Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of **DETERMINATION OF RATES AND TERMS FOR PREEXISTING SUBSCRIPTION AND SATELLITE DIGITAL AUDIO RADIO SERVICES**	))))))))	**Docket No. 2011-1** **CRB PSS/Satellite II**

Written Rebuttal Testimony of Roger G. Noll

(On behalf of Sirius XM Radio Inc.)

Previously I submitted written and live direct testimony in this matter. My educational background, professional experience and publications are described in my prior testimony.

ASSIGNMENT

Attorneys for Sirius XM have asked me to review and, where necessary, respond to the testimony of the witnesses for SoundExchange in this proceeding. To undertake this assignment, I read the direct written and live expert testimonies of Professor Janusz Ordover and Mr. J. Gregory Sidak, the direct written and live testimonies of the industry representatives, Jonathan Bender, Stephen Bryan, Charles Ciongoli, Raymond M. Hair and Darius van Arman, and the *Proposed Rates and Terms of SoundExchange, Inc*. I also considered additional material that is cited in footnotes in this report or is listed in Appendix A.

This report contains the results of my analysis. Because SoundExchange is expected to submit additional testimony, I reserve the right to alter my analysis and conclusions on the basis of the evidence and analysis that is contained in that testimony.

SUMMARY AND CONCLUSIONS

After reviewing the testimony and other submissions by SoundExchange and additional information that is cited in this testimony, I see no reason to change the analysis and conclusions in my direct testimony. This section summarizes the analysis in this report, and subsequent sections fill in the details of my analysis.

Appropriate Benchmarks

I disagree with Professor Ordover that the appropriate benchmarks for setting a statutory rate for satellite digital audio radio services (SDARS) are the rates that are paid by mobile interactive music services. I continue to believe that the most appropriate benchmarks are the direct licenses between Sirius XM and independent record labels. As of July 1, 2012, Sirius XM has negotiated 85 direct licenses with independent labels. The independent labels that have negotiated licenses offer a broad range of content that is comparable to the content offered by other labels. The direct licenses cover about a third of the most important independent labels and their combined play share on Sirius XM is more than 70 percent of the play share of the smallest major, EMI.

There is no basis for believing, as SoundExchange has suggested, that the royalty rates for these independent labels are below the rates that would be obtained by other labels, including the majors, in a competitive market. Current industry practice is that rates do not depend on the size of the label. Differences in royalty payments among labels arise primarily from differences in the size of the catalog and the frequency with which the catalog is played, not from differences in royalty rates.

Among Internet music services, the most appropriate benchmarks are not the rates in licenses for interactive services, as proposed by SoundExchange, but the rates in negotiated direct license agreements between record distribution companies and non-interactive subscription mobile Internet music services that have the least amount of user control of content. While these services provide the best benchmarks for SDARS rates among all Internet music services, the royalty rates for these services are higher than the appropriate rates for SDARS because even the least customized mobile Internet music services have features that satellite services do not offer. Notwithstanding these enhanced features, the negotiated rates for these services yield royalty payments that are comparable to the payments arising from the rates in the direct licenses that have been negotiated between Sirius XM and independent labels.

The Proposed Interactive Services Benchmark

Professor Ordover's proposed benchmark is the negotiated rates between the four major record companies and interactive mobile Internet music services. The problems with using these rates as benchmarks are: (1) the interactive services licenses grant broader rights than the performance rights in the statutory SDARS license; and (2) the interactive rates apply to services that differ from satellite radio services in several commercially significant ways that affect negotiated royalty rates. Because these rights and services are not similar, complex adjustments to the interactive services rates are necessary to produce an appropriate royalty rate for SDARS services.

Professor Ordover makes no attempt to adjust the royalty rates for interactive services to account for differences in either the rights that are conveyed or the features of the services. Professor Ordover offers three methods for calculating a royalty rate for SDARS from the rates for interactive services. All three methods reduce algebraically to the same calculations: the royalty payment equals the royalty rate for interactive services (around 60 percent) multiplied by the implicit price of the music component of Sirius XM services, and the SDARS statutory royalty rate is the ratio of this royalty payment to the retail sticker price of the standard "Select" Sirius XM service. These three methods differ only in how the royalty rate for interactive services and the implicit price of the music component of satellite services were estimated.

The validity of Professor Ordover's proposed methods for calculating the SDARS royalty rate hinges on three crucial assumptions that are not supported by any evidence.

The first assumption is that royalty rates that emerge from competitive markets are the same for all services, ranging from permanent downloads to pre-programmed music with no user control of content. If this assumption were true, the benchmark royalty rate would not need to be adjusted to account for differences in service characteristics between interactive services and SDARS. I reject this assumption because the actual royalty rates that arise from market negotiations differ substantially. Services that offer less user control of content pay lower royalty rates.

The second assumption is that royalty rates do not differ depending on whether a service with music content is sold in a bundle that includes the system for delivering content to the user (the platform). I reject this assumption because negotiated rates are lower for bundled services and because imposing rates that do not take into account the cost of the platform are economically inefficient and harm the competitive process.

The third assumption is that negotiated rates for non-interactive services that do not qualify for the statutory rate should not be considered because those rates are affected by “regulatory overhang,” which means a spillover effect from the statutory rate. I reject this assumption because the standard for setting the statutory rate for non-interactive services is the competitive market rate and because no evidence has been presented that the Copyright Royalty Judges systematically set statutory rates for non-interactive services below the rates that are required by the Copyright Act.

Professor Ordover uses two procedures to estimate the implicit retail price of music on Sirius XM. One is half the sticker price of the Sirius XM Select service and the other is an average price of five non-interactive mobile music services. Both of these procedures are economically invalid.

The correct starting point for the first procedure is average revenue per user (ARPU), not the sticker price. In addition, the implicit price of music should take into account the implicit price of the platform for delivering satellite radio services.

The method for calculating average prices of non-interactive services is invalid because: (1) the calculation is an unweighted average that does not take into account the relative popularity of services (the cheaper services have more customers); (2) Professor Ordover double-counts or triple-counts the three services with the three highest prices; and (3) Professor Ordover does not take into account commercially important differences among these services that affect their prices.

Section 801(b) Adjustments

Professor Ordover concludes that the Section 801(b) factors are satisfied by a rate that would emerge from negotiations in a competitive market, with the proviso that the fourth factor – disruption – might justify a temporary departure from the competitive rate to give a start-up firm a chance to develop a position in the market. Professor Ordover's analysis amounts to an assertion that, as a matter of economics, prices for an established product never should depart from the competitive level. This assertion constitutes an expression of Professor Ordover's values but not a conclusion that is derived from economic analysis. Moreover, his interpretation of the 801(b) factors provides no possible explanation for why the Copyright Act describes different rate-making standards for different digital services, especially if the meaning of these standards is the same.

For both SDARS and pre-existing services, the present system for establishing statutory rates was imposed after investments were made to enter the market. The four Section 801(b) factors are special considerations that must be taken into account so that a new legal institution (the system for setting statutory rates) will not undermine the ability of these services to serve their customers. In addition, competitive markets do not always maximize social welfare. Concerns about third-party effects, financing public goods, and distributive justice could lead an economically informed, rational policy maker to over-ride market outcomes in favor of the four factors in Section 801(b).

The Sirius XM Monopoly

Mr. Sidak's testimony concludes that Sirius XM has monopoly power in a market for satellite radio services. My direct testimony explains why this conclusion is irrelevant and incorrect.

Mr. Sidak's conclusion is irrelevant because the extent of competition in the product market for satellite radio services has no necessary connection to the extent of competition in the market for performance rights for sound recordings. The latter is the relevant issue for determining whether direct licenses are a valid market benchmark for the statutory license, and the evidence supports the conclusion that Sirius XM has no market power in the rights market.

Mr. Sidak's conclusion is incorrect because his analysis of this issue does not use the methods that economists developed and government agencies adopted to define markets and measure monopoly power. Mr. Sidak does not appropriately analyze whether Internet music services and terrestrial radio constrain the prices of Sirius XM or whether Sirius XM earns more than a competitive return on its investments. When these issues are analyzed correctly, the results support the conclusions reached by the federal government that the merger between Sirius and XM did not create a monopoly.

The Proposed Comprehensive Royalty Rate

SoundExchange proposes that Sirius XM pay the statutory royalty rate on nearly all of its revenue. The proposed revenue base includes sales, leases and rentals of car radios (including shipping costs), and allows no adjustments or exclusions for direct licenses between Sirius XM and record companies.[1]

The proposal regarding revenues from equipment is inconsistent with standard

1. The testimony submitted by David Frear discusses other changes in the definition of gross revenues that have been proposed by SoundExchange.

commercial practice in the industry. For example, the Cricket licenses adjust the standard royalty rate for interactive services to reflect the monthly cost of Cricket's mobile platform and do not apply to the sale of smart phones by Cricket that are used to access Cricket's on-demand music service. As Mr. Bryan testified (*Hearing Transcript*, pp. 1984-7), [redacted]

The proposal that Sirius XM pay SoundExchange for all plays of sound recordings would force Sirius XM to pay twice for playing sound recordings for which it has a direct license. This proposal eliminates the incentive for both labels and Sirius XM to negotiate direct licenses. In so doing, the proposal guarantees that SoundExchange and the labels will face no competition in rates or plays. This proposal effectively grants SoundExchange an exclusive right to license sound recordings from all record companies to SDARS and assures that an unregulated competitive market will never develop.

PROFESSOR ORDOVER'S BENCHMARK

Professor Ordover uses negotiated rates for mobile interactive Internet music services as benchmarks for setting an SDARS rate. Professor Ordover has three methods for determining the Sirius XM rate, but all three boil down to setting the royalty rate for music content on Sirius XM equal to the average royalty rate paid by interactive services. Depending on how the royalty rate for interactive services and the value of music on Sirius XM are estimated, the benchmark rates calculated by Professor Ordover are in the range of 22.4 to 32.5 percent.

The rates proposed by Professor Ordover are far above reasonable rates for several reasons, the most important of which are: (1) the market royalty rate for interactive services is far above the royalty rate that would emerge in a competitive market for rights for a mobile non-interactive service like Sirius XM, and (2) Professor Ordover's estimated price of music content on satellite radio is unreasonably high. When appropriate adjustments are made to Professor Ordover's calculations, the resulting rates are similar to the rates that I found to be reasonable in my direct testimony.

Reasons for Selecting Interactive Services

Professor Ordover offers five reasons[2] for selecting interactive services as the appropriate benchmark for SDARS: (1) both are subscription services; (2) both offer digital channels that use the same recordings; (3) both provide mobility; (4) both allow unlimited use; and (5) the rates for interactive services are "free of regulatory overhang" (*Ordover Testimony*, p. 14). According to Professor Ordover (*Hearing Transcript,* pp. 2380-83), the only criterion that differentiates interactive services from non-interactive subscription music services that are available on mobile devices is Item (5). Professor Ordover does not consider another important criterion for selecting a benchmark: (6) both services use the same or similar performance rights to offer the same or similar services. Item (6) is not satisfied by the interactive services benchmark.

A disadvantage of the interactive benchmark is that it requires adjustments in the benchmark rate to account for commercially significant differences between interactive service and a pure non-interactive streaming service with no user control of content, such

2. *Third Corrected and Amended Testimony of Janusz Ordover*, June 13, 2012, pp. 14, 18-19. Henceforth I use the convention of referring to written direct testimony as the author's last name followed by testimony, an example being *Ordover Testimony*.

as satellite radio. In the previous proceeding the benchmark was interactive music services, which required adjustment for interactivity. To make this adjustment, Professor Ordover used the differences in royalties between non-interactive and interactive music video services.

The disadvantage of using benchmarks from services that use different rights to provide different features was unavoidable in 2006 because non-interactive mobile Internet services were only beginning to emerge and because no direct licenses existed between a satellite radio service and a record company. Today there is no need to continue to use licenses for interactive services, audio or video, because licenses for more similar services have become available.

If interactive services were selected as an appropriate benchmark today, the only reasonable procedure is to make three complex adjustments: (1) account for the fact that Sirius XM, but not interactive Internet services, offers substantial non-music content; (2) account for differences in rights and service attributes between interactive and satellite radio services; and (3) account for the fact that satellite radio bundles programs with a delivery platform. Professor Ordover accepts the first adjustment, but not the other two. Professor Ordover's assertion that the other differences do not affect the percentage royalty rates that are negotiated in a competitive market is not correct for reasons that are discussed below. Consequently, adjustments (2) and (3) must be made to arrive at a reasonable royalty rate for SDARS.

Some of the problems in adjusting benchmark rates can be avoided by using non-interactive mobile Internet services as the benchmark. Professor Ordover believes that negotiated rates for non-interactive services that do not qualify for a statutory license should be ignored because the rates are affected by the statutory rate. I agree with Professor Ordover that these negotiated rates are affected by statutory rates. For example, Mr. Bryan said that [redacted] (*Hearing Transcript*, pp. 1991-93).

This logic applies to *all* rates, not just the rate for mobile non-interactive services. The incremental charge that consumers will pay for an unregulated service is, at most, its incremental value compared with a service that qualifies for a statutory rate. As a result, the statutory rate affects rates for all ways that consumers can listen to music on a mobile device. The difference between the statutory rate and the maximum rate that a service can charge is the maximum that the service will pay to add features rather than to offer only a service that qualifies for the statutory rate. This maximum royalty that a service will pay is derived from the amount that consumers will pay for these features.

Professor Ordover's reason for not taking into account negotiated rates for non-interactive services that do not qualify for the statutory rate is unclear. Unlike the rates for SDARS and pre-existing services, for which the rate-setting standard is Section 801(b), the statutory rate for non-interactive services is the competitive market rate and is derived by applying the "willing buyer, willing seller" principle that Professor Ordover seeks to implement here. If the principles set forth in the Copyright Act are followed, the statutory rate is a competitive rate, and there is no reason to be concerned that "regulatory overhang" affects negotiated rates for related services with features that are not permitted under the statutory license.

Professor Ordover provides neither facts nor analysis to support his position that all rates that are affected by regulation should be ignored. The only basis for excluding negotiated rates that are affected by the statutory rate would be evidence that the Copyright Royalty Judges, contrary to the rate-making standards for Internet music services that are set forth in the Copyright Act, systematically set statutory rates below the rates that would emerge in a competitive market. Only if the statutory rate is below the competitive rate will negotiated rates be below competitive rates for services with additional features that are not permitted under the statutory license.

As discussed in my direct testimony, independent scholarly research concludes that regulation tends to set prices above competitive levels for reasons that are rooted in administrative procedures. Economics research provides no reason to believe that statutory rates are too low, and hence that negotiated rates for non-interactive services that do not qualify for a statutory license are below competitive market rates.

Even if the statutory rate for non-interactive services is too low, Professor Ordover does not take into account the economic reality that, whatever he might think of statutory rates, direct competitors of services that pay a statutory rate cannot survive in the market if they are required to pay substantially more than competing regulated services. While Professor Ordover testified that Sirius XM competes directly with non-interactive subscription mobile Internet music services (*Hearing Transcript*, p. 2373), he did not consider the effect on the viability of Sirius XM if it is required to pay substantially higher royalties than its closest competitors pay.

The Proposition that All Rates Are the Same

The general principle for using benchmark rates to set a regulated rate is to adjust the benchmarks for differences in the attributes of the products that plausibly affect their market prices. Professor Ordover starts with the assumption that the benchmark royalty rate for interactive services is in the range of 60 to 65 percent. Why he uses a range is not clear. His other calculations are based on unweighted averages. The unweighted average royalty rate for the interactive services in Table One of the *Ordover Testimony* is 60.7 percent and the unweighted average royalty payment divided by the average price of interactive services is 59.6 percent. Professor Ordover's calculations would have been just as accurate and much more transparent had he just used 60 percent as the average percentage royalty rate for interactive services.

Professor Ordover argues that technical characteristics of services affect the *amount* of royalty that each service will pay, but not the *percentage rate* for calculating royalties that would be negotiated in a market. According to Professor Ordover, "…there is no reason to expect that a hypothetical negotiation between Sirius XM and a major record label would culminate in a percentage-of-revenue rate that differs materially from the observed rates agreed to by the record companies and Microsoft, Rhapsody, and other interactive streaming providers" (*Ordover Testimony*, p. 18). Thus, Professor Ordover concludes that no adjustments to the percentage royalty rate for interactive services are necessary to take into account the technical attributes of the service.

Contrary to Professor Ordover's assertion, economic theory provides "no reason to expect" that all royalties that are negotiated in a competitive market will be the same percentage rate of revenue. Sound recordings are inputs to many services, including many more than Professor Ordover considers: elevator music, hip-hop DJs, karaoke bars. The idea that the price of an input is the same percent of revenues of the output for which it is used is obviously incorrect. For example, the price of a grocery bag does not depend on whether the consumer bought steak or hamburger, and the price of a bolt for mounting an engine on a chassis does not depend on variations in the price of the auto model due to differences in optional equipment. The cost of an input as a fraction of revenues depends on the number and cost of other inputs that are also used to produce a product.

For satellite radio, non-music content is an important input. Professor Ordover is willing to take the proportion of non-music content into account in calculating a royalty rate for satellite radio. But Professor Ordover is not willing to take into account the cost of the platform that is used to deliver and to play the music if the platform is bundled with the content. SoundExchange implements this concept by proposing that Sirius XM pay royalties on sales and rentals of satellite radios as well as the portion of the price of a satellite radio service that pays for the platform.

Professor Ordover and SoundExchange have no basis for applying the percentage royalty rate to the price of the platform, whether sold separately or as part of a bundle. In actual commercial practice percentage royalty rates for music content are not applied to separate equipment sales, and are adjusted to take into account platform costs. For example, people do not pay different amounts for digital downloads from the iTunes Store depending on whether their iPod is a $49 2gb shuffle or a $399 64gb touch.[3] Indeed, the price of downloads is the same if the consumer does not own an iPod. When a platform is bundled with a music service and a percentage royalty rate is imposed, the rate is lower than the rate for a comparable unbundled service. My written direct testimony used the contracts between the major labels and Cricket to illustrate that

3. These are the current prices on the on-line Apple Store.

royalty rates for services than bundle content and the delivery platform have lower rates that reflect this cost difference. Mr. Bryan testified that Warner did not seek royalties on sales of the mobile device that Slacker sold, and more generally does not seek royalties for platform costs (*Hearing Transcript*, pp. 1976-77, 1984-87). Most digital music services are not bundled with the delivery of content over the Internet to the user's mobile receiver. These charges are paid separately by the user to an equipment vendor and an Internet access provider.

As discussed elsewhere, the most pernicious aspect of Professor Ordover's error and SoundExchange's proposal to include equipment sales in the revenue base for calculating royalties is that it undermines competition in digital music services. Services that bundle content and the platform will be punished compared to services that do not. There is no rational basis for advantaging one competitor over another by using regulation to impose higher costs on one.

Another factor that leads to differences in royalties among services is that some music services promote sales of CDs and digital downloads, while others are substitutes for these products. Content that is not controlled by the user is more likely to include recordings that the customer does not know and so is more likely to generate a sale than a service that allows user control of content. The incentive to generate sales of CDs and downloads creates an incentive for a label to cut royalties to pre-programmed services for two reasons. First, a lower royalty will create an incentive for the service to grant the label more plays. Second, because the profit-maximizing price of services depends on the royalty rate, a lower royalty will lead to a lower service price, and hence more subscribers, and hence more sales of CDs and downloads. This logic implies that pre-programmed services will pay a lower percentage royalty than services with extensive user control of content.

Just as economic theory does not support Professor Ordover's assertion that all percentage royalties should be the same, the evidence that Professor Ordover offers to justify this assertion actually refutes his claim. The rates just for interactive services in 2011 (*Ordover Testimony*, Table One, p. 21) vary between [redacted], and ten of the 24 rates for 2011 (over 40 percent of the contracts) fall outside his "cluster in a narrower range of 60% to 65%" (*Ordover Testimony*, p. 20). The other types of services that provide user-control of content *all* have ranges of rates that fall above (permanent downloads) or below (ringtones, ringback tones, interactive subscription to non-portable devices) the 60-65 percent range that Professor Ordover adopts as the norm. The percentage rates for ringtones/ringback tones are between [redacted] (*Ordover Testimony*, Table Two, p. 26), which is well below his "cluster" of rates. Rather than undertake an economic analysis to ascertain why different services have different royalties, Professor Ordover simply asserts that these rates are similar enough to support 60-65 percent as an appropriate benchmark rate.

Professor Ordover does not analyze the royalties for non-interactive services that do not qualify for the statutory license, rejecting them because they are affected by regulation. Regardless of whether these rates are depressed by the statutory rate, these contracts show that the "equal royalty rate" hypothesis is false. Some contracts that were used by Professor Ordover in analyzing royalties for interactive services also contain rates for non-interactive services that do not qualify for the statutory rate. If Professor Ordover were correct that all difference in royalty payments among broadly similar services would be due solely to differences in retail prices, with no differences in percentage rates, then the percentage rates for all non-interactive services would be the same, but such is not the case. Tables 2.1 and 2.2 in my revised amended written direct testimony show substantial variations among four non-interactive and interactive tiers that are described in the licenses between the major record companies and two Internet music services providers, Last.fm and Slacker. All of the rates for non-interactive services are above the statutory rate but below the rate for interactive service.

These differences demonstrate that royalty rates are not the same for all services, but vary according to service attributes. Professor Ordover does not explain why percentage royalty rates for different non-interactive services differ. Examination of the contracts shows that royalties are higher as user control of content increases, just as economic theory predicts.

Calculating the SDARS Rate from the Benchmark

The methods that Professor Ordover proposes for calculating the SDARS royalty rate are basically the same:[4] a royalty rate derived from interactive service (60 or 65 percent) is applied to an estimate of the retail price of the music component of satellite radio service, and the result is divided by the sticker price ($12.95) of Sirius XM Select.

Although Professor Ordover superficially may appear to be using the same approach that he used in the 2006 proceeding, in fact he is not. In 2006 Professor

4. Professor Ordover testified (*Hearing Transcript*, pp. 2419-23) that his three methods are completely different, but he is in error. The only differences in the rates from his three methods arise from slight differences in how the interactive royalty rate and the implicit price of music on Sirius XM were calculated.

Ordover began with the royalty payment for an interactive service ($7.50 per subscriber per month, compared to $5.95 in his current testimony). He then adjusted this rate for interactivity using the per-play royalty rates for music video services. He formed the ratio of rates for non-interactive and interactive music video services (.0015/.0080), and multiplied this ratio by $7.50 to obtain a royalty payment of $1.40. He then adjusted this royalty by an "immediacy" factor by forming the ratio of download prices for delivery to a mobile device and to a personal computer (1.25/.70), yielding a royalty of $2.51. Note that in 2006 Professor Ordover made adjustments for service characteristics (mobility and interactivity). His new procedure makes adjustments only for retail prices, and as a result does not take into account the effect of differences in the characteristics of services on the percentage royalty rate.

Professor Ordover presents three procedures that perform the same calculation.

Method One. Professor Ordover's first method attributes half of the price of content on Sirius XM to music. Professor Orover then applies this allocation of the value of content to the retail sticker price ($12.95) of Sirius XM Select, producing an estimated retail price of music content equal to $6.48. Professor Ordover then calculates 60 and 65 percent of this number as royalty payments, then divides these amounts by $12.95, producing royalty rates of 30 and 32.5 percent. A more transparent way to produce the same result is to calculate the proposed percentage rate for satellite services as half of 60 and 65 percent. Multiplication of the royalty rate by the implicit price of music content and division by the sticker price are superfluous.

My comparable method for estimating the retail price of music content on satellite radio service multiplies the fraction of content that is accounted for by sound recordings

(I used 55 percent) by the difference between the price of the bundled service and the forward-looking average cost of the platform. For the price of the bundled service, I used average revenue per user (ARPU), not the sticker price. This method produces an estimated implicit retail price of sound recordings of $3.48, which is much lower than Professor Ordover's estimate of $6.48. For reasons given in my direct testimony, this procedure understates the cost adjustment that ought to be made for the platform because it does not include a competitive return on forward-looking investments. Hence, the true implicit price of music content on SDARS is below $3.48 and far below $6.48.

To illustrate the differences between Professor Ordover's procedures and my own, I calculate the percentage royalty rate for SDARS services that would result if one switches from Professor Ordover's adjustments to mine. I first accept his interactive services benchmark rate of 60 percent, but alter the estimate of the market price for the music content on Sirius XM Select service, taking into account the adjustment to the price of Sirius XM's service that is necessary to account for the implicit price of the platform. I then make a further adjustment to take into account the differences in rates between interactive and non-interactive services. The end result is that when Professor Ordover's procedures are altered to take these two adjustments into account, his Method One yields a percentage royalty rate of 7 percent, which is in the range of the rates that I find to be reasonable.

Following Professor Ordover's procedures for Method One, the implicit price of music content is multiplied by 60 percent (the interactive services rate without adjusting for interactivity) and the result is divided by $12.95. If my estimate of the price of music content ($3.48) that is derived from subtracting the forward-looking costs of investments is substituted for Professor Ordover's estimate ($6.48), the implied royalty rate as a percentage of revenue is 16.1 percent, compared to Professor Ordover's 30 percent rate.[5] Thus, not taking into account my lower bound estimate of the implicit price of the platform causes the royalty rate roughly to double.

The next step in reconciling our calculations is to make an adjustment for interactivity. The average royalty rate from the non-interactive service with the least user control among the direct licenses that can be used (Last.fm) is 26.1 percent. Multiplying this rate by my estimate of the price of music content ($3.48) yields a royalty payment of $0.908, which is 7.0 percent of the sticker price of $12.95. Again, failing to adjust for interactivity also roughly doubles the estimated royalty rate. Thus, if Professor Ordover's approach is adjusted to adjust for platform costs and interactivity, it produces a rate equal to the top of the range that I concluded was reasonable.[6]

The differences between Professor Ordover's Method One and the most comparable method that I use are due to our treatments of platform costs and our estimates of the market price of music content. I now turn to an analysis of these differences and explain why I prefer my procedure.

Both Professor Ordover and I start with the bundled price of Sirius XM Select and attempt to disaggregate this price into to its component parts. The difference between us

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5. I doubt that Professor Ordover disagrees that ARPU, not sticker price, is the correct basis for calculating royalties. In this case his implied value of music is half of $11.38, or $5.69, which is still much larger than my estimate, but the implied royalty rate remains 30 to 32.5 percent. The implied rate based on a price of $3.48 rises to 18.3 percent.

6. The choice of a starting point for making multiple adjustments to a benchmark rate is arbitrary. If one first adjusts for interactivity, the royalty payment is 26.1 percent of $6.48, or $1.69. The royalty rate is 13.1 percent of the sticker price of Sirius XM Select, compared to 30 percent from Professor Ordover's calculation. If this royalty is then adjusted to my market price of music content of $3.48, the royalty rate is 7.0 percent.

is that he does not allocate any of the bundled price to the platform. As a matter of economic theory, Professor Ordover's approach is incorrect.

The argument that has been put forth to ignore platform costs in calculating a price for music content as a portion of the price of the bundled service is that the platform is valueless without content. Logically, the Sirius XM delivery system would have no value without content, but that does not imply that the cost of the platform should be ignored. *All* platforms are valueless without content, so this argument cannot possibly explain why royalties are adjusted to account for platform costs for other music content that are bundled with a platform.

Economic theory provides a clear explanation for why the argument for ignoring platform costs is incorrect. I illustrate this point through a commonly used mathematical representation of a production process, the Cobb-Douglas function, in which output, Q, is assumed to be determined by the amount of inputs, say K (for capital investment) and L (for labor), according to the following equation:

$$Q = AK^{a}L^{b},$$

where A, *a* and *b* are constants and *a* and *b* are less than one.[7] If either K or L is zero, output is zero, just as Sirius XM would have zero subscribers if it lacked either content or a platform. If a firm acquires K and L to maximize profits, the shares of each factor in total revenue are *a* for capital and *b* for labor. A more capital-intensive technology has a higher value of *a* relative to *b*, which means that a higher share of revenue goes to investment, even though output still is zero if no labor is used.

In some cases (e.g., restaurants and satellite radio), Q is produced by a firm and

7. A common assumption is that $a + b = 1$, in which case the production function exhibits constant returns to scale – that is, a doubling of inputs doubles outputs.

the combined product is sold to consumers. In other cases (e.g., home-cooked meals and Internet music services), Q is produced by the consumer after acquiring the components from separate vendors. This difference does not alter the fact that all inputs must receive a share of the total revenue for Q in order to remain viable, even though each input may be valueless all by itself. Thus, no progress can be made on solving the problem of allocating revenue among inputs by observing that no output can be produced unless a particular input is present.

Method Two. The second method that Professor Ordover proposes begins by observing that half of the sticker price of Sirius XM ($6.48), which is his estimate of the implicit price of music content on Sirius XM Select, is substantially less than the sticker price of interactive services ($9.99). Professor Ordover then calculates the average royalty payments from all interactive services, $5.95, and multiplies this number by the ratio of 6.48 to 9.99, or 64.8 percent, as an adjusted estimate of the proper royalty payment from Sirius XM.

Professor Ordover states that Method Two adjusts for differences in service characteristics, but it does not. The royalty rate that Professor Ordover uses for SDARS is exactly the same as the interactive services royalty rate. Method Two simply applies this rate to the retail price of Professor Ordover's estimate of the implicit price of music content on Sirius XM Select. The key to understanding this method is to recognize that $5.95 is 59.6 percent of $9.99, so this calculation is identical to applying a royalty rate of 59.6 percent to the estimated price of music of $6.48.

The result of Professor Ordover's calculation is a royalty of $3.86. When divided by $12.95, the implied percentage royalty rate is 29.8 percent. This convoluted procedure produces exactly the same result as calculating the unweighted average royalty rate for interactive services, which is 5.95/9.99 = 59.6 percent, and dividing by two (to account for the division between music and non-music).[8]

The resulting rate of 29.8 percent differs from the rate that arises from Method One because the unweighted average royalty payment is slightly different than the "cluster" of royalty rates for interactive services multiplied by the common price of $9.99. The bottom line is that Method Two is identical to Method One: the proposed royalty rate for SDARS is half of the interactive royalty rate. Because these methods are identical, no useful purpose is served by repeating my analysis of why this result differs from my calculation that adopts the same starting point.

Method Three. Professor Ordover's third approach differs from the other two methods only because it uses a different procedure to estimate the market price for music content on Sirius XM. Professor Ordover uses the average retail price of five non-interactive subscription services as a proxy for the retail value of the price of music services on Sirius XM. The services that are used (*Ordover Testimony,* Table Five, p. 34) are Pandora, Last.fm, Live365, Musicovery, and Sky.fm.

Professor Ordover also calls Method Three an adjustment for interactivity, but it is not. The royalty rate for non-interactive services is assumed to be equal to the royalty rate for interactive services, which is still 60 percent. Instead, the estimated price of Sirius XM music content is now assumed to be the average price of five non-interactive services. If done properly, this procedure would adjust for the implicit price of the Sirius XM platform. Because non-interactive services are not bundled with a platform, their

8. Mathematically [(6.475/9.99) x 5.95]/12.95 = ½(5.95/9.99). The left-hand side of the equation is Method Two and the right hand side is Method One.

prices are solely for content.

The average price of non-interactive services as calculated (incorrectly) by Professor Ordover is $4.86. Professor Ordover then takes the ratio of this average to $9.99, multiplies the result by $5.95 (the average royalty for interactive services), and divides by $12.95. When I perform this calculation the implied royalty rate for Sirius XM is 22.4 percent. Again, the easier, more transparent procedure is to take 59.6 percent of $4.86, which is $2.90, and divide by $12.95, which yields the identical royalty rate of 22.4 percent. The key to understanding Method Three is that the benchmark percentage royalty rate is 5.95/9.99 = 59.6 percent, which is then multiplied by the average retail price ($4.86) of the five non-interactive services.

If Professor Ordover had used the average royalty rate of 26.1 percent that was paid by Last.fm for its least customized subscription service, the Sirius XM royalty rate would fall from 22.4 percent to 9.8 percent, even without correcting his error in calculating the implicit price of music content.

Professor Ordover's estimate of the retail price of music on Sirius XM contains two serious errors. The first error is that the method for calculating the average is incorrect. The second error is that the average price of the five services does not measure the retail price of anything because these services have different, commercially significant characteristics that cause differences in retail prices.

The first error arises from Professor Ordover's method for calculating an average price. Professor Ordover lists three prices each for Live365 and Sky.fm, and two prices for Musicovery. The differences among these prices are due solely to the duration of a consumer's commitment to the service. This approach causes the three higher priced services to be counted a total of eight times, while the two less expensive services, Pandora and Last.fm at $3 per month, are each counted once. This procedure assigns 80 percent of the weight in calculating the average to the three services with higher prices.

The Pandora and Last.fm prices are for a year of service, so a more accurate method for calculating the average price is to include one observation – the price of a year of service – for each of the five services. This procedure cuts the average price to $4.01, the royalty payment to $2.39, and the royalty rate (2.39/12.95) to 18.5 percent.

Professor Ordover applies the royalty rate for interactive services of 59.6 percent to the estimated retail price of music content. If instead the royalty rate that is used for the calculation is cut to 26.1 percent, which is the rate paid by Last.fm (one of the services that he uses for his benchmark price of music content), the royalty payment falls to $1.05 and the royalty rate is 8.1 percent, or roughly the current rate.

Professor Ordover is aware that one problem with his approach is that his average is not weighted by the number of subscribers. Professor Ordover simply ignores this problem rather than attempt to solve it or at least obtain some indicator of the possible magnitude of the error in his estimate. Table 1 contains data that were produced by SoundExchange on the number of plays for the non-interactive subscription services for Pandora, Last.fm and Live 365. Among these three services, Pandora accounts for 87.3 percent of plays and the most expensive service, Live365, accounts for 5.0 percent. Obviously according three times as much weight to Live365 as to Pandora is wildly incorrect. The quantity-weighted average price (using the annual price for Live365 of $5.95) is $3.15, whereas the method used by Professor Ordover (counting Live365 three times, once each for its annual, 6-month and 3-month commitment) produces an average price of $5.37. No data have been produced for the other two services because I understand that data were requested only for the 25 largest services and, apparently, Musicovery and Sky.fm fell below this threshold. Because these services are smaller than the other three, the results cannot be dramatically changed by including the other two services. Hence, these data strongly indicate that the weighted average price of these services would be near $3.

The effect of Professor Ordover's error in calculating the average price of these services is substantial. If Method Three is implemented by assuming that the average price of non-interactive music services is $3.15 and that the benchmark royalty rate is 26.1 percent, the implied royalty rate on total revenues for Sirius XM is 6.34 percent, which is well within the range of the direct licenses. Note that this calculation does not require any adjustment for the implicit price of the platform. It is a simple application of Professor Ordover's Method Three using the actual average royalty rate for one of the non-interactive services that he uses and the true weighted average price of these services, which also is very close to the actual price of the service for which the royalty applies. These calculations are convincing proof that the direct licenses are an appropriate benchmark, as is Last.fm's non-interactive subscription service.

Professor Ordover's final error in Method Three is that he ignores the fact that these services differ in other respects: the technical quality of the service as measured by bit rates, the number of pre-programmed channels, the extent of customization and the ability to cache programs. Professor Ordover's method amounts to the analog of estimating the price of 15 percent fat hamburger by taking the average of 10 percent fat hamburger, t-bone steak, porterhouse steak, and prime rib. The problematic nature of

Professor Ordover's calculation is apparent by applying it to the non-interactive services that he uses to calculate his estimated price of music content. Suppose that the purpose of the exercise were to set a statutory rate for Pandora and Last.fm. Professor Ordover's rate of 59.6 percent would then be multiplied by his incorrect average price of the three remaining services ($5.33). This calculation yields a royalty of $3.18. Because the retail price of Pandora and Last.fm is $3, this royalty would leave them with an 18 cent loss.

Pandora is the service with attributes that are most like the attributes of Sirius XM's service, and Pandora also has the lowest price. Last.fm, which I identified as the service with market determined rates that was most like Sirius XM, also has a price of $3. Both Pandora and Last.fm allow substantial user control of content, Pandora through the Music Genome Project (a computer program that learns a user's tastes from prior plays, likes and dislikes) and Last.fm through scrobbling, which allows a user to mix a playlist with tracks from their own libraries. Extensive user control combined with comparable content ought to make these services more valuable than the music content on Sirius XM.

Live365 is the only service in Professor Ordover's list that charges more than $4 per month on an annual basis, so its presence on the list explains why Professor Ordover obtains an estimated price for music on Sirius XM that is far above $3. Live365 offers more than 7,000 channels that are pre-programmed by independent entities. Channel programmers often have web sites for their users that offer information about the DJ. Channels also receive a commission for generating subscriptions for the paid Live365 VIP service. Live365 also offers talk channels that do not play sound recordings, which means that the implicit price of music channels on Live365 is less than the sticker price for the service. Live365 also has a feature that recommends channels based on the customer's expressions of likes and dislikes.

Musicovery, which charges $4 per month with an annual commitment, combines music with a social network. Musicovery offers greater user control of content in that it allows users to create playlists within a social network, to ban songs and artists from the recordings that are played on customized channels, to skip songs and to bookmark recordings for future inclusion in a playlist.

Sky.fm allows users to adjust the bit rate of the content stream to fit the technical specifications of the reception device or to control bandwidth use to minimize data charges from a wireless carrier. Sky.fm also allows more user control than Pandora or Last.fm by permitting caching for later listening.

Based on this information, I believe that Pandora is the most important direct competitor to the music content on Sirius XM. Pandora is the dominant non-interactive mobile music service and is aggressively seeking to obtain a physical presence on the dashboard. Pandora also charges only $3 for a service that has considerable user control of content, yet its ad-free subscription service accounts for a tiny fraction of its users. If the vast majority of Pandora users are unwilling to pay $3 to avoid advertising, it follows that advertiser-supported services (terrestrial or mobile Internet) are close competitive substitutes for Pandora – and for Sirius XM. Thus, $3 is a conservative estimate of the implicit market price of music services on Sirius XM.

Note that the relevant concept here is not the value of music to customers, which can be much higher, but instead the price constraints that are imposed by competitive alternatives. Sirius XM must price its services to attract customers from close competitors that give music away for free.

If no change is made to Method Three other than to adopt $3 as the implicit price of music content on satellite radio service, the royalty payment is 59.6 percent of $3, or $1.79. If this royalty is then divided by $12.95, the royalty rate is 13.8 percent. If instead the benchmark royalty rate is 26.1 percent, the royalty payment is $0.78 and the royalty rate is 6.0 percent, which is in the middle of the range of royalties in the direct license.

The Sirius XM Direct License Benchmark

One advantage of using as benchmarks the licenses that Sirius XM has signed with independent labels is that it avoids getting into the weeds of how to adjust the rate from some other service to produce a truly comparable rate for satellite radio. Using the royalty rates in the direct licenses as benchmarks, one avoids having to make adjustments for differences in retail prices and service characteristics. The key issue in evaluating whether the royalty rates in the direct licenses are appropriate benchmarks is whether these rates are representative of the rates that would be negotiated with the labels that have not signed direct licenses.

Three arguments have been made to attack the reliability of the direct licenses with independent labels. The first is that most labels have not signed direct licenses, which indicates that they are unwilling to accept these rates. The second is that the independent labels that have signed licenses are too small and specialized to provide a reasonable benchmark for all labels, and especially the four major labels. The third is that Sirius XM is a monopolist in satellite radio that, by implication, can force small labels to sign licenses at unfavorable terms. Here I deal with the first and second issues. I address the third issue in the next section.

Market Rejection. The argument that most labels rejected the rates that Sirius XM offered must be considered in light of the campaign by SoundExchange and other trade associations to convince independent labels not to sign a direct license with Sirius XM. SoundExchange and other industry organizations sought to prevent labels from signing direct licenses. My direct testimony reviews public statements by these organization and their leaders asserting that the statutory rate that will emerge from this proceeding will be much higher than the current statutory rate, that the industry should present a united front to maximize the statutory rate that it will obtain, and that the direct licenses will cause a lower rate to emerge from this proceeding. These organizations and their leaders also denigrated the normal competitive process, arguing that Sirius XM engaged in bad behavior by offering more plays to labels that signed a direct license.

Discovery of internal documents from SoundExchange has produced more evidence about the scope of SoundExchange's views about direct licenses and it efforts to encourage independent labels not to sign them. A draft document for a board of directors meeting includes an item [redacted][9] Among the [redacted] activities was a [redacted] and criticizes [redacted] for programming its [redacted][10] This

9. Bates Nos. SX02 00152378-79, attached as SXM Reb. Ex. 37.

10. Bates No. SX02 00154127, attached as SXM Reb. Ex. 38. The point about the desire to avoid competing on the basis of price is echoed in the *Testimony of Darius van Arman*,

statement reveals both the goal of SoundExchange to protect record companies against competing for play time on the basis of price and the presumption that regulation of royalties is the [redacted] while a market process for negotiating licensing agreements is to be avoided.

A string of e-mails [redacted][11]

An e-mail to [redacted][12]

A long string of e-mails begins with several attempts by Sirius XM to initiate negotiations with [redacted] concerning a proposed direct license. Two of the messages summarize the proposal from Sirius XM. After many inquiries from Sirius XM

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who states: "we have a vested interest in doing all that we can to assure that the world of satellite and internet radio continues to program its music… based purely on the merits of the actual recordings and artists" (p. 7),

11. Bates Nos. SX02 00154089-91 at 89, attached as SXM Reb. Ex. 39.

12. Bates No. SX02 00153983, attached as SXM Reb. Ex. 40.

seeking to initiate negotiations, [redacted][13]

These documents demonstrate that SoundExchange worked to convince labels not to sign direct licenses. The primary argument against direct licenses was that labels should refrain from competing in order to maximize the collective rate that will be set in this proceeding. The fact that labels rejected direct licenses, many without discussing the matter with Sirius XM or MRI, is hardly a test of whether they would have signed licenses if a collective rate-making process were not available to them. The goal of SoundExchange, A2IM and other industry organizations was to “maintain solidarity,” to avoid market competition for play time, and to rely on regulation to produce a high, uniform royalty rate. Many labels, including the four major record companies, did not reject the terms that were offered by Sirius XM because the terms were not meaningfully discussed. Instead, the labels, led by SoundExchange, rejected the very concept of using the market to determine royalty rates.

Representativeness. The argument that the labels that have signed direct licenses are not representative of the industry requires comparing the combined libraries of the companies that signed licenses with the libraries of the rest of the industry. Table 2 lists the independent labels that had signed direct licenses with Sirius XM as of July 1, 2012. There are 85 licensees, 23 of which have been signed since the original version of my written direct testimony was submitted last November. I understand that Mr. Gertz of

13. Bates Nos. SX02 00153377-82, attached as SXM Reb. Ex. 41.

MRI is submitting rebuttal testimony concerning the scope and quality of the sound recordings that are offered by these labels, so I will not examine that issue here. Instead, I focus on the economic implications of the data on plays on Sirius XM.

I have asked MRI to provide data on the fraction of plays on Sirius XM that were accounted by each label in April 2012, and they have been able to identify 74 percent of the plays during that month. The identified plays by the 85 labels with direct licenses accounted for 4.15 percent of total plays on all Sirius XM services, including both Internet and satellite radio. The cumulative play share of these 85 labels is [redacted] of the share of EMI, the smallest major, with a share of [redacted].

Table 3 shows the top 70 record companies in identified play shares on Sirius XM in April 2012. The identified plays of the top 70 labels account for 54.5 percent of all plays. Of the 66 companies other than the four majors, 21 (31.8 percent) have signed direct licenses. The four majors occupy the top four slots in the ranking by play shares and their identified plays account for 43.9 percent of total plays in April 2012. The identified plays of the independents that they distribute accounted for 5.75 percent.

Ranking fifth after the four majors, with a [redacted] share, is the largest independent, Entertainment One (E1), which has signed a direct license. Seven of the 16 most played independent labels have signed direct licenses. These data show that the labels that signed direct licenses include many of the most important independents. Taking into account the testimony from Mr. Gertz about the type and quality of sound recordings that are offered by this group of labels, the direct licenses are representative of the most important independent labels.

Among the top 70 labels, indies that are not distributed by a major account for

4.84 percent of plays. Among these indies the cumulative share of labels that have signed a direct license is 2.70 percent, which is about 56 percent of the plays for this group. Thus, Sirius XM has been successful in signing direct licenses with labels that have no relationship with a major.

Among indies that are distributed by a major, the cumulative play share of labels that have signed a direct license is 1.24 percent, which is only 21.6 percent of the plays by all labels that are distributed by a major. Sirius XM has managed to sign direct licenses with a few important indies that are distributed by a major, the most important of which are [redacted], Eardrum and Milan, which rank 9th, 14th and 15th (and 5th, 10th and 11th among independents) in Table 3. Nevertheless, these data show that Sirius XM has not had great success in signing indies that are distributed by a major. Thus, the main factor explaining the ability of Sirius XM to sign direct licenses with the most important labels is whether a label is a major or is distributed by a major, not the importance of the label or the type and quality of sound recordings that it produces.

According to the testimony of executives from Sirius XM and MRI, the four major labels are unwilling to discuss a direct license. An overwhelming majority of labels that are distributed by a major have followed the lead of their distributor, eschewing the market process and letting SoundExchange represent them in this proceeding. The significance of the resistance of the majors to direct licenses is that the number of labels that actually are willing to consider signing a direct license is severely limited. In 2011, the four major labels owned or distributed labels that account for about 88 percent of industry sales.[14] Given the intransigence of the majors and the campaign

14. See www.musicindustrymetrics.com/music-industry-analysis/2012/02/record-label-

against direct licenses by SoundExchange and other industry organizations, Sirius XM has done very well in obtaining as many direct licenses as it has.

The representativeness of the direct licenses also is implicated in the argument that major labels, with larger and more diverse catalogs, including many current hits and classics, have greater bargaining power that can be used to obtain higher rates. A2IM President Rich Bengloff stated that A2IM's core mission was "insuring a fair marketplace for independents" (by which he meant equal royalty rates) and that the statutory license insures this result.[15]

Negotiated royalties do vary among labels. Among the direct licenses between Sirius XM and independent labels, rates vary between 5 and 7 percent. Among the four majors, the negotiated licenses with digital music services that have been produced in this case reveal varying market royalty rates for the same service. For example, Professor Ordover's Table One shows that [redacted] The data for Last.fm and Slacker that are reviewed in my direct testimony reveal that labels negotiate different rates for the same service. For my benchmark licenses between the majors and Last.fm, [redacted]

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distribution-market-share-end-2011.html.

15. Rich Bengloff, "The Value of Copyright: A Letter from A2IM's Rich Bengloff," September 12, 2011, at http://a2im.org/2011/09/12/the-value-of-a-copyright/.

[redacted].

While the contracts show rate variability, the data do not reveal a systematic relationship between the identity of the label and the relative magnitude of its royalty rate. For example, [redacted]. These rates also do not reveal a relationship between the size of a major and its rates. EMI, the smallest major, negotiates rates that are similar to the rates negotiated by Universal, the largest major. Which labels receive high or low rates from a particular service appears to be idiosyncratic, and certainly is not the result of differential size and bargaining power.

A statutory license has the effect of eliminating rate differences among labels, even among the majors. Professor Ordover, with tables showing widely different rates among licenses for largely identical services (such as permanent downloads or ringtones), understandably chose to recommend averages for the four majors as proposed benchmark royalties, rather than propose separate rates for each major based on the average rates that each has negotiated.

For the purposes of evaluating the representativeness of the rates in the direct licenses, the important point is that the evidence that has been submitted in this proceeding does not support the proposition that the size of the label affects negotiated royalty rates. An inefficiency that is created by setting rates by regulation instead of through markets is that, notwithstanding Mr. Bengloff’s views, different suppliers of very similar products often do set different prices. Nevertheless, this inefficiency is not likely to be large in this case because the prices of products that are similar enough to be close competitive substitutes do not generally exhibit wide variation. The licenses that

Professor Ordover and I have used in our analysis do contain a few outliers, but rates with the same service generally exhibit a variation of less than ten percent of the average rate. For example, [redacted] Of course, because the identities of the labels with the highest and lowest rates differ among services, the benefits and costs to a label from using an average tend to cancel out when the average rate applies to many services.

Although no licenses with indies have been submitted as evidence in this proceeding, indies do not appear to receive systematically lower royalty rates than majors. Dr. Ordover testified that he expects that indies and majors charge similar percentage rates (*Hearing Transcript*, pp. 2270-71). Mr. Bryan of Warner testified that [redacted] (*Hearing Transcript*, p. 1998).

Economic analysis provides a reason to believe that indies will be paid the same rates as majors. Indies that are not distributed by one of the four majors account for 12 percent of music sales. If a large indie, such as E1, could receive the Warner rate by agreeing to be distributed by Warner and if the Warner rate were higher than the rate that E1 can negotiate on its own, there would be no independent distributors like E1.

For these reasons, I see no reason to alter my conclusion that indies that have signed direct licenses offer sound recordings that are comparable to EMI, and that a market negotiation with major labels would not produce royalty rates that are higher than the rates commanded by the most important independent labels. I conclude that these licenses are representative of the industry in coverage of music and rates paid.

THE ASSERTED MONOPOLY POWER OF SIRIUS XM

Mr. Sidak has testified that Sirius XM is a monopoly in satellite radio that has exercised monopoly power in setting prices. He also testified that "there is no doubt in my mind" that the Department of Justice (DOJ) and the Federal Communications Commission (FCC) "got the wrong answer" in rejecting the arguments that he submitted in the merger review and that he also has submitted here (*Hearing Transcript*, p. 2787). The rebuttal testimony of Professors Michael Salinger and David Stowell discuss Mr. Sidak's testimony. I do not duplicate their analysis here, although I agree with their criticisms of the details of Mr. Sidak's testimony regarding Tobin's q, the proper interpretation of the financial performance of Sirius XM, and the extent of competition against Sirius XM. Here I focus on the aspects of Mr. Sidak's testimony that deal with issues that were discussed in my direct testimony.

Monopoly and Monopsony

Professor Sidak's testimony about whether the Sirius XM merger created a monopoly is not relevant to determining an appropriate royalty rate for performances of sound recordings on satellite radio services. This issue was relevant to the DOJ and FCC in considering whether to approve the merger, but re-litigating that issue here is not relevant because it has no bearing on what the market rate for sound recording performance rights ought to be for SDARS.

If Sirius XM enjoys monopoly power in satellite radio services, the source of that market power cannot be its music content because that content is available from many other sources. Instead, the source of monopoly power must be the technology: the satellite distribution system that was created by Sirius and XM and the FCC's spectrum allocation policies that prevent competitive entry. The presence of a monopoly in a unique distribution channel would not have an effect on the competitive price of an input (like music) to that monopoly.

As explained in my direct testimony, the relevant issue for purposes of rate making is whether a monopoly in satellite radio, assuming it were present, would imply market power in acquiring performance rights for sound recordings. While Sirius XM accounts for 100 percent of satellite radio services, it accounts for a small fraction of the market for performance rights for sound recordings. The latter issue is the relevant fact in addressing the question of whether Sirius XM has sufficient buyer (monopsony) power to force royalties below the competitive level.

To prove that Sirius XM has monopsony power in sound recording performance rights requires actually analyzing supply and demand in that market. No such evidence exists. Mr. Sidak's testimony focuses solely on competition among services and does not address the extent of competition in inputs to those services. Moreover, because the labels that have signed direct licenses with Sirius XM could have allowed their rates to be determined in this proceeding, Sirius XM could have exercised monopsony power in the rights market only if the labels expected that the rates that are set in this proceeding will be substantially below the rates that would emerge in a competitive market. Thus, like Professor Ordover, Mr. Sidak's argument makes sense only if he assumes that regulated rates are too low.

The Absence of Monopoly Power

In this matter the distinction between monopoly and monopsony is not relevant because the initial premise – the presence of monopoly power – is not true. As discussed in my direct testimony, the reason that the DOJ and FCC gave for allowing the merger to go through is that satellite radio faces sufficient competitive constraints from terrestrial radio and mobile Internet music services to protect consumers from being harmed by the merger through some combination of higher prices and lower quality. Mr. Sidak's conclusion that Sirius XM has monopoly power in a relevant market is unpersuasive because his argument does not use the standard methods that economists have developed and the agencies have adopted for evaluating a merger. Specifically, whether two products are in the same relevant market is determined by whether the demand for one product is affected by a change in the price of the other.[16] Whether a firm has monopoly power depends on whether its prices are constrained by the prices of other products and whether its profits exceed the competitive return on its investments.

Mr. Sidak's basis for concluding that Sirius XM enjoys monopoly power consists of the following: (1) one SDARS exists (Sirius XM); (2) the operating margin (revenues less operating costs) and net cash flow are positive and rising; (3) Mr. Sidak's calculation of Tobin's q (the ratio of the market value of financial investments [stocks, bonds, loans] to the replacement costs of its assets) exceeds one; and (4) Sirius XM

16. The standard methods for defining markets and determining whether a firm enjoys unilateral (monopoly) market power are set forth in the *Horizontal Merger Guidelines* of the Antitrust Division of the Department of Justice and the Federal Trade Commission, most recently updated in August 2010.

increased its prices, first by passing on licensing costs and then by increasing the sticker price of Sirius XM Select by $1.50 this year. These four facts, if true, would be the beginning, not the end, of an analysis of whether Sirius XM has monopoly power. When the appropriate facts are considered, as they were by the DOJ and the FCC, the only plausible conclusion is that Sirius XM does not possess monopoly power.

One Service. Mr. Sidak's first observation is irrelevant unless no other technology is a competitive substitute for Sirius XM satellite services. Functionally, satellite radio is one of several means for gaining mobile access to pre-programmed entertainment channels, and pre-programmed channels on mobile receivers are one of several ways to listen to music while traveling in an automobile. Whether different devices and service for receiving music entertainment while travelling in a car are close enough substitutes that they compete cannot be determined solely by noting that they have different technical and service characteristics. Most consumer goods and services exhibit "product differentiation" (which means that different brands of a product have different attributes). One cannot tell whether one brand's attributes are so unique that it faces no competitors simply by listing its unique attributes. Instead, one must assess whether these different methods compete directly with each other in price and service quality. Mr. Sidak does not analyze the extent to which terrestrial radio and mobile Internet music services create competitive constraints on satellite radio services.

Mr. Sidak observes that satellite radio is advantaged because users of Internet music services must pay a wireless carrier for data usage. This observation is correct, and constitutes an excellent reason for attempting to separate the platform price from the content price for satellite radio. Record labels do not receive royalties on data charges that are imposed by wireless carriers for listening to music over the Internet.

Price vs. Cost. Mr. Sidak's observation about the mark-up over average variable cost also is irrelevant because it asks the wrong question (whether price exceeds average variable cost), not whether Sirius XM's mark-up over average variable cost is sufficient to earn even a competitive return, let alone monopoly profits. In an industry with high fixed costs of capital investments and R&D, price *must* exceed average variable cost or a company cannot earn a competitive return on its investments. As discussed in my direct testimony, Sirius XM never has earned even a competitive return on its investments.

