began the first stages of integrating Ticketfly into the Pandora mobile app. Listeners can now receive concert

recommendations based on the listener's listening profile, concert reminders and purchase tickets to Ticketfly concerts, all from within the Pandora mobile app.

Ticketfly contracts with clients to sell tickets for events to fans over a set period of time, which generally ranges from three to five years. Ticketfly does not set ticket prices or seating configurations for events, as this information is determined by the client. Ticketfly generally is paid a fee per ticket sold, which usually increases as the face value of the ticket increases, or a percentage of the total ticket service charges. Ticketfly usually receives funds for the ticket sales and related service charges at the time the ticket is sold and periodically remits these receipts to the client after deducting Ticketfly's portion of the fee. Clients also sell tickets through the box office at the venue using the Ticketfly technology. Ticketfly does not usually earn a fee on these box office ticket sales.

Pandora Advertising Revenue

We derive the substantial majority of our revenue from the sale of audio, display and video advertising for delivery across our computer, mobile and other connected device platforms. We generate the majority of our revenue from mobile and other connected devices, which presents an opportunity for us to reach our audience anytime, anywhere that they enjoy music and therefore offer additional distribution channels to current and potential advertisers for delivery of their advertising messages.

Our advertising strategy focuses on developing our core suite of audio, display and video advertising products and marketing these products to advertisers for delivery across computer and mobile and other connected device platforms. Our advertising products allow both local and national advertisers to target and connect with listeners based on attributes including age, gender, zip code and content preferences using multi-platform ad campaigns to target their advertising messages to listeners anytime and anywhere. As listenership on our mobile platforms has grown more rapidly than on our other platforms, we have sought to improve our mobile advertising products to better enable us to market multi-platform advertising solutions. In the years ended December 31, 2014, 2015 and 2016, advertising revenue accounted for approximately 80%, 80% and 77% of our total revenue, respectively, and we expect that advertising will comprise a substantial majority of revenue for the foreseeable future.

Pandora Audio Advertising. Our audio advertising products allow custom audio messages to be delivered between music and comedy content during short ad interludes on our ad-supported service. Audio ads are available across all of our delivery platforms. On supported delivery platforms, the audio ads can be accompanied by display ads to further enhance advertisers' messages.

Pandora Display Advertising. Our display advertising products offer opportunities to maximize advertising exposure to listeners of our ad-supported service on computers and mobile platforms. The graphical interface for our services on these delivery platforms is divided between our tuner, which contains our player and "now playing" information, and the information space surrounding our tuner. Our display ads include industry-standard banner ads of various sizes and placements within the information space surrounding our tuner, depending on the delivery platform and listener interaction.

Pandora Video Advertising. Our video advertising products allow delivery of rich, branded messages to further engage listeners of our ad-supported service. We currently offer five video ad products, all of which offer full-screen video when activated. Some video ad products operate across our mobile and computer platforms, while others operate only on our mobile platform. All are designed to ensure they are viewable while playing, using interactions with Pandora to determine when a user is engaged with the screen. Some of our products play a full-screen video, and others go even further to offer a value exchange where opting into watching a video ad gives the listener benefits such as extra skips, song replays and even the ability to accept sponsorship by one advertiser in return for uninterrupted listening for a period of time.

Pandora Advertising Technologies. We have developed a suite of proprietary advertising technologies including order management, advertising serving and timing, native advertising formats, targeting and reporting. These technologies enable Pandora to streamline the quote to cash flow, maximize value for advertisers, simultaneously optimize yield and listener experience and personalize the advertising experience for listeners.

Pandora Native Advertising. Our audio, display and video advertising products can be designed and modified by us and advertisers to tailor advertising campaigns to fit specific advertiser needs. Our advertisers can create custom "branded" stations from our music library that can be accessed by listeners of our ad-supported and subscription services, as well as engage listeners by allowing them to personalize the branded stations through listener-controlled variables. In addition to branded stations, we offer advertisers our sponsored listening product, in which advertisers sponsor ad-free listening for listeners of our

ad-supported service in exchange for the listener's active brand interaction, such as watching a video advertisement, interacting with rich media or visiting the advertiser's landing page.

Pandora Audience Targeting. Our audio, display, video and native advertising products have access to a set of over 2,000 targeting segments across all of our platforms, ranging from Pandora's unique proprietary targeting segments to second- and third-party enabled segments. Examples include Pandora's inferred Spanish Speakers and Political Preference proprietary segments, direct customer CRM upload and Datalogix and Neustar third-party segments. Additionally, advertisers can benefit from our proprietary ad targeting capabilities, which leverage listener-submitted profile information, enabling advertisers to precisely reach sought-after consumers without needing third-party cookies.

Pandora's advertising inventory is integrated into the leading radio media buying platforms, Mediaocean and STRATA, and we are continuing to enhance the ability of radio advertisers to purchase media on these platforms, which incorporate Triton measurements of our radio audience reach side-by-side with terrestrial radio metrics.

We provide in-car advertising solutions, offering advertisers the opportunity to reach in-car audiences through audio ads running on vehicle models and aftermarket automotive devices with native Pandora automotive integrations.

In addition, we have invested in building a local advertising sales force in major radio markets. As of December 31, 2016, Pandora has 153 local sellers in 39 markets in the United States and we intend to continue investing to extend our local market presence for the foreseeable future.

We have introduced a programmatic advertising buying solution into the market primarily for national digital display and remnant performance advertising inventory. We intend to continue investing in our programmatic advertising buying solution in the future.

Our integration into standard radio media-buying processes and measurement, our in-car advertising solutions, our local advertising sales force and our programmatic advertising buying solution are key elements of our strategy to expand our penetration of the radio advertising market. Our success in executing this strategy is subject to numerous risks and uncertainties, including those described in "Risk Factors."

Pandora Subscription and Other Revenue

Prior to the launch of Pandora Plus, subscription and other revenue was generated primarily through the sale of Pandora One. Subsequent to the launch of Pandora Plus, subscription and other revenue is generated primarily through the sale of Pandora Plus. Pandora Plus is an enhanced version of the Pandora service, which currently includes product features such as replays, additional skipping and offline listening, together with our advertisement-free access and higher audio quality on the devices that support it. Pandora Plus is primarily available for purchase through major app stores and through the Pandora website. For the years ended December 31, 2014, 2015 and 2016, subscription and other revenue accounted for 20%, 19% and 16% of our total revenue, respectively.

Ticketing Service Revenue

Ticketing service revenue is generated primarily from service and merchant processing fees generated on ticket sales through the Ticketfly platform. Ticketfly sells tickets to fans for events on behalf of clients and charges a fee per ticket, which generally increases as the face value of the ticket increases, or a percentage of the total convenience charge and order processing fee, for its services at the time the ticket for an event is sold. Ticketing service revenue is recorded net of the face value of the ticket at the time of the sale, as Ticketfly generally acts as the agent in these transactions. As Ticketfly was acquired on October 31, 2015, the consolidated statements of operations include ticketing service revenue for the two months ended December 31, 2015 and the year ended December 31, 2016. For the years ended December 31, 2015 and 2016, ticketing service revenue accounted for approximately 1% and 6% of our total revenue. We had no ticketing service revenue in the year ended December 31, 2014.

Pandora Content, Copyrights and Royalties

The content we stream to users of the Pandora service consists primarily of music. To stream music, we must obtain licenses from, and pay royalties to, copyright owners, or their agents, for each sound recording that we stream, as well as for each underlying musical work, subject to certain exclusions. These licensing and royalty arrangements strongly impact our business operations. Refer to our discussion of these matters in Item 1A—"Risk Factors".

In 2015 and 2016, we signed direct license agreements with major and independent labels and distributors for sound recordings as well as publishers and composers for the musical works contained in such sound recordings. These agreements allow us to provide new and improved products that include enhanced features such as replays of the sound recordings, additional skipping capability, offline stations and on-demand listening. Certain of these license agreements include minimum guarantee payments, some of which are paid in advance. Refer to Note 2, "Summary of Significant Accounting Policies" for our policy on prepaid content acquisition costs.

Sound Recordings

Prior to signing direct license agreements with major and independent labels and distributors, we obtained all performance rights licenses and paid performance rights royalties mainly pursuant to the Digital Performance Right in Sound Recordings Act of 1995 (the "DPRA") and the Digital Millennium Copyright Act of 1998 (the "DMCA"). Under federal statutory licenses created by the DPRA and the DMCA, we are permitted to stream any lawfully released sound recordings and to make reproductions of these recordings on our computer servers without having to separately negotiate and obtain direct licenses with each individual sound recording copyright owner. These statutory licenses are available on the condition that we operate in compliance with the rules of the statutory licenses and pay the applicable royalty rates.

Prior to signing direct license agreements with major and independent labels and distributors, we paid all performance rights royalties for sound recordings we streamed on our services to SoundExchange, the non-profit organization designated by the Copyright Royalty Board (the "CRB"), a tribunal established within the U.S. Library of Congress, to collect and distribute royalties under these statutory licenses. On December 16, 2015, the CRB announced the new per-performance rates that apply for commercial webcasters for calendar years 2016 through 2020 (the "Web IV Proceeding"). Absent direct licenses in place with major and independent labels and distributors, effective January 1, 2016, the content acquisition costs we paid for sound recordings were set by the Web IV Proceeding. The rates for non-subscription services, including our ad-supported service, were set at \$0.0017 per performance for 2016. The rates for subscription services, applicable to our Pandora One service, were set at \$0.0022 per performance for 2016.

Subsequent to September 15, 2016, the majority of the content acquisition costs related to our ad-supported and subscription services are driven by direct license agreements with major and independent labels and distributors. Depending on the applicable service, these license agreements generally require us to pay either a per-performance fee based on the number of sound recordings we transmit, a percentage of revenue associated with the service or a per-subscriber minimum amount, all generally subject to certain discounts. Certain of these license agreements include minimum guarantee payments, some of which are paid in advance.

If we have not entered into a direct license agreement with the copyright owner of a particular sound recording that is streamed on our services, we stream that sound recording pursuant to the statutory license and pay the applicable Web IV Proceeding rate. Enhanced features of our services, such as replays of sound recordings, additional skipping capability and offline stations, are not available for sound recordings streamed under the statutory license and paid at the Web IV Proceeding rate.

Musical Works

Our content costs also include the royalties we pay for the musical works embodied in the sound recordings that we stream. Prior to January 1, 2016, we obtained the rights to stream musical works on both our ad-supported and subscription services by obtaining so-called "blanket" licenses from performing rights organizations ("PROs"), such as the American Society of Composers, Authors and Publishers ("ASCAP"), Broadcast Music, Inc. ("BMI"), SESAC, Inc. ("SESAC") and Global Music Rights ("GMR"). These PROs are organized to aggregate rights in musical works from millions of songwriters and publishers, negotiate blanket licenses with copyright users (such as Pandora), collect royalties under such licenses and distribute them to copyright owners. The blanket licenses that we obtained from PROs traditionally obligated us to pay a percentage of our revenue or a flat fee.

In 2015 and 2016, we signed new direct license agreements with PROs and thousands of music publishers that grant us the rights to stream musical works under their control on both our ad-supported and subscription services for a multi-year period. Prior to September 15, 2016, the combined effect of these licenses was that each copyright holder received its usage-based and ownership-based share of a royalty pool equal to 20% of the content acquisition costs paid by us for sound recordings on the respective tier of service. Subsequent to September 15, 2016, this calculation still applies to our ad-supported service, but content acquisition costs for the streaming of musical works on our subscription services are equal to the rates determined in accordance with the statutory license set forth in 17 U.S.C. §115 ("Section 115"). If we have not entered into a

direct license agreement with the copyright owner of a particular musical work, or a PRO representing the copyright owner, then we stream that musical work pursuant to the Section 115 statutory license and pay the applicable rate.

Rate-Setting Proceedings for Reproduction Rights under Section 115

The current rate structure for the statutory license for reproduction rights under Section 115 expires at the end of 2017. We are currently one of five commercial music service operators (along with Amazon, Apple, Google and Spotify) participating in rate-setting proceedings in which three judges of the CRB will determine the Section 115 rates for calendar years 2018 to 2022 (the "Phonorecords III Proceedings"). The Nashville Songwriters Association International, the National Association of Music Publishers and George Johnson Music Publishing are also participating in the Phonorecords III Proceedings. A trial before the CRB is expected to commence in March 2017, and the CRB is expected to render a decision prior to the end of 2017. The rates established by the CRB in the Phonorecords III Proceedings may be higher, lower or the same as the rates currently in effect.

The Phonorecords III Proceedings are important to us because our direct licenses with music publishers reference the Section 115 rates. As a result, any increase in the Section 115 rates would increase our content acquisition costs, which, if such increase were substantial, could materially harm our financial condition and hinder our ability to provide interactive features in our services, or cause one or more of our subscription services to not be economically viable.

Non-U.S. Licensing Regimes

In addition to the copyright and licensing arrangements described above for our use of sound recordings and musical works in the United States, we have obtained licenses in Australia and New Zealand for the communication of sound recordings and the musical works embodied in those sound recordings, which have not had a material effect on our results of operations to date.

Government Regulation

As a company conducting business on the internet, we are subject to a number of foreign and domestic laws and regulations relating to consumer protection, information security and data protection, among other things. Many of these laws and regulations are still evolving and could be interpreted in ways that could harm our business. In the area of information security and data protection, the laws in several states require companies to implement specific information security controls to protect certain types of information. Likewise, all but a few states have laws in place requiring companies to notify users if there is a security breach that compromises certain categories of their information. We are also subject to federal and state laws regarding privacy of listener data, among other things. Our privacy policy and terms of use describe our practices concerning the use, transmission and disclosure of listener information and are posted on our website.

Sales and Marketing

Pandora—Internet Radio Service

We organize our Pandora sales force into multiple geographically-based teams that are each focused on selling advertising across our computer, mobile and other connected device platforms. Teams are located in our Oakland, California headquarters, in regional sales offices throughout the United States and local sales offices throughout the United States, in Australia and in New Zealand.

Our marketing team is charged with using all forms of communications to reach our business and reputational goals. We organize the marketing team into four groups focused on campaign planning and analytics, consumer marketing, communications and our Music Makers Group. While we have historically relied on the success of viral marketing to expand consumer awareness of our service, in 2014 we began to launch marketing campaigns to increase consumer awareness and expand our listener base and in 2015, we began to launch advertising campaigns to increase the awareness of our brand. We anticipate that we will continue to utilize these types of advertising campaigns in the future.

Ticketing Service

The Ticketfly sales force is organized into various teams based on vertical, such as client type, and is focused on obtaining contracts with clients to sell tickets on the Ticketfly platform. Teams are located in the Ticketfly headquarters in San Francisco, California and in local sales offices throughout the United States and in Canada.

Artist Relations

Pandora Music Makers Group

In 2014, to consolidate all of our music industry initiatives, and to help drive connections with fans across all channels at Pandora, we brought the teams across the business that work most directly with the music industry together into a single group known as the Music Makers Group. Our vision is to ensure artists can promote and market their music to fans, drive engagement with experiences from live events to original content and audio messages to fans and understand all of the benefits of these interactions via our analytics tools.

Pandora Artist Marketing Platform

Pandora AMP consists of products and programs that enable music makers to leverage data to grow an audience, track progress and connect with fans on Pandora. Since its original launch focusing on artist data and insights in 2014, AMP has evolved into a set of powerful self-serve marketing tools including Artist Audio Messaging, AMPcast and Featured Tracks. Newly added features of AMP, which include a dynamic feed of an artist's campaign, performance metrics and suggestions for new campaigns, were launched in October 2016 alongside a data integration with Next Big Sound, shifting artist insights and analytics to the NBS platform and enhancing the set of desktop and mobile marketing tools offered via AMP.

Derived from tens of billions of hours of personalized listening on Pandora, the marketing tools on AMP along with the analytics tools on NBS are available to all artists spinning on Pandora and their teams. Additionally, enterprise-level tools and marketing opportunities are available to artist and label teams who have opted into a direct deal with Pandora.

Competition

Pandora—Internet Radio Service

Competition for Listeners

We compete for the time and attention of our listeners with other content providers on the basis of a number of factors, including quality of experience, relevance, acceptance and perception of content quality, ease of use, price, accessibility, perceptions of ad load on our ad-supported service, brand awareness and reputation. We also compete for listeners on the basis of our presence, branding and visibility as compared with other providers that deliver content through the internet, mobile devices and consumer products. We believe that we compete favorably on these factors. For additional details on risks related to competition for listeners, please refer to Item 1A—"Risk Factors."

Many of our current and potential future competitors enjoy competitive advantages, such as greater name recognition, legacy operating histories and larger marketing budgets, as well as greater financial, technical and other resources. We compete with many forms of digital media for the time and attention of our listeners, such as Facebook, Twitter, Netflix, Pinterest and Instagram. Our direct audio competitors, however, include iHeartRadio, LastFM and other companies in the traditional broadcast and internet radio market. We also directly compete with the non-interactive, internet radio offerings from providers such as Spotify, Apple Music, Tidal, Google Play Music and Slacker.

We compete for listeners with broadcast radio providers, including terrestrial radio providers. Many broadcast radio conglomerates own large numbers of radio stations or other media properties. Many terrestrial radio stations broadcast digital signals, which provide high quality audio transmission. We compete for listeners indirectly with satellite radio providers, whose content is more heavily skewed to spoken word and talk, sports and business-related content versus traditional radio whose content is more heavily skewed to music.

Broadcast and satellite radio companies generally enjoy larger established audiences and a significant cost advantage because they pay a much lower percentage of revenue for content acquisition costs. Broadcast radio companies pay no content acquisition costs for the radio broadcast of sound recordings, and satellite radio companies paid only 10.5% of revenue in 2016 and will pay only 11% of revenue in 2017 for satellite transmissions of sound recordings. By contrast, Pandora incurred content acquisition costs for our internet transmissions of sound recordings representing 44.2% of total revenue during the year ended December 31, 2016.

We also face competition for listeners and listener hours from on-demand music streaming services such as Spotify, Apple Music, YouTube, SoundCloud, Google Play Music, Amazon Prime, Rhapsody, and Deezer. These services offer consumers the ability to choose the songs and artists they want to hear and create customized playlists - functionality that our

service does not currently provide. When Pandora Premium launches in 2017, we will more directly compete against these on-demand services. This on-demand content is accessible in automobiles and homes, using portable players, mobile phones and other wireless and consumer electronic devices. The audio entertainment marketplace continues to rapidly evolve, providing our listeners with a growing number of alternatives and new media platforms.

At a macro level, we compete for the time and attention of our listeners with providers of other forms of in-home and mobile entertainment. To the extent existing or potential listeners choose to watch cable television, stream video from on-demand services or play interactive video games on their home-entertainment system, computer or mobile phone rather than listen to the Pandora service, these content services pose an adjacent competitive threat for consumer time and mindshare.

Competition for Advertisers

We compete with traditional media products and services, and with other internet-based services, for a share of our advertising customers' overall marketing budgets. We compete on the basis of a number of factors, including perceived return on investment, effectiveness and relevance of our advertising products, reporting and pricing structure and ability to deliver large volumes or precise types of ads to targeted demographics. We believe that our ability to deliver targeted and relevant ads across a wide range of platforms allows us to compete favorably on the basis of these factors and justify a long-term profitable pricing structure. However, the market for online advertising is intensely competitive and rapidly changing, and with the introduction of new technologies and market entrants, we expect competition to intensify in the future.

The market for online advertising has become increasingly competitive, yet advertisers are allocating increasing amounts of their overall marketing budgets to online advertising. We compete for online advertisers with other internet companies, including major internet portals, search engine companies and social media sites. Large internet companies with greater brand recognition have significant numbers of direct sales personnel, more advanced programmatic advertising capabilities and substantial proprietary advertising inventory and web traffic that provide a significant competitive advantage and have a significant impact on pricing for internet advertising and web traffic.

Terrestrial broadcast, and to a lesser extent satellite radio, are sources of competition for advertising dollars. These radio providers deliver ads across a more familiar platform than the internet may be to traditional advertisers.

Our competitors include Facebook, Google, Snap, Yahoo! and traditional media such as ABC, CBS, FOX, NBC, The New York Times and the Wall Street Journal. We directly compete against iHeartRadio, Entercom, CBS Radio, Cumulus and other companies of the traditional broadcast radio market. For additional details on risks related to competition for advertisers, please refer to Item 1A—"Risk Factors."

Ticketing Service

Competition for Clients

We compete with other online live events technology and primary ticketing companies for contracts with our clients, which are promoters and venues. We compete on the basis of a number of factors, including our ability to sell tickets and provide enhanced fan experiences. Our ticketing platform also offers website, email, social marketing, booking, analytics, fan CRM and other tools for our clients. Cloud technology has made it easier for other technology-based companies to offer primary ticketing services and standalone, automated ticketing systems that enable venues to perform their own ticketing services or utilize self-ticketing systems. We also experience competition from other national, regional and local primary ticketing service providers to secure contracts with new promoters and venues. Our main competitors for clients include primary ticketing companies such as Live Nation Entertainment's Ticketmaster division, Tickets.com, AXS and Paciolan and upstart providers such as Eventbrite and eTix. Some of these competitors have greater brand recognition, and financial, technical and other resources, than we do.

Competition for Fans

We compete with other live events technology and primary ticketing companies, as well as secondary ticketing companies for ticket sales to fans. We compete on the basis of a number of factors, including our ability to reach fans and provide enhanced fan experiences. The ticketing services industry includes the sale of tickets primarily through online channels, but also through telephone, mobile devices and ticket outlets. In the online environment, we compete with other websites, live events technology and ticketing companies to provide event information, sell tickets and provide other online services. We experience competition from other national, regional and local primary ticketing service providers to reach fans for events. Resale, or secondary, ticketing services have created automated internet "bot" technology to attempt to bypass

queues and buy tickets when they go on sale, so that these services may then re-sell those tickets to fans at increased prices. Our main competitors for fans include primary ticketing companies such as Live Nation Entertainment's Ticketmaster division, Tickets.com, AXS and Paciolan, upstart providers such as Eventbrite and eTix and secondary ticketing companies such as StubHub.

Seasonality

Pandora—Internet Radio Service

Our results reflect the effects of seasonal trends in listener and advertising behavior. We expect to experience both higher advertising sales due to greater advertiser demand during the holiday season and increased usage due to the popularity of holiday music during the fourth quarter of each calendar year. In addition, in the first quarter of each calendar year, we expect to experience lower advertising sales due to reduced advertiser demand, and increased usage by listeners due to increased use of media-streaming devices received as gifts during the holiday season. See the section entitled "Business Trends" in Item 7 of this Annual Report on Form 10-K for a more complete description of the seasonality of our financial results.

Ticketing Service

Ticketfly's results reflect the effects of seasonality related to the timing of events. Tickets for festivals, which constitute a significant portion of Ticketfly's business, typically go on sale during the first half of the year. As such, the Ticketfly business has historically experienced an increase in revenue in the first half of each year relative to the fourth quarter of the prior year. We expect these seasonal trends to continue to affect our operating results.

Intellectual Property

Our success depends in part upon our ability to protect our technologies and intellectual property. To accomplish this, we rely on a combination of intellectual property rights, including trade secrets, patents, copyrights, trademarks, contractual restrictions, technological measures and other methods. We enter into confidentiality and proprietary rights agreements with our employees, consultants and business partners, and we control access to and distribution of our technology and proprietary information.

We have filed and acquired dozens of active patent applications and issued patents in the United States and other countries. We continue to pursue additional patent protection, both in the United States and abroad where appropriate and cost effective. We intend to hold these patents as part of our strategy to protect and defend Pandora in patent-related litigation. We also acquire patents and patent applications from time to time as part of other transactions.

Our registered trademarks in the United States include "Pandora," the "Music Genome Project," and "Ticketfly," in addition to a number of Pandora logos and other Pandora marks. "Pandora" is also registered in Australia, Canada, Chile, the European Union, India, Israel, Korea, Mexico, New Zealand, Switzerland, Taiwan and other countries. "Music Genome Project" is also registered in Australia, Canada, China and New Zealand. We have pending trademark applications in the United States and other countries for Pandora names and marks.

We are the registrant of the internet domain names for our primary websites, pandora.com and ticketfly.com, as well as others related to our current and potential businesses.

In addition to the forms of intellectual property listed above, we own rights to proprietary processes and trade secrets, including those underlying the Pandora service. We use contractual, policy and technological means to generally control access to, use and distribution of our proprietary software, trade secrets and other confidential information, both internally and externally, including contractual protections with employees, contractors, customers and partners.

Customer Concentration

For each of the years ended December 31, 2014, 2015 and 2016, we had no individual customers that accounted for 10% or more of total revenue.

Information About Segment and Geographic Revenue

Information about segment data and geographic revenue is set forth in Note 12 of the Notes to the Consolidated Financial Statements under Item 8 of this Annual Report on Form 10-K.

Employees

As of December 31, 2016, we had 2,488 employees. None of our employees are covered by collective bargaining agreements, and we consider our relations with our employees to be good.

Corporate and Available Information

We were incorporated as a California corporation in January 2000 and reincorporated as a Delaware corporation in December 2010. Our principal executive offices are located at 2101 Webster Street, Suite 1650, Oakland, California 94612 and our telephone number is (510) 451-4100. Our website is located at www.pandora.com and our Investor Relations website is located at investor.pandora.com.

We changed our fiscal year to the calendar year ending December 31, effective beginning with the period ended December 31, 2013. As a result, the period ended December 31, 2013 was shortened from a year to an eleven-month transition period.

We file reports with the Securities and Exchange Commission ("SEC"), including Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any other filings required by the SEC. Such reports and other information filed by us with the SEC are available free of charge on our website at investor.pandora.com when such reports are available on the SEC's website. The information on our website is not incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC.

The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at www.sec.gov.

Investors and others should note that we use our Investor Relations website, SEC filings, press releases, public conference calls and webcasts as means of disclosing material non-public information and for complying with our disclosure obligations under Regulation FD. We use these channels as well as social media to communicate with the public about the Company, our services and other issues. It is possible that the information we post on social media could be deemed to be material information. Therefore, we encourage investors, the media, and others interested in the Company to review the information we post on the social media channels listed on our Investor Relations website.

ITEM 1A. RISK FACTORS

The risks and uncertainties set forth below, as well as other factors described elsewhere in this Annual Report on Form 10-K or in other filings by us with the SEC, could adversely affect our business, financial condition, results of operations and the trading price of our common stock. Additional risks and uncertainties that are not currently known to us or that are not currently believed by us to be material may also harm our business operations and financial results. Because of the following factors, as well as other factors affecting our financial condition and operating results, past financial performance should not be considered to be a reliable indicator of future performance, and investors should not use historical trends to anticipate results or trends in future periods.

Risks Related to Our Business

Our ability to offer interactive features in our services depends upon maintaining commercially viable direct licenses with copyright owners of the music we play. If we are not able to maintain these direct licenses, we could lose the right to provide interactive features in our current services, or launch an on-demand music service. If we are not able to renew these direct licenses on similar terms when they expire, our profitability may be negatively affected.

Prior to September 15, 2016, we obtained the right to publicly perform music sound recordings on our services in the U.S. primarily through a statutory license at rates set by the Copyright Royalty Board. In 2015 and 2016, we entered into direct license agreements with dozens of music sound recording copyright owners, commonly known as "record labels", with thousands of musical work copyright owners, commonly known as "publishers", and with ASCAP, BMI and SESAC, the three largest performing rights organizations, commonly known as "PROs". In total, these agreements give us the right to add interactive features such as replays, additional skips and offline play to our current ad-supported and subscription radio services in the U.S., which features we introduced on September 15, 2016, and they also give us the right to launch our recently announced on-demand music service in the U.S., Pandora Premium, which we intend to launch in 2017. We continue to rely on the U.S. statutory license to publicly perform music sound recordings that are not covered by our direct licenses with record labels, but those recordings now constitute a small portion of the music that we stream. The direct licenses we have entered into with record labels and publishers are complex and require significant on-going efforts to operationalize, and there is risk that we may not be able to comply with the terms of these licenses, which could result in the loss of some or all of these licenses and some or all of the rights they convey. Similarly, many of these licenses provide that if the licensor loses rights in a portion of the content licensed under the agreement, that content may be removed from the license going-forward. In addition, if we are acquired, certain terms of our direct licenses, including favorable rates for content acquisition costs that currently apply to us, may not be available to an acquiror. If we were to fail to maintain any of these direct licenses, or if rights to certain music were no longer available under these licenses, then we may have to remove the affected music from our services, or discontinue certain interactive features for such music, or it might become commercially impractical for us to launch an on-demand music service. Any of these occurrences could have a material adverse effect on our business, financial condition and results of operations.

Several of these direct licenses also include so-called "most favored nations" provisions, which, if triggered, could cause our payments under those agreements to escalate substantially. In addition, record labels, publishers and PROs with whom we have entered into direct licenses have the right to audit our content acquisition payments, and any such audit could result in disputes over whether we have paid the proper content acquisition costs. If such a dispute were to occur, we could be required to pay additional content acquisition costs, audit fees and interest or penalties, and the amounts involved could materially and adversely affect our business, financial condition and results of operations. Pursuant to the statutory license under which we streamed most of our sound recordings prior to September 15, 2016, and under which we will stream a small portion of our sound recordings going forward, SoundExchange, Inc. ("SoundExchange") has the right to audit our content acquisition payments thereunder. SoundExchange is currently conducting audits of our payments for the years 2010 to 2014.

Further, there is no guarantee that the direct licenses we have now will be renewed in the future or that such licenses will be available at the rates for content acquisition costs associated with the current licenses. If we are unable to secure and maintain direct licenses for the rights to provide music on our services at rates that are similar to those under our current direct licenses, or other commercially viable rates, our content costs could rise and materially adversely affect our business, financial condition and results of operations.

Minimum guarantees required under certain of our music license agreements may limit our operating flexibility and could adversely affect our liquidity and results of operations.

As described in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Note 8, Commitments and Contingencies", certain of our music license agreements contain minimum guarantees and require that we

make upfront minimum guarantee payments. As of December 31, 2016, we have future minimum guarantee commitments of \$763.0 million. Such minimum guarantees related to our content acquisition costs are not tied to our number of subscribers, active users or the number of sound recordings used on our services. As such, our ability to achieve and sustain profitability and operating leverage on our services depends on our ability to increase our revenue through increased paid subscriptions and advertising sales on terms that maintain an adequate gross margin. Given the multiple-year duration and largely fixed cost nature of these minimum guarantees, if subscriber acquisition and retention or advertising sales do not meet our expectations, our margins may be materially and adversely affected. To the extent subscriber and subscription revenue growth or advertising sales do not meet our expectations, our liquidity and results of operations could also be adversely affected as a result of such minimum guarantees. In addition, the long-term and fixed cost nature of these minimum guarantees may limit our flexibility in planning for, or reacting to, changes in our business and the market segments in which we operate.

We rely on estimates of the market share of licensable content controlled by each content provider to forecast whether such minimum guarantees will be recoupable against our actual content acquisition costs incurred over the duration of the license agreement. To the extent that these market share estimates are incorrect and our actual content acquisition costs for a particular content provider is less than the amount of the minimum guarantee, our margins may be materially and adversely affected.

The rates we must pay for "mechanical rights" to use musical works on our services are set by the Copyright Royalty Board, which is currently in the process of determining these rates for the five-year period beginning January 1, 2018. If these rates increase significantly, it will adversely affect our business.

Our direct licenses with thousands of music publishers provide that the content acquisition payments for the so-called "reproduction rights" or "mechanical rights"—which are implicated in the interactive features that we introduced on September 15, 2016 to our current ad-supported and subscription radio services, and will similarly apply to our forthcoming on-demand music service—are determined in accordance with the rate formula set by the Copyright Royalty Board for the compulsory license made available by Section 115 of the Copyright Act. Further, these rates are also applicable to our use of musical works for which we do not have a direct license with the copyright owners. The current rate structure for the Section 115 compulsory license expires at the end of 2017. The Copyright Royalty Board has commenced proceedings to set the rates for the Section 115 compulsory license for calendar years 2018 to 2022 (the "Phonorecords III Proceedings"), and we are a participant in the Phonorecords III Proceedings. The trial under the Phonorecords III Proceedings is expected to commence in March 2017. The rates established by the Copyright Royalty Board in the Phonorecords III Proceedings may be higher, lower or the same as the rates currently in effect. If the Phonorecords III Proceedings yield rates that exceed the rates that are currently in place, our content acquisition costs may significantly increase, which could materially harm our financial condition and hinder our ability to provide interactive features in our services, or cause one or more of our subscription services to not be economically viable.

If our efforts to attract and retain subscribers or convert ad-supported listeners into subscribers of our subscription offerings are not successful, our business will be adversely affected.

Our ability to continue to attract and retain users of our paid subscription services will depend in part on our ability to consistently provide our subscribers with a quality experience through Pandora Plus and Pandora Premium, our on-demand subscription offering that we intend to launch in 2017. If Pandora Plus subscribers do not perceive that offering to be of value, or if we introduce new or adjust existing features or pricing in a manner that is not favorably received by them, we may not be able to attract and retain subscribers or be able to convince listeners to become subscribers of such additional service offerings. Subscribers may cancel their subscription to our service for many reasons, including a perception that they do not use the service sufficiently, the need to cut household expenses, competitive services that provide a better value or experience or as a result in changes in pricing. Further, in a number of cases, the rates that we pay pursuant to our direct license agreements with record labels are significantly affected by the number of subscribers we are able to attract and retain. If our efforts to attract and retain subscribers are not successful, our business, operating results and financial condition may be adversely affected.

If we are unsuccessful at launching Pandora Premium, our on-demand subscription offering, our business may be adversely affected.

Our acquisition of certain assets of Rdio in December 2015 was intended to facilitate our launch of new subscription offerings that provide additional functionality, including our Pandora Plus service, launched on September 15, 2016, and Pandora Premium, our on-demand subscription offering that we intend to launch in 2017. In addition to the cost of the Rdio assets, the development and launch of such additional service offerings has required and will continue to require significant engineering as well as marketing and other resources. In addition, to support the launch of these services we have entered into direct license agreements with the major record labels, which agreements entail substantial minimum guaranteed content acquisition cost payments by us. There is no assurance that we will be able to successfully develop and launch Pandora

Premium, or obtain and maintain the content license rights to enable the offering of Pandora Plus and Pandora Premium. Further, in a number of cases, our direct license agreements with record labels require that we launch an on-demand subscription offering, and the rates for content acquisition costs payable under certain of our direct license agreements with record labels are significantly affected by the number of subscribers we are able to attract and retain to our subscription services, including Pandora Premium. If we fail to accomplish any of the foregoing, or if the additional service offerings are unsuccessful, we will not realize the benefits of the Rdio asset acquisition or the substantial investment made in the development of such additional product offerings.

Our inability to obtain accurate and comprehensive information necessary to identify the ownership of sound recordings and musical works used on our services may impact our ability to perform our obligations under our licenses from the copyright holders, may require us to remove or decrease the number of performances of certain music on our services, and may subject us to potential copyright infringement claims and difficulties in controlling content acquisition costs.

We currently rely on the assistance of third parties to determine comprehensive and accurate rightsholder information for the sound recordings and the musical works underlying the sound recordings that we use on our services. If the information provided to us does not comprehensively or accurately identify which labels, artists, composers, songwriters or publishers own or administer sound recordings or musical works, or if we are unable to determine which musical works correspond to specific sound recordings, it may be difficult to identify the appropriate rightsholders to pay under our direct licenses, and it may also be difficult to comply with other obligations under those agreements. Further, our inability to accurately identify rights holders may prevent us from obtaining necessary additional licenses, which could lead to a reduction in the music available to stream on our service, adversely impacting our ability to retain and expand our listener base. Such a lack of ownership data may also make it difficult to identify the sound recordings that we should remove from our service, which may subject us to significant liability for copyright infringement.

We also rely on the assistance of third parties to provide notices of intent ("NOIs") for a compulsory license under Section 115 of the Copyright Act to those copyright owners with whom we do not have a direct license agreement or whose contact information is unavailable or unknown. If the third parties on which we rely do not provide NOIs to the correct parties (including the United States Copyright Office for unknown copyright owners), or to all parties who should receive an NOI, or do not serve the NOI in a timely manner, we may be subject to significant liability for copyright infringement.

We are not able to obtain licenses for the underlying literary works for the sound recordings of spoken-word comedy content that we stream. Third parties could assert copyright claims against us as a result.

We stream spoken word comedy content, for which the underlying literary works are not currently entitled to eligibility for licensing by any performing rights organization in the United States. Rather, pursuant to industry-wide custom and practice, this content is performed absent a specific license from any such performing rights organization or individual rights owners, although content acquisition costs are paid to SoundExchange for the public performance of the sound recordings in which such literary works are embodied. There can be no assurance that this industry custom will not change or that we will not otherwise become subject to additional licensing costs for spoken word comedy content imposed by performing rights organizations or individual copyright owners in the future or be subject to claims of copyright infringement.

If we are unable to maintain revenue growth from our advertising products, particularly in mobile advertising, our results of operations will be materially adversely affected.

Our number of listener hours on mobile devices comprised approximately 86% of our total listener hours for the year ended December 31, 2016, and we expect that mobile listener hours will continue to grow more quickly than computer listener hours. The percentage of advertising spending allocated to digital advertising on mobile devices still lags behind that allocated to traditional online advertising. According to eMarketer, the percentage of U.S. advertising spending allocated to advertising on mobile devices was approximately 23% in 2016, compared to approximately 37% for all online advertising. We must therefore continue to convince advertisers of the capabilities of mobile digital advertising opportunities so that they migrate their advertising spend toward demographics and ad solutions that more effectively utilize mobile inventory.

We continue to build our sales capability to penetrate local advertising markets, which we view as a key challenge to monetizing our listener hours, including listener hours on mobile and other connected devices. Our audio advertising capability also places us in direct competition with terrestrial radio, as many advertisers that purchase audio ads focus their spending on terrestrial radio stations who traditionally have strong connections with local advertisers. We cannot foresee whether we will be able to continue to capture local and audio advertising revenue at the current rate of growth, which may have an adverse impact on future revenue and income.

We continue to work on initiatives that, if successfully implemented, would increase our number of listener hours on mobile and other connected devices, including efforts to expand the reach of our service by making it available on a variety of devices, such as smartphones and devices connected to or installed in automobiles. In order to effectively monetize such increased listener hours, we must, among other things, convince advertisers to migrate spending to nascent advertising markets, penetrate local advertising markets and develop compelling ad product solutions. We may not be able to effectively monetize inventory generated by listeners using mobile and connected devices, or do so in a time frame that supports our business plans.