Tobin's q. Mr. Sidak implements his calculation of Tobin's q by using the book value of assets as a proxy for replacement cost. This substitution is correct only if the methods a firms uses for calculating book value track economic depreciation of assets. In the case of Sirius XM, a massive write-down of assets took place at the time of the merger, which reflected the fact that the market value of the firm was substantially below the book value of its net assets. Thus, Mr. Sidak's calculations are meaningless.

Price Increases. Mr. Sidak asserts that two Sirius XM price increases prove that pricing by Sirius XM is not constrained by competitors. The two price increases were the surcharge for the increase in content costs and the recent price increase after the three-year cap that was applied as a condition for approving the merger was removed.

Both of these events are inconclusive about the presence of monopoly power. To prove that these increases represent the exercise of monopoly power requires assessing whether Sirius XM earns excess profits. As discussed in my written direct testimony, the profits of Sirius XM still are insufficient to produce a competitive return on investment.

The surcharge in response to increases in license fees is not evidence of market power. In all industries, prices must cover costs, so an increase in costs must be accompanied by a price increase or a firm will go out of business. The economic theory of pricing states that a profit-maximizing firm sets price on the basis of marginal cost, so all firms – from monopolies to intensely competitive firms – respond to an increase in marginal cost by raising prices. Royalties are part of marginal cost as they represent an incremental cost that must be paid if an additional subscriber is added. Thus, by itself, the price increase to recover the increase in licensing fees proves nothing about whether Sirius XM has monopoly power.

Mr. Sidak examines the recent price increase on the basis of the change in the sticker price for Sirius XM Select. The change in the sticker price was about 12 percent. But the change in the sticker price does not translate into an immediate increase in prices. To evaluate the true impact of the price increase requires analyzing the change in ARPU. In the first quarter of 2011, ARPU was $11.22, and in the first quarter of 2012, after the price increase, ARPU was $11.49. The annual rate of increase was 2.4 percent.[17] The reasons that the rate of increase is so low are that the new rates only apply as contract customers renew their subscriptions and many customers receive discounts. Thus the increase in the sticker price will only slowly and incompletely translate to an increase in ARPU. Thus, the percentage increase in the sticker price is a highly inaccurate estimate of the annual rate of increase in effective prices. For this reason, the magnitude of the price increase does not support the conclusion that Sirius XM's prices are not constrained by competition. If prices were not constrained, Sirius XM surely would increase them to at least the level that would enable it to earn a competitive return on its investments.

17. *Sirius XM 10-Q*, First Quarter 2012, p. 74. ARPU excludes advertising revenue and a purchase price accounting adjustment.

SCOPE OF THE LICENSE

The *Proposed Rates and Terms of SoundExchange, Inc.* (pp. 2-3), include several important changes in the method for calculating royalties under the statutory license. The proposals to expand the revenue base that is covered by the statutory rate would lead to a dramatic increase in the revenue to which the statutory rate applies. The written direct testimony of the Chief Operating Office of SoundExchange, Jonathan Bender, states that the revenues that presently are subject to royalties are about 80 percent of the revenues that would be subject to royalties under the new proposal (*Bender Testimony*, pp. 5-7).

Among the proposals to expand the revenue base are two that are especially anticompetitive. The first is to levy the statutory rate on equipment sales by Sirius XM (*Bender Testimony*, p. 16). The second is to require Sirius XM to pay royalties to SoundExchange for all plays of sound recordings that require a license, even sound recordings for which Sirius XM has obtained a direct license, unless the sound recordings are part of separate "services that are provided on a standalone basis" for which satellite radio and standalone subscribers pay the same price (*Bender Testimony*, p. 17).

These two proposals would impose significant economic costs on society beyond the costs imposed on Sirius XM. Both proposals create substantial inefficiency and cause harm to competition. These proposals are about more than simply increasing the income of SoundExchange by applying the statutory rate to a higher revenue base.

Equipment Sales

The proposal concerning equipment refers to sales by Sirius XM of satellite reception equipment (primarily radios) that is installed in cars. This proposal is part of a larger effort for SoundExchange to impose royalties on anything that is sold in connection with the use of music. The proposal is equivalent to collecting royalties on the sale of smart phones that are used to receive mobile Internet music services or even personal computers that are used to access music over the Internet. This proposal also is similar conceptually to the proposal made by ASCAP to impose royalties for musical performances on data usage fees of wireless telecommunications carriers that are used to deliver audio and video entertainment to smart phones.[18] This proposal was rejected by both the U.S. District Court and the Court of Appeals for the Second Circuit.[19]

One stated rationale for imposing royalties on both reception equipment and telecommunications networks is that all or part of the value of the platform is due to their use to provide music services. As Mr. Bender states the argument, sales of satellite receivers "are just another way Sirius XM makes money from providing a service that consists in large part of music" (*Bender Testimony*, p. 16). Of course, this argument is not limited to satellite radios. As discussed above, the argument that multiple complementary inputs are needed to produce an output does not imply that in a competitive market the supplier of one product can impose a tax on the sale of a complementary product. In particular, many products are just another way for someone to make money from the use of sound recordings.

Stereo equipment would not be valuable without sound recordings, and many

18. I testified on behalf of MobiTV, a provider of video content services to wireless carriers, in the proceeding to set rates for performances of musical compositions for these services.

19. *ASCAP v. MobiTV, Inc.*, 681 F.3d 76 (2d Cir. 2012).

retailers sell both CDs and stereo equipment. A record company could not succeed in demanding that, say, Best Buy pay a royalty on sales of stereo equipment and portable audio players because sales of these items are just another way that Best Buy makes money from CDs.

Apple sells both iPods and music downloads, and only Apple portable players (iPods and iPhones) can play music that is downloaded from Apple's iTunes Store. Thus, iPods are just another way that Apple makes money from selling music, but the deals between record companies and Apple concerning music that is sold through the iTunes Store do not require Apple to pay royalties on sales of iPods and iPhones.

The reason for the absence of market licenses that resemble the SoundExchange proposal about equipment is that Apple would not sign such a license because it would disadvantage itself in competing with, say, Samsung in selling portable audio players and smart phones, and Rhapsody in selling downloads and interactive music services. The only way that a tax like that proposed by SoundExchange could survive in a competitive market is if it were imposed by government by creating a mandatory license for the sale of stereo equipment and portable audio players by firms that also sell music content.

The economic argument against imposing royalties on complementary inputs is that it is inefficient. A royalty on equipment (or data service) causes an increase in its price. As a result services that sell the taxed input lose business to competitors that do not sell both equipment and content for a reason that is unrelated to either the quality or the cost of the equipment and the services that benefit from driving a cost wedge between them and the company that sells both. For example, if a royalty is imposed on satellite radios but not on car radios because radio stations do not sell radios, or personal computers, portable media players and smart phones because Internet music services do not sell them (except for Amazon and Apple), consumers face higher total service costs for subscribing to satellite radio relative to other ways to access music content. Because satellite radios impose no cost on record companies, and indeed provide a benefit, the increase in the relative price of satellite radios creates an inefficient substitution of other sources of music content for satellite radio. This switch benefits record companies because they receive more revenue from extracting higher royalties from satellite radio and from greater royalty payments from Internet services that benefit from the switch from satellite radio. But the result is nevertheless costly to society because the switch of customers was not warranted by the relative real costs and benefits of the services.

Another inefficiency that would arise from this proposal is that it gives Sirius XM an incentive to exit the satellite radio business by selling it to a firm that would not have to pay royalties. The proposed change applies only to sales of equipment by Sirius XM, so consumers and Sirius XM can evade the royalty if equipment is sold by someone else. There is no reasonable basis for adopting a policy about royalties for performance rights to sound recordings that imposes a financial penalty on firms that sell all of the components of a system for delivering music content to consumers.

Allocation of Royalties

SoundExchange provides a non-exclusive license for performance rights to sound recordings on satellite radio. The proposal to require Sirius XM to pay royalties to SoundExchange for all sound recordings that it plays would have the effect of making the statutory license exclusive. This effect would occur because the proposal eliminates the incentive for both Sirius XM and labels to sign direct licenses.

The SoundExchange proposal would impose a double payment on Sirius XM for using a sound recording that is covered by a direct license. Double payments could be avoided if SoundExchange gave Sirius XM a credit for payments to labels, but even if the proposal were revised in this way, it still would create an exclusive statutory license. The reason is that, even with a credit, Sirius XM would pay the statutory rate for all sound recordings. If so, Sirius XM would have no incentive to seek direct licenses. Likewise, labels would have no incentive to compete by offering lower royalties in exchange for more plays. From the documents cited here and in my direct testimony, this outcome is a goal of SoundExchange and A2IM, which seek to eliminate competition among labels.

To eliminate the possibility for direct licenses causes two anticompetitive effects. First, the proposal gives Sirius XM no escape valve, not even a small one, for reducing the cost of the statutory rate by seeking less costly direct licenses. Second, the proposal prevents a label from offering a lower rate in return for more plays, yielding a net increase in royalty payments and sales through other channels due to the promotional effect of plays on Sirius XM. The latter is especially important to labels that specialize in music genres that are not widely played on terrestrial radio, such as classical and jazz.

SECTION 801(b) FACTORS

Professor Ordover argues that the four factors in Section 801(b) do not require an adjustment to the "benchmark rates arrived at by the record companies and digital music distribution services through bargaining in unfettered marketplace settings" (*Ordover Testimony*, p. 5). Professor Ordover argues that only the fourth factor, disruption, could ever require an economically valid adjustment to market-determined rates, and even then a disruption adjustment “should be limited to a temporary facilitation of the ability of nascent and emerging services to gain consumer acceptance and potentially achieve an efficient scale of operation” (*Ordover Testimony*, p. 5).

Professor Ordover asserts that prices that emerge from the market can fail to achieve a valid policy goal only if the market is not competitive or if the product is too new to have firmly established a position in a market. By itself, the “infant industry” argument is not a plausible objective of Section 801(b) and monopoly is not the only circumstance in which a policy maker might have a reason based in economics to want to alter the outcome in a market.

I agree with Professor Ordover that the presence of monopoly is a plausible justification for regulating prices and that this concern adequately is taken into account by setting rates on the basis of the prices that would emerge from a competitive market. But this is the standard for setting statutory rates for other digital music services. Section 801(b) requires departing from this standard and so it cannot bear any relationship to the goal of controlling monopoly power other than that the starting place for setting rates under Section 801(b) is the competitive market rate.

Section 801(b) also cannot rationally be limited to a concern about infant industries. Section 801(b) does not apply to the services that did not exist at the time it was enacted. Many Internet-based digital music services do not qualify for a statutory license, and for services that do qualify, statutory rates are set according to the standard that Professor Ordover advocates, which is to emulate competitive market outcomes in setting the royalty and to ignore the infant industry issue. This proceeding sets rates for services that were more developed (less infant) than digital Internet services. SDARS had completed a long process of being licensed by the FCC and was about to be launched, and music on cable television channels already was in place. Hence, were Section 801(b) a temporary protection for new services, it would not have applied only to the services that were in place or that were well along the way to being launched. Thus, the Section 801(b) factors do not make sense unless they are about more than simply the desire to promote an infant industry.

For these reasons, Professor Ordover's economic interpretation of Section 801(b) cannot possibly be correct. Here I identify other considerations that are implicated by Section 801(b) and how economics can be used to analyze them.

Disruption. According to Professor Ordover the disruption factor could justify an adjustment to a market rate only in the service of an infant industry because "sound competition policy would not regard the fourth objective as advocating protection to an established service from the rigors of competition…" (*Ordover Testimony*, p. 6). I disagree that disruption only refers to giving a start-up a chance in the market. Here I describe other reasons that a concern about disruption can arise.

A product may serve social values that are not fully reflected in the market. A commonly used example is pure "public goods," which must be provided to everyone or to no one and for which the use by one person does not interfere with the ability of another person to use it. SDARS has public goods characteristics: it must be available almost everywhere or nowhere. Satellite radio service also requires a private good – a car radio that can receive satellite signals – but this private element does not alter the fact that once the satellite distribution system and the library of program content has been put in place to deliver programming to one person, it is available to all. A system like SDARS can fail to become commercially viable simply because no market price for the service can generate enough revenue to pay for the public goods element of the service, yet if the market price were set just to recover the private costs, the service would generate more consumer welfare than the cost of providing the public good.

A related aspect of SDARS is that it delivers many channels of pre-programmed radio to areas that have few or no terrestrial radio stations and no wireless Internet access. If 98 percent of the population can turn to a slightly less preferred method for obtaining digital music, but the remaining two percent cannot, SDARS can fail a market test even if the total economic welfare to all consumers is more than sufficient to justify the investment. Because satellite radio service is mobile, Sirius XM has no way to engage in effective price discrimination so that the two percent who really need the service can pay a lot more than others. Instead, its optimal policy is a uniform price that is enough to keep the 98 percent of its customers who have a less desirable but reasonable substitute. Whether this circumstance applies to Sirius XM is not known, but the point is that Professor Ordover is incorrect to assert that "economically sound competition policy" does not admit the possibility for a valid concern that an economically desirable product may not be commercially feasible in an unfettered market economy. Professor Ordover and I are entitled to opinions about whether we support delivering services that otherwise would not pass a market test to accommodate, especially, sparsely settled areas, but we cannot as economists state that our preferences are derived entirely from economics.

Professor Ordover's reference to the "unfettered market" is misleading because no such market exists. A variety of legal rules and institutions affect the commercial viability of a business, and a change in the legal environment can threaten to disrupt an entire industry. In the case of SDARS, new rules about copyright liability and the process for determining royalties were adopted for SDARS and other pre-existing services after the decision to enter had been made and after the entrants had made substantial investments in bringing these services to the market. One can have a lively debate about whether a policy to take these issues into account is appropriate, but one cannot legitimately argue that private market transactions fully account for the effects of changes in the legal environment. Changes in copyright rules involving digital technology explicitly were made to enable rights holders to generate revenues from music that was distributed over the Internet, in the wake of the birth of file-sharing services that did not pay royalties for the music that they distributed. Had the Internet never been invented, legislation requiring royalty payments for digital performances probably would not have been enacted because the pre-existing satellite and cable audio services posed no threat to the incomes of record companies and artists. If so, a valid disruption concern is that these services not be harmed by legal changes that enabled rights holders to monetize the use of sound recordings that are distributed over the Internet.

For these reasons, I do not find plausible that Section 801(b) is only, or even mainly, an instrument for protecting new services during their start-up stages. A more plausible economic view is that 801(b) is intended to distinguish between Internet services and other digital services that were developing and that posed no threat to the record industry, in which case disruption is not a concern that goes away once these industries have had a few years to establish themselves in the market. As discussed below, this conclusion adds considerable clarity to the economic content of the other

Section 801(b) factors and overcomes the conundrum arising from Professor Ordover's view, which is that three of the four Section 801(b) factors are redundant.

Availability. Professor Ordover implicitly assumes that availability is concerned only with inducing production of creative works. In a market with many competing content producers, the price that maximizes the total number of creative works that are produced is the collusive monopoly price. This key insight about the effect of setting monopoly prices in competitive markets was first discovered by economists who studied airline regulation. By setting air fares above the competitive level, the Civil Aeronautics Board induced competition in service quality, ranging from the quality of in-flight food service to the frequency of flights and the number of empty seats per flight.[20] Applied to sound recordings, the profit from successful recordings is a prize that labels and artists compete for by making new recordings. If the prize grows larger because of price collusion, more labels and artists will try to compete for it, causing an increase in the total number of creative products that is accounted for primarily by products that are unsuccessful. Hence, monopoly prices lead to more products but little or no increase in products that generate significant consumer welfare.[21]

Because the goal for setting statutory rates cannot possibly be to maximize the number of unimportant creative works, availability makes economic sense only if it also is concerned with access and usage of works by consumers. If so, availability, like disruption, requires taking into account the fact that satellite services use a ubiquitous

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20. See George Douglas and James C. Miller III, *Economic Regulation of Domestic Air Transport: Theory and Policy*, Brookings Institution, 1974, and George Eads, *The Local Service Airline Experiment*, Brookings Institution, 1972.

21. For more details, see Sherwin Rosen, "The Economics of Superstars," *American Economic Review* Vol. 71, No. 5 (1981), pp. 845-58.

national distribution platform that increases access to music. A higher royalty rate may induce the creation of more creative works, but may reduce total access to creative works by consumers because either satellite radio fails or, as a means to avoid copyright liability, satellite radio plays fewer sound recordings. In a circumstance in which creative works have common costs that are sold in many different channels, the royalty rates that will emerge in a competitive market will not necessary accomplish the goal of maximizing the use of content, just as they will not necessarily protect against disruption. Availability refers to considering this trade-off: whether the loss, if any, of creative works arising from a reduction in market royalty rates is offset by increasing the use of creative works by making them available to more people. Because of the public goods attributes of both creative works and satellite radio, there is no reason to believe that a competitive rights market makes the right trade-off between these competing values.

Fair Return. Professor Ordover states that economic policy has no connection to fairness. Whereas some aspects of fairness are related to non-economic considerations such as justice and liberty, the assertion that fairness has no connection to economics is incorrect. First, economics contains research on the distribution of economic welfare, the effect of the distribution of income, wealth and access to specific goods on economic growth, and the costs of alternative methods for attaining a distributive objective.[22] Second, in regulatory economics a "fair return" is understood to mean the returns that arise if rates recover total costs, including a competitive return on investment.[23] As a

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22. For a recent example, see Peter Diamond and Emmanuel Saez, "The Case for a Progressive Tax: From Basic Research to Policy Recommendations," *Journal of Economic Perspectives* Vol. 25, No. 4 (2011), pp. 165-190.

23. This interpretation of "fair return" is a half-century old. See Merton J. Peck and John R. Meyer, "The Determination of a Fair Return on Investment for Regulated Industries,"

practical matter, empirical research on the actual profitability of regulated industries concludes that "the fair rate of return lies somewhere between the profit maximizing rate of return and the market cost of capital."[24] That is, as I discussed in my direct testimony, the procedures that regulatory agencies follow tend to lead to supra-competitive profits.

Changes in copyright law for a service that was developed before the change occurred can change the ability of a participant in a rights market to earn a fair return on investments that were incurred before the change took place. Moreover, policy makers may conclude that a product creates sufficient social value that regulators should guarantee that it continues to be provided, as is the concern with availability and disruption. The fair return factor requires taking these possibilities into account.

The fair return factor can be implemented by determining upper and lower bounds for rates that are consistent with providing a competitive return to both sides of the rights market. Here the fair return standard is whether a rate allows both Sirius XM and record companies to remain financially viable in the long run. By this criterion, a rate is not reasonable if it expropriates the investments of Sirius XM while allowing record companies to earn profits in excess of the return that is necessary to be profitable.

Mr. Sidak attempts to establish the upper bound for SDARS rates, but he errs by excluding forward-looking capital costs. SDARS must recover its forward-looking capital costs, including a competitive return on investment, or it will not continue to reinvest. My direct testimony discusses this issue in calculating the minimum implicit

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in *Transportation Economics*, Columbia University Press for National Bureau of Economics Research, 1965, pp. 199-244.

24. Paul L. Joskow, "The Determination of the Allowed Rate of Return in a Formal Regulatory Hearing," *Bell Journal of Economics and Management Science* Vol. 3, No. 2 (1972), pp. 632-644.

price for the SDARS platform that is necessary to induce continued investment in obtaining new subscribers. Because of the high turnover rate of subscribers, a failure to reinvest in radios in new cars would cause Sirius XM to shrink its subscriber base by over 20 percent per year.

Regarding the lower bound, the testimony of Mr. Ciongoli provides data on revenues, costs and margins for Universal. According to Mr. Ciongoli, Universal Music Group took in [redacted] in revenues in 2010 and spent [redacted] "to create, market and distribute recorded music (including compensation to composers)" (*Ciongoli Testimony*, p. 8), leaving a profit of [redacted] (about [redacted] of revenues). Thus, the lower bound on keeping Universal financially viable is a rate that is substantially less than the current rate. Indeed, Universal would be viable if it received no royalties from Sirius XM. From this calculation I conclude that only the upper bound on rates comes into play in taking into account the "fair return" factor.

Relative Contribution. Professor Ordover believes that rates negotiated in a competitive market always take into account the relative contributions of rights holders and rights users. Market negotiations do not reflect the sunk costs of either side of the market, such as the costs of creating content or of undertaking research and development and investments to create a new distribution platform. Changes in copyright law could affect the ability of either record companies or SDARS to recover these sunk costs through market negotiations. The relative contribution factor requires taking this issue into account in setting rates.

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of	)	
	)	
DETERMINATION OF RATES AND TERMS FOR PREEXISTING SUBSCRIPTION AND SATELLITE DIGITAL AUDIO RADIO SERVICES	)	**Docket No. 2011-1 CRB PSS/Satellite II**

DECLARATION OF ROGER G. NOLL

I, Roger G. Noll, declare under penalty of perjury that the statements contained in my Written Rebuttal Testimony in the above-captioned matter are true and correct to the best of my knowledge, information and belief. Executed this 2nd day of July 2012 at Palo Alto, California.

Roger G. Noll

Appendix A

Documents Relied Upon by Roger Noll

Document Title	Document Date
Sirius XM 10-Q for Quarter Ending March 31, 2012	April 27, 2012
The Best Streaming Music Services, available at http://www.pcmag.com/article2/0,2817,2380776,00.asp	April 10, 2012
"Record Label / Distribution Market Share End 2011," *Music Industry Analysis*, available at http://www.musicindustrymetrics.com/music-industry-analysis/2012/02/record-label-distribution-market-share-end-2011.html	February 5, 2012
Rich Bengloff, "The Value of Copyright: A Latter from A2IM's Rich Bengloff," available at http://a2im.org/2011/09/12/the-value-of-a-copyright/.	September 12, 2011
Musicovery.com – Interactive Web Radio and Music Discovery Service, available at http://www.rankster.co.za/reviews/musicovery-com	May 19, 2011
Live365 Radio - App Review, available at http://appdictions.com/live365-radio-app-review/	April 19, 2011
Diamond, Peter and Emmanuel Saez, "The Case for a Progressive Tax: From Basic Research to Policy Recommendations," *Journal of Economic Perspectives*, Vol. 25, No. 4, pp. 165-190	2011
Rosen, Sherwin, "The Economics of Superstars," *The American Economic Review*, Vol. 71, No. 5, pp. 845-58	December, 1981
Douglas, George and James C. Miller III, *Economic Regulation of Domestic Air Transport: Theory and Policy,* Brookings Institution (Washington)	1974
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Sky.fm Internet Radio Publisher's Description, available at http://download.cnet.com/SKY-FM-Internet-Radio/3000-2139_4-75617261.html	
http://www.sky.fm/premium/	
Data from Sirius XM and MRI	
Record Labels with Which Sirius XM has Signed Direct Licenses	
Play Shares on Sirius XM for the Top 150 Labels	
Play Shares of Record Labels with Direct Licenses	
Other Testimony	
SDARS II Proceedings, Live Testimony, Volumes VII-X	June, 2012
Amended and Corrected Testimony of J. Gregory Sidak	March 26, 2012

Document Title	Document Date
Amended and Corrected Testimony of Janusz Ordover	June 13, 2012
Corrected Testimony of Stephen Bryan	March 21, 2012
Corrected Testimony of Charles Ciongoli	March 21, 2012
Proposed Rates and Terms of SoundExchange, Inc.	November 29, 2011
Testimony of Darius van Arman	November 28, 2011
Testimony of Jonathan Bender	November 28, 2011
Data and Documents from Sound Exchange's Production	
SX02 00019371	
SX02 00015826	
SX02 00019323	
SX02 00152378-79	
SX02 00154127	
SX02 00153983.	
SX02 00154089-91	
SX02 00153377-82	

Any Other Sources Cited in the Report and Exhibits

Table 1
to Roger G. Noll Written Rebuttal Testimony

RESTRICTED – SUBJECT TO PROTECTIVE ORDER IN DOCKET NO. 2011-1 CRB PSS/SATELLITE II

Table 2
Summary of Independent Labels With a Direct License with Sirius XM as of July 1, 2012

Label	Genre	Royalty Rate
101 Records	folk	[redacted]
12K Records	electronic	
Adjett Productions	country	
Amherst Records	pop/r&b	
Angel Air Records	rock	
Anjunabeats	electronic	
Ape Machine LLC	rock	
Average Joe's Entertainment	country	
Bonsound Records	pop	
Boyds Tone Records	kids	
Bullet Tooth / TrustKill Records	punk	
Bulls Eye Records	bluegrass	
Bumstead Productions Ltd.	alternative	
Cameron Productions	Christian	
Captured Tracks	alternative	
Centricity Music	Christian	
Century Media Records	metal	
Chapter Music	pop/rock	
Cleopatra Records	rock	
Cordova Bay Entertainment Group Inc.	rock	
Dangerbird Records	alternative	
Delta Groove Productions	blues	
Earache Records	metal	
Entertainment One U.S. LP	all genres	
Fader 4 Music	country	
Fair Trade Services	Christian	
FatCat Records USA	alternative	
Frenchkiss Records	alternative	
Gotee Records	Christian	
Grammercy Records	jazz	
Hep Records	jazz	
Hippos In Tanks	dance	
HLC Properties Ltd.	MOR	
Homeland Entertainment Group	gospel	
Hybrid Recordings	folk	
In The Red Records	punk	
Indica Records	alternative	
It's Time Child Records	r&b	
Justice Records	rock	
Kitchenware Records Ltd	alternative	
K-Tel Music, Inc.	re-records	
Labrador Records	alternative	
Latinum Records	r&b	

Label	**Genre**	**Royalty Rate**
Les Productions Simon Says	rock	[redacted]
Lonesome Day Records	bluegrass	[redacted]
Magnatune	New Age	[redacted]
Main Sequence Ltd. d/b/a Eardrum Records	comedy	[redacted]
Mamanook Music	kids	[redacted]
Mamou Playboy Records	Cajun	[redacted]
Master's Records	Christian	[redacted]
Michael Doughty	alternative	[redacted]
Michael Viola	alternative	[redacted]
Milan Records	soundtracks	[redacted]
Murderecords	alternative	[redacted]
[redacted]		
No Big Deal Records	rock	[redacted]
No Sleep Records	metal	[redacted]
NorthernBlues Music	blues	[redacted]
Nu Groove Records	jazz	[redacted]
One Haven Music	pop/rock	[redacted]
Opening Day Entertainment Group, Inc.	classical	[redacted]
Paracadute	alternative	[redacted]
Park The Van Records	alternative	[redacted]
Phase One Communications, Inc.	hip-hop	[redacted]
Phoenix Music International Ltd. (formerly See For Miles Records)	rock	[redacted]
Plug Research Music	alternative	[redacted]
Pravda Records	alternative	[redacted]
PS Classics	Broadway	[redacted]
[redacted]		
Reach Records	Christian	[redacted]
Saustex Media	country	[redacted]
SCI Fidelity Records	alternative	[redacted]
[redacted]		
Sharp Nine Records	jazz	[redacted]
Shelflife Records	alternative	[redacted]
Smalltown Super Sound	electronic	[redacted]
Sonic Unyon Records	alternative	[redacted]
Star 69 Entertainment LLC	electronic	[redacted]
Stone Table Records	Christian	[redacted]
Sunnyside Records	jazz	[redacted]
Temporary Residence Limited	alternative	[redacted]
Three Keys Music	jazz	[redacted]
TMB Productions	alternative	[redacted]
Tyscot Records	gospel	[redacted]
Yellow Dog Records	blues	[redacted]

Total Play Share of Labels with Direct License (April 2012) * **4.15%**

Source: MRI
Note:
* Estimated by dividing the number of plays identified as from the direct-license labels by the total number of plays on Sirius XM. Play share covers all services, and both pre- and post-72 plays. For post-72 plays on satelite radio service, the play share of the 85 direct-license labels is 3.9%.

Table 3
Top 70 Labels on Sirius XM by Play Share in April 2012

Share Rank	Label Parent	Have Direct License (DL) with Sirius XM	Distributed by Major Label (M)	April 2012 Play Share*
1	Sony Music Entertainment		M	[redacted]
2	Universal Music Group		M	[redacted]
3	Warner Music Group		M	[redacted]
4	EMI Group Limited		M	[redacted]
5	E1 ENTERTAINMENT	DL		[redacted]
6	Concord Music Group		M	[redacted]
7	Curb Records		M	[redacted]
8	Walt Disney Music Co.		M	[redacted]
9	[redacted]	DL	M	[redacted]
10	K-TEL MUSIC, INC.	DL		[redacted]
11	Varese Sarabande		M	[redacted]
12	Comedy Central Records		M	[redacted]
13	Beggars Group		M	[redacted]
14	EARDRUM RECORDS	DL	M	[redacted]
15	MILAN RECORDS	DL	M	[redacted]
16	VP Records		M	[redacted]
17	[redacted]	DL		[redacted]
18	Spinnin' Records			[redacted]
19	Daywind Music Group			[redacted]
20	CLEOPATRA RECORDS	DL		[redacted]
21	Welk Music Group		M	[redacted]
22	Big Machine Records		M	[redacted]
23	Musical Freedom		M	[redacted]
24	Broken Bow Records		M	[redacted]
25	Epitaph Records		M	[redacted]
26	Crossroads Music Group			[redacted]
27	SCI FIDELITY RECORDS	DL		[redacted]
28	Sub Pop Records		M	[redacted]
29	Shanachie Records			[redacted]
30	Merge Records		M	[redacted]
31	Replay (Ita)			[redacted]
32	Kufala Recordings			[redacted]
33	BANG/NEIL DIAMOND		M	[redacted]
34	PHOENIX MUSIC INTERNATIONAL LTD.	DL		[redacted]
35	FAIR TRADE SERVICES	DL	M	[redacted]
36	Mailboat Records			[redacted]
37	The Orchard			[redacted]
38	PHASE ONE COMMUNICATIONS, INC.	DL	M	[redacted]
39	Nettwerk Music Group		M	[redacted]
40	Abkco Music & Records Inc		M	[redacted]
41	Laugh.com			[redacted]
42	Metal Blade Records		M	[redacted]
43	Surrey House Music			[redacted]
44	Audiogram			[redacted]
45	Quantic Music			[redacted]
46	ATO Records		M	[redacted]
47	HEP RECORDS	DL		[redacted]
48	Uproar Entertainment			[redacted]

Share Rank	Label Parent	Have Direct License (DL) with Sirius XM	Distributed by Major Label (M)	April 2012 Play Share*
49	[redacted]	DL	M	[redacted]
50	Horizon Music Group			
51	ANGEL AIR RECORDS	DL		
52	Crossroads Music			
53	CENTURY MEDIA RECORDS	DL	M	
54	Fueled By Ramen Records		M	
55	BONSOUND RECORDS	DL		
56	Armada Music			
57	INDICA RECORDS	DL		
58	MSI Music Corp.			
59	Rebel Records		M	
60	Image Entertainment			
61	BUMSTEAD PRODUCTIONS LTD.	DL		
62	Madacy Records			
63	Rough Trade Records			
64	DANGERBIRD RECORDS LLC	DL		
65	Stand Up! Records			
66	Unidisc Music Inc.			
67	Third Man Records			
68	AMHERST RECORDS, INC.	DL		
69	ANJUNABEATS	DL		
70	Demon Music Group			

Total for Top 70 Labels		54.45%
Total Excluding the Four Major Labels		10.59%
Total for Independent Labels Distributed by Major Labels		5.75%
Total for Independent Labels Not Distributed by Major Labels		4.84%
Total for DL Labels in the Top 70 **	**21**	3.94%
Total for DL Labels in the Top 70 and Distributed by Major Labels	**7**	1.24%
Total for DL Labels in the Top 70 and Not Distributed by Major Labels	**14**	2.70%

Source: MRI
Note:

* Estimated by dividing the number of plays identified as from a label by the total number of plays on Sirius XM. Play share covers all services, and both pre- and post-72 plays.

** The share for all 85 direct-license labels is 4.15%. For post-72 plays on satelite radio service, the play share of the 85 direct-license labels is 3.9%.

SIRIUS XM REBUTTAL EXHIBITS 037 - 041

RESTRICTED – SUBJECT TO PROTECTIVE ORDER IN DOCKET NO. 2011-1 CRB PSS/SATELLITE II

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of **DETERMINATION OF RATES AND TERMS FOR PREEXISTING SUBSCRIPTION AND SATELLITE DIGITAL AUDIO RADIO SERVICES**	)))))))	**Docket No. 2011-1** **CRB PSS/Satellite II**

WRITTEN REBUTTAL TESTIMONY OF DR. MICHAEL A SALINGER

(On behalf of Sirius XM Radio Inc.)

I. Qualifications

1. I am the Jacqueline C. and Arthur S. Bahr Professor of Management and Professor of Economics at the Boston University School of Management and a Senior Academic Adviser to Charles River Associates (CRA), a company that among other activities provides economic analysis for legal and regulatory proceedings. From July 2005 through June 2007, I took a leave of absence from Boston University to serve as Director of the Bureau of Economics at the United States Federal Trade Commission (FTC).

2. I joined the Boston University Faculty in 1990. Most of the courses I have taught have been in managerial economics or statistics. I have also taught business history, health care economics, and health care finance. I have been faculty director of the undergraduate business program, faculty director of the undergraduate honors program in the School of Management, and chairman of the

Department of Finance and Economics. Prior to joining the Boston University faculty, I was an associate professor at the Graduate School of Business at Columbia University.

3. As Director of the Bureau of Economics, I oversaw an organization with 70 Ph.D. economists who provided the economic analysis to support the Commission's enforcement of the antitrust laws and consumer protection laws; and I was responsible for the recommendation of the Bureau of Economics to the Commission on all matters.

4. My affiliation with CRA started in April 2011. From July 2007 through March 2011, I was a Senior Managing Director of LECG, which used to be a competitor to CRA.

5. I received my BA, *magna cum laude* and with honors in economics, from Yale University in 1978. I received a Ph.D. in economics from the Massachusetts Institute of Technology in 1982. My area of specialization within economics is "industrial economics" (or "industrial organization"), the area of economics most closely related to antitrust and business regulation. I have published on a wide variety of topics related to antitrust and business regulation and have served on the editorial boards of both *The Journal of Industrial Economics* and *The Review of Industrial Organization*, two journals that specialize in publishing academic articles on industrial economics. Because they are particularly relevant for my testimony, I note that two of my published articles concern the estimation and use of Tobin's q and one concerns how to incorporate costs of durable assets into the cost of a unit of output. One of my articles on Tobin's q was based on my doctoral dissertation, which was entitled, "Tobin's q, Monopolistic Behavior, and the Determinants of Monopoly Power."

6. I have testified twice before the Copyright Royalty Board (CRB) and twice before a Copyright Arbitration Royalty Panel. Most recently, I testified on behalf of Live365 in the *Webcasting III* proceeding. My prior CRB testimony and my

CARP testimonies were all on behalf of Devotional Broadcasters with respect to the distribution of royalties paid by cable systems for the retransmission of distant broadcast signals. My consulting experience also includes work on behalf of Turner Broadcasting with respect to reasonable royalties for cable networks to pay ASCAP for performance rights.

7. For further details on my qualifications, see my curriculum vitae, which is attached as Appendix A to this testimony.

II. Assignment

8. Counsel for Sirius XM Radio Inc. ("Sirius XM" or the "Company") has asked me to review the testimony of Dr. Janusz Ordover in this proceeding and to assess whether I agree with his conclusion that a royalty rate in the range of 22.32% to 32.50% would be reasonable under the four statutory criteria in this proceeding and the logic by which he arrived at that conclusion.[1] With respect to Mr. Sidak's testimony, they have asked me to review his conclusion that Sirius XM has monopoly power, that it gained this monopoly power as a result of the merger of Sirius Satellite Radio Inc. ("Sirius") and XM Satellite Radio Inc. ("XM"), and that the monopoly power it allegedly gained as a result of the merger justifies the increased royalty rate Sound Exchange is requesting.[2]

9. Appendix B contains a complete list of materials I have relied on. I base my opinions below on my review of those materials, my understanding of the Section 801(b)(1) criteria, and my general knowledge of economics. For my work on this matter I am being compensated at the rate of $750 per hour.

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[1] SoundExchange Inc. Third Corrected and Amended Testimony before the United States Copyright Royalty Judges in Docket No. 2011-1, CRB PSS/Satellite II, Statement of Janusz Ordover, June 13, 2012. (Ordover), ¶9.

[2] SoundExchange Inc. Written Testimony before the United States Copyright Royalty Judges in Docket No. 2011-1, CRB PSS/Satellite II, Amended and Corrected Testimony of J. Gregory Sidak, March 26, 2012 (Sidak).

10. My work on this case is on-going. I reserve the right to augment or modify my opinions as new information becomes available.

III. Summary of Conclusions

11. My principal conclusions are as follows:

1. Dr. Ordover's estimates rest critically on the assumption that the contracts that would emerge in a competitive unregulated market for music rights for satellite radio would entail the same percentage of revenue as Dr. Ordover observes in the market for music rights for interactive internet music services. This assumption is implausible even as an approximation. It ignores both the substantial portion of the price of satellite radio services that represents payment for the distribution system and the likelihood that owners of the intellectual property concerned (*i.e.*, music rights) would charge a premium for the higher-quality access inherent in interactive services compared with non-interactive services. Without this assumption, which he does not, and in my opinion cannot, justify, his calculations of reasonable rates collapse.
2. Dr. Ordover's written testimony contains a discussion of whether the first three statutory criteria imply a free market standard or, alternatively, require some adjustment from free market rates. Even if Dr. Ordover's points about how the statutory criteria relate to free market rates made economic sense, they would not be a compelling defense of his estimates. The fundamental flaw in Dr. Ordover's estimates is his inference of free market music royalty rates for satellite radio from observed music royalty rates for interactive internet music services. That flaw is a matter of economics, not statutory interpretation.
3. At that, Dr. Ordover's points about the relationship between the free market rates and the statutory criteria do not make economic sense. Much of his discussion concerns sunk costs, and his opinion that the CRB should consider Sirius XM's sunk costs only in the context of the fourth statutory criterion

implies that the CRB should ignore them, *i.e.*, treat them as not being costs at all. As a matter of economics, however, the second and third statutory criteria require that the music royalty rates for satellite radio leave a substantial portion of the monthly subscription fee to cover the long run cost of Sirius XM's investment in its distribution assets (which is one of its primary contributions to the provision of satellite radio service).

4. Allocating a portion of Sirius XM's monthly subscription price to cover the long run cost of its distribution network does not guarantee Sirius XM a satisfactory (or any financial) return on its investment. The observation that firms in unregulated markets sometimes fail to earn a satisfactory return on investment does not justify ignoring sunk costs or considering them only to the extent that a royalty rate might be disruptive.

5. Mr. Sidak estimates Tobin's q for Sirius XM to be substantially above 1 and concludes from this result that Sirius XM has monopoly power. By using the book value of Sirius XM's assets as the denominator, Mr. Sidak's estimate of Tobin's q is substantially too low. More fundamentally, however, even if Tobin's q were above 1 for Sirius XM, that would not prove that it has monopoly power. A value of Tobin's q above 1 means that a firm has earned above a competitive rate of return. Since firms in competitive industries take the risk of earning less than a competitive rate of return (and therefore having a value of Tobin's q below 1), they need to have the prospect of earning above a competitive rate of return as inducement to risk a loss. Since Tobin's q can exceed 1 for firms in a competitive industry, even a reliable estimate that Tobin's q is above 1 does not prove market power.

6. The other piece of evidence that Mr. Sidak puts forward as evidence that Sirius XM has monopoly power is its imposition of the Music Royalty Fee ("MRF") and its recent price increase from $12.95 to $14.49. This inference is an example of *post hoc ergo propter hoc* reasoning. XM Planning

documents prepared as early as 2005 projected an increase in the monthly subscriber rate to $14.95 in 2009.[3] Sirius XM's agreement with the Federal Communications Commission (the "FCC") not to increase certain prices as a condition for regulatory approval of the Sirius and XM merger delayed an increase that likely would have occurred anyway.[4] The imposition of the Music Royalty Fee reflected an increase in marginal cost, which is what one would expect under competition. Moreover, because the vast majority of XM and Sirius use is in cars and because no vehicles are factory-equipped with both an XM and a Sirius radio, it is not clear why one would expect the merger to provide an opportunity to increase prices.

IV. Dr. Ordover's Testimony – Summary and Critique

12. In this section, I explain Dr. Ordover's calculation, the key assumption underlying it, and the reason the assumption is inappropriate.

A. Dr. Ordover's Calculation

13. Whatever else one makes of Dr. Ordover's testimony, it has the virtue of being simple. His base calculation of an appropriate range of royalties relies on just five assumptions/assertions:

    1. The appropriate economic interpretation of the first three 801(b)(1) criteria is the rate that willing buyers and willing sellers would agree to in a free market for music rights for satellite radio.

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[3] SXM_CRB_DIR_00000011, "LTP v6.xls."

[4] Declaration of Melvin Karmazin, In the Matter of: Carl Blessing on behalf of Himself and Others Similarly Situated v. Sirius XM Radio Inc. before the United States District Court for the Southern District of New York, No. 1:09-cv-10035-HB ECF CASE, January 18, 2011, ¶5. (Karmazin)

2. The best benchmarks to determine these prices are contracts between major music labels and interactive internet music services because they are free market rates.
3. Interactive internet music services pay royalties of approximately 60-65% of their subscriber revenues.
4. Interactive internet music services transmit only music. Satellite radio has both talk and music content. Talk and music account for approximately equal shares of the value users get from satellite radio.
5. If satellite radio programming consisted only of music then, absent a compulsory license, the competitive license fees negotiated between satellite radio and music labels in a competitive market would be the same percentage of revenue as in the market for music rights for interactive internet radio. As a shorthand, I will refer to this assumption as the "constant percentage of revenue" assumption.

14. Based on these assumptions, Dr. Ordover estimates that, absent a compulsory license, the competitive license fees negotiated between satellite radio and music labels in a competitive market would be between 30-32.5%, computed as half of the range from 60%-65% that he found in the interactive internet radio agreements he examined – an adjustment solely to account for the substantial non-music content on Sirius XM (Ordover, ¶39).

15. Dr. Ordover purports to provide two alternative estimates of a reasonable rate. One is in effect the same calculation. The other uses what Dr. Ordover calls an "interactivity adjustment" to his benchmark rate. This yields a lower, but still flawed, estimate and, as discussed below, still assumes a royalty rate equal to 60% of revenue.

B. The Problem with Dr. Ordover's Testimony

16. Just as it is simple to explain Dr. Ordover's testimony, it is simple to explain the problem. His estimates of a reasonable royalty rest on the assumption that absent

a compulsory license, the royalties that would be determined in a competitive market for music licenses for satellite radio would entail the same percentage of revenue as he observes in the market for interactive internet music services, *i.e.*, on his "constant percentage of revenue" assumption (Ordover, ¶57).

17. I assume for the sake of argument (subject to the qualifications I discuss in Section VII, *infra*) that the Section 801(b)(1) factors are consistent with a free-market standard. It is important to be clear, however, on what such a standard means. Ideally, the rate to be determined is the one that would be "negotiated between Sirius XM and copyright holders in an arms' length setting for access to a record company's entire catalog of music for use on Sirius XM's satellite radio service." (Ordover, ¶7)[5] The question one needs to address with respect to Dr. Ordover's methodology is what the observed rates in the (presumably unfettered) market for music rights for interactive internet music services indicate about what rates would be in an unfettered market for music rights for satellite radio.

18. The answer is that music royalties for satellite radio should be a substantially smaller percentage of revenue (even after adjustment for non-music content on satellite radio) than they are for interactive internet music services. Dr. Ordover simply assumes that music royalties would generally be a constant percentage of revenue across different services. But this is plainly wrong for two reasons. First, Sirius XM and interactive music services have vastly different cost structures. The former includes a delivery platform while the later does not. Applying the interactive services percentage of revenue rate to Sirius XM would effectively give record labels a share of revenues that have nothing to do with the sound recording rights they are licensing. Second, Sirius XM and interactive music services require different rights from labels. The rights that Sirius XM requires

[5] In fact, as Dr. Noll discusses in far more detail in his testimony, Sirius XM has negotiated licenses directly with a substantial number of independent music labels.

are substantially less valuable than those that interactive services require. Consequently, Sirius XM should pay less for the less valuable rights.

19. The record in this case contains evidence in support of both major reasons why Dr. Ordover's "constant percentage of revenue" assumption is implausible. With respect to the importance of the cost of distribution technology, Dr. Noll has testified about the licenses between Cricket and the four major record companies for its interactive music service bundled with cellular telephone service in a single-price package.[6] The music service provided by Cricket is similar to standalone interactive internet music services that pay royalty rates of 60% - 65% of revenue, equating to monthly music royalty payments of between $6.00 and $6.50 per subscriber. As detailed in Dr. Noll's report, the Cricket licenses set royalties as the greater of [redacted] per subscriber per month and, because of the higher bundle price, [redacted] of gross revenues. In other words, because of the higher retail prices of $55 and $65 per month for the Cricket bundle, the licensing terms call for a much lower percentage of revenue royalty rate. Nevertheless, the licensing terms imply payments to the labels of between [redacted] per subscriber per month, essentially the same dollar amount as the standalone interactive services. (Noll, Table 2.3)

20. This example clearly illustrates how a benchmark rate for one service can properly be used to set a target rate for another service. Cricket is licensing the same rights that interactive internet radio services license. Establishing comparable rates for the target (Cricket) from the benchmark (interactive internet music services) entails charging the same price, not the same percentage of

[6] Sirius XM Radio Inc. Revised Amended Written Direct Testimony before the United States Copyright Royalty Judges in Docket No. 2011-1 CRB PSS/Satellite II, Statement of Roger G. Noll, May 17, 2012 (Noll). Cricket is a popular and significant interactive service. According to documents produced by WMG, [redacted] See SX02 00088977-SX02 00089061, at SX02 00089011, 00089015.

revenue.[7] If the music rights for satellite radio were equivalent to the music rights for interactive internet radio – which they are not – then the appropriate way to determine a target rate would not be to simply apply the same percentage of revenue rate to the different retail price of Sirius XM, but rather to set the rate so as to equalize the price per subscriber.

21. Of course, Sirius XM is a non-interactive service rather than an interactive service, and the interactivity has a substantial effect on the appropriate royalty. Dr. Noll has presented evidence that music royalty rates for non-interactive services are dramatically lower than for interactive services (Noll, p. 8). His testimony reports the terms of contracts between internet music services and record companies for different service tiers provided by the same internet music provider.[8] As an example, consider his Table 2.2b, which reports the terms of Slacker's license with EMI for digital transmission. In particular, compare the terms in column (2) for subscription, non-interactive service (without advertising) with those in column (4) for interactive services (without the complication created by carrier fees). For non-interactive service, the music royalty is [redacted] of revenue. For interactive service, the music royalty is [redacted] of revenue.[9]

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[7] The ambiguity as to whether to define the price of music rights as a price per subscriber or a price per play does not change the point that the appropriate way to translate a benchmark price into a target price is to equalize the price for essentially equivalent rights.

[8] The pieces of evidence provided by Dr. Noll are not isolated examples. For example, over time, the price of computer hardware has dropped dramatically so that the price of a typical personal computer or laptop is much lower than it once was (see Dell Inc. Form 10-Ks, 2001-2012). If Dr. Ordover's constant percentage of revenue assumption applied to this instance of hardware and intellectual property, then Microsoft would have reduced the price of its Windows operating system proportionately to the price of personal computers. It has not done so (see Microsoft Corporation Form 10-K, 2001-2011).

[9] As Dr. Noll explains in the body of his testimony, the music royalty for the non-interactive service could exceed [redacted] of revenue if users streamed enough tracks that Slacker paid under the per-play prong of the revenue formula, but the number would have to be much larger than it appears to have been in practice, and in any event would only increase the effective rate marginally above [redacted]

22. As a matter of economic logic, Dr. Ordover's "constant percentage of revenue assumption" makes little sense. These examples are evidence that in addition to its logical defects, the assumption does not reflect market reality.

C. Dr. Ordover's Alternative Estimates

23. Having put forward calculations that use a deeply flawed assumption to suggest music royalties for satellite radio of 30% - 32.5%, Dr. Ordover then presents two alternative estimates to create the appearance that his estimates are robust as compared to alternative approaches. His first alternative is not materially different from his base calculation. For his base calculation, Dr. Ordover computed music royalties as percentage of revenues for different combinations of time periods, interactive services, and record labels. The range of 60% to 65% underlying his base estimate was based in effect from eyeballing the results and asserting that the middle range of the distribution was 60% to 65%. His first "alternative" is based on his calculation that the average monthly royalty per subscriber in his sample was $5.95 or 59.6% of the $9.99 average monthly subscription rate. Substituting the actual average royalty rate for his eyeball estimate of the middle range is a technical correction, not an alternative methodology that serves as a robustness check.[10]

24. Dr. Ordover's other alternative approach in this section is somewhat different. As with his other estimate(s), he starts with the interactive service royalty as his benchmark.[11] He then purports to adjust it for interactivity by multiplying the per-subscriber fee by the ratio of his estimates of the average monthly

[10] To put the point even more starkly, the calculation underlying the bottom of the range in Dr. Ordover's base calculation is 60% x 0.5 = 30%. The calculation underlying his so-called alternative is $5.95/$9.99 x 0.5 = 29.8%. Since $5.95/$9.99 is effectively 60%, the two calculations are effectively identical. Contrary to Dr. Ordover's assertion (Hearing Transcript, June 14, 201, at 2422-23), this is true regardless of the retail price of the satellite service.

[11] He uses the dollar rather than percentage rate, but that is an inessential detail.

subscription prices of non-interactive and interactive internet music services ($4.86/$9.99). From these estimates, he calculates a royalty rate for Sirius XM of $2.89 per subscriber per month (Ordover, ¶55).

25. This methodology corrects one but only one of the two fundamental problems with Dr. Ordover's base calculation. By effectively applying the 60% royalty rate to the price of an internet-delivered non-interactive service (60% x $4.86) rather than to the implicit price of the Sirius XM music channels ($6.475), this approach tacitly takes into account the differences in delivery costs between the internet-delivered services and Sirius XM. But the problem remains that this approach maintains the "constant percent of revenue" assumption despite the fact that we would not expect music rights of much different value to command the same percentage of the retail price.

D. Dr. Ordover's Choice of Benchmark

26. Both of Dr. Ordover's calculations rely on royalty rates for interactive music services as the benchmark, his rationale being that those rates are market-determined. To this point, I have focused my criticisms of Dr. Ordover's testimony on why his adjustments are inadequate. On one level, criticisms of a benchmark and of the adjustments are one and the same. A benchmark is valid if and only if suitable adjustments are available. Since I do not see any reliable way to adjust the royalties for interactive internet music services to get a reasonable royalty for satellite radio, one might reasonably ask what benchmarks would be superior.

27. Rates for non-interactive internet radio are one possibility. The music rights for satellite radio are more similar to the music rights for non-interactive internet radio. This is important for two reasons. One is a matter of fairness. Ultimately, consumers pay the royalty rates. If, say, non-interactive internet radio services pay $0.75/month per user for music royalties, why should satellite radio providers

(and their users) pay either less or more for what are in effect the same rights? The other related reason is that satellite radio and non-interactive internet radio compete with each other. Both from the perspective of the statutory criteria and a broader public policy perspective, it is desirable that the music royalty rate not distort the competition. To accomplish that objective, satellite radio should pay the same dollar amount per subscriber as the non-interactive internet radio services that offer a product that is most similar to the music channels provided by satellite radio.

28. I also consider the direct licenses that Sirius XM has entered into with record labels to provide relevant information that calls into question Dr. Ordover's choice of the interactive services as his benchmark. While Dr. Ordover appears to denigrate the direct licenses as somehow being tainted by regulatory overhang, information from markets that are subject to a compulsory license at regulated prices can provide relevant information about a free market rate. When the price is above the competitive price, individual suppliers have an incentive to undercut the market price in order to secure additional business. This price cutting to secure more business is the competitive process at work, and the incentives underlying it are present whether the prevailing price stems from an unfettered market or whether it is a regulated price. This phenomenon is precisely what we have seen with the direct licenses Sirius XM has signed with record labels. The willingness of record labels to undercut the existing regulated rate to obtain more business (*i.e.*, plays) is evidence that existing rates are above competitive levels.

29. When a regulator sets a rate above a competitive level, it is in the collective interest of the industry for all sellers to maintain the regulated rate. This is so even if every one of them would individually cut their price to obtain more business if they could do so without inducing their competitors to cut prices as well. Dr. Noll addresses the record evidence demonstrating this phenomenon at work here. The fact that a substantial number of record labels have seen fit to undercut the existing statutory rate notwithstanding the industry pressure not to do

so should, in my opinion, make the CRB reluctant to raise the rate at all, much less to anywhere near the level that Dr. Ordover suggests would be reasonable.

E. Reprise

30. Dr. Ordover's testimony concerning reasonable rates turns critically – whatever his approach – on his "constant percentage of revenue" assumption. As both the record evidence in this case and external evidence demonstrate, however, we should expect music royalties as a percentage of revenue to be *far* lower for satellite radio than for interactive internet music services. Because the "constant percentage of revenue" assumption is both so critical to Dr. Ordover's testimony and so flawed, the CRB should reject Dr. Ordover's conclusions about what royalty rates would be reasonable.

V. Dr. Ordover's Discussion of How to Interpret the Statutory Criteria

31. Section III of Dr. Ordover's written testimony provides his economic interpretation of the 801(b)(1) criteria. The presumed purpose of this section is to justify his calculations, but it fails to do so. First, by focusing on how to interpret the statutory criteria, Dr. Ordover diverts attention from the economic problems with his estimates explained above. Even if Dr. Ordover's interpretation of the statutory criteria were correct, those problems remain. Moreover, his economic interpretation of the statutory criteria is flawed.

A. Dr. Ordover's Flawed Discussion of the Third Criterion

32. The third statutory criterion requires the Judges to take account of the "relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication." (Ordover,

¶11) Dr. Ordover's discussion of the third statutory criterion is primarily about sunk costs. He observes (and, by implication, asserts to be relevant) that 1) in free markets, companies are often unable to recover their sunk costs, 2) record companies incur sunk costs, and 3) Sirius XM is not going to launch any new satellites in the period covered by this proceeding. From this, he concludes, "To the extent the Court finds the investment in satellites relevant, I believe that the issue appropriately is addressed under the rubric of the fourth policy objective." (Ordover, ¶23)

33. Sirius XM's main role in making satellite radio available was to develop the necessary technology, to pay for the satellites and terrestrial repeaters, and to subsidize placement of receivers in automobiles. The third statutory criterion says that the rate the CRB sets should reflect this contribution, which presumably means that it should recognize that part of the monthly Sirius XM subscriber fee should compensate Sirius XM for this contribution. It is a basic principle of economics that firms will continue to operate in the short run as long as they can cover their variable (*i.e.*, non-sunk) costs and, as a consequence, market prices can fall, under some circumstances, to average variable cost. When this happens, the market price provides the seller no margin to contribute to its sunk costs. I would not interpret such an outcome as reflecting the contribution of the sunk costs to the provision of the service. Since some market prices might not reflect the contribution of satellite radio providers to the provision of the service, not all conceivable market-determined prices satisfy the third statutory criterion.[12]

34. Allocating a portion of the fee for satellite radio to cover Sirius XM's sunk costs would not, as Dr. Ordover suggests, guarantee Sirius XM a competitive (or any)

[12] To be clear, the point I am making is not the fundamental problem with Dr. Ordover's estimates. I have no reason to believe that the royalty rates for music rights for interactive internet music services are so high that they fail to reflect the contribution of the service providers to those services. The point is that the contribution of such services is quite different than the contribution of Sirius XM – and that it would therefore be inappropriate to apply the same percentage royalty for the music input.

return on its past investments. As I explain in more detail in Appendix C, any calculation of the long run average cost associated with Sirius XM's sunk costs necessarily reflects prior assumptions about the number of subscribers Sirius XM will attract over time. Implicitly recognizing a monthly contribution per subscriber that would have allowed Sirius XM an adequate *expected* rate of return on its investment, as the third statutory criterion would seem to require, would not guarantee Sirius XM that return today in light of Sirius XM's actual subscriber count and financial history. To actually earn a rate of return equal to a competitive rate of return, it would still have to attract an adequate number of subscribers consistent with its prior projections, which it has not done.

35. Dr. Ordover's suggestion that the fourth statutory criterion (disruption) provides the appropriate framework for evaluating Sirius XM's sunk costs makes no sense and indeed gets matters completely backwards. To the extent that Sirius XM's investments in its satellite network are sunk, then it would rationally continue operation even if the CRB set rates that left it with no contribution to the recovery of those costs. This situation would violate the relative contribution factor even if it did not cause Sirius XM to cease operations.

36. In suggesting that consideration of sunk costs is relevant for assessing whether a royalty reflects the relative contribution of sunk inputs, I am not arguing that the statutory criteria suggest something other than a free-market standard, but I am adding a qualification. In most markets, a range of market prices is feasible, and that range is generally broader in the economic short run than it is in the economic long run. As a matter of economics, I read the third statutory criterion as restricting rates to those that are sustainable in the economic long run. Such prices would ensure that all participants would still have voluntarily engaged in the market transactions needed to make satellite services available had they been aware of the rates when they made the decisions to enter into those transactions – and avoid the situation where a post hoc rate increase allows music rights owners

to expropriate that portion of per-subscriber revenue that the service provider expected to cover capital costs when making its initial capital investment.[13]

B. Dr. Ordover's Interpretation of the Second Criterion

37. Similar points apply to the second statutory criterion and Dr. Ordover's discussion of it. Again, to the extent that one argues that the statutory criteria are identical to or consistent with a free market standard, the question one needs to address is whether free market rates would necessarily "afford the copyright owner a fair return for his creative work and the copyright user a fair income under existing economic conditions." As Dr. Ordover points out, "fair return" and "fair income" are not terms of art in economics and I agree with Dr. Ordover that a reasonable economic interpretation of a "fair outcome" is one that the participants would voluntarily accept. For example, suppose hypothetically that every satellite radio subscriber would, if satellite radio were unavailable, subscribe to non-interactive internet radio. Suppose further that music royalties for subscription non-interactive internet radio are $0.75 per subscriber month. Given these assumptions, any royalty rate for satellite radio below $0.75 per subscriber month would be unfair to the copyright owner because it would not compensate it for the opportunity cost of the royalties it would otherwise get from non-interactive internet radio. The only qualification I would add is that the interaction must be voluntary even in the long run. In other words, any party that has incurred sunk costs might voluntarily accept interactions in the short run that it would not have agreed to in the long run had it been aware of the terms prior to incurring sunk

[13] A problem with interpreting the statutory criteria as being synonymous with a free market rate is that doing so begs the question of why Congress created a compulsory license rather than simply leaving rate determination to the market or adopting a Willing Buyer / Willing Seller standard as it did for the webcasting. See Final Rule and Order, Digital Performance Right in Sound Recordings and Ephemeral Recordings, Docket No. 2009-1 CRB Webcasting III, published in 76 Federal Register 13026, 13028, March 9, 2011 (*Webcaster III*).

costs, and it would be "unfair" to set the rate for the music input at a level that necessarily would have *prevented* such investment in the first instance.

C. Reprise

38. Dr. Ordover's main message in his discussion of the meaning of the first three statutory criteria is: 1) sunk costs are sunk; 2) in free markets, firms do not necessarily recover their sunk costs; and, therefore, 3) the statutory criteria do not require the CRB to be concerned with whether the music royalties it sets will afford Sirius XM a contribution from each subscriber to cover the long run cost of the satellite network.

39. This message is misleading. A substantial fraction of Sirius XM's contribution to the provision of satellite radio – and a substantial portion of the revenue earned from each subscriber – reflects sunk costs. The CRB does not have to guarantee Sirius XM a satisfactory return on its investment on an aggregate basis to recognize that a substantial portion of Sirius XM's monthly subscription fee, on a per-user basis, must be reserved to cover these sunk costs in order to "afford" Sirius XM the reasonable prospect of a market return (viewed ex ante). Once one recognizes this point, the music royalty necessarily has to be a smaller fraction of the satellite radio subscription price than it is for interactive internet music services, even ignoring the higher value of music rights for interactive services relative to those for non-interactive services.

VI. Mr. Sidak's Testimony

40. I now turn to Mr. Sidak's testimony. In brief, he argues that not only can Sirius XM afford the rates SoundExchange proposes but that these rates will provide Sirius XM with a "fair income." He bases these arguments on his conclusion that Sirius XM has monopoly power, that the merger of Sirius and XM increased its monopoly power, that Sirius XM faces no competition from substitutes that constrain its pricing, and even that Sirius XM is "relatively impervious" to

macroeconomic downturn. (Sidak, Section II). As evidence of Sirius XM's market power, Mr. Sidak has put forward estimates of Tobin's q, which is one way economists measure monopoly power. (Sidak, ¶30)

A. Mr. Sidak's Analysis of the Impact of Macroeconomic Factors on Sirius XM

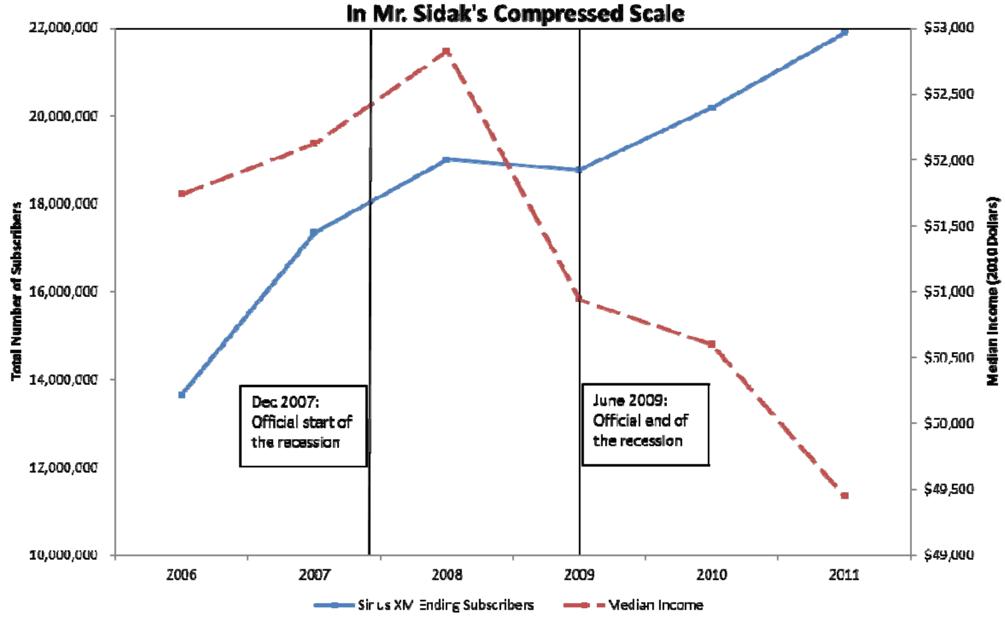
41. Before getting to Mr. Sidak's estimates of Tobin's q, it is worth noting several blatant instances in which Mr. Sidak's conclusions both reflect deeply flawed economic analysis and defy common sense.

42. The title of Section II of Mr. Sidak's report is, "Sirius XM Is Relatively Impervious to Macroeconomic Downturns." It would be hard to overstate how stunning a result this would be if it were so. Of course, it is not. Indeed, the effect of the contraction on Sirius XM's subscribers is clearly evident (at least to a trained eye) in Mr. Sidak's Figure 1. As it shows, Sirius XM's subscriber count was growing dramatically up to the start of the recession. That growth rate slowed and then even actually turned downward by the official end of the recession before resuming growth (albeit at a slower pace) as the tepid recovery took hold. Given this clear and significant drop-off in the rate of subscriber growth experienced by Sirius XM during the recession, as compared to the growth prior to the recession, it is hard to fathom how Mr. Sidak concludes that Sirius XM is "impervious to macroeconomic downturns."

43. Mr. Sidak's Figure 2, which he uses to try to reinforce his point, is deceptive. It appears to show that the decline in Sirius XM subscribership during the great contraction was small relative to the decline in median income. But, he generates this appearance by choosing a right-hand scale for the income series that ranges (in thousands of 2010 dollars) from $49.0 to $53.0. My Figure 1A is my reproduction (using his scaling) of Mr. Sidak's Figure 2. My Figure 1B represents the same information but using a scale for both series that starts at 0. Whether or not Mr. Sidak did so intentionally, his choice of a compressed scale,

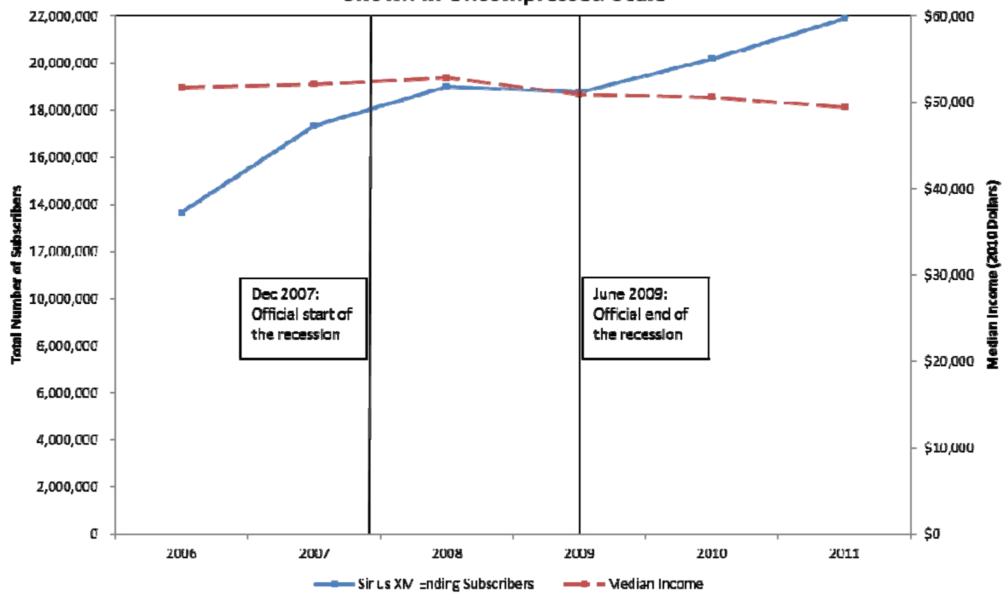
which created the appearance of a large change, is a well-known technique for presenting empirical findings in a misleading way. The impression created by Figure 1A is that whatever decline Sirius XM suffered during the economic contraction, it was modest compared to the apparently dramatic reduction in personal income. As Figure 1B makes clear, however, the decline in personal income was not nearly as dramatic as the scaling in Figure 1A makes it appear.

Figure 1A: Sirius XM Subscribers and Median Real U.S. Household Income In Mr. Sidak's Compressed Scale



Note:
Mr. Sidak's Figure 1 and Figure 2 use quarterly data for ending subscribers, while this figure uses yearly data for ending subscribers as of 12/31 in each year.
Sources:
1. Sirius XM Radio Inc. Form 10-K, 2008 and 2011.
2. U.S. Census Bureau, Current Population Survey. Income Statistics, Table H-6, Regions—All Races by Median and Mean Income: 1975 to 2010, available at http://www.census.gov/hhes/www/income/data/historical/household/.

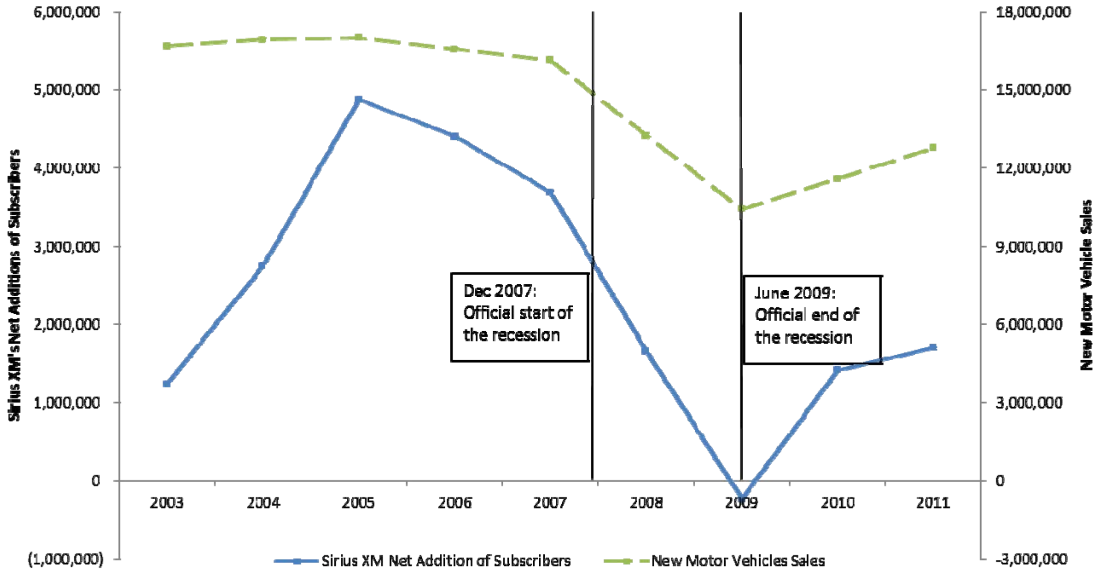
Figure 1B: Sirius XM Subscribers and Median Real U.S. Household Income Shown in Uncompressed Scale



Note:
Mr. Sidak's Figure 1 and Figure 2 use quarterly data for ending subscribers, while this figure uses yearly data for ending subscribers as of 12/31 in each year.
Sources:
1. Sirius XM Radio Inc. Form 10-K, 2008 and 2011.
2. U.S. Census Bureau, Current Population Survey. Income Statistics, Table H-6, Regions—All Races by Median and Mean Income: 1975 to 2010, available at http://www.census.gov/hhes/www/income/data/historical/household/.

44. As if there were any doubt about the matter, my Figure 2 is a time plot of new car sales in the United States and the change in the number of subscribers to satellite radio. As it shows, the two series are highly correlated. The dramatic reduction in new subscribers in 2008 and 2009 mirrors the drop in new cars sales. This finding should come as no surprise. A critical aspect of Sirius XM's business is its agreements with automobile manufacturers to install satellite radios in new vehicles. Key assumptions in Sirius XM's financial projections are the rate of new car sales and the fraction of new car buyers who Sirius XM successfully converts to paid subscriptions. Mr. Sidak's expert opinion that satellite radio is relatively impervious to economic downturns is simply wrong.

Figure 2: Sirius XM's Net Addition of Subscribers and U.S. New Motor Vehicle Sales



Notes:
1. The net addition of subscribers = gross subscriber additions - number of deactivated subscribers.
2. Net addition of subscribers data for 2003-2005 is the sum of Net addition from Sirius and XM. Net addition of subscribers data for 2006-2011 is from Sirius XM Radio Inc..
3. New motor vehicle sales include new car sales and new light-truck sales.

Sources:
1. XM Satellite Radio Holdings Inc. and Sirius Satellite Radio Inc. Form 10-K, 2005. Sirius XM Radio Inc. Form 10-K, 2008 and 2011.
2. Automotive News, 2000-2011 Market Data. http://www.autonews.com/, accessed on June 20, 2012.

B. Mr. Sidak's Analysis of the Competition Faced by Sirius XM is Flawed

45. Section III of Mr. Sidak's report argues that Sirius XM can afford the rates SoundExchange is proposing because it does not face significant business risk. Most of this section is devoted to risk from competitors (Sidak, ¶41).

46. In it, he asserts that "[T]errestrial radio does not constrain Sirius XM's prices or subscribership because of the implicit cost to listeners of advertisements on music channels" (Sidak, ¶45). While it is not at all clear how the first half of this sentence follows from the second, it cannot be the case that the implicit cost to listeners of advertisements on music channels is high. Internet radio services such as Pandora offer an advertising-supported free service and a subscription service that is free of advertising and includes other enhancements. The vast majority of Pandora users tolerate the advertisements to listen for free even though the

subscription price is only $3 per month. That is quite strong evidence of how little many users are willing to pay to avoid advertisements.

47. Other advantages of satellite radio that Mr. Sidak goes on to describe are the greater variety of programming (including programming with indecent content under the current FCC precedent) and its availability outside the reach of terrestrial radio stations (Sidak, ¶47). There is no doubt that Sirius XM has attributes that distinguish it from terrestrial radio. If it did not, no one would subscribe. But, from his observations about why terrestrial radio is not a perfect substitute for satellite radio, Mr. Sidak concludes that terrestrial radio does not constrain Sirius XM's pricing at all (Sidak, ¶48). Under this flawed economic logic, one could conclude that Pepsi does not constrain the pricing of Coke, or to use an example more closely related to Mr. Sidak's experience, that basic cable networks do not constrain the pricing of premium networks. This is obviously not the case.

Mr. Sidak devotes another portion of this section to arguing that the cell phone delivery of internet radio does not pose a risk to Sirius XM. As he points out, to listen to internet radio in a car over a cell phone, one must figure out how to connect a cell phone to a car audio system and incur cell phone usage charges (Sidak, ¶62). While both factors may place some limitations on the use of internet radio services over cell phones in cars, it simply does not follow that Sirius XM faces no competitive threat from these technologies. Also, it does not seem to occur to Mr. Sidak that the advantages of satellite radio that might help it withstand competition from internet radio delivered over cell phones reflect its investments in its distribution network and in getting satellite radios installed in cars.

C. Mr. Sidak's Claim that Sirius XM has Market Power is Flawed

48. Mr. Sidak concludes that the merger of Sirius and XM increased Sirius XM's market power by giving it a monopoly in satellite radio. He argues that the price guarantees Sirius XM gave the FCC initially constrained this alleged market power, and the sunset of those provisions now gives it an unconstrained monopoly. He cites Sirius XM's imposition of the MRF and its recent rate increase from $12.95 to $14.49 as evidence that Sirius XM now has unconstrained monopoly power (Sidak, ¶25). He also cites the reduction in other content licensing fees as evidence that Sirius XM can now afford higher music licensing fees.

49. None of these conclusions or inferences is warranted. First, Sirius XM was permitted to impose the music royalty fee to reflect cost (and, indeed, marginal cost) increases.[14] We would expect marginal cost increases to affect prices in competitive markets, so Sirius XM's decision to pass on higher royalty costs is not evidence of market power. Furthermore, the fact that a company chooses to increase its prices to reflect higher costs does not in any way imply that the cost increase fails to harm the company. It is a general principle in economics that a cost increase, even for a firm with some discretion over its price, lowers profits.

50. Second, XM had projected a price increase before the prospect of the merger arose. A long term plan from 2005 projects a price increase to $14.95 in 2009.[15] The price concession to the FCC caused it to postpone the price increase. The fact that, when Sirius XM did increase its rates in 2012, it did not raise them

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[14] See Karmazin ¶9.

[15] A 2005 XM Long Term Strategic Plan assumes a base subscription price increase from $12.95 to $14.95 will be in effect in 2009. See SXM_CRB_DIR_00000011, "LTP v6.xls."

above what it had planned well before the merger is evidence that the merger did not result in market power for Sirius XM.[16]

51. According to data published by the National Association of Theater Owners, the average price of a movie ticket, which is another entertainment product, increased from $6.41 in 2005 to $7.89 in 2010.[17] The increase of 23% is about the same percentage increase as Sirius XM put into place (including the MRF). While just one piece of evidence, it illustrates how careful one must be about automatically inferring market power from price increases. Prices can change for many reasons other than changes in market power. Without a thorough examination of other explanations (like costs and product improvements), inferring market power from a price increase is not warranted.

52. In addition, the FCC and the Department of Justice were well aware that they were reducing the number of satellite radio providers from two to one. Had they believed that satellite radio constituted a relevant market for merger review, they likely would have blocked the merger. Their decision to allow the merger and to give Sirius XM full pricing flexibility starting in 2012 reflected their judgment that Sirius XM faces competition.[18]

53. One important reason cited by the Department of Justice for closing its review of the Sirius XM merger was that most satellite radios are sold pre-installed in cars, and that prior to the merger Sirius and XM each had contracts with auto companies that gave one or the other exclusive rights to have their radios installed (USDOJ, p. 1). Thus consumers could get GM cars with XM radios, but not with

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[16] XM made those projections before it was aware of the royalty increases that gave rise to the MRF. With the MRF, Sirius XM did increase its price relative to XM's 2005 expectations, but the bigger increase is attributable entirely to an increase in cost.

[17] See National Association of Theatre Owners data, available at http://www natoonline.org/statisticstickets.htm, last accessed June 26, 2012.

[18] Statement of the Department of Justice Antitrust Division on Its Decision to Close Its Investigation of XM Satellite Radio Holdings Inc.'s Merger with Sirius Satellite Radio Inc., March 24, 2008. (USDOJ)

Sirius radios, while Ford customers could only buy a car with a pre-installed Sirius radio. For a customer buying a new GM car and choosing whether to get an XM satellite radio or to continue as a paying subscriber once the trial subscription expires, the choice is between XM versus over-the-air radio, CDs, MP3 players plugged into the aux port on the radio, internet based services on mobile phones, and so on, but not between XM and Sirius. As the DOJ noted, to a significant degree, the merger did not change the competitive environment faced by XM and Sirius when it comes to customers choosing whether or not to subscribe (USDOJ, p. 2).

54. Finally, Mr. Sidak refers to rate reductions that Sirius XM has obtained with other sources of content, such as Howard Stern (Sidak, ¶29). Once again, he simply assumes that, because a price changed, it must be due to an exercise of market power, without recognizing that the price change might simply mean changing demand and supply conditions. In the case of content, Sirius XM may have reassessed the incremental value of some of its entertainment because of more modest projections of future subscribers and revenues. It is noteworthy that the very article that Mr. Sidak cites as evidence, when discussing the new Howard Stern contract, concludes, "Stern is so expensive, the savings from him leaving would pretty much offset the loss of subscribers."[19] In other words, under his new contract with Sirius XM following the merger, Howard Stern is still extracting the full incremental value of his contribution to satellite radio profits. Mr. Sidak has presented no evidence that these new contracts reflect market power versus a more sober forecast of the prospects for satellite radio.

55. The last issue related to Mr. Sidak's report that I will discuss before turning to Tobin's q is his Section IV, in which Mr. Sidak reports his estimates of how high

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[19] J. P. Mangalindan, "What Howard Stern's $400 Million Sirius Contract Means to the Street", *FORTUNE*, Dec. 9, 2010, available at http://money.cnn.com/2010/12/09/news/companies/Sirius-Stern-400-million fortune/index.htm, last accessed June 28, 2012.

music royalties could be before they would cause Sirius XM not to be able to cover its variable costs. Any rate below the 57.8% royalty he estimates would not, according to Mr. Sidak, be disruptive (Sidak, ¶68). In Mr. Sidak's view, disruption requires liquidation. Moreover, Mr. Sidak's interpretation of disruption makes a point that I made above with respect to Dr. Ordover's testimony. If the fourth statutory criterion means that a rate is disruptive if it makes it impossible to cover variable costs, then that criterion does not provide a framework for considering Sirius XM's sunk costs and may violate the relative contribution and fair income/fair return criteria.

D. Mr. Sidak's Analysis of Tobin's q

56. Tobin's q is the ratio of the market value of a firm to the replacement value of its assets. James Tobin introduced it as a measure to predict rates of physical investment. Economic theory predicts that firms have an incentive to invest in physical assets when their market value exceeds their replacement value, *i.e.*, when q is greater than 1, and do not have an incentive to do so when q is less than 1. For example, when the market value of oil refineries exceeds their replacement value, oil refiners have an incentive to invest in additional refining capacity. If firms invest in a particular type of asset (like an oil refinery) when Tobin's q for that type of asset is greater than 1 and do not do so when Tobin's q is less than 1, we should expect over time for Tobin's q to gravitate to 1 for that type of asset. Tobin introduced q as a tool for modeling investment on a macroeconomic scale, and others have used it as a tool for modeling investment on the scale of an entire firm (which generally entails an aggregation of assets).[20] Industrial economists have used Tobin's q as a measure of profitability in studies of market power. In

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[20] For elaborations, see Fumio Hayashi, "Tobin's marginal q and Average q: A Neoclassical Interpretation," *Econometrica*, January 1982, Vol. 50, pp. 213-24., and Lawrence H. Summers, "Taxation and corporate investment: A Q theory approach," *Brookings Papers on Economic Activity*, 1981:1, pp. 67-127.

those studies, the reason for measuring Tobin's q and assessing whether it is less than, equal to, or greater than 1 is to determine whether a firm has earned a return that is less than, equal to, or greater than a competitive rate of return, *i.e.*¸ a return that equals the return investors could earn in an alternative investment of comparable risk.

57. Mr. Sidak estimates Tobin's q for Sirius XM in two ways. Using the book value of Sirius XM's assets as his denominator, he estimates q to be 2.35. Using the depreciated value of just Sirius XM's property, plant, and equipment, he estimates a range of from 4.95 to 6.48. As both exceed 1, he concludes that Sirius XM has monopoly power and that it has earned above a fair rate of return (Sidak, ¶¶33, 34).

58. Mr. Sidak's use of Tobin's q in this proceeding is not appropriate. If Tobin's q for Sirius XM were greater than 1, that would imply that Sirius XM has earned a return greater than a competitive rate of return. For anyone familiar with the history of Sirius XM's financial results, this would be a surprising result if it were so. But even if it were so, the conclusion Mr. Sidak wants us to draw from it is not warranted.

59. When Sirius and XM invested in satellite radio, they did so in the presence of substantial uncertainty about, among other factors, demand for the service, the viability of satellite radio technology, the cost of delivering satellite radio, the appearance of competing technologies, interest rates, and so on. As Dr. Ordover has observed, firms that undertake such investments often lose money (Ordover, ¶21). Whenever a company risks a loss on an investment, its expected return cannot equal a competitive return without some prospect of getting above a competitive return (such that the upside of a return that exceeds the competitive rate of return offsets the downside of a return that is less than the competitive rate of return). As a result, a finding that a company ended up earning above a

competitive rate of return cannot and does not imply that its expected return when it made its investment exceeded a competitive return.[21]

60. Although a value of Tobin's q for Sirius XM above 1 would not mean what Mr. Sidak says it would mean, Mr. Sidak has not demonstrated that Tobin's q for Sirius XM is above 1. His estimates rely on the book value of Sirius XM's physical assets.[22] There are at least two major problems with Mr. Sidak's calculation. First, the book value of Sirius XM's assets reflects straight-line accounting depreciation. As I explain in more detail in Appendix C, straight-line depreciation would be accelerated relative to properly-calculated economic depreciation even if Sirius XM's assets were expected to generate a constant stream of cash flows over time. With the likely time pattern of cash flows from satellite radio (which would start at a low level and only grow over time as the installed base of satellite radios increased), the assumptions underlying Mr. Sidak's estimates make even less sense. Second, the current book value of Sirius XM reflects non-cash impairment charges of several billion dollars arising from the merger. Impairment entails adjusting the book value of investments to reflect declines in their market value relative to the expectations implicit in the assumed depreciation. Once one adjusts the book value of assets to reflect their market value, the rationale for using Tobin's q as a measure either of market power or the incentive to invest largely disappears.

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[21] If Mr. Sidak's methodology were valid, then one could properly conclude that someone who hit the jackpot on a slot machine in a Las Vegas casino had market power.

[22] As described above, Mr. Sidak estimates Tobin's q in two ways. One uses the book value of total assets as the denominator whereas the other uses the book value of just physical assets. If one is using Tobin's q to understand the incentive to invest in a particular type of asset, then it is appropriate to take the ratio of the market value to the replacement value of the individual asset. But if one is analyzing whether a firm has earned a rate of return above the competitive rate of return, one needs to look at the ratio of the market value of the firm to the replacement value of all its assets. Without controlling for other assets (as I sought to do in my own research), the ratio of the market value of the firm to the replacement value of just the physical assets is not informative.

61. A point that exemplifies why one cannot infer monopoly power on a case-by-case basis by whether q exceeds 1 is that the estimate of q can vary substantially depending on the timing of the estimate. The value of Sirius XM stock declined 90% from September 2008 to January 2009.[23] Tobin's q estimated in January 2009, which was after the merger, would plainly have been well below 1. Under Mr. Sidak's methodology for diagnosing market power (and ignoring for the sake of argument the defects in how he measures the denominator of q), Sirius XM did not have market power in January 2009 but does now.

VII. Conclusions

62. The testimony of both Dr. Ordover and Mr. Sidak contain such fundamental flaws that the CRB should disregard both.

63. Dr. Ordover's conclusion about reasonable royalty rates rests critically on his "constant percentage of revenue" assumption. The assumption ignores the obvious point that Sirius XM has invested substantial amounts in its distribution network and in subsidizing the placement of radios in cars, and it thus ignores (and expropriates) the portion of the monthly subscriber fee needed to give Sirius XM a reasonable prospect (viewed as of the time when the investment were made) of recovering the cost of those investments. It also ignores the fact that even if there were no difference in delivery costs between Sirius XM and the internet services, the rights at issue in this proceeding are substantially less valuable than those acquired by interactive services (and the rates should account for this difference in value).

64. A proper reading of the 801(b) factors, from an economic perspective, requires limiting the set of market based rates to those that are sustainable in the economic

[23] Yahoo Finance, Sirius XM Radio Inc. (SIRI)-NAsdaqGS, from September 2, 2008 to January 2, 2009, available at http://finance.yahoo.com/echarts?s=SIRI+Interactive#symbol=siri;range=20080902,20090101;compare=;indicator=volume;charttype=area;crosshair=on;ohlcvalues=0;logscale=off;source=undefined, last accessed June 28, 2012.

long run. This limitation ensures that the market transactions needed to make satellite services available would have been entered into voluntarily had the parties been aware of the rates when they entered into those transactions.

65. Neither Sirius XM's recent price increase nor its imposition of the MRF demonstrates that it has market power. Long run strategic plans developed prior to the merger reveal the expectation that subscription fees for satellite radio would increase over time. Costs explain the imposition of the MRF.

66. Mr. Sidak has substantially overestimated Tobin's q for Sirius XM. Even if, properly estimated, the current value exceeded 1, it would not follow that Sirius XM has monopoly power. Tobin's q can exceed 1 for reasons other than monopoly power.

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of	)	
	)	
DETERMINATION OF RATES AND TERMS FOR PREEXISTING SUBSCRIPTION AND SATELLITE DIGITAL AUDIO RADIO SERVICES	)	**Docket No. 2011-1 CRB PSS/Satellite II**

DECLARATION OF MICHAEL A. SALINGER

I, Michael A. Salinger, declare under penalty of perjury that the statements contained in my Written Rebuttal Testimony in the above-captioned matter are true and correct to the best of my knowledge, information and belief. Executed this 2nd day of July 2012 at Boston, Massachusetts.

Michael Salinger

Michael A. Salinger

CRA Charles River Associates

Michael A. Salinger

Senior Academic Adviser

PhD Economics
Massachusetts Institute of Technology

BA Economics
Yale University

Dr. Michael A. Salinger is a senior academic adviser with the Competition Practice of CRA. He is also a professor of economics and Everett W. Lord Distinguished Faculty Scholar at the Boston University School of Management. From 2005 to 2007, he was Director of the Bureau of Economics at the FTC. He has consulted for private organizations and a variety of worldwide government agencies, including the EPA, the Federal Trade Commission, the Board of Governors of the Federal Reserve, and the Australian Competition and Consumer Commission. He has published articles on such issues as the structural determinants of market power, the statistical properties of firm growth, and the competitive effects of tying and vertical mergers and has served on the editorial boards of the *Review of Industrial Organization* and the *Journal of Industrial Economics*. Prior to joining CRA, he was a managing director in LECG's Cambridge office.

Professional history

April 2011	*Senior Academic Adviser,* Charles River Associates
2007–2011	*Managing Director*, LECG
1990–Present	*Professor of Economics* (2001–Present) *Associate Professor* (1990–2001) *Jacqueline J. and Arthur S. Bahr Professor in Management* (2011) *W. Everett Lord Distinguished Faculty Scholar* (2007–2011) *Chairman of Finance and Economics Department* (2000–2004) *Faculty Director of Undergraduate Program* (1999–2000) Boston University School of Management
2005–2007	*Director*, Bureau of Economics, US Federal Trade Commission (while on leave from Boston University)
1997–1998	*Visiting Associate Professor of Applied Economics*, Sloan School of Management, MIT (while on leave from Boston University)
1982–1990	*Associate Professor of Business Economics* (1987–1990) Assistant Professor (1982–1987) Columbia University Graduate School of Business
1985–1986	*Economist*, Bureau of Economics, Antitrust Division, United States Federal Trade Commission (while on leave from Columbia)

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Reports for Turner Broadcasting on the treatment of affiliate transactions in cable television price regulations (Federal Communications Commission) (1994).

Written testimony on behalf of Devotional Broadcasters regarding appropriate procedures for allocating royalties paid by cable operators among different classes of programs on retransmitted broadcast signals (Copyright Arbitration Royalty Panel) (1993).

Deposition testimony for Long Lake Energy Corp. regarding market definition in monopolization suit against Niagara Mohawk Corporation (1991).

Affidavit concerning class certification in a class action suit against bottlers of Coke and Pepsi. Affidavit argued that a conspiracy to raise the price of colas sold on promotion to grocery stores affected soft drink prices in general (1989).

Report and trial testimony on behalf of Record Club of America regarding damages in a breach of contract suit against United Artists (US District Court, Southern District of New York) (1988).

Other professional activities/distinctions

Panelist, "Horizontal Merger Guideline Review Project," joint Department of Justice and Federal Trade Commission Workshop, New York, NY, December 8, 2009.

Panelist, "Section 5 of the FTC Act as a Competition Statute," Federal Trade Commission Workshop, Washington, DC, October 17, 2008.

Panelist, "FTC at 100: Into our Second Century," Federal Trade Commission Roundtable, Washington, DC, July 29, 2008.

Participant, Academic Consultants Meeting on Non-Traditional Financial Services, Federal Reserve Board, April 16, 2008.

Presenter, Fundamentals of Antitrust Economics, American Bar Association Antitrust Section Spring Meeting, 2007, 2008.

Editorial Board, *Journal of Industrial Economics*, 2002–2006, (Associate Editor, 1996–2002).

Editorial Board, *Review of Industrial Organization*, 2002–2005.

Special Consultant, National Economic Research Associates, 1994–2005.

Member, Science Advisory Board/Illegal Competitive Advantage, United States Environmental Protection Agency, 2004.

Broderick Prize for Service to Undergraduate Community, Boston University, 2004.

Who's Who in America (first listing in 2003).

Principal Investigator: "A Statistical Mechanics Approach to Coase's Theory of the Firm," National Science Foundation Grant SES-0113103, 8/1/01–7/31/02.

Courses taught

Boston University

Undergraduate: Modeling Business Decisions and Market Outcomes (course designer and director), Probability and Statistics, Business History

Masters: Quantitative Methods, Managerial Economics, Health Care Economics, Health Care Finance, Economics of Strategic Planning

Executive: Microeconomics (Korean Executive MBA), Macroeconomics

Doctoral: Cross-disciplinary Theory and Research

MIT

MBA: Microeconomics, Economics of Strategic Planning

Columbia

MBA: Business Economics, Economics of Strategic Planning, Econometrics, Industrial Organization

Doctoral: Microeconomics, Industrial Organization

Appendix B: Materials Relied Upon

Category
SEC Filings
Sirius Satellite Radio Inc. Form 10-K for fiscal year ended December 31, 1999.
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Dell Inc. Form 10-K for fiscal year ended February 2, 2007.
Dell Inc. Form 10-K for fiscal year ended February 1, 2008.
Dell Inc. Form 10-K for fiscal year ended January 30, 2009.
Dell Inc. Form 10-K for fiscal year ended January 29, 2010.
Dell Inc. Form 10-K for fiscal year ended January 28, 2011.
Dell Inc. Form 10-K for fiscal year ended February 3, 2012.
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Microsoft Corporation Form 10-K for fiscal year ended June 30, 2011.
Pandora Media, Inc. Form 10-K for fiscal year ended January 31, 2012.
CD Radio Inc. Form 10-K for fiscal year ended December 31, 1997.
CD Radio Inc. Form 10-K for fiscal year ended December 31, 1998.

Appendix B: Materials Relied Upon

Category

Testimony

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Appendix C

Cost and Asset Value Analysis

C1. This appendix explains two points in my testimony in more (and more technical) detail. The first point concerns how one would determine the contribution per subscriber month that would be needed to give Sirius XM a competitive *expected* return on its investment and why setting royalty rates that recognize that contribution would not *guarantee* Sirius XM a competitive return. The second point concerns the depreciation assumptions underlying Mr. Sidak's estimates of Tobin's q. These points are related to each other because they emerge from a common model of the economics of investing in sunk assets.[1]

A. Stripped-down version of the model

C2. To understand the basic logic of the model, it will be helpful to begin with a stripped-down version. Suppose a firm makes an investment cost, I, at time 0, and that this investment will yield a stream of expected subscribers from time 1 to L, where L is the economic life of the asset. The investment cost is, by assumption, sunk, meaning that it has no alternative use that would provide a salvage value. Let X_t be the number of subscribers in time t, where t ranges from 1 to L. Let i be the required expected return on investment arising from the opportunity cost of invested funds. We need to solve for a contribution margin, m, such that:

[1] See Harold Hotelling, "A General Mathematical Theory of Depreciation," *Journal of the American Statistical Association*, vol. 20, pp. 340-353 (1925) (Hotelling). I applied similar principles in Michael A. Salinger, "Regulation Prices to Equal Forward-Looking Costs: Cost-Based Prices or Price-Based Costs," *Journal of Regulatory Economics*, vol. 14, pp. 149-163 (1998).

(1) $$I = \sum_{t=1}^{t=L} \frac{mX_t}{(1+i)^t}$$

which is the condition for the present value of the expected cash flows generated by the investment to equal the cost of the investment. Equation (1) is the condition needed to induce a company to invest in the asset. Solving for *m* implies:[2]

(2) $$m = \frac{I}{\sum_{t=1}^{t=L} \frac{X_t}{(1+i)^t}}$$

We can then define a residual value of the asset as of the end of time s, V_s, where s can range from each period 1 to L - 1,[3] as:

(3) $$V_s = \sum_{t=s+1}^{t=L} \frac{mX_t}{(1+i)^{t-s}}$$

Economic (or Hotelling) depreciation[4] over period s, D_s, is:

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[2] There is a simple intuition behind equation (2). The summation that forms the denominator in equation (2) is the present discounted value of the number of subscribers. It might seem unusual to apply a discount rate to subscribers rather than to dollar numbers. Because subscriber months are the source of revenue, however, future subscribers are worth less than current subscribers precisely because the income from them must be discounted. Suppose the present discounted value of the number of subscribers is 1 billion and the investment cost is $3 billion. Then the contribution needed per period to cover the investment cost would be $3 billion/1 billion subscriber months = $3/subscriber month.

[3] We can define V_s for $s = L$, but V_L must equal 0.

[4] The term "economic depreciation" has two distinct meanings. One is appropriate when there is a market for used durable equipment, as is the case with automobiles. In that case, economic depreciation is the change in the actual market value of the asset. For example, if the price of a new car is $30,000 and its resale value after one year is $25,000, the economic depreciation over the first year is $5,000. The other notion of economic depreciation, which is called "Hotelling depreciation," is appropriate when the cost of an investment is sunk for a substantial period of time. For example, consider investing $1 billion dollars in an asset that has an expected life of 10 years but no alternative uses. Under the "change in market value" meaning of economic depreciation, the depreciation of the full $1 billion cost of the asset is instantaneous (because the cost is sunk). Under such circumstances, a depreciation schedule that allocates the cost of the durable asset over its life is useful for computing a rate of profit for individual periods over the asset's life. One might suspect that this allocation is 1) entirely an accounting function and 2) arbitrary. But Hotelling demonstrated, that there is a depreciation schedule that will result in an estimated rate of profit each period equal to the internal rate of return of the asset. Since, for a sunk cost, the internal rate of return is the appropriate number to compare with the opportunity cost of capital, Hotelling depreciation yields an economically meaningful measure of the rate of profit. See Hotelling, note 1 *infra*. See also See also, Franklin M. Fisher and John J. McGowan, "On the Misuse of Accounting Rates of Return to Infer Monopoly Power," *The American Economic Review*, vol. 73, pp. 82-97 (1983).

(4) $D_s = V_{S-1} - V_S$

C3. Let I be \$3 billion, L be 15, X_t be 28 million in every period, and i be 0.13.[5] With these assumptions, m = 16.58, which would imply a monthly contribution of \$1.38.

C4. Table C1 gives the implied sequence of residual values and depreciation charges:

Table C1

Residual Values and Economic Depreciation
An Example of Stable Subscribership

t	Xt	Vt	Dt
1	28	$2,925.8	$74.2
2	28	$2,841.9	$83.9
3	28	$2,747.1	$94.8
4	28	$2,640.0	$107.1
5	28	$2,519.0	$121.0
6	28	$2,382.2	$136.8
7	28	$2,227.7	$154.5
8	28	$2,053.1	$174.6
9	28	$1,855.8	$197.3
10	28	$1,632.8	$223.0
11	28	$1,380.8	$252.0
12	28	$1,096.1	$284.7
13	28	$774.4	$321.7
14	28	$410.8	$363.6
15	28	$0.0	$410.8

Note:
All values are in millions of dollars.

C5. Table C1 illustrates a general point that is the source of a fundamental flaw in Mr. Sidak's estimates of Tobin's q. In Table C1, even though the asset generates a constant number of subscribers and revenue per period, the depreciation per period is not constant and

[5] An XM strategic planning document used a discount rate of 13%. See SXM_CRB_DIR_00000011, "LTP v6.xls."

therefore does not conform to the common assumption for accounting purposes of straight-line depreciation. This feature of economic depreciation given a flat revenue stream is not specific to this example. It is a general feature about flat revenue streams. The implicit assumption underlying straight-line depreciation is that the revenues generated by the asset decline over time, an assumption that plainly is not appropriate for satellite radio. In its accounting, however, Sirius XM uses straight-line depreciation, and Mr. Sidak's estimates of Tobin's q rely on net asset values estimated from Sirius XM's reported depreciation.

C6. Table C2 is based on the same assumptions as Table C1 with one exception. Rather than assuming a stable level of 28 million subscribers, it assumes that subscribers grow linearly at a rate of four million subscribers per year, reach a peak of 40 million subscribers, and remain at 40 million for the remainder of the 15 year life. The average number of subscribers is the same as in Table C1, 28 million, but the time pattern is different. Because the subscribers "arrive" later than in Table C1, a higher monthly contribution is needed to make the investment a 0 net present value investment. With this set of assumptions, *m* is $21.51 or $1.79 per month. Table C2 gives the time path of the net values and annual economic (Hotelling) depreciation implied by these assumptions:

Table C2

Residual Values and Economic Depreciation
An Example of Growing Subscribership

t	Xt	Vt	Dt
1	4	$3,304.0	-$304.0
2	8	$3,561.4	-$257.4
3	12	$3,766.3	-$204.9
4	16	$3,911.7	-$145.5
5	20	$3,990.0	-$78.3
6	24	$3,992.5	-$2.5
7	28	$3,909.2	$83.3
8	32	$3,729.1	$180.1
9	36	$3,439.5	$289.6
10	40	$3,026.2	$413.3
11	40	$2,559.3	$467.0
12	40	$2,031.5	$527.7
13	40	$1,435.2	$596.3
14	40	$761.4	$673.8
15	40	$0.0	$761.4

Note:
All values are in millions of dollars.

In Table C2, depreciation is actually negative in the first six periods, with the residual asset value reaching nearly $4 billion at the end of year six. Thereafter, depreciation is positive; but, even as late as the end of year 10, the residual asset value exceeds the original cost of the investment, meaning that the accumulated *economic* depreciation of the assets is approximately 0 as of that time.

C7. One rationale for starting with a stripped-down version of the model is to emphasize that the key points it implies about problems with Dr. Ordover's and Mr. Sidak's testimony are not the results of detailed assumptions but, instead, reflect features of the economics of satellite radio. As long as it was expected that the number of subscribers would be low during the initial years of the service and take many years to reach peak penetration, the economic depreciation schedule would entail negative depreciation for several years and could quite plausibly entail approximately no accumulated depreciation approximately 10 years after the launch of the service. Second, even making assumptions intended to understate the contribution margin needed to make a rational investment in satellite radio implies a contribution margin for the satellite network (and not counting the additional cost of subsidizing the installation of satellite radios in automobiles) of nearly $1.80 per subscriber month. This is not an amount needed to guarantee satellite radio providers a return on their investment equal to the opportunity cost of their invested funds. It is an amount needed that would have created a reasonable expectation of doing so at the time the investments were made.

C8. In contrast to the assumptions underlying the stripped-down version of the model, Sirius XM's investments in its distribution network did not occur at a single point in time. It is easy, however, to allow for investments at different times. The basic principle underlying the calculation remains the same. The present value of the income stream at the time of the investment must equal the present value of the investment. Letting I_t be the investment at time t¸ the underlying principle is:

$$(5) \qquad \sum_{t=1}^{t=L} \frac{I_t}{(1+i)^t} = \sum_{t=1}^{t=L} \frac{mX_t}{(1+i)^t},$$

which implies:[6]

$$(6) \qquad m = \frac{\sum_{t=1}^{t=L} \frac{I_t}{(1+i)^t}}{\sum_{t=1}^{t=L} \frac{X_t}{(1+i)^t}} \ .$$

B. Applying the Model to the Distribution Network

C9. In this section, I apply the model to estimate the monthly cost associated with Sirius XM's satellites, terrestrial repeaters, and research and development. These cost components are

[6] Equations (5) and (6) presume that the contribution margin per unit sold is constant over time. That need not be the case. For example, a company developing a new market might take a lower contribution in the early stages of the business in order to build market awareness and then raise the contribution margin over time. One could easily adapt the model to allow the contribution to vary over time.

just part of the cost of Sirius XM's distribution system. They do not include the cost of Sirius XM's equipment subsidies, which are a larger cost component. And they do not include any annual expenses such as maintenance or marketing. I selected these components because they are cost components for which the accounting treatment is likely to diverge substantially from a proper economic treatment and because the financial statements give good data about the timing of the cash flows.

C10. Most of the data come from the 10-K forms submitted by Sirius XM and its predecessors to the Securities and Exchange Commission, which give quite detailed information about these cost factors. The income statements are the sources for the data on research and development and engineering costs. Depending on the year and the company, either the balance sheet or the Property and Equipment table or footnote to the financial statements was the source of the information on the investment in satellites and terrestrial repeaters. Because the 10-K's generally report the undepreciated value of the different classes of assets, I took the change in the asset values from one year to the next as the investment cost each period. Table C3 shows the calculation of the investment costs through 2011:

Table C3

Sirius XM Investments in Satellites and Terrestrial Repeaters

(1997-2011)

Sirius XM

	Satellites			Terrestrial Network		
Year	Under Construction	In Place	Investment	Under Construction	In Place	Investment
1997	$49.4		$49.4			$0.0
1998	$252.1		$202.7	$2.0		$2.0
1999	$579.4		$327.3	$6.6		$6.6
2000	$648.3	$801.2	$870.1	$110.0		$103.4
2001	$183.7	$1,322.5	$56.7	$68.5	$243.8	$202.3
2002	$55.0	$1,466.8	$15.6	$5.8	$331.0	$24.5
2003	$92.5	$1,466.8	$37.4	$1.9	$337.1	$2.2
2004	$322.5	$1,332.9	$96.1	$2.0	$340.0	$3.0
2005	$237.5	$1,593.6	$175.8	$2.6	$335.3	$1.7
2006	$204.5	$1,838.6	$212.0	$11.0	$328.0	$10.3
2007	$306.8	$1,836.6	$100.3	$11.9	$333.3	$6.3
2008	$449.1	$1,414.6	$0.0	$19.1	$109.2	$0.0
2009	$398.4	$1,680.7	$215.4	$19.4	$108.8	$0.0
2010	$262.7	$1,943.5	$127.1	$19.2	$109.6	$0.6
2011	$343.9	$1,943.5	$81.2	$19.2	$112.4	$2.8

Notes:

1. All values are in millions of dollars.
2. Except where otherwise noted, investment in each year for both types of assets is the sum of the value under construction and the value in place at the end of the year, minus the sum of the value under construction and the value in place at the end of the preceding year.
3. Decline in value of XM satellites in 2004 reflects insurance payment.
4. Estimated negative investment values for XM's satellites in 2007, XM's terrestrial repeaters in 2005, Sirius XM's satellites in 2008, and Sirius XM's terrestrial repeaters in 2008 and 2009. These are treated as $0.
5. Sirius removed 13 terrestrial repeaters from its reported assets in 2006. Sirius 2006 Investment in terrestrial repeaters assumed to be difference between 2006 and 2005 value of terrestrial repeaters under construction.
6. Sirius XM Under Construction, In Place, and Investment values for 1997-2007 sum the corresponding Sirius and XM values, while values for 2008-2011 use Sirius XM data only.
7. Sirius XM Under Construction values for 1997 and 1998 include values from CD Radio Inc.

8. CD Radio data is located on the balance sheet. Sirius data is located in the Property and Equipment section in all years except for 1999, when it is located in the balance sheet. XM Radio "Under Construction" values are located in "System Under Construction" tables or paragraphs in all years. XM Radio "In Place" values are located in the Property and Equipment section in all years.

Sources:

CD Radio Form 10-Ks 1997-1998, Sirius and XM Satellite Radio Holdings Inc. Form 10-Ks, 1999-2007, and Sirius XM Form 10-Ks 2008-2011.

C11. Table C4 shows the data for Sirius XM’s investment in research and development:

Table C4

Sirius XM Research and Development Expense

(1997-2011)

	Sirius	XM	Sirius XM	Total
1997	$56.6	$0.0	-	$56.6
1998	$22.0	$6.9	-	$28.9
1999	$33.1	$4.3	-	$37.4
2000	$71.0	$7.4	-	$78.4
2001	$58.5	$14.3	-	$72.7
2002	$30.1	$10.8	-	$40.9
2003	$24.5	$12.3	-	$36.8
2004	$30.5	$23.5	-	$54.0
2005	$44.7	$31.2	-	$76.0
2006	$70.1	$37.4	-	$107.6
2007	$41.3	$33.1	-	$74.4
2008	-	-	$52.5	$52.5
2009	-	-	$41.0	$41.0
2010	-	-	$45.4	$45.4
2011	-	-	$53.4	$53.4

Notes:

1. All values are in millions of dollars.
2. For 1997-2007, Sirius research and development expense taken to be maximum of reported "Research and Development" and "Engineering, Design, and Development."
3. 2008 research and development expense is based on pro-forma statement of combined operations from the 2009 Sirius XM Form 10-K.

Sources:

CD Radio Form 10-Ks 1997-1998, Sirius and XM Satellite Radio Holdings Inc. Form 10-Ks, 1999-2007, and Sirius XM Form 10-Ks 2008-2011.

C12. Besides the investment costs, the key inputs into the calculation of cost per subscriber month needed to cover the cost of the network are the discount rate and the number of subscribers. Here, I assume a discount rate of 13%, a rate that comes from an internal XM document (SXM_CRB_DIR_00000011, "LTP v6.xls"). As Professor Noll pointed out in his testimony, Dr. Pelcovits had concluded that a 16.7% discount rate would be appropriate for a satellite radio company (Noll, p. 87). As required contribution per month is an increasing function of the discount rate, my assumption of 13% is more conservative than that suggested by Dr. Pelcovits.

C13. For the number of subscribers, I make two sets of assumptions. The most optimistic assumption I have seen comes from an XM strategic planning document apparently prepared in 2005 (SXM_CRB_DIR_00000011, "LTP v6.xls"). It projects that XM subscribers would grow from 3.2 million at the end of 2004 to 5.6 million at the end of 2005, 24.3 million at the end of 2010, and 41.2 million by the end of 2015. Note that these projections were for XM Radio alone, not the total market. As the document assumed a 60% share of satellite radio for XM, the projections imply total satellite radio subscriptions of 40.5 million by 2010 and 68.7 million by 2015. An updated version of the document prepared just one year later had pared the 2010 forecast from 24.3 million subscribers to 15.1 million subscribers (even though XM's actual 2005 end-of-year subscribers exceeded the value projected in the earlier document). The subsequent document does not contain a projection out to 2015. However, the 2006 to 2010 linear projections result in over 24 million subscribers for XM by 2015 and over 33 million by 2020 (SXM_CRB_DIR_00000009, "Strat Plan (current)_v1b.xls."). Applying the same assumption of 60% market share for XM implies a total market of 40.2 million subscribers by 2015 and 55.4 million by 2020. The other set of projections relies on the actual number of subscribers to satellite radio through 2011. For subsequent years, I projected forward the average (absolute) annual growth from 2009 to 2011. Table C5 contains the projections:

Table C5

Alternative Assumptions about Number of Subscribers

(2003-2020)

	Basis for Projection	
Year	XM 2006 Strategic Plan	Actual Subscribers
2003	1.6	1.6
2004	4.4	4.4
2005	9.9	9.2
2006	13.1	13.7
2007	15.9	17.3
2008	19.4	19.0
2009	22.6	18.8
2010	25.1	20.2
2011	27.8	21.9
2012	31.2	23.5
2013	34.2	25.0
2014	37.2	26.6
2015	40.2	28.1
2016	43.3	29.7
2017	46.3	31.3
2018	49.3	32.8
2019	52.3	34.4
2020	55.4	35.9

Notes:

1. All values are in millions of subscribers.
2. "XM 2006 Strategic Plan" projections assume actual end of year subscribers for 2003-2004, XM actual and projected subscribers divided by 0.6 for 2005-2011, and linear extrapolation of the 2005 to 2011 series through 2020 using Microsoft Excel.
3. "Actual Subscribers" are based on actual end of year subscribers for 2003-2011 and projections assuming that the absolute annual growth after 2011 equals the average annual growth from 2009-2011.

Sources:

1. Sirius and XM Satellite Radio Holdings Inc. Form 10-Ks, 1999-2007, and Sirius XM Form 10-Ks 2008-2011.
2. SXM_CRB_DIR_00000009, "Strat Plan (current)_v1b.xls."