Advertising spending is increasingly being placed through new data-driven channels, such as the programmatic buying ecosystem, where mobile offerings are not as mature as their web-based equivalents. Because the substantial majority of our listener hours occur on mobile devices, our growth prospects and revenue may be adversely affected if the advertising ecosystem is slow to adopt data-driven mobile advertising offerings.

As new advertising buying technologies, such as programmatic buying, develop around data-driven technologies and advertising products, an increasing percentage of advertising spend is likely to shift to such channels and products. These data-driven advertising products and programmatic buying technologies allow publishers to use data to target advertising toward specific groups of consumers who are more likely to be interested in the advertising message delivered. These advertising products and programmatic technologies are currently more developed in terms of ad technology and industry adoption on the web than they are on mobile. Due to the fact that the substantial majority of our listener hours occur on mobile devices, our ability to attract advertising spend, and ultimately our ad revenue, may be adversely affected by this shift. We have no reliable way to predict how significantly or how quickly advertisers will shift buying to programmatic technologies and data-driven advertising products.

We have developed a data-driven, programmatic advertising capability for mobile in an effort to take advantage of this trend. However, if adoption of mobile programmatic or demand for our mobile programmatic offering lags behind web-based programmatic technologies and competitive offerings, our ability to grow revenue may be adversely affected.

Emerging industry trends in digital advertising measurement and pricing may pose challenges for our ability to forecast or optimize our advertising inventory, which may adversely impact our advertising revenue.

The digital advertising marketplace is introducing new ways to measure and price advertising inventory. Specifically, the industry is in the process of moving from purchasing ad impressions based on the number of ads served by the applicable ad server to a new “viewable” impression standard (based on number of pixels in view and duration) for select products. In the absence of a uniform industry standard, agencies and advertisers have adopted several different billing standards and measurement methodologies. In addition, measurement services may require technological integrations which are still being evaluated by the industry. As these trends in the industry continue to evolve, our advertising revenue may be adversely affected by the availability, accuracy and utility of the available analytics and measurement technologies as well as our ability to successfully implement and operationalize such technologies and standards.

Our failure to convince advertisers of the benefits of our ad-supported service in the future could harm our business.

For the year ended December 31, 2016, we derived 77% of our revenue from the sale of advertising and expect to continue to derive a substantial majority of our revenue from the sale of advertising in the future. Our ability to attract and retain advertisers, and ultimately to sell our advertising inventory to generate advertising revenue, depends on a number of factors, including:

- increasing the number of listener hours, particularly within desired demographics;
- keeping pace with changes in technology and our competitors;
- competing effectively for advertising dollars from other online marketing and media companies;
- penetrating the market for local radio advertising;
- demonstrating the value of advertisements to reach targeted audiences across all of our delivery platforms, including the value of mobile digital advertising;
- ensuring that new ad formats and ad product offerings are attractive to advertisers and that inventory management decisions (such as changes to ad load, frequency, prominence and quality of ads that we serve listeners) do not have a negative impact on listener hours;

- continuing to develop and diversify our advertising platform, which currently includes delivery of display, audio and video advertising products through multiple delivery channels, including computers, mobile and other connected devices; and
- coping with ad blocking technologies that have been developed and are likely to continue to be developed that can block the display of our ads.

Our agreements with advertisers are generally short-term or may be terminated at any time by the advertiser. Advertisers that are spending only a small amount of their overall advertising budget on our service may view advertising with us as experimental and unproven and may leave us for competing alternatives at any time. We may never succeed in capturing a greater share of our advertisers' core advertising spending, particularly if we are unable to achieve the scale and industry penetration necessary to demonstrate the effectiveness of our advertising platforms, or if our advertising model proves ineffective or not competitive when compared to alternatives. Failure to demonstrate the value of our service would result in reduced spending by, or loss of, existing or potential future advertisers, which would materially harm our revenue and business.

Unavailability of, or fluctuations in, third-party measurements of our audience may adversely affect our ability to grow advertising revenue.

Selling ads, locally and nationally, requires that we demonstrate to advertisers that our service has substantial reach and usage. Third-party measurement vendors' technology may not reflect our true listening audience and their underlying methodologies are subject to change at any time. In addition, the methodologies we apply to measure the key metrics that we use to monitor and manage our business may differ from the methodologies used by third-party measurement service providers. For example, we calculate listener hours based on the total bytes served for each track that is requested and served from our servers, as measured by our internal analytics systems, whether or not a listener listens to the entire track. By contrast, certain third-party measurement service providers may calculate and report the number of listener hours using a client-based approach, which measures time elapsed during listening sessions. Measurement technologies for mobile and consumer electronic devices may be even less reliable in quantifying the reach, usage and location of our service, and it is not clear whether such technologies will integrate with our systems or uniformly and comprehensively reflect the reach, usage and location of our service. While we have been working with third-party measurement service providers and certain of their measurements have earned Media Ratings Council accreditation, some providers have not yet developed uniform measurement systems that comprehensively measure the reach, usage and location of our service. In order to demonstrate to potential advertisers the benefits of our service, we supplement third-party measurement data with our internal reporting, which may be perceived as less valuable than third-party numbers. If third-party measurement providers report lower metrics than we do, or if there is wide variance among reported metrics, our ability to attract advertisers to our service could be adversely affected.

The lack of accurate cross-platform measurements for internet radio and broadcast radio may adversely affect our ability to grow advertising revenue.

We have invested substantial resources to create accurate cross-platform measurements for internet radio and broadcast radio in the major automated media-buying platforms, attempting to create a one-stop shop that enables media buyers to compare internet radio audience reach with terrestrial radio audience reach using traditional broadcast radio metrics.

Media buying agencies receive measurement metrics from third parties, such as Triton for internet radio and Nielsen for more traditional media like terrestrial radio and television. Media buying agencies may choose not to show, or may be prohibited by contract from showing, internet radio metrics alongside traditional terrestrial metrics. Despite our efforts to achieve parity within the tools available to media buying agencies, a lack of comparable internet radio metrics in these buying tools could have a materially negative effect on our ability to sell advertising on our service and achieve our revenue goals.

If we are unable to continue to make our technology compatible with the technologies of third-party distribution partners who make our service available to our listeners through mobile devices, consumer electronic products and automobiles, we may not remain competitive and our business may fail to grow or decline.

In order to deliver music everywhere our listeners want to hear it, our service must be compatible with mobile, consumer electronic, automobile and website technologies. Our service is accessible in part through both Pandora-developed and third-party developed apps that hardware manufacturers embed in, and distribute through, their devices. Most of our agreements with makers of mobile operating systems and devices through which our service may be accessed, including Apple and Google, are short-term or can be canceled at any time with little or no prior notice or penalty. The loss of these agreements, or the renegotiation of these agreements on less favorable economic or other terms, could limit the reach of our service and its

attractiveness to advertisers. Some of these mobile device makers and operating system providers, including Apple, Amazon, Samsung and Google, are now, or may in the future become, competitors of ours, and could stop allowing or supporting access to our service through their products for competitive reasons.

Connected devices and their underlying technologies are constantly evolving. As internet connectivity of automobiles, mobile devices and other consumer electronic products expands and as new internet-connected products are introduced, we must constantly adapt our technology. It is challenging to keep pace with the continual release of new devices and technological advances in digital media delivery. If manufacturers fail to make products that are interoperable with our technology or we fail to adapt our technology to their evolving requirements, our ability to grow or sustain the reach of our service, increase listener hours and sell advertising could be adversely affected.

Consumer tastes and preferences can change in rapid and unpredictable ways and consumer acceptance of these products depends on the marketing, technical and other efforts of third-party manufacturers, which is beyond our control. If consumers fail to accept the products of the companies with whom we partner or if we fail to establish relationships with makers of leading consumer products, our business could be adversely affected.

If our efforts to attract prospective listeners and to retain existing listeners are not successful, our growth prospects and revenue will be adversely affected.

Our ability to grow our business and generate advertising revenue depends on retaining and expanding our listener base and increasing listener hours. We must convince prospective listeners of the benefits of our service and existing listeners of the continuing value of our service. The more listener hours we stream, the more ad inventory we have to sell. Further, growth in our listener base increases the size of demographic pools targeted by advertisers, which improves our ability to deliver advertising in a manner that maximizes our advertising customers' return on investment and, ultimately, to demonstrate the effectiveness of our advertising solutions and justify a pricing structure that is profitable for us. If we fail to grow our listener base and listener hours, particularly in key demographics such as young adults, we will be unable to grow advertising revenue, and our business will be materially and adversely affected.

Our ability to increase the number of our listeners and listener hours will depend on effectively addressing a number of challenges. Some of these challenges include:

- providing listeners with a consistent high quality, user-friendly and personalized experience;
- successfully expanding our share of listening in cars;
- continuing to build and maintain availability of catalogs of music and comedy and other content that our listeners enjoy;
- continuing to innovate and keep pace with changes in technology and our competitors;
- maintaining and building our relationships with makers of consumer products such as mobile devices and other consumer electronic products to make our service available through their products;
- maintaining positive listener perception of our service while managing ad-load to optimize inventory utilization; and
- minimizing listener churn and attracting lapsed listeners back to the service.

In addition, we have historically relied heavily on the success of viral marketing to expand consumer awareness of our service. We recently began supplementing our viral marketing strategy with larger, more costly marketing campaigns, and this increase in marketing expenses could fail to achieve expected returns and therefore have an adverse effect on our results of operations. We cannot guarantee that we will be successful in maintaining or expanding our listener base and failure to do so would materially and adversely affect our business, operating results and financial condition.

Further, although we use our number of active users as a key indicator of our brand awareness and the growth of our business, the number of active users exceeds the number of unique individuals who register for, or actively use, our service. We define active users as the number of distinct users that have requested audio from our servers within the trailing 30 days from the end of each calendar month. To establish an account, a person does not need to provide personally unique information. For this reason, a person may have multiple accounts. If the number of actual listeners does not result in an increase in listener

hours, then our business may not grow as quickly as we expect, which may harm our business, operating results and financial condition.

If we fail to accurately predict and play music, comedy or other content that our listeners enjoy, we may fail to retain existing and attract new listeners.

We believe that a key differentiating factor between the Pandora service and other music content providers is our ability to predict music that our listeners will enjoy. Our personalized playlist generating system, based on the Music Genome Project and our proprietary algorithms, is designed to enable us to predict listener music preferences and select music content tailored to our listeners' individual music tastes. We have invested, and will continue to invest, significant resources in refining these technologies; however, we cannot guarantee that such investments will produce the intended results. The effectiveness of our personalized playlist generating system depends in part on our ability to gather and effectively analyze large amounts of listener data and listener feedback and we have no assurance that we will continue to be successful in enticing listeners to give a thumbs-up or thumbs-down to enough songs for our database to effectively predict and select new and existing songs. In addition, our ability to offer listeners songs that they have not previously heard and impart a sense of discovery depends on our ability to acquire and appropriately categorize additional tracks that will appeal to our listeners' diverse and changing tastes. While we have over 1,000,000 analyzed songs in our library, we must continuously identify and analyze additional tracks that our listeners will enjoy and we may not effectively do so. Further, many of our competitors currently have larger catalogs than we offer and they may be more effective in providing their listeners with a more appealing listener experience.

We also provide comedy content on Pandora, and for that content we also try to predict what our listeners will enjoy, using technology similar to the technology that we use to generate personalized playlists for music. The risks that apply to predicting our listeners' musical tastes apply to comedy and other content to an even greater extent, particularly as we lack experience with content other than music, do not yet have as large a data set on listener preferences for comedy and other content, and have a much smaller catalog as compared to music. Our ability to predict and select music, comedy and other content that our listeners enjoy is critical to the perceived value of our service among listeners and failure to make accurate predictions would adversely affect our ability to attract and retain listeners, increase listener hours and sell advertising.

We face, and will continue to face, competition with other content providers for listener hours and advertising spending.

We compete for the time and attention of our listeners with other content providers on the basis of a number of factors, including quality of experience, relevance, acceptance and perception of content quality, ease of use, price, accessibility, perception of ad load, brand awareness and reputation. Such competition affects the amount of quality advertising inventory available which we can offer to advertisers on our ad-supported service.

Many of our competitors may leverage their existing infrastructure, brand recognition and content collections to augment their services by offering competing internet radio features within a more comprehensive digital music streaming service. We face increasing competition for listeners from a growing variety of music services that deliver music content through mobile phones and other wireless devices. Our direct competitors in the internet radio segment include iHeart Radio, LastFM and other companies in the traditional broadcast and internet radio market. We also directly compete with the non-interactive, internet radio offerings from providers such as Spotify, Apple Music, Tidal, Google Play Music and Slacker, and we compete more broadly with on-demand music streaming services such as Spotify, Apple Music, YouTube, SoundCloud, Google Play Music, Amazon Prime, Rhapsody, and Deezer.

Our competitors also include terrestrial radio and satellite radio services, many of which also broadcast on the internet. Terrestrial radio providers offer their content for free, are well established and accessible to listeners and offer content, such as news, sports, traffic, weather and talk that we currently do not offer. In addition, many terrestrial radio stations have begun broadcasting digital signals, which provide high-quality audio transmission. Satellite radio providers may offer extensive and oftentimes exclusive news, comedy, sports and talk content, national signal coverage and long-established automobile integration. In addition, terrestrial radio pays no content acquisition costs for its use of sound recordings and satellite radio pays a much lower percentage of revenue, 10.5% in 2016 and 11% in 2017, than internet radio providers for use of sound recordings, giving broadcast and satellite radio companies a significant cost advantage. We also compete directly with other emerging non-interactive internet radio providers, which may offer more extensive content libraries than we offer and some of which may be accessed internationally.

We compete for the time and attention of our listeners with providers of other forms of in-home and mobile entertainment. To the extent existing or potential listeners choose to watch cable television, stream video from on-demand services or play interactive video games on their home-entertainment system, computer or mobile phone rather than listen to the Pandora service, these content services pose a competitive threat. We also compete with many other forms of media and

services for the time and attention of our listeners, including non-music competitors such as Facebook, Google, Snap, MSN, Yahoo!, Verizon, ABC, CBS, FOX, NBC, The New York Times and the Wall Street Journal, among others.

We believe that companies with a combination of financial resources, technical expertise and digital media experience also pose a significant threat. For example, Apple, Amazon and Google have recently launched competing services. These and other competitors may devote greater resources than we have available, have a more accelerated time frame for deployment, be willing to absorb significant costs to acquire customers through free trials or other initiatives, operate their music services at a loss in order to drive their other profitable businesses, and leverage their existing user base and proprietary technologies to provide products and services that our listeners and advertisers may view as superior or more cost effective. Our current and future competitors may have more well established brand recognition, more established relationships with music content companies and consumer product manufacturers, greater financial, technical and other resources, more sophisticated technologies or more experience in the markets, both domestic and international, in which we compete.

We also compete for listeners on the basis of the presence and visibility of our app, which is distributed via the largest app stores operated by Apple, Google and Amazon. Such distribution is subject to an application developer license agreement in each case. We face significant competition for listeners from these companies, who are also promoting their own digital music and content online through their app stores. Search engines and app stores rank responses to search queries based on the popularity of a website or mobile application, as well as other factors that are outside of our control. Additionally, app stores often offer users the ability to browse applications by various criteria, such as the number of downloads in a given time period, the length of time since a mobile app was released or updated, or the category in which the application is placed. The websites and mobile applications of our competitors may rank higher than our website and our Pandora app, and our app may be difficult to locate in app stores, which could draw potential listeners away from our service and toward those of our competitors. In addition, our competitors' products may be pre-loaded or integrated into consumer electronics products or automobiles, creating an initial visibility advantage. If we are unable to compete successfully for listeners against other digital media providers by maintaining and increasing our presence and visibility online, in app stores and in consumer electronics products and automobiles, our listener hours may fail to increase as expected or decline and our business may suffer. Additionally, should any of these parties reject our app from their app store or amend the terms of their license in such a way that inhibits our ability to distribute our apps, or negatively affects our economics in such distribution, our ability to increase listener hours and sell advertising would be adversely affected, which would reduce our revenue and harm our operating results.

To compete effectively, we must continue to invest significant resources in the development of our service to enhance the user experience of our listeners.

Additionally, in order to compete successfully for advertisers against new and existing competitors, we must continue to invest resources in developing and diversifying our advertisement platform, harnessing listener data and ultimately proving the effectiveness and relevance of our advertising products. There can be no assurance that we will be able to compete successfully for listeners and advertisers in the future against existing or new competitors, and failure to do so could result in loss of existing or potential listeners, loss of current or potential advertisers or a reduced share of our advertisers' overall marketing budget, which could adversely affect our pricing and margins, lower our revenue, increase our research and development and marketing expenses, diminish our brand strength and prevent us from achieving or maintaining profitability.

If we are not successful in operating and growing our recently acquired Ticketfly business, we will not realize the benefits anticipated when we acquired the business.

We acquired Ticketfly in October 2015, which was our first major acquisition and represents an entirely new line of business for us. Ticketfly's business is highly sensitive to rapidly changing public tastes and is dependent on the availability of popular artists and events. Ticketfly's revenue is derived from ticketing services under client contracts with venues and event promoters across North America, which consist primarily of per ticket convenience fees, credit card processing and shipping fees as well as per order "order processing" fees. If Ticketfly's clients fail to anticipate the tastes of consumers and to offer events that appeal to them, the business may not grow or succeed. We cannot provide assurances that Ticketfly will be able to maintain or expand arrangements with clients and other third parties on acceptable terms, if at all. Furthermore, a decline in attendance at or reduction in the number of live entertainment, sporting and leisure events for any reason may have an adverse effect on our Ticketfly business. If we fail to successfully operate and grow our Ticketfly business, we will not realize the benefits anticipated when we acquired the business, and any such failure could result in substantial impairment charges.

Our ability to expand our services into countries outside the United States is dependent on our ability to obtain necessary licenses from content owners, which we currently do not have.

We currently operate the Pandora service in the United States, Australia and New Zealand. In Australia and New Zealand, we have licenses from copyright owners to provide our ad-supported and subscription radio services without the additional interactive features that we introduced in the U.S. on September 15, 2016, and we do not yet have the necessary licenses from copyright owners to launch an on-demand music service in Australia or New Zealand. Therefore, in order to introduce interactive features into our existing services in Australia and New Zealand, or to launch an on-demand music service there, or to launch any interactive or non-interactive music streaming service anywhere else in the world, we will need to negotiate and execute license agreements with the necessary rights holders. We may not be able to obtain all of the necessary rights to expand our service offerings on commercially viable terms, or at all. If we are not able to obtain the necessary licenses on commercially viable terms, then we will not be able to proceed with our international service expansion plans, and our growth could suffer materially. This could adversely affect our business, financial condition and results of operations.

We face many risks associated with our long-term plan to further expand our operations outside of the United States, including difficulties obtaining rights to music and other content on favorable terms.

Expanding our operations into international markets is an element of our long-term strategy. For example, in June 2012 we began providing our service in New Zealand, Australia and their associated territories. However, offering our service outside of the United States involves numerous risks and challenges. Most importantly, while United States copyright law provides a statutory licensing regime for the public performance of sound recordings to listeners within the United States, there is no equivalent statutory licensing regime available outside of the United States, and direct licenses from rights organizations and other content owners may not be available on commercially viable terms. Addressing licensing structure and issues with the rate for content acquisition costs in the United States required us to make very substantial investments of time, capital and other resources, and our business could have failed if such investments had not succeeded. Addressing these issues in foreign jurisdictions may require a commensurate investment by us, and there can be no assurance that we would succeed or achieve any return on this investment.

In addition, international expansion exposes us to other risks such as:

- the need to modify our technology and market our service in non-English speaking countries;
- the need to localize our service to foreign customers' preferences and customs;
- the need to conform our operations, and our marketing and advertising efforts, with the laws and regulations of foreign jurisdictions, including, but not limited to, the use of any personal information about our listeners;
- the need to amend existing agreements and to enter into new agreements with automakers, automotive suppliers, consumer electronics manufacturers with products that integrate our service, and others in order to provide that service in foreign countries;
- difficulties in managing operations due to language barriers, distance, staffing, cultural differences and business infrastructure constraints and domestic laws regulating corporations that operate internationally;
- our lack of experience in marketing, and encouraging viral marketing growth without incurring significant marketing expenses, in foreign countries;
- application of foreign laws and regulations to us;
- fluctuations in currency exchange rates;
- reduced or ineffective protection of our intellectual property rights in some countries; and
- potential adverse tax consequences associated with foreign operations and revenue.

Furthermore, in most international markets, we would not be the first entrant, and our competitors may be better positioned than we are to succeed. In addition, in jurisdictions where copyright protection has been insufficient to protect against widespread music piracy, achieving market acceptance of our service may prove difficult as we would need to convince listeners to stream our service when they could otherwise download the same music for free. As a result of these obstacles, we may find it impossible or prohibitively expensive to enter or sustain our presence in foreign markets, or entry into foreign markets could be delayed, which could hinder our ability to grow our business.

Expansion of our operations into content beyond pre-recorded music, including comedy, live events and podcasts, subjects us to additional business, legal, financial and competitive risks.

Expansion of our operations into delivery of content beyond pre-recorded music involves numerous risks and challenges, including increased capital requirements, new competitors and the need to develop new strategic relationships. Growth into these new areas may require changes to our existing business model and cost structure, modifications to our infrastructure and exposure to new regulatory and legal risks, including infringement liability, any of which may require additional expertise that we currently do not have. There is no guarantee that we will be able to generate sufficient revenue from advertising sales associated with comedy, live events, podcasts or other non-prerecorded-music content to offset the costs of maintaining these stations or the content acquisition costs paid for such stations. Further, we have established a reputation as a music format internet radio provider and our ability to gain acceptance and listenership for comedy, live events, podcasts or other non-music content stations, and thus our ability to attract advertisers on these stations, is not certain. Failure to obtain or retain rights to comedy, live events, podcasts or other non-music content on acceptable terms, or at all, to successfully monetize and generate revenues from such content, or to effectively manage the numerous risks and challenges associated with such expansion could adversely affect our business and financial condition.

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

We have recently acquired and may in the future seek to acquire or invest in businesses, products or technologies that we believe could complement or expand our service, enhance our technical capabilities or otherwise offer growth opportunities. For example, in 2015, we acquired Next Big Sound, Ticketfly and certain assets of Rdio. These acquisitions, and our pursuit of future potential acquisitions, may divert the attention of management and cause us to incur various expenses in identifying, investigating and pursuing suitable acquisitions, whether or not they are consummated. In addition, we have limited experience acquiring and integrating other businesses. We may be unsuccessful in integrating our recently acquired businesses or any additional business we may acquire in the future. For instance, our acquisition in December 2015 of certain assets of Rdio in order to facilitate our intention to launch an on-demand service, has required and will continue to require time and resources. There is no assurance that we will be able to successfully launch an on-demand service, if at all, and if we fail to launch an on-demand service or a new service is unsuccessful, we will not realize the benefits of this acquisition.

We also may not achieve the anticipated benefits from any acquired business due to a number of factors, including:

- unanticipated costs or liabilities associated with the acquisition;
- incurrence of acquisition-related costs;
- diversion of management's attention from other business concerns;
- regulatory uncertainties;
- harm to our existing business relationships with business partners and advertisers as a result of the acquisition;
- harm to our brand and reputation;
- the potential loss of key employees;
- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

In addition, a significant portion of the purchase price of companies we acquire may be allocated to acquired goodwill and other intangible assets, which must be assessed for impairment at least annually. In the future, if our acquisitions do not yield expected returns, we may be required to take charges to our operating results based on this impairment assessment process. Acquisitions could also result in dilutive issuances of equity securities or the incurrence of debt, which could adversely affect our operating results. In addition, if an acquired business fails to meet our expectations, our operating results, business and financial condition may suffer.

Our ability to increase the number of our listeners will depend in part on our ability to establish and maintain relationships with automakers, automotive suppliers and consumer electronics manufacturers with products that integrate our service.

A key element of our strategy to expand the reach of our service and increase the number of our listeners and listener hours is to establish and maintain relationships with automakers, automotive suppliers and consumer electronics manufacturers that integrate our service into and with their products. Working with certain third-party distribution partners, we currently offer listeners the ability to access our service through a variety of consumer electronics products used in the home and devices connected to or installed in automobiles. We intend to broaden our ability to reach additional listeners, and increase current listener hours, through other platforms and partners over time, including through direct integration into connected cars. However, product design cycles in automotive manufacturing are lengthy and the useful lives of automobiles in service is long, and we may not be able to achieve our goals in our desired timeframe, which could adversely impact our ability to grow our business.

Our existing agreements with partners in the automobile and consumer electronics industries generally do not obligate those partners to offer our service in their products. In addition, some automobile manufacturers or their supplier partners may terminate their agreements with us for convenience. Our business could be adversely affected if our automobile partners and consumer electronics partners do not continue to provide access to our service or are unwilling to do so on terms acceptable to us. If we are forced to amend the business terms of our distribution agreements as a result of competitive pressure, our ability to maintain and expand the reach of our service and increase listener hours would be adversely affected, which would reduce our revenue and harm our operating results.

We rely upon an agreement with DoubleClick, which is owned by Google, for delivering and monitoring most of our ads. Failure to renew the agreement on favorable terms, or termination of the agreement, could adversely affect our business.

We use DoubleClick's ad-serving platform to deliver and monitor most of the ads for our ad-supported service. There can be no assurance that our agreement with DoubleClick, which is owned by Google, will be extended or renewed upon expiration, that we will be able to extend or renew our agreement with DoubleClick on terms and conditions favorable to us or that we could identify another alternative vendor to take its place. Our agreement with DoubleClick also allows DoubleClick to terminate our relationship before the expiration of the agreement on the occurrence of certain events, including material breach of the agreement by us, and to suspend provision of the services if DoubleClick determines that our use of its service violates certain security, technology or content standards.

We rely on third parties to provide software and related services necessary for the operation of our business.

We incorporate and include third-party software into and with our apps and service offerings and expect to continue to do so. The operation of our apps and service offerings could be impaired if errors occur in the third-party software that we use. It may be more difficult for us to correct any defects in third-party software because the development and maintenance of the software is not within our control. Accordingly, our business could be adversely affected in the event of any errors in this software. There can be no assurance that any third-party licensors will continue to make their software available to us on acceptable terms, to invest the appropriate levels of resources in their software to maintain and enhance its capabilities, or to remain in business. Any impairment in our relationship with these third-party licensors could harm our ability to maintain and expand the reach of our service, increase listener hours and sell advertising, each of which could harm our operating results, cash flow and financial condition.

Digital music streaming is an evolving industry, which makes it difficult to evaluate our near- and long-term business prospects.

Digital music streaming continues to develop as an industry and our near- and long-term business prospects are difficult to evaluate. The marketplace for digital music streaming is subject to significant challenges and new competitors. As a result, the future revenue, income and growth potential of our business is uncertain. Investors should consider our business and prospects in light of the risks and difficulties we encounter in this evolving business, which risks and difficulties include, among others, risks related to:

- our evolving business model and new licensing models for content as well as the potential need for additional types of content;
- our ability to develop additional products and services, or products and services in adjacent markets, in order to maintain revenue growth, and the resource requirements of doing so;

- our ability to retain current levels of active listeners, build our listener base and increase listener hours;
- our ability to effectively monetize listener hours by growing our sales of advertising inventory created from developing new and compelling ad product solutions that successfully deliver advertisers' messages across the range of our delivery platforms while maintaining our listener experience;
- our ability to attract new advertisers, retain existing advertisers and prove to advertisers that our advertising platform is effective enough to justify a pricing structure that is profitable for us;
- our ability to maintain relationships with platform providers, makers of mobile devices, consumer electronic products and automobiles;
- our ability to continue to secure the rights to music that attracts listeners to the service on fair and reasonable economic terms.

Failure to successfully address these risks and difficulties and other challenges associated with operating in an evolving marketplace could materially and adversely affect our business, financial condition and results of operations.

We have incurred significant operating losses in the past and may not be able to generate sufficient revenue to be profitable.

Since our inception in 2000, we have incurred significant net operating losses and, as of December 31, 2016, we had an accumulated deficit of \$709.6 million. A key element of our strategy is to increase the number of listeners and listener hours to increase our industry penetration, including the number of listener hours on mobile and other connected devices. However, as our number of listener hours increases, our content acquisition costs also increase. In addition, we have adopted a strategy to invest in our operations in advance of, and to drive, future revenue growth. This strategy includes recently completed acquisitions and other initiatives. As a result of these trends, we have not in the past generated, and may not in the future generate, sufficient revenue from the sale of advertising and subscriptions, or new revenue sources, to offset our expenses. In addition, we plan to continue to invest heavily in our operations to support anticipated future growth. As a result of these factors, we expect to incur annual net losses in the near term.

Our revenue has increased rapidly in recent periods; however, we do not expect to sustain our high revenue growth rates in the future as a result of a variety of factors, including increased competition and the maturation of our business, and we cannot guarantee that our revenue will continue to grow or will not decline. Investors should not consider our historical revenue growth or operating expenses as indicative of our future performance. If revenue growth is lower than our expectations, or our operating expenses exceed our expectations, our financial performance will be adversely affected. Further, if our future growth and operating performance fail to meet investor or analyst expectations, it could have a material adverse effect on our stock price.

In addition, in our efforts to increase revenue as the number of listener hours has grown, we have expanded and expect to continue to expand our sales force. If our hiring of additional sales personnel does not result in a sufficient increase in revenue, the cost of this additional headcount will not be offset, which would harm our operating results and financial condition.

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

Our rapid growth has placed, and will continue to place, significant demands on our management and our operational and financial infrastructure. In order to attain and maintain profitability, we will need to recruit, integrate and retain skilled and experienced sales personnel who can demonstrate our value proposition to advertisers and increase the monetization of listener hours, particularly on mobile devices, by developing relationships with both national and local advertisers to convince them to migrate advertising spending to online and mobile digital advertising markets and utilize our advertising product solutions. Continued growth could also strain our ability to maintain reliable service levels for our listeners, effectively monetize our listener hours, develop and improve our operational, financial and management controls and enhance our reporting systems and procedures. If our systems do not evolve to meet the increased demands placed on us by an increasing number of advertisers, we may also be unable to meet our obligations under advertising agreements with respect to the timing of our delivery of advertising or other performance obligations. As our operations grow in size, scope and complexity, we will need to improve and upgrade our systems and infrastructure, which will require significant expenditures and allocation of valuable management resources. If we fail to maintain the necessary level of discipline and efficiency and allocate limited resources effectively in our organization as it grows, our business, operating results and financial condition may suffer.

Our business and prospects depend on the strength of our brands and failure to maintain and enhance our brands would harm our ability to expand our base of listeners, advertisers and other partners.

Maintaining and enhancing the "Pandora", "Ticketfly" and "Next Big Sound" brands is critical to expanding our base of listeners, advertisers, venue partners, concertgoers, content owners and other partners. Maintaining and enhancing our brands will depend largely on our ability to continue to develop and provide an innovative and high quality experience for our listeners and concertgoers and attract advertisers, content owners, venue partners and automobile, mobile device and other consumer electronic product manufacturers to work with us, which we may not do successfully.

Our brands may be impaired by a number of other factors, including service outages, data privacy and security issues, listener perception of ad load and exploitation of our trademarks by others without permission. In addition, if our partners fail to maintain high standards for products that integrate our service, or if we partner with manufacturers of products that our listeners reject, the strength of our brand could be adversely affected.

Assertions by third parties of violations under state law with respect to the public performance and reproduction of pre-1972 sound recordings could result in significant costs and substantially harm our business and operating results.

Federal copyright protection does not apply to sound recordings created prior to February 15, 1972 ("pre-1972 sound recordings"). The protection of such recordings is instead governed by a patchwork of state statutory and common laws. Copyright owners of pre-1972 sound recordings have commenced litigation against us in New York, California, Illinois, and New Jersey alleging violations of state statutory and common laws arising from the reproduction and public performance of pre-1972 sound recordings. Despite settling one such suit with the major record labels in October 2015, and entering into direct license agreements for recorded music with major and independent labels, distributors and publishers during the first nine months of 2016 that also permit us to stream certain pre-1972 sound recordings, we still face a number of class-action suits brought by various plaintiffs who seek, among other things, restitution, disgorgement of profits, and punitive damages as well as injunctive relief prohibiting further violation of those copyright owners' alleged exclusive rights.

If we are found liable for the violation of the exclusive rights of any pre-1972 sound recording copyright owners, then we could be subject to liability, the amount of which could be significant. Similarly, any settlements of the remaining litigation could require substantial payments. If we are required to obtain licenses from individual sound recording copyright owners for the reproduction and public performance of pre-1972 sound recordings, then the time, effort and cost of securing such licenses directly from all owners of sound recordings used on our service could be significant and could harm our business and operating results. If we are required to obtain licenses for pre-1972 sound recordings to avoid liability and are unable to secure such licenses, then we may have to remove pre-1972 sound recordings from our service, which could harm our ability to attract and retain users.

We could be adversely affected by regulatory restrictions on the use of mobile and other electronic devices in motor vehicles and legal claims arising from use of such devices while driving.

Regulatory and consumer agencies have increasingly focused on distraction to drivers that may be associated with use of mobile and other devices in motor vehicles. In 2010, the U.S. Department of Transportation identified driver distraction as a top priority, and in April 2013, the National Highway Traffic Safety Administration (the "NHTSA") released voluntary Phase 1 Driver Distraction Guidelines for visual-manual devices not related to the driving task that are integrated into motor vehicles. In March 2014, NHTSA held a public meeting soliciting comments related to its voluntary Phase 2 Driver Distraction Guidelines for portable and aftermarket devices that may be used in motor vehicles, but such guidelines have not yet been issued. If NHTSA or other agencies implemented regulatory restrictions and took enforcement action related to how drivers and passengers in motor vehicles may engage with devices on which our service is broadcast, such restrictions or enforcement actions could inhibit our ability to increase listener hours and generate ad revenue, which would harm our operating results. In addition, concerns over driver distraction due to use of mobile and other electronic devices used to access our service in motor vehicles could result in product liability or personal injury litigation and negative publicity.

Federal, state and industry regulations as well as self-regulatory programs related to privacy and data security pose the threat of lawsuits and other liability, require us to expend significant resources for compliance, and may hinder our ability and our advertisers' ability to deliver certain types of advertising.

We collect and utilize demographic and other information from and about our listeners and artists as they interact with our service, including information which could fall under a definition of "personally identifiable information" under various state and federal laws. For example, to register for a Pandora account, our listeners self-report the following information: birth year, gender, zip code and e-mail address. Listeners must also provide their credit card or debit card numbers and other billing

information if they choose to take advantage of additional service offerings, such as Pandora Plus or Ticketfly. We also may collect location information from listeners who have enabled this feature on their mobile or other devices, information listeners provide on their profile page or in using other community or social networking features that are part of our service, or information listeners provide when they participate in polls or contests or sign up to receive e-mail newsletters. Further, we and third parties use tracking technologies, including "cookies" and related technologies, to help us manage and track our listeners' interactions with our service and deliver relevant advertising. We also collect information from and track artists' activity on our Pandora Artist Marketing Platform. Third parties may, either without our knowledge or consent, or in violation of contractual prohibitions, obtain, transmit or utilize our listeners' or artists' personally identifiable information, or data associated with particular users, devices or artists.

Various federal and state laws and regulations, as well as the laws of foreign jurisdictions in which we may choose to operate, govern the collection, use, retention, sharing and security of the data we receive from and about our listeners. Privacy groups and government authorities have increasingly scrutinized the ways in which companies link personal identities and data associated with particular users or devices with data collected through the internet, and we expect such scrutiny to continue to increase. Alleged violations of laws and regulations relating to privacy and data security, and any relevant claims, may expose us to potential liability and may require us to expend significant resources in responding to and defending such allegations and claims. Claims or allegations that we have violated laws and regulations relating to privacy and data security have resulted and could in the future result in negative publicity and a loss of confidence in us by our listeners and our advertisers.

Existing privacy-related laws and regulations are evolving and subject to potentially differing interpretations, and various federal and state legislative and regulatory bodies, as well as foreign legislative and regulatory bodies, may expand current or enact new laws regarding privacy and data security-related matters. We may find it necessary or desirable to join self-regulatory bodies or other privacy-related organizations that require compliance with their rules pertaining to privacy and data security. We are also bound by our public-facing privacy statement, which sets forth the ways in which we collect, use and share information. We also may be bound by contractual obligations that limit our ability to collect, use, disclose and leverage listener data and to derive economic value from it. New laws, amendments to or re-interpretations of existing laws, rules of self-regulatory bodies, industry standards and contractual obligations, as well as changes in our listeners' expectations and demands regarding privacy and data security, may limit our ability to collect, use and disclose, and to leverage and derive economic value from listener data. We may also be required to expend significant resources to adapt to these changes and to develop new ways to deliver relevant advertising or otherwise provide value to our advertisers. In particular, government regulators have proposed "do not track" mechanisms, and requirements that users affirmatively "opt-in" to certain types of data collection and use that, if enacted into law or adopted by self-regulatory bodies or as part of industry standards, could significantly hinder our ability to collect and use data relating to listeners. Restrictions on our ability to collect, access and harness listener data, or to use or disclose listener data or any profiles that we develop using such data, could in turn limit our ability to stream personalized music content to our listeners and offer targeted advertising opportunities to our advertising customers, each of which are critical to the success of our business.

We have incurred, and will continue to incur, expenses to comply with privacy and security standards and protocols imposed by law, regulation, self-regulatory bodies, industry standards and contractual obligations. Increased regulation of data utilization and distribution practices, including self-regulation and industry standards, could increase our cost of operation, limit our ability to grow our operations or otherwise adversely affect our business.

Government regulation of the internet is evolving, and unfavorable developments could have an adverse effect on our operating results.

We are subject to general business regulations and laws, as well as regulations and laws specific to the internet. Such laws and regulations cover sales and other taxes and withholding of taxes, user privacy, data collection and protection, copyrights, electronic contracts, sales procedures, automatic subscription renewals, credit card processing procedures, consumer protections, broadband internet access and content restrictions. We cannot guarantee that we have been or will be fully compliant in every jurisdiction, as it is not entirely clear how existing laws and regulations governing issues such as privacy, taxation and consumer protection apply to the internet. Moreover, as internet commerce continues to evolve, increasing regulation by federal, state and foreign agencies becomes more likely. The adoption of any laws or regulations that adversely affect the popularity or growth in use of the internet, including laws limiting network neutrality, could decrease listener demand for our service offerings and increase our cost of doing business. Future regulations, or changes in laws and regulations or their existing interpretations or applications, could also hinder our operational flexibility, raise compliance costs and result in additional historical or future liabilities for us, resulting in adverse impacts on our business and our operating results.

Our operating results may fluctuate, which makes our results difficult to predict and could cause our results to fall short of expectations.

Our revenue and operating results could vary significantly from quarter to quarter and year to year due to a variety of factors, many of which are outside our control. As a result, comparing our operating results on a period-to-period basis may not be meaningful. In addition to other risk factors discussed in this "Risk Factors" section, factors that may contribute to the variability of our quarterly and annual results include:

- costs associated with pursuing licenses or other commercial arrangements;
- costs associated with defending any litigation, including intellectual property infringement litigation, and any associated judgments or settlements;
- our ability to pursue, and the timing of, entry into new geographic or content markets or other strategic initiatives and, if pursued, our management of these initiatives;
- the impact of general economic and competitive conditions on our revenue and expenses; and
- changes in government regulation affecting our business.

Seasonal variations in listener and advertising behavior may also cause fluctuations in our financial results. We expect to experience some effects of seasonal trends in listener behavior due to higher advertising sales during the fourth quarter of each year due to greater advertiser demand during the holiday season and lower advertising sales in the first quarter of the following year. Expenditures by advertisers tend to be cyclical and discretionary in nature, reflecting overall economic conditions, the economic prospects of specific advertisers or industries, budgeting constraints and buying patterns and a variety of other factors, many of which are outside our control. In addition, we expect to experience increased usage during the fourth quarter of each year due to the holiday season, and in the first quarter of each year due to increased use of media-streaming devices received as gifts during the holiday season.

If we are unable to implement and maintain effective internal control over financial reporting in the future, the accuracy and timeliness of our financial reporting may be adversely affected.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we are required to furnish a report by our management on our internal control over financial reporting. The report contains, among other matters, an assessment of the effectiveness of our internal control over financial reporting as of year-end, including a statement as to whether or not our internal control over financial reporting is effective. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by management.

While we have determined that our internal control over financial reporting was effective as of December 31, 2016, as indicated in "Controls and Procedures Management's Report on Internal Control over Financial Reporting", we must continue to monitor and assess our internal control over financial reporting. If our management identifies one or more material weaknesses in our internal control over financial reporting and such weakness remains uncorrected at year-end, we will be unable to assert that such internal control is effective at year-end. If we are unable to assert that our internal control over financial reporting is effective at year-end, or if our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal controls or concludes that we have a material weakness in our internal controls, we could lose investor confidence in the accuracy and completeness of our financial reports, which could have a material adverse effect on our business and the price of our common stock.

We may require additional capital to pursue our business objectives and respond to business opportunities, challenges or unforeseen circumstances. If capital is not available to us, our business, operating results and financial condition may be harmed.

We may require additional capital to operate or expand our business. In addition, some of our current or future strategic initiatives, or international markets, may require substantial additional capital resources before they begin to generate revenue. Additional funds may not be available when we need them, on terms that are acceptable to us, or at all. For example, our current credit facility contains restrictive covenants relating to our capital raising activities and other financial and operational matters, and any debt financing secured by us in the future could involve further restrictive covenants, which may make it more difficult for us to obtain additional capital and to pursue business opportunities. In addition, volatility in the credit markets may have an adverse effect on our ability to obtain debt financing. If we do not have funds available to enhance our solutions, maintain the competitiveness of our technology and pursue business opportunities, we may not be able to service our existing

listeners, acquire new listeners or attract or retain advertising customers, each of which could inhibit the implementation of our business plan and materially harm our operating results.

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

The success of our business depends, in part, on our ability to protect and enforce our trade secrets, trademarks, copyrights and patents and all of our other intellectual property rights, including our intellectual property rights underlying the Pandora service. To establish and protect those proprietary rights, we rely on a combination of patents, patent applications, trademarks, copyrights, trade secrets (including know-how), license agreements, information security procedures, non-disclosure agreements with third parties, employee disclosure and invention assignment agreements, and other contractual obligations. These afford only limited protection. Despite our efforts to protect our intellectual property rights, unauthorized parties may copy or attempt to copy aspects of our technology. Moreover, policing our intellectual property rights is difficult, costly and may not always be effective.

We have filed, and may in the future file, patent applications and from time to time we have purchased patents and patent applications from third parties. It is possible, however, that these innovations may not be protectable. In addition, given the cost, effort, risks and downside of obtaining patent protection, including the requirement to ultimately disclose the invention to the public, we may choose not to seek patent protection for certain innovations. However, such patent protection could later prove to be important to our business. Furthermore, there is always the possibility that our patent applications may not issue as granted patents, that the scope of the protection gained will be insufficient or that an issued patent may be deemed invalid or unenforceable. Moreover, in certain circumstances there are additional risks, including:

- present or future patents or other intellectual property rights could lapse or be invalidated, circumvented, challenged or abandoned;
- our ability to assert our intellectual property rights against potential competitors or to settle current or future disputes may be limited by our relationships with third parties;
- our pending or future patent applications may not have coverage sufficient to provide the desired competitive advantage; and
- our intellectual property rights may not be enforced in jurisdictions where competition may be intense or where legal protection may be weak.

We have registered "Pandora," "Music Genome Project", "Next Big Sound", "Ticketfly" and other marks as trademarks in the United States and other countries. Nevertheless, competitors may adopt service names similar to ours, or purchase confusingly similar terms as keywords in internet search engine advertising programs, thereby impeding our ability to build brand identity and possibly leading to confusion among our listeners or advertising customers. In addition, there could be potential trade name or trademark infringement claims brought by owners of other registered trademarks or trademarks that incorporate variations of the term Pandora or our other trademarks. Any claims or customer confusion related to our trademarks could damage our reputation and brand and substantially harm our business and operating results.

We currently own the www.pandora.com and www.ticketfly.com internet domain names and various other domain names related to our business. The regulation of domain names in the United States and in foreign countries is subject to change. Regulatory bodies continue to establish additional top-level domains, appoint additional domain name registrars and modify the requirements for holding domain names. As a result, we may not be able to acquire or maintain the domain names that utilize our brand names in the United States or other countries in which we may conduct business in the future. If we lose or fail to acquire the right to use any domain name relevant to our current or future business in the United States or other countries, we may incur significant additional expense.

In order to protect our trade secrets and other confidential information, we rely in part on confidentiality agreements with our employees, consultants and third parties with whom we have relationships. These agreements may not effectively prevent disclosure of trade secrets and 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 the same subject matter as that covered by our trade secrets and confidential information, and in some such cases we might 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 trade secret rights and related confidentiality and nondisclosure provisions, and failure to obtain or maintain trade secret protection, or our competitors' independent

development of technology similar to ours for which we are unable to rely on other forms of intellectual property protection such as patents, 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 patent rights, trademarks, trade secrets and 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 and could result in substantial costs and diversion of resources and management time, each of which 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.

Internet, technology and media companies are frequently subject to litigation based on allegations of infringement, misappropriation or other violations of others' intellectual property rights. Some internet, technology and media companies, including some of our competitors, own large numbers of patents, copyrights, trademarks and trade secrets, which they may use to assert claims against us. In addition, we encourage third parties to submit content for our catalog and we cannot be assured that artist representations made in connection with such submissions accurately reflect the legal rights of the submitted content. Third parties have asserted, and may in the future assert, that we have infringed, misappropriated or otherwise violated their intellectual property rights. In addition, various federal and state laws and regulations govern the intellectual property and related rights associated with sound recordings and musical works. Existing laws and regulations are evolving and subject to different interpretations, and various federal and state legislative or regulatory bodies may expand current or enact new laws or regulations. We cannot guarantee that we are not infringing or violating any third-party intellectual property rights.

We cannot predict whether assertions of third-party intellectual property rights or any infringement or misappropriation claims arising from such assertions will substantially harm our business and operating results. When we are forced to defend against any infringement or misappropriation claims, we may be required to expend significant time and financial resources on the defense of such claims, even if without merit, settled out of court, or adjudicated in our favor. Furthermore, an adverse outcome of a dispute may require us to: pay damages (potentially including treble damages and attorneys' fees if we are found to have willfully infringed a party's intellectual property); cease making, licensing or using products or services that are alleged to infringe or misappropriate the intellectual property of others; expend additional development resources to redesign our services to avoid infringement; enter into potentially unfavorable content acquisition or license agreements in order to obtain the right to use necessary technologies, content or materials; or to indemnify our partners and other third parties. We do not carry broadly applicable patent liability insurance and lawsuits regarding patent rights, regardless of their success, can be expensive to resolve and can divert the time and attention of our management and technical personnel.

Some of our services and technologies may use "open source" software, which may restrict how we use or distribute our service or require that we release the source code of certain services subject to those licenses.

Some of our services and technologies may incorporate software licensed under so-called "open source" licenses. Such open source licenses often require that source code subject to the license be made available to the public and that any modifications or derivative works to open source software continue to be licensed under open source licenses. Few courts have interpreted open source licenses, and the manner in which these licenses may be interpreted and enforced is therefore subject to some uncertainty. We rely on multiple employee and non-employee software programmers to design our proprietary technologies, and since we may not be able to exercise complete control over the development efforts of all such programmers we cannot be certain that they have not incorporated open source software into our products and services without our knowledge, or that they will not do so in the future. In the event that portions of our proprietary technology are determined to be subject to an open source license, we may be required to publicly release the affected portions of our source code, be forced to re-engineer all or a portion of our technologies, or otherwise be limited in the licensing of our technologies, each of which could reduce the value of our services and technologies and materially and adversely affect our ability to sustain and grow our business.

Interruptions or delays in service arising from our own systems or from our third-party vendors could impair the delivery of our service and harm our business.

We rely on systems housed at our own premises and at those of third-party vendors, including network service providers and data center facilities, to enable listeners to stream our content in a dependable and efficient manner. We have experienced and expect to continue to experience periodic service interruptions and delays involving our own systems and those of our third-party vendors. In the event of a service outage at our main site, we maintain a backup site that can function in read-only

capacity. We do not currently maintain live fail-over capability that would allow us to instantaneously switch our streaming operations from one facility to another in the event of a service outage. In the event of an extended service outage at our main site, we do maintain and test fail-over capabilities that should allow us to switch our live streaming operations from one facility to another. Both our own facilities and those of our third-party vendors are vulnerable to damage or interruption from earthquakes, floods, fires, power loss, telecommunications failures and similar events. They also are subject to break-ins, hacking, denial of service attacks, sabotage, intentional acts of vandalism, terrorist acts, natural disasters, human error, the financial insolvency of our third-party vendors and other unanticipated problems or events. The occurrence of any of these events could result in interruptions in our service and to unauthorized access to, or alteration of, the content and data contained on our systems and that these third-party vendors store and deliver on our behalf.

We do not exercise complete control over our third-party vendors, which makes us vulnerable to any errors, interruptions, or delays in their operations. Any disruption in the services provided by these vendors could have significant adverse impacts on our business reputation, customer relations and operating results. Upon expiration or termination of any of our agreements with third-party vendors, we may not be able to replace the services provided to us in a timely manner or on terms and conditions, including service levels and cost, that are favorable to us, and a transition from one vendor to another vendor could subject us to operational delays and inefficiencies until the transition is complete.

If our security systems are breached, we may face civil liability and public perception of our security measures could be diminished, either of which would negatively affect our ability to attract and retain listeners and advertisers.

Techniques used to gain unauthorized access to corporate data systems are constantly evolving, and we may be unable to anticipate or prevent unauthorized access to data pertaining to our listeners, including credit card and debit card information and other personally identifiable information. Like all internet services, our service, which is supported by our own systems and those of third-party vendors, is vulnerable to computer malware, Trojans, viruses, worms, break-ins, phishing attacks, denial-of-service attacks, attempts to access our servers to acquire playlists or stream music in an unauthorized manner, or other attacks on and disruptions of our and third-party vendor computer systems, any of which could lead to system interruptions, delays, or shutdowns, causing loss of critical data or the unauthorized access to personally identifiable information. If an actual or perceived breach of security occurs on our systems or a vendor's systems, we may face civil liability and reputational damage, either of which would negatively affect our ability to attract and retain listeners, which in turn would harm our efforts to attract and retain advertisers. We also would be required to expend significant resources to mitigate the breach of security and to address related matters. Unauthorized access to music or playlists would potentially create additional content acquisition cost obligations with no corresponding revenue.

We may not be able to effectively control the unauthorized actions of third parties who may have access to the listener data we collect. The integration of the Pandora service with apps provided by third parties represents a significant growth opportunity for us, but we may not be able to control such third parties' use of listeners' data, ensure their compliance with the terms of our privacy policies, or prevent unauthorized access to, or use or disclosure of, listener information, any of which could hinder or prevent our efforts with respect to growth opportunities.

Any failure, or perceived failure, by us to maintain the security of data relating to our listeners and employees, to comply with our posted privacy policy, laws and regulations, rules of self-regulatory organizations, industry standards and contractual provisions to which we may be bound, could result in the loss of confidence in us, or result in actions against us by governmental entities or others, all of which could result in litigation and financial losses, and could potentially cause us to lose listeners, artists, advertisers, revenue and employees.

We are subject to a number of risks related to credit card and debit card payments we accept.

We accept subscription payments through 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 those fees would require us to either increase the prices we charge for our products, which could cause us to lose subscribers and subscription revenue, or absorb an increase in our operating expenses, either of which could harm our operating results.

If we or any of our processing vendors have problems with our billing software, or the billing software malfunctions, it could have an adverse effect on our subscriber satisfaction and could cause one or more of the major credit card companies 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 subscribers' credit cards on a timely basis or at all, or there are issues with financial insolvency of our third-party vendors or other unanticipated problems or events, we could lose subscription revenue, which would harm our operating results.

We are also subject to payment card association operating rules, certification requirements and rules governing electronic funds transfers, which could change or be reinterpreted to make it more difficult for us to comply. We are currently accredited against, and in compliance with, the Payment Card Industry Data Security Standard, or PCI DSS, the payment card industry's 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. Currently we comply with PCI DSS version 3.2 as a Level 2 merchant. Ticketfly is a Level 2 merchant and has been given an extension by certain credit card networks to recertify that it is in compliance with PCI DSS. Ticketfly previously received an extension until January 2017 from Visa to recertify that it is in compliance with PCI DSS and, as of February 2017, has been assessed fines for non-compliance. While we plan that Ticketfly will recertify that it is in compliance with PCI DSS, there is no guarantee that Pandora or Ticketfly will maintain PCI DSS compliance. Our failure to comply fully with PCI DSS in the future could 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 also could subject us to fines, penalties, damages and civil liability, and could result in the loss of our ability to accept credit and debit card payments. Further, 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, financial condition and results of operations. If we are unable to maintain our chargeback rate or refund rates at acceptable levels, credit card and debit card companies may increase our transaction fees or terminate their relationships with us. Any increases in our credit card and debit card fees could adversely affect our results of operations, particularly if we elect not to raise our rates for our service to offset the increase. The termination of our ability to process payments on any major credit or debit card would significantly impair our ability to operate our business.

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

At December 31, 2016, we had federal net operating loss carryforwards of approximately \$818.5 million and tax credit carryforwards of approximately \$14.8 million. At December 31, 2016, we had state net operating loss carryforwards of approximately \$552.2 million and tax credit carryforwards of approximately \$21.5 million. 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 may be limited. In general, an "ownership change" will occur if there is a cumulative change in our ownership by "5-percent shareholders" that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. As a result of prior equity issuances and other transactions in our stock, we have previously experienced "ownership changes" under section 382 of the Code and comparable state tax laws. We may also experience ownership changes in the future as a result of other future transactions in our stock. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards or other pre-change tax attributes to offset United States federal and state taxable income may be subject to limitations.

We could be subject to additional income tax liabilities.

We are subject to income taxes in the United States and in certain foreign jurisdictions. As we expand our operations globally, we become subject to taxation based on the applicable foreign statutory rates and our effective tax rate could fluctuate accordingly. Significant judgment is required in evaluating and estimating our worldwide provision for income taxes and accruals for these taxes. For example, our effective tax rates could be adversely affected by earnings being lower than anticipated in countries where we have lower statutory tax rates and higher than anticipated in countries where we have higher statutory tax rates, by losses incurred in jurisdictions for which we are not able to realize the related tax benefit, by changes in foreign currency exchange rates, by changes in the valuation of our deferred tax assets and liabilities, or by changes in the relevant tax, accounting and other laws, regulations, principles and interpretations. We are also subject to tax audits in various jurisdictions, and such jurisdictions may assess additional income tax liabilities against us.

Our Ticketfly business and venue partners may be subject to sales tax and other taxes.

The application of indirect taxes (such as sales, use, excise, admissions, amusement, entertainment or other transaction-based taxes) to internet-based live entertainment ticketing businesses such as Ticketfly is a complex and evolving area. Many of the fundamental statutes and regulations that impose these taxes were established before the adoption and growth of the internet and ecommerce. In many cases, it is not clear how existing statutes apply to the internet or ecommerce. In addition, governments are increasingly looking for ways to increase revenues, which has resulted in discussions about tax reform and

other legislative action to increase tax revenues, including through indirect taxes. Changes in these tax laws could adversely affect our business.

Ticketfly is not the seller of tickets sold on the Ticketfly platform. Instead it facilitates the transaction between our venue partners and customers. If a taxing jurisdiction were to treat Ticketfly as the seller and liable for the tax of the venue partners or customers, it could result in a material liability.

Ticketfly does not currently calculate all applicable indirect taxes on the fees charged when a customer purchases tickets on the Ticketfly platform. Some jurisdictions may interpret their law in a manner that would require Ticketfly to calculate, collect and remit the applicable indirect taxes on the entire charges. Such an interpretation could negatively impact our customers and our business.

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.

We believe that our success depends on the contributions of our executive officers as well as our ability to attract and retain qualified sales, technical and other personnel. All of our employees, including our executive officers, are free to terminate their employment relationship with us at any time, and their knowledge of our business and industry may be difficult to replace. Qualified individuals are in high demand, particularly in the digital media industry and in the San Francisco Bay Area, where our headquarters is located, and in New York, and we may incur significant costs to attract them. If we are unable to attract and retain our executive officers and key employees, we may not be able to achieve our strategic objectives, and our business could be harmed. We use stock-based and other performance-based incentive awards such as restricted stock units and cash bonuses to help attract, retain, and motivate qualified individuals. If our stock-based or other compensation programs cease to be viewed as competitive and valuable benefits, our ability to attract, retain, and motivate employees could be weakened, and our business could 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.

We believe that a critical component of our success is our corporate culture, which we believe fosters innovation, encourages teamwork, cultivates creativity and promotes focus on execution. We have invested substantial time, energy and resources in building a highly collaborative team that works together effectively in a non-hierarchical environment designed to promote openness, honesty, mutual respect and pursuit of common goals. As we continue to develop the infrastructure of a public company and 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 employees, encourage innovation and teamwork and effectively focus on and pursue our corporate objectives.

The impact of worldwide economic conditions, including the effect on advertising budgets and discretionary entertainment spending behavior, may adversely affect our business and operating results.

Our financial condition is affected by worldwide economic conditions and their impact on advertising spending. Expenditures by advertisers generally tend to reflect overall economic conditions, and reductions in spending by advertisers could have a serious adverse impact on our business. In addition, we provide an entertainment service, and payment for our Pandora Plus subscription service may be considered discretionary on the part of some of our current and prospective subscribers or listeners who may choose to use a competing free service or to listen to Pandora without subscribing. To the extent that overall economic conditions reduce spending on discretionary activities, our ability to retain current and obtain new subscribers could be hindered, which could reduce our subscription revenue and negatively impact our business.

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

Our systems and operations are vulnerable to damage or interruption from earthquakes, fires, floods, power losses, telecommunications failures, terrorist attacks, acts of war, human errors, break-ins or similar events. For example, a significant natural disaster, such as an earthquake, fire or flood, could have a material adverse effect on our business, operating results and financial condition, and our insurance coverage may be insufficient to compensate us for losses that may occur. Our principal executive offices are located in the San Francisco Bay Area, a region known for seismic activity. In addition, acts of terrorism could cause disruptions in our business or the economy as a whole. Our servers may also be vulnerable to computer viruses, cybersecurity incidents and similar disruptions caused by unauthorized tampering with our computer systems, which could lead to interruptions, delays, loss of critical data or the unauthorized disclosure of confidential customer data. Our business

interruption insurance may be insufficient to compensate us for all such losses. As we rely heavily on our servers and the internet to conduct our business and provide high quality service to our listeners, such disruptions could negatively impact our ability to run our business, resulting in a loss of existing or potential listeners and advertisers and increased maintenance costs, which would adversely affect our operating results and financial condition.

We may not have sufficient cash flow from our business to make payments on our indebtedness.

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness, including our 1.75% convertible senior notes due 2020 (the "Notes"), depends on our performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

The conditional conversion feature of the Notes, if triggered, may adversely affect our financial condition and operating results.

In the event the conditional conversion feature of the Notes is triggered, holders of Notes will be entitled to convert the Notes at any time during specified periods at their option. See Note 7, "Debt Instruments." If one or more holders elect to convert their Notes, we may elect to satisfy our conversion obligation in whole or in part through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

The accounting method for convertible debt securities that may be settled in cash, such as the Notes, could have a material effect on our reported financial results.

Accounting Standards Codification Subtopic 470-20 (ASC 470-20), Debt with Conversion and Other Options, requires an entity to separately account for the liability and equity components of convertible debt instruments (such as the Notes) that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer's economic interest cost. The effect of ASC 470-20 on the accounting for the Notes is that the equity component of the Notes is required to be included in the additional paid-in capital section of stockholders' equity on our consolidated balance sheet, and the value of the equity component is treated as original issue discount for purposes of accounting for the debt component of the Notes. As a result, we will be required to recognize a greater amount of non-cash interest expense current and future periods presented as a result of the amortization of the discounted carrying value of the Notes to their principal amount over the term of the Notes. We will report lower net income (or greater net losses) in our consolidated financial results because ASC 470-20 will require interest to include both the current period's amortization of the original issue discount and the instrument's coupon interest, which could adversely affect our reported or future consolidated financial results, the trading price of our common stock and the trading price of the Notes.

In addition, under certain circumstances, in calculating earnings per share, convertible debt instruments (such as the Notes) that may be settled entirely or partly in cash are currently accounted for utilizing the treasury stock method, the effect of which is that the shares of common stock issuable upon conversion of the Notes, if any, are not included in the calculation of diluted earnings per share except to the extent that the conversion value of the Notes exceeds their principal amount. Under the treasury stock method, diluted earnings per share is calculated as if the number of shares of common stock that would be necessary to settle such excess, if we were to elect to settle such excess in shares, were issued. We cannot be sure that the accounting standards in the future will continue to permit the use of the treasury stock method. If we are unable to use the treasury stock method in accounting for the shares issuable upon conversion of the Notes (if any) then, to the extent we generate positive net income, our diluted consolidated earnings per share would be adversely affected.

Risks Related to Owning Our Common Stock

Our stock price has been and will likely continue to be volatile, and the value of an investment in our common stock may decline.

The trading price of our common stock has been and is likely to continue to be volatile. In addition to the risk factors described in this section, and elsewhere in this Annual Report on Form 10-K, additional factors that may cause the price of our common stock to fluctuate include, but are not limited to:

- our actual or anticipated operating performance and the operating performance of similar companies in the internet, radio or digital media spaces;
- our ability to grow active users and listener hours;
- competitive conditions and developments;
- our actual or anticipated achievement of financial and non-financial key operating metrics;
- general economic conditions and their impact on advertising spending;
- the overall performance of the equity markets;
- threatened or actual litigation or regulatory proceedings, including the current Phonorecords III rate proceedings in the CRB;
- changes in laws or regulations relating to our service;
- any major change in our board of directors or management;
- publication of research reports about us or our industry or changes in recommendations or withdrawal of research coverage by securities analysts; and
- sales or expected sales of shares of our common stock by us, and our officers, directors and significant stockholders.

In addition, the stock market has experienced extreme price and volume fluctuations that often have been unrelated or disproportionate to the operating performance of affected companies. Securities class action litigation has often been instituted against companies following periods of volatility in the overall market and in the market price of a company's securities. Such litigation, if instituted against us, could result in substantial costs, divert our management's attention and resources and harm our business, operating results and financial condition.

If securities or industry analysts cease publishing research about our business, publish inaccurate or unfavorable research about our business, or make projections that exceed our actual results, 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 securities or industry analysts who cover us downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline. Furthermore, such analysts publish their own projections regarding our actual results. These projections may vary widely from one another and may not accurately predict the results we actually achieve. Our stock price may decline if we fail to meet securities and industry analysts' projections.

Our charter documents, Delaware law and certain terms of our music licensing arrangements could discourage takeover attempts and lead to management entrenchment.

Our certificate of incorporation and bylaws contain provisions that could delay or prevent a change in control of the Company. These provisions could also make it difficult for stockholders to elect directors who are not nominated by the current members of our board of directors or take other corporate actions, including effecting changes in our management. These provisions include:

- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- no cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;

- the ability of our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by the chairman of our board of directors, our president, our secretary, or a majority vote of our board of directors, which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the requirement for the affirmative vote of holders of at least 66 2/3% of the voting power of all of the then outstanding shares of the voting stock, voting together as a single class, to amend the provisions of our certificate of incorporation relating to the issuance of preferred stock and management of our business or our bylaws, which may inhibit the ability of an acquiror to effect such amendments to facilitate an unsolicited takeover attempt;
- the ability of our board of directors, by majority vote, to amend the bylaws, which may allow our board of directors to take additional actions to prevent an unsolicited takeover and inhibit the ability of an acquiror to amend the bylaws to facilitate an unsolicited takeover attempt; and
- advance notice procedures with which stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

Section 203 of the Delaware General Corporation Law governs us. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time.

In addition, if we are acquired, certain terms of our music licensing arrangements, including favorable rates for content acquisition costs that currently apply to us, may not be available to an acquiror. These terms may discourage a potential acquiror from making an offer to buy us or may reduce the price such a party may be willing to offer.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

Pandora

Pandora's principal executive offices are located in Oakland, California, under a lease for 233,094 square feet of office space, expiring on September 30, 2020. Ticketfly's principal executive offices are located in San Francisco, California in an office building with 23,826 square-feet, under a lease expiring on May 31, 2022. We also lease regional offices in Atlanta, Georgia; Chicago, Illinois; Dallas, Texas; Detroit, Michigan; New York, New York; San Francisco, California; and Santa Monica, California and local sales offices at various locations throughout the United States. We also lease offices in Australia, New Zealand, Canada and the United Kingdom.

Our data centers are located in colocation facilities operated by Equinix in San Jose, California and Ashburn, Virginia as well as by Digital Realty Trust in Chicago, Illinois and Oakland, California. In 2016, we also added a facility in San Jose, California operated by InfoMart, LLC. These data centers are designed to be fault-tolerant and operate at maximum uptime. Backup systems in California and Virginia can be brought online in the event of a failure at the other data centers. These redundancies enable fault tolerance and will also support our continued growth.

The data centers host the Pandora.com website and intranet applications that are used to manage the website content. The websites are designed to be fault-tolerant, with a collection of identical web servers connecting to an enterprise database. The design also includes load balancers, firewalls and routers that connect the components and provide connections to the internet. The failure of any individual component is not expected to affect the overall availability of our website.

We believe that our current facilities are adequate to meet our needs for the near future and that suitable additional or alternative space will be available on commercially reasonable terms to accommodate our foreseeable future operations.

ITEM 3. LEGAL PROCEEDINGS

The material set forth in the section entitled "Legal Proceedings" in Note 8 of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Annual Report on Form 10-K is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock has traded on The New York Stock Exchange ("NYSE") under the symbol "P" since June 15, 2011. Our initial public offering was priced at \$16.00 per share on June 14, 2011. The following table sets forth the range of high and low intra-day sales prices per share of our common stock for the periods indicated, as reported by the NYSE.

	<u>High</u>	<u>Low</u>
Year ended December 31, 2016		
First quarter (January 1, 2016 - March 31, 2016)	\$ 12.25	\$ 7.88
Second quarter (April 1, 2016 - June 30, 2016)	\$ 12.52	\$ 8.17
Third quarter (July 1, 2016 - September 30, 2016)	\$ 14.63	\$ 12.00
Fourth quarter (October 1, 2016 - December 31, 2016)	\$ 14.77	\$ 10.42
Year Ended December 31, 2015		
First quarter (January 1, 2015 - March 31, 2015)	\$ 18.52	\$ 14.63
Second quarter (April 1, 2015 - June 30, 2015)	\$ 19.02	\$ 15.54
Third quarter (July 1, 2015 - September 30, 2015)	\$ 21.34	\$ 13.81
Fourth quarter (October 1, 2015 - December 31, 2015)	\$ 21.98	\$ 11.51

On December 31, 2016, the closing price per share of our common stock as reported on the NYSE was \$13.04. As of December 31, 2016, there were approximately 87 holders of record of our common stock. The number of beneficial stockholders is substantially greater than the number of holders of record because a large portion of our common stock is held through brokerage firms.

Dividend Policy

We have not declared or paid any cash dividends on our common stock and currently do not anticipate paying any cash dividends in the foreseeable future. Instead, we intend to retain all available funds and any future earnings for use in the operation and expansion of our business. Any future determination relating to dividend policy will be made at the discretion of our board of directors and will depend on our future earnings, capital requirements, financial condition, future prospects, applicable Delaware law, which provides that dividends are only payable out of surplus or current net profits, and other factors that our board of directors deems relevant. In addition, our credit facility restricts our ability to pay dividends. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Our Indebtedness—Credit Facility" and Note 7 to our financial statements included elsewhere in this Annual Report on Form 10-K.

Equity Compensation Plan Information

For equity compensation plan information refer to Item 12 in Part III of this Annual Report on Form 10-K.

Stock Price Performance Graph

This performance graph shall not be deemed to be "soliciting material" or "filed" or incorporated by reference in future filings with the SEC, or subject to the liabilities of Section 18 of the Exchange Act except as shall be expressly set forth by specific reference in such filing.

The following graph shows a comparison from June 15, 2011, the date our common stock commenced trading on the NYSE, through December 31, 2016 of the total cumulative return of our common stock with the total cumulative return of the New York Stock Exchange Composite Index (the "NYA Composite"), the Global X Social Media Index (the "SOCL") and the SPDR Morgan Stanley Technology MTK Index (the "MTK"). The figures represented below assume an investment of \$100 in

our common stock at the closing price of \$17.42 on June 15, 2011 and in the NYA Composite and MTK on the same date. The SOCL was modeled from the inception of the index on November 15, 2011. Data for the NYA Composite, MTK and SOCL assume reinvestment of dividends. The comparisons in the graph are historical and are not intended to forecast or be indicative of possible future performance of our common stock.

**Comparison of Cumulative Total Return Among Pandora Media, Inc.,
New York Stock Exchange Composite Index, Global X Social Media Index and
SPDR Morgan Stanley Technology MTK Index**



ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial and other data should be read in conjunction with, and are qualified by reference to, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our audited consolidated financial statements and the accompanying notes included elsewhere in this report. The consolidated statement of operations data for the year ended January 31, 2013 and the eleven months ended December 31, 2013 and the consolidated balance sheet data as of January 31, 2013 and December 31, 2014 were derived from our audited consolidated financial statements not included in this report. The consolidated statements of operations data for the years ended December 31, 2014, 2015 and 2016, and the consolidated balance sheet data as of December 31, 2015 and 2016 were derived from our audited consolidated financial statements included in this report. The consolidated statements of operations for the years ended December 31, 2015 and 2016 include Ticketfly results for the two months ended December 31, 2015 and the year ended December 31, 2016, and the consolidated balance sheets as of December 31, 2015 and 2016 include Ticketfly's financial position as of December 31, 2015 and 2016. The consolidated statement of operations data for the eleven months ended December 31, 2012 is unaudited. Our unaudited consolidated financial statements were prepared on a basis consistent with our audited consolidated financial statements and include, in our opinion, all adjustments, consisting of normal recurring adjustments that we consider necessary for a fair presentation of the financial information set forth in those statements included elsewhere in this report.

The historical results presented below are not necessarily indicative of financial results to be achieved in future periods.

	Year ended January 31,		Eleven months ended December 31,		Year ended December 31,	
	2013	2012	2013	2014	2015	2016
	(in thousands, except per share data)					
Total revenue	\$ 427,145	\$ 389,484	\$ 600,233	\$ 920,802	\$ 1,164,043	\$ 1,384,826
Net loss attributable to common stockholders	(38,148)	(24,462)	(27,017)	(30,406)	(169,661)	(342,978)
Net loss per share, basic and diluted	(0.23)	(0.15)	(0.15)	(0.15)	(0.79)	(1.49)
Weighted-average common shares outstanding used in computing basic and diluted net loss per share	168,294	167,956	180,968	205,273	213,790	230,693

Key Metrics (unaudited):(1)

	Year ended January 31,		Eleven months ended December 31,		Year ended December 31,	
	2013	2012	2013	2014	2015	2016
	(in billions)					
Listener hours	14.01	12.56	15.31	20.03	21.11	21.96

	As of January 31,		As of December 31,			
	2013	2013	2014	2015	2016	
	(in millions)					
Active users		65.6	76.2	81.5	81.1	81.0

(1) Listener hours and active users are defined in the section entitled "Key Metrics" in Item 7 of this Annual Report on Form 10-K.

	As of January 31,		As of December 31,		
	2013	2013	2014	2015	2016
			(in thousands)		
Balance Sheet Data:					
Cash and cash equivalents	\$ 65,725	\$ 245,755	\$ 175,957	\$ 334,667	\$ 199,944
Working capital	82,644	362,777	439,254	451,675	371,704
Total assets	218,832	673,335	749,290	1,240,657	1,184,810
Long-term debt, net	—	—	—	234,577	342,247
Total liabilities	119,843	165,104	165,933	497,270	630,551
Common stock and additional paid-in capital	238,569	675,123	781,030	1,110,562	1,264,717
Total stockholders' equity	98,989	508,231	583,357	743,387	554,259

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS (MD&A)

You should read the following discussion of our financial condition and results of operations in conjunction with the financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. The following discussion contains forward-looking statements that are subject to risks and uncertainties. Actual results may differ substantially from those referred to herein due to a number of factors, including but not limited to those discussed below and elsewhere in this report, particularly in the sections entitled "Special Note Regarding Forward-Looking Statements and Industry Data" and "Risk Factors."

Overview

Pandora—Internet Radio Service

Pandora is the world's most powerful music discovery platform, offering a personalized experience for each of our listeners wherever and whenever they want to listen to music—whether through earbuds, car speakers or live on stage. Our vision is to be the definitive source of music discovery and enjoyment for billions. Pandora is available as an ad-supported service or as a subscription service, which we call Pandora Plus. The majority of our listener hours occur on mobile devices, with the majority of our revenue generated from advertising on our ad-supported service on these devices. We offer both local and national advertisers the opportunity to deliver targeted messages to our listeners using a combination of audio, display and video advertisements. We also generate revenue from subscriptions to Pandora Plus. Founded by musicians, Pandora also empowers artists with valuable data and tools to help grow their careers and connect with their fans.

At the heart of our service is our set of proprietary personalization technologies, including the Music Genome Project and our playlist generating algorithms. The Music Genome Project is a database of over 1,000,000 uniquely analyzed songs from over 150,000 artists, spanning over 600 genres and sub-genres, which we develop one song at a time by evaluating and cataloging each song's particular attributes. When a listener enters a single song, artist, comedian or genre to start a station, the Pandora service instantly generates a station that plays music or comedy we think that listener will enjoy. Based on listener reactions to the recordings we pick, we further tailor the station to match the listener's preferences. Listeners also have the ability to add variety to and rename stations, which further allows for the personalization of our service.

For the year ended December 31, 2016, we streamed 21.96 billion hours of internet radio, and as of December 31, 2016, we had 81.0 million active users during the prior 30-day period. Since we first launched our ad-supported service in 2005, our listeners have created over 11 billion stations.

We currently provide the Pandora service through two models and have announced an additional service model to be launched in 2017:

- *Ad-Supported Service.* Our ad-supported service allows listeners to access our music and comedy catalogs and personalized playlist generating system for free across all of our delivery platforms. Beginning on September 15, 2016, our ad-supported service includes new features such as the ability to obtain more skips and replay tracks by watching an advertisement.
- *Subscription Service—Pandora Plus.* Our new subscription service, Pandora Plus, launched in the United States on September 15, 2016. Prior to the launch of Pandora Plus, we operated a subscription service called Pandora One. Pandora Plus and Pandora One are premium monthly or annual paid versions of the Pandora service, which include advertisement-free access, higher quality audio on supported devices and longer timeout-free listening. Pandora Plus includes additional features, such as replays, additional skipping and offline listening.
- *Subscription Service—Pandora Premium.* In December 2016, we unveiled our new on-demand music subscription service, Pandora Premium, which will launch to users in 2017. Pandora Premium will be a paid version of the Pandora service that offers a unique, on-demand experience, providing users with the ability to search, play and collect songs and albums, build playlists on their own or with the tap of a button and automatically generate playlists based on the user's listening activity.

A key element of our strategy is to make the Pandora service available everywhere that there is internet connectivity. To this end, we make the Pandora service available through a variety of distribution channels. In addition to streaming our service to computers, we have developed Pandora mobile device applications ("apps") for smartphones and mobile operating systems,

such as the iPhone and Android and for tablets, including the iPad and Android tablets. We distribute those mobile apps free to listeners via app stores.

Pandora Plus launched in September 2016, and Pandora Premium will launch to users in 2017. The development and launch of our new service offerings have and will continue to require significant engineering effort, as well as marketing, and other resources. In addition, to support the launch of these services we have entered into direct license agreements with major and independent record labels, some of which include substantial minimum guarantee payments. In order for Pandora Plus and Pandora Premium to be successful, we will need to attract subscribers to these new service offerings. The market for subscription-based music services, including on-demand services, is intensely competitive, and our ability to realize a return on our investments in these new service offerings will depend on our ability to leverage the existing audience of our ad-supported service, our brand awareness and our ability to deliver differentiated subscription services with features and functionality that listeners find attractive. Refer to our discussion of these matters in Item 1A—"Risk Factors".