C14. With the assumptions described in Tables C3-C5, we can now estimate the cost per subscriber month needed to cover Sirius XM's investments in satellites, terrestrial repeaters, and research and development. To implement equation (6), we need to convert both the investment amounts and subscriber numbers into present values. Table C6 presents these calculations:

Table C6

Present Values as of 1997
(1997-2020)

	Projection of Subscribers		Investment		
	XM 2006 Strategic Plan	Actual Subscribers	Satellites	Terrestrial Repeaters	Research and Development
1997	0	0	$49.4	$0.0	$56.6
1998	0	0	$179.4	$1.8	$25.6
1999	0	0	$256.3	$5.2	$29.3
2000	0	0	$603.0	$71.7	$54.3
2001	0	0	$34.8	$124.1	$44.6
2002	0	0	$8.5	$13.3	$22.2
2003	0.4	0.4	$18.0	$1.1	$17.7
2004	1.3	1.3	$40.9	$1.3	$23.0
2005	2.7	2.6	$66.1	$0.6	$28.6
2006	3.8	3.8	$70.6	$3.4	$35.8
2007	4.3	4.6	$29.6	$1.8	$21.9
2008	4.6	4.7	$0.0	$0.0	$13.7
2009	4.8	4.4	$49.7	$0.0	$9.5
2010	4.9	4.0	$26.0	$0.1	$9.3
2011	4.8	3.8	$14.7	$0.5	$9.7
2012	4.7	3.6	$0.0	$0.0	$0.0
2013	4.6	3.4	$0.0	$0.0	$0.0
2014	4.5	3.2	$0.0	$0.0	$0.0
2015	4.3	3.0	$0.0	$0.0	$0.0
2016	4.1	2.8	$0.0	$0.0	$0.0
2017	3.9	2.6	$0.0	$0.0	$0.0
2018	3.7	2.5	$0.0	$0.0	$0.0
2019	3.5	2.3	$0.0	$0.0	$0.0
2020	3.2	2.1	$0.0	$0.0	$0.0
Sum	68.0	55.1	$1,446.8	$224.8	$401.7

Notes:

1. All values are in millions.
2. Discount rate is assumed to be 13%.
3. The average number of subscribers in a given year is calculated using the end number of subscribers in the year and the end number of subscribers for the previous year.

Sources:

1. CD Radio Form 10-Ks 1997-1998, Sirius and XM Satellite Radio Holdings Inc. Form 10-Ks, 1999-2007, and Sirius XM Form 10-Ks 2008-2011.
2. SXM_CRB_DIR_00000009, "Strat Plan (current)_v1b.xls."

C15. Based on the 2006 projections, the annual cost per subscriber is (1446.8 + 224.8 + 401.7)/68.0 = $30.50. Dividing by 12 gives a required monthly contribution of $2.54. Based on the actual subscriber numbers, the estimated annual and monthly contributions are (1446.8 + 224.8 + 401.7)/55.1 = $37.61 and $37.61/12 = $3.13.

C16. Dr. Noll estimated the average cost of Sirius XM's total distribution system to be $5.11. (Noll, p.89) Of this, $0.41 was for the satellites and terrestrial repeaters and $0.23 was for R&D.[7] My estimates of $2.54 and $3.13 should be compared with the sum of these two portions of Dr. Noll's total, or $0.63. They show that Dr. Noll was intentionally conservative in his treatment of capital costs. My estimates indicate the true economic costs per subscriber month of Sirius XM's satellite network are almost $2.00 higher than he estimated, and that is just for a small portion ($.63 out of $5.11) of the total costs used in his adjustments

[7] Dr. Noll's Table 3 reports that in 2010, the costs for satellite and transmission were $81 million, and the Engineering, Design, and Development Costs were $45 million. Based on the average number of satellite radio subscribers in 2010 of 19.4 million in Dr. Noll's report at page 85, the average cost per user of those two cost components were $0.41 and $0.23 per month respectively.

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of **DETERMINATION OF RATES AND TERMS FOR PREEXISTING SUBSCRIPTION AND SATELLITE DIGITAL AUDIO RADIO SERVICES**	**Docket No. 2011-1 CRB PSS/Satellite II**

WRITTEN REBUTTAL TESTIMONY OF DAVID P. STOWELL

(On behalf of Sirius XM Radio Inc.)

1. My name is David P. Stowell. I previously submitted written direct testimony in this matter on behalf of Sirius XM Radio Inc. ("Sirius XM" or the "Company") opining on the likely impact of a royalty rate increase on the risk of disruption, which I define as bankruptcy. I concluded that an increase in the royalty rate would "substantially increase the likelihood of disruption for Sirius XM."[1] I have been asked by counsel for Sirius XM to respond to the opinions put forth by Professor Thomas Z. Lys and Professor J. Gregory Sidak. In preparing this written rebuttal testimony, I have reviewed the testimony of Messrs. David Frear, Mel Karmazin, William R. Rosenblatt and James Meyer, for Sirius XM; and Professors Thomas Z. Lys and J. Gregory Sidak for SoundExchange. My relevant experience is described in my prior written direct testimony, and my *curriculum vitae* is attached to my prior written direct testimony.[2] Additional testimony I have given since I filed my written direct testimony is attached as Appendix A. A full list of the documents I relied upon in preparing this written rebuttal testimony can be found in Appendix B.

[1] Written Direct Testimony of David P. Stowell, November 28, 2011 ("Stowell WDT"), ¶11.
[2] Stowell WDT, ¶¶1–4.

I. Summary of Testimony

2. Professor Lys, in concluding that the increases in the royalty rate proposed by SoundExchange "would not be disruptive to Sirius XM's business," does not actually examine *the risk* of disruption.[3] Instead, he adopts Morgan Stanley's forecast of revenues and profitability, which are just one point estimate of the future. He opines that the royalty rate could be increased up to 37% by 2017 without causing a disruption if Sirius XM's performance over the next five and a half years turns out to be exactly as predicted by Morgan Stanley.[4] An investment banker representing either an acquirer or lender would consider the risk of a range of potential outcomes in which a higher royalty rate may cause disruption, and not just one point estimate of the future. Additionally, an investment banker would consider the sensitivity of the forecast given the competitive environment faced by the Company, as well as the accuracy of previous forecasts.

3. While no one can be sure whether the Company's problematic financial history will be repeated during the next five years, to ignore this risk is unwise. Another financial crisis could be triggered by, among other events, a default on foreign sovereign debt, a further increase in unemployment, or by a continuing political logjam that exacerbates federal or state budget deficits. This, in turn, could have a negative impact on the auto industry and Sirius XM. These are the types of risks that investment bankers factor in when advising clients about significant long-term investments in companies. This is particularly important for Sirius XM since the company has a single product and is inextricably tied to a single industry. As I testified in the direct case, as an investment banker advising a client about a long term investment in Sirius XM, it would also be important to weigh the risk that a cash rich company, like Verizon, AT&T, Apple, Google, Microsoft, or Amazon, could partner with auto manufacturers to install dashboard apps that directly compete with Sirius XM. These companies have the financial wherewithal to make such an investment and some of their past investments have caused competitors to lose a significant portion of their market share, and in certain cases, to fail.[5] In

[3] Corrected Testimony of Thomas Z. Lys, March 26, 2012 ("Lys WDT"), ¶15.
[4] Lys WDT, ¶84.
[5] For an example of this, see ¶29 of Stowell WDT discussing Amazon and Borders, or, more recently, the effect of the entry of Apple into the smartphone market and the resulting effect on RIM, the maker of the once ubiquitous Blackberry.

many such cases, analysts did not project that the affected companies would become obsolete or sustain a dramatic decline in market share.

4. Professor Sidak merely assumes that Professor Lys's adoption of the Morgan Stanley forecast is proper, without factoring in any of the myriad risks that could prevent the company from achieving those forecasts. His opinions about the Company's ability to pay a higher royalty rate are based on a static point in time and ignore the Company's volatile financial history.

II. Professor Lys's Use of Equity Analyst Projections

A. The use of Morgan Stanley's long-term projections for Sirius XM is neither a reliable or an appropriate way to determine the increased likelihood of disruption that would be caused by SoundExchange's proposed royalty rate

5. In his written direct testimony dated November 28, 2011, Professor Lys uses the forecasts of a Morgan Stanley analyst report dated November 3, 2011 as the basis for his conclusions regarding Sirius XM's future growth and profitability.[6] Specifically, Professor Lys accepts the Morgan Stanley projections as "a reasonable and possibly conservative starting point" for his analysis of Sirius XM's financial performance through 2017.[7] In assuming that Sirius XM will achieve the Morgan Stanley analyst's projections, he opines that the 12% of revenue (or more) in royalties sought by SoundExchange "would not be disruptive to Sirius XM's business."[8, 9]

6. Morgan Stanley's November 2011 five-year projections have no greater reliability than the previous projections that were submitted by SoundExchange's expert (Sean Butson) in the last proceeding that covered the period 2007 through 2012. Mr. Butson's projections were based on the consensus estimates of Wall Street analysts. The CRB declined to rely on these estimates in its 2007 decision. Specifically, the CRB held that it is a:

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[6] Lys WDT, ¶77. Should Professor Lys replace the November 3, 2011 Morgan Stanley projections with updated Morgan Stanley projections, the same criticisms apply.

[7] Lys WDT, ¶75. Because Morgan Stanley's projections only extend through 2016, for 2017 he uses the growth rate forecasted for annual GDP by the Congressional Budget Office. Lys WDT, ¶78.

[8] Lys WDT, ¶15.

[9] The percentage of revenue number would be more to the extent that the royalty rate would be calculated on additional revenues.

> "well-known fact that financial projections of the kind undertaken by Mr. Butson increase in uncertainty over the course of the period projected, with the last year in a six-year period of projections (in this case, 2012) being the least reliable. Mr. Butson's projections in turn rest on a number of growth assumptions that either merely track past experience at best, or are arbitrary at worst, leading us to question the degree to which such data is reliable[.]"[10]

7. This skepticism regarding the reliability of Mr. Butson's projections proved well-founded. Figures 1a and 1b show how far off Mr. Butson and Wall Street equity analysts were in their forecasts of revenues and subscribers, demonstrating how difficult it is to forecast subscriber growth and churn.[11]

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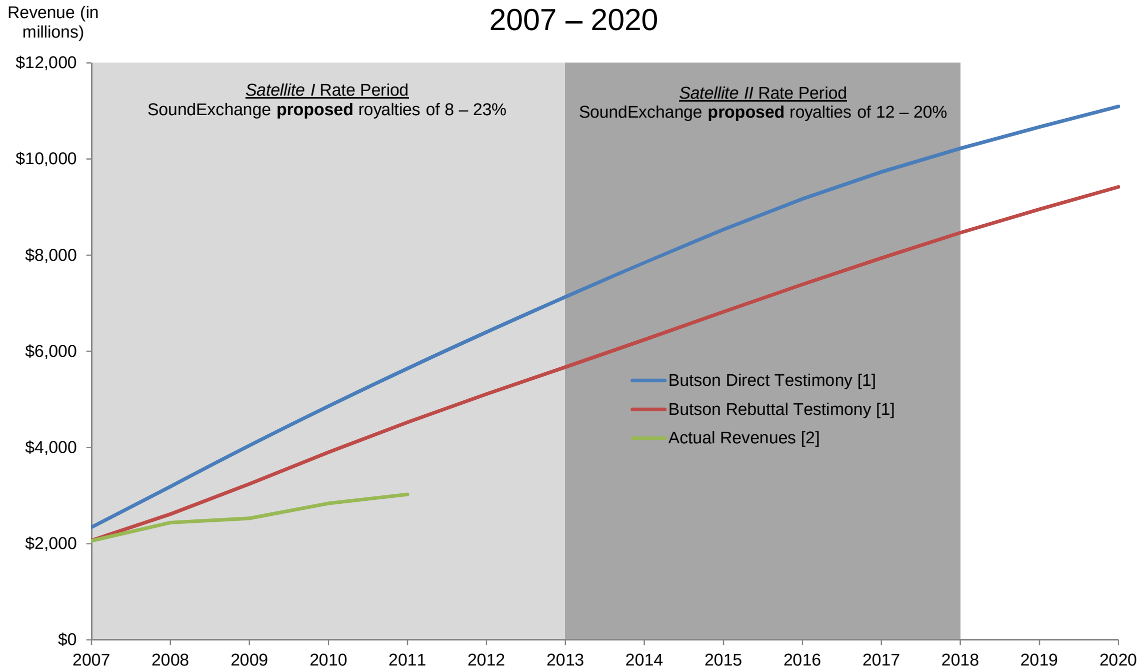
[10] Final Determination of Rates and Terms (Docket No. 2006-1 CRB DSTRA), p. 49.

[11] I note that Mr. Butson's (and equity analysts') profitability forecasts were more accurate than their subscriber and revenue forecasts, but given how inaccurate his top line predictions were, his forecasting lacks reliability. Among the chief reasons that the Company achieved profitability forecasts were the synergies and cost savings that were achieved from the merger (factors that were not considered by Mr. Butson in his forecasts). But for these unanticipated merger-related benefits, his profitability forecasts would have fallen significantly short.

Figure 1b

Forecasts of Total Revenue from *Satellite I*

2007 – 2020



Source: Butson Direct Testimony dated 10/26/06; Butson Rebuttal Testimony dated 7/23/07; SEC Filings

Note:

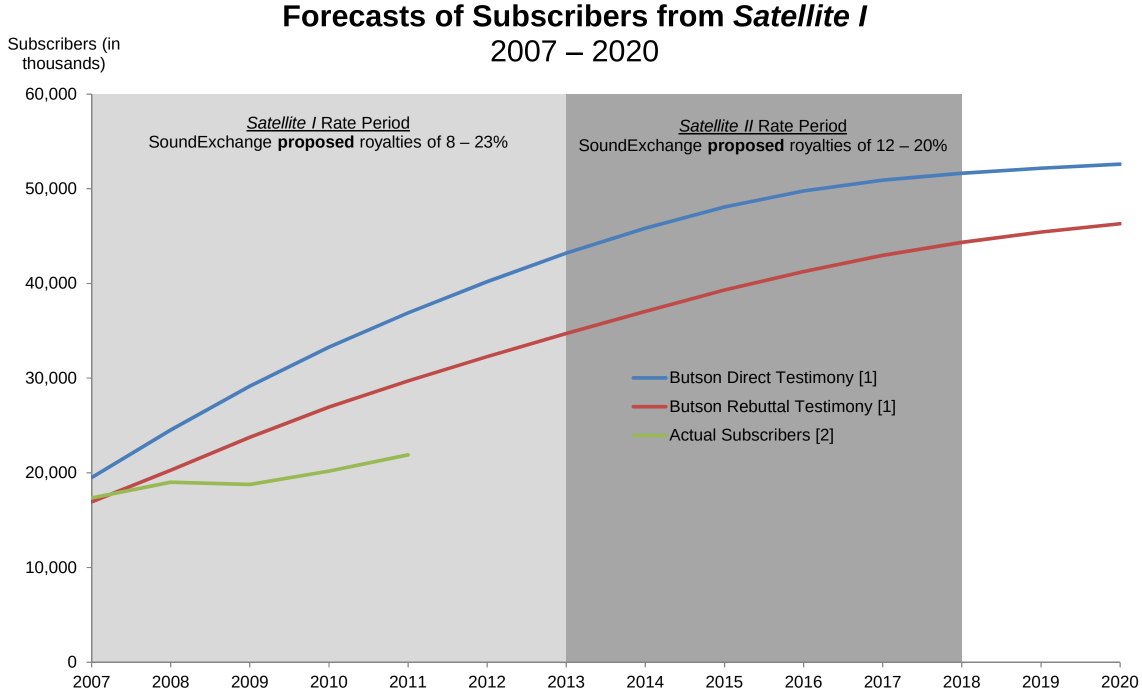
[1] Butson's forecasts of Total Revenue extend through 2020 in both his Direct and Rebuttal reports. In all years Sirius and XM forecasts are combined.

[2] All revenues are adjusted/pro forma and assume that the merger occurred on January 1, 2006.

Figure 1a

Forecasts of Subscribers from *Satellite I*

2007 – 2020



Source: Butson Direct Testimony dated 10/26/06; Butson Rebuttal Testimony dated 7/23/07; SEC Filings

Note:

[1] Butson's forecasts of total Subscribers (Retail + OEM) extend through 2020 in both his Direct and Rebuttal reports. In all years Sirius and XM forecasts are combined.

[2] In 2007, Sirius and XM subscriber numbers are combined.

8. Given the Company's tumultuous financial history and the poor track record of prior analyst forecasts, the expedient of adopting a new set of analyst forecasts, as Professor Lys does, does not afford any more reliable a basis for determining the likelihood of potential future disruption. Instead of explaining what he believes to be an appropriate set of assumptions – or at least explaining why he believes the Morgan Stanley assumptions are valid – he states that the Morgan Stanley forecasts are "aligned with Sirius XM management's expectations," and that many of the metrics forecasted by Morgan Stanley are equal to or less than the average of forecasts from other equity analysts.[12]

9. Professor Lys does not explain how changes in subscriber counts, penetration, conversion, revenue per subscriber, or churn alter the risk of disruption in the face of a higher royalty rate. More importantly, Professor Lys makes no adjustment to the Morgan Stanley projections to reflect the risk that Sirius XM's business could undergo a downturn prior to December 2017.[13] A sophisticated investor considering a loan or a significant investment in the Company would evaluate worst case or reasonably likely downside scenarios. This is especially important for a company like Sirius XM that has a track record of two decades of losses and negative EBITDA, and that has only turned a profit during the last ten quarters of operations. Such an investor would not use an equity analyst's model without making adjustments, nor would such an investor simply rely on an analyst's long-term projections because they were within the range of consensus projections. Moreover, the fact that the Morgan Stanley projections "are at or below the average of other forecasts" should be considered in the context of how wrong Morgan Stanley's prior long-term forecasts turned out to be.[14]

10. Sirius XM's management does not provide long term financial guidance or projections; rather, it provides guidance for a period of approximately one year because of uncertainty about the future. As an investment banker, this indicates to me that the Company regards the future beyond a year as a relative unknown; the challenge of reliably predicting the long-term OEM market, the global economy, and new competitive threats makes it particularly difficult to predict

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[12] Lys WDT, ¶¶75–7.

[13] "Q. What do you view as the key inputs that really drive the [Morgan Stanley] model?... A. I have not tested the Morgan Stanley model and computed elasticities to see which one of their analyses has what impact on their conclusions." *See* Deposition of Thomas Z. Lys, March 5, 2012, p. 21.

[14] Lys WDT, ¶75.

the long-term performance of Sirius XM. This, coupled with the previous forecasting errors made by equity analysts (including Morgan Stanley), causes me to take a very cautious view of any forecasts greater than one year for Sirius XM.[15]

B. Management's general optimism does not validate the long-term Morgan Stanley forecasts

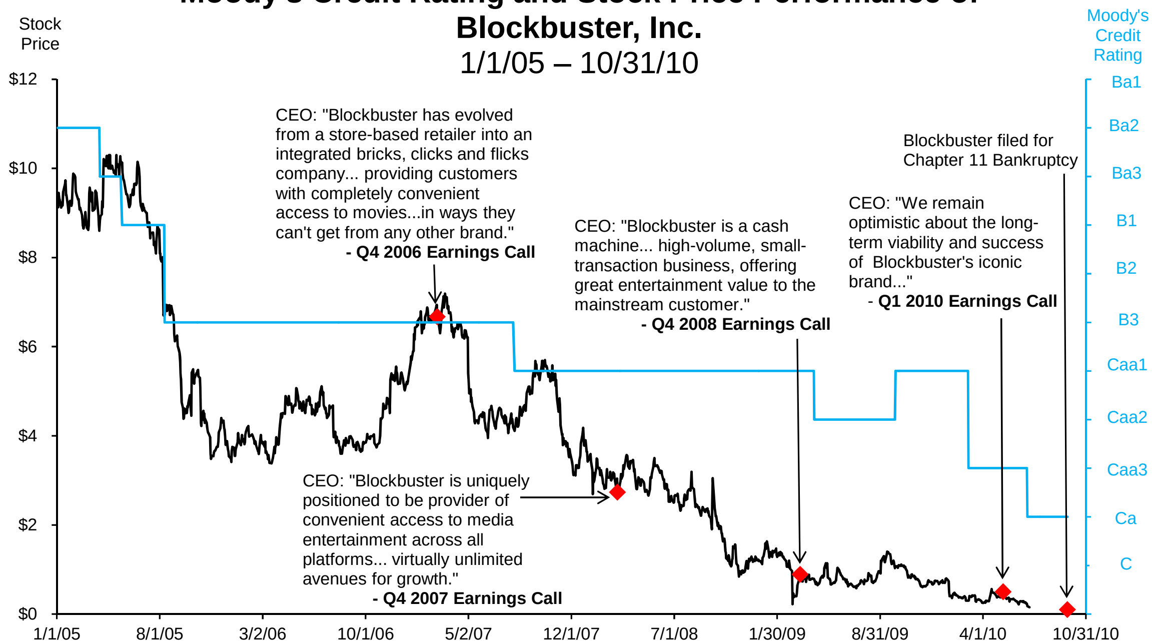
11. Professor Lys suggests that one of the reasons why Morgan Stanley's optimistic projections are reliable is because they "are consistent with management's view of continued revenue growth, subscriber growth, and increased used car subscribers."[16] For this, he quotes general optimistic statements by management during a third quarter 2011 conference call. However, during this call, neither Mr. Karmazin nor Mr. Frear (or any other executive) provided specific guidance on revenue, subscribers or other metrics beyond a short-term horizon of approximately one year, nor have they done so since December 2008.[17] As Mr. Frear explained in his direct testimony, the Company does not give public guidance on EBITDA, free cash flow, earnings or other financial metrics, beyond the roughly one-year time horizon because "there's just too much uncertainty."[18] Indeed, not a single one of the management statements quoted by Professor Lys contains a specific projection about the Company's actual financial performance for the period 2013 through 2017.

12. Professor Lys claims that the Company's "financial stability and expected future financial performance have improved greatly since the merger … in mid-2008."[19] Although Sirius XM senior management expressed similar views about the Company's prospects, it is important to recognize how common it is for chief executive officers ("CEOs") to make optimistic statements about their companies' long-term prospects. It is equally important to recognize that many CEOs have been dramatically wrong, as illustrated by the fact that there are companies that have filed for bankruptcy not long after their CEOs publicly expressed optimism about the company or its products. This is not to suggest that Sirius XM will have a third close

[15] The analyst responsible for the incorrect Morgan Stanley forecasts upon which Mr. Butson relied is the same analyst who prepared the November 3, 2011 forecast upon which Professor Lys relies.
[16] Lys WDT, ¶77.
[17] Trial Testimony of David John Frear, June 7, 2012 (Frear Trial Testimony), pp. 753–4 and Sirius XM Radio Inc. Form 8-K filed December 18, 2008.
[18] Frear Trial Testimony, p. 800.
[19] Lys WDT, ¶31.

call with bankruptcy or seek bankruptcy protection before 2017, but rather to illustrate that even senior executives can be wrong—no matter how strongly they believe that their companies' products are resilient to economic downturns and competition. An example of how a CEO's optimism was not borne out is shown in Figure 2, which excerpts statements by Blockbuster's CEO prior to the company's bankruptcy and depicts Blockbuster's stock price and credit ratings in the five years preceding Blockbuster's filing for bankruptcy in September 2010.

Figure 2
Moody's Credit Rating and Stock Price Performance of Blockbuster, Inc.
1/1/05 – 10/31/10



Source: *CRSP; Bloomberg*; Blockbuster, Inc. Earnings Calls; Public Press

Note:
[1] Blockbuster, Inc. was delisted from the NYSE prior to the opening of trading on July 7, 2010. The company's stock ticker was changed from BBI to BLOKA on July 7, 2010 and the stock started trading in the OTC market.

13. Less than two years prior to the bankruptcy, in the face of a declining stock price and multiple ratings downgrades, Blockbuster's CEO was still describing the company as a "cash machine." In reality, Blockbuster was in the late stages of a multi-year collapse due to its inability to position its retail video rental business to withstand competition from more consumer-friendly technologies such as Netflix. While Messrs. Karmazin and Frear are optimistic that the Company has finally turned a corner after two decades of losses, an experienced banker analyzing the Company's long-term financial prospects through 2017 would place no weight on the type of general optimistic statements by management that Professor Lys

relies on in projecting the Company's next six years of performance. Investment bankers do not view general optimistic statements by management that lack specificity about future financial results as providing useful information about the risk profile of a company.

III. Professor Lys's Use of Credit Rating Agency Ratings

14. Professor Lys posits that the optimistic view of Sirius XM's future, as presented in the Morgan Stanley forecasts, is buttressed by the ratings from credit rating agencies which show that "Sirius XM will not be disrupted by the [SoundExchange-proposed] royalty rate."[20] However, in emphasizing the *improved* credit ratings of Sirius XM, he fails to take into account the still tenuous position of the Company today from the perspective of these same credit rating agencies.

15. While Sirius XM has undergone several ratings upgrades since the last proceeding, the Company's *current* B2 credit rating from Moody's implies a 25.7% five-year cumulative default probability.[21] In other words, over the past three decades, one in four companies that have been rated B2 defaulted on their debt within five years.[22] Professor Lys does not acknowledge that B2-rated entities are considered by Moody's to be "speculative and … subject to high credit risk" and that the Company's bond ratings by both Moody's and Standard & Poor's remain a "junk" non-investment grade rating as of today.[23]

[20] Lys WDT, ¶¶87, 95.

[21] In ¶93 of his written direct testimony, Professor Lys cites a Moody's *probability of default* rating for Sirius of B1. This *probability of default* rating is one component of Moody's overall credit rating, which for Sirius XM is B2. Despite the name, it is not appropriate to use the *probability of default* rating to determine the implied probability of default from Moody's historical statistics. The B2 *credit rating* is the appropriate measurement to use as separate *probability of default* ratings have only been assigned for approximately six years, and the statistics compiled by Moody's that show historical defaults are categorized by the *credit rating* at the time of the default, *i.e.,* before the *probability of default* rating existed. Also, in ¶90, Professor Lys cites a 0.27% default probability for Baa-rated corporate bonds as "context" for Sirius XM's bonds. This 0.27% is an annual implied default rating for firms with a Baa credit rating. This statistic is misleading for a number of reasons. To begin with, Sirius XM's credit rating from Moody's is B2, well below Baa. Second, and more importantly, this is an *annual* implied default rate, which is not as relevant as the implied *five-year cumulative* default rate of 25.7%, which is calculated by Moody's and which I cite. *See* Stowell WDT ¶26.

[22] In ¶70 of his corrected testimony, Professor Lys states that he considers a royalty rate to be disruptive if it leads to "a substantial, immediate and irreversible decline as evidenced in the financial measures… [like] EBITDA and free cash flows." From this definition, it is unclear whether he defines "immediate" to mean in the short-term (e.g., less than a year) or any time during this rate setting period of 2013 – 2017. I have assumed any decline which is both substantial and irreversible is equally disruptive, regardless of when it occurs between 2013 and 2017.

[23] Stowell WDT, Note 26.

16. On May 31, 2012, Moody's upgraded Sirius XM's outlook to "Positive" from its previous outlook of "Stable." Importantly, however, Moody's did not alter its credit rating.[24] In passing on this opportunity to upgrade the Company, Moody's confirmed that the B2 rating – and accompanying "junk" status and implied 25.7% cumulative five-year default rate – is still the appropriate classification for Sirius XM. Even if Moody's had decided to upgrade the Company, B1, which Professor Lys suggests is the correct Moody's rating, is still a "junk" credit rating several levels below investment grade. Moreover, the cumulative five-year default rate implied by a rating of B1 is 21.1%, meaning that Moody's believes there is a better than one-in-five chance that Sirius XM will default on its credit obligations over the next five years even if a further upgrade occurs.

IV. Professor Sidak's Opinions Regarding Sirius XM's Competitive Position

17. Professor Sidak claims that satellite radio is a distinct market, and that Sirius XM, as the only provider of satellite radio, is therefore somehow protected from competition.[25] This proposition, that satellite radio is sufficiently differentiated from other forms of radio to constitute its own market and that Sirius XM consequently has enough market power to raise its prices, has been rejected by two federal agencies: the FCC and the Department of Justice, Antitrust Division, which both found that satellite radio faced competition for listeners from a variety of sources and declined to define the relevant market for measuring competition as being limited to satellite radio.[26] This conclusion was reaffirmed by the FCC in 2011:

> "There is evidence that new competitive alternatives have arisen since 2008…. [T]he marketplace has evolved since the merger closed, and consumers now have additional audio entertainment choices … indeed, it appears that since the merger order new audio services have emerged as viable consumer alternatives, including smartphone internet streaming applications that can be used in a

[24] Moody's changes Sirius' rating outlook to positive, Moody's Investors Service, May 31, 2012, available at http://www.moodys.com/research/Moodys-changes-Sirius-rating-outlook-to-positive--PR_247286.
[25] *See* Amended and Corrected Testimony of J. Gregory Sidak, March 26, 2012 (Sidak Amended WDT), ¶¶43–67 and Trial Testimony of J. Sidak, June 18, 2012, pp. 2757–8.
[26] Applications for Consent to the Transfer of Control of Licenses, XM Satellite Radio Holdings Inc. to Sirius Satellite Radio Inc., Memorandum Opinion and Order and Report and Order, 23 F.C.C.R. 12,348, 12,371–2 (2008), ¶¶44, 47, SX02 0004203–304 at 212–3 and "Statement of the Department of Justice Antitrust Division on its Decision to Close its Investigation of XM Satellite Radio Holdings Inc.'s Merger with Sirius Satellite Radio Inc.," Department of Justice, March 24, 2008, available at .

> mobile environment such as automobiles equipped with user-friendly interfaces."[27]

18. The FCC and DOJ conclusions are consistent with (i) the Company's own descriptions in its Securities and Exchange Commission ("SEC") filing of the competition it faces and (ii) commentary in the financial press and analyst reports. For instance, in April 2012, Standard & Poor's stated that:

> "We believe satellite radio also faces increased competition for consumers' time and attention from a growing array of digital entertainment (e.g., Internet, iPod/smart phones, video games, etc.). There are also various digital initiatives from the $20 billion terrestrial radio market (e.g., HD radio, podcasting)."[28]

While there is some disagreement within the analyst community about the size and scope of the threat posed by alternative technologies, many of the analyst reports I reviewed discussed these technologies in the context of competing with Sirius XM for listeners and none of them stated that they saw Sirius XM as immune to the threat posed by these alternative technologies.[29] Sirius XM faces numerous competitors, both from existing firms like Pandora and Spotify, and traditional terrestrial radio stations, as well as potential new entrants such as Apple, Verizon, Amazon, Google, and others.

19. The Company explicitly discloses the substantial competition it faces in its filings with the SEC:

[27] Applications for Consent to the Transfer of Control of Licenses, XM Satellite Radio Holdings Inc. to Sirius Satellite Radio Inc., Memorandum Opinion and Order, 26 F.C.C.R. 10,539, 10,541-2, (2011), ¶¶5, 7, SX02 00004321–6 at 3–4

[28] Sirius XM Radio Inc., Standard & Poor's, April 2, 2012, p. 2.

[29] As an additional example: "Free internet radio could more significantly cannibalize SIRI's subscriber base. Alternatively, internet radio could more directly challenge SIRI by adopting a hybrid advertising / subscription model and competing with SIRI for acquisition of premium content." Moving to Equal Weight, Morgan Stanley, January 23, 2012, p. 7. *See generally* "Highlights from Fireside Chat with CEO," Citigroup Global Markets, January 5, 2012, p. 3 and "In the driver's seat: Dominant position in auto with a defensive business," Macquarie Equities Research, February 1, 2012, p. 16.

> "We face substantial competition from other providers of radio and other audio services. Our ability to retain and attract subscribers depends on our success in creating and providing popular or unique music, entertainment, news and sports programming. Our subscribers can obtain certain similar content for free through terrestrial radio stations or Internet radio services. Audio content delivered via the Internet, including through mobile devices, is increasingly competitive with our services. A number of automakers and aftermarket manufacturers have introduced, or will shortly introduce, factory-installed radios capable of accessing Internet-delivered audio entertainment."[30]

20. Professor Sidak opines that emerging technologies do not pose a competitive threat to Sirius XM because it "has agreements 'with every major automaker to include satellite radios in new vehicles.' That 100-percent penetration among major automakers will help to protect Sirius XM from being displaced in the near future by audio streaming services."[31] The logic behind this argument is flawed. Automakers can and do enter into deals with multiple vendors, as evidenced by their agreements with Pandora (discussed below). Agreements to include Sirius XM radios in dashboards do not protect the Company from competitors who enter into their own agreements with automakers. Professor Sidak's argument is like saying that since his consulting firm (Criterion Economics) works with all major law firms it has "100% penetration," and is thus protected from competition from other economic consulting firms, which is clearly wrong. Furthermore, Sirius XM's existing agreements with automakers do not require them to install a minimum number of radios.[32] Therefore, automakers are free to lower the number of satellite radios they install at any time, or to stop installing them altogether.

21. Professor Sidak also claims that "it would not be reasonable to expect that the new technology would achieve by 2017 the level of penetration that satellite radio currently has. Pandora, for example, did not begin until 2009 to have agreements with automobile manufacturers to provide in-dashboard options."[33] Regardless of when Pandora first began

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[30] Sirius XM Form 10-K for 2011 filed February 9, 2012, p. 11.
[31] Sidak Amended WDT, ¶55 quoting Sirius XM Form 10-K for 2010 filed February 16, 2011, p. 13.
[32] Sirius XM Form 10-K for 2011 filed February 9, 2012, p. 12, attached hereto as Sirius XM Rebuttal Exhibit 42. I note that Sirius XM's penetration rate has leveled off at approximately 65%. This may make the Company more vulnerable to downturns in sales of new cars than they have been in the past when increasing penetration rates would at least partially offset declines in new car sales. Sirius XM Radio Inc. – Bank of America Merrill Lynch Credit Conference, November 18, 2010, p. 2.
[33] Sidak Amended WDT, ¶57. Pandora alone had over 50 million active users as of April 2012 – far more than the roughly 22 million subscribers Sirius XM had at the same point in time. This is a huge user base that

partnering with automobile manufacturers, by the end of 2012, there will be at least sixteen major automakers producing vehicles with Pandora Radio integrated in the dashboard.[34] Clearly, automakers see value in Pandora and other competitors to Sirius XM, and believe that including them in the dashboard will help them sell cars. Given these facts, and how quickly technology and consumer electronics advance, there is no reason to think that Pandora and other Internet services could not achieve a high penetration rate in new autos by 2017. As stated in my own Written Direct Testimony as well as that of others, that many new competitors do not require the same type of costly installations that Sirius XM radios do means a more crowded dashboard full of infotainment options and a likely reduction in the Company's subscriber base over the long term.

22. Professor Sidak also opines that the large installed base of cars with satellite radios, as well as the growing number of used cars that have satellite radios, protect the Company from competition.[35] Sirius XM is, however, highly dependent on new car sales for new subscribers, and the new car market is precisely where its competitors will have the highest penetration.

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already actively uses the Pandora music service. Pandora Media, Inc. Form 10-Q for the Period April 30, 2012 filed June 4, 2012, p. 19, attached hereto as Sirius XM Rebuttal Exhibit 43.

[34] "We have also developed relationships with major automobile manufacturers, including Ford, Lincoln, Mercedes-Benz, MINI, BMW, Hyundai, Scion, Toyota, Lexus, Honda, GMC, Chevrolet and Buick, and with suppliers to major automobile manufacturers, to integrate the Pandora service into current and future automotive sound systems. Additionally, Cadillac, Acura and Kia have publicly announced their plans for future Pandora integrations." Pandora Media, Inc. Form 10-K for the Period January 31, 2012 filed March 19, 2012, p. 4. *See*, for example, Various manufacturers:
http://help.pandora.com/customer/portal/topics/7288-auto/articles, attached hereto as Sirius XM Rebuttal Exhibit 44; Toyota: http://www.youtube.com/watch?v=F-9F-OsCNZ4;
Hyundai: http://investor.pandora.com/phoenix.zhtml?c=227956&p=irol-newsArticle&ID=1611633&highlight=, attached hereto as Sirius XM Rebuttal Exhibit 45;
Honda: http://investor.pandora.com/phoenix.zhtml?c=227956&p=irol-newsArticle&ID=1631319&highlight=\ attached hereto as Sirius XM Rebuttal Exhibit 46;
Cadillac: http://investor.pandora.com/phoenix.zhtml?c=227956&p=irol-newsArticle&ID=1616090&highlight, attached hereto as Sirius XM Rebuttal Exhibit 47;
Acura: http://www.prnewswire.com/news-releases/acura-joins-line-up-of-pandora-automotive-partners-136965598.html, attached hereto as Sirius XM Rebuttal Exhibit 48;
Lexus, Mazda , and Kia will have Pandora in 2013 models (available late 2012):
Mazda: http://blog.pandora.com/archives/press/2012/06/pandora_unveils_4.html; attached hereto as Sirius XM Rebuttal Exhibit 49;
Lexus: http://investor.pandora.com/phoenix.zhtml?c=227956&p=RssLanding_pf&cat=news&id=1666961, attached hereto as Sirius XM Rebuttal Exhibit 50;
Kia: http://www.kiamedia.com/secure/corporate011012.html, attached hereto as Sirius XM Rebuttal Exhibit 51.

[35] Sidak WDT, ¶¶55–6.

The existing base of installed radios is much less relevant from a competitive perspective than the subscribers generated from the sale of new cars.[36]

23. Since I filed my Written Direct Testimony last November, the evidence of emerging competitors has only increased. For instance, as explained in the Written Rebuttal Testimony of David J. Frear, new agreements have been reached between digital service providers and automakers that will reshape the competitive environment in which Sirius XM operates. These recent developments support the FCC's and DOJ's expectations that new and yet-to-emerge technology will pose meaningful competition to Sirius XM in the future in addition to the competition that currently exists in the form of terrestrial radio, HD radio, MP3 players and internet music suppliers. I understand other experts are opining on the Company's ability to raise prices and pass through any increase in royalties paid and therefore decrease the risk of disruption.

V. Professor Sidak's Opinion Regarding the "Shut-down" Royalty Rate and Disruption

24. Professor Sidak claims that "A higher royalty rate could disrupt the SDARS industry in terms of causing Sirius XM to cease supplying SDARS only if the royalty rate caused Sirius XM's average variable cost to exceed its subscription price" and "Sirius XM would need to pay a royalty rate of 57.8 percent of gross revenue to necessitate exiting the market."[37] However, this calculation only looks at a single quarter of results in 2011, and so is not especially meaningful unless one assumes that future results through 2017 will be similar to the third quarter of 2011, which is unlikely.

25. Professor Sidak's definition of "disruption" – a shut-down of the Company – is so extreme as to not be meaningful or relevant. Disruption is most likely to occur in the form of bankruptcy, which occurs when a company does not have sufficient cash to pay its debts. Professor Sidak ignores this type of disruption, which recent history has shown is a risk, given the Company's two prior close brushes with bankruptcy and the other risks discussed in my Written Direct Testimony, trial testimony, and this report. Among other things, bankruptcy is a

[36] In 2011, Morgan Stanley estimated 2.3 MM Net Additions from OEM segment, while only 69,000 came from the Used Vehicle segment. Sirius XM Radio Inc. - Solid Start to the Year, Morgan Stanley, May 1, 2012, p. 14.
[37] Sidak Amended WDT, ¶¶68, 70.

costly, time consuming process, with many companies that file for Chapter 11 devoting significant financial and management resources to navigating the process. And some of these companies end up liquidating, with significant disruption not only to shareholders and creditors but also to employees and customers.

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of	)	
DETERMINATION OF RATES AND TERMS FOR PREEXISTING SUBSCRIPTION AND SATELLITE DIGITAL AUDIO RADIO SERVICES	)	**Docket No. 2011-1 CRB PSS/Satellite II**

DECLARATION OF DAVID P. STOWELL

I, David P. Stowell, declare under penalty of perjury that the statements contained in my Written Direct Testimony in the above-captioned matter are true and correct to the best of my knowledge, information and belief. Executed this 28th day of June, 2012 at Evanston, Illinois.

David P. Stowell

David P. Stowell

Appendix A

Recent Deposition and Trial Testimony
David Paul Stowell

International Textile Group Merger Litigation
C.A. No. 2009-CP-23-3346
State of South Carolina, County of Greenville, The Court of Common Pleas
Jones Day LLP: Jean-Paul Boulee
Expert report and deposition testimony on behalf of Wilbur L. Ross, et al.
June 2011 and March 2012

Overstock.com, Inc., et al. v. Morgan Stanley & Co., Inc., et al.
S.F.S.C. Case No. CGC-07-460147
Sullivan & Cromwell LLP: Richard C. Pepperman, II
O'Melveny & Myers: Jeffrey A. N. Kopczynski
Expert report and deposition testimony on behalf of Goldman Sachs and
Bank of America
December, 2011

Tronox Incorporated, et al. (09-10156) Adv. 09-01198 (ALG); Tronox et al. v. Anadarko et al.: In the United States Bankruptcy Court, Southern District of New York
Weil, Gotshal & Manges LLP: Melanie Gray
Bingham McCutchen LLP: Thomas Lotterman
Expert report and deposition testimony on behalf of Anadarko et al.
January 2012

TFT-LCD (Flat Panel) Antitrust Litigation, Individual Case No. 09-cv-4997 SI
United States District Court, Northern District of California, San Francisco Division
Crowell & Moring: Jason Murray
Expert report and deposition testimony on behalf of plaintiffs collectively called
AT&T Mobility
February and June 2012

Riad Tawfiq Al Sadik vs. Investcorp Bank B.S.C. et al.
In the Grand Court of the Cayman Islands, Financial Services Division
Cause No: FSD 47 of 2009 (ALJ)
Gibson, Dunn & Crutcher: Philip Rocher
Expert report and trial testimony on behalf of defendant Investcorp Bank B.S.C. et al.
February 2012

Appendix B

Documents Relied Upon by David Stowell

Document Title, Bates Numbers	Document Date
Applications for Consent to the Transfer of Control of Licenses, XM Satellite Radio Holdings Inc. to Sirius Satellite Radio Inc., Memorandum Opinion and Order and Report and Order, 23 F.C.C.R. 12,348, 12,371-2 (2008) *SX02 0004203–304*	
Applications for Consent to the Transfer of Control of Licenses, XM Satellite Radio Holdings Inc. to Sirius Satellite Radio Inc., Memorandum Opinion and Order, 26 F.C.C.R. 10,539, 10,541-2 (2011) *SX02 00004321-6*	
Final Determination of Rates and Terms (Docket No. 2006-1 CRB DSTRA)	
Testimony of Sean Butson (Unrestricted), with Appendices A-V	October 26, 2006
Rebuttal Testimony of Sean Butson (Restricted), with Appendices A-H	July 23, 2007
Written Direct Testimony of Mel Karmazin, with Exhibits	November 28, 2011
Written Direct Testimony of David P. Stowell, with Appendices A-C	November 28, 2011
Written Direct Testimony of David J. Frear, with Exhibits	November 28, 2011
Written Direct Testimony of William R. Rosenblatt	November 28, 2011
Written Direct Testimony of James E. Meyer	November 28, 2011
Corrected Testimony of Thomas Z. Lys, with Appendix A and Attachments 1-13	March 26, 2012
Amended and Corrected Testimony of J. Gregory Sidak, with Appendices I-III	March 26, 2012
Trial Testimony of James E. Meyer	June 6, 2012
Trial Testimony of David John Frear	June 7, 2012
Trial Testimony of William Rosenblatt	June 8, 2012
Trial Testimony of Melvin Karmazin	June 11, 2012
Trial Testimony of Joseph Sidak	June 18, 2012
Deposition of Thomas Z. Lys	March 5, 2012
"Statement of the Department of Justice Antitrust Division on its Decision to Close its Investigation of XM Satellite Radio Holdings Inc.'s Merger with Sirius Satellite Radio Inc.," Department of Justice, March 24, 2008, available at http://www.justice.gov/opa/pr/2008/March/08_at_226.html.	
Sirius XM Radio Inc. – Reiterating OW Following 3Q Results, Outlook Unchanged, Morgan Stanley	November 3, 2011
Highlights from Fireside Chat with CEO, Citigroup Global Markets	January 5, 2012
Moving to Equal Weight, Morgan Stanley	January 23, 2012
In the driver's seat: Dominant position in auto with a defensive business, Macquarie Equities Research	February 1, 2012
Sirius XM Radio Inc., Standard & Poor's	April 2, 2012
Sirius XM Radio Inc. - Solid Start to the Year, Morgan Stanley	May 1, 2012
Announcement: Moody's Changes Sirius' Rating Outlook to Positive, Moody's Investors Service, available at http://www.moodys.com/research/Moodys-changes-Sirius-rating-outlook-to-positive--PR_247286.	May 31, 2012
Pandora Media, Inc. Form 10-K for the Period 1/31/12	March 19, 2012
Pandora Media, Inc. Form 10-Q for the Period 3/31/12	June 4, 2012

Document Title, Bates Numbers	Document Date
Sirius XM Radio Inc. Forms 10-K for the Periods Ending 12/31/07 – 12/31/11	
Blockbuster Inc. Form 8-K for the Period Ending 9/23/10	September 24, 2010
Blockbuster Inc. – Q4 2006 Earnings Call	February 27, 2007
Blockbuster Inc. – Q4 2007 Earnings Call	March 6, 2008
Blockbuster Inc. – Q4 2008 Earnings Call	March 19, 2009
Blockbuster Inc. – Q1 2010 Earnings Call	May 13, 2010
Sirius XM Radio Inc. – Bank of America Merrill Lynch Credit Conference	November 18, 2010
Various Websites:	
http://help.pandora.com/customer/portal/topics/7288-auto/articles	
Toyota: http://www.youtube.com/watch?v=F-9F-OsCNZ4	
Hyundai: http://investor.pandora.com/phoenix.zhtml?c=227956&p=irol-newsArticle&ID=1611633&highlight=	
Honda: http://investor.pandora.com/phoenix.zhtml?c=227956&p=irol-newsArticle&ID=1631319&highlight=\	
Cadillac: http://investor.pandora.com/phoenix.zhtml?c=227956&p=irol-newsArticle&ID=1616090&highlight	
Acura: http://www.prnewswire.com/news-releases/acura-joins-line-up-of-pandora-automotive-partners-136965598.html	
Mazda: http://blog.pandora.com/archives/press/2012/06/pandora_unveils_4.html	
Lexus: http://investor.pandora.com/phoenix.zhtml?c=227956&p=RssLanding_pf&cat=news&id=1666961	
Kia: http://www.kiamedia.com/secure/corporate011012.html	
Data Sources: Bloomberg; CRSP Data; Thomson Reuters Datastream; Capital IQ	

Any Other Sources Cited in the Report and Figures

10-K 1 d273024d10k.htm FORM 10-K

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 Fiscal Year Ended December 31, 2011

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 001-34295

SIRIUS XM RADIO INC.

(Exact name of registrant as specified in its charter)

Delaware *(or other jurisdiction of incorporation of organization)*	**52-1700207** *(I.R.S. Employer Identification Number)*
1221 Avenue of the Americas, 36th Floor **New York, New York** *(Address of principal executive offices)*	**10020** *(Zip Code)*

Registrant's telephone number, including area code:

(212) 584-5100

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

Title of Each Class:	Name of Each Exchange on Which Registered:
Common Stock, par value $0.001 per share	Nasdaq Global Select Market

Securities registered pursuant to Section 12(g) of the Act:
None
(Title of class)

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 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 Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T 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 is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions 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 ☐ (Do not check if a smaller reporting company)	Smaller Reporting company ☐

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

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant as of June 30, 2011 was $8,614,271,427. All executive officers and directors of the registrant have been deemed, solely for the purpose of the foregoing calculation, to be "affiliates" of the registrant.

The number of shares of the registrant's common stock outstanding as of February 7, 2012 was 3,755,256,475.

DOCUMENTS INCORPORATED BY REFERENCE

Information included in our definitive proxy statement for our 2012 annual meeting of stockholders scheduled to be held on Tuesday, May 22, 2012 is incorporated by reference in Items 10, 11, 12, 13 and 14 of Part III of this report.

SXM REB EX 42

SIRIUS XM RADIO INC.

2011 FORM 10-K ANNUAL REPORT

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ITEM 1. *BUSINESS*

We broadcast our music, sports, entertainment, comedy, talk, news, traffic and weather channels in the United States on a subscription fee basis through our two proprietary satellite radio systems. Subscribers can also receive certain of our music and other channels over the Internet, including through applications for mobile devices.

As of December 31, 2011, we had 21,892,824 subscribers. Our subscribers include:

- subscribers under our regular and discounted pricing plans;
- subscribers that have prepaid, including payments made or due from automakers for subscriptions included in the sale or lease price of a vehicle;
- certain radios activated for daily rental fleet programs;
- subscribers to our Internet services who do not also have satellite radio subscriptions; and
- certain subscribers to our weather, traffic, data and Backseat TV services.

Our primary source of revenue is subscription fees, with most of our customers subscribing on an annual, semi-annual, quarterly or monthly basis. We offer discounts for prepaid and long-term subscription plans as well as discounts for multiple subscriptions on each platform. We also derive revenue from activation and other fees, the sale of advertising on select non-music channels, the direct sale of satellite radios and accessories, and other ancillary services, such as our weather, traffic, data and Backseat TV services.

Our satellite radios are primarily distributed through automakers (“OEMs”); retail locations nationwide; and through our website. We have agreements with every major automaker to offer satellite radios in their vehicles. Satellite radio services are also offered to customers of certain rental car companies.

Certain important dates in our corporate history are listed below:

- Satellite CD Radio, Inc. was incorporated in the State of Delaware on May 17, 1990.
- On December 7, 1992, Satellite CD Radio, Inc. changed its name to CD Radio Inc., and Satellite CD Radio, Inc. was formed as a wholly owned subsidiary.
- On November 18, 1999, CD Radio Inc. changed its name to Sirius Satellite Radio Inc.
- In July 2008, our wholly owned subsidiary, Vernon Merger Corporation, merged (the “Merger”) with and into XM Satellite Radio Holdings Inc.
- On August 5, 2008, we changed our name from Sirius Satellite Radio Inc. to Sirius XM Radio Inc.
- In April 2010, XM Satellite Radio Holdings Inc. merged with and into XM Satellite Radio Inc.; and in January 2011, XM Satellite Radio Inc., our wholly-owned subsidiary, merged with and into Sirius XM Radio Inc.

Programming

We offer a dynamic programming lineup of commercial-free music, sports, entertainment, talk, news, traffic and weather. The channel line-ups for our services vary in certain respects and are available at siriusxm.com.

Our subscription packages allow most listeners to enhance our standard programming lineup. Our “XM Premier” package offers subscribers the Howard Stern channels, Martha Stewart Living Radio, SiriusXM NFL Radio, SiriusXM NASCAR Radio, Playboy Radio, Spice Radio and play-by-play NFL games and college sports programming. Our “Sirius Premier” package offers subscribers Oprah Radio, Opie and Anthony, SiriusXM Public Radio, MLB Network Radio, NHL Home Ice, SiriusXM PGA Radio, Sirius XM Fantasy Sports Radio and select play-by-play of NBA and NHL games and college sports programming. Subscribers with a la carte-capable radios may customize the programming they receive through our a la carte subscription packages. We also offer family friendly, “mostly music” and “mostly sports, news and talk” packages.

In October 2011, we launched an expanded channel lineup, including new music, sports and comedy channels as well as SiriusXM Latino, a suite of Latin channels. These channels, available online and over certain new radios, are the first phase of SiriusXM 2.0, an upgrade and evolution of our satellite and Internet delivered service that will ultimately span hardware, software, audio, and data services.

We make changes to our programming lineup from time to time as we strive to attract new subscribers and offer content which appeals to a broad range of audiences and to our existing subscribers.

Music Programming

We offer an extensive selection of music genres, ranging from rock, pop and hip-hop to country, dance, jazz, Latin and classical. Within each genre we offer a range of formats, styles and recordings.

All of our original music channels are broadcast commercial free. Certain of our music channels are programmed by third parties and air commercials. Our channels are produced, programmed and hosted by a team of experts in their fields, and each channel is operated as an individual radio station, with a distinct format and branding. We also provide special features, such as our *Artist Confidential* series which provides interviews and performances from some of the biggest names in music, and an array of "pop up" channels featuring the music of particular artists.

Sports Programming

Live play-by-play sports is an important part of our programming strategy. We are the Official Satellite Radio Partner of the National Football League ("NFL"), Major League Baseball ("MLB"), NASCAR, National Basketball Association ("NBA"), National Hockey League ("NHL") and PGA TOUR, and broadcast most major college sports, including NCAA Division I football and basketball games. Soccer coverage includes matches from the Barclays Premier League. We also air FIS Alpine Skiing, FIFA World Cup events and horse racing.

We offer many exclusive talk channels and programs such as MLB Network Radio, SiriusXM NASCAR Radio, SiriusXM NFL Radio and Chris "Mad Dog" Russo's *Mad Dog Unleashed* on Mad Dog Radio, as well as two ESPN channels, ESPN Radio and ESPN Xtra. Simulcasts of select ESPN television shows, including *SportsCenter*, can be found on ESPN Xtra.

Talk and Entertainment Programming

We offer a multitude of talk and entertainment channels for a variety of audiences. Our diverse spectrum of talk programming is a significant differentiator from terrestrial radio and other audio entertainment providers.

Our talk radio offerings feature dozens of popular talk personalities, many creating radio shows that air exclusively on our services, including Howard Stern, Oprah Winfrey, Martha Stewart, Dr. Laura Schlessinger, Opie and Anthony, Bob Edwards, Senator Bill Bradley and doctors from the NYU Langone Medical Center.

Our comedy channels present a range of humor such as Jamie Foxx's The Foxxhole, Laugh USA, Blue Collar Comedy and Raw Dog Comedy. Other talk and entertainment channels include SiriusXM Book Radio, Kids Place Live and Radio Disney, as well as OutQ, Road Dog Trucking and Playboy Radio.

Our religious programming includes The Catholic Channel, which is programmed with the Archdiocese of New York, EWTN, a Global Catholic Radio Network, and Family Talk.

News and Information Programming

We offer a wide range of national, international and financial news, including news from BBC World Service News, Bloomberg Radio, CNBC, CNN, FOX News, HLN, MSNBC, NPR and World Radio Network. We also air a range of political call-in talk shows on a variety of channels including our exclusive channel, POTUS.

We offer continuous, local traffic reports for 22 metropolitan markets throughout the United States.

Distribution of Radios

Automakers

Our primary means of distributing satellite radios is through the sale and lease of new vehicles. We have agreements with every major automaker to offer satellite radios in their vehicles and satellite radios are available as a factory or dealer-installed option in substantially all vehicle makes sold in the United States.

Many automakers include a subscription to our radio service in the sale or lease price of their vehicles. In many cases, we receive subscription payments from automakers in advance of the activation of our service. We share with certain automakers a portion of the revenues we derive from subscribers using vehicles equipped to receive our service. We also reimburse various automakers for certain costs associated with the satellite radios installed in their vehicles, including in certain cases hardware costs, tooling expenses and promotional and advertising expenses.