Ticketing Service

We operate our ticketing service through our subsidiary Ticketfly, a leading live events technology company that provides ticketing and marketing software and services for our clients, which are venues and event promoters, across North America. Ticketfly's ticketing, digital marketing and analytics software helps promoters book talent, sell tickets and drive in-venue revenue, while Ticketfly's consumer tools help fans find and purchase tickets to events. Tickets are primarily sold through the Ticketfly platform but are also sold through other channels such as box offices. We completed the acquisition of Ticketfly on October 31, 2015. In the year ended December 31, 2016, Ticketfly provided ticketing services for approximately 115,000 live events, for which approximately 15.2 million tickets, excluding box office sales, were sold to approximately 5.3 million unique ticket buyers, which resulted in more than \$615.0 million in gross transaction value, excluding box office sales.

Ticketfly's platform provides ticketing and marketing services for venues and event promoters across North America and makes it easy for fans to find and purchase tickets to events, and also gives artists a means to more effectively promote their events. We intend to expand our ticketing service by connecting our listeners to events through our internet radio service.

Recent Events

Content Acquisition License Agreements

In 2015 and 2016, we signed direct license agreements with major and independent labels and distributors for sound recordings as well as publishers and composers for the musical works contained in such sound recordings. These agreements allow us to provide new and improved products that include enhanced features such as replays of sound recordings, additional skipping capability, offline stations and on-demand listening. Certain of these license agreements include minimum guarantee payments, some of which are paid in advance. These minimum guarantee payments resulted in a material impact to the prepaid content acquisition costs line item in our consolidated balance sheets. Refer to Note 2 "Summary of Significant Accounting Policies" in the Notes to Consolidated Financial Statements for further details on our prepaid content acquisition costs policy and minimum guarantees.

Pandora Plus, Pandora Premium and New Ad-Supported Service Features

In September 2016, we announced the launch of our new subscription service, Pandora Plus, in the United States. The updated service, which is a premium paid version of the Pandora service that includes advertisement-free access, also includes replays, additional skipping and offline listening. In addition, new features were also added to our ad-supported service, allowing listeners to skip more songs and replay songs by viewing a video ad.

In December 2016, we unveiled our new on-demand music subscription service, Pandora Premium, which will launch to users in 2017. Pandora Premium will be a paid version of the Pandora service that offers a unique, on-demand experience, providing users with the ability to search, play and collect songs and albums, build playlists on their own or with the tap of a button and automatically generate playlists based on the user's listening activity.

Factors Affecting our Business Model

Content Acquisition Costs

Prior to signing direct license agreements with major and independent labels and distributors, we paid performance rights royalties for the sound recordings we streamed on our ad-supported service and our prior subscription service, Pandora One, according to the rates set by the Copyright Royalty Board on December 16, 2015 (the "Web IV Proceeding"). The rates for non-

subscription services, such as our ad-supported service, were set at \$0.0017 per play and the rates for subscription services, such as Pandora One, were set at \$0.0022 per play for 2016.

In 2015 and 2016, we signed direct license agreements with major and independent music labels and distributors for sound recordings as well as publishers and composers for the musical works contained in such sound recordings. Subsequent to September 15, 2016, we began paying content acquisition costs based on the terms of these license agreements for the significant majority of the sound recordings we stream on our ad-supported service and Pandora Plus. Content acquisition costs for sound recordings we will stream on Pandora Premium will also be based on the terms of these license agreements. Depending on the applicable service, these license agreements generally require us to pay either a per-performance fee based on the number of sound recordings we transmit, a percentage of revenue associated with the service, or a per-subscriber minimum amount, all generally subject to certain discounts. Certain of these license agreements require minimum guarantee payments, some of which are paid in advance. Refer to Note 2 "Summary of Significant Accounting Policies" in the Notes to Consolidated Financial Statements for further details on our prepaid content acquisition costs policy and minimum guarantees.

If we have not entered into a direct license agreement with the copyright owner of a particular sound recording that is streamed on our services, we stream that sound recording pursuant to the statutory license and pay the applicable Web IV Proceeding rate. Enhanced features of our services, such as replays, additional skipping and offline listening, are not available for sound recordings streamed under the statutory license and paid at the Web IV Proceeding rates.

Content acquisition costs for musical works are negotiated with and paid to performing rights organizations ("PROs") such as ASCAP, BMI, SESAC and Global Music Rights and directly to publishing companies. In 2015 and 2016, we signed direct licenses with PROs and thousands of music publishers. Prior to September 15, 2016, the combined effect of these licenses was that each copyright holder received its usage-based and ownership-based share of a royalty pool equal to 20% of the content acquisition costs paid by us for sound recordings on the respective tier of service. Subsequent to September 15, 2016, this calculation still applies to our ad-supported service, but content acquisition costs for the streaming of musical works on our subscription services are equal to the rates determined in accordance with the statutory license set forth in 17 U.S.C. §115 ("Section 115"). If we have not entered into a direct license agreement with the copyright owner of a particular musical work, or a PRO representing the copyright owner, then we stream that musical work pursuant to the Section 115 statutory license and pay the applicable rate.

The current rate structure for the statutory license for reproduction rights under Section 115 expires at the end of 2017. We are currently one of five commercial music service operators (along with Amazon, Apple, Google and Spotify) participating in rate-setting proceedings in which three judges of the CRB will determine the Section 115 rates for calendar years 2018 to 2022 (the "Phonorecords III Proceedings"). The Nashville Songwriters Association International, the National Association of Music Publishers and George Johnson Music Publishing are also participating in the Phonorecords III Proceedings. A trial before the CRB is expected to commence in March 2017, and the CRB is expected to render a decision prior to the end of 2017. The rates established by the CRB in the Phonorecords III Proceedings may be higher, lower or the same as the rates currently in effect.

The Phonorecords III Proceedings are important to us because our direct licenses with music publishers reference the Section 115 rates. As a result, any increase in the Section 115 rates would increase our content acquisition costs, which, if such increase were substantial, could materially harm our financial condition and hinder our ability to provide interactive features in our services, or cause one or more of our subscription services to not be economically viable.

Ad-Supported Service

Our ad-supported service is monetized through the sale of display, audio and video advertisements to national, regional and local advertisers. We compete with digital advertising networks such as Google and Facebook, other digital media companies and local broadcast radio stations in our advertising business.

Our total number of listener hours is a key driver for both advertising revenue generation opportunities and content acquisition costs, which are the largest component of our expenses.

- *Advertising Revenue.* Listener hours define the number of opportunities we have to sell advertisements, which we refer to as inventory. Our ability to attract advertisers depends in large part on our ability to offer sufficient inventory within desired demographics.
- *Cost of Revenue—Content Acquisition Costs—Ad-Supported Service.* We pay content acquisition costs to the copyright owners and performers, or their agents, of each sound recording that we stream, as well as to the

publishers and songwriters, or their agents, for the musical works embodied in each of those sound recordings, subject to certain exclusions. Subsequent to September 15, 2016, the majority of the content acquisition costs related to our ad-supported service are driven by direct license agreements with major and independent labels and distributors, as discussed above in "Factors Affecting Our Business Model—Content Acquisition Costs". Certain of these license agreements include minimum guarantee payments, some of which are paid in advance. Refer to Note 2 "Summary of Significant Accounting Policies" in the Notes to Consolidated Financial Statements for further details on our prepaid content acquisition costs policy and minimum guarantees.

As a result of the structure of our license agreements, our ability to achieve and sustain profitability and operating leverage on our ad-supported service depends on our ability to increase our revenue per hour of streaming through increased advertising revenue across all of our delivery platforms.

Subscription Services

We monetize our subscription services through subscription payments made by users of the services. We drive subscriber growth in our subscription services by providing the world's most powerful music discovery platform, offering a personalized experience for each of our listeners. In addition, we invest in marketing and free-trials to promote our service.

Our total number of paid subscriptions is a key driver for both subscription revenue and, subsequent to September 15, 2016, content acquisition costs related to our subscription services, which is the largest component of our subscription-related expenses. In order to drive greater subscription revenue, we must increase the number of new subscribers to our subscription services and minimize the number of current subscribers who discontinue their subscriptions.

- *Subscription Revenue.* Our subscription revenue depends upon the number of paid subscriptions we are able to sell and the price that our subscribers pay for those subscriptions. Our ability to attract subscribers depends in large part on our ability to offer features and functionality on our subscription services that are valued by consumers within desired demographics, on terms that are attractive to those consumers, and still enable us to maintain adequate gross margins.
- *Cost of Revenue—Content Acquisition Costs—Subscription Services.* We pay content acquisition costs to the copyright owners, performers, songwriters, or their agents, subject to certain exclusions. Subsequent to September 15, 2016 and the launch of Pandora Plus, the majority of our content acquisition costs related to our subscription service are generally driven by direct license agreements with major and independent labels and distributors, PROs and publishers, as discussed above in "Factors Affecting Our Business Model - Content Acquisition Costs". Certain of these license agreements include minimum guarantee payments, some of which are paid in advance. Refer to Note 2 "Summary of Significant Accounting Policies" in the Notes to Consolidated Financial Statements for further details on our prepaid content acquisition costs policy and minimum guarantees.

Given the structure of our license agreements for our subscription services, the majority of our content acquisition costs increase as subscription revenue increases and are subject to minimum guarantee payments. As such, our ability to achieve and sustain profitability and operating leverage on our subscription services depends on our ability to increase our revenue through increased paid subscriptions on terms that maintain an adequate gross margin. Refer to our discussion of these matters in Item 1A—"Risk Factors".

Key Metrics

Change in Key Metrics

Beginning in the quarter ended December 31, 2016, we are reporting updated key metrics on a prospective basis as a result of a change in our service offerings discussed in the "Recent Events" section above. We have discontinued our previous key metrics as of October 1, 2016 and have determined that the impact of the new key metrics from the period of the launch of Pandora Plus on September 15, 2016 to September 30, 2016 is not material. As such, we have reported our results for the nine months ended September 30, 2016 under our previous metrics and our results for the quarter ended December 31, 2016 under our new metrics. Metrics for the nine months ended September 30, 2016 are compared to the results for the nine months ended September 30, 2015. Certain of our new key metrics are not comparable to prior periods given the lack of history of our new service offerings. As such, these metrics have not been presented for, nor compared against, these periods. Key metrics that did not change are presented for the year ended December 31, 2016 and are compared to the results for the year ended December 31, 2015.

The below tables summarize the changes in our key metrics, the periods for which each metric is presented and the comparable prior year period.

New metrics		
Metric	Period presented	Comparable period
Paid subscribers	As of December 31, 2016	As of September 30, 2016
Net new paid subscribers	Quarter ended December 31, 2016	N/A
Penetration rate	As of December 31, 2016	N/A
ARPU	Quarter ended December 31, 2016	N/A
LPU	Quarter ended December 31, 2016	N/A

Metrics with no change		
Metric	Period presented	Comparable period
Active users - all services	As of December 31, 2016	As of December 31, 2015
Advertising listener hours	Year ended December 31, 2016	Year ended December 31, 2015
Subscription listener hours	Year ended December 31, 2016	Year ended December 31, 2015
Total listener hours	Year ended December 31, 2016	Year ended December 31, 2015
Advertising RPM	Year ended December 31, 2016	Year ended December 31, 2015
Advertising LPM	Year ended December 31, 2016	Year ended December 31, 2015

Discontinued metrics		
Metric	Period presented	Comparable period
Subscription RPM	Nine months ended September 30, 2016	Nine months ended September 30, 2015
Subscription LPM	Nine months ended September 30, 2016	Nine months ended September 30, 2015
Total RPM	Nine months ended September 30, 2016	Nine months ended September 30, 2015
Total LPM	Nine months ended September 30, 2016	Nine months ended September 30, 2015
Ad-based active users	Nine months ended September 30, 2016	Nine months ended September 30, 2015
Total users	Nine months ended September 30, 2016	Nine months ended September 30, 2015

Total service

We will continue to report our total active users on a trailing 30-day basis and listener hours across all services.

Ad-supported service

For our ad-supported service, we will continue to report advertising revenue per thousand listener hours ("RPMs"), licensing costs per thousand listener hours ("LPMs") and listener hours.

We will no longer report ad-based active users, as we no longer assess our performance based on this metric.

Subscription services—total

For our subscription services on an aggregate basis, we will provide detail of the change in paid subscribers, which will include paid subscribers at the beginning of the period, net new paid subscribers in the period and paid subscribers at the end of the period. We will also report listener hours for our subscription services on an aggregate basis.

We will no longer report subscription RPMs nor LPMs for our total subscription service, as neither revenue nor costs are driven by listening hours for subscriptions given the terms of our license agreements for recorded music with major and independent labels, distributors and publishers.

Pandora Plus and Pandora Premium

For each of our Pandora Plus and Pandora Premium subscription services, we will report paid subscribers at the end of the period, penetration rate, average revenue per paid subscriber ("ARPU") and average licensing costs per paid subscriber ("LPU").

We will not report subscription RPMs nor LPMs for Pandora Plus or Pandora Premium, as neither revenue nor costs are driven by listening hours for subscriptions given the terms of our license agreements.

The below key metrics do not include amounts related to our ticketing service, unless otherwise specifically stated.

New Key Metrics—Quarter Ended December 31, 2016

Subscription Service—Total

Paid Subscribers

Paid subscribers are defined as the number of distinct users that have current, paid access to our subscription service as of the beginning or the end of the period. Net new subscribers are defined as the net number of distinct new users that have paid for access to our subscription service in the period. We track paid subscribers because it is a key indicator of the growth of our subscription services.

The below table sets forth the detail of the change in paid subscribers in the quarter ended December 31, 2016, which includes paid subscribers as of September 30, 2016, net new subscribers during the quarter ended December 31, 2016 and paid subscribers as of December 31, 2016.

	Subscribers (in millions)
Paid subscribers as of September 30, 2016	4.01
Net new paid subscribers	0.38
Paid subscribers as of December 31, 2016	<u>4.39</u>

Penetration rate

Penetration rate is defined as paid subscribers divided by total trailing 30-day active users. We track penetration rate as it is an indicator of the relative scale of our subscriber base. Our penetration rate as of December 31, 2016 was 5.4%.

ARPU and LPU

ARPU is defined as average monthly revenue per paid subscriber on our subscription services. LPU is defined as average monthly content acquisition costs per paid subscriber on our subscription services. We believe ARPU to be the central top-line indicator for evaluating the results of our monetization efforts on our subscription services. We track LPU because it is a key measure of our ability to manage costs for our subscription services. The below table sets forth our ARPU and LPU for our subscription services for the quarter ended December 31, 2016.

	Quarter ended December 31, 2016
ARPU	\$ 4.73
LPU	\$ 3.12

Key Metrics that Did Not Change—Year Ended December 31, 2016

The below key metrics did not change under our new service offerings. As such, we have reported these for the year ended December 31, 2016.

Total Service

Listener hours

We track listener hours because it is a key indicator of the growth of our business and the engagement of our listeners. Beginning with the listener hours disclosed in our Annual Report on Form 10-K for the year ended December 31, 2015, we include listener hours related to our non-radio content offerings in the definition of listener hours. These offerings include non-music content such as podcasts, as well as custom music content such as Pandora Premiers and artist mixtapes. Historically, listener hours related to non-radio content represented a negligible number of listener hours. Including non-radio content in the listener hours we have previously reported for 2014 and 2015 would not have changed the reported listener hours for any such period. We calculate listener hours based on the total bytes served for each track that is requested and served from our servers, as measured by our internal analytics systems, whether or not a listener listens to the entire track. For non-music content such as podcasts, episodes are divided into approximately track-length parts, which are treated as tracks under this definition. To the extent that third-party measurements of listener hours are not calculated using a similar server-based approach, the third-party measurements may differ from our measurements.

The table below sets forth the total listener hours for our advertising and subscription services for the years ended December 31, 2014, 2015 and 2016.

Service	Year ended December 31,		
	2014	2015	2016
	Listener hours (in billions)		
Advertising	17.58	18.47	19.17
Subscription	2.45	2.64	2.79
Total	20.03	21.11	21.96

Active users

We track the number of active users as an additional indicator of the breadth of audience we are reaching at a given time. We define active users as the number of distinct registered users, including subscribers that have requested audio from our servers within the trailing 30 days to the end of the final calendar month of the period. The number of active users may overstate the number of unique individuals who actively use our service within a month as one individual may register for, and use, multiple accounts. Beginning with the active users disclosed in our Annual Report on Form 10-K for the year ended December 31, 2015, we include active users who only request non-radio content offerings in the definition of active users. Including users who only request non-radio content in the calculation of active users would not have materially changed the reported active users for 2014 or 2015.

The table below sets forth our total active users for all services as of December 31, 2015 and 2016.

	As of December 31,	
	2015	2016
	(in millions)	
Active users - all services	81.1	81.0

*Advertising-based service**Advertising Revenue per Thousand Listener Hours ("ad RPMs")*

We track ad RPMs for our non-subscription, ad-supported service because it is a key indicator of our ability to monetize advertising inventory created by our listener hours. We focus on ad RPMs across all of our delivery platforms. We believe ad RPMs to be the central top-line indicator for evaluating the results of our monetization efforts. Ad RPMs are calculated by dividing advertising revenue by the number of thousands of listener hours of our advertising-based service.

Advertising LPMs

Prior to September 15, 2016, advertising LPMs were relatively fixed content acquisition costs with scheduled annual rate adjustments, per thousands of listener hours. Subsequent to September 15, 2016, LPMs are our content acquisition costs as calculated either under the rates set by our license agreements with record labels, PROs and music publishers or under the Web IV rates if we have not entered into a license agreement with the copyright owner of a particular sound recording, in each case per thousands of listener hours.

Historically, we provided estimates of disaggregated ad RPMs and related LPMs for our computer platform as well as our mobile and other connected devices platforms. Starting in the quarter ended March 31, 2016, we no longer present disaggregated RPMs or LPMs for our computer or mobile and other connected devices platforms. Previously, we had provided this information in order to demonstrate the potential monetization expansion opportunity as mobile and other connected devices markets matured. Revenue and listener hours for mobile and other connected devices have since grown to represent the significant majority of our total revenue and listener hours. In addition, we currently manage the business to optimize revenue across our device platforms and thus we no longer assess our performance on a disaggregated basis. As such, we no longer believe this disaggregation is relevant.

Period-to-period results should not be regarded as precise nor can they be relied upon as indicative of results for future periods. In addition, as our business matures and in response to technological evolutions, we anticipate that the relevant indicators we monitor for evaluating our business may change.

The table below sets forth our RPMs and LPMs for our ad-supported service for the years ended December 31, 2014, 2015 and 2016.

	Year ended December 31,					
	2014		2015		2016	
	RPM	LPM	RPM*	LPM	RPM*	LPM
Advertising	\$ 41.66	\$ 20.31	\$ 50.52	\$ 26.13	\$ 55.94	\$ 32.40

*The calculation of RPMs does not include revenue generated by Ticketfly or Next Big Sound, which were acquired in 2015.

Advertising RPMs

For the year ended December 31, 2016 compared to 2015, ad RPMs increased primarily due to the increase in advertising revenue outpacing the growth in advertising listener hours as a result of an increase in the average price per ad sold, due in part to our increase in relative volume of local ad sales and our focus on monetizing mobile inventory.

For the year ended December 31, 2015 compared to 2014, ad RPMs increased primarily due to the increase in advertising revenue outpacing the growth in advertising listener hours as a result of an increase in the average price per ad sold, due in part to our increase in relative volume of local ad sales and our focus on monetizing mobile inventory.

Advertising LPMs

Total ad LPMs in the year ended December 31, 2016 compared to 2015 increased as the growth in cost of revenue—content acquisition costs outpaced the growth in advertising listener hours. Cost of revenue—content acquisition costs increased by \$124.0 million in the year ended December 31, 2016, primarily due to an increase in content acquisition costs subject to the license agreements for recorded music with major and independent labels, distributors, PROs and publishers that were signed in 2015 and 2016. The increase was offset by one-time cumulative charges in the year ended December 31, 2015 of \$57.9 million for the pre-1972 sound recordings settlement and \$23.9 million as a result of management's decision to forgo the application of the RMLC publisher royalty rate from June 2013 to September 2015.

Total ad LPMs in the year ended December 31, 2015 compared to 2014 increased as the growth in cost of revenue—content acquisition costs outpaced the growth in advertising listener hours. Cost of revenue—content acquisition costs increased by \$65.4 million in the year ended December 31, 2015, of which \$57.9 million was related to a one-time cumulative charge to cost of revenue—content acquisition costs for the pre-1972 sound recordings settlement. In addition, cost of revenue

— content acquisition costs increased by \$28.2 million in the year ended December 31, 2015, of which \$23.9 million was related to a one-time cumulative charge to cost of revenue - content acquisition as a result of our decision to forgo the application of the RMLC publisher royalty rate from June 2013 to September 2015.

Discontinued Key Metrics - Nine Months Ended September 30, 2016

Total Service

Total revenue per thousand listener hours ("total RPMs")

Prior to the launch of Pandora Plus, we tracked total RPMs for our service, which included ad and subscription RPMs, because it was a key indicator of our ability to monetize our listener hours. Total RPMs compared advertising and subscription and other revenue in a given period to total listener hours in the period. We calculated total RPMs by dividing the total revenue by the number of thousands of listener hours.

The table below sets forth our RPMs and LPMs on a total basis for the nine months ended September 30, 2015 and 2016.

	Nine months ended September 30,			
	2015		2016	
	RPM	LPM	RPM	LPM
Total	\$ 52.57	\$ 29.69	\$ 55.80	\$ 31.52

Advertising-Based Service

Advertising-based active users ("ad-based active users")

We define ad-based active users as the number of users, excluding subscribers that have requested audio from our servers within the trailing 30 days to the end of the final calendar month of the period.

The table below sets forth our ad-based active users as of September 30, 2015 and 2016.

User type	As of September 30,	
	2015	2016
	Users (in millions)	
Ad-based active users	74.7	74.5

Subscription Services

Subscription and other revenue per thousand listener hours ("subscription RPMs")

Prior to the launch of Pandora Plus, we tracked subscription RPMs because it was a key indicator of the performance of our subscription service. Subscription RPMs are calculated by dividing subscription and other revenue by the number of thousands of listener hours of our subscription service.

Subscription LPMs

Prior to the launch of Pandora Plus, we tracked subscription LPMs because it was a key indicator of the performance of our subscription service. Subscription LPMs were relatively fixed content acquisition costs with scheduled annual rate adjustments, per thousands of listener hours, related to our subscription service. Subsequent to the launch of Pandora Plus, subscription LPMs are our content acquisition costs as calculated either under the rates set by our license agreements with record labels, PROs and music publishers or under the Web IV rates if we have not entered into a license agreement with the copyright owner of a particular sound recording, in each case per thousands of listener hours.

The table below sets forth our RPMs and LPMs on a subscription basis for the nine months ended September 30, 2015 and 2016.

	Nine months ended September 30,			
	2015		2016	
	RPM	LPM	RPM	LPM
Subscription	\$ 82.84	\$ 49.95	\$ 80.98	\$ 35.88

Subscription RPMs

For the nine months ended September 30, 2016 compared to 2015, the decrease in subscription RPMs was due to the growth in subscription listening hours outpacing the growth in subscription and other revenue.

Subscription LPMs

For the nine months ended September 30, 2016 compared to 2015, subscription LPMs decreased as a result of the one-time cumulative charges in the quarter ended September 30, 2015 of \$57.9 million for the pre-1972 sound recordings settlement and \$23.9 million as a result of management's decision to forgo the application of the RMLC publisher royalty rate from June 2013 to September 2015 and a decrease in the rate for content acquisition costs of 12% on our subscription-supported platform related to the Web IV rates set by the Copyright Royalty Board on December 16, 2015, offset by increases in content acquisition costs paid to PROs and publishers under the content acquisition cost structure of our new publishing licenses.

Basis of Presentation and Results of Operations

The following table presents our results of operations for the periods indicated as a percentage of total revenue. Our results of operations for the year ended December 31, 2015 include operating results of Ticketfly for the two months ended December 31, 2015. The period-to-period comparisons of results are not necessarily indicative of results for future periods.

	Year ended December 31,		
	2014	2015	2016
Revenue			
Advertising	80 %	80 %	77 %
Subscription and other	20	19	16
Ticketing service	—	1	6
Total revenue	100	100	100
Cost of revenue			
Cost of revenue—Content acquisition costs	48	52	53
Cost of revenue—Other(1)	7	7	7
Cost of revenue—Ticketing service(1)	—	—	4
Total cost of revenue	55	60	65
Gross profit	45	40	35
Operating expenses			
Product development(1)	6	7	10
Sales and marketing(1)	30	34	35
General and administrative(1)	12	13	13
Total operating expenses	48	55	58
Loss from operations	(3)	(15)	(23)
Interest expense	—	—	(2)
Other income (expense), net	—	—	—
Total other income (expense), net	—	—	(2)
Loss before provision for income taxes	(3)	(15)	(25)
Provision for income taxes	—	—	—
Net loss	(3)%	(15)%	(25)%

(1) Includes stock-based compensation as follows:

Cost of revenue—Other	0.5%	0.5%	0.4%
Cost of revenue—Ticketing service	—	—	—
Product development	1.9	2.0	2.2
Sales and marketing	4.6	4.5	4.2
General and administrative	2.5	2.5	3.1

Note: Amounts may not recalculate due to rounding

Revenue

	Year ended December 31,			Year ended December 31,		
	2014	2015	\$ Change	2015	2016	\$ Change
	(in thousands)			(in thousands)		
Revenue						
Advertising	\$ 732,338	\$ 933,305	\$ 200,967	\$ 933,305	\$ 1,072,490	\$ 139,185
Subscription and other	188,464	220,571	32,107	220,571	225,786	5,215
Ticketing service	—	10,167	10,167	10,167	86,550	76,383
Total revenue	\$ 920,802	\$ 1,164,043	\$ 243,241	\$ 1,164,043	\$ 1,384,826	\$ 220,783

Advertising revenue

We generate advertising revenue primarily from audio, display and video advertising, which is typically sold on a cost-per-thousand impressions, or CPM, basis. Advertising campaigns typically range from one to twelve months, and advertisers generally pay us based on the number of delivered impressions or the satisfaction of other criteria, such as click-throughs. We also have arrangements with advertising agencies under which these agencies sell advertising inventory on our service directly to advertisers. We report revenue under these arrangements net of amounts due to agencies. For the years ended December 31, 2014, 2015 and 2016, advertising revenue accounted for 80%, 80% and 77%, of our total revenue, respectively. We expect that advertising will comprise a substantial majority of revenue for the foreseeable future.

For the year ended December 31, 2016 compared to 2015, advertising revenue increased \$139.2 million or 15%, primarily due to an approximate 10% increase in the average price per ad sold, due in part to our increase in relative volume of local ad sales and our focus on monetizing mobile inventory.

For the year ended December 31, 2015 compared to 2014, advertising revenue increased by \$201.0 million or 27%, primarily due to an approximate 25% increase in the average price per ad sold, due in part to our increase in relative volume of local ad sales and our focus on monetizing mobile inventory, and an approximate 5% increase in the number of ads sold, primarily due to an increase in advertising listener hours.

Subscription and other revenue

Prior to the launch of Pandora Plus, subscription and other revenue was generated primarily through the sale of Pandora One. Subsequent to the launch of Pandora Plus, subscription and other revenue is generated primarily through the sale of Pandora Plus. Pandora Plus is an enhanced version of the Pandora service, which currently includes features such as replays, additional skipping and offline listening, together with advertisement-free access and higher audio quality on the devices that support it. Subscription revenue is recognized on a straight-line basis over the duration of the subscription period. For the years ended December 31, 2014, 2015 and 2016, subscription and other revenue accounted for 20%, 19% and 16% of our total revenue, respectively.

Effective in March 2014, we implemented a change in the pricing structure for our subscription service under which the \$36 annual subscription option was eliminated. In addition, effective in May 2014, the monthly pricing option for our subscription service was increased to \$4.99 per-month for new subscribers. Existing monthly subscribers who did not lapse maintained the \$3.99 per-month pricing structure, and existing annual subscribers who did not lapse were migrated to the \$3.99 per-month monthly pricing structure. Effective in December 2014, we reinstated the annual subscription option at \$54.89 per year.

For the year ended December 31, 2016 compared to 2015, subscription revenue increased \$5.2 million or 2%, primarily due to an approximate 10% increase in the number of subscribers, offset by an agreement for which the term expired in December 2015, which was recorded in other revenue.

For the year ended December 31, 2015 compared to 2014, subscription and other revenue increased by \$32.1 million, or 17%, primarily due to an approximate 15% increase in the average price per subscription as a result of the change in the pricing structure of our subscription service and due to an approximate 10% increase in the number of subscribers.

Ticketing service

Ticketing service revenue is generated primarily from service and merchant processing fees generated on ticket sales through the Ticketfly platform. Ticketfly sells tickets to fans for events on behalf of clients and charges a fee per ticket, which generally increases as the face value of the ticket increases, or a percentage of the total convenience charge and order processing fee, for its services at the time the ticket for an event is sold. Ticketing service revenue is recorded net of the face value of the ticket at the time of the sale, as Ticketfly generally acts as the agent in these transactions. As Ticketfly was acquired on October 31, 2015, the consolidated statements of operations include ticketing service revenue for the two months ended December 31, 2015 and the year ended December 31, 2016. We had no ticketing service revenue in the year ended December 31, 2014.

For the years ended December 31, 2015 and 2016, ticketing service revenue accounted for approximately 1% and 6% of our total revenue. In the year ended December 31, 2016 Ticketfly provided ticketing services for approximately 115 thousand live events on sale, for which approximately 15.2 million tickets, excluding box office sales, were sold to approximately 5.3 million unique ticket buyers, which resulted in more than \$615.0 million in gross transaction value, excluding box office sales.

Deferred revenue

Our deferred revenue consists primarily of prepaid but unrecognized subscription revenue and, to a lesser extent, advertising fees received or billed in advance of the delivery or completion of the delivery of services. Deferred revenue is recognized as revenue when the services are provided and all other revenue recognition criteria have been met.

In addition, subscription revenue derived from sales through certain mobile device app stores may be subject to refund or cancellation terms which may affect the timing or amount of the subscription revenue recognition. When refund rights exist, we recognize revenue when services have been provided and the rights lapse or when we have developed sufficient transaction history to estimate a return reserve.

We were required to defer revenue for certain subscriptions purchased through mobile device app stores that contained refund rights until the refund rights lapsed or until we developed sufficient operating history to estimate a return reserve. As of December 31, 2013, we had deferred all revenue related to these mobile subscriptions subject to refund rights totaling approximately \$14.2 million, as we did not have sufficient transaction history to estimate a return reserve. Beginning in January 2014, we had sufficient transaction history that enabled us to estimate future returns. Accordingly, in January 2014, we began recording revenue related to these mobile subscriptions net of estimated returns. This resulted in a one-time increase in subscription revenue in the quarter ended March 31, 2014 of approximately \$14.2 million, as the previously deferred revenue was recognized. As of December 31, 2016, the deferred revenue related to the return reserve was not significant.

Costs and Expenses

Cost of revenue consists of cost of revenue—content acquisition costs, cost of revenue—other and cost of revenue—ticketing. Our operating expenses consist of product development, sales and marketing and general and administrative costs. Cost of revenue—content acquisition costs are the most significant component of our costs and expenses, followed by employee-related costs, which include stock-based compensation expenses. We expect to continue to hire additional employees in order to support our anticipated growth and our product development initiatives. In any particular period, the timing of additional hires could materially affect our cost of revenue and operating expenses, both in absolute dollars and as a percentage of revenue. We anticipate that our costs and expenses will increase in the future.

Cost of revenue—Content acquisition costs

	Year ended December 31,			Year ended December 31,		
	2014	2015	\$ Change	2015	2016	\$ Change
	(in thousands)			(in thousands)		
Cost of revenue— Content acquisition costs	\$ 446,377	\$ 610,362	\$ 163,985	\$ 610,362	\$ 734,353	\$ 123,991

Cost of revenue—content acquisition costs principally consist of licensing fees paid for streaming music or other content to our listeners. Content acquisition costs are currently calculated using negotiated rates documented in direct license agreements with major and independent record labels, music publishers and PROs. Prior to September 15, 2016, the majority of our content acquisition costs for sound recordings were based on a fee per public performance of a sound recording. Subsequent to September 15, 2016, depending on the applicable service, these license agreements generally require us to pay either a per-performance fee based on the number of sound recordings we transmit, a percentage of revenue associated with the service, or a per-subscriber minimum amount, all generally subject to certain discounts. Prior to January 1, 2016, the majority of our content acquisition costs for the underlying musical works contained in sound recording were based on a percentage of our revenue. From January 1, 2016 until September 15, 2016, the majority of our content acquisition costs for the underlying musical works were based on a percentage of content acquisition costs paid for sound recordings. Subsequent to September 15, 2016, the majority of our content acquisition costs for the underlying musical works contained in sound recordings are determined in the same manner they were prior to September 15, 2016, but this calculation only applies to the performance rights on our ad-supported service and content acquisition costs for the reproduction rights on our subscription services are determined in accordance with the statutory license set forth in 17 U.S.C. §115. Certain of our direct license agreements are also subject to minimum guarantee payments, some of which are paid in advance and amortized over the minimum guarantee period. For certain content acquisition arrangements, we accrue for estimated content acquisition costs based on the available facts and circumstances and adjust these estimates as more information becomes available.

For the year ended December 31, 2016 compared to 2015, content acquisition costs increased \$124.0 million or 20%, and total content acquisition costs as a percentage of total revenue increased from 52% to 53%, primarily due to an increase in content acquisition costs subject to the license agreements for recorded music with major and independent labels, distributors, PROs and publishers that were signed in 2015 and 2016. The increase was offset by one-time cumulative charges in the year ended December 31, 2015 of \$57.9 million for the pre-1972 sound recordings settlement and \$23.9 million as a result of management's decision to forgo the application of the RMLC publisher royalty rate from June 2013 to September 2015.

For the year ended December 31, 2015 compared to 2014, content acquisition costs increased by \$164.0 million or 37%, and content acquisition costs as a percentage of total revenue increased from 48% to 52%, primarily due to an increase of \$65.4 million related to pre-1972 sound recordings in the year ended December 31, 2015, of which \$57.9 million was related to a one-time cumulative charge to cost of revenue—content acquisition costs for the pre-1972 sound recordings settlement. In addition, cost of revenue—content acquisition costs increased by \$28.2 million related to publisher royalty rate increases in the year ended December 31, 2015, of which \$23.9 million was related to a one-time cumulative charge to cost of revenue—content acquisition as a result of our decision to forgo the application of the RMLC publisher royalty rate from June 2013 to September 2015. Cost of revenue—content acquisition costs also increased due to scheduled sound-recording royalty rate increases of 8%.

Cost of Revenue—Other

	Year ended December 31,			Year ended December 31,		
	2014	2015	\$ Change	2015	2016	\$ Change
	(in thousands)			(in thousands)		
Cost of revenue— Other	\$ 61,627	\$ 79,858	\$ 18,231	\$ 79,858	\$ 101,289	\$ 21,431

Cost of revenue—other consists primarily of ad and music serving costs, employee-related and facilities and equipment costs and other costs of ad sales. Ad and music serving costs consist of content streaming, maintaining our internet radio service and creating and serving advertisements through third-party ad servers. We make payments to third-party ad servers for the period the advertising impressions are delivered or click-through actions occur, and accordingly, we record this as a cost of revenue in the related period. Employee-related costs include salaries and benefits associated with supporting music and ad-serving functions. Other costs of ad sales include costs related to music events that are sold as part of certain of our advertising arrangements.

For the year ended December 31, 2016 compared to 2015, cost of revenue—other increased \$21.4 million or 27%, primarily due to an \$9.6 million increase in employee-related and facilities and equipment costs driven by an approximate 15% increase in average headcount, a \$9.2 million increase in hosting and ad-serving costs driven by an increase in advertising revenue and a \$2.4 million increase in costs related to music events that are sold as part of our advertising arrangements.

For the year ended December 31, 2015 compared to 2014, cost of revenue—other increased by \$18.2 million or 30%, primarily due to an \$11.3 million increase in ad and music serving costs driven by an increase in advertising revenue and a \$6.7 million increase in employee-related and facilities and equipment costs driven by an approximate 50% increase in average headcount.

Cost of revenue—ticketing service

	Year ended December 31,			Year ended December 31,		
	2014	2015	\$ Change	2015	2016	\$ Change
	(in thousands)			(in thousands)		
Cost of revenue— Ticketing service	\$ —	\$ 7,121	\$ 7,121	\$ 7,121	\$ 59,280	\$ 52,159

Cost of revenue—ticketing service consists primarily of ticketing revenue share costs, credit card fees and other, intangible amortization expense and employee-related and facilities and equipment costs. The majority of the cost is related to revenue share costs which consist of fees paid to clients for their share of convenience and order processing fees. Payments to clients are recorded as an expense to the extent that the fair value of the identifiable benefit received in the exchange exceeds the amount of the payment to the client. Intangible amortization expense is related to amortization of developed technology.

For the year ended December 31, 2016, cost of revenue—ticketing service was \$59.3 million and consisted primarily of \$39.4 million in ticketing revenue share costs, \$12.8 million in credit card fees and other and \$5.7 million in intangible amortization expense.

For the two months ended December 31, 2015, cost of revenue—ticketing service was \$7.1 million and consisted of \$4.4 million in revenue share costs, \$1.7 million in credit card fees and other and \$1.0 million in intangible amortization of developed technology.

Gross profit

	Year ended December 31,			Year ended December 31,		
	2014	2015	\$ Change	2015	2016	\$ Change
	(in thousands)			(in thousands)		
Gross profit						
Total revenue	\$ 920,802	\$ 1,164,043	\$ 243,241	\$ 1,164,043	\$ 1,384,826	\$ 220,783
Total cost of revenue	508,004	697,341	189,337	697,341	894,922	197,581
Gross profit	\$ 412,798	\$ 466,702	\$ 53,904	\$ 466,702	\$ 489,904	\$ 23,202
Gross margin	45%	40%		40%	35%	

For the year ended December 31, 2016 compared to 2015, gross profit increased by \$23.2 million or 5%, primarily due to an increase in advertising revenue as a result of an increase in the average price per ad sold. Gross margin decreased from 40% to 35%, as the growth in content acquisition costs outpaced the growth in revenue, primarily due to an increase in content acquisition costs subject to the license agreements for recorded music with major and independent labels, distributors, PROs and publishers that were signed in 2015 and 2016.