Previously Owned Vehicles

We expect to acquire an increasing number of subscribers through the sale and lease of previously owned vehicles with factory-installed satellite radios. We have entered into agreements with many automakers to market subscriptions to purchasers and lessees of vehicles which include satellite radios sold through their certified pre-owned programs. In addition, we work directly with many franchise and independent dealers on similar programs for non-certified vehicles.

We have developed systems and methods to identify purchasers and lessees of previously owned vehicles which include satellite radios and have established marketing plans to promote our services to these potential subscribers.

Retail

We sell satellite and Internet radios directly to consumers through our website. Satellite and Internet radios are also marketed and distributed through major national and regional retailers. We develop in-store merchandising materials and provide sales force training for several retailers.

Our Satellite Radio Systems

Our satellite radio systems are designed to provide clear reception in most areas despite variations in terrain, buildings and other obstructions. Subscribers can receive our transmissions in all outdoor locations in the continental U.S. where the satellite radio has an unobstructed line-of-sight with one of our satellites or is within range of one of our terrestrial repeaters. We continually monitor our infrastructure and regularly evaluate improvements in technology.

The Federal Communications Commission (the "FCC") has allocated the portion of the S-band located between 2320 MHz and 2345 MHz exclusively for satellite radio. Each of our services uses 12.5 MHz of this bandwidth to transmit its respective signals. Uplink transmissions (from the ground to our satellites) use 12.5 MHz of bandwidth in the 7060-7072.5 MHz band.

Our satellite radio systems have three principal components:

- satellites, terrestrial repeaters and other satellite facilities;
- studios; and
- radios.

Satellites, Terrestrial Repeaters and Other Satellite Facilities

Satellites. We currently own a fleet of nine orbiting satellites. We have invested in more technologically advanced satellites and satellite deployment to provide for improved coverage, increased redundancy and more efficient use of our spectrum.

Space Systems/Loral has constructed another satellite, FM-6, for use in our system. We expect to launch this satellite on a Proton rocket in the first half of 2012.

We use four of our orbiting satellites in the Sirius system. These satellites, FM-1, FM-2, FM-3 and FM-5, are of the Loral FS-1300 model series. Our FM-1, FM-2 and FM-3 satellites travel in a geosynchronous orbit. Our FM-5 satellite is deployed in a geostationary orbit.

We own five orbiting satellites for use in the XM system which operate in a geostationary orbit. Four of these satellites were manufactured by Boeing Satellite Systems International and one was manufactured by Space Systems/Loral.

Satellite Insurance. We hold in-orbit insurance for our FM-5 and XM-5 satellites. These policies provide coverage for a total, constructive total or partial loss of the satellites that occurs during the first five in-orbit years. We also have negotiated launch and in-orbit insurance for our FM-6 satellite. This insurance provides coverage for a total, constructive total or partial loss of the FM-6 that occurs from launch through the end of the first annual in-orbit period. The insurance does not cover the full cost of constructing, launching and insuring new satellites, nor will it protect us from the adverse effect on business operations due to the loss of a satellite. The policies contain standard commercial satellite insurance provisions, including coverage exclusions. We use launch and in-orbit insurance to mitigate the potential financial impact of satellite fleet launch and in-orbit failures unless the premium costs are considered to be uneconomical relative to the risk of satellite failure.

Terrestrial Repeaters. In some areas with high concentrations of tall buildings, such as urban centers, signals from our satellites may be blocked and reception of satellite signals can be adversely affected. In many of these areas, we have deployed terrestrial repeaters to supplement satellite coverage. We operate over 140 terrestrial repeaters in the Sirius system and over 560 terrestrial repeaters in the XM system.

Other Satellite Facilities. We control and communicate with our satellites from facilities in North America and maintain earth stations in Panama and Ecuador to control and communicate with several of our Sirius satellites. Our satellites are monitored, tracked and controlled by a third party satellite operator.

Studios

Our programming originates principally from studios in New York City and Washington D.C., and, to a lesser extent, from smaller studio facilities in Cleveland, Los Angeles, Memphis, Nashville and Orlando. Our New York City offices house our corporate headquarters. Both our New York City and Washington D.C. offices house facilities for programming origination, programming personnel and facilities to transmit programming.

Radios

We design, establish specifications for, source or specify parts and components for, and manage various aspects of the logistics and production of satellite and Internet radios. We do not manufacture radios. We have authorized manufacturers and distributors to produce and distribute radios, and have licensed our technology to various electronics manufacturers to develop, manufacture and distribute radios under certain brands. We purchase radios from independent manufacturers, that are distributed through our website. To facilitate the sale of radios, we may subsidize a portion of the radio manufacturing costs to reduce the hardware price to consumers.

Radios are manufactured in four principal configurations — as in-dash radios, Dock & Play radios, home or commercial units and portable or wearable radios.

- In-dash satellite radios are integrated into vehicles and allow the user to listen to satellite radio with the push of a button. Aftermarket in-dash radios are available at retailers nationally, and to automakers for factory or dealer installation.
- Dock & Play satellite radios enable subscribers to transport their radios easily to and from their cars, trucks, homes, offices, boats or other locations with available adapter kits. Dock & Play radios adapt to existing audio systems through FM modulation or direct audio connection and can be easily installed. Audio systems and boom boxes, which enable subscribers to use their radios virtually anywhere, are available for various models. The Stratus 6, Starmate 5 and Starmate 8 Dock & Play radios also support a la carte channel selection.
- Radios that provide our satellite or Internet service to home and commercial audio systems.
- Portable or wearable radios offer live satellite or Internet radio and recorded satellite, MP3 or WMA content "on the go".

We have introduced an interoperable radio called MiRGE. This radio has a unified control interface allowing for easy switching between our two satellite radio networks. We also offer the XM SkyDock, which connects to an Apple iPhone and iPod touch and provides live XM satellite radio using the control capability of the iPhone or iPod touch.

In 2011, we introduced Edge, a Dock & Play radio capable of receiving our SiriusXM 2.0 expanded channel lineup, including SiriusXM Latino, and Lynx, a portable radio with SiriusXM 2.0 satellite and Internet radio capability and features.

Internet Radio

We stream music channels and select non-music channels over the Internet. Our Internet service also includes channels and features that are not available on our satellite service. Access to certain Internet services is offered to subscribers for a fee. We have available products that provide access to our Internet services without the need for a personal computer. We also offer applications to allow consumers to access our Internet services on certain smartphones and tablet computers. Subscribers to our Internet services are not included in our subscriber count, unless the service is purchased separately and not as part of a satellite radio subscription.

Canada

We also have an equity interest in the satellite radio services offered in Canada through Sirius XM Canada. In June 2011, Canadian Satellite Radio Holdings Inc. ("CSR"), the parent company of XM Canada, and Sirius Canada completed a transaction to combine their operations. Following this merger, we own approximately 38.0% of the equity of CSR, which operates as Sirius XM Canada.

Other Services

Commercial Accounts. Our music services are also available for commercial establishments. Commercial accounts are available through providers of in-store entertainment solutions and directly from us. Certain commercial subscribers are included in our subscriber count.

Satellite Television Service. Certain of our music channels are offered as part of certain programming packages on the DISH Network satellite television service. Subscribers to the DISH Network satellite television service are not included in our subscriber count.

Subscribers to the following services are not included in our subscriber count, unless the applicable service is purchased by the subscriber separately and not as part of a radio subscription to our services:

Backseat TV. We offer Backseat TV, a service offering television content designed primarily for children in the backseat of vehicles. Backseat TV is available as a factory-installed option in select Chrysler, Dodge and Jeep models, and at retail for aftermarket installation.

Travel Link. We offer Travel Link, a suite of data services that includes graphical weather, fuel prices, sports schedules and scores, and movie listings.

Real-Time Traffic Services. We also offer services that provide graphic information as to road closings, traffic flow and incident data to consumers with compatible in-vehicle navigation systems.

Real-Time Weather Services. We offer several real-time weather services designed for improving situational awareness in vehicle, marine and/or aviation use.

FCC Conditions

In order to demonstrate to the FCC that the Merger was in the public interest, we agreed to implement a number of voluntary commitments. These commitments include certain voluntary assurances regarding our programming and programming packages; the creation of public interest channels; and equipment manufacturing, all of which we have complied with.

Qualified Entity Channels

In April 2011, we entered into long-term leases or other agreements to provide rights to four percent of the full-time audio channels on our platforms to a Qualified Entity or Entities. A Qualified Entity is defined as an entity or entities that: (1) are not directly or indirectly owned, in whole or in part, by us or one of our affiliates; (2) do not share any common officers, directors or employees with us or any affiliate of us; and (3) did not have any existing relationships with us for the supply of programming during the two years prior to October 19, 2010.

As digital compression technology enables us to broadcast additional full-time audio channels, we will ensure that four percent of the full-time audio channels on our platforms are reserved for Qualified Entities. The Qualified Entities are not required to make any lease payments for such channels. We may not alter, censor, or otherwise exercise any control over the leased programming but we may remove programming that violates the law.

Subscription Rates

In connection with the Merger, we had agreed with the FCC not to raise the retail price for, or reduce the number of channels in, our basic $12.95 per month subscription package, our a la carte programming packages or certain other programming packages until July 28, 2011. In July 2011, the FCC issued an order confirming that the price cap was no longer necessary. On January 1, 2012, we increased the base price of our basic subscription packages from $12.95 to $14.49 per month.

Competition

We face significant competition for both listeners and advertisers. In addition to pre-recorded entertainment purchased or playing in cars, homes and using portable players, we compete with numerous other providers of radio or other audio services. Some of our new, digital competitors are making in-roads into automobiles, where we are currently the prominent alternative to traditional AM/FM radio. Our existing and emerging competition includes:

Traditional AM/FM Radio

Our services compete with traditional AM/FM radio. Many traditional radio companies are substantial entities owning large numbers of radio stations or other media properties. The radio broadcasting industry is highly competitive.

Traditional AM/FM radio has had a well-established demand for its services and offers free broadcasts paid for by commercial advertising rather than by a subscription fee like satellite radio. Many radio stations offer information programming of a local nature, such as local news and sports. Traditional free AM/FM radio reduces the likelihood that customers would be willing to pay for our subscription services and, by offering free broadcasts, it imposes limits on what we can charge for our services. Some AM/FM radio stations have reduced the number of commercials per hour, expanded the range of music played on the air and experimented with new formats in order to lure customers away from satellite radio.

HD Radio

Many radio stations now broadcast digital signals, which have clarity similar to our signals. These stations do not charge a subscription fee for their digital signals but do generally carry advertising. A group of major broadcast radio networks have created a coalition to jointly market digital radio services. According to this coalition, over 2,100 radio stations are currently broadcasting primary signals with HD Radio technology and broadcasting more than 1,300 additional FM multicast channels (HD2/HD3), and manufacturers are marketing and distributing digital receivers. To the extent that traditional AM/FM radio stations adopt digital transmission technology and listeners adopt digital receivers, any competitive advantage that we enjoy over traditional radio because of our clearer digital signal would be lessened. Traditional AM/FM broadcasters are also complementing their HD Radio efforts by aggressively pursuing Internet radio and wireless Internet-based distribution arrangements. Several automakers install or plan to install HD Radio equipment as factory standard equipment in select models, including Cadillac, Mazda, Lexus, Ford, Volkswagen, BMW, Mercedes-Benz, Scion, Kia and Hyundai.

Internet Radio and Internet-Enabled Smartphones

Internet radio broadcasts often have no geographic limitations and can provide listeners with radio programming from across the country and around the world. Major media companies and online-only providers, including Clear Channel, CBS and Pandora, make high fidelity digital streams available through the Internet for free or, in some cases, for a fraction of the cost of a satellite radio subscription. These services compete directly with our services, at home, in the automobile, and wherever audio entertainment is consumed.

Internet-enabled smartphones, most of which have the capability of interfacing with vehicles, have become popular. These smartphones can typically play recorded or cached content and access Internet radio via dedicated applications or browsers. These applications are often free to the user and offer music and talk content as long as the user is subscribed to a sufficiently large mobile data plan. Leading audio smartphone radio applications include Pandora, last.FM, Slacker, iheartradio and Stitcher. Certain of these applications also include advanced functionality, such as personalization and song skipping, and allow the user to access large libraries of content and podcasts on demand.

In 2011, Spotify launched its music streaming service in the United States, which allows its users unlimited, on-demand access to a large library of song tracks, allowing the sharing of playlists with other listeners through the Facebook platform. Other similar services have launched Facebook integration, including MOG and Rdio. These services, which usually require a monthly subscription fee, are currently available on smartphones but may become integrated into connected cars in the future.

Third and fourth generation mobile networks have enabled a steady increase in the audio quality and reliability of mobile Internet radio streaming, and this is expected to further increase as fourth generation networks become the standard. We expect that improvements from higher bandwidths, wider programming selection, and advancements in functionality are likely to continue making Internet radio and smartphone applications an increasingly significant competitor, particularly in vehicles.

Advanced In-Dash Infotainment Systems

Nearly all automakers have deployed or are planning to deploy integrated multimedia systems in dash boards, such as Ford’s SYNC, Toyota’s Entune, and BMW/Mini’s Connected. These systems can combine control of audio entertainment from a variety of sources, including AM/FM/HD radio broadcasts, satellite radio, Internet radio, smartphone applications and stored audio, with navigation and other advanced applications such as restaurant bookings, movie show times and financial information. Internet radio and other data is typically connected to the system via a bluetooth link to an Internet-enabled smartphone, and the entire system may be controlled by touchscreen or voice recognition. These systems enhance the attractiveness of our Internet-based competition by making such applications more prominent, easier to access, and safer to use in the car. Similar systems are also available in the aftermarket and sold through retailers.

Direct Broadcast Satellite and Cable Audio

A number of providers offer specialized audio services through either direct broadcast satellite or cable audio systems. These services are targeted to fixed locations, mostly in-home. The radio service offered by direct broadcast satellite and cable audio is often included as part of a package of digital services with video service, and video customers generally do not pay an additional monthly charge for the audio service.

Other Digital Media Services

The audio entertainment marketplace continues to evolve rapidly, with a steady emergence of new media platforms and portable devices that compete with our services now or that could compete with those services in the future.

Traffic News Services

A number of providers also compete with our traffic services. Clear Channel and Tele Atlas deliver nationwide traffic information for the top 50 markets to in-vehicle navigation systems using RDS/TMC, the radio broadcast standard technology for delivering traffic and travel information to drivers. The in-dash navigation market is also being threatened by increasingly capable smartphones that provide advanced navigation functionality, including live traffic. Android, Palm, Blackberry, and Apple iOS-based smartphones all include GPS mapping and navigation functionality, often with turn-by-turn navigation.

Government Regulation

As operators of a privately owned satellite system, we are regulated by the FCC under the Communications Act of 1934, principally with respect to:

- the licensing of our satellite systems;
- preventing interference with or to other users of radio frequencies; and
- compliance with FCC rules established specifically for U.S. satellites and satellite radio services.

Any assignment or transfer of control of our FCC licenses must be approved by the FCC. The FCC’s order approving the Merger requires us to comply with certain voluntary commitments we made as part of the FCC merger proceeding. We believe we comply with those commitments.

In 1997, we were the winning bidders for an FCC license to operate a satellite digital audio radio service and provide other ancillary services. Our FCC licenses for our Sirius satellites expire in 2017. Our FCC licenses for our XM satellites expire in 2013, 2014 and 2018. We anticipate that, absent significant misconduct on our part, the FCC will renew our licenses to permit operation of our satellites for their useful lives, and grant a license for any replacement satellites.

In some areas with high concentrations of tall buildings, such as urban centers, signals from our satellites may be blocked and reception can be adversely affected. In many of these areas, we have installed terrestrial repeaters to supplement our satellite signal coverage. In 2010, the FCC established rules governing terrestrial repeaters which are also intended to protect adjacent wireless services from interference. Under those rules, we filed an application in November 2011 for a single license to authorize operation of our repeater network.

We design, establish specifications for, source or specify parts and components for, manage various aspects of the logistics and production of, and, in most cases, obtain FCC certifications for, satellite radios, including satellite radios that include FM modulators. We believe our radios that are in production comply with all applicable FCC rules.

We are required to obtain export licenses from the United States government to export certain ground control equipment, satellite communications/control services and technical data related to our satellites and their operations. The delivery of such equipment, services and technical data to destinations outside the United States and to foreign persons is subject to strict export control and prior approval requirements from the United States government (including prohibitions on the sharing of certain satellite-related goods and services with China).

Changes in law or regulations relating to communications policy or to matters affecting our services could adversely affect our ability to retain our FCC licenses or the manner in which we operate.

Copyrights to Programming

In connection with our music programming, we must negotiate and enter into royalty arrangements with two sets of rights holders: holders of copyrights in musical works (that is, the music and lyrics) and holders of copyrights in sound recordings (that is, the actual recording of a work).

Musical works rights holders, generally songwriters and music publishers, are represented by performing rights organizations such as the American Society of Composers, Authors and Publishers ("ASCAP"), Broadcast Music, Inc. ("BMI"), and SESAC, Inc. ("SESAC"). These organizations negotiate fees with copyright users, collect royalties and distribute them to the rights holders. We have arrangements with all of these organizations.

Sound recording rights holders, typically large record companies, are primarily represented by SoundExchange, an organization which negotiates licenses, and collects and distributes royalties on behalf of record companies and performing artists. Under the Digital Performance Right in Sound Recordings Act of 1995 and the Digital Millennium Copyright Act of 1998, we may negotiate royalty arrangements with the sound recording copyright owners, or if negotiation is unsuccessful, the royalty rate is established by the Copyright Royalty Board (the "CRB") of the Library of Congress. In January 2008, the CRB issued a decision regarding the royalty rate payable by us under the statutory license covering the performance of sound recordings over our satellite radio services for the six-year period starting January 1, 2007 and ending December 31, 2012. Under the terms of the CRB's decision, we paid, or will pay, a royalty of 6.0%, 6.0%, 6.5%, 7.0%, 7.5% and 8.0% of gross revenues, subject to certain exclusions, for 2007, 2008, 2009, 2010, 2011 and 2012, respectively.

The rate setting proceeding covering the period from 2013 through 2017 before the CRB commenced in January 2011. In November 2011, we filed our direct case in that proceeding and requested the CRB to set a royalty rate payable by us under the statutory license covering the performance of sound recordings over our satellite radio services at less than 7% of our gross revenues, subject to certain exclusions. In November 2011, SoundExchange also filed its direct case in the proceeding and requested the CRB to set a royalty rate under the statutory license of initially 12%, increasing by 2% each year during the term and up to a maximum of 20%, of our gross revenues. A hearing before the CRB in this proceeding is scheduled to commence in 2012.

Trademarks

We have registered, and intend to maintain, the trademark "Sirius", "XM", "SiriusXM" and the "Dog design" logo with the United States Patent and Trademark Office in connection with the services we offer. We are not aware of any material claims of infringement or other challenges to our right to use the "Sirius", "XM" or "SiriusXM" trademark or the "Dog design" logo in the United States. We also have registered, and intend to maintain, trademarks for the names of certain of our channels. We have also registered the trademarks "Sirius", "XM", and the "Dog design" logo in Canada. We have granted a license to use certain of our trademarks in Canada to Sirius XM Canada.

Personnel

As of December 31, 2011, we had 1,526 full-time employees. In addition, we rely upon a number of part-time employees, consultants, other advisors and outsourced relationships. None of our employees are represented by a labor union, and we believe that our employee relations are good.

Corporate Information

Our executive offices are located at 1221 Avenue of the Americas, 36th floor, New York, New York 10020 and our telephone number is (212) 584-5100. Our internet address is www.siriusxm.com. Our annual, quarterly and current reports, and any amendments to those reports, filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 may be accessed free of charge through our website after we have electronically filed or furnished such material with the SEC. Siriusxm.com (including any other reference to such address in this Annual Report) is an inactive textual reference only, meaning that the information contained on or accessible from the website is not part of this Annual Report on Form 10-K and is not incorporated in this report by reference.

Executive Officers of the Registrant

Certain information regarding our executive officers is provided below:

Name	Age	Position
Mel Karmazin	68	Chief Executive Officer
Scott A. Greenstein	52	President and Chief Content Officer
James E. Meyer	57	President, Operations and Sales
Dara F. Altman	53	Executive Vice President and Chief Administrative Officer
Patrick L. Donnelly	50	Executive Vice President, General Counsel and Secretary
David J. Frear	55	Executive Vice President and Chief Financial Officer

Mel Karmazin has served as our Chief Executive Officer and a member of our board of directors since November 2004. Prior to joining us, Mr. Karmazin was President and Chief Operating Officer and a member of the board of directors of Viacom Inc. from May 2000 until June 2004. Prior to joining Viacom, Mr. Karmazin was President and Chief Executive Officer of CBS Corporation from January 1999 and a director of CBS Corporation from 1997 until its merger with Viacom in May 2000. He was President and Chief Operating Officer of CBS Corporation from April 1998 through December 1998. Mr. Karmazin joined CBS Corporation in December 1996 as Chairman and Chief Executive Officer of CBS Radio and served as Chairman and Chief Executive Officer of the CBS Station Group (Radio and Television) from May 1997 to April 1998. Prior to joining CBS Corporation, Mr. Karmazin served as President and Chief Executive Officer of Infinity Broadcasting Corporation.

Scott A. Greenstein has served as our President and Chief Content Officer since May 2004. Prior to May 2004, Mr. Greenstein was Chief Executive Officer of The Greenstein Group, a media and entertainment consulting firm. From 1999 until 2002, he was Chairman of USA Films, a motion picture production, marketing and distribution company. From 1997 until 1999, Mr. Greenstein was Co-President of October Films, a motion picture production, marketing and distribution company. Prior to joining October Films, Mr. Greenstein was Senior Vice President of Motion Pictures, Music, New Media and Publishing at Miramax Films, and held senior positions at Viacom Inc.

James E. Meyer has served as our President, Operations and Sales, since May 2004. Prior to May 2004, Mr. Meyer was President of Aegis Ventures Incorporated, a consulting firm that provides general management services. From December 2001 until 2002, Mr. Meyer served as special advisor to the Chairman of Thomson S.A., a leading consumer electronics company. From January 1997 until December 2001, Mr. Meyer served as the Senior Executive Vice President for Thomson as well as the Chief Operating Officer for Thomson Consumer Electronics. From 1992 until 1996, Mr. Meyer served as Thomson’s Senior Vice President of Product Management. Mr. Meyer is a director of ROVI Corporation.

Dara F. Altman has served as our Executive Vice President and Chief Administrative Officer since September 2008. From January 2006 until September 2008, Ms. Altman served as Executive Vice President, Business and Legal Affairs, of XM. Ms. Altman was Executive Vice President of Business Affairs for Discovery Communications from 1997 to 2005. From 1993 to 1997, Ms. Altman served as Senior Vice President and General Counsel of Reiss Media Enterprises, which owned Request TV, a national pay-per-view service. Before Request TV, Ms. Altman served as counsel for Home Box Office. Ms. Altman started her career as an attorney at the law firm of Willkie Farr & Gallagher LLP.

Patrick L. Donnelly has served as our Executive Vice President, General Counsel and Secretary since May 1998. From June 1997 to May 1998, he was Vice President and deputy general counsel of ITT Corporation, a hotel, gaming and entertainment company that was acquired by Starwood Hotels & Resorts Worldwide, Inc. in February 1998. From October 1995 to June 1997, he was assistant general counsel of ITT Corporation. Prior to October 1995, Mr. Donnelly was an attorney at the law firm of Simpson Thacher & Bartlett LLP.

David J. Frear has served as our Executive Vice President and Chief Financial Officer since June 2003. From 1999 to 2003, Mr. Frear was Executive Vice President and Chief Financial Officer of Savvis Communications Corporation, a global managed service provider, delivering internet protocol applications for business customers. Mr. Frear also served as a director of Savvis. From 1993 to 1998, Mr. Frear was Senior Vice President and Chief Financial Officer of Orion Network Systems Inc., an international satellite communications company that was acquired by Loral Space & Communications Ltd. in 1998. From 1990 to 1993, Mr. Frear was Chief Financial Officer of Millicom Incorporated, a cellular, paging and cable television company. Prior to joining Millicom, he was an investment banker at Bear, Stearns & Co., Inc. and Credit Suisse.

ITEM 1A. *RISK FACTORS*

In addition to the other information in this Annual Report on Form 10-K, including the information under the caption Item 1. Business "Competition," the following risk factors should be considered carefully in evaluating us and our business. This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Actual results and the timing of events could differ materially from those projected in forward-looking statements due to a number of factors, including those set forth below and elsewhere in this Annual Report on Form 10-K. See "Special Note Regarding Forward-Looking Statements" following this Item 1A. Risk Factors.

We face substantial competition and that competition is likely to increase over time.

We face substantial competition from other providers of radio and other audio services. Our ability to retain and attract subscribers depends on our success in creating and providing popular or unique music, entertainment, news and sports programming. Our subscribers can obtain certain similar content for free through terrestrial radio stations or Internet radio services. Audio content delivered via the Internet, including through mobile devices, is increasingly competitive with our services. A number of automakers and aftermarket manufacturers have introduced, or will shortly introduce, factory-installed radios capable of accessing Internet-delivered audio entertainment. A summary of various services that compete with us is contained in the section entitled "Item 1. Business — Competition."

Competition could result in lower subscription, advertising or other revenue or increase our marketing, promotion or other expenses and, consequently, lower our earnings and free cash flow. We cannot assure you we will be able to compete successfully with our existing or future competitors or that competition will not have a material adverse effect on our business, financial condition or results of operations.

Our business depends in large part upon automakers.

Most of our new subscription growth has come from purchasers and lessees of new and previously owned automobiles. As a result, the sale and lease of vehicles with satellite radios is an important source of subscribers for our satellite radio service. We have agreements with every major automaker to include satellite radios in new vehicles, although these agreements do not require automakers to install specific or minimum quantities of radios in any given period.

Automotive production and sales are dependent on many factors, including the availability of consumer credit, general economic conditions, consumer confidence and fuel costs. To the extent vehicle sales by automakers decline, or the penetration of factory-installed satellite radios in those vehicles is reduced, subscriber growth for our satellite radio services may be adversely impacted.

General economic conditions can affect our business.

The purchase of a satellite radio subscription is discretionary, and our business and our financial condition can be negatively affected by general economic conditions. Poor general economic conditions can adversely affect subscriber churn, conversion rates and vehicle sales, as evidenced by the dramatic slowdown in auto sales that negatively impacted our subscriber growth in 2008 and 2009.

Failure of our satellites would significantly damage our business.

The lives of our satellites will vary and depend on a number of factors, including:

- degradation and durability of solar panels;
- quality of construction;
- random failure of satellite components, which could result in significant damage to or loss of a satellite;
- amount of fuel the satellite consumes; and
- damage or destruction by electrostatic storms, collisions with other objects in space or other events, such as nuclear detonations, occurring in space.

In the ordinary course of operation, satellites experience failures of component parts and operational and performance anomalies. Components on our in-orbit satellites have failed; and from time to time we have experienced anomalies in the operation and performance of these satellites. These failures and anomalies are expected to continue in the ordinary course, and we cannot predict if any of these possible future events will have a material adverse effect on our operations or the life of our existing in-orbit satellites.

Three of the Sirius in-orbit satellites have experienced degradation on their solar arrays. The degradation these satellites have experienced does not affect current operations. Additional degradation on the three Sirius satellites could reduce the estimated lives of those satellites.

Space Systems/Loral has constructed a new satellite for the Sirius system that is expected to be launched in the first half of 2012. Satellite launches have significant risks, including launch failure, damage or destruction of the satellite during launch and failure to achieve a proper orbit or operate as planned. Our agreement with Space Systems/Loral does not protect us against the risks inherent in a satellite launch or in-orbit operations.

Our XM-1 and XM-2 satellites have experienced progressive degradation problems common to early Boeing 702 class satellites and now serve as in-orbit spares. Our XM-2, XM-3, and XM-4 in-orbit satellites have experienced circuit failures on their solar arrays which do not affect current operations. Additional circuit failures on the satellites could reduce the estimated lives of those satellites. We estimate that our XM-3, XM-4 and XM-5 satellites will meet their 15-year predicted depreciable lives, and that the XM-1 and XM-2 satellites’ depreciable lives will end no earlier than 2013.

Our XM-5 satellite serves as an in-orbit spare for both of our services. In the event of a failure of XM-3, XM-4 or any of the Sirius satellites, service would be maintained through XM-5.

In addition, our Sirius network of terrestrial repeaters communicates with a single third-party satellite. Our XM network of terrestrial repeaters communicates with a single XM satellite. If the satellites communicating with the applicable repeater network fail unexpectedly, the services would be disrupted for several hours or longer.

We maintain in-orbit insurance policies covering only our XM-5 and FM-5 satellites. We may not renew these in-orbit insurance policies when they expire. Any insurance proceeds will not fully cover our losses in the event of a satellite failure or significant degradation. For example, the policies covering the insured satellites do not cover the full cost of constructing, launching and insuring new satellites, nor will they cover, and we do not have protection against, business interruption, loss of business or similar losses. Our insurance contains customary exclusions, material change and other conditions that could limit recovery under those policies. Further, any insurance proceeds may not be received on a timely basis in order to launch a spare satellite or construct and launch a replacement satellite or take other remedial measures. In addition, the policies are subject to limitations involving uninsured losses, large satellite performance deductibles and policy limits.

Our ability to attract and retain subscribers at a profitable level in the future is uncertain.

We spend substantial amounts on advertising and marketing and in transactions with automakers, retailers and others to obtain and attract subscribers. During 2011, we added 1,701,860 net subscribers to our satellite radio service. Our ability to retain our subscribers, or increase the number of subscribers to our service, in any given period is subject to many factors, including:

- the price of our service, which we increased on January 1, 2012;
- the health of the economy;
- the production and sale of new vehicles in the United States;
- our ability to convince owners and lessees of new and previously owned vehicles that include satellite radios to purchase subscriptions to our service;
- the effectiveness of our marketing programs;
- the entertainment value of our programming; and
- actions by our competitors, such as terrestrial radio and other audio entertainment providers.

As part of our business, we experience, and expect to experience in the future, subscriber turnover (i.e., churn). If we are unable to retain current subscribers at expected rates, or the costs of retaining subscribers are higher than expected, our financial performance and operating results could be adversely affected. We cannot predict how successful we will be at retaining customers who purchase or lease vehicles that include a prepaid promotional subscription to our satellite radio service. During 2011, we converted 45% of the customers who received a promotional subscription as part of the purchase or lease of a new vehicle to a self-paying subscription. Over the same period, we have experienced churn of our self-pay subscribers of 1.9% per month.

Average monthly revenue per subscriber, which we refer to as ARPU, is another key metric we use to analyze our business. Over the past several years, we have focused substantial attention and efforts on balancing ARPU and subscriber additions. Our ability to maintain ARPU over time is uncertain and depends upon various factors, including:

- the value consumers perceive in our service;
- our ability to add and retain compelling programming;
- the increasing competition we experience from terrestrial and Internet radio; and
- pricing and other offers we may make to attract new subscribers and retain existing subscribers.

If we are unable to consistently attract new subscribers, and retain our current subscribers, at a sufficient level of revenues to be profitable, the value of our common stock could decline, and without sufficient cash flow we may not be able to make the required payments on our indebtedness and could ultimately default on our commitments.

Royalties for music rights may increase.

We must maintain music programming royalty arrangements with, and pay license fees to, BMI, ASCAP and SESAC. These organizations negotiate with copyright users, collect royalties and distribute them to songwriters and music publishers. We have agreements with ASCAP and SESAC through 2016. We do not have a definitive agreement with BMI and continue to operate under an interim agreement. There can be no assurance that the royalties we pay to ASCAP, SESAC and BMI will not increase upon expiration of these arrangements.

Under the Digital Performance Right in Sound Recordings Act of 1995 and the Digital Millennium Copyright Act of 1998, we pay royalties to copyright owners of sound recordings. Those royalty rates may be established through negotiation or, if negotiation is unsuccessful, by the CRB. Owners of copyrights in sound recordings have created SoundExchange, a collective organization, to collect and distribute royalties. SoundExchange is exempt by statute from U.S. antitrust laws and exercises significant market power in the licensing of sound recordings.

A rate setting proceeding commenced in January 2011, and, if negotiations with SoundExchange prove unsuccessful, new royalty rates will be determined by the CRB and will be effective for the five-year period beginning in 2013. In November 2011, we filed our direct case in that proceeding and requested the CRB to set a royalty rate payable by us under the statutory license covering the performance of sound recordings over our satellite radio services at less than 7% of our gross revenues, subject to certain exclusions. In November 2011, SoundExchange also filed a direct case in the proceeding and requested the CRB to set a royalty rate under the statutory license of initially 12%, increasing by 2% each year during the term and up to a maximum of 20%, of our gross revenues. A hearing before the CRB in this proceeding is scheduled to commence in 2012.

Failure to comply with FCC requirements could damage our business.

We hold FCC licenses and authorizations to operate commercial satellite radio services in the United States, including authorizations for satellites and terrestrial repeaters, and related authorizations. The FCC generally grants licenses and authorizations for a fixed term. Although we expect our licenses and authorizations to be renewed in the ordinary course upon their expiration, there can be no assurance that this will be the case. Any assignment or transfer of control of any of our FCC licenses or authorizations must be approved in advance by the FCC.

The operation of our satellite radio systems is subject to significant regulation by the FCC under authority granted through the Communications Act and related federal law. We are required, among other things, to operate only within specified frequencies; to meet certain conditions regarding the interoperability of our satellite radios with those of other licensed satellite radio systems; to coordinate our satellite radio services with radio systems operating in the same range of frequencies in neighboring countries; and to coordinate our communications links to our satellites with other systems that operate in the same frequency band. Non-compliance by us with these requirements or other conditions or with other applicable FCC rules and regulations could result in fines, additional license conditions, license revocation or other detrimental FCC actions. There is no guarantee that Congress will not modify the statutory framework governing our services, or that the FCC will not modify its rules and regulations in a manner that would have a material impact on our operations.

The terms of our licenses, the order of the FCC approving the Merger, and the consent decrees we entered into with the FCC require us to meet certain conditions. Non-compliance with these conditions could result in fines, additional license conditions, license revocation or other detrimental FCC actions.

The unfavorable outcome of pending or future litigation could have a material adverse effect.

We are parties to several legal proceedings arising out of various aspects of our business, including class action lawsuits alleging violations of state consumer protection statutes. We are defending all claims against us. The outcome of these proceedings may not be favorable, and an unfavorable outcome may have a material adverse effect on our business or financial results.

Rapid technological and industry changes could adversely impact our services.

The audio entertainment industry is characterized by rapid technological change, frequent product innovations, changes in customer requirements and expectations, and evolving standards. If we are unable to keep pace with these changes, our business may not succeed. Products using new technologies, or emerging industry standards, could make our technologies less competitive in the marketplace.

Failure of other third parties to perform could adversely affect our business.

Our business depends, in part, on various other third parties, including:

- manufacturers that build and distribute satellite radios;
- companies that manufacture and sell integrated circuits for satellite radios;
- programming providers and on-air talent;
- retailers that market and sell satellite radios and promote subscriptions to our services; and
- vendors that have designed or built and vendors that support or operate important elements of our systems, such as our satellites and customer service facilities.

If one or more of these third parties do not perform in a satisfactory or timely manner, our business could be adversely affected. In addition, a number of third parties on which we depend have experienced, and may in the future experience, financial difficulties or file for bankruptcy protection. Such third parties may not be able to perform their obligations to us in a timely manner, if at all, as a result of their financial condition or may be relieved of their obligations to us as part of seeking bankruptcy protection.

We design, establish specifications, source or specify parts and components, and manage various aspects of the logistics and production of radios. As a result of these activities, we may be exposed to liabilities associated with the design, manufacture and distribution of radios that the providers of an entertainment service would not customarily be subject to, such as liabilities for design defects, patent infringement and compliance with applicable laws, as well as the costs of returned product.

Changes in consumer protection laws and their enforcement could damage our business.

We engage in extensive marketing efforts to attract and retain subscribers to our services. We employ a wide variety of communications tools as part of our marketing campaigns, including telemarketing efforts; print, television, radio and online advertising; and email solicitations.

Consumer protection laws, rules and regulations are extensive and have developed rapidly, particularly at the State level. Consumer protection laws in certain jurisdictions cover nearly all aspects of our marketing efforts, including the content of our advertising, the terms of consumer offers and the manner in which we communicate with subscribers and prospective subscribers. We are engaged in considerable efforts to ensure that all our activities comply with federal and state laws, rules and regulations relating to consumer protection, including laws relating to privacy. Modifications to federal and state laws, rules and regulations concerning consumer protection, including decisions by federal and state courts and agencies interpreting these laws, could have an adverse impact on our ability to attract and retain subscribers to our services. While we monitor the changes in and interpretations of these laws in consumer-related settlements and decisions, and while we believe that we are in material compliance with applicable laws, there can be no assurances that new laws or regulations will not be enacted or adopted, preexisting laws or regulations will not be more strictly enforced or that our varied operations will continue to comply with all applicable laws, which might adversely affect our operations.

A Multistate Working Group of 30 State Attorneys General, led by the Attorney General of the State of Ohio, is investigating certain of our consumer practices. The investigation focuses on practices relating to the cancellation of subscriptions; automatic renewal of subscriptions; charging, billing, collecting, and refunding or crediting of payments from consumers; and soliciting customers. A separate investigation into our consumer practices is being conducted by the Attorneys General of the State of Florida and New York. In addition, the Attorney General of the State of Missouri has commenced an action against us regarding our telemarketing practices to residents of the State of Missouri.

Interruption or failure of our information technology and communications systems could negatively impact our results and our brand.

We operate a complex and growing business. We offer a wide variety of subscription packages at different price points. Our business is dependent on the operation and availability of our information technology and communication systems and those of third party service providers. Any degradation in the quality, or any failure, of our systems could reduce our revenues, cause us to lose customers and damage our brand. Although we have implemented practices designed to maintain the availability of our information technology systems and mitigate the harm of any unplanned interruptions, we do not have complete redundancy for all of our information technology systems, and our disaster recovery planning cannot anticipate all eventualities. We occasionally experience unplanned outages or technical difficulties. We could also experience loss of data or processing capabilities, which could cause us to lose customers and could materially harm our reputation and our operating results.

We are involved in continuing efforts to upgrade and maintain our information technology systems. These maintenance and upgrade activities are costly, and problems with the design or implementation of system enhancements could harm our business and our results of operations.

Our data centers and our information technology and communications systems are vulnerable to damage or interruption from natural disasters, malicious attacks, fire, power loss, telecommunications failures, computer viruses or other attempts to harm our systems.

If hackers were able to circumvent our security measures, we could lose proprietary information or personal information or experience significant disruptions. If our systems become unavailable or suffer a security breach, we may be required to expend significant resources to address these problems, including notification under various federal and state data privacy regulations, and our reputation and operating results could suffer.

We rely on internal systems and external systems maintained by manufacturers, distributors and service providers to take, fulfill and handle customer service requests and host certain online activities. Any interruption or failure of our internal or external systems could prevent us from servicing customers or cause data to be unintentionally disclosed.

If we fail to protect the security of personal information about our customers, we could be subject to costly government enforcement actions or private litigation and our reputation could suffer.

The nature of our business involves the receipt and storage of personal information about our subscribers. If we experience a data security breach, we could be exposed to government enforcement actions and private litigation. In addition, our subscribers and potential customers could lose confidence in our ability to protect their personal information, which could cause them to discontinue usage of our services. Such events could lead to lost future sales and adversely affect our results of operations.

We may from time to time modify our business plan, and these changes could adversely affect us and our financial condition.

We regularly evaluate our plans and strategy. These evaluations often result in changes to our plans and strategy, some of which may be material. These changes in our plans or strategy may include: the acquisition or termination of unique or compelling programming; the introduction of new features or services; significant new or enhanced distribution arrangements; investments in infrastructure, such as satellites, equipment or radio spectrum; and acquisitions of other businesses, including acquisitions that are not directly related to our satellite radio business.

Our substantial indebtedness could adversely affect our operations and could limit our ability to react to changes in the economy or our industry.

As of December 31, 2011, we had an aggregate principal amount of approximately $3.1 billion of indebtedness. Our substantial indebtedness has important consequences. For example, it:

- increases our vulnerability to general adverse economic and industry conditions;
- requires us to dedicate a portion of our cash flow from operations to payments on indebtedness, reducing the availability of cash flow to fund capital expenditures, marketing and other general corporate activities;
- limits our ability to borrow additional funds or make capital expenditures;
- limits our flexibility in planning for, or reacting to, changes in our business and the audio entertainment industry; and
- may place us at a competitive disadvantage compared to other competitors.

The instruments governing our indebtedness contain covenants that, among other things, place certain limitations on our ability to incur more debt, pay dividends, make distributions, make investments, repurchase stock, create liens, enter into transactions with affiliates, enter into sale lease-back transactions, merge or consolidate, and transfer or sell assets. Failure to comply with the covenants associated with this debt could result in an event of default, which, if not cured or waived, could cause us to seek the protection of the bankruptcy laws, discontinue operations or seek a purchaser for our business or assets.

Our broadcast studios, terrestrial repeater networks, satellite uplink facilities or other ground facilities could be damaged by natural catastrophes or terrorist activities.

An earthquake, tornado, flood, terrorist attack or other catastrophic event could damage our broadcast studios, terrestrial repeater networks or satellite uplink facilities, interrupt our service and harm our business.

Any damage to the satellites that transmit to our terrestrial repeater networks would likely result in degradation of the affected service for some subscribers and could result in complete loss of service in certain or all areas. Damage to our satellite uplink facilities could result in a complete loss of either of our services until we could transfer operations to suitable back-up facilities.

Electromagnetic interference from others could damage our business.

Our satellite radio service may be subject to interference caused by other users of radio frequencies, such as RF lighting, ultra-wideband technology and Wireless Communications Service (“WCS”) users. The FCC has approved modifications to the rules governing the operations of WCS devices in the spectrum adjacent to satellite radio, including rule changes that facilitate mobile broadband services in the WCS frequencies. We have opposed certain of the changes out of a concern for their impact on the reception of satellite radio service; and have filed a petition with the FCC asking the Commission to reconsider certain of the changes. We cannot predict the outcome of our petition for reconsideration. The ultimate impact of certain of these rules changes on satellite radio reception is impossible to predict and dependent on numerous factors outside of our control, such as the design and implementation of WCS systems and devices, the applications deployed through WCS devices, and the number of WCS devices ultimately adopted by consumers.

Our business may be impaired by third-party intellectual property rights.

Development of our systems has depended upon the intellectual property that we have developed, as well as intellectual property licensed from third parties. If the intellectual property that we have developed or use is not adequately protected, others will be permitted to and may duplicate portions of our systems or services without liability. In addition, others may challenge, invalidate, render unenforceable or circumvent our intellectual property rights, patents or existing licenses or we may face significant legal costs in connection with defending and enforcing those intellectual property rights. Some of the know-how and technology we have developed, and plan to develop, is not now, nor will it be, covered by U.S. patents or trade secret protections. Trade secret protection and contractual agreements may not provide adequate protection if there is any unauthorized use or disclosure. The loss of necessary technologies could require us to substitute technologies of lower quality performance standards, at greater cost or on a delayed basis, which could harm us.

Other parties may have patents or pending patent applications, which will later mature into patents or inventions that may block our ability to operate our system or license technologies. We may have to resort to litigation to enforce our rights under license agreements or to determine the scope and validity of other parties' proprietary rights in the subject matter of those licenses. This may be expensive and we may not succeed in any such litigation.

Third parties may assert claims or bring suit against us for patent, trademark or copyright infringement, or for other infringement or misappropriation of intellectual property rights. Any such litigation could result in substantial cost, and diversion of effort and adverse findings in any proceeding could subject us to significant liabilities to third parties; require us to seek licenses from third parties; block our ability to operate our systems or license our technology; or otherwise adversely affect our ability to successfully develop and market our satellite radio systems.

Liberty Media Corporation has significant influence over our business and affairs and its interests may differ from ours.

Liberty Media Corporation holds preferred stock that is convertible into 2,586,976,000 shares of common stock. Pursuant to the terms of the preferred stock held by Liberty Media, we cannot take certain actions, such as certain issuances of equity or debt securities, without the consent of Liberty Media. Additionally, Liberty Media has the right to designate a percentage of our board of directors proportional to its interest. As a result, Liberty Media has significant influence over our business and affairs. The interests of Liberty Media may differ from our interests. The extent of Liberty Media's stock ownership in us also may have the effect of discouraging offers to acquire control of us. Under its investment agreement, Liberty Media is subject to certain standstill provisions which expire in March 2012.

Our net operating loss carryforwards could be substantially limited if we experience an ownership change as defined in the Internal Revenue Code.

We have generated a federal net operating loss carryforward of approximately $7.8 billion through the year ended December 31, 2011, and we may generate net operating loss carryforwards in future years.

Section 382 of the Internal Revenue Code of 1986, as amended (the "Code"), contains rules that limit the ability of a company that undergoes an ownership change, which is generally any change in ownership of more than 50% of its stock over a three-year period, to utilize its net operating loss carryforwards and certain built-in losses recognized in years after the ownership change. These rules generally operate by focusing on ownership changes among stockholders owning directly or indirectly 5% or more of the stock of a company and any change in ownership arising from a new issuance of stock by the company.

If we undergo an ownership change for purposes of Section 382 as a result of future transactions involving our common stock, including purchases or sales of stock between 5% stockholders, our ability to use our net operating loss carryforwards and to recognize certain built-in losses would be subject to the limitations of Section 382. The limitation on our ability to utilize tax losses and credit carryforwards arising from an ownership change under Section 382 would depend upon the value of our equity at the time of any ownership change. Given our current market capitalization, any future ownership change will not negatively impact our ability to fully utilize our existing net operating losses within the carryforward period. If we were to experience a significant decrease in equity value it is possible that a portion of our tax losses and credit carryforwards could expire before we would be able to use them to offset future taxable income.

Special Note About Forward-Looking Statements

We have made various statements in this Annual Report on Form 10-K that may constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements may also be made in our other reports filed with or furnished to the SEC, in our press releases and in other documents. In addition, from time to time, we, through our management, may make oral forward-looking statements. Forward-looking statements are subject to risks and uncertainties, including those identified above, which could cause actual results to differ materially from such statements. The words "will likely result," "are expected to," "will continue," "is anticipated," "estimated," "believe," "intend," "plan," "may," "should," "could," "would," "likely," "projection," "outlook" and similar expressions are intended to identify forward-looking statements. We caution you that the risk factors described above are not exclusive. There may also be other risks that we are unable to predict at this time that may cause actual results to differ materially from those in forward-looking statements. New factors emerge from time to time, and it is not possible for us to predict which will arise or to assess with any precision the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date on which they are made. We undertake no obligation to update publicly or revise any forward-looking statements.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

None.

ITEM 2. *PROPERTIES*

Below is a list of the principal properties that we own or lease:

Location	Purpose	Own/Lease
New York, NY	Corporate headquarters and studio/production facilities	Lease
New York, NY	Office facilities	Lease
Washington, DC	Office and studio/production facilities	Own
Washington, DC	Office facilities and data center	Own
Lawrenceville, NJ	Office and technical/engineering facilities	Lease
Deerfield Beach, FL	Office and technical/engineering facilities	Lease
Farmington Hills, MI	Office and technical/engineering facilities	Lease
Nashville, TN	Studio/production facilities	Lease
Vernon, NJ	Technical/engineering facilities	Own
Ellenwood, GA	Technical/engineering facilities	Lease

We also own or lease other small facilities that we use as offices for our advertising sales personnel, studios and warehouse and maintenance space. These facilities are not material to our business or operations. We also lease properties in Panama and Ecuador that we use as earth stations to command and control satellites.

In addition, we lease or license space at over 650 locations for use in connection with the terrestrial repeater networks that support our satellite radio services. In general, these leases and licenses are for space on building rooftops and communications towers. None of these individual arrangements is material to our business or operations.

ITEM 3. *LEGAL PROCEEDINGS*

State Consumer Investigations. A Multistate Working Group of 30 State Attorneys General, led by the Attorney General of the State of Ohio, is investigating certain of our consumer practices. The investigation focuses on practices relating to the cancellation of subscriptions; automatic renewal of subscriptions; charging, billing, collecting, and refunding or crediting of payments from consumers; and soliciting customers.

A separate investigation into our consumer practices is being conducted by the Attorneys General of the State of Florida and the State of New York. In addition, in September 2010, the Attorney General of the State of Missouri commenced an action against us in Missouri Circuit Court, Twenty-Second Judicial Circuit, St. Louis, Missouri, alleging violations of various consumer protection statutes, including the Missouri Telemarketing No-Call List Act. The suit seeks, among other things, a permanent injunction prohibiting us from making, or causing to be made, telephone solicitations to our subscribers in the State of Missouri who are on Missouri’s no-call list, statutory penalties and reimbursement of costs.

We are cooperating with these investigations and believe our consumer practices comply with all applicable federal and state laws and regulations.

Carl Blessing et al. v. Sirius XM Radio Inc. We have settled the case titled Carl Blessing et al. v. Sirius XM Radio Inc. and the settlement has been approved by the United States District Court for the Southern District of New York. Notices of appeal have been filed by 11 individuals seeking to overturn the settlement.

In December 2009, Carl Blessing, a subscriber, filed a lawsuit against us in the United States District Court for the Southern District of New York. Mr. Blessing and several other plaintiffs purported to represent all subscribers who were subject to: an increase in the price for additional-radio subscriptions from $6.99 to $8.99; the imposition of the US Music Royalty Fee; and the elimination of our free Internet service. The suit claimed that the pricing changes showed that our merger with XM lessened competition or led to a monopoly in violation of the Clayton Act and that the merger led to monopolization in violation of the Sherman Act. Earlier the Court dismissed the plaintiffs’ claims for breach of contract and granted our motion for summary judgment as to various state law claims.

As part of the settlement, we agreed to: not raise the price of our basic satellite radio service or other programming packages or our Internet services; not increase our US Music Royalty Fee; or not decrease our multi-radio discount prior to January 1, 2012. Existing subscribers were also permitted to renew their current subscription plans at current rates prior to December 31, 2011. Former subscribers who terminated their subscriptions after July 29, 2009 are entitled to receive, at their election, either: one month of our basic satellite radio service or one month of our Internet service, at no charge. We also paid the costs of providing notice to the plaintiff class and reimbursed counsel for the plaintiffs for $13 million of their fees and expenses.

One Twelve, Inc. and Don Buchwald v. Sirius XM Radio Inc. In March 2011, One Twelve, Inc., Howard Stern’s production company, and Don Buchwald, Stern’s agent, commenced an action against us in the Supreme Court of the State of New York, County of New York. The action alleges that, upon the Merger, we failed to honor our obligations under the performance-based compensation provisions of our prior agreement dated

October 2004 with One Twelve and Buchwald, as agent; One Twelve and Buchwald each assert a claim of breach of contract. More specifically, the complaint alleges that subscribers to the XM Satellite Radio service should have been counted as “Sirius subscribers” following the Merger for purposes of provisions entitling One Twelve and Buchwald to compensation in the event that the number of “Sirius subscribers” exceeded the projected growth amounts of Sirius subscribers by certain magnitudes specified in the 2004 agreement for each year of that agreement. The suit seeks damages, plus interest and costs, in an amount to be determined. We believe that the claims are without merit and intend to vigorously defend this action.

We filed a motion for summary judgment on the basis that the 2004 agreement is unambiguous; specifically, that the term “Sirius subscribers,” as used in the 2004 agreement, does not include subscribers to XM Satellite Radio following the Merger and, as a result, One Twelve and Buchwald were not entitled to additional compensation for exceeding projected growth amounts of Sirius subscribers. The Court heard oral argument on our motion for summary judgment in September 2011.

Other Matters. In the ordinary course of business, we are a defendant in various lawsuits and arbitration proceedings, including derivative actions; actions filed by subscribers, both on behalf of themselves and on a class action basis; former employees; parties to contracts or leases; and owners of patents, trademarks, copyrights or other intellectual property. None of these other actions are, in our opinion, likely to have a material adverse effect on our business, financial condition or results of operations.

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*

Our common stock is traded on the Nasdaq Global Select Market under the symbol "SIRI." The following table sets forth the high and low sales price for our common stock, as reported by Nasdaq, for the periods indicated below:

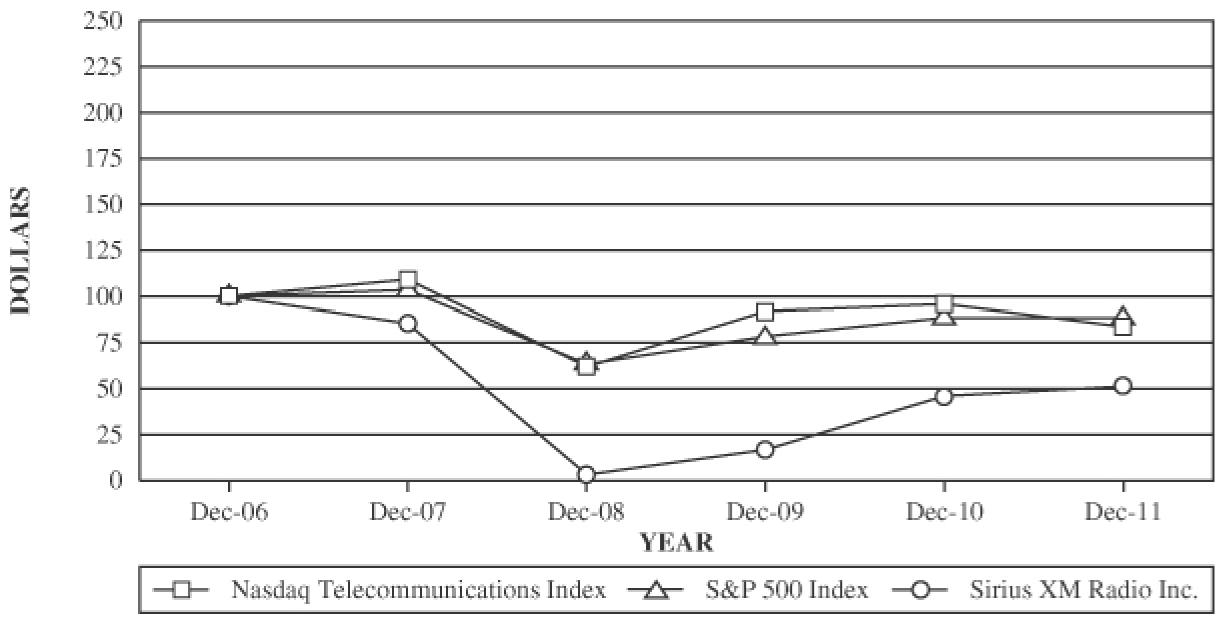
	High	Low
Year ended December 31, 2010		
First Quarter	$1.18	$0.61
Second Quarter	1.25	0.84
Third Quarter	1.20	0.90
Fourth Quarter	1.69	1.18
Year ended December 31, 2011		
First Quarter	$1.88	$1.49
Second Quarter	2.44	1.62
Third Quarter	2.35	1.44
Fourth Quarter	1.92	1.27

On February 7, 2012, the closing sales price of our common stock on the Nasdaq Global Select Market was $2.12 per share. On February 7, 2012, there were approximately 11,459 record holders of our common stock.