For the year ended December 31, 2015 compared to 2014, gross profit increased by \$53.9 million or 13%, primarily due to an increase in advertising revenue as a result of an increase in the average price per ad sold and an increase in the number of ads sold. Gross margin decreased from 45% to 40% as the growth in content acquisition costs outpaced the growth in revenue primarily due to the increase of \$65.4 million related to pre-1972 sound recordings settlement, the increase of \$28.2 million related to publisher royalty rate increases and scheduled sound-recording royalty rate increases of 8%.

Product development

	Year ended December 31,			Year ended December 31,		
	2014	2015	\$ Change	2015	2016	\$ Change
	(in thousands)			(in thousands)		
Product development	\$ 53,153	\$ 84,581	\$ 31,428	\$ 84,581	\$ 141,636	\$ 57,055

Product development consists primarily of employee-related and facilities and equipment costs, including salaries and benefits related to employees in software engineering, music analysis and product management departments, information technology, costs associated with supporting consumer connected-device manufacturers in implementing our service in their products and amortization expense related to acquired intangible assets. We incur product development expenses primarily for improvements to our website and the Pandora app, development of new services and enhancement of existing services, development of new advertising products and development and enhancement of our personalized playlisting system. We have generally expensed product development as incurred. These amounts are offset by costs that we capitalize to develop software for internal use. Certain website development and internal use software development costs are capitalized when specific criteria are met. In such cases, the capitalized amounts are amortized over the useful life of the related application once the application is placed in service. We expect these capitalized costs to continue to increase during the first quarter of 2017 as we continue to develop an on-demand streaming service. We intend to substantially increase investments in developing new products and enhancing the functionality of our existing products.

For the year ended December 31, 2016 compared to 2015, product development expenses increased \$57.1 million or 67%, primarily due to a \$67.9 million increase in employee-related and facilities and equipment costs driven by an approximate 60% increase in average headcount, a \$6.6 million increase in intangible amortization expense and a \$4.0 million increase in professional fees, offset by a \$22.3 million increase in costs that we capitalized to develop software for internal use.

For the year ended December 31, 2015 compared to 2014, product development expenses increased by \$31.4 million or 59%, primarily due to a \$31.7 million increase in employee-related and facilities and equipment costs, which were driven by an approximate 70% increase in average headcount and a \$1.3 million increase in professional fees, offset by a \$2.5 million increase in costs that we capitalized to develop software for internal use.

Sales and marketing

	Year ended December 31,			Year ended December 31,		
	2014	2015	\$ Change	2015	2016	\$ Change
	(in thousands)			(in thousands)		
Sales and marketing	\$ 277,330	\$ 398,169	\$ 120,839	\$ 398,169	\$ 491,455	\$ 93,286

Sales and marketing consists primarily of employee-related and facilities and equipment costs, including salaries, commissions and benefits related to employees in sales, sales support, marketing, advertising and music maker group departments. In addition, sales and marketing expenses include transaction processing commissions on subscription purchases through mobile app stores, external sales and marketing expenses such as brand marketing, advertising, direct response and search engine marketing costs, public relations expenses, costs related to music events, agency platform and media measurement expenses, infrastructure costs and amortization expense related to acquired intangible assets. Also included in sales and marketing are customer acquisition costs, which are defined as total external marketing costs. Customer acquisition costs were \$6.5 million, \$27.8 million and \$39.3 million in the years ended December 31, 2014, 2015 and 2016, respectively.

We are substantially increasing sales and marketing expenses to drive growth as we hire additional personnel to build out our sales and sales support teams, particularly as we continue to build out our local market sales team. While we have historically relied on the success of viral marketing to expand consumer awareness of our service, in 2014 we began to launch marketing campaigns to increase consumer awareness and expand our listener base and in 2015, we began to launch advertising campaigns to increase the awareness of our brand. We anticipate that we will continue to utilize these types of advertising campaigns in the future. As such, we anticipate higher overall levels of sales and marketing expense going forward.

For the year ended December 31, 2016 compared to 2015, sales and marketing expenses increased \$93.3 million or 23%, primarily due to a \$61.8 million increase in employee-related and facilities and equipment costs driven by an approximate 20%

increase in average headcount, a \$22.1 million increase in brand marketing, advertising, direct response and search engine marketing costs driven by advertising campaigns launched in 2016 and a \$5.8 million increase in intangible amortization expense.

For the year ended December 31, 2015 compared to 2014, sales and marketing expenses increased by \$120.8 million or 44%, primarily due to a \$54.0 million increase in employee-related and facilities and equipment costs, which were driven by an approximate 35% increase in average headcount, a \$45.3 million increase in brand marketing, advertising, direct response and search costs, which were driven by advertising campaigns that were launched in 2015, an \$11.2 million increase in transaction processing commissions on subscription purchases through mobile app stores and a \$5.3 million increase in costs related to music events.

General and administrative

	Year ended December 31,			Year ended December 31,		
	2014	2015	\$ Change	2015	2016	\$ Change
	(in thousands)			(in thousands)		
General and administrative	\$ 112,443	\$ 153,943	\$ 41,500	\$ 153,943	\$ 175,572	\$ 21,629

General and administrative consists primarily of employee-related and facilities and equipment costs, including salaries, benefits and severance expense for finance, accounting, legal, internal information technology and other administrative personnel. In addition, general and administrative expenses include professional services costs for outside legal and accounting services, infrastructure costs, credit card fees and sales and other tax expense. We expect general and administrative expenses to increase in future periods as we continue to invest in corporate infrastructure, including adding personnel and systems to our administrative functions.

For the year ended December 31, 2016 compared to 2015, general and administrative expenses increased \$21.6 million or 14%, primarily due to a \$35.0 million increase in employee-related, facilities and equipment costs driven by an approximate 25% increase in average headcount and executive severance, and a \$2.3 million increase in sales and other tax expense, offset by a \$19.3 million decrease in professional services costs related to content acquisition and other legal matters.

For the year ended December 31, 2015 compared to 2014, general and administrative expenses increased by \$41.5 million or 37%, primarily due to a \$22.4 million increase in employee-related, facilities and equipment costs, which were driven by an approximate 35% increase in average headcount, a \$13.8 million increase in professional services costs primarily due to content acquisition and other legal matters and a \$3.0 million increase in credit card fees.

Interest expense

Interest expense in the year ended December 31, 2016 consists primarily of interest expense on our 1.75% Convertible Senior Notes due 2020 and interest on our credit facility. Refer to Note 7 "Debt Instruments" in the Notes to Consolidated Financial Statements for further details on our Notes and credit facility.

Provision for (benefit from) income taxes

We have historically been subject to income taxes in the United States and various foreign jurisdictions. As we expand our operations to other foreign locations, we become subject to taxation based on the applicable foreign statutory rates and our effective tax rate could fluctuate accordingly.

Our provision for (benefit from) income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted statutory income tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce net deferred tax assets to the amount expected to be realized.

During the year ended December 31, 2015, we released \$1.8 million of our valuation allowance as a result of acquisitions. Deferred tax liabilities were established for the book-tax basis difference related to acquired intangible assets. The

net deferred tax liabilities provided an additional source of income to support the realizability of pre-existing deferred tax assets.

During the year ended December 31, 2016, we made an adjustment to goodwill and deferred tax liabilities as a result of the impact of final pre-acquisition Ticketfly income tax returns filed. As a result, during the year ended December 31, 2016, we released \$1.9 million of our valuation allowance and recorded an income tax benefit.

Liquidity and Capital Resources

As of December 31, 2016, we had cash, cash equivalents and investments totaling \$243.3 million, which consisted of cash and money market funds held at major financial institutions and investment-grade corporate debt securities.

Our principal uses of cash during the year ended December 31, 2016 were funding our operations, as described below, payments of content acquisition costs and capital expenditures.

Sources of Funds

We believe, based on our current operating plan, that our existing cash and cash equivalents and available borrowings under our credit facility will be sufficient to meet our anticipated cash needs for at least the next year.

From time to time, we may explore additional financing sources and means to lower our cost of capital, which could include equity, equity-linked and debt financing. In addition, in connection with any future acquisitions, we may require additional funding which may be provided in the form of additional debt, equity or equity-linked financing or a combination thereof. There can be no assurance that any additional financing will be available to us on acceptable terms.

Our Indebtedness

Credit Facility

We are party to a \$120.0 million credit facility with a syndicate of financial institutions, which expires on September 12, 2018. In September 2016, we borrowed \$90.0 million from the credit facility to enhance our working capital position. The amount borrowed is included in long-term debt on our balance sheet. Interest is payable quarterly at the applicable annual interest rate of 3.81% through September 2017. The applicable interest rate will be adjusted in September 2017.

As of December 31, 2016, we had \$1.2 million in letters of credit outstanding and \$28.8 million of available borrowing capacity under the credit facility. We are in compliance with all financial covenants associated with the credit facility as of December 31, 2016. Refer to Note 7 "Debt Instruments" in the Notes to Consolidated Financial Statements for further details regarding our credit facility.

1.75% Convertible Senior Notes Due 2020

On December 9, 2015, we completed an unregistered Rule 144A offering of \$345.0 million aggregate principal amount of our 1.75% Convertible Senior Notes due 2020. The net proceeds from the sale of the Notes were approximately \$336.5 million, after deducting the initial purchaser's fees and other estimated expenses. We used approximately \$43.2 million of the net proceeds to pay the cost of capped call transactions we entered into in connection with the sale of the Notes. Refer to Note 7 "Debt Instruments" in the Notes to Consolidated Financial Statements for further details on our Notes.

The Notes are unsecured, senior obligations of Pandora, and interest is payable semi-annually at a rate of 1.75% per annum. The Notes will mature on December 1, 2020, unless earlier repurchased or redeemed by Pandora or converted in accordance with their terms prior to such date. Prior to July 1, 2020, the Notes are convertible at the option of holders only upon the occurrence of specified events or during certain periods? thereafter, until the second scheduled trading day prior to maturity, the Notes will be convertible at the option of holders at any time.

The conversion rate for the Notes is initially 60.9050 shares of common stock per \$1,000 principal amount of the Notes, which is equivalent to an initial conversion price of approximately \$16.42 per share of our common stock, and is subject to adjustment in certain circumstances.

The Notes were separated into debt and equity components and assigned a fair value. The value assigned to the debt component is the estimated fair value as of the issuance date of similar debt without the conversion feature. The difference

between the cash proceeds and this estimated fair value represents the value which has been assigned to the equity component and recorded as a debt discount. The debt discount is being amortized using the effective interest method.

The capped call transactions are expected generally to reduce the potential dilution to our common stock and/or offset the cash payments we would be required to make in excess of the principal amount of the converted Notes in the event that the market price of our common stock, as measured under the terms of the capped call transaction, is greater than the strike price of the capped call transaction, with such reduction and/or offset subject to a cap based on the cap price of the capped call transactions. The strike price of the capped call transactions corresponds to the initial conversion price of the Notes and is subject to certain adjustments under the terms of the capped call transactions. The capped call transactions have an initial cap price of \$25.26 per share and are subject to certain adjustments under the terms of the capped call transactions. The capped call transactions have been included as a net reduction to additional paid-in capital within stockholders' equity.

Capital Expenditures

Consistent with previous periods, future capital expenditures will primarily focus on acquiring additional networking and hosting infrastructure and general corporate infrastructure. Our access to capital is adequate to meet our anticipated capital expenditures for our current plans.

Historical Trends

The following table summarizes our cash flow data for the years ended December 31, 2014, 2015 and 2016. Our cash flow data for the year ended December 31, 2015 includes cash flow data of Ticketfly for the two months ended December 31, 2015.

	Year ended December 31,		
	2014	2015	2016
	(in thousands)		
Net cash provided by (used in) operating activities	\$ 21,029	\$ (42,082)	\$ (181,691)
Net cash used in investing activities	(112,200)	(102,266)	(52,155)
Net cash provided by financing activities	21,661	303,135	99,757

Operating activities

In the year ended December 31, 2016, net cash used in operating activities was \$181.7 million and primarily consisted of our net loss of \$343.0 million, which was partially offset by non-cash charges of \$222.3 million, primarily related to \$138.5 million in stock-based compensation charges and \$60.8 million in depreciation and amortization expense. Net cash used in operating activities also included an increase in prepaid content acquisition costs of \$44.2 million, an increase in accounts receivable of \$35.7 million and an increase in prepaid and other assets of \$12.3 million, offset by an increase in accrued compensation of \$15.4 million and an increase in deferred revenue of \$8.4 million. Cash used in operating activities increased \$139.6 million from the year ended December 31, 2015, primarily due to a \$173.3 million increase in our net loss, offset by a \$36.3 million increase in depreciation and amortization expense as a result of an increase in depreciation expense for leasehold improvements and server equipment and an increase in intangible amortization expense.

In the year ended December 31, 2015, net cash used in operating activities was \$42.1 million and primarily consisted of our net loss of \$169.7 million and increases in accounts receivable and prepaid and other assets of \$55.9 million and \$17.5 million, offset by decreases in accounts payable, accrued and other current liabilities and accrued content acquisition costs of \$18.1 million and \$23.7 million, and non-cash charges of \$141.2 million, primarily related to \$111.6 million in stock-based compensation charges and \$24.5 million in depreciation and amortization charges. Cash provided by operating activities decreased \$63.1 million from the year ended December 31, 2014, primarily due to a \$139.3 million increase in our net loss, offset by a \$24.6 million increase in stock-based compensation expense as a result of an increase in headcount.

In the year ended December 31, 2014, net cash provided by operating activities was \$21.0 million and primarily consisted of non-cash charges of \$106.3 million, primarily related to \$87.1 million in stock-based compensation charges, offset by an increase in accounts receivable of \$55.5 million and our net loss of \$30.4 million. Net cash provided by operating activities also included a \$28.2 million decrease in deferred revenue from December 31, 2013, primarily due to the one-time

recognition of the accumulation of deferred revenue related to certain subscriptions purchased through mobile app stores of \$14.2 million and due to a decrease in deferred revenue as a result of the elimination of the annual subscription option from March through December 2014, as we collected less cash upfront under the one-month subscription period as opposed to the twelve-month subscription period under the annual subscription option.

Investing activities

In the year ended December 31, 2016, net cash used in investing activities was \$52.2 million and included \$59.8 million of capital expenditures for leasehold improvements and server equipment, \$30.2 million of capital expenditures for internal-use software and \$12.4 million in purchases of investments, offset by \$51.2 million in proceeds from sales and maturities of investments. Net cash used in investing activities decreased \$50.1 million from the year ended December 31, 2015 primarily due to a decrease of \$268.9 million in payments related to acquisitions and a decrease in purchases of investments of \$128.6 million, offset by a decrease in proceeds from sales and maturities of investments of \$289.2 million.

In the year ended December 31, 2015, net cash used in investing activities was \$102.3 million, primarily due to \$269.6 million in payments related to acquisitions, net of cash acquired due to the acquisitions of Rdio, Ticketfly, NBS and KXMZ, \$141.0 million of purchases of investments, \$23.5 million of capital expenditures for leasehold improvements and server equipment and \$8.6 million of capital expenditures for internal-use software, offset by \$340.4 million in proceeds from sales and maturities of investments.

In the year ended December 31, 2014, net cash used in investing activities was \$112.2 million, primarily due to \$340.7 million of purchases of investments, \$25.5 million of capital expenditures for leasehold improvements and server equipment and \$4.6 million of capital expenditures for internal-use software, offset by \$258.5 million in maturities of investments.

Financing activities

In the year ended December 31, 2016, net cash provided by financing activities was \$99.8 million and included \$90.0 million in borrowings under debt arrangements and \$9.7 million in proceeds from our employee stock purchase plan. Net cash provided by financing activities decreased \$203.4 million from the year ended December 31, 2015 primarily due to a decrease of \$345.0 million in proceeds from issuance of the Notes, offset by proceeds of \$90.0 million in borrowings under debt arrangements.

In the year ended December 31, 2015, net cash provided by financing activities was \$303.1 million, primarily consisting of \$345.0 million in proceeds from issuance of the Notes, offset by \$43.2 million in payments pursuant to the capped call transaction and \$8.9 million in payment of debt issuance costs related to the issuance of the Notes and the amendment to our line of credit facility.

In the year ended December 31, 2014, net cash provided by financing activities was \$21.7 million, primarily consisting of \$16.9 million in proceeds from the exercise of stock options and \$6.4 million in proceeds from our employee stock purchase plan.

Contractual Obligations and Commitments

The following summarizes our contractual obligations as of December 31, 2016:

	Payments Due by Period				
	Total	Less Than 1 Year	1 - 3 Years	4 - 5 Years	More Than 5 Years
	(in thousands)				
Minimum guarantees—Content acquisition costs	\$ 763,040	\$ 355,560	\$ 407,480	\$ —	\$ —
Operating lease obligations	155,213	26,035	49,544	35,774	43,860
Total	\$ 918,253	\$ 381,595	\$ 457,024	\$ 35,774	\$ 43,860

Minimum Guarantees—Content Acquisition Costs

As of December 31, 2016, certain of our content acquisition agreements contain minimum guarantees, and require that we make upfront minimum guarantee payments. As of December 31, 2016, we have future minimum guarantee commitments of \$763.0 million, of which \$355.6 million will be paid in 2017 and the remainder will be paid thereafter.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements and did not have any such arrangements in 2015 or 2016.

Business Trends

Our operating results fluctuate from quarter to quarter as a result of a variety of factors. We expect our operating results to continue to fluctuate in future quarters.

Pandora—Internet Radio Service

Our results reflect the effects of seasonal trends in listener and advertising behavior. During the last quarter of each calendar year, we expect to experience both higher advertising sales due to greater advertiser demand during the holiday season and increased usage due to the popularity of holiday music. In addition, in the first quarter of each calendar year, we expect to experience lower advertising sales due to reduced advertiser demand, and increased usage by listeners due to increased use of media-streaming devices received as gifts during the holiday season. We believe these seasonal trends have affected, and will continue to affect our operating results, particularly if increases in content acquisition costs from increased usage are not offset by increases in advertising sales in the first calendar quarter.

In addition, expenditures by advertisers tend to be cyclical and discretionary in nature, reflecting overall economic conditions, the economic prospects of specific advertisers or industries, budgeting constraints and buying patterns and a variety of other factors, many of which are outside our control. As a result of these and other factors, the results of any prior quarterly or annual periods should not be relied upon as indications of our future operating performance.

We continue to invest in building a local advertising sales force in major radio markets and as of December 31, 2016, we had 153 local sellers in 39 markets in the United States. As a result, we experienced an increase in local advertising revenue as a percentage of total advertising revenue in the year ended December 31, 2016 compared to the year ended December 31, 2015, and we intend to continue investing to extend our local market presence for the foreseeable future.

Ticketing Service

Ticketfly's results reflect the effects of seasonality related to the timing of events. Tickets for festivals, which constitute a significant portion of Ticketfly's business, typically go on sale during the first half of the year. As such, the Ticketfly business has historically experienced an increase in revenue in the first half of each year relative to the fourth quarter of the prior year. We expect these seasonal trends to continue to affect our operating results.

Critical Accounting Policies and Estimates

Our discussion and analysis of our consolidated financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these consolidated financial statements requires us to make estimates, judgments and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses and the related disclosure of contingent assets and liabilities. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances. Our estimates form the basis for our judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

An accounting policy is considered to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, and if different estimates that reasonably could have been used, or changes in the accounting estimate that are reasonably likely to occur, could materially impact the consolidated financial statements. We believe that our critical accounting policies reflect the most significant estimates and assumptions used in the preparation of the consolidated financial statements.

We believe that the assumptions and estimates associated with our content acquisition costs for performance rights of musical works, prepaid content acquisition costs, advertising revenue, subscription and other revenue, ticketing service revenue, business combinations, goodwill and intangible assets, stock based compensation, the valuation of stock option grants,

market stock units and performance stock units and capitalized internal-use software have the greatest potential impact on our financial statements. Therefore, we consider these to be our critical accounting policies and estimates.

Content Acquisition Costs for Performance Rights of Musical Works

We incur content acquisition cost expenses from our public performance of musical works. This includes content acquisition costs that we pay for public performance rights to the owners of those musical works or their agents, such as PROs and individual publishers. We record a liability for public performance content acquisition costs based on our best estimate of the amount owed to each licensor, PRO or individual copyright owner, based on historical rates, third-party evidence and legal developments consistent with our past practices. For each quarterly period, we evaluate our estimates to assess the adequacy of recorded liabilities. If actual content acquisition costs differ from estimates, revisions to the estimated royalty liabilities may be required, which could materially affect our results of operations.

Prepaid Content Acquisition Costs

Prepaid content acquisition costs are primarily comprised of minimum guarantees under content acquisition agreements. In 2015 and 2016, we signed direct license agreements with major and independent labels, distributors, PROs and publishers. Certain of these license agreements include minimum guarantee payments, some of which are paid in advance. These minimum guarantees may take the form of either a contractually obligated minimum over a specified period of time that requires a true-up payment at the end of the specified period if the cumulative payments have not met or exceeded the specified minimum, or cash advance payments made at the beginning of, or at intervals during, the specified period, which cash payments are then recoupable against content acquisition costs over the specified period. On a quarterly basis, we record the greater of the cumulative actual content acquisition costs incurred or the cumulative minimum guarantee based on forecasted usage for the minimum guarantee period. The minimum guarantee period is the period of time that the minimum guarantee relates to, as specified in each agreement, which may be annual or a longer period. The cumulative minimum guarantee, based on forecasted usage considers factors such as listening hours, revenue, subscribers and other terms of each agreement that impact our expected attainment or recoupment of the minimum guarantees on a non-straight line basis. If we are unable to accurately estimate the forecasted usage for the minimum guarantee period, our content acquisition costs could increase and materially adversely affect our business, financial condition and results of operations.

Revenue Recognition

We recognize revenue when four basic criteria are met: (1) persuasive evidence exists of an arrangement with the customer reflecting the terms and conditions under which the products or services will be provided; (2) delivery has occurred or services have been provided; (3) the fee is fixed or determinable; and (4) collection is reasonably assured. We consider a signed agreement, a binding insertion order or other similar documentation to be persuasive evidence of an arrangement. Collectability is assessed based on a number of factors, including transaction history and the creditworthiness of a customer. If it is determined that collection is not reasonably assured, revenue is not recognized until collection becomes reasonably assured, which is generally upon receipt of cash. We record cash received in advance of revenue recognition as deferred revenue.

Advertising revenue

We generate advertising revenue primarily from audio, display and video advertising. We generate the majority of our advertising revenue through the delivery of advertising impressions sold on a cost per thousand, or CPM, basis. In determining whether an arrangement exists, we ensure that a binding arrangement, such as an insertion order or a fully executed customer-specific agreement, is in place. We generally recognize revenue based on delivery information from our campaign trafficking systems.

We also generate advertising revenue pursuant to arrangements with advertising agencies and brokers. Under these arrangements, we provide the agencies and brokers the ability to sell advertising inventory on our service directly to advertisers. We report this revenue net of amounts due to agencies and brokers because we are not the primary obligor under these arrangements, we do not set the pricing nor do we establish or maintain the relationships with the advertisers.

Subscription and other revenue

Our new subscription service, Pandora Plus, launched on September 15, 2016. Prior to the launch of Pandora Plus, our subscription service was Pandora One. Pandora Plus and Pandora One are premium monthly or annual paid versions of the Pandora service, which include advertisement-free access, higher quality audio on supported devices and longer timeout-free

listening. Pandora Plus also includes additional features such as replays, additional skipping and offline listening. Subscription revenue derived from direct sales to listeners is recognized on a straight-line basis over the duration of the subscription period. Subscription revenue derived from sales through some mobile device app stores may be subject to refund or cancellation terms which may affect the timing or amount of the subscription revenue recognition. When refund rights exist, we recognize revenue when services have been provided and the rights lapse or when we have developed sufficient transaction history to estimate a reserve.

We were required to defer revenue for certain subscriptions purchased through mobile device app stores that contained refund rights until the refund rights lapsed or until we developed sufficient operating history to estimate a return reserve. As of December 31, 2013, we had deferred all revenue related to these mobile subscriptions subject to refund rights totaling approximately \$14.2 million, as we did not have sufficient history to estimate a return reserve. Beginning in January 2014, we had sufficient historic transactional information which enabled us to estimate future returns. Accordingly, in January 2014, we began recording revenue related to these mobile subscriptions net of estimated returns. This change resulted in a one-time increase in subscription revenue in the quarter ended March 31, 2014 of approximately \$14.2 million, as the previously deferred revenue was recognized. As of December 31, 2015 and 2016, the deferred revenue related to the return reserve was not significant.

Ticketing service revenue

Ticketing service revenue is generated primarily from service and merchant processing fees generated on ticket sales through the Ticketfly platform. Ticketfly sells tickets to fans for events on behalf of clients and charges a fee per ticket, which generally increases as the face value of the ticket increases, or a percentage of the total convenience charge and order processing fee for its services at the time the ticket for an event is sold. Ticketing service revenue is recorded net of the face value of the ticket at the time of the sale, as Ticketfly generally acts as an agent with respect to the ticket price in these transactions.

Business Combinations, Goodwill and Intangible Assets, net

We allocate the fair value of purchase consideration to the tangible assets acquired, liabilities assumed and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require management to make significant estimates and assumptions, especially with respect to intangible assets. Significant estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from acquired users, acquired technology, and trade names from a market participant perspective, useful lives and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. During the measurement period, which is one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings.

We do not amortize goodwill and intangible assets with indefinite useful lives, rather such assets are required to be tested for impairment at least annually or sooner whenever events or changes in circumstances indicate that the assets may be impaired. We perform our goodwill and intangible asset impairment tests in the fourth quarter of each year. As of December 31, 2016, no impairment of goodwill or indefinite-lived intangible assets has been identified. For purposes of testing goodwill for impairment, we established reporting units based on our current reporting structure. As of December 31, 2016, our goodwill was allocated to our Pandora and Ticketfly reporting units.

Acquired finite-lived intangible assets are amortized over the estimated useful lives of the assets, which range from two to eleven years. Acquired finite-lived intangible assets consist primarily of patents, customer relationships, developed technology and trade names resulting from business combinations. We evaluate the recoverability of our intangible assets for potential impairment whenever events or circumstances indicate that the carrying amount of such assets may not be recoverable. Recoverability of these assets is measured by a comparison of the carrying amounts to the future undiscounted cash flows the assets are expected to generate. If such review indicates that the carrying amount of intangible assets is not recoverable, the carrying amount of such assets is reduced to the fair value.

In addition to the recoverability assessment, we routinely review the remaining estimated useful lives of finite-lived intangible assets. If we reduce the estimated useful life assumption for any asset, the remaining unamortized balance would be amortized over the revised estimated useful life. We record the amortization of intangible assets to the financial statement line item in our consolidated statement of operations that the asset directly relates to. To the extent that purchased intangibles are used in revenue generating activities, we record the amortization of these intangible assets to cost of revenue.

Stock-Based Compensation

Stock-based compensation expenses are classified in the statement of operations based on the department to which the related employee reports. We measure stock-based compensation expense for employees at the grant date fair value of the award, and recognize expense on a straight-line basis over the requisite service period, which is generally the vesting period, net of estimated forfeitures.

We generally estimate the grant date fair value of stock options using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model is affected by our stock price on the date of grant, the expected stock price volatility over the expected term of the award, which is based on projected employee stock option exercise behaviors, the risk-free interest rate for the expected term of the award and expected dividends.

Stock-based compensation expense is recorded net of estimated forfeitures in the statement of operations for only those stock-based awards that we expect to vest. We estimate the forfeiture rate based on historical forfeitures of equity awards and adjust the rate to reflect changes in facts and circumstances, if any. We will revise our estimated forfeiture rate if actual forfeitures differ from our initial estimates.

Stock-Based Compensation — Market Stock Units ("MSUs")

We implemented a market stock unit program in March 2015 for certain key executives. Specifically, MSUs measure Pandora's total stockholder return ("TSR") performance against that of the Russell 2000 Index across three performance periods.

We have determined the grant-date fair value of the MSUs using a Monte Carlo simulation performed by a third-party valuation firm. The Monte Carlo simulation model utilizes multiple input variables to estimate the probability that market conditions will be achieved. The variables used in these models are reviewed on an annual basis and adjusted, as needed. We recognize stock-based compensation for the MSUs over the requisite service period using the accelerated attribution method.

Stock-Based Compensation—Performance Stock Units ("PSUs")

In 2016, the compensation committee of the board of directors granted 2016 Performance Awards consisting of stock-settled performance-based RSUs to certain key executives.

We have determined the grant-date fair value of the PSUs granted in 2016 using a Monte Carlo simulation performed by a third-party valuation firm. The Monte Carlo simulation model utilizes multiple input variables to estimate the probability that market conditions will be achieved. The variables used in these models are reviewed on an annual basis and adjusted, as needed. We recognize stock-based compensation for the PSUs over the requisite service period, which is approximately four years, using the accelerated attribution method.

Capitalized Internal-Use Software

We capitalize certain costs incurred to develop software for internal use. Costs incurred in the preliminary stages of development are expensed as incurred. Once software has reached the development stage, internal and external costs, if direct and incremental, are capitalized until the software is substantially complete and ready for its intended use. Capitalization ceases upon completion of all substantial testing. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Capitalized costs are recorded as part of property and equipment. Maintenance and training costs are expensed as incurred.

Capitalized internal-use software costs are amortized on a straight-line basis over their three to five-year estimated useful lives. We evaluate the useful lives of these assets and test for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. There were no material impairments to internal-use software during the years ended December 31, 2014, 2015 and 2016.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks in the ordinary course of our business, including interest rate and inflation risks.

Interest Rate Fluctuation Risk

Our exposure to interest rates relates to the increase or decrease in the amount of interest we must pay on our outstanding debt instruments. We are party to a \$120.0 million credit facility with a syndicate of financial institutions, which expires on September 12, 2018. In September 2016, we borrowed \$90.0 million from the credit facility to enhance our working capital position. Interest is payable quarterly at the applicable annual interest rate of 3.81% through September 2017. The applicable interest rate will be adjusted in September 2017. As of December 31, 2016, we had \$1.2 million in letters of credit outstanding and \$28.8 million of available borrowing capacity under the credit facility.

On December 9, 2015, we completed an unregistered Rule 144A offering for the issuance of \$345.0 million aggregate principal amount of our 1.75% Convertible Senior Notes due 2020 (the "Notes"). The Notes were offered only to qualified institutional buyers pursuant to Rule 144A under the Securities Act. In connection with the issuance of the Notes, we entered into capped call transactions with the initial purchaser of the Notes and an additional financial institution. The Notes are unsecured, senior obligations of Pandora, and interest is payable semi-annually at a rate of 1.75% per annum, with no interest rate fluctuation risk.

Refer to Note 7 "Debt Instruments" in the Notes to Consolidated Financial Statements for further details regarding our credit facility and convertible notes.

The primary objective of our investment activities is to preserve principal while maximizing income without significantly increasing risk. Approximately 56% of our portfolio consists of cash and cash equivalents that have a relatively short maturity, and a fair value relatively insensitive to interest rate changes. Our available-for-sale investments consist of corporate debt securities which may be subject to market risk due to changes in prevailing interest rates that may cause the fair values of our investments to fluctuate. Based on a sensitivity analysis, we have determined that a hypothetical 100 basis points increase in interest rates would have resulted in a decrease in the fair values of our investments of approximately \$0.2 million as of December 31, 2016. Such losses would only be realized if we sold the investments prior to maturity. In future periods, we will continue to evaluate our investment policy in order to ensure that we continue to meet our overall objectives.

Inflation Risk

We do not believe that inflation has had a material effect on our business, financial condition or results of operations. If our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could harm our business, financial condition and results of operations.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

**PANDORA MEDIA, INC.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Pandora Media, Inc.

We have audited the accompanying consolidated balance sheets of Pandora Media, Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Pandora Media, Inc. at December 31, 2016 and 2015, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Pandora Media, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 15, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Francisco, California

February 15, 2017

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Pandora Media, Inc.

We have audited Pandora Media, Inc.'s internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Pandora Media, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Pandora Media, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the 2016 consolidated financial statements of Pandora Media, Inc. and our report dated February 15, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Francisco, California

February 15, 2017

Pandora Media, Inc.
Consolidated Balance Sheets
(in thousands, except share and per share amounts)

	As of December 31,	
	2015	2016
Assets		
Current assets		
Cash and cash equivalents	\$ 334,667	\$ 199,944
Short-term investments	35,844	37,109
Accounts receivable, net of allowance of \$2,165 at December 31, 2015 and \$3,633 at December 31, 2016	277,075	309,267
Prepaid content acquisition costs	2,099	46,310
Prepaid expenses and other current assets	33,821	33,191
Total current assets	<u>683,506</u>	<u>625,821</u>
Long-term investments	46,369	6,252
Property and equipment, net	66,370	124,088
Goodwill	303,875	306,691
Intangible assets, net	110,745	90,425
Other long-term assets	29,792	31,533
Total assets	<u>\$ 1,240,657</u>	<u>\$ 1,184,810</u>
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	\$ 17,897	\$ 15,224
Accrued liabilities	37,185	35,465
Accrued content acquisition costs	97,390	93,723
Accrued compensation	43,788	60,353
Deferred revenue	19,939	28,359
Other current liabilities	15,632	20,993
Total current liabilities	<u>231,831</u>	<u>254,117</u>
Long-term debt, net	234,577	342,247
Other long-term liabilities	30,862	34,187
Total liabilities	<u>497,270</u>	<u>630,551</u>
Stockholders' equity		
Common stock, \$0.0001 par value, 1,000,000,000 shares authorized: 224,970,412 shares issued and outstanding at December 31, 2015 and 235,162,757 at December 31, 2016	23	24
Additional paid-in capital	1,110,539	1,264,693
Accumulated deficit	(366,658)	(709,636)
Accumulated other comprehensive loss	(517)	(822)
Total stockholders' equity	<u>743,387</u>	<u>554,259</u>
Total liabilities and stockholders' equity	<u>\$ 1,240,657</u>	<u>\$ 1,184,810</u>

The accompanying notes are an integral part of the consolidated financial statements.

Pandora Media, Inc.
Consolidated Statements of Operations
(in thousands, except per share amounts)

	Year ended December 31,		
	2014	2015	2016
Revenue			
Advertising	\$ 732,338	\$ 933,305	\$ 1,072,490
Subscription and other	188,464	220,571	225,786
Ticketing service	—	10,167	86,550
Total revenue	<u>920,802</u>	<u>1,164,043</u>	<u>1,384,826</u>
Cost of revenue			
Cost of revenue—Content acquisition costs	446,377	610,362	734,353
Cost of revenue—Other	61,627	79,858	101,289
Cost of revenue—Ticketing service	—	7,121	59,280
Total cost of revenue	<u>508,004</u>	<u>697,341</u>	<u>894,922</u>
Gross profit	<u>412,798</u>	<u>466,702</u>	<u>489,904</u>
Operating expenses			
Product development	53,153	84,581	141,636
Sales and marketing	277,330	398,169	491,455
General and administrative	112,443	153,943	175,572
Total operating expenses	<u>442,926</u>	<u>636,693</u>	<u>808,663</u>
Loss from operations	<u>(30,128)</u>	<u>(169,991)</u>	<u>(318,759)</u>
Interest expense	(528)	(1,976)	(26,144)
Other income, net	834	756	1,697
Total other income (expense), net	<u>306</u>	<u>(1,220)</u>	<u>(24,447)</u>
Loss before benefit from (provision for) income taxes	<u>(29,822)</u>	<u>(171,211)</u>	<u>(343,206)</u>
Benefit from (provision for) income taxes	<u>(584)</u>	<u>1,550</u>	<u>228</u>
Net loss	<u>\$ (30,406)</u>	<u>\$ (169,661)</u>	<u>\$ (342,978)</u>
Weighted-average common shares outstanding used in computing basic and diluted net loss per share	<u>205,273</u>	<u>213,790</u>	<u>230,693</u>
Net loss per share, basic and diluted	<u>\$ (0.15)</u>	<u>\$ (0.79)</u>	<u>\$ (1.49)</u>

The accompanying notes are an integral part of the consolidated financial statements.

Pandora Media, Inc.
Consolidated Statements of Comprehensive Loss
(in thousands)

	Year ended December 31,		
	2014	2015	2016
Net loss	\$ (30,406)	\$ (169,661)	\$ (342,978)
Change in foreign currency translation adjustment	(184)	53	(594)
Change in net unrealized losses on marketable securities	(191)	106	289
Other comprehensive income (loss)	(375)	159	(305)
Total comprehensive loss	\$ (30,781)	\$ (169,502)	\$ (343,283)

The accompanying notes are an integral part of the consolidated financial statements.

Pandora Media, Inc.
Consolidated Statements of Stockholders' Equity
(in thousands, except share amounts)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Par Amount				
Balances as of December 31, 2013	195,395,940	\$ 20	\$ 675,103	\$ (301)	\$ (166,591)	\$ 508,231
Issuance of common stock upon exercise of stock options	10,437,509	1	17,115	—	—	17,116
Stock-based compensation	—	—	87,055	—	—	87,055
Vesting of restricted stock units	3,169,456	—	—	—	—	—
Share cancellations to satisfy tax withholding on vesting of restricted stock units	(73,682)	—	(2,019)	—	—	(2,019)
Stock issued under employee stock purchase plan	142,265	—	3,407	—	—	3,407
Excess tax benefit from stock-based awards	—	—	348	—	—	348
Components of comprehensive loss:						
Net loss	—	—	—	—	(30,406)	(30,406)
Other comprehensive loss	—	—	—	(375)	—	(375)
Balances as of December 31, 2014	209,071,488	\$ 21	\$ 781,009	\$ (676)	\$ (196,997)	\$ 583,357
Issuance of common stock upon exercise of stock options	1,077,797	—	5,156	—	—	5,156
Issuance of common stock related to acquisitions	10,246,616	2	148,488	—	—	148,490
Stock-based compensation	—	—	111,645	—	—	111,645
Vesting of restricted stock units	4,184,415	—	—	—	—	—
Share cancellations to satisfy tax withholding on vesting of restricted stock units	(148,302)	—	(2,540)	—	—	(2,540)
Stock issued under employee stock purchase plan	538,398	—	6,973	—	—	6,973
Equity component of convertible note issuance, net of issuance costs	—	—	102,968	—	—	102,968
Purchase of capped call	—	—	(43,160)	—	—	(43,160)
Components of comprehensive loss:						
Net loss	—	—	—	—	(169,661)	(169,661)
Other comprehensive income	—	—	—	159	—	159
Balances as of December 31, 2015	224,970,412	\$ 23	\$ 1,110,539	\$ (517)	\$ (366,658)	\$ 743,387
Issuance of common stock upon exercise of stock options	1,588,781	—	3,464	—	—	3,464
Stock-based compensation	—	—	145,968	—	—	145,968
Vesting of restricted stock units	7,666,647	1	(1)	—	—	—
Vesting of market stock units	56,903	—	—	—	—	—
Share cancellations to satisfy tax withholding on vesting of restricted stock units	(354,638)	—	(3,368)	—	—	(3,368)
Stock issued under employee stock purchase plan	1,254,910	—	8,484	—	—	8,484
Fair value of escrow settlement	(20,258)	—	(393)	—	—	(393)
Components of comprehensive loss:						
Net loss	—	—	—	—	(342,978)	(342,978)
Other comprehensive loss	—	—	—	(305)	—	(305)
Balances as of December 31, 2016	235,162,757	\$ 24	\$ 1,264,693	\$ (822)	\$ (709,636)	\$ 554,259

The accompanying notes are an integral part of the consolidated financial statements.