We have never paid cash dividends on our common stock. Our ability to pay dividends on our common stock is currently limited by covenants under our debt agreements. It is currently our intention to retain earnings, if any, for use in our business. Our board of directors discusses alternative uses of cash based on a variety of factors such as working capital levels, our debt repayment obligations or repurchase of our debt, our cash requirements for acquisitions, and our return of capital to shareholders. See Note 13 to our consolidated financial statements included in this Annual Report on Form 10-K.

COMPARISON OF CUMULATIVE TOTAL RETURNS

Set forth below is a graph comparing the cumulative performance of our common stock with the Standard & Poor's Composite-500 Stock Index, or the S&P 500, and the NASDAQ Telecommunications Index from December 31, 2006 to December 31, 2011. The graph assumes that $100 was invested on December 31, 2006 in each of our common stock, the S&P 500 and the NASDAQ Telecommunications Index. There were no dividends declared during these periods.



Stockholder Return Performance Table

	Nasdaq Telecommunications Index	S&P 500 Index	Sirius XM Radio Inc.
December 31, 2006	$ 100.00	$ 100.00	$ 100.00
December 31, 2007	$ 109.17	$ 103.53	$ 85.59
December 31, 2008	$ 62.25	$ 63.69	$ 3.39
December 31, 2009	$ 92.27	$ 78.62	$ 16.95
December 31, 2010	$ 95.89	$ 88.67	$ 46.05
December 31, 2011	$ 83.79	$ 88.67	$ 51.41

Equity Compensation Plan Information

Plan category	Number of Securities to be Issued upon Exercise of Outstanding Options, Warrants and Rights (a)	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights (b)	Number of Securities Remaining Available for Future Issuance under Equity Compensation Plans (excluding Securities Reflected in Column (a)) (c)
(shares in thousands)			
Equity compensation plans approved by security holders	462,086	$ 1.32	197,606
Equity compensation plans not approved by security holders	—	—	—
Total	462,086	$ 1.32	197,606

ITEM 6. *SELECTED FINANCIAL DATA*

Our selected financial data set forth below with respect to the consolidated statements of operations for the years ended December 31, 2011, 2010 and 2009, and with respect to the consolidated balance sheets at December 31, 2011 and 2010, are derived from our audited consolidated financial statements included in Item 8 of this Annual Report on Form 10-K. Our selected financial data set forth below with respect to the consolidated statements of operations for the years ended December 31, 2008 and 2007, and with respect to the consolidated balance sheets at December 31, 2009, 2008 and 2007 are derived from our audited consolidated financial statements, which are not included in this Annual Report on Form 10-K. This selected financial data should be read in conjunction with the Consolidated Financial Statements and related notes thereto included in Item 8 of this Annual Report on Form 10-K and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in Item 7 of this Annual Report on Form 10-K.

	As of and for the Years Ended December 31,				
(in thousands, except per share data)	2011	2010	2009(1)	2008(1)(2)	2007
Statements of Operations Data:					
Total revenue	$3,014,524	$2,816,992	$2,472,638	$ 1,663,992	$ 922,066
Net income (loss) attributable to common stockholders	$ 426,961	$ 43,055	$ (538,226)	$(5,316,910)	$ (565,252)
Net income (loss) per share — basic	$ 0.11	$ 0.01	$ (0.15)	$ (2.45)	$ (0.39)
Net income (loss) per share — diluted	$ 0.07	$ 0.01	$ (0.15)	$ (2.45)	$ (0.39)
Weighted average common shares outstanding — basic	3,744,606	3,693,259	3,585,864	2,169,489	1,462,967
Weighted average common shares outstanding — diluted	6,500,822	6,391,071	3,585,864	2,169,489	1,462,967
Balance Sheet Data:					
Cash and cash equivalents	$ 773,990	$ 586,691	$ 383,489	$ 380,446	$ 438,820
Restricted investments	$ 3,973	$ 3,396	$ 3,400	$ 141,250	$ 53,000
Total assets	$7,495,996	$7,383,086	$7,322,206	$ 7,527,075	$1,687,231
Long-term debt, net of current portion	$3,012,351	$3,021,763	$3,063,281	$ 2,820,781	$1,271,699
Stockholders' equity (deficit)(3)	$ 704,145	$ 207,636	$ 95,522	$ 75,875	$ (792,737)

(1) The 2009 and 2008 results and balances reflect the adoption of ASU 2009-15, *Accounting for Own-Share Lending Arrangements in Contemplation of Convertible Debt Issuance or Other Financing*.

(2) The 2008 results and balances reflect the results and balances of XM Satellite Radio Holdings Inc. from the date of the Merger and a $4,766,190 goodwill impairment charge.

(3) No cash dividends were declared or paid in any of the periods presented.

ITEM 7. *MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS*

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Actual results and the timing of events could differ materially from those projected in forward-looking statements due to a number of factors, including those described under "Item 1A — Risk Factors" and elsewhere in this Annual Report. See "Special Note Regarding Forward-Looking Statements."

(All dollar amounts referenced in this Item 7 are in thousands, unless otherwise stated)

Executive Summary

We broadcast our music, sports, entertainment, comedy, talk, news, traffic and weather channels in the United States on a subscription fee basis through two proprietary satellite radio systems. Subscribers can also receive certain of our music and other channels over the Internet, including through applications for mobile devices.

We have agreements with every major automaker ("OEMs") to offer satellite radios as factory- or dealer-installed equipment in their vehicles. We also distribute our satellite radios through retail locations nationwide and through our website. Satellite radio services are also offered to customers of certain daily rental car companies.

As of December 31, 2011, we had 21,892,824 subscribers. Our subscriber totals include subscribers under our regular pricing plans; discounted pricing plans; subscribers that have prepaid, including payments either made or due from automakers for subscriptions included in the sale or lease price of a vehicle; activated radios in daily rental fleet vehicles; certain subscribers to our Internet services; and certain subscribers to our weather, traffic, data and video services.

Our primary source of revenue is subscription fees, with most of our customers subscribing on an annual, semi-annual, quarterly or monthly basis. We offer discounts for prepaid and long-term subscription plans, as well as discounts for multiple subscriptions on each platform. We also derive revenue from activation and other subscription-related fees, the sale of advertising on select non-music channels, the direct sale of satellite radios, components and accessories, and other ancillary services, such as our Backseat TV, data and weather services.

In certain cases, automakers include a subscription to our radio services in the sale or lease price of new and pre-owned vehicles. The length of these prepaid subscriptions varies, but is typically three to twelve months. In many cases, we receive subscription payments from automakers in advance of the activation of our service. We also reimburse various automakers for certain costs associated with satellite radios installed in their vehicles.

We also have an equity interest in the satellite radio services offered in Canada. Subscribers to the Sirius XM Canada service are not included in our subscriber count. In June 2011, Canadian Satellite Radio Holdings Inc. ("CSR"), the parent company of XM Canada, and Sirius Canada completed a transaction to combine their operations ("the Canada Merger").

Actual Results of Operations

Set forth below are our results of operations for the year ended December 31, 2011 compared with the year ended December 31, 2010 and the year ended December 31, 2010 compared with the year ended December 31, 2009.

	For the Years Ended December 31,			2011 vs 2010 Change		2010 vs 2009 Change	
	2011	2010	2009	Amount	%	Amount	%
Revenue:							
Subscriber revenue	$2,595,414	$2,414,174	$2,287,503	$181,240	8%	$126,671	6%
Advertising revenue, net of agency fees	73,672	64,517	51,754	9,155	14%	12,763	25%
Equipment revenue	71,051	71,355	50,352	(304)	(0%)	21,003	42%
Other revenue	274,387	266,946	83,029	7,441	3%	183,917	222%
Total revenue	3,014,524	2,816,992	2,472,638	197,532	7%	344,354	14%
Operating expenses:							
Revenue share and royalties	471,149	435,410	397,210	35,739	8%	38,200	10%
Programming and content	281,234	305,914	308,121	(24,680)	(8%)	(2,207)	(1%)
Customer service and billing	259,719	241,680	234,456	18,039	7%	7,224	3%
Satellite and transmission	75,902	80,947	84,033	(5,045)	(6%)	(3,086)	(4%)
Cost of equipment	33,095	35,281	40,188	(2,186)	(6%)	(4,907)	(12%)
Subscriber acquisition costs	434,482	413,041	340,506	21,441	5%	72,535	21%
Sales and marketing	222,773	215,454	228,956	7,319	3%	(13,502)	(6%)
Engineering, design and development	53,435	45,390	41,031	8,045	18%	4,359	11%
General and administrative	238,738	240,970	227,554	(2,232)	(1%)	13,416	6%
Depreciation and amortization	267,880	273,691	309,450	(5,811)	(2%)	(35,759)	(12%)
Restructuring, impairments and related costs	—	63,800	32,807	(63,800)	(100%)	30,993	94%
Total operating expenses	2,338,407	2,351,578	2,244,312	(13,171)	(1%)	107,266	5%
Income from operations	676,117	465,414	228,326	210,703	45%	237,088	104%
Other income (expense):							
Interest expense, net of amounts capitalized	(304,938)	(295,643)	(315,668)	(9,295)	(3%)	20,025	6%
Loss on extinguishment of debt and credit facilities, net	(7,206)	(120,120)	(267,646)	112,914	94%	147,526	55%
Interest and investment income (loss)	73,970	(5,375)	5,576	79,345	nm	(10,951)	(196%)
Other income	3,252	3,399	3,355	(147)	(4%)	44	1%
Total other expense	(234,922)	(417,739)	(574,383)	182,817	44%	156,644	27%
Income (loss) before income taxes	441,195	47,675	(346,057)	393,520	825%	393,732	114%
Income tax expense	(14,234)	(4,620)	(5,981)	(9,614)	(208%)	1,361	23%
Net income (loss)	426,961	43,055	(352,038)	383,906	892%	395,093	112%
Preferred stock beneficial conversion feature	—	—	(186,188)	—	—%	186,188	nm
Net income (loss) attributable to common stockholders	$ 426,961	$ 43,055	$ (538,226)	$383,906	892%	$581,281	108%

nm — not meaningful

Total Revenue

Subscriber Revenue includes subscription fees, activation and other fees.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, subscriber revenue was $2,595,414 and $2,414,174, respectively, an increase of 8%, or $181,240. The increase was primarily attributable to an increase of 8% in daily weighted average subscribers and an increase in sales of premium services, including Premier packages, data services and Internet subscriptions, partially offset by the impact of subscription discounts offered through customer acquisition and retention programs.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, subscriber revenue was $2,414,174 and $2,287,503, respectively, an increase of 6%, or $126,671. The increase was primarily attributable to a 5% increase in daily weighted average subscribers; an increase in the sales of premium services, including Premier packages, data services and Internet subscriptions; decreases in discounts on multi-subscription and Internet packages and a $32,159 decrease in the impact of purchase price accounting adjustments attributable to acquired deferred subscriber revenues, partially offset by an increase in the number of subscribers on promotional plans.

The future growth of subscriber revenue will be dependent upon the growth of our subscriber base, conversion and churn rates, promotions, rebates offered to subscribers and corresponding take-rates, plan mix, subscription prices and identification of additional revenue streams from subscribers. We increased certain of our subscription rates beginning January 2012.

Advertising Revenue includes the sale of advertising on our non-music channels, net of agency fees. Agency fees are based on a contractual percentage of the gross advertising billing revenue.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, advertising revenue was $73,672 and $64,517, respectively, an increase of 14%, or $9,155. The increase was primarily due to greater demand for audio advertising resulting in increases in the number of advertising spots sold as well as the rate charged per spot.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, advertising revenue was $64,517 and $51,754, respectively, an increase of 25%, or $12,763. The increase was primarily due to more effective sales efforts and improvements in the national market for advertising.

Our advertising revenue is subject to fluctuation based on the effectiveness of our sales efforts and the national economic environment. We expect advertising revenue to increase as advertisers are attracted by the growth in our subscriber base.

Equipment Revenue includes revenue and royalties from the sale of satellite radios, components and accessories.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, equipment revenue was $71,051 and $71,355, respectively, a decrease of $304. The decrease was driven by a reduction in aftermarket hardware subsidies earned, partially offset by increased royalties from higher OEM production.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, equipment revenue was $71,355 and $50,352, respectively, an increase of 42%, or $21,003. The increase was driven by royalties from increased OEM production and subsidies earned on aftermarket radios and accessories.

We expect equipment revenue to fluctuate based on OEM production for which we receive royalty payments for our technology and, to a lesser extent, on the volume and mix of equipment sales in our direct to consumer business.

Other Revenue includes amounts earned from subscribers for the U.S. Music Royalty Fee, revenue from our Canadian affiliate and ancillary revenues.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, other revenue was $274,387 and $266,946, respectively. The $7,441 increase was primarily due to increased royalty revenue from Sirius

XM Canada. While the number of subscribers subject to the U.S. Music Royalty Fee increased, that increase was offset by a reduction in December 2010 in the rate charged on primary subscriptions.

- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, other revenue was $266,946 and $83,029, respectively. The $183,917 increase was primarily due to the full year impact of the U.S. Music Royalty Fee introduced in the third quarter of 2009.

Other revenue is dependent upon the amount of the U.S. Music Royalty Fee and revenues from our Canadian affiliate. Other revenue will fluctuate as additional subscribers become subject to the U.S. Music Royalty Fee and based on the performance of our Canadian affiliate.

Operating Expenses

Revenue Share and Royalties include distribution and content provider revenue share, advertising revenue share, residuals and broadcast and web streaming royalties. Residuals are monthly fees paid based upon the number of subscribers using satellite radios purchased from retailers. Advertising revenue share is recognized in revenue share and royalties in the period in which the advertising is broadcast.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, revenue share and royalties were $471,149 and $435,410, respectively, an increase of 8%, or $35,739. For the year ended December 31, 2011, revenue share and royalties remained flat as a percentage of total revenue. The increase in revenue share and royalties was primarily attributable to a 14% increase in our revenues subject to royalty and/or revenue sharing arrangements and a 7% increase in the statutory royalty rate for the performance of sound recordings, partially offset by a $18,974 increase in the benefit to earnings from the amortization of deferred credits on executory contracts initially recognized in purchase price accounting associated with the Merger.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, revenue share and royalties were $435,410 and $397,210, respectively, an increase of 10%, or $38,200. For the year ended December 31, 2010, revenue share and royalties decreased as a percentage of total revenue. The increase in revenue share was primarily attributable to a 12% increase in our revenues subject to royalty and/or revenue sharing arrangements and an 8% increase in the statutory royalty rate for the performance of sound recordings, partially offset by a decrease in the revenue sharing rate with an automaker and a $18,187 increase in the benefit to earnings from the amortization of deferred credits on executory contracts initially recognized in purchase price accounting associated with the Merger.

We expect our revenue share and royalty costs to increase as our revenues grow and as a result of statutory increases in the royalty rate for the performance of sound recordings. Under the terms of the Copyright Royalty Board’s decision, we paid royalties of 7.5% and 7.0% of gross revenues, subject to certain exclusions, for the years ended December 31, 2011 and 2010, respectively, and will pay royalties of 8.0% for 2012. The deferred credits on executory contracts initially recognized in purchase price accounting associated with the Merger are expected to provide increasing benefits to revenue share and royalties through the expiration of the acquired executory contracts, principally in 2012 and 2013.

Programming and Content includes costs to acquire, create, promote and produce content. We have entered into various agreements with third parties for music and non-music programming that require us to pay license fees, purchase advertising on media properties owned or controlled by the licensor and pay other guaranteed amounts.

- *2011 vs. 2010:* For the years ended December 31, 2011 and 2010, programming and content expenses were $281,234 and $305,914, respectively, a decrease of 8%, or $24,680 and decreased as a percentage of total revenue. The decrease was primarily due to savings in content agreements and production costs, partially offset by increases in personnel costs and an $8,394 reduction in the benefit to earnings from purchase price accounting adjustments associated with the Merger attributable to the amortization of the deferred credit on acquired programming executory contracts.

- *2010 vs. 2009:* For the years ended December 31, 2010 and 2009, programming and content expenses were $305,914 and $308,121, respectively, a decrease of 1%, or $2,207 and decreased as a percentage of total revenue. The decrease was primarily due to savings in content agreements and production costs, partially offset by increases in personnel costs, general operating expenses and a $14,503 reduction in the benefit to earnings from purchase price accounting adjustments associated with the Merger attributable to the amortization of the deferred credit on acquired programming executory contracts.

Based on our current programming offerings, we expect our programming and content expenses to decrease as agreements expire and are renewed or replaced on more cost effective terms. The impact of purchase price accounting adjustments associated with the Merger attributable to the amortization of the deferred credit on acquired programming executory contracts will continue to decline, in absolute amount and as a percentage of reported programming and content costs, through 2013.

Customer Service and Billing includes costs associated with the operation and management of third party customer service centers, and our subscriber management systems as well as billing and collection costs, transaction fees and bad debt expense.

- *2011 vs. 2010:* For the years ended December 31, 2011 and 2010, customer service and billing expenses were $259,719 and $241,680, respectively, an increase of 7%, or $18,039 and remained flat as a percentage of total revenue. The increase was primarily attributable to an 8% increase in daily weighted average subscribers which drove higher call volume, billing and collection costs, transaction fees, as well as increased handle time per call and personnel costs. This increase was partially offset by lower agent rates, fewer contacts per subscriber and lower general operating costs.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, customer service and billing expenses were $241,680 and $234,456, respectively, an increase of 3%, or $7,224 but decreased as a percentage of total revenue. The increase was primarily due to higher call volume driven by an increase in average subscribers and more contacts per subscriber, partially offset by lower handle time per call and lower agent cost as a result of moving calls to lower cost locations.

We expect our customer care and billing expenses to increase as our subscriber base grows.

Satellite and Transmission consists of costs associated with the operation and maintenance of our satellites; satellite telemetry, tracking and control systems; terrestrial repeater networks; satellite uplink facilities; broadcast studios; and delivery of our Internet service.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, satellite and transmission expenses were $75,902 and $80,947, respectively, a decrease of 6%, or $5,045 and decreased as a percentage of total revenue. The decrease was due to savings in repeater expenses from network optimization along with favorable lease renewals, a reduction in satellite in-orbit insurance expense, and a transition to more cost-effective approaches to satellite and broadcast operations.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, satellite and transmission expenses were $80,947 and $84,033, respectively, a decrease of 4%, or $3,086 and decreased as a percentage of total revenue. The decrease was primarily due to savings in repeater expenses, partially offset by increased satellite insurance costs related to our FM-5 satellite.

We expect overall satellite and transmission expenses to increase as a result of costs associated with our enhanced internet-based features and functionality, while costs associated with our in-orbit satellite fleet and terrestrial repeater network remain relatively flat.

Cost of Equipment includes costs from the sale of satellite radios, components and accessories and provisions for inventory allowance attributable to products purchased for resale in our direct to consumer distribution channels.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, cost of equipment was $33,095 and $35,281, respectively, a decrease of 6%, or $2,186, and remained flat as a percentage of total revenue. The decrease was primarily due to lower volume of direct to consumer sales.

- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, cost of equipment was $35,281 and $40,188, respectively, a decrease of 12%, or $4,907, and decreased as a percentage of total revenue. The decrease was primarily due to lower inventory write-downs, lower sales through distributors and reduced costs to produce aftermarket radios.

We expect cost of equipment to vary with changes in sales, supply chain management, and inventory valuations.

Subscriber Acquisition Costs include hardware subsidies paid to radio manufacturers, distributors and automakers, including subsidies paid to automakers who include a satellite radio and subscription to our service in the sale or lease price of a new vehicle; subsidies paid for chip sets and certain other components used in manufacturing radios; device royalties for certain radios; commissions paid to retailers and automakers as incentives to purchase, install and activate satellite radios; product warranty obligations; freight; and provisions for inventory allowances attributable to inventory consumed in our OEM and retail distribution channels. The majority of subscriber acquisition costs are incurred and expensed in advance of, or concurrent with, acquiring a subscriber. Subscriber acquisition costs do not include advertising, loyalty payments to distributors and dealers of satellite radios and revenue share payments to automakers and retailers of satellite radios.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, subscriber acquisition costs were $434,482 and $413,041, respectively, an increase of 5%, or $21,441, and decreased as a percentage of total revenue. The increase was primarily a result of the 12% increase in gross subscriber additions and higher subsidies related to increased OEM installations occurring in advance of acquiring the subscriber, partially offset by improved OEM subsidy rates per vehicle and a $6,052 increase in the benefit to earnings from the amortization of the deferred credit for acquired executory contracts recognized in purchase price accounting associated with the Merger.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, subscriber acquisition costs were $413,041 and $340,506, respectively, an increase of 21%, or $72,535, and increased as a percentage of total revenue. The increase was primarily a result of the 25% increase in gross subscriber additions and higher subsidies related to increased OEM installations occurring in advance of acquiring the subscriber, partially offset by improved OEM subsidy rates per vehicle and an $18,275 increase in the benefit to earnings from the amortization of the deferred credit for acquired executory contracts recognized in purchase price accounting associated with the Merger.

We expect total subscriber acquisition costs to fluctuate with increases or decreases in OEM installations and changes in our gross subscriber additions. Declines in contractual OEM subsidy rates and the cost of subsidized radio components will also impact total subscriber acquisition costs. The impact of purchase price accounting adjustments associated with the Merger attributable to the amortization of the deferred credit for acquired executory contracts will vary, in absolute amount and as a percentage of reported subscriber acquisition costs, through the expiration of the acquired contracts, primarily in 2013. We intend to continue to offer subsidies, commissions and other incentives to acquire subscribers.

Sales and Marketing includes costs for advertising, media and production, including promotional events and sponsorships; cooperative marketing; subscriber communications; customer retention and personnel. Cooperative marketing costs include fixed and variable payments to reimburse retailers and automakers for the cost of advertising and other product awareness activities performed on our behalf.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, sales and marketing expenses were $222,773 and $215,454, respectively, an increase of 3%, or $7,319, and decreased as a percentage of total revenue. The increase was primarily due to increased subscriber communications and retention programs associated with a greater number of subscribers and promotional trials, partially offset by reductions in consumer advertising and event marketing.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, sales and marketing expenses were $215,454 and $228,956, respectively, a decrease of 6%, or $13,502, and decreased as a percentage of total

revenue. The decrease was primarily due to reductions in consumer advertising, event marketing and third party distribution support expenses, partially offset by additional cooperative marketing and personnel costs.

Sales and marketing expenses will fluctuate on a quarterly basis as we launch seasonal advertising and promotional initiatives to attract new subscribers in existing and new distribution channels, and launch and expand programs to retain our existing subscribers and win-back former subscribers.

Engineering, Design and Development includes costs to develop chip sets and new products, research and development for broadcast information systems and costs associated with the incorporation of our radios into vehicles manufactured by automakers.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, engineering, design and development expenses were $53,435 and $45,390, respectively, an increase of 18%, or $8,045, and remained flat as a percentage of total revenue. The increase was primarily due to higher product development costs and costs related to enhanced subscriber features and functionality, partially offset by lower share-based payment expenses.

- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, engineering, design and development expenses were $45,390 and $41,031, respectively, an increase of 11%, or $4,359, and remained flat as a percentage of total revenue. The increase was primarily due to higher personnel, overhead and aftermarket product development costs.

We expect engineering, design and development expenses to increase in future periods as we develop our next generation chip sets and products.

General and Administrative includes executive management, rent and occupancy, finance, legal, human resources, information technology, insurance and investor relations costs.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, general and administrative expenses were $238,738 and $240,970, respectively, a decrease of 1%, or $2,232, and decreased as a percentage of total revenue. The decrease was primarily due to lower share-based payment expense, as well as lower general operating expenses, including rent, insurance and information technology costs.

- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, general and administrative expenses were $240,970 and $227,554, respectively, an increase of 6%, or $13,416, and decreased as a percentage of total revenue. The increase was primarily due to increased personnel and legal costs, partially offset by lower share-based payment expense.

We expect our general and administrative expenses to increase in future periods primarily as a result of enhanced information technology and personnel costs to support the growth of our business.

Depreciation and Amortization represents the systematic recognition in earnings of the acquisition cost of assets used in operations, including our satellite constellations, property, equipment and intangible assets, over their estimated service lives.

- *2011 vs. 2010:* For the years ended December 31, 2011 and 2010, depreciation and amortization expense was $267,880 and $273,691, respectively, a decrease of 2%, or $5,811, and decreased as a percentage of total revenue. The decrease was primarily due to a reduction in the amortization of subscriber relationships, partially offset by depreciation recognized on additional assets placed in service.

- *2010 vs. 2009:* For the years ended December 31, 2010 and 2009, depreciation and amortization expense was $273,691 and $309,450, respectively, a decrease of 12%, or $35,759, and decreased as a percentage of total revenue. The decrease was primarily due to a $38,136 reduction in the depreciation of acquired satellite constellation and amortization of subscriber relationships, partially offset by depreciation recognized on additional assets placed in-service.

We expect depreciation expenses to increase in future periods as we complete construction and launch our FM-6 satellite, which will be partially offset by reduced amortization associated with the stepped-up basis in assets acquired in the Merger (including intangible assets, satellites, property and equipment) through the end of their estimated service lives, principally through 2017.

Restructuring, Impairments and Related Costs represents charges related to the re-organization of our staff and restructuring of contracts, as well as charges related to the impairment of assets when those costs are deemed to provide no future benefit.

- *2011 vs. 2010:* In 2011, we did not record any restructuring, impairments, and related costs. For the year ended December 31, 2010, restructuring, impairments and related costs were $63,800 primarily due to the impairment of our FM-4 satellite as a result of the launch of XM-5 in 2010, and contract terminations.
- *2010 vs. 2009:* For the years ended December 31, 2010 and 2009, restructuring, impairments and related costs were $63,800 and $32,807, respectively, an increase of 94%, or $30,993. The increase was primarily due to the impairment of our FM-4 satellite as a result of the launch of XM-5 in 2010, and contract termination costs in the year ended December 31, 2010 compared to losses incurred on capitalized installment payments which were expected to provide no future benefit due to the counterparty's bankruptcy filing in the year ended December 31, 2009.

Other Income (Expense)

Interest Expense, Net of Amounts Capitalized, includes interest on outstanding debt, reduced by interest capitalized in connection with the construction of our satellites and related launch vehicles.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, interest expense was $304,938 and $295,643, respectively, an increase of 3%, or $9,295. The increase was primarily due to lower capitalized interest related to the construction of our satellites and related launch vehicles, partially offset by the mix of outstanding debt with lower interest rates.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, interest expense was $295,643 and $315,668, respectively, a decrease of 6%, or $20,025. The decrease was primarily due to decreases in the weighted average interest rate on our outstanding debt in the year ended December 31, 2010 compared to the year ended December 31, 2009 and the redemption of XM's 10% Senior PIK Secured Notes due 2011 on June 1, 2010.

Following the launch of our FM-6 satellite, which is anticipated during the first half of 2012, the capitalization of interest expense related to the construction of our satellites and related launch vehicles will be eliminated. As a result, we expect interest expense to increase, offset partially as our outstanding debt declines due to retirements at maturity, redemptions and repurchases.

Loss on Extinguishment of Debt and Credit Facilities, Net, includes losses incurred as a result of the conversion and retirement of certain debt.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, loss on extinguishment of debt and credit facilities, net, was $7,206 and $120,120, respectively, a decrease of 94%, or $112,914. During the year ended December 31, 2011, the loss was incurred on the repayment of our 11.25% Senior Secured Notes due 2013 and our 3.25% Convertible Notes due 2011. During the year ended December 31, 2010, the loss was incurred on the repayment of our Senior Secured Term Loan due 2012 and 9.625% Senior Notes due 2013 and XM's 10% Senior PIK Secured Notes due 2011 and 9.75% Senior Notes due 2014, as well as the partial repayment of XM's 11.25% Senior Secured Notes due 2013 and our 3.25% Convertible Notes due 2011.

- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, loss on extinguishment of debt and credit facilities, net, was $120,120 and $267,646, respectively, a decrease of 55%, or $147,526. During the year ended December 31, 2010, the loss was incurred on the repayment of our Senior Secured Term Loan due 2012 and 9.625% Senior Notes due 2013 and XM's 10% Senior PIK Secured Notes due 2011 and 9.75% Senior Notes due 2014, as well as the partial repayment of XM's 11.25% Senior Secured Notes due 2013 and our 3.25% Convertible Notes due 2011. During the year ended December 31, 2009, the loss was incurred on the retirement of our 2.5% Convertible Notes due 2009, the extinguishment of our Term Loan and Purchase Money Loan with Liberty Media, the repayment of the XM's Amended and Restated Credit Agreement due 2011, the partial repayment of XM's 10% Convertible Senior Notes due 2009 and the termination of XM's Second Lien Credit Agreement.

Interest and Investment Income (Loss) includes realized gains and losses, dividends, interest income, our share of Sirius Canada's and XM Canada's pre-merger net losses, our share of the income (loss) of Sirius XM Canada and gains related to the Canada Merger.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, interest and investment income (loss) was $73,970 and ($5,375), respectively, an increase of $79,345. The increase was attributable to a net gain realized as a result of the Canada Merger. This transaction resulted in the recognition of a $75,768 gain recorded in interest and investment income. The gain was partially offset by our share of net losses at our Canadian affiliate.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, interest and investment (loss) income was ($5,375) and $5,576, respectively, a decrease of 196%, or $10,951. The decrease in income was primarily attributable to higher net losses at XM Canada and Sirius Canada and a decrease in payments received from Sirius Canada in excess of the carrying value of our investments, partially offset by the gain on sale of auction rate securities during the year ended December 31, 2010. In addition, we recorded an impairment charge on our investment in XM Canada during the year ended December 31, 2009.

Income Taxes

Income Tax Expense primarily represents the deferred tax liability related to the difference in accounting for our FCC licenses, which are amortized over 15 years for tax purposes but not amortized for book purposes in accordance with GAAP, foreign withholding taxes on royalty income and the state tax impact of the suspension of net operating loss ("NOL") use in California and Illinois.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, income tax expense was $14,234 and $4,620, respectively, an increase of 208%, or $9,614, primarily due to an increase in the applicable state effective tax rate, foreign withholding taxes on royalty income and the state tax impact of the suspension of NOL use in California and Illinois.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, income tax expense was $4,620 and $5,981, respectively, a decrease of 23%, or $1,361, primarily as a result of a decrease in the applicable state effective tax rate and foreign withholding taxes on royalty income.

In assessing the recoverability of our deferred tax assets, management regularly considers whether some portion or all of the deferred tax assets will not be realized based on the recognition threshold and measurement of tax positions in accordance with the Income Tax Topic of the FASB Accounting Standards Codification (the "Income Taxes Topic"). The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax assets and liabilities, projected taxable income and tax planning strategies in making this assessment. Management's evaluation of the realizability of deferred tax assets considers both positive and negative evidence. The weight given to the potential effects of positive and negative evidence is based on the extent to which it can be objectively verified. Our conclusion with regard to maintaining or releasing the valuation allowance gives consideration to a variety of factors including but not limited to: (a) our ability to utilize net operating losses within the carryforward period, (b) a three-year cumulative pre-tax income, (c) current period taxable income and (d) the expectation of future earnings. After weighting this evidence, management will conclude whether it is more likely than not that our deferred tax assets will be realized.

We have maintained a deferred tax valuation allowance against our deferred tax assets through December 31, 2011. In 2010, we had our first year of pre-tax earnings, but continued to generate taxable losses. For the year ended December 31, 2011, we have continued to report positive earnings and have generated taxable income. If such earnings trends continue, we may realize the benefits of all or a significant portion of our net deferred tax assets in 2012 through a reduction in our deferred tax valuation allowance. This would result in an income tax benefit that would be reflected in net income. As of December 31, 2011, we had approximately $3.4 billion of valuation allowances established against the deferred tax assets.

Subscriber Data

The following table contains actual subscriber data for the years ended December 31, 2011, 2010 and 2009, respectively.

	Unaudited		
	For the Years Ended December 31,		
	2011	2010	2009
Beginning subscribers	20,190,964	18,772,758	19,003,856
Gross subscriber additions	8,696,020	7,768,827	6,208,482
Deactivated subscribers	(6,994,160)	(6,350,621)	(6,439,580)
Net additions	1,701,860	1,418,206	(231,098)
Ending subscribers	21,892,824	20,190,964	18,772,758
Self-pay	17,908,742	16,686,799	15,703,932
Paid promotional	3,984,082	3,504,165	3,068,826
Ending subscribers	21,892,824	20,190,964	18,772,758
Self-pay	1,221,943	982,867	154,275
Paid promotional	479,917	435,339	(385,373)
Net additions	1,701,860	1,418,206	(231,098)
Daily weighted average number of subscribers	20,903,908	19,385,055	18,529,696
Average self-pay monthly churn	1.9%	1.9%	2.0%
New vehicle consumer conversion rate	45%	46%	45%

Note: See pages 45 through 51 for a glossary of terms.

Subscribers. At December 31, 2011, we had 21,892,824 subscribers, an increase of 1,701,860 subscribers, or 8%, from the 20,190,964 subscribers as of December 31, 2010.

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, net additions were 1,701,860 and 1,418,206, respectively, an increase in net additions of 20%, or 283,654. The improvement is due to the 12% increase in gross subscriber additions, primarily resulting from an increase in U.S. light vehicle sales, new vehicle penetration, and returning subscriber activations inclusive of previously owned car acquisitions. This increase in gross additions was partially offset by the 10% increase in deactivations, which was primarily due to an increase in paid promotional trial volumes along with growth in our subscriber base.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, net additions were 1,418,206 and (231,098), respectively, an increase in net additions of 1,649,304. The improvement was due to the 25% increase in gross subscriber additions, primarily resulting from an increase in U.S. light vehicle sales, new vehicle penetration and returning subscriber activations.

Average Self-pay Monthly Churn is derived by dividing the monthly average of self-pay deactivations for the quarter by the average self-pay subscriber balance for the quarter. (See accompanying glossary on pages 45 through 51 for more details.)

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, our average self-pay monthly churn rate was 1.9%. The consistent churn rate exhibits stability in the continued demand for and satisfaction with our service from existing subscribers.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, our average self-pay monthly churn rate was 1.9% and 2.0%, respectively. The decrease was due to an improving economy, the success of retention and win-back programs and reductions in non-pay cancellation rates.

New Vehicle Consumer Conversion Rate is the percentage of owners and lessees of new vehicles that receive our service and convert to become self-paying subscribers after an initial promotional period. The metric excludes rental and fleet vehicles. (See accompanying glossary on pages 45 through 51 for more details).

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, the new vehicle consumer conversion rate was 45% and 46%, respectively. The decrease was primarily due to the changing mix of sales among OEMs and operational issues impacting the timing of the receipt of customer information and prompt marketing communications with buyers and lessees of vehicles.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, the new vehicle consumer conversion rate was 46% and 45%, respectively. The increase was primarily due to improved marketing to promotional period subscribers and an improving economy.

The discussion of operating results below excludes the effects of stock-based compensation and purchase price accounting adjustments associated with the Merger. Financial measures and metrics previously reported as “pro forma” have been renamed “adjusted.”

Adjusted Results of Operations

In this section, we present certain financial performance measures that are not calculated and presented in accordance with generally accepted accounting principles in the United States of America (“Non-GAAP”). These Non-GAAP financial measures include: average monthly revenue per subscriber, or ARPU; subscriber acquisition cost, or SAC, per gross subscriber addition; customer service and billing expenses, per average subscriber; free cash flow; adjusted total revenue; and adjusted EBITDA. These measures exclude the impact of certain purchase price accounting adjustments. We use these Non-GAAP financial measures to manage our business, set operational goals and as a basis for determining performance-based compensation for our employees.

The purchase price accounting adjustments include the elimination of the earnings benefit of deferred revenue associated with our investment in Sirius XM Canada, the recognition of subscriber revenues not recognized in purchase price accounting and the elimination of the earnings benefit of deferred credits on executory contracts, which are primarily attributable to third party arrangements with an OEM and programming providers.

Our adjusted EBITDA also reallocates share-based payment expense from functional operating expense line items to a separate line within operating expenses. We believe the exclusion of share-based payment expense from functional operating expenses is useful given the significant variation in expense that can result from changes in the fair value as determined by the Black-Scholes-Merton model which varies based on assumptions used for the expected life, expected stock price volatility and risk-free interest rates; the effect of which is unrelated to the operational conditions that give rise to variations in the components of our operating costs.

Free cash flow is a metric that our management and Board of Directors use to evaluate the cash generated by our operations, net of capital expenditures and other investment activity. In a capital intensive business, with significant historical and current investments in satellites, we look at our operating cash flow, net of these investing cash outflows, to determine cash available for future subscriber acquisition and capital expenditures, to repurchase or retire debt, to acquire other companies and to evaluate our ability to return capital to stockholders. We believe free cash flow is an indicator of the long-term financial stability of our business. Free cash flow, which is reconciled to “Net cash provided by (used in) operating activities”, is a non-GAAP financial measure. This measure can be calculated by deducting amounts under the captions “Additions to property and equipment” and deducting or adding “Restricted and other investment activity” from “Net cash provided by (used in) operating activities” from the consolidated statements of cash flows. Free cash flow should be used in conjunction with other GAAP financial performance measures and may not be comparable to free cash flow measures presented by other companies. Free cash flow should be viewed as a supplemental measure rather than an alternative measure of cash flows from operating activities, as determined in accordance with GAAP. Free cash flow is limited and does not represent remaining cash flows available for discretionary expenditures due to the fact that the measure does not deduct the payments required for debt maturities. We believe free cash flow provides useful supplemental information to investors regarding our current and projected cash flow, along with other GAAP measures (such as cash flows from operating and investing activities), to determine our financial condition, and to compare our operating performance to other communications, entertainment and media companies.

We believe these Non-GAAP financial measures provide useful information to investors regarding our financial condition and results of operations. We believe investors find these Non-GAAP financial performance measures useful in evaluating our core trends because it provides a direct view of our underlying contractual costs. We believe investors use our current and projected adjusted EBITDA to estimate our current or prospective enterprise value and to make investment decisions. By providing these Non-GAAP financial measures, together with the reconciliations to the most directly comparable GAAP measure, we believe we are enhancing investors' understanding of our business and our results of operations.

These Non-GAAP financial measures should be viewed in addition to, and not as an alternative for or superior to, our reported results prepared in accordance with GAAP. Please refer to the glossary (pages 45 through 51) for a further discussion of such Non-GAAP financial measures and reconciliations to the most directly comparable GAAP measure.

The following table contains our key operating metrics based on our unaudited adjusted results of operations for the years ended December 31, 2011, 2010 and 2009, respectively:

	Unaudited		
	For the Years Ended December 31,		
	2011	**2010**	**2009**
(in thousands, except for per subscriber amounts)			
ARPU	$ 11.58	$ 11.73	$ 10.95
SAC, per gross subscriber addition	$ 55	$ 59	$ 63
Customer service and billing expenses, per average subscriber	$ 1.03	$ 1.03	$ 1.05
Free cash flow	$ 415,742	$ 210,481	$ 185,319
Adjusted total revenue	$3,025,434	$2,838,898	$2,526,703
Adjusted EBITDA	$ 731,018	$ 626,288	$ 462,539

Note: See pages 45 through 51 for a glossary of terms.

ARPU is derived from total earned subscriber revenue, net advertising revenue and other subscription-related revenue, net of purchase price accounting adjustments, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period. (See accompanying glossary on pages 45 through 51 for more details.)

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, ARPU was $11.58 and $11.73, respectively. The decrease was driven primarily by an increase in subscription discounts offered through customer acquisition and retention programs and the decrease in the U.S. Music Royalty Fee rate, partially offset by an increase in sales of our premium services, including Premier packages, data services and Internet subscriptions.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, ARPU was $11.73 and $10.95, respectively. The increase was driven primarily by the full year impact of the U.S. Music Royalty Fee introduced in the third quarter of 2009, increased revenues from the sale of Premier packages, decreases in discounts on multi-subscription and Internet packages, and increased net advertising revenue, partially offset by an increase in the number of subscribers on promotional plans.

SAC, Per Gross Subscriber Addition, is derived from subscriber acquisition costs and margins from the direct sale of radios and accessories, excluding share-based payment expense and purchase price accounting adjustments, divided by the number of gross subscriber additions for the period. (See accompanying glossary on pages 45 through 51 for more details.)

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, SAC, per gross subscriber addition, was $55 and $59, respectively. The decrease was primarily due to lower per radio subsidy rates for certain OEMs and growth in subscriber reactivations and royalties from radio manufacturers.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, SAC, per gross subscriber addition, was $59 and $63, respectively. The decrease was primarily due to lower per radio subsidy rates for certain OEMs and growth in subscriber reactivations and royalties from radio manufacturers compared to the year ended December 31, 2009, partially offset by increased OEM installations of factory-installed satellite radios.

Customer Service and Billing Expenses, Per Average Subscriber, is derived from total customer service and billing expenses, excluding share-based payment expense and purchase price accounting adjustments, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period. (See accompanying glossary on pages 45 through 51 for more details.)

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, customer service and billing expenses, per average subscriber, were $1.03.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, customer service and billing expenses, per average subscriber, were $1.03 and $1.05, respectively. The decrease was primarily due to lower call center expenses as a result of moving calls to lower cost locations, partially offset by higher call volume.

Free Cash Flow includes the net cash provided by operations, additions to property and equipment, and restricted and other investment activity. (See accompanying glossary on pages 45 through 51 for more details.)

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, free cash flow was $415,742 and $210,481, respectively, an increase of $205,261. Net cash provided by operating activities increased $30,735 to $543,630 for the year ended December 31, 2011 compared to the $512,895 provided by operations for the year ended December 31, 2010. Capital expenditures for property and equipment for the year ended December 31, 2011 decreased $174,439 to $137,429 compared to $311,868 for the year ended December 31, 2010. The increase in net cash provided by operating activities was primarily the result of improved operating performance driving higher adjusted EBITDA, cash received from the Canada Merger, higher collections from subscribers and distributors, and the repayment in the first quarter of 2010 of liabilities deferred in 2009. The decrease in capital expenditures for the year ended December 31, 2011 was primarily the result of decreased satellite construction and launch expenditures due to the launch in 2010 of our XM-5 satellite. The increase in restricted and other investment activities was driven by the return of capital resulting from the Canada Merger, partially offset by proceeds from the sale of investment securities in the year ended December 31, 2010.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, free cash flow was $210,481 and $185,319, respectively, an increase of $25,162. Net cash provided by operating activities increased $79,065 to $512,895 for the year ended December 31, 2010 compared to the $433,830 provided by operations for the year ended December 31, 2009. Capital expenditures for property and equipment for the year ended December 31, 2010 increased $63,357 to $311,868 compared to $248,511 for the year ended December 31, 2009. The increase in net cash provided by operating activities was primarily the result of growth in deferred revenue and changes in net assets. The increase in capital expenditures for the year ended December 31, 2010 was primarily the result of satellite construction and launch expenditures for our XM-5 and FM-6 satellites.

Adjusted Total Revenue. Our adjusted total revenue includes the recognition of deferred subscriber revenues acquired in the Merger that are not recognized in our results under purchase price accounting and the elimination of the benefit in earnings from deferred revenue associated with our investment in XM Canada acquired in the Merger. (See the accompanying glossary on pages 45 through 51 for more details.)

	Unaudited		
	For the Years Ended December 31,		
(in thousands)	2011	2010	2009
Revenue:			
Subscriber revenue	$2,595,414	$2,414,174	$2,287,503
Advertising revenue, net of agency fees	73,672	64,517	51,754
Equipment revenue	71,051	71,355	50,352
Other revenue	274,387	266,946	83,029
Purchase price accounting adjustments:			
Subscriber revenue	3,659	14,655	46,814
Other revenue	7,251	7,251	7,251
Adjusted total revenue	$3,025,434	$2,838,898	$2,526,703

Adjusted EBITDA. EBITDA is defined as net income (loss) before interest and investment income (loss); interest expense, net of amounts capitalized; income tax expense and depreciation and amortization. Adjusted EBITDA removes the impact of other income and expense, losses on extinguishment of debt as well as certain other charges, such as goodwill impairment; restructuring, impairments and related costs; certain purchase price accounting adjustments and share-based payment expense. (See the accompanying glossary on pages 45 through 51 for more details):

- *2011 vs. 2010*: For the years ended December 31, 2011 and 2010, adjusted EBITDA was $731,018 and $626,288, respectively, an increase of 17%, or $104,730. The increase was primarily due to an increase of 7%, or $186,536, in adjusted revenues, partially offset by an increase of 4%, or $81,806, in expenses included in adjusted EBITDA. The increase in adjusted revenues was primarily due to the increase in our subscriber base. The increase in expenses was primarily driven by higher revenue share and royalties expenses associated with growth in revenues, increased customer service and billing expenses associated with subscriber growth and higher subscriber acquisition costs related to the 12% increase in gross additions, partially offset by lower programming and content costs.
- *2010 vs. 2009*: For the years ended December 31, 2010 and 2009, adjusted EBITDA was $626,288 and $462,539, respectively, an increase of 35%, or $163,749. The increase was primarily due to an increase of 12%, or $312,195, in adjusted revenues, partially offset by an increase of 7%, or $148,446, in expenses included in adjusted EBITDA. The increase in revenue was primarily due to the increase in our subscriber base and the introduction of the U.S. Music Royalty Fee in the third quarter of 2009, as well as increased advertising and equipment revenue, decreases in discounts on multi-subscription and Internet packages, and an increase in the sale of "Best of" programming, partially offset by an increase in the number of subscribers on promotional plans. The increase in expenses was primarily driven by higher subscriber acquisition costs related to the 25% increase in gross additions and higher revenue share and royalties expenses associated with growth in revenues subject to revenue sharing and royalty arrangements.

Liquidity and Capital Resources

Cash Flows for the Year Ended December 31, 2011 Compared with the Year Ended December 31, 2010 and Year Ended December 31, 2010 Compared with the Year Ended December 31, 2009

As of December 31, 2011 and 2010, we had $773,990 and $586,691, respectively, in cash and cash equivalents. The following table presents a summary of our cash flow activity for the years set forth below:

	For the Years Ended December 31,				
	2011	2010	2009	2011 vs. 2010	2010 vs. 2009
Net cash provided by operating activities	$ 543,630	$ 512,895	$ 433,830	$ 30,735	$ 79,065
Net cash used in investing activities	(127,888)	(302,414)	(248,511)	174,526	(53,903)
Net cash used in financing activities	(228,443)	(7,279)	(182,276)	(221,164)	174,997
Net increase in cash and cash equivalents	187,299	203,202	3,043	(15,903)	200,159
Cash and cash equivalents at beginning of period	586,691	383,489	380,446	203,202	3,043
Cash and cash equivalents at end of period	$ 773,990	$ 586,691	$ 383,489	$ 187,299	$ 203,202

Cash Flows Provided by Operating Activities

Cash provided by operating activities increased by $30,735, or 6%, to $543,630 for the year ended December 31, 2011 from $512,895 for the year ended December 31, 2010. Cash provided by operating activities increased by $79,065, or 18%, to $512,895 for the year ended December 31, 2010 from cash provided by operating activities of $433,830 for the year ended December 31, 2009. The primary drivers of our operating cash flow growth have been improvements in profitability and changes in operating assets and liabilities.

- Our net income (loss) was $426,691, $43,055, and ($352,038) for the years ended December 31, 2011, 2010 and 2009, respectively. Our net income growth has been primarily due to growth in our subscriber revenues which increased by $181,240, or 8%, and $126,671, or 6%, for the years ended December 31, 2011 and 2010, respectively.
- Net adjustments to net income (loss) were $66,975, $357,743, and $564,902 for the years ended December 31, 2011, 2010 and 2009, respectively. Significant components of adjustments to net income, and their impact on cash flows from operating activities, include:

	For the Years Ended December 31,		
	2011	2010	2009
Depreciation and amortization	$ 267,880	$ 273,691	$ 309,450
Restructuring, impairments and related costs	$ —	$ 66,731	$ 26,964
Loss on extinguishment of debt and credit facilities, net	$ 7,206	$ 120,120	$ 267,646
Gain on merger of unconsolidated entities	$ (75,768)	$ —	$ —
Share-based payment expense	$ 53,190	$ 60,437	$ 73,981
Other non-cash purchase price adjustments	$(275,338)	$(250,727)	$(202,054)

Depreciation and amortization expense is expected to increase in future periods as we recognize depreciation expense after the construction and launch of our FM-6 satellite and continue to invest in our information technology, broadcast, and facilities infrastructures.

Included in restructuring, impairments and related costs for the year ended December 31, 2010 are contract termination costs of $7,361 and a loss on the full impairment of our FM-4 satellite of $56,100.

Loss on extinguishment of debt and credit facilities, net, includes losses incurred as a result of the conversion and retirement of certain debt instruments. Future charges related to the retirement or conversions of debt are dependent upon many factors, including the conversion price of debt or our ability to refinance or retire specific debt instruments.

Gain on merger of unconsolidated entities represents the gain on the Canada Merger which closed in June 2011.

Share-based payment expense is expected to increase in future periods as we grant equity awards to our employees and directors. Compensation expense for share-based awards is recorded in the financial statements based on the fair value of the underlying equity awards. The fair value of stock option awards is determined using the Black-Scholes-Merton option-pricing model which is subject to various assumptions including the market price of our common stock, estimated forfeiture rates of awards and the volatility of our stock price. The fair value of restricted shares and restricted stock units is based on the market price of our common stock at date of grant.

Other non-cash purchase price adjustments include liabilities recorded as a result of the Merger related to executory contracts with an OEM and certain programming providers, as well as amortization resulting from changes in the value of deferred revenue as a result of the Merger.

Changes in operating assets and liabilities contributed $49,694, $112,097 and $220,966 to operating cash flows for the years ended December 31, 2011, 2010 and 2009, respectively. Significant changes in operating assets and liabilities include the timing of collections from our customers, the repayment of the XM Canada credit facility, and the timing of payments to vendors and related parties. As we continue to grow our subscriber and revenue base, we expect that deferred revenue and amounts due from customers and distributors will continue to increase. Amounts payable to vendors are also expected to increase as our business grows. The timing of payments to vendors and related parties are based on both contractual commitments and the terms and conditions of our vendors.

Cash Flows Used in Investing Activities

Cash used for investing activities consists primarily of capital expenditures for property and equipment. We will continue to incur significant costs to improve our terrestrial repeater network and broadcast and administrative infrastructure. In addition, we will continue to incur capital expenditures associated with our FM-6 satellite, which is scheduled for launch in the first half of 2012. After the launch of our FM-6 satellite, we anticipate no significant satellite capital expenditures for several years until it becomes necessary to replace satellites in our fleet.

- The decrease in cash used for investing activities was primarily due to lower capital expenditures for construction of our satellites and related launch vehicles following the launch of our XM-5 satellite in 2010.

Cash Flows Used in Financing Activities

Cash flows used in financing activities have generally been the result of the issuance and repayment of long-term debt and related party debt and cash proceeds from exercise of stock options. Proceeds from long-term debt, related party debt and equity issuances have been used to fund our operations, construct and launch new satellites and invest in other infrastructure improvements.

- The increase in cash flows used in financing activities was primarily due to the 2011 repayment of the remaining balance of our 11.25% Senior Secured Notes due 2013 and 3.25% Convertible Notes due 2011 without issuing new debt. In 2010, we repaid our Senior Secured Term Loan due 2012, 9.625% Senior Notes due 2013, XM's 10% Senior PIK Secured Notes due 2011 and 9.75% Senior Notes due 2014. We also partially repaid XM's 11.25% Senior Secured Notes due 2013 and our 3.25% Convertible Notes due 2011. We issued the following new debt in 2010; our 8.75% Senior Notes due 2015 and 7.625% Senior Notes due 2018.

Financings and Capital Requirements

We have historically financed our operations through the sale of debt and equity securities. The Certificate of Designations for our Series B Preferred Stock provides that, so long as Liberty Media beneficially owns at least half of its initial equity investment, Liberty Media's consent is required for certain actions, including the grant or issuance of our equity securities and the incurrence of debt (other than, in general, debt incurred to refinance existing debt) in amounts greater than $10,000 in any calendar year.

Future Liquidity and Capital Resource Requirements

We have entered into various agreements to design, construct, and launch our satellites in the normal course of business. As disclosed in Note 17 in our consolidated financial statements in Item 8 of this Annual Report on Form 10-K, as of December 31, 2011, we expect to incur expenditures of approximately $60,517 and $5,526 in 2012 and 2013, respectively, and an additional $48,545 thereafter, the majority of which is attributable to the construction and launch of our FM-6 satellite and related launch vehicle.

Based upon our current plans, we believe that we have sufficient cash, cash equivalents and marketable securities to cover our estimated funding needs. We expect to fund operating expenses, capital expenditures, working capital requirements, interest payments, taxes and scheduled maturities of our debt with existing cash and cash flow from operations, and we believe that we will be able to generate sufficient revenues to meet our cash requirements.

Our ability to meet our debt and other obligations depends on our future operating performance and on economic, financial, competitive and other factors. We continually review our operations for opportunities to adjust the timing of expenditures to ensure that sufficient resources are maintained.

We regularly evaluate our business plans and strategy. These evaluations often result in changes to our business plans and strategy, some of which may be material and significantly change our cash requirements. These changes in our business plans or strategy may include: the acquisition of unique or compelling programming; the introduction of new features or services; significant new or enhanced distribution arrangements; investments in infrastructure, such as satellites, equipment or radio spectrum; and acquisitions, including acquisitions that are not directly related to our satellite radio business. In addition, our operations are affected by the FCC order approving the Merger, which imposed certain conditions upon, among other things, our program offerings.

Debt Covenants

The indentures governing our debt include restrictive covenants. As of December 31, 2011, we were in compliance with our debt covenants.

For a discussion of our "Debt Covenants", refer to Note 13 to our consolidated financial statements in Item 8 of this Annual Report on Form 10-K.

Off-Balance Sheet Arrangements

We do not have any significant off-balance sheet financing arrangements other than those disclosed in Note 17 to our consolidated financial statements in Item 8 of this Annual Report on Form 10-K that are reasonably likely to have a material effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Contractual Cash Commitments

For a discussion of our “Contractual Cash Commitments,” refer to Note 17 to our consolidated financial statements in Item 8 of this Annual Report on Form 10-K.

Related Party Transactions

For a discussion of “Related Party Transactions,” refer to Note 11 to our consolidated financial statements in Item 8 of this Annual Report on Form 10-K.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with U.S. GAAP, which require management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the periods. Accounting estimates require the use of significant management assumptions and judgments as to future events, and the effect of those events cannot be predicted with certainty. The accounting estimates will change as new events occur, more experience is acquired and more information is obtained. We evaluate and update our assumptions and estimates on an ongoing basis and use outside experts to assist in that evaluation when we deem necessary. We have disclosed all significant accounting policies in Note 2 to our consolidated financial statements in Item 8 of this Annual Report on Form 10-K.

Goodwill. Goodwill represents the excess of the purchase price over the estimated fair value of net tangible and identifiable intangible assets acquired in business combinations. Our annual impairment assessment of our single reporting unit is performed as of October 1st of each year. Assessments are performed at other times if events or circumstances indicate it is more likely than not that the asset is impaired. Step one of the impairment assessment compares the fair value of the entity to its carrying value and if the fair value exceeds its carrying value, goodwill is not impaired. If the carrying value exceeds the fair value, the implied fair value of goodwill is compared to the carrying value of goodwill; an impairment loss will be recorded for the amount the carrying value exceeds the implied fair value. At October 1, 2011, the fair value of our single reporting unit substantially exceeded its carrying value and therefore was not at risk of failing step one of ASC 350-20, *Goodwill* (“ASC 350-20”). Subsequent to our annual evaluation of the carrying value of goodwill, there were no events or circumstances that triggered the need for an interim evaluation for impairment. As a result, there were no changes in the carrying value of our goodwill during the years ended December 31, 2011 and 2010.

Long-Lived and Indefinite-Lived Assets. We carry our long-lived assets at cost less accumulated amortization and depreciation. We review our long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset is not recoverable. At the time an impairment in the value of a long-lived asset is identified, the impairment is measured as the amount by which the carrying amount of a long-lived asset exceeds its fair value.

Our annual impairment assessment of indefinite-lived assets, our FCC licenses and trademark, is performed as of October 1st of each year and an assessment is made at other times if events or changes in circumstances indicate that it is more likely than not that the asset is impaired. To determine fair value, we employ an expected present value technique, which utilizes multiple cash flow scenarios for the FCC licenses and trademark that reflect the range of possible outcomes and an appropriate discount rate.

We use independent appraisals to assist in determining the fair value of our FCC licenses and trademark. The income approach, which is commonly called the “Jefferson Pilot Method” or the “Greenfield Method”, has been consistently used to estimate the fair value of our FCC licenses. This method attempts to isolate the income that is properly attributable to the license alone (that is, apart from tangible and intangible assets and goodwill). It is based upon modeling a hypothetical “Greenfield” build-up to a normalized enterprise that, by design, lacks inherent goodwill and has essentially purchased (or added) all other assets as part of the build-up process. The methodology assumes that, rather than acquiring such an operation as a going concern, the buyer would hypothetically obtain a license at nominal cost and build a new operation with similar attributes from inception. The significant assumption was that the hypothetical start up entity would begin its network build out phase at the impairment testing date and revenues and variable costs would not be generated until the satellite network was operational, approximately five years from inception. The "Relief from Royalty" method valuation approach was utilized to value our trademark. This methodology involves the estimation of an amount of hypothetical royalty income that could be generated if the asset was licensed from an independent, third-party owner. The value of the intangible is the present value of the prospective stream of hypothetical royalty income that would be generated over the useful life of the asset.

At October 1, 2011, the fair value of our FCC licenses and trademark substantially exceeded the carrying value and therefore was not at risk of impairment. Subsequent to our annual evaluation of the carrying value of our long-lived assets, there were no events or circumstances that triggered the need for an interim impairment evaluation.

There were no changes in the carrying value of our indefinite life intangible assets during the years ended December 31, 2011 and 2010.

Useful Life of Broadcast/Transmission System. Our satellite system includes the costs of our satellite construction, launch vehicles, launch insurance, capitalized interest, spare satellite, terrestrial repeater network and satellite uplink facilities. We monitor our satellites for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset is not recoverable.

We currently expect our first two in-orbit Sirius satellites launched in 2000 to operate effectively through 2013, our FM-3 satellite, which was also launched in 2000, to operate effectively through 2015, and our FM-5 satellite, launched in 2009, to operate effectively through 2024. In December 2010, we recorded an other than temporary charge for our FM-4 satellite, the ground spare held in storage since 2002. We operate five in-orbit XM satellites, three of which function as in-orbit spares. Two of the three in-orbit spare satellites were launched in 2001 and the other in 2010 while the other two satellites were launched in 2005 and 2006. We estimate that our XM-3, XM-4 and XM-5 satellites will meet their 15 year predicted depreciable lives, and that the depreciable lives of XM-1 and XM-2 will end in 2013.

Certain of our in-orbit satellites have experienced circuit failures on their solar arrays. We continue to monitor the operating condition of our in-orbit satellites. If events or circumstances indicate that the depreciable lives of our in-orbit satellites have changed, we will modify the depreciable life accordingly. If we were to revise our estimates, our depreciation expense would change. For example, a 10% decrease in the expected depreciable lives of satellites and spacecraft control facilities during 2011 would have resulted in approximately $20,614 of additional depreciation expense.

Income Taxes. Deferred income taxes are recognized for the tax consequences related to temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for tax purposes, based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. A valuation allowance is recognized when, based on the weight of all available evidence, it is considered more likely than not that all, or some portion, of the deferred tax assets will not be realized. Income tax expense is the sum of current income tax plus the change in deferred tax assets and liabilities. As of December 31, 2011 and 2010, we maintained a full valuation allowance against our deferred tax assets due to our prior history of pre-tax losses and uncertainty about the timing of and ability to generate taxable income in the future and our assessment that the realization of the deferred tax assets did not meet the "more likely than not" criterion under ASC 740.

Recent Accounting Pronouncements

In May 2011, the FASB issued Accounting Standards Update No. 2011-04, *Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and International Financial Reporting Standards (Topic 820) — Fair Value Measurement* ("ASU 2011-04"), to provide a consistent definition of fair value and ensure that the fair value measurement and disclosure requirements are similar between U.S. GAAP and International Financial Reporting Standards. ASU 2011-04 changes certain fair value measurement principles and enhances the disclosure requirements particularly for Level 3 fair value measurements. The amendments are not expected to have a significant impact on companies that apply U.S. GAAP. This standard is effective for interim and annual periods beginning after December 15, 2011 and will be applied prospectively. The impact of our pending adoption of ASU 2011-04 will not be material to our consolidated financial statements.

In June 2011, the FASB issued Accounting Standards Update No. 2011-05, *Comprehensive Income (Topic 220) — Presentation of Comprehensive Income* (“ASU 2011-05”), to require an entity to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. ASU 2011-05 eliminates the option to present the components of other comprehensive income as part of the statement of equity. The standard does not change the items which must be reported in other comprehensive income, how such items are measured or when they must be reclassified to net income. This standard is effective for interim and annual periods beginning after December 15, 2011 and will be applied retrospectively. The FASB has deferred the requirement to present reclassification adjustments for each component of accumulated other comprehensive income in both net income and other comprehensive income. Companies are required to either present amounts reclassified out of other comprehensive income on the face of the financial statements or disclose those amounts in the notes to the financial statements. During the deferral period, there is no requirement to separately present or disclose the reclassification adjustments into net income. The effective date of this deferral will be consistent with the effective date of the ASU 2011-05. ASU 2011-05 affects financial statement presentation only and will have no impact on our results of operations or financial position.

Glossary

Adjusted EBITDA — EBITDA is defined as net income (loss) before interest and investment income (loss); interest expense, net of amounts capitalized; income tax expense and depreciation and amortization. We adjust EBITDA to remove the impact of other income and expense, loss on extinguishment of debt as well as certain other charges discussed below. This measure is one of the primary Non-GAAP financial measures on which we (i) evaluate the performance of our businesses, (ii) base our internal budgets and (iii) compensate management. Adjusted EBITDA is a Non-GAAP financial performance measure that excludes (if applicable): (i) certain adjustments as a result of the purchase price accounting for the Merger, (ii) goodwill impairment, (iii) restructuring, impairments, and related costs, (iv) depreciation and amortization and (v) share-based payment expense. The purchase price accounting adjustments include: (i) the elimination of deferred revenue associated with the investment in XM Canada, (ii) recognition of deferred subscriber revenues not recognized in purchase price accounting, and (iii) elimination of the benefit of deferred credits on executory contracts, which are primarily attributable to third party arrangements with an OEM and programming providers. We believe adjusted EBITDA is a useful measure of the underlying trend of our operating performance, which provides useful information about our business apart from the costs associated with our physical plant, capital structure and purchase price accounting. We believe investors find this Non-GAAP financial measure useful when analyzing our results and comparing our operating performance to the performance of other communications, entertainment and media companies. We believe investors use current and projected adjusted EBITDA to estimate our current and prospective enterprise value and to make investment decisions. Because we fund and build-out our satellite radio system through the periodic raising and expenditure of large amounts of capital, our results of operations reflect significant charges for depreciation expense. The exclusion of depreciation and amortization expense is useful given significant variation in depreciation and amortization expense that can result from the potential variations in estimated useful lives, all of which can vary widely across different industries or among companies within the same industry. We believe the exclusion of restructuring, impairments and related costs is useful given the nature of these expenses. We also believe the exclusion of share-based payment expense is useful given the significant variation in expense that can result from changes in the fair value as determined using the Black-Scholes-Merton model which varies based on assumptions used for the expected life, expected stock price volatility and risk-free interest rates.

Adjusted EBITDA has certain limitations in that it does not take into account the impact to our statement of operations of certain expenses, including share-based payment expense and certain purchase price accounting for the Merger. We endeavor to compensate for the limitations of the Non-GAAP measure presented by also providing the comparable GAAP measure with equal or greater prominence and descriptions of the reconciling items, including quantifying such items, to derive the Non-GAAP measure. Investors that wish to compare and evaluate our operating results after giving effect for these costs, should refer to net income as disclosed in our consolidated statements of operations. Since adjusted EBITDA is a Non-GAAP financial performance measure, our calculation of adjusted EBITDA may be susceptible to varying calculations; may not be comparable to other similarly titled measures of other companies; and should not be considered in isolation, as a substitute for, or superior to measures of financial performance prepared in accordance with GAAP. The reconciliation of net income (loss) to the adjusted EBITDA is calculated as follows (in thousands):

	Unaudited		
	For the Years Ended December 31,		
	2011	2010	2009
Net income (loss) (GAAP):	$ 426,961	$ 43,055	$(352,038)
Add back items excluded from Adjusted EBITDA:			
Purchase price accounting adjustments:			
Revenues (see pages 47-49)	10,910	21,906	54,065
Operating expenses (see pages 47-49)	(277,258)	(261,832)	(240,891)
Share-based payment expense, net of purchase price accounting adjustments	53,369	63,309	78,782
Depreciation and amortization (GAAP)	267,880	273,691	309,450
Restructuring, impairments and related costs (GAAP)	—	63,800	32,807
Interest expense, net of amounts capitalized (GAAP)	304,938	295,643	315,668
Loss on extinguishment of debt and credit facilities, net (GAAP)	7,206	120,120	267,646
Interest and investment (income) loss (GAAP)	(73,970)	5,375	(5,576)
Other income (GAAP)	(3,252)	(3,399)	(3,355)
Income tax expense (GAAP)	14,234	4,620	5,981
Adjusted EBITDA	$ 731,018	$ 626,288	$ 462,539

Adjusted Revenues and Operating Expenses – We define this Non-GAAP financial measure as our actual revenues and operating expenses adjusted to exclude the impact of certain purchase price accounting adjustments and share-based payment expense. We use this Non-GAAP financial measure to manage our business, set operational goals and as a basis for determining performance-based compensation for our employees. The following tables reconcile our actual revenues and operating expenses to our adjusted revenues and operating expenses for the years ended December 31, 2011, 2010 and 2009:

	Unaudited For the Year Ended December 31, 2011			
(in thousands)	As Reported	Purchase Price Accounting Adjustments	Allocation of Share-based Payment Expense	Adjusted
Revenue:				
Subscriber revenue	$2,595,414	$ 3,659	$ —	$2,599,073
Advertising revenue, net of agency fees	73,672	—	—	73,672
Equipment revenue	71,051	—	—	71,051
Other revenue	274,387	7,251	—	281,638
Total revenue	$3,014,524	$ 10,910	$ —	$3,025,434
Operating expenses				
Cost of services:				
Revenue share and royalties	471,149	126,941	—	598,090
Programming and content	281,234	49,172	(6,212)	324,194
Customer service and billing	259,719	18	(1,502)	258,235
Satellite and transmission	75,902	313	(2,678)	73,537
Cost of equipment	33,095	—	—	33,095
Subscriber acquisition costs	434,482	85,491	—	519,973
Sales and marketing	222,773	15,233	(8,193)	229,813
Engineering, design and development	53,435	31	(4,851)	48,615
General and administrative	238,738	59	(29,933)	208,864
Depreciation and amortization (a)	267,880	—	—	267,880
Restructuring, impairments and related costs	—	—	—	—
Share-based payment expense (b)	—	—	53,369	53,369
Total operating expenses	$2,338,407	$ 277,258	$ —	$2,615,665

(a) Purchase price accounting adjustments included above exclude the incremental depreciation and amortization associated with the $785,000 stepped up basis in property, equipment and intangible assets as a result of the Merger. The increased depreciation and amortization for the year ended December 31, 2011 was $59,000.

(b) Amounts related to share-based payment expense included in operating expenses were as follows:

Programming and content	$ 6,185	$ 27	$ —	$ 6,212
Customer service and billing	1,484	18	—	1,502
Satellite and transmission	2,659	19	—	2,678
Sales and marketing	8,166	27	—	8,193
Engineering, design and development	4,820	31	—	4,851
General and administrative	29,874	59	—	29,933
Total share-based payment expense	$ 53,188	$ 181	$ —	$ 53,369

(in thousands)	Unaudited For the Year Ended December 31, 2010 As Reported	Purchase Price Accounting Adjustments	Allocation of Share-based Payment Expense	Adjusted
Revenue:				
Subscriber revenue	$2,414,174	$ 14,655	$ —	$2,428,829
Advertising revenue, net of agency fees	64,517	—	—	64,517
Equipment revenue	71,355	—	—	71,355
Other revenue	266,946	7,251	—	274,197
Total revenue	$2,816,992	$ 21,906	$ —	$2,838,898
Operating expenses				
Cost of services:				
Revenue share and royalties	435,410	107,967	—	543,377
Programming and content	305,914	57,566	(10,267)	353,213
Customer service and billing	241,680	281	(2,207)	239,754
Satellite and transmission	80,947	1,170	(3,397)	78,720
Cost of equipment	35,281	—	—	35,281
Subscriber acquisition costs	413,041	79,439	—	492,480
Sales and marketing	215,454	13,983	(9,423)	220,014
Engineering, design and development	45,390	520	(5,868)	40,042
General and administrative	240,970	906	(32,147)	209,729
Depreciation and amortization (a)	273,691	—	—	273,691
Restructuring, impairments and related costs	63,800	—	—	63,800
Share-based payment expense (b)	—	—	63,309	63,309
Total operating expenses	$2,351,578	$ 261,832	$ —	$2,613,410

(a) Purchase price accounting adjustments included above exclude the incremental depreciation and amortization associated with the $785,000 stepped up basis in property, equipment and intangible assets as a result of the Merger. The increased depreciation and amortization for the year ended December 31, 2010 was $68,000.

(b) Amounts related to share-based payment expense included in operating expenses were as follows:

Programming and content	$ 9,817	$ 450	$ —	$ 10,267
Customer service and billing	1,926	281	—	2,207
Satellite and transmission	3,109	288	—	3,397
Sales and marketing	8,996	427	—	9,423
Engineering, design and development	5,348	520	—	5,868
General and administrative	31,241	906	—	32,147
Total share-based payment expense	$ 60,437	$ 2,872	$ —	$ 63,309

(in thousands)	As Reported	Purchase Price Accounting Adjustments	Allocation of Share-based Payment Expense	Adjusted
	Unaudited For the Year Ended December 31, 2009			
Revenue:				
Subscriber revenue	$2,287,503	$ 46,814	$ —	$2,334,317
Advertising revenue, net of agency fees	51,754	—	—	51,754
Equipment revenue	50,352	—	—	50,352
Other revenue	83,029	7,251	—	90,280
Total revenue	$2,472,638	$ 54,065	$ —	$2,526,703
Operating expenses				
Cost of services:				
Revenue share and royalties	397,210	89,780	—	486,990
Programming and content	308,121	72,069	(9,720)	370,470
Customer service and billing	234,456	453	(2,504)	232,405
Satellite and transmission	84,033	1,339	(3,202)	82,170
Cost of equipment	40,188	—	—	40,188
Subscriber acquisition costs	340,506	61,164	—	401,670
Sales and marketing	228,956	13,507	(10,264)	232,199
Engineering, design and development	41,031	977	(5,856)	36,152
General and administrative	227,554	1,602	(47,236)	181,920
Depreciation and amortization (a)	309,450	—	—	309,450
Restructuring, impairments and related costs	32,807	—	—	32,807
Share-based payment expense (b)	—	—	78,782	78,782
Total operating expenses	$2,244,312	$ 240,891	$ —	$2,485,203

(a) Purchase price accounting adjustments included above exclude the incremental depreciation and amortization associated with the $785,000 stepped up basis in property, equipment and intangible assets as a result of the Merger. The increased depreciation and amortization for the year ended December 31, 2009 was $106,000.

(b) Amounts related to share-based payment expense included in operating expenses were as follows:

Programming and content	$ 9,064	$ 656	$ —	$ 9,720
Customer service and billing	2,051	453	—	2,504
Satellite and transmission	2,745	457	—	3,202
Sales and marketing	9,608	656	—	10,264
Engineering, design and development	4,879	977	—	5,856
General and administrative	45,634	1,602	—	47,236
Total share-based payment expense	$ 73,981	$ 4,801	$ —	$ 78,782

ARPU — is derived from total earned subscriber revenue, net advertising revenue and other subscription-related revenue, net of purchase price accounting adjustments, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period. Other subscription-related revenue includes the U.S. Music Royalty Fee, which was initially charged to subscribers in the third quarter of 2009. Purchase price accounting adjustments include the recognition of deferred subscriber revenues not recognized in purchase price accounting associated with the Merger. ARPU is calculated as follows (in thousands, except for subscriber and per subscriber amounts):

	Unaudited		
	For the Years Ended December 31,		
	2011	2010	2009
Subscriber revenue (GAAP)	$ 2,595,414	$ 2,414,174	$ 2,287,503
Add: net advertising revenue (GAAP)	73,672	64,517	51,754
Add: other subscription-related revenue (GAAP)	231,902	234,148	48,679
Add: purchase price accounting adjustments	3,659	14,655	46,814
	$ 2,904,647	$ 2,727,494	$ 2,434,750
Daily weighted average number of subscribers	20,903,908	19,385,055	18,529,696
ARPU	$ 11.58	$ 11.73	$ 10.95

Average self-pay monthly churn — is defined as the monthly average of self-pay deactivations for the period divided by the average number of self-pay subscribers for the period. Average self-pay churn for the year is the average of the quarterly average self-pay churn.

Customer service and billing expenses, per average subscriber — is derived from total customer service and billing expenses, excluding share-based payment expense and purchase price accounting adjustments associated with the Merger, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period. We believe the exclusion of share-based payment expense in our calculation of customer service and billing expenses, per average subscriber, is useful given the significant variation in expense that can result from changes in the fair market value of our common stock, the effect of which is unrelated to the operational conditions that give rise to variations in the components of our customer service and billing expenses. Purchase price accounting adjustments associated with the Merger include the elimination of the benefit associated with incremental share-based payment arrangements recognized at the Merger date. Customer service and billing expenses, per average subscriber, is calculated as follows (in thousands, except for subscriber and per subscriber amounts):

	Unaudited		
	For the Years Ended December 31,		
	2011	2010	2009
Customer service and billing expenses (GAAP)	$ 259,719	$ 241,680	$ 234,456
Less: share-based payment expense, net of purchase price accounting adjustments	(1,502)	(2,207)	(2,504)
Add: purchase price accounting adjustments	18	281	453
	$ 258,235	$ 239,754	$ 232,405
Daily weighted average number of subscribers	20,903,908	19,385,055	18,529,696
Customer service and billing expenses, per average subscriber	$ 1.03	$ 1.03	$ 1.05

Free cash flow — is derived from cash flow provided by operating activities, capital expenditures and restricted and other investment activity. Free cash flow is calculated as follows (in thousands):

	Unaudited For the Years Ended December 31, 2011	2010	2009
Net cash provided by operating activities	$ 543,630	$ 512,895	$ 433,830
Additions to property and equipment	(137,429)	(311,868)	(248,511)
Restricted and other investment activity	9,541	9,454	—
Free cash flow	$ 415,742	$ 210,481	$ 185,319

New vehicle consumer conversion rate — is defined as the percentage of owners and lessees of new vehicles that receive our service and convert to become self-paying subscribers after the initial promotion period. At the time satellite radio enabled vehicles are sold or leased, the owners or lessees generally receive trial subscriptions ranging from three to twelve months. Promotional periods generally include the period of trial service plus 30 days to handle the receipt and processing of payments. We measure conversion rate three months after the period in which the trial service ends.

Subscriber acquisition cost, per gross subscriber addition — or SAC, per gross subscriber addition, is derived from subscriber acquisition costs and margins from the direct sale of radios and accessories, excluding share-based payment expense and purchase price accounting adjustments, divided by the number of gross subscriber additions for the period. Purchase price accounting adjustments associated with the Merger include the elimination of the benefit of amortization of deferred credits on executory contracts recognized at the Merger date attributable to an OEM. SAC, per gross subscriber addition, is calculated as follows (in thousands, except for subscriber and per subscriber amounts):

	Unaudited For the Years Ended December 31, 2011	2010	2009
Subscriber acquisition costs (GAAP)	$ 434,482	$ 413,041	$ 340,506
Less: margin from direct sales of radios and accessories (GAAP)	(37,956)	(36,074)	(10,164)
Add: purchase price accounting adjustments	85,491	79,439	61,164
	$ 482,017	$ 456,406	$ 391,506
Gross subscriber additions	8,696,020	7,768,827	6,208,482
SAC, per gross subscriber addition	$ 55	$ 59	$ 63

ITEM 7A. *QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISKS*

As of December 31, 2011, we did not have any derivative financial instruments. We do not hold or issue any free-standing derivatives. We hold investments in marketable securities consisting of money market funds, and certificates of deposit and investments in debt and equity securities of other entities. We classify our investments in marketable securities as available-for-sale. These securities are consistent with the investment objectives contained within our investment policy. The basic objectives of our investment policy are the preservation of capital, maintaining sufficient liquidity to meet operating requirements and maximizing yield.

Our debt includes fixed rate instruments and the fair market value of our debt is sensitive to changes in interest rates. Under our current policies, we do not use interest rate derivative instruments to manage our exposure to interest rate fluctuations.

ITEM 8. *FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA*

See Index to Consolidated Financial Statements contained in Item 15 herein.

ITEM 9. ***CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE***

None.

ITEM 9A. ***CONTROLS AND PROCEDURES***

Controls and Procedures

As of December 31, 2011, an evaluation was performed under the supervision and with the participation of our management, including Mel Karmazin, our Chief Executive Officer, and David J. Frear, our Executive Vice President and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures (as that term is defined in Rule 13a-15(e) and 15d-15(e) under the Securities Exchange Act). Based on that evaluation, our management, including our Chief Executive Officer and our Chief Financial Officer, concluded that our disclosure controls and procedures were effective as of December 31, 2011. There has been no change in our internal control over financial reporting (as that term is defined in Rule 13a-15(f) and 15d-15(f) under the Securities Exchange Act) during the quarter ended December 31, 2011 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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 Rule 13a-15(f) under the Exchange Act. We have performed an evaluation under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, of the effectiveness of our internal control over financial reporting. Our management used the framework in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations to perform this evaluation. Based on that evaluation, our management, including our Chief Executive Officer and Chief Financial Officer, concluded that our internal control over financial reporting was effective as of December 31, 2011.

KPMG LLP, an independent registered public accounting firm, which has audited and reported on the consolidated financial statements contained in this Annual Report on Form 10-K, has issued its report on the effectiveness of our internal control over financial reporting which follows this report.

Audit Report of the Independent Registered Public Accounting Firm

The effectiveness of our internal control over financial reporting as of December 31, 2011 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their audit report appearing on page F-3 of this Annual Report on Form 10-K.

ITEM 9B. ***OTHER INFORMATION***

None.

PART III

ITEM 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

The information required by this Item 10 is incorporated in this report by reference to the applicable information in our definitive proxy statement for the 2012 annual meeting of stockholders set forth under the captions *Stock Ownership, Governance of the Company, Item 1. Election of Common Stock Directors* and *Item 2. Ratification of Independent Registered Public Accountants*, which we expect to file with the Securities and Exchange Commission prior to April 30, 2012.

Code of Ethics

We have adopted a code of ethics that applies to all employees, including executive officers, and to directors. The Code of Ethics is available on the Corporate Governance page of our website at *www.siriusxm.com.* If we ever were to amend or waive any provision of our Code of Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or any person performing similar functions, we intend to satisfy our disclosure obligations with respect to any such waiver or amendment by posting such information on our internet website set forth above rather than filing a Form 8-K.

ITEM 11. *EXECUTIVE COMPENSATION*

The information required by this Item 11 is incorporated in this report by reference to the applicable information in our definitive proxy statement for the 2012 annual meeting of stockholders set forth under the captions *Item 1. Election of Common Stock Directors* and *Item 2. Ratification of Independent Registered Public Accountants*, which we expect to file with the Securities and Exchange Commission prior to April 30, 2012.

ITEM 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS*

Certain information required by this item is set forth under the heading “Equity Compensation Plan Information” in Part II, Item 5, of this report.

The additional information required by this Item 12 is incorporated in this report by reference to the applicable information in our definitive proxy statement for the 2012 annual meeting of stockholders set forth under the caption *Stock Ownership*, which we expect to file with the Securities and Exchange Commission prior to April 30, 2012.

ITEM 13. *CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE*

The information required by this Item 13 is incorporated in this report by reference to the applicable information in our definitive proxy statement for the 2012 annual meeting of stockholders set forth under the captions *Governance of the Company* and *Item 1. Election of Common Stock Directors* which we expect to file with the Securities and Exchange Commission prior to April 30, 2012.

ITEM 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

The information required by this Item 14 is incorporated in this report by reference to the applicable information in our definitive proxy statement for the 2012 annual meeting of stockholders set forth under the captions *Item 2. Ratification of Independent Registered Public Accountants — Principal Accountant Fees and Services*, which we expect to file with the Securities and Exchange Commission prior to April 30, 2012.

PART IV

ITEM 15. ***EXHIBITS AND FINANCIAL STATEMENT SCHEDULES***

Documents filed as part of this report:

(1) Financial Statements. See Index to Consolidated Financial Statements appearing on page F-1.

(2) Financial Statement Schedules. See Index to Consolidated Financial Statements appearing on page F-1.

(3) Exhibits. See Exhibit Index following this report, which is incorporated herein by reference.

SIGNATURES

Pursuant to the requirements of 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 this 9th day of February 2012.

SIRIUS XM RADIO INC.

By: /s/ DAVID J. FREAR
David J. Frear
Executive Vice President and
Chief Financial Officer
(Principal Financial Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ EDDY W. HARTENSTEIN **(Eddy W. Hartenstein)**	Chairman of the Board of Directors and Director	February 9, 2012
/s/ MEL KARMAZIN **(Mel Karmazin)**	Chief Executive Officer and Director (Principal Executive Officer)	February 9, 2012
/s/ DAVID J. FREAR **(David J. Frear)**	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 9, 2012
/s/ THOMAS D. BARRY **(Thomas D. Barry)**	Senior Vice President and Controller (Principal Accounting Officer)	February 9, 2012
/s/ JOAN L. AMBLE **(Joan L. Amble)**	Director	February 9, 2012
/s/ LEON D. BLACK **(Leon D. Black)**	Director	February 9, 2012
/s/ DAVID J. A. FLOWERS **(David J. A. Flowers)**	Director	February 9, 2012
/s/ LAWRENCE F. GILBERTI **(Lawrence F. Gilberti)**	Director	February 9, 2012
/s/ JAMES P. HOLDEN **(James P. Holden)**	Director	February 9, 2012
/s/ GREGORY B. MAFFEI **(Gregory B. Maffei)**	Director	February 9, 2012

Signature	Title	Date
/s/ JOHN C. MALONE **(John C. Malone)**	Director	February 9, 2012
/s/ JAMES F. MOONEY **(James F. Mooney)**	Director	February 9, 2012
/s/ JACK SHAW **(Jack Shaw)**	Director	February 9, 2012
/s/ CARL VOGEL **(Carl Vogel)**	Director	February 9, 2012
/s/ VANESSA WITTMAN **(Vanessa Wittman)**	Director	February 9, 2012

SIRIUS XM RADIO INC. AND SUBSIDIARIES

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Sirius XM Radio Inc. and subsidiaries:

We have audited the accompanying consolidated balance sheets of Sirius XM Radio Inc. and subsidiaries as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and cash flows for each of the years in the three-year period ended December 31, 2011. In connection with our audits of the consolidated financial statements, we also have audited the financial statement schedule listed in Item 15(2). These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedule 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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Sirius XM Radio Inc. and subsidiaries as of December 31, 2011 and 2010, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2011, in conformity with U.S. generally accepted accounting principles. Also in our opinion, the related financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Sirius XM Radio Inc. and subsidiaries' internal control over financial reporting as of December 31, 2011, based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 9, 2012 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

/s/ KPMG LLP

New York, New York
February 9, 2012

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Sirius XM Radio Inc. and subsidiaries:

We have audited Sirius XM Radio Inc. and subsidiaries' internal control over financial reporting as of December 31, 2011, based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Sirius XM Radio 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, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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, Sirius XM Radio Inc. and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011, based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Sirius XM Radio Inc. and subsidiaries as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and cash flows for each of the years in the three-year period ended December 31, 2011, and our report dated February 9, 2012 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP

New York, New York
February 9, 2012

SIRIUS XM RADIO INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)	For the Years Ended December 31, 2011	2010	2009
Revenue:			
Subscriber revenue	$2,595,414	$2,414,174	$2,287,503
Advertising revenue, net of agency fees	73,672	64,517	51,754
Equipment revenue	71,051	71,355	50,352
Other revenue	274,387	266,946	83,029
Total revenue	3,014,524	2,816,992	2,472,638
Operating expenses:			
Cost of services:			
Revenue share and royalties	471,149	435,410	397,210
Programming and content	281,234	305,914	308,121
Customer service and billing	259,719	241,680	234,456
Satellite and transmission	75,902	80,947	84,033
Cost of equipment	33,095	35,281	40,188
Subscriber acquisition costs	434,482	413,041	340,506
Sales and marketing	222,773	215,454	228,956
Engineering, design and development	53,435	45,390	41,031
General and administrative	238,738	240,970	227,554
Depreciation and amortization	267,880	273,691	309,450
Restructuring, impairments and related costs	—	63,800	32,807
Total operating expenses	2,338,407	2,351,578	2,244,312
Income from operations	676,117	465,414	228,326
Other income (expense):			
Interest expense, net of amounts capitalized	(304,938)	(295,643)	(315,668)
Loss on extinguishment of debt and credit facilities, net	(7,206)	(120,120)	(267,646)
Interest and investment income (loss)	73,970	(5,375)	5,576
Other income	3,252	3,399	3,355
Total other expense	(234,922)	(417,739)	(574,383)
Income (loss) before income taxes	441,195	47,675	(346,057)
Income tax expense	(14,234)	(4,620)	(5,981)
Net income (loss)	426,961	43,055	(352,038)
Preferred stock beneficial conversion feature	—	—	(186,188)
Net income (loss) attributable to common stockholders	$ 426,961	$ 43,055	$ (538,226)
Net income (loss) per common share:			
Basic	$ 0.11	$ 0.01	$ (0.15)
Diluted	$ 0.07	$ 0.01	$ (0.15)
Weighted average common shares outstanding:			
Basic	3,744,606	3,693,259	3,585,864
Diluted	6,500,822	6,391,071	3,585,864

See accompanying notes to the consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	As of December 31, 2011	As of December 31, 2010
(in thousands, except share and per share data)		
ASSETS		
Current assets:		
Cash and cash equivalents	$ 773,990	$ 586,691
Accounts receivable, net	101,705	121,658
Receivables from distributors	84,817	67,576
Inventory, net	36,711	21,918
Prepaid expenses	125,967	134,994
Related party current assets	14,702	6,719
Deferred tax asset	132,727	44,787
Other current assets	6,335	7,432
Total current assets	1,276,954	991,775
Property and equipment, net	1,673,919	1,761,274
Long-term restricted investments	3,973	3,396
Deferred financing fees, net	42,046	54,135
Intangible assets, net	2,573,638	2,632,688
Goodwill	1,834,856	1,834,856
Related party long-term assets	54,953	33,475
Other long-term assets	35,657	71,487
Total assets	$ 7,495,996	$ 7,383,086
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable and accrued expenses	$ 543,193	$ 593,174
Accrued interest	70,405	72,453
Current portion of deferred revenue	1,333,965	1,201,346
Current portion of deferred credit on executory contracts	284,108	271,076
Current maturities of long-term debt	1,623	195,815
Related party current liabilities	14,302	15,845
Total current liabilities	2,247,596	2,349,709
Deferred revenue	198,135	273,973
Deferred credit on executory contracts	218,199	508,012
Long-term debt	2,683,563	2,695,856
Long-term related party debt	328,788	325,907
Deferred tax liability	1,011,084	914,637
Related party long-term liabilities	21,741	24,517
Other long-term liabilities	82,745	82,839
Total liabilities	6,791,851	7,175,450
Commitments and contingencies (Note 17)		
Stockholders' equity:		
Preferred stock, par value $0.001; 50,000,000 authorized at December 31, 2011 and 2010: Series A convertible preferred stock; no shares issued and outstanding at December 31, 2011 and 2010	—	—
Convertible perpetual preferred stock, series B-1 (liquidation preference of $0.001 per share at December 31, 2011 and 2010); 12,500,000 shares issued and outstanding at December 31, 2011 and 2010	13	13
Convertible preferred stock, series C junior; no shares issued and outstanding at December 31, 2011 and 2010	—	—
Common stock, par value $0.001; 9,000,000,000 shares authorized at December 31, 2011 and 2010; 3,753,201,929 and 3,933,195,112 shares issued and outstanding at December 31, 2011 and 2010, respectively	3,753	3,933
Accumulated other comprehensive income (loss), net of tax	71	(5,861)
Additional paid-in capital	10,484,400	10,420,604
Accumulated deficit	(9,784,092)	(10,211,053)
Total stockholders' equity	704,145	207,636
Total liabilities and stockholders' equity	$ 7,495,996	$ 7,383,086

See accompanying notes to the consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME (LOSS)

	Series A Convertible Preferred Stock		Convertible Perpetual Preferred Stock, Series B-1		Common Stock		Accumulated Other Comprehensive Income (loss)	Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
(in thousands, except share and per share data)	Shares	Amount	Shares	Amount	Shares	Amount				
Balance at January 1, 2009	24,808,959	$ 25	—	$ —	3,651,765,837	$ 3,652	$ (7,871)	$ 9,795,951	$ (9,715,882)	$ 75,875
Net loss									(352,038)	(352,038)
Other comprehensive loss:										
Unrealized gain on available-for-sale securities	—	—	—	—	—	—	473	—	—	473
Foreign currency translation adjustment, net of tax of $110	—	—	—	—	—	—	817	—	—	817
Total comprehensive loss	—	—	—	—	—	—	—	—	—	(350,748)
Issuance of preferred stock — related party, net of issuance costs	—	—	12,500,000	13	—	—	—	410,179	(186,188)	224,004
Issuance of common stock to employees and employee benefit plans, net of forfeitures	—	—	—	—	8,511,009	8	—	2,622	—	2,630
Structuring fee on 10% Senior PIK Secured Notes due 2011	—	—	—	—	59,178,819	59	—	5,859	—	5,918
Share-based payment expense	—	—	—	—	—	—	—	71,388	—	71,388
Returned shares under share borrow agreements	—	—	—	—	(60,000,000)	(60)	—	60	—	—
Issuance of restricted stock units in satisfaction of accrued compensation	—	—	—	—	83,803,422	84	—	31,207	—	31,291
Exchange of 2.5% Convertible Notes due 2009, including accrued interest	—	—	—	—	139,400,000	139	—	35,025	—	35,164
Balance at December 31, 2009	24,808,959	$ 25	12,500,000	$ 13	3,882,659,087	$ 3,882	$ (6,581)	$10,352,291	$ (10,254,108)	$ 95,522
Net income									43,055	43,055
Other comprehensive income:										
Unrealized gain on available-for-sale securities	—	—	—	—	—	—	469	—	—	469
Foreign currency translation adjustment, net of tax of $63	—	—	—	—	—	—	251	—	—	251
Total comprehensive income	—	—	—	—	—	—	—	—	—	43,775
Issuance of common stock to employees and employee benefit plans, net of										

forfeitures	—	—	—	—	6,175,089	6	—	5,265	—	5,271
Share-based payment expense	—	—	—	—	—	—	—	52,229	—	52,229
Exercise of options and vesting of restricted stock units	—	—	—	—	19,551,977	20	—	10,819	—	10,839
Conversion of preferred stock to common stock	(24,808,959)	(25)	—	—	24,808,959	25	—	—	—	—
Balance at December 31, 2010	—	$ —	12,500,000	$ 13	3,933,195,112	$ 3,933	$ (5,861)	$10,420,604	$ (10,211,053)	$ 207,636
Net income									426,961	426,961
Other comprehensive income:										
Realized loss on XM Canada investment foreign currency translation adjustment	—	—	—	—	—	—	6,072	—	—	6,072
Foreign currency translation adjustment, net of tax of $11	—	—	—	—	—	—	(140)	—	—	(140)
Total comprehensive income	—	—	—	—	—	—	—	—	—	432,893
Issuance of common stock to employees and employee benefit plans, net of forfeitures	—	—	—	—	1,882,801	2	—	3,480	—	3,482
Share-based payment expense	—	—	—	—	—	—	—	48,581	—	48,581
Exercise of options and vesting of restricted stock units	—	—	—	—	13,401,048	13	—	11,540	—	11,553
Issuance of common stock upon exercise of warrants	—	—	—	—	7,122,951	7	—	(7)	—	—
Return of shares under share borrow agreements	—	—	—	—	(202,399,983)	(202)	—	202	—	—
Balance at December 31, 2011	—	$ —	12,500,000	$ 13	3,753,201,929	$ 3,753	$ 71	$10,484,400	$ (9,784,092)	$ 704,145

See accompanying notes to the consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Years Ended December 31,		
(in thousands)	2011	2010	2009
Cash flows from operating activities:			
Net income (loss)	$ 426,961	$ 43,055	$(352,038)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	267,880	273,691	309,450
Non-cash interest expense, net of amortization of premium	39,515	42,841	43,066
Provision for doubtful accounts	33,164	32,379	30,602
Restructuring, impairments and related costs	—	66,731	26,964
Amortization of deferred income related to equity method investment	(2,776)	(2,776)	(2,776)
Loss on extinguishment of debt and credit facilities, net	7,206	120,120	267,646
Gain on merger of unconsolidated entities	(75,768)	—	—
Loss on unconsolidated entity investments, net	6,520	11,722	13,664
Loss on disposal of assets	269	1,017	—
Share-based payment expense	53,190	60,437	73,981
Deferred income taxes	8,264	2,308	4,359
Other non-cash purchase price adjustments	(275,338)	(250,727)	(202,054)
Distribution from investment in unconsolidated entity	4,849	—	—
Changes in operating assets and liabilities:			
Accounts receivable	(13,211)	(39,236)	(42,158)
Receivables from distributors	(17,241)	(11,023)	(2,788)
Inventory	(14,793)	(5,725)	8,269
Related party assets	30,036	(9,803)	15,305
Prepaid expenses and other current assets	8,525	75,374	10,027
Other long-term assets	36,490	17,671	86,674
Accounts payable and accrued expenses	(32,010)	5,420	(46,645)
Accrued interest	(2,048)	(884)	2,429
Deferred revenue	55,336	133,444	93,578
Related party liabilities	(1,542)	(53,413)	50,172
Other long-term liabilities	152	272	46,103
Net cash provided by operating activities	543,630	512,895	433,830
Cash flows from investing activities:			
Additions to property and equipment	(137,429)	(311,868)	(248,511)
Purchase of restricted investments	(826)	—	—
Sale of restricted and other investments	—	9,454	—
Release of restricted investments	250	—	—
Return of capital from investment in unconsolidated entity	10,117	—	—
Net cash used in investing activities	(127,888)	(302,414)	(248,511)
Cash flows from financing activities:			
Proceeds from exercise of stock options	11,553	10,839	—
Preferred stock issuance, net of costs	—	—	(3,712)
Long-term borrowings, net of costs	—	1,274,707	582,612
Related party long-term borrowings, net of costs	—	196,118	362,593
Payment of premiums on redemption of debt	(5,020)	(84,326)	(17,075)
Repayment of long-term borrowings	(234,976)	(1,262,396)	(755,447)
Repayment of related party long-term borrowings	—	(142,221)	(351,247)
Net cash used in financing activities	(228,443)	(7,279)	(182,276)
Net increase in cash and cash equivalents	187,299	203,202	3,043
Cash and cash equivalents at beginning of period	586,691	383,489	380,446
Cash and cash equivalents at end of period	$ 773,990	$ 586,691	$ 383,489

See accompanying notes to the consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS — (Continued)

(in thousands)	For the Years Ended December 31, 2011	2010	2009
Supplemental Disclosure of Cash and Non-Cash Flow Information			
Cash paid during the period for:			
Interest, net of amounts capitalized	$258,676	$241,160	$257,328
Non-cash investing and financing activities:			
Share-based payments in satisfaction of accrued compensation	$ —	$ —	$ 31,291
Common stock issued in exchange of 2.5% Convertible Notes due 2009 including, accrued interest	$ —	$ —	$ 18,000
Structuring fee on 10% Senior PIK Secured Notes due 2011	$ —	$ —	$ 5,918
Preferred stock issued to Liberty Media	$ —	$ —	$227,716
Release of restricted investments	$ —	$ —	$137,850
In-orbit satellite performance incentive	$ —	$ 21,450	$ 14,905
Sale-leaseback of equipment	$ —	$ 5,305	$ —
Common stock issuance upon exercise of warrants	$ 7	$ —	$ —
Conversion of Series A preferred stock to common stock	$ —	$ 25	$ —

See accompanying notes to the consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(Dollar amounts in thousands, unless otherwise stated)

(1) Business

We broadcast our music, sports, entertainment, comedy, talk, news, traffic and weather channels in the United States on a subscription fee basis through two proprietary satellite radio systems. Subscribers can also receive certain of our music and other channels over the Internet, including through applications for mobile devices. We have agreements with every major automaker (“OEMs”) to offer satellite radios as factory- or dealer-installed equipment in their vehicles. We also distribute our satellite radios through retail locations nationwide and through our website. Satellite radio services are also offered to customers of certain daily rental car companies.

Our primary source of revenue is subscription fees, with most of our customers subscribing on an annual, semi-annual, quarterly or monthly basis. We offer discounts for prepaid and long-term subscription plans, as well as discounts for multiple subscriptions on each platform. We also derive revenue from activation and other subscription-related fees, the sale of advertising on select non-music channels, the direct sale of satellite radios, components and accessories, and other ancillary services, such as our Backseat TV, data and weather services.

In certain cases, automakers include a subscription to our radio services in the sale or lease price of new and pre-owned vehicles. The length of these prepaid subscriptions varies, but is typically three to twelve months. In many cases, we receive subscription payments from automakers in advance of the activation of our service. We also reimburse various automakers for certain costs associated with satellite radios installed in their vehicles.

(2) Summary of Significant Accounting Policies

Principles of Consolidation

The accompanying consolidated financial statements of Sirius XM Radio Inc. and subsidiaries have been prepared in accordance with U.S. generally accepted accounting principles (“GAAP”). All significant intercompany transactions have been eliminated in consolidation.

Basis of Presentation

In the opinion of management, all normal recurring adjustments necessary for a fair presentation of our consolidated financial statements as of December 31, 2011 and 2010, and for the years ended December 31, 2011, 2010 and 2009 have been made.

We have evaluated events subsequent to the balance sheet date and prior to the filing of this Annual Report on Form 10-K for the year ended December 31, 2011 and have determined no events have occurred that would require adjustment to or disclosure in our consolidated financial statements.

Reclassifications

Certain amounts in our prior period consolidated financial statements have been reclassified to conform to our current period presentation.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and footnotes. Estimates, by their nature, are based on judgment and available information. Actual results could differ materially from those estimates.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Significant estimates inherent in the preparation of the accompanying consolidated financial statements include revenue recognition, asset impairment, depreciable lives of our satellites, share-based payment expense, and valuation allowances against deferred tax assets. Economic conditions in the United States could have a material impact on our accounting estimates.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash on hand, money market funds, in-transit credit card receipts and highly liquid investments with an original maturity of three months or less when purchased.

Equity Method Investments

We hold an equity method investment in Sirius XM Canada. Investments in which we have the ability to exercise significant influence but not control are accounted for pursuant to the equity method of accounting. We recognize our proportionate share of earnings or losses of our affiliates as they occur as a component of Other income (expense) in our consolidated statements of operations.

The difference between our investment and our share of the fair value of the underlying net assets of our affiliates is first allocated to either finite-lived intangibles or indefinite-lived intangibles and the balance is attributed to goodwill. We follow ASC 350, *Intangibles — Goodwill and Other* (“ASC 350”), which requires that equity method finite-lived intangibles be amortized over their estimated useful life while indefinite-lived intangibles and goodwill are not amortized. The amortization of equity method finite-lived intangible assets is recorded in Interest and investment income in our consolidated statements of operations. We periodically evaluate our equity method investments to determine if there has been an other than temporary decline below carrying value. Equity method finite-lived intangibles, indefinite-lived intangibles and goodwill are included in the carrying amount of the investment.

Property and Equipment

Property and equipment, including satellites, are stated at cost less accumulated depreciation and amortization. Equipment under capital leases is stated at the present value of minimum lease payments. Depreciation and amortization are calculated using the straight-line method over the following estimated depreciable lives:

Satellite system	2 - 15 years
Terrestrial repeater network	5 - 15 years
Broadcast studio equipment	3 - 15 years
Capitalized software and hardware	3 - 7 years
Satellite telemetry, tracking and control facilities	3 - 15 years
Furniture, fixtures, equipment and other	2 - 7 years
Building	20 or 30 years
Leasehold improvements	Lesser of useful life or remaining lease term

We review long-lived assets, such as property and equipment, and purchased intangibles subject to amortization for impairment whenever events or changes in circumstances indicate the carrying amount may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds the estimated future cash flows, an impairment charge is recognized for the amount by which the carrying amount exceeds the fair value of the asset.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Goodwill and Other Intangible Assets

Goodwill represents the excess of the purchase price over the estimated fair value of net tangible and identifiable intangible assets acquired in business combinations. Our annual impairment assessment of our single reporting unit is performed as of October 1st of each year, and an assessment is performed at other times if events or circumstances indicate it is more likely than not that the asset is impaired. Step one of the impairment assessment compares the fair value of the entity to its carrying value and if the fair value exceeds its carrying value, goodwill is not impaired. If the carrying value exceeds the fair value, the implied fair value of goodwill is compared to the carrying value of goodwill. If the implied fair value exceeds the carrying value then goodwill is not impaired; otherwise, an impairment loss will be recorded by the amount the carrying value exceeds the implied fair value. We did not record any impairments in 2011, 2010 or 2009.

The impairment test for other intangible assets not subject to amortization consists of a comparison of the fair value of the intangible asset with its carrying value. This test is performed as of October 1st of each year, and an assessment is performed at other times if events or circumstances indicate it is more likely than not that the asset is impaired. Our indefinite life intangibles include FCC licenses and trademark. If the carrying value of the intangible asset exceeds its fair value, an impairment loss is recognized in an amount equal to that excess.

We use independent appraisals to assist in determining the fair value of our FCC licenses and trademark. The income approach, which is commonly called the “Jefferson Pilot Method” or the “Greenfield Method”, has been consistently used to estimate the fair value of our FCC licenses. This method attempts to isolate the income that is properly attributable to the license alone (that is, apart from tangible and intangible assets and goodwill). It is based upon modeling a hypothetical “Greenfield” build-up to a normalized enterprise that, by design, lacks inherent goodwill and has essentially purchased (or added) all other assets as part of the build-up process. The methodology assumes that, rather than acquiring such an operation as a going concern, the buyer would hypothetically obtain a license at nominal cost and build a new operation with similar attributes from inception. The significant assumption was that the hypothetical start up entity would begin its network build out phase at the impairment testing date and revenues and variable costs would not be generated until the satellite network was operational, approximately five years from inception. The Relief from Royalty method valuation approach was utilized to value our trademark. This methodology involves the estimation of an amount of hypothetical royalty income that could be generated if the asset was licensed to an independent, third-party owner. The value of the intangible is the present value of the prospective stream of hypothetical royalty income that would be generated over the useful life of the asset. We did not record any impairments in 2011, 2010 or 2009.

Other intangible assets with finite lives consists primarily of customer relationships acquired in business combinations, licensing agreements, and certain IT related costs. These assets are amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment under the provisions of ASC 360-10-35, *Property, Plant and Equipment/Overall/Subsequent Measurement*. We review intangible assets subject to amortization for impairment whenever events or circumstances indicate that the carrying amount of an asset may not be recoverable. If the sum of the expected cash flows, undiscounted and without interest, is less than the carrying amount of the asset, an impairment loss is recognized as the amount by which the carrying amount of the asset exceeds its fair value. We did not record any impairments in 2011, 2010 or 2009.

Revenue Recognition

We derive revenue primarily from subscribers, advertising and direct sales of merchandise. Revenue from subscribers consists of subscription fees; revenue derived from our agreements with daily rental fleet programs; and non-refundable activation and other fees. Revenue is recognized as it is realized or realizable and earned.

We recognize subscription fees as our services are provided.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

At the time of sale, vehicle owners purchasing or leasing a vehicle with a subscription to our service typically receive between a three and twelve month prepaid subscription. Prepaid subscription fees received from certain automakers are recorded as deferred revenue and amortized to revenue ratably over the service period which commences upon retail sale and activation.

Activation fees are recognized ratably over the estimated term of a subscriber relationship, estimated to be approximately 3.5 years during 2011, 2010 and 2009. The estimated term of a subscriber relationship is based on historical experience.

We recognize revenue from the sale of advertising as the advertising is broadcast. Agency fees are calculated based on a stated percentage applied to gross billing revenue for our advertising inventory and are reported as a reduction of Advertising revenue. We pay certain third parties a percentage of Advertising revenue. Advertising revenue is recorded gross of such revenue share payments as we are the primary obligor in the transaction. Advertising revenue share payments are recorded to Revenue share and royalties during the period in which the advertising is broadcast.

Equipment revenue and royalties from the sale of satellite radios, components and accessories are recognized upon shipment, net of discounts and rebates. Shipping and handling costs billed to customers are recorded as revenue. Shipping and handling costs associated with shipping goods to customers are reported as a component of Cost of equipment.

ASC 605, *Revenue Recognition*, provides guidance on how and when to recognize revenues for arrangements that may involve the delivery or performance of multiple products, services and/or rights to use assets. Revenue arrangements with multiple deliverables are required to be divided into separate units of accounting if the deliverables in the arrangement meet certain criteria. Arrangement consideration must be allocated at the inception of the arrangement to all deliverables based on their relative selling price, which has been determined using vendor specific objective evidence of selling price of self-pay customers.

Revenue Share

We share a portion of the subscription revenues earned from subscribers with certain automakers. The terms of the revenue share agreements vary with each automaker, but are typically based upon the earned audio revenue as reported or gross billed audio revenue. Revenue share is recorded as an expense in our consolidated statement of operations and not as a reduction to revenue.

Programming Costs

Programming costs which are for a specified number of events are amortized on an event-by-event basis; programming costs which are for a specified season or period are amortized over the season or period on a straight-line basis. We allocate a portion of certain programming costs which are related to sponsorship and marketing activities to Sales and marketing expenses on a straight-line basis over the term of the agreement.

Advertising Costs

Media is expensed when aired and advertising production costs are expensed as incurred. Market development funds consist of fixed and variable payments to reimburse retailers for the cost of advertising and other product awareness activities. Fixed market development funds are expensed over the periods specified in the applicable agreement; variable costs are expensed when aired and production costs are expensed as incurred. During the years ended December 31, 2011, 2010 and 2009, we recorded advertising costs of $116,694, $110,050 and $128,784, respectively. These costs are reflected in Sales and marketing expense in our consolidated statements of operations.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Subscriber Acquisition Costs

Subscriber acquisition costs consist of costs incurred to acquire new subscribers and include hardware subsidies paid to radio manufacturers, distributors and automakers, including subsidies paid to automakers who include a satellite radio and a prepaid subscription to our service in the sale or lease price of a new vehicle; subsidies paid for chip sets and certain other components used in manufacturing radios; device royalties for certain radios; commissions paid to retailers and automakers as incentives to purchase, install and activate radios; product warranty obligations; and provisions for inventory allowance. Subscriber acquisition costs do not include advertising, loyalty payments to distributors and dealers of radios and revenue share payments to automakers and retailers of radios.

Subsidies paid to radio manufacturers and automakers are expensed upon installation, shipment, receipt of product or activation and are included in Subscriber acquisition costs because we are responsible for providing the service to the customers. Commissions paid to retailers and automakers are expensed upon either the sale or activation of radios. Chip sets that are shipped to radio manufacturers and held on consignment are recorded as inventory and expensed as Subscriber acquisition costs when placed into production by radio manufacturers. Costs for chip sets not held on consignment are expensed as Subscriber acquisition costs when the automaker confirms receipt.

We record product warranty obligations in accordance with ASC 460, *Guarantees*, which requires a guarantor to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken by issuing the guarantee. We warrant that certain products sold through our retail and direct to consumer distribution channels will perform in all material respects in accordance with specifications in effect at the time of the purchase of the products by the customer. The product warranty period on our products is 90 days from the purchase date for repair or replacement of components and/or products that contain defects of material or workmanship. We record a liability for costs that we expect to incur under our warranty obligations when the product is shipped from the manufacturer. Factors affecting the warranty liability include the number of units sold and historical and anticipated rates of claims and costs per claim. We periodically assess the adequacy of our warranty liability based on changes in these factors.

Research & Development Costs

Research and development costs are expensed as incurred and primarily include the cost of new product development, chip set design, software development and engineering. During the years ended December 31, 2011, 2010 and 2009, we recorded research and development costs of $48,574, $40,043 and $38,852, respectively. These costs are reported as a component of Engineering, design and development expense in our consolidated statements of operations.

Share-Based Compensation

We account for equity instruments granted to employees in accordance with ASC 718, *Compensation — Stock Compensation*. ASC 718 requires all share-based compensation payments to be recognized in the financial statements based on fair value. ASC 718 requires forfeitures to be estimated at the time of grant and revised in subsequent periods if actual forfeitures differ from initial estimates. We use the Black-Scholes-Merton option-pricing model to value stock option awards and have elected to treat awards with graded vesting as a single award. Share-based compensation expense is recognized ratably over the requisite service period, which is generally the vesting period, net of forfeitures. We measure non-vested stock awards using the fair market value of restricted shares of common stock on the day the award is granted.

Fair value as determined using Black-Scholes-Merton model varies based on assumptions used for the expected life, expected stock price volatility and risk-free interest rates. In 2011, we estimate fair value of awards

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

granted using the hybrid approach for volatility, which weights observable historical volatility and implied volatility of qualifying actively traded options on our common stock. In 2010 and 2009, due to the lack of qualifying actively traded options on our common stock, we utilized a 100% weighting to observable historical volatility. The expected life assumption represents the weighted-average period stock-based awards are expected to remain outstanding. These expected life assumptions are established through a review of historical exercise behavior of stock-based award grants with similar vesting periods. Where historical patterns do not exist, contractual terms are used. The risk-free interest rate represents the daily treasury yield curve rate at the grant date based on the closing market bid yields on actively traded U.S. treasury securities in the over-the-counter market for the expected term. Our assumptions may change in future periods.