Pandora Media, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Year ended December 31,		
	2014	2015	2016
Operating activities			
Net loss	\$ (30,406)	\$ (169,661)	\$ (342,978)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities			
Depreciation and amortization	15,431	24,458	60,757
Stock-based compensation	87,055	111,645	138,458
Amortization of premium on investments, net	2,833	1,911	405
Other operating activities	1,366	2,134	4,403
Amortization of debt discount	—	1,084	18,315
Excess tax benefit from stock-based awards	(348)	—	—
Changes in assets and liabilities			
Accounts receivable	(55,478)	(55,904)	(35,710)
Prepaid content acquisition costs	(700)	(1,399)	(44,211)
Prepaid expenses and other assets	(8,519)	(17,519)	(12,321)
Accounts payable, accrued and other current liabilities	4,830	18,080	5,294
Accrued content acquisition costs	7,608	23,736	(3,668)
Accrued compensation	13,736	7,378	15,364
Other long-term liabilities	7,690	6,005	1,384
Deferred revenue	(28,238)	4,946	8,420
Reimbursement of cost of leasehold improvements	4,169	1,024	4,397
Net cash provided by (used in) operating activities	<u>21,029</u>	<u>(42,082)</u>	<u>(181,691)</u>
Investing activities			
Purchases of property and equipment	(25,465)	(23,512)	(59,769)
Internal-use software costs	(4,574)	(8,562)	(30,210)
Changes in restricted cash	—	—	(250)
Purchases of investments	(340,679)	(140,980)	(12,413)
Proceeds from maturities of investments	258,518	228,998	47,656
Proceeds from sales of investments	—	111,356	3,507
Payments related to acquisitions, net of cash acquired	—	(269,566)	(676)
Net cash used in investing activities	<u>(112,200)</u>	<u>(102,266)</u>	<u>(52,155)</u>
Financing activities			
Proceeds from issuance of convertible notes	—	345,000	—
Payments for purchase of capped call	—	(43,160)	—
Payment of debt issuance costs	—	(8,909)	(32)
Borrowings under debt arrangements	—	—	90,000
Proceeds from employee stock purchase plan	6,438	7,552	9,701
Proceeds from exercise of stock options	16,894	5,192	3,457
Tax payments from net share settlements of restricted stock units	(2,019)	(2,540)	(3,369)
Excess tax benefit from stock-based awards	348	—	—
Net cash provided by financing activities	<u>21,661</u>	<u>303,135</u>	<u>99,757</u>
Effect of exchange rate changes on cash and cash equivalents	(288)	(77)	(634)
Net increase (decrease) in cash and cash equivalents	(69,798)	158,710	(134,723)
Cash and cash equivalents at beginning of period	245,755	175,957	334,667
Cash and cash equivalents at end of period	<u>\$ 175,957</u>	<u>\$ 334,667</u>	<u>\$ 199,944</u>
Supplemental disclosures of cash flow information			
Cash paid during the period for income taxes	\$ 164	\$ 389	\$ 297
Cash paid during the period for interest	\$ 314	\$ 351	\$ 7,222
Purchases of property and equipment recorded in accounts payable and accrued liabilities	\$ 751	\$ 5,890	\$ 1,129
Fair value of shares issued related to the acquisition of a business	\$ —	\$ 146,855	\$ —

The accompanying notes are an integral part of the consolidated financial statements.

Pandora Media, Inc.
Notes to Consolidated Financial Statements

1. Description of Business and Basis of Presentation

Pandora—Internet Radio Service

Pandora is the world's most powerful music discovery platform, offering a personalized experience for each of our listeners wherever and whenever they want to listen to music—whether through earbuds, car speakers or live on stage. Pandora is available as an ad-supported service or as a subscription service, which we call Pandora Plus. The majority of our listener hours occur on mobile devices, with the majority of our revenue generated from advertising on our ad-supported service on these devices. We offer both local and national advertisers the opportunity to deliver targeted messages to our listeners using a combination of audio, display and video advertisements. We also generate revenue from subscriptions to Pandora Plus. We were incorporated as a California corporation in January 2000 and reincorporated as a Delaware corporation in December 2010. Our principal operations are located in the United States, and we also operate in Australia, New Zealand, Canada and the United Kingdom.

Ticketing Service

We operate our ticketing service through our subsidiary Ticketfly, a leading live events technology company that provides ticketing and marketing software and services for our clients, which are venues and event promoters, across North America. Ticketfly's ticketing, digital marketing and analytics software helps promoters book talent, sell tickets and drive in-venue revenue, while Ticketfly's consumer tools help fans find and purchase tickets to events. Ticketfly's revenue primarily consists of service and merchant processing fees from ticketing operations. We completed the acquisition of Ticketfly on October 31, 2015.

As used herein, "Pandora," "we," "our," "the Company" and similar terms include Pandora Media, Inc. and its subsidiaries, unless the context indicates otherwise.

Basis of Presentation

The consolidated financial statements and accompanying notes have been prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP") and include the accounts of Pandora and our wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

Certain changes in presentation have been made to conform the prior period presentation to current period reporting. We have reclassified internal-use software costs from the purchases of property and equipment line item to the internal-use software costs line item of our consolidated statements of cash flows. We have also reclassified prepaid content acquisition costs from the prepaid expenses and other assets line item to the prepaid content acquisition costs line item of our consolidated balance sheets and our consolidated statements of cash flows. Lastly, we have reclassified interest expense from the other income (expense), net line item to the interest expense line item of our consolidated statements of operations.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities and the related disclosures at the date of the financial statements, as well as the reported amounts of revenue and expenses during the periods presented. Estimates are used in several areas including, but not limited to determining accrued content acquisition costs, amortization of minimum guarantees under content acquisition agreements, selling prices for elements sold in multiple-element arrangements, the allowance for doubtful accounts, the fair value of stock options, market stock units ("MSUs"), stock-settled performance-based RSUs ("PSUs") and the Employee Stock Purchase Plan ("ESPP"), the impact of forfeitures on stock-based compensation, the provision for (benefit from) income taxes, the subscription return reserve, the fair value of convertible debt, the fair value of acquired property and equipment, capitalized internal-use software, intangible assets and goodwill and the useful lives of acquired intangible assets. To the extent there are material differences between these estimates, judgments or assumptions and actual results, our financial statements could be affected. In many cases, the accounting treatment of a particular transaction is specifically dictated by U.S. GAAP and does not require management's judgment in its application. There are also areas in which management's judgment in selecting among available alternatives would not produce a materially different result.

2. Summary of Significant Accounting Policies **Pandora Media, Inc.**

Revenue Recognition

We recognize revenue when four basic criteria are met: (1) persuasive evidence exists of an arrangement with the customer reflecting the terms and conditions under which the products or services will be provided; (2) delivery has occurred or services have been provided; (3) the fee is fixed or determinable; and (4) collection is reasonably assured. We consider a signed agreement, a binding insertion order or other similar documentation to be persuasive evidence of an arrangement. Collectability is assessed based on a number of factors, including transaction history and the creditworthiness of a customer. If it is determined that collection is not reasonably assured, revenue is not recognized until collection becomes reasonably assured, which is generally upon receipt of cash. We record cash received in advance of revenue recognition as deferred revenue.

Gross versus net revenue recognition. We report revenue on a gross or net basis based on management's assessment of whether we act as a principal or agent in the transaction. To the extent we act as the principal, revenue is reported on a gross basis. The determination of whether we act as a principal or an agent in a transaction is based on an evaluation of whether we have the substantial risks and rewards of ownership under the terms of an arrangement.

Advertising revenue. We generate advertising revenue primarily from audio, display and video advertising. We generate the majority of our advertising revenue through the delivery of advertising impressions sold on a cost per thousand, or CPM, basis. In determining whether an arrangement exists, we ensure that a binding arrangement, such as an insertion order or a fully executed customer-specific agreement, is in place. We generally recognize revenue based on delivery information from our campaign trafficking systems.

We also generate advertising revenue pursuant to arrangements with advertising agencies and brokers. Under these arrangements, we provide the agencies and brokers the ability to sell advertising inventory on our service directly to advertisers. We report this revenue net of amounts due to agencies and brokers because we are not the primary obligor under these arrangements, we do not set the pricing nor do we establish or maintain the relationships with the advertisers.

Subscription and other revenue. Our new subscription service, Pandora Plus, launched on September 15, 2016. Prior to the launch of Pandora Plus, our subscription service was Pandora One. Pandora Plus and Pandora One are premium monthly or annual paid versions of the Pandora service, which include advertisement-free access, higher quality audio on supported devices and longer timeout-free listening. Pandora Plus also includes additional features such as replays, additional skipping and offline listening. Subscription revenue derived from direct sales to listeners is recognized on a straight-line basis over the duration of the subscription period and is recognized net of sales tax amounts collected from subscribers. Subscription revenue derived from sales through some mobile device app stores may be subject to refund or cancellation terms which may affect the timing or amount of the subscription revenue recognition. When refund rights exist, we recognize revenue when services have been provided and the rights lapse or when we have developed sufficient transaction history to estimate a reserve.

We were required to defer revenue for certain subscriptions purchased through mobile device app stores that contained refund rights until the refund rights lapsed or until we developed sufficient operating history to estimate a return reserve. As of December 31, 2013, we had deferred all revenue related to these mobile subscriptions subject to refund rights totaling approximately \$14.2 million, as we did not have sufficient history to estimate a return reserve. Beginning in January 2014, we had sufficient historic transactional information which enabled us to estimate future returns. Accordingly, in January 2014, we began recording revenue related to these mobile subscriptions net of estimated returns. This change resulted in a one-time increase in subscription revenue in the quarter ended March 31, 2014 of approximately \$14.2 million, as the previously deferred revenue was recognized. As of December 31, 2015 and 2016, the deferred revenue related to the return reserve was not significant.

Multiple-element arrangements. We enter into arrangements with customers to sell advertising packages that include different media placements or ad services that are delivered at the same time, or within close proximity of one another. We recognize the relative fair value of the media placements or ad services as they are delivered assuming all other revenue recognition criteria are met.

We allocate arrangement consideration in multiple-deliverable revenue arrangements at the inception of an arrangement to all deliverables or those packages in which all components of the package are delivered at the same time, based on the relative selling price method in accordance with the selling price hierarchy, which includes: (1) vendor-specific objective evidence ("VSOE") if available; (2) third-party evidence ("TPE") if VSOE is not available; and (3) best estimate of selling price ("BESP") if neither VSOE nor TPE is available.

Pandora Media, Inc.

We determine VSOE based on our historical pricing and discounting practices for the specific product or service when sold separately. In determining VSOE, we require that a substantial majority of the selling prices for these services fall within a reasonably narrow pricing range. We have not historically priced our advertising products within a narrow range. As a result, we have not been able to establish VSOE for any of our advertising products.

When VSOE cannot be established for deliverables in multiple element arrangements, we apply judgment with respect to whether it can establish a selling price based on TPE. TPE is determined based on competitor prices for similar deliverables when sold separately. Generally, our go-to-market strategy differs from that of our peers and our offerings contain a significant level of differentiation such that the comparable pricing of services cannot be obtained. Furthermore, we are unable to reliably determine what similar competitor services' selling prices are on a stand-alone basis. As a result, we have not been able to establish selling price based on TPE.

When we are unable to establish selling price using VSOE or TPE, we use BSP in our allocation of arrangement consideration. The objective of BSP is to determine the price at which we would transact a sale if the service were sold on a stand-alone basis. BSP is generally used to allocate the selling price to deliverables in our multiple element arrangements. We determine BSP for deliverables by considering multiple factors including, but not limited to, prices we charge for similar offerings, market conditions, competitive landscape and pricing practices. We limit the amount of allocable arrangement consideration to amounts that are fixed or determinable and that are not contingent on future performance or future deliverables. We regularly review BSP. Changes in assumptions or judgments or changes to the elements in the arrangement may cause an increase or decrease in the amount of revenue that we report in a particular period.

Ticketing service revenue. Ticketing service revenue is generated primarily from service and merchant processing fees generated on ticket sales through the Ticketfly platform. Ticketfly sells tickets to fans for events on behalf of clients and charges a fee per ticket, which generally increases as the face value of the ticket increases, or a percentage of the total convenience charge and order processing fee, for its services at the time the ticket for an event is sold. Ticketing service revenue is recorded net of the face value of the ticket at the time of the sale, as Ticketfly generally acts as an agent with respect to the ticket price in these transactions.

Concentration of Credit Risk

Financial instruments that potentially subject us to concentrations of credit risk consist principally of cash and cash equivalents, investments and trade accounts receivable. We maintain cash and cash equivalents with domestic financial institutions of high credit quality. We perform periodic evaluations of the relative credit standing of such institutions.

We perform ongoing credit evaluations of customers to assess the probability of accounts receivable collection based on a number of factors, including past transaction experience with the customer, evaluation of their credit history, and review of the invoicing terms of the contract. We generally do not require collateral. We maintain reserves for potential credit losses on customer accounts when deemed necessary. Actual credit losses during the years ended December 31, 2014, 2015 and 2016 were \$1.1 million, \$1.1 million and \$2.0 million, respectively.

For the years ended December 31, 2014, 2015 and 2016, we had no individual customers that accounted for 10% or more of total revenue. As of December 31, 2015 and 2016, there were no individual customers that accounted for 10% or more of our total accounts receivable.

Cash, Cash Equivalents and Investments

We classify our highly liquid investments with maturities of three months or less at the date of purchase as cash equivalents. Our investments consist of corporate debt securities. These investments are classified as available-for-sale securities and are carried at fair value with the unrealized gains and losses reported as a component of stockholders' equity. Management determines the appropriate classification of our investments at the time of purchase and reevaluates the available-for-sale designations as of each balance sheet date. We classify our investments as either short-term or long-term based on each instrument's underlying contractual maturity date. Investments with maturities of twelve months or less are classified as short-term and those with maturities greater than twelve months are classified as long-term. The cost basis for investments sold is based upon the specific identification method.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded net of an allowance for doubtful accounts. Our allowance for doubtful accounts is based upon historical loss patterns, the number of days that billings are past due and an evaluation of the potential risk of loss

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associated with delinquent accounts. We also consider any changes to the financial condition of our customers and any other external market factors that could impact the collectability of our receivables in the determination of our allowance for doubtful accounts. Accounts receivable amounts that are deemed uncollectable are charged against the allowance for doubtful accounts when identified.

Property and Equipment, net

Property and equipment is recorded at cost, less accumulated depreciation and amortization. Depreciation is computed using the straight-line method based on the estimated useful lives of the assets, which typically range from three to five years. Leasehold improvements are amortized over the shorter of the lease term or expected useful lives of the improvements.

Property and equipment is reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. Recoverability of these assets is measured by a comparison of the carrying amounts to the future undiscounted cash flows the assets are expected to generate. If property and equipment are considered to be impaired, the impairment to be recognized equals the amount by which the carrying value of the asset exceeds its fair market value. If we reduce the estimated useful life assumption for any asset, the remaining unamortized balance would be amortized or depreciated over the revised estimated useful life.

Capitalized Internal-Use Software

We capitalize certain costs incurred to develop software for internal use. Costs incurred in the preliminary stages of development are expensed as incurred. Once software has reached the development stage, internal and external costs, if direct and incremental, are capitalized until the software is substantially complete and ready for its intended use. Capitalization ceases upon completion of all substantial testing. We also capitalize costs related to specific upgrades and enhancements when it is probable the expenditures will result in additional functionality. Capitalized costs are recorded as part of property and equipment. Maintenance and training costs are expensed as incurred.

Capitalized internal-use software costs are amortized on a straight-line basis over their three to five-year estimated useful lives. As of December 31, 2015 and 2016, we had approximately \$6.3 million and \$25.7 million of capitalized internal use software and website development costs, net of accumulated amortization. We evaluate the useful lives of these assets and test for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets. There were no material impairments to internal-use software during the years ended December 31, 2014, 2015 and 2016.

Ticketing Contract Advances

Ticketing contract advances, which are either recoupable or non-recoupable, represent amounts paid in advance to clients pursuant to ticketing agreements. These amounts are reflected in prepaid expenses and other current assets if the amount is expected to be recouped or recognized over a period of twelve months or less or in other long-term assets if the amount is expected to be recouped or recognized over a period of more than twelve months. Recoupable ticketing contract advances are generally recoupable against future royalties earned by clients, based on the contract terms, over the lives of their contracts which typically range between three and five years. Non-recoupable ticketing contract advances are fixed incentives paid by Ticketfly to secure exclusive rights with certain clients and are amortized to sales and marketing expense over the life of the contract on a straight-line basis. Amortization expense for the years ended December 31, 2015 and 2016 was \$0.7 million and \$5.7 million.

We maintain an allowance for doubtful accounts to reserve for recoupable ticketing contract advances that we potentially do not expect to recoup. Our allowance is based on historical loss patterns, the aging of balances and known factors about customers' current financial conditions.

Business Combinations, Goodwill and Intangible Assets, net

We allocate the fair value of purchase consideration to the tangible assets acquired, liabilities assumed and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require management to make significant estimates and assumptions, especially with respect to intangible assets. Significant estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from acquired users, acquired technology, and trade names from a market participant perspective, useful lives and discount rates. Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. During the measurement period, which is one year from the acquisition date, we may record adjustments

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to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings.

We do not amortize goodwill and intangible assets with indefinite useful lives, rather such assets are required to be tested for impairment at least annually or sooner whenever events or changes in circumstances indicate that the assets may be impaired. We perform our goodwill and intangible asset impairment tests in the fourth quarter of each year. As of December 31, 2016, no impairment of goodwill or indefinite-lived intangible assets has been identified. For purposes of testing goodwill for impairment, we established reporting units based on our current reporting structure. As of December 31, 2016, our goodwill was allocated to our Pandora and Ticketfly reporting units.

Acquired finite-lived intangible assets are amortized over the estimated useful lives of the assets, which range from two to eleven years. Acquired finite-lived intangible assets consist primarily of patents, customer relationships, developed technology and trade names resulting from business combinations. We evaluate the recoverability of our intangible assets for potential impairment whenever events or circumstances indicate that the carrying amount of such assets may not be recoverable. Recoverability of these assets is measured by a comparison of the carrying amounts to the future undiscounted cash flows the assets are expected to generate. If such review indicates that the carrying amount of intangible assets is not recoverable, the carrying amount of such assets is reduced to the fair value.

In addition to the recoverability assessment, we routinely review the remaining estimated useful lives of finite-lived intangible assets. If we reduce the estimated useful life assumption for any asset, the remaining unamortized balance would be amortized over the revised estimated useful life. We record the amortization of intangible assets to the financial statement line item in our consolidated statement of operations that the asset directly relates to. To the extent that purchased intangibles are used in revenue generating activities, we record the amortization of these intangible assets to cost of revenue.

Stock-Based Compensation—Restricted Stock Units and Stock Options

Stock-based awards granted to employees, including grants of restricted stock units ("RSUs") and stock options, are recognized as expense in our statements of operations based on their grant date fair value. We recognize stock-based compensation expense on a straight-line basis over the service period of the award, which is generally four years. We estimate the fair value of RSUs at our stock price on the grant date. We generally estimate the grant date fair value of stock options using the Black-Scholes option-pricing model. The Black-Scholes option-pricing model is affected by our stock price on the date of grant, the expected stock price volatility over the expected term of the award, which is based on projected employee stock option exercise behaviors, the risk-free interest rate for the expected term of the award and expected dividends.

Stock-based compensation expense is recorded net of estimated forfeitures in the statement of operations for only those stock-based awards that we expect to vest. We estimate the forfeiture rate based on historical forfeitures of equity awards and adjust the rate to reflect changes in facts and circumstances, if any. We revise our estimated forfeiture rate if actual forfeitures differ from our initial estimates.

We have elected to use the "with and without" approach as described in Accounting Standards Codification 740 - *Income Taxes* in determining the order in which tax attributes are utilized. As a result, we will only recognize a tax benefit from stock-based awards in additional paid-in capital if an incremental tax benefit is realized after all other tax attributes currently available to us have been utilized. In addition, we have elected to account for the indirect effects of stock-based awards on other tax attributes, such as the research tax credit, through the statement of operations.

Stock-Based Compensation—Employee Stock Purchase Plan

In December 2013, our board of directors approved the Employee Stock Purchase Plan ("ESPP"), which was approved by our stockholders at the annual meeting in June 2014. We estimate the fair value of shares to be issued under the ESPP on the first day of the offering period using the Black-Scholes valuation model. The determination of the fair value is affected by our stock price on the first date of the offering period, as well as other assumptions including the risk-free interest rate, the estimated volatility of our stock price over the term of the offering period, the expected term of the offering period and the expected dividend rate. Stock-based compensation expense related to the ESPP is recognized on a straight-line basis over the offering period, net of estimated forfeitures.

Stock-Based Compensation—MSUs

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In March 2015, the compensation committee of the board of directors granted performance awards consisting of market stock units to certain key executives under our 2011 Plan. Specifically, MSUs measure Pandora's total stockholder return ("TSR") performance against that of the Russell 2000 Index across three performance periods.

We have determined the grant-date fair value of the MSUs using a Monte Carlo simulation performed by a third-party valuation specialist. The Monte Carlo simulation model utilizes multiple input variables to estimate the probability that market conditions will be achieved. The variables used in these models are reviewed on an annual basis and adjusted, as needed. We recognize stock-based compensation for the MSUs over the requisite service period using the accelerated attribution method.

Stock-Based Compensation—PSUs

We implemented a performance stock unit program in April 2016 for stock-settled performance-based RSUs to certain key executives.

We have determined the grant-date fair value of the PSUs granted in 2016 using a Monte Carlo simulation performed by a third-party valuation firm. The Monte Carlo simulation model utilizes multiple input variables to estimate the probability that market conditions will be achieved. The variables used in these models are reviewed on an annual basis and adjusted, as needed. We recognize stock-based compensation for the PSUs over the requisite service period, which is approximately four years, using the accelerated attribution method.

Cost of Revenue—Content Acquisition Costs

Cost of revenue—content acquisition costs principally consist of licensing fees paid for streaming music or other content to our listeners. Content acquisition costs are currently calculated using negotiated rates documented in direct license agreements with major and independent record labels, music publishers and PROs. Prior to September 15, 2016, the majority of our content acquisition costs for sound recordings were based on a fee per public performance of a sound recording. Subsequent to September 15, 2016, depending on the applicable service, these license agreements generally require us to pay either a per-performance fee based on the number of sound recordings we transmit, a percentage of revenue associated with the service, or a per-subscriber minimum amount, all generally subject to certain discounts. Prior to January 1, 2016, the majority of our content acquisition costs for the underlying musical works contained in sound recording were based on a percentage of our revenue. From January 1, 2016 until September 15, 2016, the majority of our content acquisition costs for the underlying musical works were based on a percentage of content acquisition costs paid for sound recordings.

Subsequent to September 15, 2016, the majority of our content acquisition costs for the underlying musical works contained in sound recordings are determined in the same manner they were prior to September 15, 2016, but this calculation only applies to the performance rights on our ad-supported service and content acquisition costs for the reproduction rights on our subscription services are determined in accordance with the statutory license set forth in 17 U.S.C. §115. Certain of our direct license agreements are also subject to minimum guarantee payments, some of which are paid in advance and amortized over the minimum guarantee period. For certain content acquisition arrangements, we accrue for estimated content acquisition costs based on the available facts and circumstances and adjust these estimates as more information becomes available. Several of our direct license agreements also include so-called "most favored nations" provisions, which, if triggered, could cause our payments under those agreements to escalate. We recognize an accrual when it is probable that we will make additional payments under these provisions. The expense related to these accruals is recognized in cost of revenue—content acquisition costs.

Prepaid Content Acquisition Costs

Prepaid content acquisition costs are primarily comprised of minimum guarantees under content acquisition agreements. In 2015 and 2016, we signed direct license agreements with major and independent labels, distributors and publishers. Certain of these license agreements include minimum guarantee payments, some of which are paid in advance. These minimum guarantees may take the form of either a contractually obligated minimum over a specified period of time that requires a true-up payment at the end of the specified period if the cumulative payments have not met or exceeded the specified minimum, or cash advance payments made at the beginning of, or at intervals during, the specified period, which cash payments are then recoupable against content acquisition costs over the specified period. On a quarterly basis, we record the greater of the cumulative actual content acquisition costs incurred or the cumulative minimum guarantee based on forecasted usage for the minimum guarantee period. The minimum guarantee period is the period of time that the minimum guarantee relates to, as specified in each agreement, which may be annual or a longer period. The cumulative minimum guarantee, based on forecasted usage considers factors such as listening hours, revenue, subscribers and other terms of each agreement that impact our expected attainment or recoupment of the minimum guarantees on a non-straight line basis.

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Cost of Revenue—Ticketing Service

Cost of revenue—ticketing service consists primarily of ticketing revenue share costs, credit card fees and intangible amortization expense. The majority of the cost is related to revenue share costs which consist of royalties paid to clients for their share of convenience and order processing fees. Payments to clients are recorded as an expense to the extent that the fair value of the identifiable benefit received in the exchange exceeds the amount of the payment to the client. Intangible amortization expense is related to amortization of developed technology.

Cost of Revenue—Other

Cost of revenue—other consists primarily of ad and music serving costs, employee-related and facilities and equipment costs and other costs of ad sales. Ad and music serving costs consist of content streaming, maintaining our internet radio service and creating and serving advertisements through third-party ad servers. We make payments to third-party ad servers for the period the advertising impressions are delivered or click-through actions occur, and accordingly, we record this as a cost of revenue in the related period. Employee-related costs include salaries and benefits associated with supporting music and ad-serving functions. Other costs of ad sales include costs related to music events that are sold as part of certain of our advertising arrangements.

Product Development

Product development consists primarily of employee-related, facilities and equipment costs, including salaries and benefits related to employees in software engineering, music analysis and product management departments, information technology and costs associated with supporting consumer connected-device manufacturers in implementing our service in their products. We incur product development expenses primarily for improvements to our website and the Pandora app, development of new advertising products and development and enhancement of our personalized station generating system. We have generally expensed product development as incurred.

Certain website development and internal use software development costs are capitalized when specific criteria are met. In such cases, the capitalized amounts are amortized over the useful life of the related application once the application is placed in service.

Sales and Marketing

Sales and marketing consists primarily of employee-related and facilities and equipment costs, including salaries, commissions and benefits related to employees in sales, sales support, marketing, advertising and music maker group departments. In addition, sales and marketing expenses include transaction processing commissions on subscription purchases through mobile app stores, external sales and marketing expenses such as brand marketing, advertising, direct response and search engine marketing costs, public relations expenses, costs related to music events, agency platform and media measurement expenses, infrastructure costs and amortization expense related to acquired intangible assets.

We expense the costs of producing advertisements as they are incurred and expense the cost of communicating advertisements at the time the advertisement airs or the event occurs, in each case as sales and marketing expense within the accompanying consolidated statements of operations. During the years ended December 31, 2014, 2015 and 2016, we recorded advertising expenses of \$10.4 million, \$35.1 million and \$45.7 million, respectively.

General and Administrative

General and administrative consists primarily of employee-related and facilities and equipment costs, including salaries, benefits and severance expense for finance, accounting, legal, internal information technology and other administrative personnel. In addition, general and administrative expenses include professional services costs for outside legal and accounting services, infrastructure costs, credit card fees and sales and other tax expense.

Provision for (Benefit from) Income Taxes

Our provision for (benefit from) income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted statutory income tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce net deferred tax assets to the amount expected to be

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realized.

We recognize a tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such positions are then measured based on the largest benefit that has a greater than 50% likelihood of being realized upon settlement. We will recognize interest and penalties related to unrecognized tax benefits in the provision for (benefit from) income taxes in the accompanying statement of operations.

We calculate the current and deferred income tax provision based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed in subsequent years. Adjustments based on filed income tax returns are recorded when identified. The amount of income taxes paid is subject to examination by U.S. federal, state and international tax authorities. The estimate of the potential outcome of any uncertain tax issue is subject to management's assessment of relevant risks, facts and circumstances existing at that time. To the extent that the assessment of such tax positions change, the change in estimate is recorded in the period in which the determination is made.

Net Loss Per Share

Basic net loss per share is computed by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share is computed by giving effect to all potential shares of common stock, including stock options, restricted stock units, market stock units and performance-based RSUs, to the extent dilutive. Basic and diluted net loss per share were the same for each period presented as the inclusion of all potential common shares outstanding would have been anti-dilutive.

Recently Issued Accounting Standards

In March 2016, the Financial Accounting Standards Board ("the FASB") issued Accounting Standards Update No. 2016-09, Compensation - Stock Compensation (Topic 718) ("ASU 2016-09"). ASU 2016-09 requires all income tax effects of awards to be recognized in the income statement when the awards vest or are settled. Additionally, it allows an employer to repurchase more of an employee's shares for tax withholding purposes without triggering liability accounting and to make a policy election to account for forfeitures as they occur. The guidance is effective for fiscal years beginning after December 15, 2016, and interim periods within that fiscal year, although early adoption is permitted. We have completed our initial assessment and expect to adopt ASU 2016-09 as of January 1, 2017 using the prospective method. We do not expect the impact of adopting ASU 2016-09 will be material to the consolidated financial statements and footnote disclosures.

In May 2014, the FASB issued Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers (Topic 606) ("ASU 2014-09"), which amends the existing accounting standards for revenue recognition. ASU 2014-09 outlines a single comprehensive model for entities to use in accounting for revenue. Under the guidance, revenue is recognized when a company transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In March 2016, the FASB issued Accounting Standards Update No. 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net) (ASU 2016-08) which clarifies the implementation guidance on principal versus agent considerations. The guidance includes indicators to assist an entity in determining whether it controls a specified good or service before it is transferred to the customers. The standard may be effective for public entities with annual and interim reporting periods beginning after December 15, 2017. Entities have the option of using either a full retrospective or a modified retrospective approach to adopt the guidance. We expect to adopt ASU 2014-09 as of January 1, 2018 using the full retrospective method. We have completed our initial assessment and do not believe there will be a material impact to our consolidated financial statements for the majority of our advertising and subscription revenue arrangements. We are currently continuing to evaluate the impact that the new principal versus agent guidance may have on certain of our advertising revenue arrangements and on our ticketing service revenue arrangements, and we are continuing to evaluate the expected impact on our business processes, systems and controls. We expect to complete our assessment of the effects of adopting ASU 2014-09 during 2017, and we will continue our evaluation of ASU 2014-09, including how it may impact new arrangements we enter into as well as new or emerging interpretations of the standard, through the date of adoption.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases (Topic 842) ("ASU 2016-02"). ASU 2016-02 requires lessees to put most leases on their balance sheets but recognize expenses on their income statement and eliminates the real estate-specific provisions for all entities. The guidance is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. We have completed our initial assessment and expect to adopt ASU 2016-02 as of January 1, 2018 using the modified retrospective method. We expect the potential impact of adopting ASU 2016-02 to be material to our lease liabilities and assets on our consolidated balance sheets.

Pandora Media, Inc.*Recently Adopted Accounting Standards*

In August 2014, the FASB issued Accounting Standards Update No. 2014-15, Going Concern (Subtopic 205-40) ("ASU 2014-15"). ASU 2014-15 requires management of all entities to evaluate whether there are conditions and events that raise substantial doubt about the entity's ability to continue as a going concern within one year after the financial statements are issued (or available to be issued when applicable). The guidance is effective for annual periods ending after December 15, 2016 and for interim periods thereafter. The adoption of this guidance did not have a material effect on our consolidated financial statements during the year ended December 31, 2016.

3. Composition of Certain Financial Statement Captions*Cash, Cash Equivalents and Investments*

Cash, cash equivalents and investments consisted of the following:

	As of December 31,	
	2015	2016
	(in thousands)	
Cash and cash equivalents		
Cash	\$ 104,361	\$ 144,192
Money market funds	180,021	55,752
Commercial paper	31,089	—
Corporate debt securities	2,000	—
U.S. government and government agency debt securities	17,196	—
Total cash and cash equivalents	<u>\$ 334,667</u>	<u>\$ 199,944</u>
Short-term investments		
Commercial paper	\$ 4,792	\$ —
Corporate debt securities	31,052	37,109
Total short-term investments	<u>\$ 35,844</u>	<u>\$ 37,109</u>
Long-term investments		
Corporate debt securities	\$ 46,369	\$ 6,252
Total long-term investments	<u>\$ 46,369</u>	<u>\$ 6,252</u>
Total cash, cash equivalents and investments	<u>\$ 416,880</u>	<u>\$ 243,305</u>

Our short-term investments have maturities of twelve months or less and are classified as available-for-sale. Our long-term investments have maturities of greater than twelve months and are classified as available-for-sale.

The following tables summarize our available-for-sale securities' adjusted cost, gross unrealized gains, gross unrealized losses and fair value by significant investment category as of December 31, 2015 and 2016.

	As of December 31, 2015			
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Cash equivalents and marketable securities				
Money market funds	\$ 180,021	\$ —	\$ —	\$ 180,021
Commercial paper	35,881	—	—	35,881
Corporate debt securities	79,760	8	(347)	79,421
U.S. government and government agency debt securities	17,198	—	(2)	17,196
Total cash equivalents and marketable securities	<u>\$ 312,860</u>	<u>\$ 8</u>	<u>\$ (349)</u>	<u>\$ 312,519</u>

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Notes to Consolidated Financial Statements - Continued

	As of December 31, 2016			
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value
	(in thousands)			
Cash equivalents and marketable securities				
Money market funds	\$ 55,752	\$ —	\$ —	\$ 55,752
Corporate debt securities	43,413	3	(55)	43,361
Total cash equivalents and marketable securities	\$ 99,165	\$ 3	\$ (55)	\$ 99,113

The following tables present available-for-sale investments by contractual maturity date as of December 31, 2015 and 2016:

	As of December 31, 2015	
	Adjusted Cost	Fair Value
	(in thousands)	
Due in one year or less	\$ 266,205	\$ 266,150
Due after one year through three years	46,655	46,369
Total	\$ 312,860	\$ 312,519

	As of December 31, 2016	
	Adjusted Cost	Fair Value
	(in thousands)	
Due in one year or less	\$ 92,914	\$ 92,861
Due after one year through three years	6,251	6,252
Total	\$ 99,165	\$ 99,113

The following tables summarize our available-for-sale securities' fair value and gross unrealized losses aggregated by investment category and length of time that the individual securities have been in a continuous unrealized loss position as of December 31, 2015 and 2016:

	As of December 31, 2015					
	Twelve Months or Less		More than Twelve Months		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
(in thousands)						
Corporate debt securities	\$ 64,804	\$ (293)	\$ 8,531	\$ (54)	\$ 73,335	\$ (347)
U.S. government and government agency debt securities	16,241	(2)	—	—	16,241	(2)
Total	\$ 81,045	\$ (295)	\$ 8,531	\$ (54)	\$ 89,576	\$ (349)

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Notes to Consolidated Financial Statements - Continued

	As of December 31, 2016					
	Twelve Months or Less		More than Twelve Months		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
	(in thousands)					
Corporate debt securities	\$ 34,257	\$ (52)	\$ 4,099	\$ (3)	\$ 38,356	\$ (55)
Total	<u>\$ 34,257</u>	<u>\$ (52)</u>	<u>\$ 4,099</u>	<u>\$ (3)</u>	<u>\$ 38,356</u>	<u>\$ (55)</u>

Our investment policy requires investments to be investment grade, primarily rated "A1" by Standard & Poor's or "P1" by Moody's or better for short-term investments and rated "A" by Standard & Poor's or "A2" by Moody's or better for long-term investments, with the objective of minimizing the potential risk of principal loss. In addition, the investment policy limits the amount of credit exposure to any one issuer.

The unrealized losses on our available-for-sale securities as of December 31, 2016 were primarily a result of unfavorable changes in interest rates subsequent to the initial purchase of these securities. As of December 31, 2016, we owned 30 securities that were in an unrealized loss position. Based on our cash flow needs, we may be required to sell a portion of these securities prior to maturity. However, we expect to recover the full carrying value of these securities. As a result, no portion of the unrealized losses at December 31, 2016 is deemed to be other-than-temporary and the unrealized losses are not deemed to be credit losses. When evaluating the investments for other-than-temporary impairment, we review factors such as the length of time and extent to which fair value has been below cost basis, the financial condition of the issuer and any changes thereto, and our intent to sell, or whether it is more likely than not we will be required to sell, the investment before recovery of the investment's amortized cost basis. During the year ended December 31, 2016, we did not recognize any impairment charges. During the year ended December 31, 2016, proceeds from the sale of available-for-sale securities were \$3.5 million. We did not recognize a realized gain or loss in connection with these sales.

Accounts Receivable, net

Accounts receivable, net consisted of the following as of December 31, 2015 and 2016:

	As of December 31,	
	2015	2016
	(in thousands)	
Accounts receivable, net		
Accounts receivable	\$ 279,240	\$ 312,900
Allowance for doubtful accounts	(2,165)	(3,633)
Total accounts receivable, net	<u>\$ 277,075</u>	<u>\$ 309,267</u>

The following table summarizes our beginning allowance for doubtful accounts balance for each period, additions, write-offs net of recoveries and the balance at the end of each period for the years December 31, 2014, 2015 and 2016:

Allowance for Doubtful Accounts	Balance at Beginning of Period	Additions	Write-offs, Net of Recoveries	Balance at End of Period
	(in thousands)			
For the year ended December 31, 2014	\$ 1,272	1,064	(1,118)	\$ 1,218
For the year ended December 31, 2015	\$ 1,218	2,085	(1,138)	\$ 2,165
For the year ended December 31, 2016	\$ 2,165	3,508	(2,040)	\$ 3,633

Prepaid Content Acquisition Costs

Prepaid content acquisition costs consist primarily of minimum guarantees under content acquisition agreements. These

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minimum guarantees may take the form of either a contractually obligated minimum over a specified period of time that requires a true-up payment at the end of the specified period if the cumulative payments have not met or exceeded the specified minimum, or cash advance payments made at the beginning of, or at intervals during, the specified period, which cash payments are then recoupable against content acquisition costs over the specified period. On a quarterly basis, we record the greater of the cumulative actual content acquisition costs incurred or the cumulative minimum guarantee based on forecasted usage for the minimum guarantee period. The minimum guarantee period is the period of time that the minimum guarantee relates to, as specified in each agreement, which may be annual or a longer period. The cumulative minimum guarantee, based on forecasted usage considers factors such as listening hours, revenue, subscribers and other terms of each agreement that impact our expected attainment or recoupment of the minimum guarantees on a non-straight line basis. As of December 31, 2015 and 2016, we had prepaid content acquisition costs of \$2.1 million and \$46.3 million.

Prepaid and Other Current Assets

Prepaid and other current assets consisted of the following as of December 31, 2015 and 2016:

	As of December 31,	
	2015	2016
	(in thousands)	
Prepaid and other current assets		
Other current assets	\$ 15,821	\$ 13,858
Prepaid expenses	13,908	13,533
Ticketing contract advances—short term, net	4,092	5,800
Total prepaid and other current assets	<u>\$ 33,821</u>	<u>\$ 33,191</u>

As of December 31, 2015 and 2016, other current assets consisted primarily of \$12.9 million and \$9.1 million in receivables for the reimbursement of costs of leasehold improvements in connection with our operating leases.

Other Long-Term Assets

Other long-term assets consisted of the following as of December 31, 2015 and 2016:

	As of December 31,	
	2015	2016
	(in thousands)	
Other long-term assets		
Ticketing contract advances—long-term	\$ 9,824	\$ 15,395
Long-term security deposits	9,039	9,090
Other	10,929	7,048
Total other long-term assets	<u>\$ 29,792</u>	<u>\$ 31,533</u>

Property and Equipment, net

Property and equipment, net consisted of the following as of December 31, 2015 and 2016:

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	As of December 31,	
	2015	2016
	(in thousands)	
Property and equipment, net		
Servers, computers and other related equipment	\$ 57,309	\$ 85,541
Leasehold improvements	35,947	63,519
Office furniture and equipment	5,470	9,037
Construction in progress	12,550	20,393
Software developed for internal use	10,239	34,983
Total property and equipment	\$ 121,515	\$ 213,473
Less accumulated depreciation and amortization	(55,145)	(89,385)
Total property and equipment, net	\$ 66,370	\$ 124,088

Depreciation expenses totaled \$14.7 million, \$20.4 million and \$34.2 million for the years ended December 31, 2014, 2015 and 2016, respectively. There were no material write-offs during the years ended December 31, 2014, 2015 and 2016.

Software developed for internal use generally has an expected useful life of three to five years from the date placed in service. As of December 31, 2015 and 2016 the net carrying amount was \$6.3 million and \$25.7 million, including accumulated amortization of \$4.0 million and \$9.3 million. Amortization expense for the years ended December 31, 2014, 2015 and 2016 was \$1.1 million, \$2.2 million and \$5.3 million, respectively.

Other Current Liabilities

Other current liabilities consisted of the following as of December 31, 2015 and 2016:

	As of December 31,	
	2015	2016
	(in thousands)	
Other current liabilities		
Ticketing amounts due to clients	\$ 13,104	\$ 20,666
Other	2,528	327
Total other current liabilities	\$ 15,632	\$ 20,993

Ticketing amounts due to clients consists of the face value of tickets sold and the revenue share costs related to tickets sold on the Ticketfly ticketing platform that are owed to clients. The face value of tickets sold on the Ticketfly ticketing platform is collected by Ticketfly and remitted to clients. Revenue share costs owed to clients related to tickets sold on the Ticketfly ticketing platform consist of fees paid to clients for their share of convenience and order processing fees.

Other Long-Term Liabilities

Other long-term liabilities consisted of the following as of December 31, 2015 and 2016:

	As of December 31,	
	2015	2016
	(in thousands)	
Other long-term liabilities		
Long-term deferred rent	\$ 23,662	\$ 24,245
Other	7,200	9,942
Total other long-term liabilities	\$ 30,862	\$ 34,187

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For operating leases that include escalation clauses over the term of the lease, tenant improvement reimbursements and rent abatement periods, we recognize rent expense on a straight-line basis over the lease term including expected renewal periods. The difference between rent expense and rent payments is recorded as deferred rent.

4. Fair Value

We record cash equivalents and short-term investments at fair value. Fair value is an exit price, representing the amount that would be received from the sale of an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. Fair value measurements are required to be disclosed by level within the following fair value hierarchy:

Level 1 — Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Level 2 — Inputs (other than quoted prices included in Level 1) are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument's anticipated life.

Level 3 — Inputs lack observable market data to corroborate management's estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

When determining fair value, whenever possible we use observable market data and rely on unobservable inputs only when observable market data is not available.

The fair value of these financial assets and liabilities was determined using the following inputs at December 31, 2015 and 2016:

	As of December 31, 2015		
	Fair Value Measurement Using		
	Quoted Prices in Active Markets for Identical Instruments (Level 1)	Significant Other Observable Inputs (Level 2)	Total
	(in thousands)		
Assets			
Commercial paper	\$ —	\$ 35,881	\$ 35,881
Corporate debt securities	—	79,421	79,421
U.S. government and government agency debt securities	—	17,196	17,196
Total assets measured at fair value	<u>\$ —</u>	<u>\$ 132,498</u>	<u>\$ 132,498</u>
	As of December 31, 2016		
	Fair Value Measurement Using		
	Quoted Prices in Active Markets for Identical Instruments (Level 1)	Significant Other Observable Inputs (Level 2)	Total
	(in thousands)		
Assets			
Corporate debt securities	\$ —	\$ 43,361	\$ 43,361
Total assets measured at fair value	<u>\$ —</u>	<u>\$ 43,361</u>	<u>\$ 43,361</u>

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Our other cash equivalents and short-term investments are classified as Level 2 within the fair value hierarchy because they are valued using professional pricing sources for identical or comparable instruments, rather than direct observations of quoted prices in active markets. As of December 31, 2015 and 2016, we held no Level 3 assets or liabilities.

Our money market funds are no longer classified within the fair value hierarchy, as the fair values are measured at net asset value using the practical expedient. As of December 31, 2015 and 2016, the fair value of our money market funds were \$180.0 million and \$55.8 million.

Refer to Note 7, "Debt Instruments," for the carrying amount and estimated fair value of our convertible senior notes, which are not recorded at fair value as of December 31, 2016.

5. Business Combinations

Year Ended December 31, 2016

During the year ended December 31, 2016, we completed a business combination that was not material to our consolidated financial statements. We had no material business combinations during the period.

We have included the financial results of the acquired business in our consolidated financial statements from the respective date of acquisition. Pro forma results of operations related to this acquisition during the year ended December 31, 2016 have not been presented because they are not material to our consolidated statements of operations.

The fair value of assets acquired and liabilities assumed from our acquisition was based on a preliminary valuation and our estimates and assumptions are subject to change within the measurement period. Measurement period adjustments that we determine to be material will be applied to the period in which the amounts are determined in our consolidated financial statements.

Year Ended December 31, 2015

Ticketfly

On October 31, 2015, we completed the acquisition of Ticketfly, a leading live events technology company that provides ticketing and marketing software and services for venues and event promoters across North America, for an aggregate purchase price of \$335.3 million of common stock and cash, including 11,193,847 shares of the Company's common stock and approximately \$191.5 million in cash paid by the Company. In addition to the purchase price, unvested options and unvested RSUs of Ticketfly held by Ticketfly employees were converted into unvested options to acquire our common stock and our unvested RSUs.

Upon acquisition, Ticketfly became a wholly owned subsidiary of Pandora. The acquisition was accounted for as a business combination, and the financial results of Ticketfly are included in our consolidated financial statements from the date of acquisition.

The following table summarizes the components of the purchase consideration transferred based on the closing price of \$12.18 per share of our common stock as of the acquisition date:

	(in thousands)
Cash paid by Pandora	\$ 191,479
Cash paid by Ticketfly to option holders	7,238
Common stock (11,193,847 shares at \$12.18 per share) issued by Pandora to selling shareholders	136,342
Fair value of stock options and restricted stock units assumed	10,514
Less: purchase price adjustments	(6,995)
Less: post-combination compensation expense	(3,235)
Purchase consideration	<u>\$ 335,343</u>

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The \$3.2 million of post-combination compensation expense (approximately 0.2 million shares of common stock and \$1.9 million in cash) is subject to continuous employment and is being recognized over the required service period of up to three years.

The following table summarizes the estimated fair values of assets acquired and liabilities assumed as of the date of acquisition:

	(in thousands)	
Current assets	\$	39,809
Long-term assets		15,982
Current liabilities		(21,853)
Long-term liabilities		(6,298)
Deferred tax liability		(1,738)
Intangible assets		76,800
Goodwill		232,641
Total	\$	<u>335,343</u>

The fair value of assets acquired and liabilities assumed from our acquisition of Ticketfly was based on a preliminary valuation and our estimates and assumptions are subject to change. We will recognize any subsequent adjustments to the purchase price prospectively in the period in which the adjustments are determined. A portion of the purchase price related to estimated liabilities for taxes totaling \$5.1 million is held in escrow and may be recovered from this escrow amount. We have recorded a receivable in the amount of \$5.1 million related to these liabilities, as we expect to recover any amounts required to be paid by us from the escrow amount.

The following unaudited pro forma information presents the combined results of operations as if the acquisition had been completed on January 1, 2014, the beginning of the comparable prior annual reporting period. The unaudited pro forma results include: (i) amortization associated with preliminary estimates for the acquired intangible assets; (ii) recognition of the post-combination compensation expense; and (iii) share-based compensation expense related to the RSUs and options granted to Ticketfly employees.

The unaudited pro forma results do not reflect any cost saving synergies from operating efficiencies or the effect of the incremental costs incurred in integrating the two companies. Accordingly, these unaudited pro forma results are presented for informational purpose only and are not necessarily indicative of what the actual results of operations of the combined company would have been if the acquisition had occurred at the beginning of the period presented, nor are they indicative of future results of operations:

	Year ended December 31,	
	2014	2015
	(in thousands)	
Revenue	\$ 975,712	\$ 1,222,452
Net loss	\$ (58,195)	\$ (210,111)

Rdio, Inc. ("Rdio")

On December 23, 2015, we completed the acquisition of technology and intellectual property from Rdio for \$77.5 million, which includes \$2.5 million in additional purchase consideration transferred prior to the closing of the acquisition. Goodwill generated from the assets acquired is primarily attributable to expected synergies that will allow us to broaden our subscription business and roll out our new subscription services, Pandora Plus and Pandora Premium. Pandora Plus launched on September 15, 2016 and Pandora Premium will launch in 2017. We have accounted for this acquisition as a business combination, and the financial results of Rdio are included in our consolidated financial statements from the date of acquisition. As a result of the sale of assets, Rdio discontinued its service as of December 22, 2015.

Other acquisitions

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During the year ended December 31, 2015, we completed the acquisitions of Next Big Sound ("NBS") and KXMZ-FM ("KXMZ"). These acquisitions were not material to our consolidated financial statements, either individually or in the aggregate.

We have included the financial results of Ticketfly, Rdio, NBS and KXMZ in our consolidated financial statements from their respective dates of acquisition. Pro forma results of operations related to our acquisitions, other than Ticketfly, during the year ended December 31, 2015 have not been presented because they are not material to our consolidated statements of operations, either individually or in the aggregate.

The following table summarizes the allocation of estimated fair values of the net assets acquired during the year ended December 31, 2015, including the related estimated useful lives, where applicable:

	Ticketfly		Rdio		Other	
	Estimated fair value	Estimated useful life in years	Estimated fair value	Estimated useful life in years	Estimated fair value	Estimated useful life in years
(in thousands, except for estimated useful life)						
Intangible assets:						
Customer relationships—clients	\$ 37,300	8	\$ —		\$ —	
Developed technology	28,100	5	26,400	2-5	1,550	4
Tradename	10,400	8	1,000	3	320	2
Customer relationships—users	1,000	2	—		940	2
FCC license—broadcast radio	—		—		193	
Tangible assets acquired, net	27,640		1,969		(490)	
Deferred tax liabilities	(1,738)		—		(49)	
Net assets acquired	\$ 102,702		\$ 29,369		\$ 2,464	
Goodwill	232,641		48,131		23,103	
Total fair value consideration	\$ 335,343		\$ 77,500		\$ 25,567	

Goodwill generated from the Ticketfly acquisition is primarily attributable to expected synergies from future growth and strategic advantages in the ticketing industry. Goodwill generated from Rdio is primarily attributable to expected synergies from future growth and strategic advantages in the online streaming music industry. Goodwill generated from all other business acquisitions during the year ended December 31, 2015 is primarily attributed to expected synergies from future growth and, also for NBS, the potential to expand our Artist Marketing Platform. Goodwill generated during the period related to Ticketfly and NBS is not deductible for tax purposes and goodwill generated during the period related to Rdio and KXMZ is deductible for tax purposes.

6. Goodwill and Other Intangible Assets

During the year ended December 31, 2016 we completed a business combination that was not material to our consolidated financial statements. During the year ended December 31, 2016, we made an adjustment to goodwill and deferred tax liabilities as a result of the impact of final pre-acquisition Ticketfly income tax returns filed. The changes in the carrying amount of goodwill for the years ended December 31, 2015 and 2016, are as follows:

	Goodwill
	(in thousands)
Balance as of December 31, 2014	\$ —
Goodwill resulting from business combinations	303,875
Balance as of December 31, 2015	\$ 303,875
Goodwill resulting from business combination and purchase price adjustments	2,816
Balance as of December 31, 2016	\$ 306,691

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The following summarizes information regarding the gross carrying amounts and accumulated amortization of intangibles:

	As of December 31, 2015			As of December 31, 2016		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value	Gross Carrying Amount	Accumulated Amortization	Net Carrying Value
	(in thousands)					
Finite-lived intangible assets						
Patents	\$ 8,030	\$ (1,824)	\$ 6,206	\$ 8,030	\$ (2,556)	\$ 5,474
Developed technology	56,050	(1,265)	54,785	56,162	(13,599)	42,563
Customer relationships—clients	37,300	(777)	36,523	37,399	(5,487)	31,912
Customer relationships—users	1,940	(318)	1,622	1,940	(1,288)	652
Trade names	11,720	(304)	11,416	11,735	(2,104)	9,631
Total finite-lived intangible assets	\$ 115,040	\$ (4,488)	\$ 110,552	\$ 115,266	\$ (25,034)	\$ 90,232
Indefinite-lived intangible assets						
FCC license—broadcast radio	\$ 193	\$ —	\$ 193	\$ 193	\$ —	\$ 193
Total intangible assets	\$ 115,233	\$ (4,488)	\$ 110,745	\$ 115,459	\$ (25,034)	\$ 90,425

Amortization expense of intangible assets was \$0.7 million, \$3.4 million and \$20.5 million for the years ended December 31, 2014, 2015 and 2016, respectively.

The following is a schedule of future amortization expense related to finite-lived intangible assets as of December 31, 2016.

	As of December 31, 2016
	(in thousands)
2017	\$ 20,116
2018	17,654
2019	17,129
2020	15,896
2021	6,690
Thereafter	12,747
Total future amortization expense	\$ 90,232

7. Debt Instruments

Long-term debt, net consisted of the following:

	As of December 31,	
	2015	2016
	(in thousands)	
1.75% convertible senior notes due 2020	\$ 345,000	\$ 345,000
Credit facility	—	90,000
Unamortized discount and deferred issuance costs	(110,423)	(92,753)
Long-term debt, net	\$ 234,577	\$ 342,247

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Convertible Debt Offering

On December 9, 2015, we completed an unregistered Rule 144A offering for the issuance of \$345.0 million aggregate principal amount of our 1.75% Convertible Senior Notes due 2020 (the "Notes"). In connection with the issuance of the Notes, we entered into capped call transactions with the initial purchaser of the Notes and an additional financial institution (the "capped call transactions").

The net proceeds from the sale of the Notes were approximately \$336.5 million, after deducting the initial purchasers' fees and other estimated expenses. We used approximately \$43.2 million of the net proceeds to pay the cost of the capped call transactions.

The Notes are unsecured, senior obligations of Pandora, and interest is payable semi-annually at a rate of 1.75% per annum. The Notes will mature on December 1, 2020, unless earlier repurchased or redeemed by Pandora or converted in accordance with their terms prior to such date. Prior to July 1, 2020, the Notes are convertible at the option of holders only upon the occurrence of specified events or during certain periods as further described below; thereafter, until the second scheduled trading day prior to maturity, the Notes will be convertible at the option of holders at any time.

The conversion rate for the Notes is initially 60.9050 shares of common stock per \$1,000 principal amount of the Notes, which is equivalent to an initial conversion price of approximately \$16.42 per share of our common stock, and is subject to adjustment in certain circumstances.

We will not have the right to redeem the Notes prior to December 5, 2018. We may redeem all or any portion of the Notes for cash at our option on or after December 5, 2018 if the last reported sale price of our common stock is at least 130% of the conversion price then in effect for at least 20 trading days, whether or not consecutive, during any 30 consecutive trading day period, including the last trading day of such period, ending on, and including, any of the five trading days immediately preceding the date on which we provide notice of redemption. Any optional redemption of the Notes will be at a redemption price equal to 100% of the principal amount of the Notes to be redeemed, plus accrued and unpaid interest to, but excluding, the redemption date. The maximum number of shares of common stock the Notes are convertible into is approximately 27.3 million, and is subject to adjustment under certain circumstances.

The Notes will be convertible at the option of holders only under the following circumstances:

- Prior to the close of business on the business day immediately preceding July 1, 2020, during any calendar quarter commencing after the calendar quarter ending on March 31, 2016 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive), during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day;
- Prior to the close of business on the business day immediately preceding July 1, 2020, during the five business day period after any ten consecutive trading day period (the "measurement period") in which the trading price per \$1,000 principal amount of Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate on each such trading day;
- Prior to the business day immediately preceding July 1, 2020, upon the occurrence of specified corporate events; or
- At any time on or after July 1, 2020 until the close of business on the second scheduled trading day immediately preceding the December 1, 2020 maturity date.

Upon the occurrence of a make-whole fundamental change or if we call all or any portion of the Notes for redemption prior to July 1, 2020, we will, in certain circumstances, increase the conversion rate by a number of additional shares for a holder that elects to convert its Notes in connection with such make-whole fundamental change or during the related redemption period.

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The Notes were separated into debt and equity components and assigned a fair value. The value assigned to the debt component is the estimated fair value as of the issuance date of similar debt without the conversion feature. The difference between the cash proceeds and this estimated fair value represents the value which has been assigned to the equity component and recorded as a debt discount. The debt discount is being accreted using the effective interest method over the period from the date of issuance through the December 1, 2020 maturity date.

The initial debt component of the Notes was valued at \$233.5 million, based on the contractual cash flows discounted at an appropriate market rate for non-convertible debt at the date of issuance. The carrying value of the permanent equity component reported in additional paid-in-capital was initially valued at \$103.0 million, which is net of \$2.6 million of fees and expenses allocated to the equity component.

The following table outlines the effective interest rate, contractually stated interest expense and costs related to the amortization of the discount for the Notes:

	Year ended December 31,	
	2015	2016
	(in thousands except for effective interest rate)	
Effective interest rate	10.18%	10.18%
Contractually stated interest expense	\$ 369	\$ 6,046
Amortization of discount	\$ 1,084	\$ 18,315

The capped call transactions are expected to reduce the potential dilution to our common stock and/or offset the cash payments we would be required to make in excess of the principal amount of the converted Notes in the event that the market price of our common stock, as measured under the terms of the capped call transaction, is greater than the strike price of the capped call transaction, with such reduction and/or offset subject to a cap based on the cap price of the capped call transactions. The strike price of the capped call transactions corresponds to the initial conversion price of the Notes and is subject to certain adjustments under the terms of the capped call transactions. The capped call transactions have an initial cap price of \$25.26 per share and are subject to certain adjustments under the terms of the capped call transactions. The capped call transactions have been included as a net reduction to additional paid-in capital within stockholders' equity.

The total estimated fair value of the Notes as of December 31, 2016 was \$357.2 million. The fair value was determined using a methodology that combines direct market observations with quantitative pricing models to generate evaluated prices. We consider the fair value of the Notes to be a Level 2 measurement due to the limited trading activity of the Notes.

The closing price of our common stock was \$13.04 on December 31, 2016, which was less than the initial conversion price for the Notes of approximately \$16.42 per share. As such, the if-converted value of the Notes was less than the principal amount of \$345.0 million.

Credit Facility

In May 2011, we entered into a credit facility and in December 2015, we amended this credit facility to increase the aggregate commitment amount to \$120.0 million, with a maturity date of September 12, 2018. The amendment further increased the minimum liquidity financial covenant requirement from \$5.0 million to \$10.0 million at any time.

The credit facility interest rate on US borrowings is based on an alternate base rate plus 1.00% - 1.25% and Eurocurrency borrowings are based on the LIBO rate plus 2.00% - 2.25%, both of which are per annum rates based on outstanding borrowings. The non-usage fee is 0.375% per annum. The available letters of credit under the amended credit facility is \$15.0 million, and the annual charge for outstanding letters of credit is 2.00% - 2.25% per annum based on outstanding borrowings.

The amount of borrowings available under the credit facility at any time is based on our monthly accounts receivable balance at such time and the amounts borrowed are collateralized by our personal property, including such accounts receivable but excluding intellectual property. The credit facility contains customary events of default, conditions to borrowing and covenants, including restrictions on our ability to dispose of assets, make acquisitions, incur debt, incur liens and make

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distributions to stockholders. During the continuance of an event of a default, the lenders may accelerate amounts outstanding, terminate the credit facility and foreclose on all collateral.

In September 2016, we borrowed \$90.0 million from the credit facility to enhance our working capital position. The amount borrowed is included in long-term debt on our balance sheet. Interest is payable quarterly at the applicable annual interest rate of 3.81% through September 2017. The applicable interest rate will be adjusted in September 2017.

As of December 31, 2015 we had no outstanding borrowings, \$1.1 million in letters of credit outstanding and \$118.9 million of available borrowing capacity under the credit facility. As of December 31, 2016, we had \$90.0 million outstanding borrowings, \$1.2 million in letters of credit outstanding and \$28.8 million of available borrowing capacity under the credit facility.

Total debt issuance costs associated with the 2015 credit facility amendment were \$0.4 million, which are recorded as a debt discount that will be accreted as interest expense over the approximate two-year remaining term of credit facility agreement. For the years ended December 31, 2014, 2015 and 2016, \$0.2 million, \$0.2 million and \$0.4 million of debt issuance costs, respectively, were amortized and included in interest expense.

8. Commitments and Contingencies

Leases

The following is a schedule of future minimum lease payments and future minimum sublease income under noncancelable operating leases as of December 31, 2016:

	As of December 31, 2016	
	Future Minimum Lease Payments	Future Minimum Sublease Income
	(in thousands)	
2017	\$ 26,035	\$ 1,848
2018	25,023	907
2019	24,521	487
2020	21,996	501
2021	13,778	430
Thereafter	43,860	—
Total	\$ 155,213	\$ 4,173

We conduct our operations using leased office facilities in various locations. We lease office space under arrangements expiring through 2027. Rent expense for the years ended December 31, 2014, 2015 and 2016 was \$8.6 million, \$12.2 million and \$20.5 million, respectively.

For operating leases that include escalation clauses over the term of the lease, tenant improvement reimbursements and rent abatement periods, we recognize rent expense on a straight-line basis over the lease term including expected renewal periods. The difference between rent expense and rent payments is recorded as deferred rent in current and long-term liabilities. As of December 31, 2015 and 2016 deferred rent was \$23.9 million and \$27.6 million.

Minimum Guarantees and Other Provisions—Content Acquisition Costs

Certain of our content acquisition agreements contain minimum guarantees and require that we make upfront minimum guarantee payments. Refer to our discussion of these matters in Item 1A—"Risk Factors". During the year ended December 31, 2016, we prepaid \$163.8 million in content acquisition costs related to minimum guarantees, which were offset by amortization of prepaid content acquisition costs of \$117.5 million. As of December 31, 2016, we have future minimum guarantee commitments of \$763.0 million, of which \$355.6 million will be paid in 2017 and the remainder will be paid thereafter. On a

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quarterly basis, we record the greater of the cumulative actual content acquisition costs incurred or the cumulative minimum guarantee based on forecasted usage for the minimum guarantee period. The minimum guarantee period is the period of time that the minimum guarantee relates to, as specified in each agreement, which may be annual or a longer period. The cumulative minimum guarantee, based on forecasted usage considers factors such as listening hours, revenue, subscribers and other terms of each agreement that impact our expected attainment or recoupment of the minimum guarantees on a non-straight line basis.

Several of our content acquisition agreements also include so-called "most favored nations" provisions, which, if triggered, could cause our payments under those agreements to escalate. In addition, record labels, publishers and PROs with whom we have entered into direct license agreements have the right to audit our content acquisition payments, and any such audit could result in disputes over whether we have paid the proper content acquisition costs. However, as of December 31, 2016, we do not believe it is probable that these provisions of our agreements discussed above will, individually or in the aggregate, have a material adverse effect on our business, financial position, results of operations or cash flows.

Legal Proceedings

We have been in the past, and continue to be, a party to various legal proceedings, which have consumed, and may continue to consume, financial and managerial resources. We record a liability when we believe that it is both probable that a loss has been incurred and the amount can be reasonably estimated. Our management periodically evaluates developments that could affect the amount, if any, of liability that we have previously accrued and make adjustments as appropriate. Determining both the likelihood and the estimated amount of a loss requires significant judgment, and management's judgment may be incorrect. We do not believe the ultimate resolution of any pending legal matters is likely to have a material adverse effect on our business, financial position, results of operations or cash flows.

Pre-1972 copyright litigation

On April 17, 2014, UMG Recordings, Inc., Sony Music Entertainment, Capitol Records, LLC, Warner Music Group Corp. and ABKCO Music and Records, Inc. filed suit against Pandora Media Inc. in the Supreme Court of the State of New York. The complaint claims common law copyright infringement and unfair competition arising from allegations that Pandora owes royalties for the public performance of sound recordings recorded prior to February 15, 1972.

In October 2015, the parties reached an agreement ("pre-1972 settlement") whereby we agreed to pay the plaintiffs a total of \$90 million. The settlement resolves all past claims as to our use of pre-1972 recordings owned or controlled by the plaintiffs and enables us, without any additional payment, to reproduce, perform and broadcast such recordings in the United States through December 31, 2016. This agreement was approved by our board of directors and executed on October 21, 2015. As a result of this settlement, cost of revenue—content acquisition costs increased by \$65.4 million in the year ended December 31, 2015, of which \$57.9 million was related to a one-time cumulative charge to cost of revenue - content acquisition costs related to pre-1972 spins played through September 30, 2015. The remaining charge of \$24.6 million was recorded in cost of revenue—content acquisition costs in 2016 based on the allocation of pre-1972 listening throughout the settlement period.

On October 2, 2014, Flo & Eddie Inc. filed a class action suit against Pandora Media Inc. in the federal district court for the Central District of California. The complaint alleges misappropriation and conversion in connection with the public performance of sound recordings recorded prior to February 15, 1972. On December 19, 2014, Pandora filed a motion to strike the complaint pursuant to California's Anti-Strategic Lawsuit Against Public Participation ("Anti-SLAPP") statute, which was appealed to the Ninth Circuit Court of Appeals. The district court litigation is currently stayed pending the Ninth Circuit's decision. On December 8, 2016, the Ninth Circuit heard oral argument on the Anti-SLAPP motion and a decision by the Ninth Circuit on the motion is pending.

Between September 14, 2015 and October 19, 2015, Arthur and Barbara Sheridan filed four separate class action suits against the Company in the federal district courts for the Northern District of California, Southern District of New York, District of New Jersey and Northern District of Illinois. The complaints allege a variety of violations of common law and state copyright statutes, common law misappropriation, unfair competition, conversion, unjust enrichment and violation of rights of publicity arising from allegations that we owe royalties for the public performance of sound recordings recorded prior to February 15, 1972. Currently, the action in California is stayed pending the Ninth Circuit's decision in *Flo & Eddie, Inc. v. Pandora Media, Inc.*, and the actions in New York, New Jersey and Illinois are all stayed or otherwise suspended pending the Second Circuit's decision in *Flo & Eddie et al. v. Sirius XM*.

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Notes to Consolidated Financial Statements - Continued

On September 7, 2016, Ponderosa Twins Plus One et al. filed a class action suit against the Company alleging claims similar to that of *Flo & Eddie, Inc. v. Pandora Media Inc.* The action is currently stayed in the Northern District of California pending the Ninth Circuit's decision in *Flo & Eddie, Inc. v. Pandora Media, Inc.*

The outcome of any litigation is inherently uncertain. Except as noted above, we do not believe it is probable that the final outcome of the matters discussed above will, individually or in the aggregate, have a material adverse effect on our business, financial position, results of operations or cash flows; however, in light of the uncertainties involved in such matters, there can be no assurance that the outcome of each case or the costs of litigation, regardless of outcome, will not have a material adverse effect on our business.

Indemnification Agreements, Guarantees and Contingencies

In the ordinary course of business, we are party to certain contractual agreements under which we may provide indemnifications of varying scope, terms and duration to customers, vendors, lessors, business partners and other parties with respect to certain matters, including, but not limited to, losses arising out of breach of such agreements, services to be provided by us or from intellectual property infringement claims made by third parties. In addition, we have entered into indemnification agreements with directors and certain officers and employees that will require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors, officers or employees. Such indemnification provisions are accounted for in accordance with guarantor's accounting and disclosure requirements for guarantees, including indirect guarantees of indebtedness of others. To date, we have not incurred, do not anticipate incurring and therefore have not accrued for, any costs related to such indemnification provisions.

While the outcome of these matters cannot be predicted with certainty, we do not believe that the outcome of any claims under indemnification arrangements will have a material adverse effect on our consolidated financial position, results of operations or cash flows.

9. Provision for Income Taxes

Loss before provision for income taxes by jurisdiction consists of the following:

	Year ended December 31,		
	2014	2015	2016
	(in thousands)		
Jurisdiction			
Domestic	\$ (24,230)	\$ (163,460)	\$ (328,414)
Foreign	(5,592)	(7,751)	(14,792)
Loss before provision for income taxes	<u>\$ (29,822)</u>	<u>\$ (171,211)</u>	<u>\$ (343,206)</u>

The provision for income taxes consists of the following:

Pandora Media, Inc.

	Year ended December 31,		
	2014	2015	2016
	(in thousands)		
Current			
Federal	\$ —	\$ —	\$ —
State and local	353	9	26
International	231	214	443
Total current income tax expense	<u>\$ 584</u>	<u>\$ 223</u>	<u>\$ 469</u>
Deferred			
Federal	(9,996)	(17,943)	(96,852)
State and local	(6,238)	(2,174)	(10,750)
International	—	—	(1,032)
Valuation allowance	16,234	18,344	107,937
Total deferred income tax expense (benefit)	<u>\$ —</u>	<u>\$ (1,773)</u>	<u>\$ (697)</u>
Total provision for (benefit from) income taxes	<u><u>\$ 584</u></u>	<u><u>\$ (1,550)</u></u>	<u><u>\$ (228)</u></u>

The benefit from income taxes decreased by \$1.3 million during the year ended December 31, 2016 as a result of the tax amortization of indefinite lived assets acquired during the previous period.

The following table presents a reconciliation of the statutory federal rate and our effective tax rate:

	Year ended December 31,		
	2014	2015	2016
U.S. federal taxes at statutory rate	34 %	34%	34%
State taxes, net of federal benefit	(1)	—	—
Permanent differences	4	3	2
Foreign rate differential	(7)	(1)	(2)
Federal and state credits, net of reserve	11	2	2
Impact of acquired DTAs and DTLs	—	1	1
Change in valuation allowance	(55)	(33)	(32)
Change in rate	6	(1)	—
Deferred adjustments	6	(4)	(5)
Effective tax rate	<u>(2)%</u>	<u>1%</u>	<u>—%</u>

The major components of deferred tax assets and liabilities consist of the following:

Pandora Media, Inc.

	As of December 31,	
	2015	2016
	(in thousands)	
Deferred tax assets		
Net operating loss carryforwards	\$ 91,658	\$ 167,961
Tax credit carryforwards	14,204	21,111
Allowances and other	21,802	27,729
Stock options	29,927	32,986
Depreciation and amortization	—	3,704
Total deferred tax assets	\$ 157,591	\$ 253,491
Valuation allowance	(92,772)	(200,797)
Total deferred tax assets, net of valuation allowance	\$ 64,819	\$ 52,694
Deferred tax liabilities		
Convertible debt	(37,580)	(31,592)
Depreciation and amortization	(27,252)	(22,360)
Total deferred tax liabilities	\$ (64,832)	\$ (53,952)
Net deferred tax assets (liabilities)	\$ (13)	\$ (1,258)

During the years ended December 31, 2015 and 2016, we released \$1.8 million and \$1.9 million of our valuation allowance as a result of acquisitions. Deferred tax liabilities were established for the book-tax basis difference related to acquired intangible assets. The net deferred tax liabilities provided an additional source of income to support the realizability of pre-existing deferred tax assets.

At December 31, 2016, we had federal net operating loss carryforwards of approximately \$818.5 million and tax credit carryforwards of approximately \$14.8 million. If realized, approximately \$377.3 million of the net operating loss carryforwards will be recognized as a benefit through additional paid in capital. The federal net operating losses and tax credits expire in years beginning in 2021. At December 31, 2016, we had state net operating loss carryforwards of approximately \$552.2 million which expire in years beginning in 2017. In addition, we had state tax credit carryforwards of approximately \$15.8 million that do not expire and approximately \$5.7 million of credits that will expire beginning in 2024.

At December 31, 2016, we had foreign net operating loss carryforwards of approximately \$8.2 million which expire in years beginning in 2033.

Included in the net operating loss carryforward amounts above are approximately \$62.4 million of federal, \$41.3 million of state and \$3.8 million of foreign net operating loss carryforwards related to acquisitions.

Under Section 382 and 383 of the Internal Revenue Code of 1986, as amended, or 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 attributes, such as research tax credits, to offset its post-change income may be limited. In general, an "ownership change" will occur if there is a cumulative change in our ownership by "5-percent shareholders" that exceeds 50 percentage points over a rolling three-year period. Similar rules may apply under state tax laws. Utilization of our net operating loss and tax credit carryforwards may be subject to annual limitations due to ownership changes. Such annual limitations could result in the expiration of our net operating loss and tax credit carryforwards before utilized.

During the year ended December 31, 2016, our valuation allowance increased by \$108.0 million. At December 31, 2015 and 2016, we maintained a full valuation allowance on our net deferred tax assets. The valuation allowance was determined in accordance with the provisions of Accounting Standards Codification 740 - Accounting for Income Taxes, which requires an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable. Such assessment is required on a jurisdiction by jurisdiction basis. Our history of cumulative losses, along with expected future U.S. losses required that a full valuation allowance be recorded against all net deferred tax assets. We intend to maintain a full valuation allowance on net deferred tax assets until sufficient positive evidence exists to support reversal of the valuation allowance.

At December 31, 2015 and 2016 we have unrecognized tax benefits of approximately \$6.9 million and \$9.4 million. The

Pandora Media, Inc.

increase in our unrecognized tax benefits was primarily attributable to current year activities. A reconciliation of the beginning and ending amounts of unrecognized tax benefits (excluding interest and penalties) is as follows:

	Year ended December 31,	
	2015	2016
	(in thousands)	
Beginning balance	\$ 5,793	\$ 6,864
Increases related to tax positions taken during a prior year	—	—
Decreases related to tax positions taken during a prior year	(74)	(13)
Increases related to tax positions taken during the current year	1,145	2,561
Ending balance	<u>\$ 6,864</u>	<u>\$ 9,412</u>

The total unrecognized tax benefits, if recognized, would not affect the Company's effective tax rate as the tax benefit would increase a deferred tax asset, which is currently offset with a full valuation allowance. We do not anticipate that the amount of existing unrecognized tax benefits will significantly increase or decrease within the next twelve months. Accrued interest and penalties related to unrecognized tax benefits are recorded in the provision for income taxes. We did not have such interest, penalties or tax benefits during the years ended December 31, 2014, 2015 and 2016.

We file income tax returns in the United States, California, other states and international jurisdictions. Tax years 2000 to 2016 remain subject to examination for U.S. federal, state and international purposes. All net operating loss and tax credits generated to date are subject to adjustment for U.S. federal and state purposes. We are not currently under examination in federal, state or international jurisdictions.

10. Stock-based Compensation Plans and Awards

Stock Compensation Plans

In 2000, our board of directors adopted the 2000 Stock Incentive Plan, as amended (the "2000 Plan"). In 2004, our board of directors adopted the 2004 Stock Option Plan (the "2004 Plan"), which replaced the 2000 Plan and provided for the issuance of incentive and non-statutory stock options to employees and other service providers of Pandora. In 2011, our board of directors adopted the Pandora Media, Inc. 2011 Equity Incentive Plan (the "2011 Plan" and, together with the 2000 Plan and the 2004 Plan, the "Plans"), which replaced the 2004 Plan. The Plans are administered by the compensation committee of our board of directors (the "Plan Administrator").

The 2011 Plan provides for the issuance of stock options, restricted stock units and other stock-based awards. Shares of common stock reserved for issuance under the 2011 Plan include 12,000,000 shares of common stock reserved for issuance under the 2011 Plan and 1,506,424 shares of common stock previously reserved but unissued under the 2004 Plan as of June 14, 2011. To the extent awards outstanding as of June 14, 2011 under the 2004 Plan expire or terminate for any reason prior to exercise or would otherwise return to the share reserve under the 2004 Plan, the shares of common stock subject to such awards will instead be available for future issuance under the 2011 Plan. Each year, the number of shares in the reserve under the Plan may be increased by the lesser of 10,000,000 shares, 4.0% of the outstanding shares of common stock on the last day of the prior fiscal year or another amount determined by our board of directors. The 2011 Plan is scheduled to terminate in 2021, unless our board of directors determines otherwise.

Under the 2011 Plan, the Plan Administrator determines various terms and conditions of awards including option expiration dates (no more than ten years from the date of grant), vesting terms (generally over a four-year period) and payment terms. For stock option grants the exercise price is determined by the Plan Administrator, but generally may not be less than the fair market value of the common stock on the date of grant.

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Notes to Consolidated Financial Statements - Continued

In December 2013, our board of directors approved the ESPP, which was approved by our stockholders at the annual meeting in June 2014. The ESPP allows eligible employees to purchase shares of our common stock through payroll deductions of up to 15% of their eligible compensation, subject to a maximum of their eligible compensation, subject to a maximum of \$25,000 per calendar year. Shares reserved for issuance under the ESPP include 4,000,000 shares of common stock. The ESPP provides for six-month offering periods, commencing in February and August of each year. At the end of each offering period employees are able to purchase shares at 85% of the lower of the fair market value of our common stock on the first trading day of the offering period or on the last day of the offering period.

Shares available for grant as of December 31, 2016 and the activity during the year ended December 31, 2016 are as follows:

	Shares Available for Grant		
	Equity Awards	ESPP	Total
Balance as of December 31, 2015	11,723,327	3,319,337	15,042,664
Additional shares authorized	8,998,816	—	8,998,816
Restricted stock units granted	(15,522,398)	—	(15,522,398)
Performance stock units granted	(1,835,250)	—	(1,835,250)
ESPP shares issued	—	(1,254,910)	(1,254,910)
Options forfeited	1,592,289	—	1,592,289
Restricted stock units forfeited	2,587,203	—	2,587,203
Market stock units forfeited	185,714	—	185,714
Share adjustment	614,967	—	614,967
Balance as of December 31, 2016	8,344,668	2,064,427	10,409,095

Employee Stock Purchase Plan ("ESPP")

We estimate the fair value of shares to be issued under the ESPP on the first day of the offering period using the Black-Scholes valuation model. The determination of the fair value is affected by our stock price on the first date of the offering period, as well as other assumptions including the risk-free interest rate, the estimated volatility of our stock price over the term of the offering period, the expected term of the offering period and the expected dividend rate. Stock-based compensation expense related to the ESPP is recognized on a straight-line basis over the offering period, net of estimated forfeitures.

The per-share fair value of shares to be granted under the ESPP is determined on the first day of the offering period using the Black-Scholes option pricing model using the following assumptions:

	Year Ended December 31,		
	2014	2015	2016
Expected life (in years)	0.5	0.5	0.5
Risk-free interest rate	0.06%	0.12%	0.36%
Expected volatility	42%	52%	44%
Expected dividend yield	0%	0%	0%

During the years ended December 31, 2014, 2015 and 2016, we withheld \$6.4 million, \$7.6 million and \$9.7 million in contributions from employees and recognized \$2.1 million, \$3.3 million and \$3.4 million of stock-based compensation expense related to the ESPP, respectively. In the years ended December 31, 2014, 2015 and 2016, 149,378, 538,398 and 1,254,910 shares of common stock were issued under the ESPP at a weighted average purchase price of \$23.95, \$17.80 and \$6.76, respectively.

Stock Options

Pandora Media, Inc.
Notes to Consolidated Financial Statements - Continued

Stock option activity during the year ended December 31, 2016 was as follows:

	Options Outstanding			Aggregate Intrinsic Value (1)
	Outstanding Stock Options	Weighted- Average Exercise Price	Weighted- Average Remaining Contractual Term (in years)	
(in thousands, except share and per share data)				
Balance as of December 31, 2015	12,815,891	\$ 7.15	1.09	\$ 101,151
Granted	—	—		
Exercised	(1,588,781)	2.18		
Forfeited	(1,790,730)	19.02		
Balance as of December 31, 2016	<u>9,436,380</u>	5.74	0.47	<u>77,752</u>
Vested and exercisable as of December 31, 2016	<u>8,108,519</u>	5.40	0.31	<u>68,656</u>
Expected to vest as of December 31, 2016 (2)	<u>1,241,887</u>	\$ 7.94	1.50	<u>\$ 8,403</u>

(1) Amounts represent the difference between the exercise price and the fair value of common stock at each period end for all in the money options outstanding based on the fair value per share of common stock of \$13.41 and \$13.04 as of December 31, 2015 and 2016.

(2) Options expected to vest reflect an estimated forfeiture rate.

The per-share fair value of stock options granted during the years ended December 31, 2014 and 2015 was determined on the grant date using the Black-Scholes option pricing model with the following assumptions. No stock option grants were made during the year ended December 31, 2016.

	Year Ended December 31,		
	2014	2015	2016
Expected life (in years)	6.08	6.08	N/A
Risk-free interest rate	1.71% - 1.93%	1.75% - 1.92%	N/A
Expected volatility	58% - 59%	49% - 50%	N/A
Expected dividend yield	0%	0%	N/A

The expected term of stock options granted represents the weighted average period that the stock options are expected to remain outstanding. We determined the expected term assumption based on our historical exercise behavior combined with estimates of the post-vesting holding period. Expected volatility is based on historical volatility of peer companies in our industry that have similar vesting and contractual terms. The risk-free interest rate is based on the implied yield currently available on U.S. Treasury issues with terms approximately equal to the expected life of the option. We currently have no history or expectation of paying cash dividends on our common stock.

During the years ended December 31, 2014, 2015 and 2016, we recorded stock-based compensation expense related to stock options of approximately \$14.7 million, \$10.7 million and \$13.8 million, respectively.

As of December 31, 2016, there was \$11.2 million of unrecognized compensation cost related to outstanding employee stock options. This amount is expected to be recognized over a weighted-average period of 1.55 years. To the extent the actual forfeiture rate differs from our estimates, stock-based compensation related to these awards could differ from our expectations.

The weighted-average fair value of stock option grants made during the years ended December 31, 2014 and 2015 was \$19.74 and \$9.08.

The aggregate intrinsic value of stock options exercised during the years ended December 31, 2014, 2015 and 2016 was \$169.2 million, \$9.5 million and \$17.3 million, respectively. The total fair value of options vested during the years ended December 31, 2014, 2015 and 2016 was \$16.5 million, \$17.6 million and \$10.2 million, respectively.

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Notes to Consolidated Financial Statements - Continued

Restricted Stock Units

The fair value of the restricted stock units is expensed ratably over the vesting period. RSUs vest annually on a cliff basis over the service period, which is generally four years. During the years ended December 31, 2014, 2015 and 2016, we recorded stock-based compensation expense related to restricted stock units of approximately \$69.9 million, \$96.1 million and \$124.3 million, respectively. As of December 31, 2016, total compensation cost not yet recognized of approximately \$251.0 million related to non-vested restricted stock units, is expected to be recognized over a weighted average period of 2.73 years.

The following table summarizes the activities for our RSUs for the year ended December 31, 2016:

	Number of RSUs	Weighted-Average Grant Date Fair Value
Unvested as of December 31, 2015	17,272,085	\$ 17.91
Granted	15,522,398	10.21
Vested	(7,666,647)	16.94
Forfeited	(2,723,419)	14.84
Unvested as of December 31, 2016	22,404,417	13.26
Expected to vest as of December 31, 2016 (1)	20,325,998	\$ 13.33

(1) RSUs expected to vest reflect an estimated forfeiture rate.

MSUs

In March 2015, the compensation committee of the board of directors granted performance awards consisting of market stock units to certain key executives under our 2011 Plan.

MSUs granted in March 2015 are earned as a function of Pandora's TSR performance measured against that of the Russell 2000 Index across three performance periods:

- One-third of the target MSUs are eligible to be earned for a performance period that is the first calendar year of the MSU grant (the "One-Year Performance Period");
- One-third of the target MSUs are eligible to be earned for a performance period that is the first two calendar years of the MSU grant (the "Two-Year Performance Period"); and
- Any remaining portion of the total potential MSUs are eligible to be earned for a performance period that is the entire three calendar years of the MSU grant (the "Three-Year Performance Period").

For each performance period, a "performance multiplier" is calculated by comparing Pandora's TSR for the period to the Russell 2000 Index TSR for the same period, using the average adjusted closing stock price of Pandora stock, and the Russell 2000 Index, for ninety calendar days prior to the beginning of the performance period and the last ninety calendar days of the performance period. In each period, the target number of shares will vest if the Pandora TSR is equal to the Russell 2000 Index TSR. For each percentage point that the Pandora TSR falls below the Russell 2000 Index TSR for the period, the performance multiplier is decreased by three percentage points. The performance multiplier is capped at 100% for the One-Year and Two-Year Performance Periods. However, the full award is eligible for a payout up to 200% of target, less any shares earned in prior periods, in the Three-Year Performance Period. Specifically, for each percentage point that the Pandora TSR exceeds the Russell 2000 Index TSR for the Three-Year Performance Period, the performance multiplier is increased by 2%. As such, the ability to exceed the target number of shares is determined exclusively with respect to Pandora's three-year TSR during the term of the award.

We have determined the grant-date fair value of the MSUs using a Monte Carlo simulation performed by a third-party valuation firm. We recognize stock-based compensation for the MSUs over the requisite service period, which is approximately three years, using the accelerated attribution method. During the year ended December 31, 2015, we granted 776,000 MSUs at a total grant-date fair value of \$4.3 million. There were no MSUs granted in the year ended December 31, 2016. During the years ended December 31, 2015 and 2016, we recorded stock-based compensation expense from MSUs of approximately \$1.5 million and \$0.7 million. As of December 31, 2016, total compensation cost not yet recognized of approximately \$0.8 million

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Notes to Consolidated Financial Statements - Continued

related to non-vested MSUs is expected to be recognized over a weighted average period of 1.13 years. There was no stock-based compensation expense related to MSUs or shares of common stock issued under the MSU plan in the year ended December 31, 2014.

In February 2016 and January 2017, the compensation committee of the board of directors certified the results of the One-Year Performance Period and Two-Year Performance Period of the 2015 MSU grant, which concluded December 31, 2015 and 2016. During the One-Year Performance Period, our relative TSR declined 26 percentage points relative to the Russell 2000 Index TSR for the period, which resulted in the vesting of the One-Year Performance Period at 22% of the one-third vesting opportunity for the period. During the Two-Year Performance Period, our relative TSR declined 48 percentage points relative to the Russell 2000 Index TSR for the period, which resulted in vesting of the Two-Year Performance Period at 0% of the one-third vesting opportunity for the period.

The following table summarizes the activities for our MSUs for the year ended December 31, 2016:

	Number of MSUs	Weighted-Average Grant Date Fair Value
Unvested as of December 31, 2015	776,000	\$ 5.60
Granted	—	—
Vested	(56,903)	2.57
Forfeited	(185,714)	5.91
Unvested as of December 31, 2016	533,383	5.49
Expected to vest as of December 31, 2016 (1)	398,831	\$ 5.52

(1) MSUs expected to vest reflect an estimated forfeiture rate.

PSUs

In April 2016 and October 2016, the compensation committee of the board of directors granted 2016 Performance Awards consisting of stock-settled performance-based RSUs to certain key executives under our 2011 Plan.

PSUs granted in April 2016 and October 2016 have a vesting period that includes a four-year service period, during which one fourth of the awards will vest after one year and the remainder will vest quarterly thereafter. The PSUs are earned when our trailing average ninety-day stock price is equal to or greater than \$20.00. If the trailing average ninety-day stock price does not equal or exceed \$20.00 on the applicable vesting date, then the portion of the award that was scheduled to vest on such vesting date shall not vest but shall vest on the next vesting date on which the trailing average ninety-day stock price equals or exceeds \$20.00. Any portion of the award that remains unvested as of the final vesting date shall be canceled and forfeited.

We have determined the grant-date fair value of the PSUs granted in April 2016 and October 2016 using a Monte Carlo simulation performed by a third-party valuation firm. We recognize stock-based compensation for the PSUs over the requisite service period, which is approximately four years, using the accelerated attribution method. During the year ended December 31, 2016, we granted 1,835,250 PSUs at a total grant-date fair value of \$9.8 million. During the year ended December 31, 2016, we recorded stock-based compensation expense from PSUs of approximately \$3.8 million. As of December 31, 2016, total compensation cost not yet recognized of approximately \$5.8 million related to non-vested PSUs is expected to be recognized over a weighted average period of 3.16 years. There was no stock-based compensation expense related to PSUs or shares of common stock issued as a result of vesting of PSUs in the years ended December 31, 2014 and 2015.

The following table summarizes the activities for our PSUs for the year ended December 31, 2016:

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	<u>Number of PSUs</u>	<u>Weighted-Average Grant Date Fair Value</u>
Unvested as of December 31, 2015	—	\$ —
Granted	1,835,250	5.33
Vested	—	—
Forfeited	—	—
Unvested as of December 31, 2016	1,835,250	5.33
Expected to vest as of December 31, 2016 (1)	1,658,031	\$ 5.32

(1) PSUs expected to vest reflect an estimated forfeiture rate.

Stock-based Compensation Expense

Stock-based compensation expense related to all employee and non-employee stock-based awards was as follows:

	Year ended December 31,		
	<u>2014</u>	<u>2015</u>	<u>2016</u>
	(in thousands)		
Stock-based compensation expense			
Cost of revenue—Other	\$ 4,414	\$ 5,531	\$ 6,108
Cost of revenue—Ticketing service	—	40	188
Product development	17,546	23,671	30,975
Sales and marketing	42,165	52,747	58,118
General and administrative	22,930	29,656	43,069
Total stock-based compensation expense	<u>\$ 87,055</u>	<u>\$ 111,645</u>	<u>\$ 138,458</u>

During the year ended December 31, 2016, we capitalized \$7.5 million of stock-based compensation as internal use software and website development costs.

During the year ended December 31, 2016, we recorded \$8.7 million related to accelerated awards in connection with executive severance. The majority of this amount is included in the general and administrative line item of our consolidated statement of operations.

11. Common Stock and Net Loss per Share

Each share of common stock has the right to one vote per share. The holders of common stock are also entitled to receive dividends as and when declared by our board of directors, whenever funds are legally available.

Net Loss per Share

Basic net loss per share is computed by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period.

Diluted net loss per share is computed by giving effect to all potential shares of common stock, including stock options, restricted stock units, market stock units and performance-based RSUs, to the extent dilutive. Basic and diluted net loss per share were the same for the years ended December 31, 2014, 2015 and 2016, as the inclusion of all potential common shares outstanding would have been anti-dilutive.

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Notes to Consolidated Financial Statements - Continued

The following table sets forth the computation of historical basic and diluted net loss per share:

	Year Ended December 31,		
	2014	2015	2016
	(in thousands except per share amounts)		
Numerator			
Net loss	\$ (30,406)	\$ (169,661)	\$ (342,978)
Denominator			
Weighted-average common shares outstanding used in computing basic and diluted net loss per share	205,273	213,790	230,693
Net loss per share, basic and diluted	\$ (0.15)	\$ (0.79)	\$ (1.49)

The following potential common shares outstanding were excluded from the computation of diluted net loss per share because including them would have been anti-dilutive:

	As of December 31, 2014	As of December 31, 2015	As of December 31, 2016
	(in thousands)		
Options to purchase common stock	10,980	12,816	9,436
Restricted stock units	11,024	17,272	22,404
Performance awards*	—	776	2,369
Total common stock equivalents	22,004	30,864	34,209

*Includes potential common shares outstanding for MSUs and PSUs

On December 9, 2015, we completed an offering of our 1.75% convertible senior notes due 2020. Under the treasury stock method, the Notes will generally have a dilutive impact on earnings per share if our average stock price for the period exceeds approximately \$16.42 per share of our common stock, the conversion price of the Notes. For the period from the issuance of the offering of the Notes through December 31, 2016, the conversion feature of the Notes was anti-dilutive.

In connection with the pricing of the Notes, we entered into capped call transactions which increase the effective conversion price of the Notes, and are designed to reduce potential dilution upon conversion of the Notes. Since the beneficial impact of the capped call is anti-dilutive, it is excluded from the calculation of earnings per share. Refer to Note 7 "Debt Instruments" for further details regarding our Notes.

12. Segment Data and Revenue by Geographic Area Pandora Media, Inc.

Segment Data

We report segment information based on the “management” approach. The management approach designates the internal reporting used by management for making decisions and assessing performance as the source of our reportable operating segments.

Our chief operating decision maker (the "CODM"), our Chief Executive Officer, manages our operations on a consolidated basis for purposes of allocating resources. When evaluating our financial performance, the CODM reviews revenue and gross profit on a disaggregated basis for our internet radio and ticketing services, while all other financial information is reviewed on a consolidated basis. Such evaluation excludes operating expenses and general corporate-level costs that are not specific to either of the reportable segments and are managed separately at the corporate level. The general corporate-level expenses relate to executive management, finance and accounting, human resources, legal, training and development, various nonrecurring charges and other separately managed general and administrative costs.

Our two operating segments, which are the same as our two reportable segments, are as follows:

Pandora—Internet Radio Service

Pandora is the world’s most powerful music discovery platform, offering a personalized experience for each of our listeners wherever and whenever they want to listen to music—whether through earbuds, car speakers or live on stage. Pandora is available as an ad-supported service or as a subscription service, which we call Pandora Plus. The majority of our listener hours occur on mobile devices, with the majority of our revenue generated from advertising on our ad-supported service on these devices. We offer both local and national advertisers the opportunity to deliver targeted messages to our listeners using a combination of audio, display and video advertisements. We also generate revenue from subscriptions to Pandora Plus.

Ticketing Service

We operate our ticketing service through our subsidiary Ticketfly, a leading live events technology company that provides ticketing and marketing software and services for clients, which are venues and event promoters, across North America. Ticketfly's ticketing, digital marketing and analytics software helps promoters book talent, sell tickets and drive in-venue revenue, while Ticketfly's consumer tools help fans find and purchase tickets to events. Tickets are primarily sold through the Ticketfly platform but are also sold through other channels such as box offices.

The measurement basis of segment profit or loss is gross profit, as operating expenses and working capital are all managed on an aggregate basis. Total segment assets have not been presented as segment assets are not reported to, or used by management to allocate resources to or assess performance of the segments.

The following table provides the financial performance of our reportable segments, including a reconciliation of gross profit from segment operations to gross profit from total operations:

	Year ended December 31,					
	2015			2016		
	Pandora	Ticketfly (1)	Total	Pandora	Ticketfly	Total
	(in thousands)			(in thousands)		
Revenues	\$ 1,153,876	\$ 10,167	\$ 1,164,043	\$ 1,298,276	\$ 86,550	\$ 1,384,826
Cost of revenues	690,220	7,121	697,341	835,642	59,280	894,922
Gross profit	\$ 463,656	\$ 3,046	\$ 466,702	\$ 462,634	\$ 27,270	\$ 489,904
Operating and other expenses			(636,363)			(832,882)
Net loss			<u>\$ (169,661)</u>			<u>\$ (342,978)</u>

(1) Includes two months of revenue and expense for Ticketfly from the acquisition date of October 31, 2015 to December 31, 2015.

The following table provides depreciation and amortization costs included in costs of revenues by segment included in the consolidated statements of operations:

Pandora Media, Inc.

	Year ended December 31,					
	2015			2016		
	Pandora	Ticketfly (1)	Total	Pandora	Ticketfly	Total
	(in thousands)			(in thousands)		
Depreciation and amortization	\$ 7,231	\$ 949	\$ 8,180	\$ 8,667	\$ 5,729	\$ 14,396

(1) Includes two months of depreciation and amortization expense for Ticketfly from the acquisition date of October 31, 2015 to December 31, 2015.

Revenue by Geographic Area

The following table sets forth revenue by geographic area:

Revenue by geographic area	Year ended December 31,		
	2014	2015	2016
	(in thousands)		
United States	\$ 917,008	\$ 1,155,210	\$ 1,366,330
International	3,794	8,833	18,496
Total revenue	<u>\$ 920,802</u>	<u>\$ 1,164,043</u>	<u>\$ 1,384,826</u>

No individual foreign country represented a material portion of our consolidated revenue during the years ended December 31, 2014, 2015 and 2016.

13. Selected Quarterly Financial Data (unaudited)

Pandora Media, Inc.

Quarter ended

	March 31, 2015	June 30, 2015	September 30, 2015	December 31, 2015	March 31, 2016	June 30, 2016	September 30, 2016	December 31, 2016
(in thousands, except per share data)								
Total revenue (1)	\$ 230,764	\$ 285,560	\$ 311,562	\$ 336,157	\$ 297,305	\$ 343,022	\$ 351,901	\$ 392,598
Cost of revenue								
Cost of revenue— Content acquisition costs	126,023	130,134	211,272	142,933	171,264	176,633	174,334	212,122
Cost of revenue— Other	16,233	20,043	21,414	22,168	20,999	24,833	25,556	29,901
Cost of revenue— Ticketing service (1)	—	—	—	7,121	14,646	15,259	15,318	14,057
Total cost of revenue	142,256	150,177	232,686	172,222	206,909	216,725	215,208	256,080
Gross profit	88,508	135,383	78,876	163,935	90,396	126,297	136,693	136,518
Operating expenses								
Product development (1)	15,875	18,742	21,849	28,115	35,846	33,808	33,657	38,325
Sales and marketing (1)	84,274	94,035	107,286	112,574	117,622	123,812	116,475	133,546
General and administrative (1)	36,754	38,812	35,603	42,774	46,296	40,562	41,768	46,946
Total operating expenses	136,903	151,589	164,738	183,463	199,764	198,182	191,900	218,817
Loss from operations	(48,395)	(16,206)	(85,862)	(19,528)	(109,368)	(71,885)	(55,207)	(82,299)
Net loss	(48,257)	(16,065)	(85,930)	(19,409)	(115,102)	(76,333)	(61,534)	(90,009)
Net loss per share, basic	(0.23)	(0.08)	(0.40)	(0.09)	(0.51)	(0.33)	(0.27)	(0.38)
Net loss per share, diluted	\$ (0.23)	\$ (0.08)	\$ (0.40)	\$ (0.09)	\$ (0.51)	\$ (0.33)	\$ (0.27)	\$ (0.38)

(1) Includes two months of revenue and expense for Ticketfly from the acquisition date of October 31, 2015 to December 31, 2015.

Pandora Media, Inc.**14. Subsequent Event**

On January 12, 2017, we announced a reduction in force plan affecting approximately 7% of our U.S. employee base, excluding Ticketfly. Our Board of Directors approved the plan on December 15, 2016 and the affected employees were informed of the plan on January 12, 2017. The reduction in force will allow us to focus and realign existing resources on execution and make further investments in product innovation to drive advertising revenue and subscription growth. We expect the reduction in force plan to be completed by the end of the first quarter of 2017.

In connection with the reduction in force plan, we estimate we will incur approximately \$5.0 million to \$7.0 million of cash expenditures, substantially all of which are related to employee severance and benefits costs. Total reduction in force costs are estimated at \$4.0 million to \$6.0 million, which is lower than cash reduction in force costs due to a credit related to non-cash stock-based compensation expense reversals for unvested equity awards. We expect to recognize these pre-tax reduction in force charges in the first quarter of 2017.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURES

None.

ITEM 9A. CONTROLS AND PROCEDURES**Evaluation of Disclosure Controls and Procedures**

We maintain "disclosure controls and procedures," as such term is defined in Rule 13a-15(e) under the Exchange Act, that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms, and that such information is accumulated and communicated to our management, including our chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, management recognizes that disclosure controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the disclosure controls and procedures are met. Additionally, in designing disclosure controls and procedures, our management necessarily was required to apply judgment in evaluating the cost-benefit relationship of possible disclosure controls and procedures. Based on their evaluation at the end of the period covered by this Annual Report on Form 10-K, our chief executive officer and chief financial officer have concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of December 31, 2016.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of internal control effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management has assessed the effectiveness of the internal control over financial reporting as of December 31, 2016. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control-Integrated Framework (2013 framework).

Based on the results of this evaluation, our management has concluded that our internal control over financial reporting was effective as of December 31, 2016.

The effectiveness of our internal control over financial reporting as of December 31, 2016 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report which is included in this Annual Report on Form 10-K.

Changes in Internal Control over Financial Reporting

Pandora Media, Inc.

There have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the year ended December 31, 2016, that have materially affected, or are reasonably likely to materially affect our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information required by this Item regarding our directors and executive officers is incorporated by reference to the sections of our proxy statement to be filed with the SEC in connection with our 2017 Annual Meeting of Stockholders (the "Proxy Statement") entitled "Election of Class III Directors" and "Management."

Information required by this Item regarding our corporate governance, including our audit committee and code of business conduct and ethics, is incorporated by reference to the sections of the Proxy Statement entitled "Corporate Governance" and "Board of Directors."

Information required by this Item regarding compliance with Section 16(a) of the Exchange Act required by this Item is incorporated by reference to the section of the Proxy Statement entitled "Section 16(a) Beneficial Ownership Reporting Compliance."

ITEM 11. EXECUTIVE COMPENSATION

Information required by this Item is incorporated by reference to the sections of the Proxy Statement entitled "Executive Compensation," "Board of Directors—Director Compensation," "Corporate Governance—Compensation Committee Interlocks and Insider Participation."

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information regarding security ownership of certain beneficial owners and management is incorporated by reference to the section of the Proxy Statement entitled "Security Ownership of Certain Beneficial Owners and Management."

Information regarding our stockholder approved and non-approved equity compensation plans is incorporated by reference to the section of the Proxy Statement entitled "Equity Compensation Plan Information."

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required by this Item is incorporated by reference to the sections of the Proxy Statement entitled "Certain Relationships and Related-Party Transactions" and "Corporate Governance—Director Independence."

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information required by this Item is incorporated by reference to the section of the Proxy Statement entitled "Ratification of Appointment of Independent Registered Public Accounting Firm."

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are included as part of this Annual Report on Form 10-K.

1. Index to Financial Statements

Reports of Ernst & Young LLP, Independent Registered Public Accounting Firm
Consolidated Balance Sheets
Consolidated Statements of Operations
Consolidated Statements of Comprehensive Loss
Consolidated Statements of Stockholders' Equity
Consolidated Statements of Cash Flows
Notes to Consolidated Financial Statements

2. Financial Statement Schedules

All other schedules are omitted as the information required is inapplicable or the information is presented in the consolidated financial statements or the related notes.

3. Exhibits

See the Exhibit Index immediately following the signature page of this Annual Report on Form 10-K.

SIGNATURES

Pursuant to the requirements Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on February 15, 2017.

PANDORA MEDIA, INC.

By: /s/ TIM WESTERGREN

Name: Tim Westergren

Title: *Chief Executive Officer (Principal Executive Officer) and Director*

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Tim Westergren, Michael S. Herring and Stephen Bené and each of them, his or her true and lawful attorneys-in-fact and agents, with full power to act separately and full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or either of them or his or her or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1934, as amended, this report has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ TIM WESTERGREN</u> Tim Westergren	Chief Executive Officer (Principal Executive Officer) and Director	February 15, 2017
<u>/s/ MICHAEL S. HERRING</u> Michael S. Herring	President and Chief Financial Officer (Duly Authorized Officer and Principal Financial and Accounting Officer)	February 15, 2017
<u>/s/ ROGER FAXON</u> Roger Faxon	Director	February 15, 2017
<u>/s/ JAMES M. P. FEUILLE</u> James M. P. Feuille	Director	February 15, 2017
<u>/s/ PETER GOTCHER</u> Peter Gotcher	Director	February 15, 2017
<u>/s/ TIMOTHY LEIWEKE</u> Timothy Leiweke	Director	February 15, 2017
<u>/s/ ELIZABETH A. NELSON</u> Elizabeth A. Nelson	Director	February 15, 2017
<u>/s/ MICKIE ROSEN</u> Mickie Rosen	Director	February 15, 2017
<u>/s/ ANTHONY VINCIQUERRA</u> Anthony Vinciquerra	Director	February 15, 2017

EXHIBIT INDEX

Exhibit No.	Exhibit Description	Incorporated by Reference					Filed Herewith
		Form	File No.	Exhibit	Filing Date	Filed By	
2.01	Agreement and Plan of Merger, dated as of October 7, 2015, among the Company, Ticketfly, Inc., Tennessee Acquisition Sub I, Inc., Tennessee Acquisition Sub II, LLC and Shareholder Representative Services LLC	8-K/A	001-35198	2.1	10/8/2015		
2.02	Asset Purchase Agreement, dated as of November 16, 2015, by and between Pandora Media, Inc. and Rdio, Inc.	10-K	001-35198	2.02	2/18/2016		
3.01	Amended and Restated Certificate of Incorporation	S-1/A	333-172215	3.1	5/4/2011		
3.02	Certificate of Amendment to the Amended and Restated Certificate of Incorporation	10-Q	001-35198	3.02	7/26/2016		
3.03	Amended and Restated Bylaws	S-1/A	333-172215	3.2	5/4/2011		
3.04	Certificate of Amendment to the Amended and Restated Bylaws	10-Q	001-35198	3.04	7/26/2016		
4.01	Fifth Amended and Restated Investor Rights Agreement, by and among Pandora Media, Inc. and the investors listed on Exhibit A thereto, dated May 20, 2010, as amended	S-1/A	333-172215	4.2	2/22/2011		
4.02	Indenture, dated as of December 9, 2015, between Pandora Media, Inc. and Citibank, N.A., as Trustee	8-K	001-35198	4.1	12/9/2015		
4.03	Form of 1.75% Convertible Senior Note due 2020 (included in Exhibit 4.02)						
10.01†	2011 Equity Incentive Plan and Form of Stock Option Agreement under 2011 Equity Incentive Plan	S-1/A	333-172215	10.1	5/26/2011		
10.02†	Ticketfly, Inc. 2008 Stock Plan	S-8	333-208005	99.1	11/13/2015		
10.03†	2004 Stock Plan, as amended, and Forms of Stock Option Agreement and Restricted Stock Purchase Agreement under 2004 Stock Plan	S-1/A	333-172215	10.3	2/22/2011		
10.04†	2000 Stock Incentive Plan, as amended, and Forms of NSO Stock Option Agreement and ISO Stock Option Agreement under 2000 Stock Plan	S-1/A	333-172215	10.4	2/22/2011		
10.05†	Form of Indemnification Agreement by and between Pandora Media, Inc. and each of its executive officers and its directors not affiliated with an investment fund	S-1/A	333-172215	10.5	2/22/2011		
10.06†	Form of Indemnification Agreement by and between Pandora Media, Inc. and each of its directors affiliated with an investment fund	S-1/A	333-172215	10.5A	2/22/2011		
10.7†	Employment Agreement with Tim Westergren, dated April 28, 2004	S-1/A	333-172215	10.7	2/22/2011		
10.9†	Offer Letter with John Trimble, dated February 18, 2009	S-1/A	333-172215	10.1	2/22/2011		
10.10	Office Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated July 23, 2009	S-1/A	333-172215	10.12	2/22/2011		
10.10A	First Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated April 13, 2010	S-1/A	333-172215	10.12A	2/22/2011		
10.10B	Second Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated June 16, 2010	S-1/A	333-172215	10.12B	2/22/2011		
10.10C	Third Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated December 15, 2010	10-Q	001-35198	10.12C	9/4/2012		
10.10D	Fourth Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated March 10, 2011	10-Q	001-35198	10.12D	9/4/2012		

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10.10E	Fifth Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated July 1, 2011	10-Q	001-35198	10.12E	9/4/2012
10.10F	Sixth Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated September 27, 2011	10-Q	001-35198	10.12F	9/4/2012
10.10G	Seventh Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated July 12, 2012	10-Q	001-35198	10.12G	9/4/2012
10.10H	Eighth Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated February 1, 2013	10-Q	001-35198	10.12H	5/29/2013
10.10I	Ninth Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated August 15, 2013	10-Q	001-35198	10.12I	10/28/2014
10.10J	Tenth Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated October 1, 2014	10-Q	001-35198	10.12J	10/28/2014
10.10K	Sublease between Cerexa, Inc. and Pandora Media, Inc. dated January 1, 2015	10-K	001-35198	10.10K	2/11/2015
10.10L	First Lease Modification and Term Extension and Additional Space Agreement between 125 Park Owner LLC and Pandora Media, Inc., dated July 22, 2015	10-Q	001-35198	10.10L	7/24/2015
10.10M	Eleventh Amendment to Lease between CIM/Oakland Center 21, LP and Pandora Media, Inc., dated July 28, 2015*	10-K	001-35198	10.10M	2/18/2016
10.13	Credit Agreement among Pandora Media, Inc., the Lenders party thereto and JPMorgan Chase Bank, N.A. as Administrative Agent, dated as of May 13, 2011	S-1/A	333-172215	10.17	6/10/2011
10.13A	Amendment and Restatement Agreement to Credit Agreement among Pandora Media, Inc., the Lenders party thereto and JPMorgan Chase Bank, N.A. as Administrative Agent, dated as of September 12, 2013	10-Q	001-35198	10.15	11/26/2013
10.13B	Amendment No. 1 to Credit Agreement, as amended and restated as of September 12, 2013, among Pandora Media, Inc., the Lenders party thereto and JPMorgan Chase Bank, N.A. as Administrative Agent, dated as of December 2, 2015	10-K	001-35198	10.13B	2/18/2016
10.13C	Amendment and Restatement Agreement to Credit Agreement, as previously amended and restated as of September 12, 2013, among Pandora Media, Inc., the Lenders party thereto and JPMorgan Chase Bank, N.A. as Administrative Agent, dated as of December 21, 2015	10-K	001-35198	10.13C	2/18/2016
10.14†	Form of Restricted Stock Unit Agreement under the 2011 Equity Incentive Plan	10-Q	001-35198	10.01	9/2/2011
10.15†	Amended Executive Severance and Change in Control Policy	10-K	001-35198	10.18	3/19/2012
10.16†	Offer Letter with Simon Fleming-Wood, dated August 5, 2011	10-Q	001-35198	10.19	6/4/2012
10.18†	2015 Corporate Incentive Plan	10-Q	001-35198	10.17D	4/27/2015
10.19†	2016 Corporate Incentive Plan	10-Q	001-35198	10.19	5/2/2016
10.19A†	Amended and Restated 2016 Corporate Incentive Plan				X
10.20†	Australian Form of Restricted Stock Unit Agreement under the 2011 Equity Incentive Plan	10-K	001-35198	10.22	3/18/2013
10.21†	Offer Letter with Michael Herring, dated December 21, 2012	10-K	001-35198	10.23	3/18/2013
10.22†	New Zealand Form of Restricted Stock Unit Agreement under the 2011 Equity Incentive Plan	10-Q	001-35198	10.24	5/29/2013

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10.23†	Offer Letter with Brian McAndrews, dated September 11, 2013	10-Q	001-35198	10.25	11/26/2013	
10.24†	2014 Employee Stock Purchase Plan	S-8	333-193612	99.2	1/28/2014	
10.25†	Offer Letter with Sara Clemens, dated January 22, 2014	10-Q	001-35198	10.25	4/27/2015	
10.26†	Offer Letter with Stephen Bené, dated October 14, 2014	10-Q	001-35198	10.26	4/27/2015	
10.27†	Offer Letter with Christopher Phillips, dated October 20, 2014	10-Q	001-35198	10.27	4/27/2015	
10.28†	Form of MSU Grant Notice and Award Agreement	10-Q	001-35198	10.28	4/27/2015	
10.29	Settlement Agreement by and among Pandora Media, Inc. and Capitol Records, LLC et al.**	10-Q	001-35198	10.29	10/26/2015	
10.30	Capped call transaction confirmation, dated as of December 3, 2015, by and between Morgan Stanley & Co. LLC and Pandora Media, Inc.	8-K	001-35198	10.1	12/9/2015	
10.31	Additional capped call transaction confirmation, dated as of December 4, 2015, by and between Morgan Stanley & Co. LLC and Pandora Media, Inc.	8-K	001-35198	10.2	12/9/2015	
10.32	Capped call transaction confirmation, dated as of December 3, 2015, by and between JPMorgan Chase Bank, National Association, London Branch and Pandora Media, Inc.	8-K	001-35198	10.3	12/9/2015	
10.33	Additional capped call transaction confirmation, dated as of December 4, 2015, by and between JPMorgan Chase Bank, National Association, London Branch and Pandora Media, Inc.	8-K	001-35198	10.4	12/9/2015	
10.34†	Severance and Release Agreement between Simon Fleming-Wood and Pandora Media, Inc., dated April 3, 2016	10-Q	001-35198	10.34	5/2/2016	
10.35†	Severance and Release Agreement between Brian McAndrews and Pandora Media, Inc., dated April 13, 2016	10-Q	001-35198	10.35	5/2/2016	
10.36†	Form of Performance Award Agreement under the 2011 Equity Incentive Plan	10-Q	001-35198	10.01	7/26/2016	
23.01	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm					X
24.01	Power of Attorney (included on signature page of this Annual Report on Form 10-K)					X
31.01	Certification of the Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act					X
31.02	Certification of the Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act					X
32.01	Certification of the Principal Executive Officer and Principal Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act					X
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document					X
101.SCH	XBRL Taxonomy Schema Linkbase Document					X
101.CAL	XBRL Taxonomy Calculation Linkbase Document					X
101.DEF	XBRL Taxonomy Definition Linkbase Document					X
101.LAB	XBRL Taxonomy Labels Linkbase Document					X
101.PRE	XBRL Taxonomy Presentation Linkbase Document					X

† Indicates management contract or compensatory plan.

Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. A copy of any omitted schedule or exhibit will be furnished on a supplemental basis to the Securities and Exchange Commission upon request; provided, however that we may request confidential treatment pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended, for any schedules or exhibits so
* furnished.

Confidential treatment requested as to certain portions of this exhibit, which portions have been omitted and submitted separately to the Securities and Exchange Commission.
**