Equity instruments granted to non-employees are accounted for in accordance with ASC 505, *Equity*. The final measurement date for the fair value of equity instruments with performance criteria is the date that each performance commitment for such equity instrument is satisfied or there is a significant disincentive for non-performance.

Stock-based awards granted to employees, non-employees and members of our board of directors include warrants, stock options, restricted stock and restricted stock units.

Income Taxes

Deferred income taxes are recognized for the tax consequences related to temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for tax purposes at each year-end, based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. A valuation allowance is recognized when, based on the weight of all available evidence, it is considered more likely than not that all, or some portion, of the deferred tax assets will not be realized. Income tax expense is the sum of current income tax plus the change in deferred tax assets and liabilities.

ASC 740, *Income Taxes*, requires a company to first determine whether it is more-likely-than-not that a tax position will be sustained based on its technical merits as of the reporting date, assuming that taxing authorities will examine the position and have full knowledge of all relevant information. A tax position that meets this more-likely-than-not threshold is then measured and recognized at the largest amount of benefit that is greater than fifty percent likely to be realized upon effective settlement with a taxing authority. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs. We record interest and penalties related to uncertain tax positions in income tax expense in our consolidated statement of operations.

We report revenues net of any tax assessed by a governmental authority that is both imposed on, and concurrent with, a specific revenue-producing transaction between a seller and a customer in our consolidated statements of operations.

As of December 31, 2011 and 2010, we maintained a full valuation allowance against our deferred tax assets due to our prior history of pre-tax losses and uncertainty about the timing of and ability to generate taxable income in the future and our assessment that the realization of the deferred tax assets did meet the “more likely than not” criterion under ASC 740.

Fair Value of Financial Instruments

The fair value of a financial instrument is the amount at which the instrument could be exchanged in an orderly transaction between market participants to sell the asset or transfer the liability. As of December 31, 2011 and 2010, the carrying amounts of cash and cash equivalents, accounts and other receivables, and accounts payable approximated fair value due to the short-term nature of these instruments.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

ASC 820, *Fair Value Measurements and Disclosures*, establishes a fair value hierarchy for input into valuation techniques as follows: i) Level 1 input — unadjusted quoted prices in active markets for identical instrument; ii) Level 2 input — observable market data for the same or similar instrument but not Level 1; and iii) Level 3 input — unobservable inputs developed using management's assumptions about the inputs used for pricing the asset or liability. We use Level 3 inputs to fair value the 8% convertible unsecured subordinated debentures issued by Sirius XM Canada. This investment is not material to our consolidated results of operations or financial position.

Investments are periodically reviewed for impairment and a write down is recorded whenever declines in fair value below carrying value are determined to be other than temporary. In making this determination, we consider, among other factors, the severity and duration of the decline as well as the likelihood of a recovery within a reasonable timeframe.

The fair value for publicly traded instruments is determined using quoted market prices while the fair value for non-publicly traded instruments is based upon estimates from a market maker and brokerage firm. As of December 31, 2011 and 2010, the carrying value of our debt was $3,013,974 and $3,217,578, respectively; and the fair value approximated $3,506,546 and $3,722,905, respectively.

Recent Accounting Pronouncements

In May 2011, the FASB issued Accounting Standards Update No. 2011-04, *Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and International Financial Reporting Standards (Topic 820) — Fair Value Measurement* ("ASU 2011-04"), to provide a consistent definition of fair value and ensure that the fair value measurement and disclosure requirements are similar between U.S. GAAP and International Financial Reporting Standards. ASU 2011-04 changes certain fair value measurement principles and enhances the disclosure requirements particularly for Level 3 fair value measurements. The amendments are not expected to have a significant impact on companies that apply U.S. GAAP. This standard is effective for interim and annual periods beginning after December 15, 2011 and will be applied prospectively. The impact of our pending adoption of ASU 2011-04 will not be material to our consolidated financial statements.

In June 2011, the FASB issued Accounting Standards Update No. 2011-05, *Comprehensive Income (Topic 220) — Presentation of Comprehensive Income* ("ASU 2011-05"), to require an entity to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. ASU 2011-05 eliminates the option to present the components of other comprehensive income as part of the statement of equity. The standard does not change the items which must be reported in other comprehensive income, how such items are measured or when they must be reclassified to net income. This standard is effective for interim and annual periods beginning after December 15, 2011 and will be applied retrospectively. The FASB has deferred the requirement to present reclassification adjustments for each component of accumulated other comprehensive income in both net income and other comprehensive income. Companies are required to either present amounts reclassified out of other comprehensive income on the face of the financial statements or disclose those amounts in the notes to the financial statements. During the deferral period, there is no requirement to separately present or disclose the reclassification adjustments into net income. The effective date of this deferral will be consistent with the effective date of the ASU 2011-05. ASU 2011-05 affects financial statement presentation only and will have no impact on our results of consolidated financial statements.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(3) Earnings per Share

Basic net income (loss) per common share is calculated using the weighted average common shares outstanding during each reporting period. Diluted net income (loss) per common share adjusts the weighted average common shares outstanding for the potential dilution that could occur if common stock equivalents (convertible debt and preferred stock, warrants, stock options, restricted stock and restricted stock units) were exercised or converted into common stock, calculated using the treasury stock method. For the years ended December 31, 2011 and 2010, common stock equivalents of approximately 419,752,000 and 689,922,000, respectively, were excluded from the calculation of diluted net income per common share as the effect would have been anti-dilutive. Due to the net loss for the year ended December 31, 2009, common stock equivalents of approximately 3,381,905,000 were excluded from the calculation of diluted net loss per common share as the effect would have been anti-dilutive.

(in thousands, except per share data)	For the Years Ended December 31, 2011	2010	2009
Net income (loss) available to common stockholders	$ 426,961	$ 43,055	$ (538,226)
Average common shares outstanding-basic	3,744,606	3,693,259	3,585,864
Dilutive effect of equity instruments	2,756,216	2,697,812	—
Average common shares outstanding-diluted	6,500,822	6,391,071	3,585,864
Net income (loss) per common share			
Basic	$ 0.11	$ 0.01	$ (0.15)
Diluted	$ 0.07	$ 0.01	$ (0.15)

(4) Accounts Receivable, net

Accounts receivable, net are stated at amounts due from customers net of an allowance for doubtful accounts. Our allowance for doubtful accounts considers historical experience, the age of certain receivable balances, current economic conditions and other factors that may affect the counterparty's ability to pay.

Accounts receivable, net, consists of the following:

	December 31, 2011	December 31, 2010
Gross accounts receivable	$ 111,637	$ 131,880
Allowance for doubtful accounts	(9,932)	(10,222)
Total accounts receivable, net	$ 101,705	$ 121,658

Receivables from distributors include billed and unbilled amounts due from OEMs for radio services included in the sale or lease price of vehicles, as well as billed amounts due from retailers. Receivables from distributors consist of the following:

	December 31, 2011	December 31, 2010
Billed	$ 44,618	$ 30,456
Unbilled	40,199	37,120
Total	$ 84,817	$ 67,576

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(5) Inventory, net

Inventory consists of finished goods, refurbished goods, chip sets and other raw material components used in manufacturing radios. Inventory is stated at the lower of cost, determined on a first-in, first-out basis, or market. We record an estimated allowance for inventory that is considered slow moving, obsolete or whose carrying value is in excess of net realizable value. The provision related to products purchased for resale in our direct to consumer distribution channel and components held for resale by us is reported as a component of Cost of equipment in our consolidated statements of operations. The provision related to inventory consumed in our OEM and retail distribution channel is reported as a component of Subscriber acquisition costs in our consolidated statements of operations.

Inventory, net, consists of the following:

	December 31, 2011	December 31, 2010
Raw materials	$ 24,134	$ 18,181
Finished goods	28,007	24,492
Allowance for obsolescence	(15,430)	(20,755)
Total inventory, net	$ 36,711	$ 21,918

(6) Goodwill

Goodwill represents the excess of the purchase price over the estimated fair value of net tangible and identifiable intangible assets acquired in business combinations. Our annual impairment assessment is performed as of October 1st of each year, and an assessment is performed at other times if events or circumstances indicate it is more likely than not that the asset is impaired. At October 1, 2011 and 2010, the fair value of our single reporting unit substantially exceeded its carrying value and therefore was not at risk of failing step one of ASC 350-20, *Goodwill* (“ASC 350-20”). Subsequent to our annual evaluation of the carrying value of goodwill, there were no events or circumstances that triggered the need for an interim evaluation for impairment. There were no changes in the carrying value of our goodwill during the years ended December 31, 2011, 2010 and 2009.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(7) Intangible Assets

Intangible assets consisted of the following:

		December 31, 2011			December 31, 2010		
	Weighted Average Useful Lives	Gross Carrying Value	Accumulated Amortization	Net Carrying Value	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Indefinite life intangible assets:							
FCC licenses	Indefinite	$2,083,654	$ —	$2,083,654	$2,083,654	$ —	$2,083,654
Trademark	Indefinite	250,000	—	250,000	250,000	—	250,000
Definite life intangible assets:							
Subscriber relationships	9 years	380,000	(191,201)	188,799	380,000	(144,325)	235,675
Licensing agreements	9.1 years	78,897	(34,145)	44,752	78,897	(24,130)	54,767
Proprietary software	6 years	16,552	(11,507)	5,045	16,552	(9,566)	6,986
Developed technology	10 years	2,000	(683)	1,317	2,000	(483)	1,517
Leasehold interests	7.4 years	132	(61)	71	132	(43)	89
Total intangible assets		$2,811,235	$ (237,597)	$2,573,638	$2,811,235	$ (178,547)	$2,632,688

Indefinite Life Intangible Assets

We have identified our FCC licenses and the XM trademark as indefinite life intangible assets after considering the expected use of the assets, the regulatory and economic environment within which they are used and the effects of obsolescence on their use.

We hold FCC licenses to operate our satellite digital audio radio service and provide ancillary services. The following table outlines the years in which each of our licenses expires:

FCC license	Expiration year
SIRIUS FM-1 satellite	2017
SIRIUS FM-2 satellite	2017
SIRIUS FM-3 satellite	2017
SIRIUS FM-4 satellite(1)	2017
SIRIUS FM-5 satellite	2017
SIRIUS FM-6 satellite	(2)
XM-1 satellite	2014
XM-2 satellite	2014
XM-3 satellite	2013
XM-4 satellite	2014
XM-5 satellite	2018

(1) In 2010, we retired our FM-4 ground spare satellite. We still maintain the FCC license for this satellite.

(2) We hold an FCC license for our FM-6 satellite, which will expire eight years from when this satellite is launched and placed into operation.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Prior to expiration, we are required to apply for a renewal of our FCC licenses. The renewal and extension of our licenses is reasonably certain at minimal cost, which is expensed as incurred. Each of the FCC licenses authorizes us to use the broadcast spectrum, which is a renewable, reusable resource that does not deplete or exhaust over time.

In connection with the Merger, $250,000 of the purchase price was allocated to the XM trademark. As of December 31, 2011, there were no legal, regulatory or contractual limitations associated with the XM trademark.

Our annual impairment assessment of our indefinite intangible assets is performed as of October 1st of each year. An assessment is made at other times if events or changes in circumstances indicate that it is more likely than not that the assets have been impaired. At October 1, 2011 and 2010, the fair value of our indefinite intangible assets substantially exceeded its carrying value and therefore was not at risk of impairment. Subsequent to our annual evaluation of the carrying value of goodwill, there were no events or circumstances that triggered the need for an interim evaluation for impairment.

Definite Life Intangible Assets

Subscriber relationships are amortized on an accelerated basis over 9 years, which reflects the estimated pattern in which the economic benefits will be consumed. Other definite life intangible assets include certain licensing agreements, which are amortized over a weighted average useful life of 9.1 years on a straight-line basis.

Amortization expense for all definite life intangible assets was $59,050, $66,324 and $76,587 for the years ended December 31, 2011, 2010 and 2009, respectively. Expected amortization expense for each of the fiscal years through December 31, 2016 and for periods thereafter is as follows:

Year ending December 31,	Amount
2012	$ 53,680
2013	47,357
2014	38,879
2015	37,553
2016	31,959
Thereafter	30,556
Total definite life intangibles assets, net	$239,984

(8) Subscriber Revenue

Subscriber revenue consists of subscription fees, revenue derived from agreements with certain daily rental fleet operators, non-refundable activation and other fees. Revenues received from OEMs for subscriptions included in the sale or lease price of vehicles are also included in subscriber revenue over the service period.

Subscriber revenue consists of the following:

	For the Years Ended December 31,		
	2011	2010	2009
Subscription fees	$2,581,433	$2,398,146	$2,265,666
Activation fees	13,981	16,028	21,837
Total subscriber revenue	$2,595,414	$2,414,174	$2,287,503

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(9) Interest Costs

We capitalized a portion of the interest on funds borrowed to finance the construction costs of our satellites and related launch vehicles for our FM-6 satellite for the year ended December 31, 2011 and for our FM-6 and XM-5 satellites for the years ended December 31, 2010 and 2009. We also incur interest costs on all of our debt instruments and on our satellite incentive agreements. The following is a summary of our interest costs:

	For the Years Ended December 31,		
	2011	2010	2009
Interest costs charged to expense	$304,938	$295,643	$315,668
Interest costs capitalized	33,522	63,880	61,201
Total interest costs incurred	$338,460	$359,523	$376,869

Included in interest costs incurred is non-cash interest expense, consisting of amortization related to original issue discounts, premiums and deferred financing fees of $39,515, $42,841 and $43,066 for the years ended December 31, 2011, 2010 and 2009, respectively.

(10) Property and Equipment

Property and equipment, net, consists of the following:

	December 31, 2011	December 31, 2010
Satellite system	$ 1,943,537	$ 1,943,537
Terrestrial repeater network	112,440	109,582
Leasehold improvements	43,455	43,567
Broadcast studio equipment	53,903	51,985
Capitalized software and hardware	193,301	163,689
Satellite telemetry, tracking and control facilities	60,539	57,665
Furniture, fixtures, equipment and other	60,283	63,265
Land	38,411	38,411
Building	57,185	56,685
Construction in progress	372,508	297,771
Total property and equipment	2,935,562	2,826,157
Accumulated depreciation and amortization	(1,261,643)	(1,064,883)
Property and equipment, net	$ 1,673,919	$ 1,761,274

Construction in progress consists of the following:

	December 31, 2011	December 31, 2010
Satellite system	$ 343,932	$ 262,744
Terrestrial repeater network	19,194	19,239
Other	9,382	15,788
Construction in progress	$ 372,508	$ 297,771

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Depreciation and amortization expense on property and equipment was $208,830, $207,367 and $232,863 for the years ended December 31, 2011, 2010 and 2009, respectively. We retired property and equipment of $12,158 during the year ended December 31, 2011 and $155,000, which included our FM-4 satellite, during the year ended December 31, 2010.

Satellites

We currently own a fleet of nine orbiting satellites. The chart below provides certain information on these satellites:

Satellite Designation	Year Delivered	Estimated End of Depreciable Life
FM-1	2000	2013
FM-2	2000	2013
FM-3	2000	2015
FM-5	2009	2024
XM-1	2001	2013
XM-2	2001	2013
XM-3	2005	2020
XM-4	2006	2021
XM-5	2010	2025

We own four orbiting satellites for use in the Sirius system. Space Systems/Loral has constructed another satellite (FM-6) for use in this system.

In 2010, we recorded an other than temporary impairment charge of $56,100 to Restructuring, impairments, and related costs in our consolidated statement of operations for FM-4, a ground spare satellite held in storage since 2002. We determined that the probability of launching FM-4 was remote due to the launch of XM-5 in 2010.

We own five orbiting satellites for use in the XM system. Four of these satellites were manufactured by Boeing Satellite Systems International and one was manufactured by Space Systems/Loral.

During the years ended December 31, 2011 and 2010, we capitalized expenditures, including interest, of $81,189 and $223,928, respectively, related to the construction of our FM-6 and XM-5 satellites and related launch vehicles.

(11) Related Party Transactions

We had the following related party balances at December 31, 2011 and 2010:

	Related party current assets		Related party long-term assets		Related party current liabilities		Related party long-term liabilities		Related party long-term debt	
	2011*	2010	2011*	2010	2011*	2010	2011*	2010	2011*	2010
Liberty Media	$ —	$ —	$ 1,212	$ 1,571	$ 9,722	$ 9,765	$ —	$ —	$328,788	$325,907
Sirius XM Canada	14,702	—	53,741	—	4,580	—	21,741	—	—	—
Sirius Canada	—	5,613	—	—	—	1,805	—	—	—	—
XM Canada	—	1,106	—	31,904	—	4,275	—	24,517	—	—
Total	$14,702	$6,719	$54,953	$33,475	$14,302	$15,845	$21,741	$24,517	$328,788	$325,907

*Sirius Canada and XM Canada combined in June 2011. The combined entity now operates as Sirius XM Canada.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Liberty Media

In February, 2009, we entered into an Investment Agreement (the “Investment Agreement”) with an affiliate of Liberty Media Corporation, Liberty Radio, LLC (collectively, “Liberty Media”). Pursuant to the Investment Agreement, in March 2009 we issued to Liberty Radio, LLC 12,500,000 shares of our Convertible Perpetual Preferred Stock, Series B (the “Series B Preferred Stock”), with a liquidation preference of $0.001 per share in partial consideration for certain loan investments. Liberty Media has representatives on our board of directors.

The Series B Preferred Stock is convertible into 2,586,976,000 shares of common stock. The Investment Agreement provides for certain standstill provisions during the three year period ending in March 2012.

We accounted for the Series B Preferred Stock by recording a $227,716 increase to additional paid-in capital, excluding issuance costs, for the amount of allocated proceeds received and an additional $186,188 increase in paid-in capital for the beneficial conversion feature, which was immediately recognized as a charge to retained earnings.

Liberty Media has advised us that as of December 31, 2011 and 2010, respectively, it owned the following:

	December 31, 2011	December 31, 2010
8.75% Senior Notes due 2015	$ 150,000	$ 150,000
9.75% Senior Secured Notes due 2015	50,000	50,000
13% Senior Notes due 2013	76,000	76,000
7% Exchangeable Senior Subordinated Notes due 2014	11,000	11,000
7.625% Senior Notes due 2018	50,000	50,000
Total principal debt	337,000	337,000
Less: discounts	8,212	11,093
Total carrying value debt	$ 328,788	$ 325,907

As of December 31, 2011 and 2010, we recorded $9,722 and $9,765, respectively, related to accrued interest with Liberty Media to Related party current liabilities. We recognized Interest expense associated with debt held by Liberty Media of $35,681, $40,169 and $79,640 for the years ended December 31, 2011, 2010 and 2009, respectively.

Sirius XM Canada

In June 2011, Canadian Satellite Radio Holdings Inc. (“CSR”), the parent company of XM Canada, and Sirius Canada completed a transaction to combine their operations (“the Canada Merger”). As a result of the Canada Merger, Sirius Canada became a wholly-owned subsidiary of CSR. The combined company operates as Sirius XM Canada. In connection with the transaction, we received:

- approximately 46,700,000 Class A shares of CSR, representing a 38.0% equity interest and a 25.0% voting interest;
- $53,781 in cash as repayment of the XM Canada credit facility ($38,815) and consideration for our preferred stock in Sirius Canada ($10,117 as a return of capital and $4,849 in dividends, net of foreign withholding taxes); and
- $5,208 in non-interest bearing notes of CSR, which are primarily due at the earliest of (a) the maturity date (2 years), (b) after Sirius XM Canada is “free cash flow” positive for a period of six consecutive months, or (c) a date determined by the Sirius XM Canada board of directors. As of December 31, 2011, $4,798 of these notes were reported as a Related Party current assets.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The transaction was accounted for as a reverse acquisition whereby Sirius Canada was deemed to be the acquirer of CSR. As a result of the transaction, we recognized a $75,768 gain in Interest and investment income during the year ended December 31, 2011.

Our interest in Sirius XM Canada is accounted for under the equity method. The excess of the cost of our ownership interest in the equity of Sirius XM Canada over our share of the net assets is recognized as goodwill and intangible assets and is included in the carrying amount of our investment. Equity method goodwill is not amortized. We will periodically evaluate this investment to determine if there has been an other than temporary decline below carrying value. Equity method intangible assets are amortized over their respective useful lives, which is recorded in Interest and investment income. As of December 31, 2011, our investment balance in Sirius XM Canada was approximately $45,061, $28,589 of which represents equity method goodwill and intangible assets, and was recorded in Related party long-term assets.

We provide Sirius XM Canada with chip sets and other services and we are reimbursed for these costs. As of December 31, 2011, amounts due for these costs totaled $7,404 and is reported as Related party current assets.

As of December 31, 2011, amounts due from Sirius XM Canada also included $7,280 attributable to deferred programming costs and accrued interest, $4,780 of which is reported as Related party long-term assets.

We hold an investment in Cdn$4,000 face value of 8% convertible unsecured subordinated debentures issued by CSR, for which the embedded conversion feature is bifurcated from the host contract. The host contract is accounted for at fair value as an available-for-sale security with changes in fair value recorded to Accumulated other comprehensive income (loss), net of tax. The embedded conversion feature is accounted for at fair value as a derivative with changes in fair value recorded in earnings as Interest and investment income (loss). As of December 31, 2011, the carrying values of the host contract and embedded derivative related to our investment in the debentures was $3,490 and $0, respectively. As of December 31, 2010, the carrying values of the host contract and embedded derivative related to our investment in the debentures was $3,302 and $11, respectively. The carrying values of the host contract and embedded derivative are recorded in Related party long-term assets.

As of December 31, 2011, amounts due to Sirius XM Canada totaled $1,804 and is reported as Related party current liabilities.

We recorded the following revenue from Sirius XM Canada as Other revenue in our consolidated statements of operations:

	For the Year Ended December 31, 2011*
Royalty income	$ 13,735
Amortization of Sirius XM Canada deferred income	1,388
Licensing fee revenue	3,000
Advertising reimbursements	417
Total revenue from Sirius XM Canada	$ 18,540

*Sirius XM Canada commenced operations on June 2011.

Our share of net earnings or losses of Sirius XM Canada are recorded to Interest and investment income (loss) in our consolidated statements of operations on a one month lag. Our share of Sirius XM Canada's net income was $1,081 for the year ended December 31, 2011. We recorded amortization expense of $1,556 related to the equity method intangible assets for the year ended December 31, 2011.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Sirius Canada

We had an equity interest of 49.9% in Sirius Canada until June 21, 2011 when the transaction between XM Canada and Sirius Canada closed. Our investment balance was zero as of December 31, 2010 as our investment balance was absorbed by our share of net losses generated by Sirius Canada.

In 2005, we entered into a license and services agreement with Sirius Canada. Pursuant to such agreement, we are reimbursed for certain costs incurred to provide Sirius Canada service, including certain costs incurred for the production and distribution of radios, as well as information technology support costs. In consideration for the rights granted pursuant to this license and services agreement, we have the right to receive a royalty equal to a percentage of Sirius Canada's gross revenues based on subscriber levels (ranging between 5% to 15%) and the number of Canadian-specific channels made available to Sirius Canada.

We recorded the following revenue from Sirius Canada. Royalty income is included in other revenue and dividend income is included in Interest and investment income (loss) in our consolidated statements of operations:

	For the Years Ended December 31,		
	2011*	2010	2009
Royalty income	$ 9,945	$ 10,684	$ 5,797
Dividend income	460	926	839
Total revenue from Sirius Canada	$ 10,405	$ 11,610	$ 6,636

*Sirius Canada combined with XM Canada in June 2011.

Receivables from royalty and dividend income were utilized to absorb a portion of our share of net losses generated by Sirius Canada. Total costs that have been or will be reimbursed by Sirius Canada were $5,253, $12,185 and $11,031 for the years ended December 31, 2011, 2010 and 2009, respectively.

Our share of net earnings or losses of Sirius Canada was recorded to Interest and investment income (loss) in our consolidated statements of operations on a one month lag. Our share of Sirius Canada's net loss was $9,717, $10,257 and $6,636 for the years ended December 31, 2011, 2010 and 2009, respectively. The payments received from Sirius Canada in excess of carrying value were $6,748, $10,281 and $13,738 for the years ended December 31, 2011, 2010 and 2009, respectively.

XM Canada

We had an equity interest of 21.5% in XM Canada until June 21, 2011 when the transaction between XM Canada and Sirius Canada closed. Our investment balance was zero as of December 31, 2010 as our investment balance was absorbed by our share of net losses generated by XM Canada.

In 2005, XM entered into agreements to provide XM Canada with the right to offer XM satellite radio service in Canada. The agreements have an initial ten year term and XM Canada has the unilateral option to extend the agreements for an additional five year term. We receive a 15% royalty for all subscriber fees earned by XM Canada each month for its basic service and an activation fee for each gross activation of an XM Canada subscriber on XM's system. Sirius XM Canada is obligated to pay us a total of $70,300 for the rights to broadcast and market National Hockey League ("NHL") games for a ten year term. We recognize these payments on a gross basis as a principal obligor pursuant to the provisions of ASC 605, *Revenue Recognition*. The estimated fair value of deferred revenue from XM Canada as of the Merger date was approximately $34,000, which is

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

amortized on a straight-line basis through 2020, the end of the expected term of the agreements. As of December 31, 2011 and December 31, 2010, the carrying value of deferred revenue related to this agreement was $24,517 and $28,792, respectively.

The Cdn$45,000 standby credit facility we extended to XM Canada was paid and terminated as a result of the Canada Merger. We received $38,815 in cash upon payment of this facility. As a result of the repayment of the credit facility and completion of the Canada Merger, we released a $15,649 valuation allowance related to the absorption of our share of the net loss from our investment in XM Canada as of June 21, 2011.

As of December 31, 2010, amounts due from XM Canada also included $7,201 attributable to deferred programming costs and accrued interest, all of which is reported as Related party long-term assets.

We recorded the following revenue from XM Canada as Other revenue in our consolidated statements of operations:

	For the Years Ended December 31,		
	2011*	**2010**	**2009**
Amortization of XM Canada deferred income	$ 1,388	$ 2,776	$ 2,776
Subscriber and activation fee royalties	5,483	10,313	11,603
Licensing fee revenue	3,000	4,500	6,000
Advertising reimbursements	833	1,083	1,067
Total revenue from XM Canada	$10,704	$18,672	$21,446

*XM Canada combined with Sirius Canada in June 2011.

Our share of net earnings or losses of XM Canada is recorded to Interest and investment income in our consolidated statements of operations on a one month lag. Our share of XM Canada’s net loss was $6,045, $12,147 and $2,292 for the years ended December 31, 2011, 2010 and 2009, respectively.

General Motors and American Honda

We have a long-term distribution agreement with General Motors Company (“GM”). GM had a representative on our board of directors and was considered a related party through May 27, 2010. During the term of the agreement, GM has agreed to distribute our service. We subsidize a portion of the cost of satellite radios and make incentive payments to GM when the owners of GM vehicles with factory- or dealer- installed satellite radios become self-paying subscribers. We also share with GM a percentage of the subscriber revenue attributable to GM vehicles with factory- or dealer- installed satellite radios. As part of the agreement, GM provides certain call-center related services directly to subscribers who are also GM customers for which we reimburse GM.

We make bandwidth available to OnStar LLC for audio and data transmissions to owners of enabled GM vehicles, regardless of whether the owner is a subscriber. OnStar’s use of our bandwidth must be in compliance with applicable laws, must not compete or adversely interfere with our business, and must meet our quality standards. We also granted to OnStar a certain amount of time to use our studios on an annual basis and agreed to provide certain audio content for distribution on OnStar’s services.

We have a long-term distribution agreement with American Honda. American Honda had a representative on our board of directors and was considered a related party through May 27, 2010. We have an agreement to make a certain amount of our bandwidth available to American Honda. American Honda’s use of our bandwidth

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

must be in compliance with applicable laws, must not compete or adversely interfere with our business, and must meet our quality standards. This agreement remains in effect so long as American Honda holds a certain amount of its investment in us. We make incentive payments to American Honda for each purchaser of a Honda or Acura vehicle that becomes a self-paying subscriber and we share with American Honda a portion of the subscriber revenue attributable to Honda and Acura vehicles with installed satellite radios.

We recorded the following total related party revenue from GM and American Honda, primarily consisting of subscriber revenue, in connection with the agreements above:

	For the Years Ended December 31, 2010*	2009
GM	$ 12,759	$ 31,037
American Honda	4,990	12,254
Total	$ 17,749	$ 43,291

*GM and American Honda were considered related parties through May 27, 2010.

We have incurred the following related party expenses with GM and American Honda:

	For the Years Ended December 31, 2010*		2009	
	GM	American Honda	GM	American Honda
Sales and marketing	$13,374	$ —	$ 31,595	$ 500
Revenue share and royalties	15,823	3,167	58,992	6,541
Subscriber acquisition costs	17,514	1,969	34,895	5,397
Customer service and billing	125	—	268	—
Interest expense, net of amounts capitalized	1,421	—	4,644	—
Total	$48,257	$ 5,136	$130,394	$12,438

*GM and American Honda were considered related parties through May 27, 2010.

(12) Investments

Auction Rate Certificates

Auction rate certificates are long-term securities structured to reset their coupon rates by means of an auction. We accounted for our investment in auction rate certificates as available-for-sale securities. In January 2010, our investment in the auction rate certificates was called by the issuer at par plus accrued interest, or $9,456, resulting in a gain of $425 in the year ended December 31, 2010.

Long Term Restricted Investments

Restricted investments relate to reimbursement obligations under letters of credit issued for the benefit of lessors of office space. As of December 31, 2011 and December 31, 2010, our Long-term restricted investments were $3,973 and $3,396, respectively. During the year ended December 31, 2011, $250 of obligations relating to these letters of credit were terminated and a new letter of credit agreement was entered into for $826 for additional space.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(13) Debt

Our debt consists of the following:

	Conversion Price (per share)	December 31, 2011	December 31, 2010
3.25% Convertible Notes due 2011 (a)	$ 5.30	$ —	$ 191,979
Less: discount		—	(515)
8.75% Senior Notes due 2015 (b)	N/A	800,000	800,000
Less: discount		(9,753)	(12,213)
9.75% Senior Secured Notes due 2015 (c)	N/A	257,000	257,000
Less: discount		(8,356)	(10,116)
11.25% Senior Secured Notes due 2013 (d)	N/A	—	36,685
Less: discount		—	(1,705)
13% Senior Notes due 2013 (e)	N/A	778,500	778,500
Less: discount		(39,504)	(59,592)
7% Exchangeable Senior Subordinated Notes due 2014 (f)	$ 1.875	550,000	550,000
Less: discount		(5,956)	(7,620)
7.625% Senior Notes due 2018 (g)	N/A	700,000	700,000
Less: discount		(10,898)	(12,054)
Other debt:			
Capital leases	N/A	2,941	7,229
Total debt		3,013,974	3,217,578
Less: total current maturities non-related party		1,623	195,815
Total long-term		3,012,351	3,021,763
Less: related party		328,788	325,907
Total long-term, excluding related party		$2,683,563	$2,695,856

(a) 3.25% Convertible Notes due 2011

In October 2004, we issued $230,000 in aggregate principal amount of 3.25% Convertible Notes due October 15, 2011 (the “3.25% Notes”), which were convertible, at the option of the holder, into shares of our common stock at any time at a conversion rate of 188.6792 shares of common stock for each $1,000 principal amount, or $5.30 per share of common stock. Interest was payable semi-annually on April 15 and October 15 of each year. The obligations under the 3.25% Notes were not secured by any of our assets.

In 2011, we purchased $168,113 of the outstanding 3.25% Notes at prices between 100.75% and 101% of the principal amount plus accrued interest. We recognized a loss on extinguishment of debt for the 3.25% Notes of $2,291 for the year ended December 31, 2011, which consists primarily of cash premiums paid, unamortized discount and deferred financing fees. The remaining $23,866 in principal amount of the 3.25% Notes was paid in October 2011 upon maturity.

(b) 8.75% Senior Notes due 2015

In March 2010, we issued $800,000 aggregate principal amount of 8.75% Senior Notes due 2015 (the “8.75% Notes”). Interest is payable semi-annually in arrears on April 1 and October 1 of each year at a rate of 8.75% per annum. The 8.75% Notes mature on April 1, 2015. The 8.75% Notes were issued for $786,000, resulting in an aggregate original issuance discount of $14,000. Substantially all of our domestic wholly-owned subsidiaries guarantee our obligations under the 8.75% Notes on a senior unsecured basis.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(c) 9.75% Senior Secured Notes due 2015

In August 2009, we issued $257,000 aggregate principal amount of 9.75% Senior Secured Notes due September 1, 2015 (the "9.75% Notes"). Interest is payable semi-annually in arrears on March 1 and September 1 of each year at a rate of 9.75% per annum. The 9.75% Notes were issued for $244,292, resulting in an aggregate original issuance discount of $12,708. Substantially all of our domestic wholly-owned subsidiaries guarantee our obligations under the 9.75% Notes. The 9.75% Notes and related guarantees are secured by first-priority liens on substantially all of our assets and the assets of the guarantors.

(d) 11.25% Senior Secured Notes due 2013

In June 2009, we issued $525,750 aggregate principal amount of 11.25% Senior Secured Notes due 2013 (the "11.25% Notes"). The 11.25% Notes were issued for $488,398, resulting in an aggregate original issuance discount of $37,352.

In October 2010, we purchased $489,065 in aggregate principal amount of the 11.25% Notes. The aggregate purchase price for the 11.25% Notes was $567,927. We recorded an aggregate loss on extinguishment of the 11.25% Notes of $85,216, consisting primarily of unamortized discount, deferred financing fees and repayment premium to Loss on extinguishment of debt and credit facilities, net, in our 2010 consolidated statements of operations. The remainder of the 11.25% Notes of $36,685 was purchased in January 2011 for an aggregate purchase price of $40,376. A loss from extinguishment of debt of $4,915 associated with this purchase was recorded during the year ended December 31, 2011.

(e) 13% Senior Notes due 2013

In July 2008, we issued $778,500 aggregate principal amount of 13% Senior Notes due 2013 (the "13% Notes"). Interest is payable semi-annually in arrears on February 1 and August 1 of each year at a rate of 13% per annum. The 13% Notes mature on August 1, 2013. Substantially all of our domestic wholly-owned subsidiaries guarantee our obligations under the 13% Notes.

(f) 7% Exchangeable Senior Subordinated Notes due 2014

In August 2008, we issued $550,000 aggregate principal amount of 7% Exchangeable Senior Subordinated Notes due 2014 (the "Exchangeable Notes"). The Exchangeable Notes are senior subordinated obligations and rank junior in right of payment to our existing and future senior debt and equally in right of payment with our existing and future senior subordinated debt. Substantially all of our domestic wholly-owned subsidiaries have guaranteed the Exchangeable Notes on a senior subordinated basis.

Interest is payable semi-annually in arrears on June 1 and December 1 of each year at a rate of 7% per annum. The Exchangeable Notes mature on December 1, 2014. The Exchangeable Notes are exchangeable at any time at the option of the holder into shares of our common stock at an initial exchange rate of 533.3333 shares of common stock per $1,000 principal amount of Exchangeable Notes, which is equivalent to an approximate exchange price of $1.875 per share of common stock.

(g) 7.625% Senior Notes due 2018

In October 2010, we issued $700,000 aggregate principal amount of 7.625% Senior Notes due 2018 (the "7.625% Senior Notes"). Interest is payable semi-annually in arrears on May 1 and November 1 of each year at a rate of 7.625% per annum. A majority of the net proceeds were used to purchase $489,065 aggregate principal amount of the 11.25% Notes. The 7.625% Senior Notes mature on November 1, 2018. Substantially all of our domestic wholly-owned subsidiaries guarantee our obligations under the 7.625% Senior Notes.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Covenants and Restrictions

Our debt generally requires compliance with certain covenants that restrict our ability to, among other things, (i) incur additional indebtedness unless our consolidated leverage ratio would be no greater than 6.00 to 1.00 after the incurrence of the indebtedness, (ii) incur liens, (iii) pay dividends or make certain other restricted payments, investments or acquisitions, (iv) enter into certain transactions with affiliates, (v) merge or consolidate with another person, (vi) sell, assign, lease or otherwise dispose of all or substantially all of our assets, and (vii) make voluntary prepayments of certain debt, in each case subject to exceptions.

Under our debt agreements, the following generally constitute an event of default: (i) a default in the payment of interest; (ii) a default in the payment of principal; (iii) failure to comply with covenants; (iv) failure to pay other indebtedness after final maturity or acceleration of other indebtedness exceeding a specified amount; (v) certain events of bankruptcy; (vi) a judgment for payment of money exceeding a specified aggregate amount; and (vii) voidance of subsidiary guarantees, subject to grace periods where applicable. If an event of default occurs and is continuing, our debt could become immediately due and payable.

At December 31, 2011, we were in compliance with our debt covenants.

(14) Stockholders' Equity

Common Stock, par value $0.001 per share

We were authorized to issue up to 9,000,000,000 shares of common stock as of December 31, 2011 and 2010. There were 3,753,201,929 and 3,933,195,112 shares of common stock issued and outstanding as of December 31, 2011 and 2010, respectively.

As of December 31, 2011, approximately 3,342,818,000 shares of common stock were reserved for issuance in connection with outstanding convertible debt, preferred stock, warrants, incentive stock awards and common stock to be granted to third parties upon satisfaction of performance targets.

To facilitate the offering of the Exchangeable Notes, we entered into share lending agreements with Morgan Stanley Capital Services Inc. ("MS") and UBS AG London Branch ("UBS") in July 2008, under which we loaned MS and UBS an aggregate of 262,400,000 shares of our common stock in exchange for a fee of $0.001 per share. During the third quarter of 2009, MS returned to us 60,000,000 shares of our common stock borrowed. In October 2011, MS and UBS returned the remaining 202,400,000 shares loaned. The returned shares were retired upon receipt and removed from outstanding common stock. The share lending agreements have been terminated.

The shares we loaned to the share borrowers were issued and outstanding for corporate law purposes through October 2011, and holders of borrowed shares (other than the share borrowers) had the same rights under those shares as holders of any of our other outstanding common shares. Under GAAP, the borrowed shares were not considered outstanding for the purpose of computing and reporting our net income (loss) per common share.

We recorded interest expense related to the amortization of the costs associated with the share-lending arrangement and other issuance costs of $11,189, $10,095 and $9,248, respectively, for the years ended December 31, 2011, 2010 and 2009. As of December 31, 2011, the unamortized balance of the debt issuance costs was $40,054, with $39,253 recorded in deferred financing fees, net, and $801 recorded in long-term related party assets. As of December 31, 2010, the unamortized balance of the debt issuance costs was $51,243, with $50,218 recorded in deferred financing fees, net, and $1,025 recorded in long-term related party assets. As of December 31, 2010, the estimated fair value of the outstanding 202,400,000 loaned shares was approximately $329,912. These costs will continue to be amortized until the debt is terminated.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In January 2004, Sirius signed a seven-year agreement with a sports programming provider which expired in February 2011. Upon execution of this agreement, Sirius delivered 15,173,070 shares of common stock valued at $40,967 to that programming provider. These shares of common stock were subject to transfer restrictions which lapsed over time. We recognized share-based payment expense associated with these shares of $1,568, $5,852, and $5,852 in the years ended December 31, 2011, 2010 and 2009, respectively. As of December 31, 2011 and December 31, 2010, there was $0 and $1,568 remaining balance of common stock value included in other current assets, respectively.

Preferred Stock, par value $0.001 per share

We were authorized to issue up to 50,000,000 shares of undesignated preferred stock as of December 31, 2011 and 2010.

There were no shares of Series A Convertible Preferred Stock ("Series A Preferred Stock") issued and outstanding as of December 31, 2011 and December 31, 2010.

There were 12,500,000 shares of Series B Preferred Stock issued and outstanding as of December 31, 2011 and 2010. The Series B Preferred Stock is convertible into shares of our common stock at the rate of 206.9581409 shares of common stock for each share of Series B Preferred Stock, representing approximately 40% of our outstanding shares of common stock (after giving effect to such conversion). As the holder of the Series B Preferred Stock, Liberty Radio LLC is entitled to a number of votes equal to the number of shares of our common stock into which such shares of Series B Preferred Stock are convertible. Liberty Radio LLC will also receive dividends and distributions ratably with our common stock, on an as-converted basis. With respect to dividend rights, the Series B Preferred Stock ranks evenly with our common stock and each other class or series of our equity securities not expressly provided as ranking senior to the Series B Preferred Stock. With respect to liquidation rights, the Series B Preferred Stock ranks evenly with each other class or series of our equity securities not expressly provided as ranking senior to the Series B Preferred Stock, and will rank senior to our common stock. In 2009, we accounted for the issuance of Series B Preferred Stock by recording a $227,716 increase to additional paid-in-capital for the amount of the allocated proceeds received and an additional $186,188 increase to paid-in-capital for the beneficial conversion feature, which was recognized as a charge to retained earnings.

There were no shares of Preferred Stock, Series C Junior (the "Series C Junior Preferred Stock"), issued and outstanding as of December 31, 2011 and 2010. In 2009, our board of directors created and reserved for issuance in accordance with the Rights Plan (as described below) 9,000 shares of the Series C Junior Preferred Stock. The shares of Series C Junior Preferred Stock are not redeemable and rank, with respect to the payment of dividends and the distribution of assets, junior to all other series of our preferred stock, unless the terms of such series shall so provide. The Rights Plan expired on August 1, 2011.

Warrants

We have issued warrants to purchase shares of common stock in connection with distribution, programming and satellite purchase agreements and certain debt issuances. As of December 31, 2011 and 2010 approximately 22,506,000 and 42,421,000 warrants to acquire an equal number of shares of common stock were outstanding and fully vested. These warrants expire at various times through 2015. At December 31, 2011 and 2010, the weighted average exercise price of outstanding warrants was $2.63 and $2.66 per share, respectively. During the year ended December 31, 2011, 3,415,000 warrants expired. We incurred warrant related expense of $2,522 for the year ended December 31, 2009. We did not incur warrant related expenses in 2011 or 2010.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(warrants in thousands)	Average Exercise Price	Expiration Date	Number of Warrants Outstanding December 31, 2011	Number of Warrants Outstanding December 31, 2010
NFL	$ 2.50	March 2015	16,718	16,718
DaimlerChrysler AG	1.04	May 2012	—	16,500
Ford	3.00	October 2012	4,000	4,000
Lehman Warrants	15.00	March 2011 - April 2011	—	1,575
Space Systems/Loral	7.05	December 2011	—	1,840
Other distributors and programming providers	3.00	June 2014	1,788	1,788
Total			22,506	42,421

In February 2011, Daimler AG exercised 16,500,000 warrants to purchase shares of common stock on a net settlement basis, resulting in the issuance of 7,122,951 shares of our common stock.

Rights Plan

In April 2009, our board of directors adopted a rights plan. The terms of the rights and the rights plan are set forth in a Rights Agreement dated as of April 29, 2009 (the "Rights Plan"). The Rights Plan was intended to act as a deterrent to any person or group acquiring 4.9% or more of our outstanding common stock (assuming for purposes of this calculation that all of our outstanding convertible preferred stock was converted into common stock) without the approval of our board of directors. The Rights Plan expired on August 1, 2011.

(15) Benefits Plans

We recognized share-based payment expense of $51,622, $54,585, and $65,607 for the years ended December 31, 2011, 2010 and 2009, respectively. We did not realize any income tax benefits from share-based benefits plans during the years ended December 31, 2011, 2010 and 2009 as a result of the full valuation allowance that is maintained for substantially all net deferred tax assets.

2009 Long-Term Stock Incentive Plan

In May 2009, our stockholders approved the Sirius XM Radio Inc. 2009 Long-Term Stock Incentive Plan (the "2009 Plan"). Employees, consultants and members of our board of directors are eligible to receive awards under the 2009 Plan. The 2009 Plan provides for the grant of stock options, restricted stock, restricted stock units and other stock-based awards that the compensation committee of our board of directors may deem appropriate. Vesting and other terms of stock-based awards are set forth in the agreements with the individuals receiving the awards. Stock-based awards granted under the 2009 Plan are generally subject to a vesting requirement. Stock-based awards generally expire ten years from the date of grant. Each restricted stock unit entitles the holder to receive one share of common stock upon vesting. As of December 31, 2011, approximately 197,606,000 shares of common stock were available for future grants under the 2009 Plan.

Other Plans

We maintain four other share-based benefit plans — the XM 2007 Stock Incentive Plan, the Amended and Restated Sirius Satellite Radio 2003 Long-Term Stock Incentive Plan, the XM 1998 Shares Award Plan and the XM Talent Option Plan. No further awards may be made under these plans. Outstanding awards under these plans continue to vest.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes the weighted-average assumptions used to compute the fair value of options granted to employees and members of our board of directors:

	For the Years Ended December 31,		
	2011	2010	2009
Risk-free interest rate	1.1%	1.7%	2.5%
Expected life of options — years	5.27	5.28	4.68
Expected stock price volatility	68%	85%	88%
Expected dividend yield	0%	0%	0%

The following table summarizes the range of assumptions used to compute the fair value of options granted to third parties, other than non-employee members of our board of directors:

	For the Year Ended December 31,
	2009
Risk-free interest rate	0.67-2.69%
Expected life — years	2.33-6.19
Expected stock price volatility	83-130%
Expected dividend yield	0%

There were no options granted to third parties, other than non-employee members of our board of directors, during the years ended December 31, 2011 and 2010.

In 2011, we estimated fair value of awards granted using the hybrid approach for volatility, which weights observable historical volatility and implied volatility of qualifying actively traded options on our common stock. In 2010 and 2009, due to the lack of qualifying actively traded options on our common stock, we utilized a 100% weighting to observable historical volatility.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes stock option activity under our share-based payment plans for the years ended December 31, 2011, 2010 and 2009 (shares in thousands):

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding, January 1, 2009	165,436	$ 4.42		
Granted	265,761	$ 0.53		
Exercised	—	$ —		
Forfeited, cancelled or expired	(66,405)	$ 5.21		
Outstanding, December 31, 2009	364,792	$ 1.44		
Granted	71,179	$ 0.97		
Exercised	(19,360)	$ 0.56		
Forfeited, cancelled or expired	(14,741)	$ 3.58		
Outstanding, December 31, 2010	401,870	$ 1.32		
Granted	77,450	$ 1.80		
Exercised	(13,300)	$ 0.87		
Forfeited, cancelled or expired	(26,440)	$ 4.15		
Outstanding, December 31, 2011	439,580	$ 1.25	6.33	$378,274
Exercisable, December 31, 2011	179,851	$ 1.59	4.92	$158,550

The weighted average grant date fair value of options granted during the years ended December 31, 2011, 2010 and 2009 was $1.04, $0.67 and $0.36, respectively. The total intrinsic value of stock options exercised during the years ended December 31, 2011, 2010 and 2009 was $13,408, $13,261 and $0, respectively.

We recognized share-based payment expense associated with stock options of $48,038, $44,833 and $46,080 for the years ended December 31, 2011, 2010 and 2009, respectively.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes the nonvested restricted stock and restricted stock unit activity under our share-based payment plans for the years ended December 31, 2011, 2010 and 2009 (shares in thousands):

	Shares	Weighted-Average Grant Date Fair Value
Nonvested, January 1, 2009	19,931	$ 2.84
Granted	84,851	$ 0.37
Vested restricted stock awards	(8,476)	$ 2.98
Vested restricted stock units	(87,036)	$ 0.46
Forfeited	(2,351)	$ 1.92
Nonvested, December 31, 2009	6,919	$ 2.65
Granted	—	$ —
Vested restricted stock awards	(4,039)	$ 2.85
Vested restricted stock units	(192)	$ 2.92
Forfeited	(291)	$ 2.72
Nonvested, December 31, 2010	2,397	$ 2.57
Granted	—	$ —
Vested restricted stock awards	(1,854)	$ 3.30
Vested restricted stock units	(101)	$ 3.08
Forfeited	(21)	$ 3.05
Nonvested, December 31, 2011	421	$ 1.46

The weighted average grant date fair value of restricted stock units granted during the year ended December 31, 2009 was $0.37. No restricted stock units were granted during 2011 or 2010. The total intrinsic value of restricted stock and restricted stock units that vested during the years ended December 31, 2011, 2010 and 2009 was $3,178, $3,927 and $45,827, respectively.

We recognized share-based payment expense associated with restricted stock units and shares of restricted stock of $543, $7,397 and $16,632 for the years ended December 31, 2011, 2010 and 2009, respectively.

Total unrecognized compensation costs related to unvested share-based payment awards for stock options and restricted stock units and shares granted to employees and members of our board of directors at December 31, 2011 and 2010, net of estimated forfeitures, was $129,983 and $108,170, respectively. The total unrecognized compensation costs at December 31, 2011 are expected to be recognized over a weighted-average period of three years.

401(k) Savings Plan

We sponsor the Sirius XM Radio 401(k) Savings Plan (the "Sirius XM Plan") for eligible employees.

The Sirius XM Plan allows eligible employees to voluntarily contribute from 1% to 50% of their pre-tax eligible earnings, subject to certain defined limits. We match 50% of an employee's voluntary contributions, up to 6% of an employee's pre-tax salary, in the form of shares of common stock. Employer matching contributions

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

under the Sirius XM Plan vest at a rate of 33 1/3% for each year of employment and are fully vested after three years of employment for all current and future contributions. Share-based payment expense resulting from the matching contribution to the Sirius XM Plan was $3,041, $2,356 and $2,895 for the years ended December 31, 2011, 2010 and 2009, respectively.

We may also elect to contribute to the profit sharing portion of the Sirius XM Plan based upon the total eligible compensation of eligible participants. These additional contributions in the form of shares of common stock are determined by the compensation committee of our board of directors. Employees are only eligible to receive profit-sharing contributions during any year in which they are employed on the last day of the year. We did not contribute to the profit sharing portion of the Sirius XM Plan in 2011, 2010 or 2009.

(16) Income Taxes

Our income tax expense consisted of the following:

	For the Years Ended December 31,		
	2011	2010	2009
Current taxes:			
Federal	$ —	$ —	$ —
State	3,229	942	—
Foreign	2,741	1,370	1,622
Total current taxes	5,970	2,312	1,622
Deferred taxes:			
Federal	3,991	4,163	3,962
State	4,273	(1,855)	397
Total deferred taxes	8,264	2,308	4,359
Total income tax expense	$14,234	$ 4,620	$ 5,981

The following table indicates the significant elements contributing to the difference between the federal tax expense (benefit) at the statutory rate and at our effective rate:

	For the Years Ended December 31,		
	2011	2010	2009
Federal tax expense (benefit), at statutory rate	$ 154,418	$ 16,678	$(117,883)
State income tax expense (benefit), net of federal benefit	15,751	1,620	(11,788)
State rate changes	3,851	(2,252)	—
Non-deductible expenses	457	4,130	1,849
Other, net	6,209	6,193	(4,945)
Change in valuation allowance	(166,452)	(21,749)	138,748
Income tax expense	$ 14,234	$ 4,620	$ 5,981

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are presented below:

	December 31, 2011	December 31, 2010
Deferred tax assets:		
Net operating loss carryforwards	$ 3,025,621	$ 3,091,869
GM payments and liabilities	194,976	308,776
Deferred revenue	410,812	346,221
Severance accrual	21	266
Accrued bonus	17,296	16,599
Expensed costs capitalized for tax	35,227	44,149
Loan financing costs	1,575	1,568
Investments	40,880	62,742
Stock based compensation	89,862	118,507
Other	42,924	53,260
Total deferred tax assets	3,859,194	4,043,957
Deferred tax liabilities:		
Depreciation of property and equipment	(405,892)	(379,180)
FCC license	(781,742)	(773,850)
Other intangible assets	(188,988)	(209,489)
Other	(189)	—
Total deferred tax liabilities	(1,376,811)	(1,362,519)
Net deferred tax assets before valuation allowance	2,482,383	2,681,438
Valuation allowance	(3,360,740)	(3,551,288)
Total deferred tax liability	$ (878,357)	$ (869,850)

The difference in the net deferred tax liability of $878,357 and $869,850 at December 31, 2011 and 2010, respectively, is primarily the result of the amortization of our FCC licenses which are amortized over 15 years for tax purposes but not amortized for book purposes. This net deferred tax liability cannot be offset against our deferred tax assets under GAAP since it relates to indefinite-lived assets and is not anticipated to reverse in the same period.

As a result of the Merger, we have had several ownership changes under Section 382 of the Internal Revenue Code, which may limit our ability to utilize tax deductions. Internal Revenue Code Section 382 imposes substantial restrictions on the utilization of net operating losses and tax credits in the event of a corporation's ownership change. Currently, our ownership changes do not limit our ability to utilize future tax deductions and so no adjustments were made to gross deferred tax assets as a result of the Merger. As of December 31, 2011, we had NOL carryforwards of approximately $7,844,000 for federal and state income tax purposes available to offset future taxable income. These NOL carryforwards expire on various dates beginning in 2014 and ending in 2028.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences can be carried forward under tax law. Management's evaluation of the realizability of deferred tax assets considers both positive and negative evidence, including historical financial performance, scheduled reversal of deferred tax assets and liabilities, projected taxable income and tax planning strategies in making this assessment. The weight given to the potential effects of positive and negative evidence is based on the extent to which it can be objectively verified. We will not release the valuation allowance until giving consideration to a variety of factors including but not limited to: (a) the current period realization of NOL carryforwards, (b) three-year cumulative pre-tax income, (c) the current period taxable income and (d) the expectation of future earnings. After weighting this evidence, management concluded that it is more likely than not that our deferred tax assets will not be realized, accordingly, a full valuation allowance was retained at December 31, 2011.

There is no U.S. federal income tax provision as all federal taxable income was offset by utilizing U.S NOL carryforwards. The state tax provision is primarily related to taxable income in certain states that have suspended the ability to use NOL carryforwards. The foreign income tax provision is primarily related to foreign withholding taxes related to royalty income between us and our Canadian affiliate.

As of December 31, 2011 and 2010, the gross liability for income taxes associated with uncertain state tax positions, including interest, was $1,524 and $942, respectively, in other long-term liabilities. No penalties have been accrued for. We do not currently anticipate that our existing reserves related to uncertain tax positions as of December 31, 2011 will significantly increase or decrease during the twelve-month period ending December 31, 2012; however, various events could cause our current expectations to change in the future. Should our position with respect to the majority of these uncertain tax positions be upheld, the effect would be recorded in our consolidated statements of operations as part of the income tax provision. Our policy is to recognize interest and penalties accrued on uncertain tax positions as part of income tax expense.

Changes in our uncertain income tax positions, from January 1 through December 31 are presented below:

	2011	2010
Balance, beginning of year	$ 942	$ —
Additions for tax positions from prior years	490	942
Interest	92	—
Balance, end of year	$1,524	$942

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(17) Commitments and Contingencies

The following table summarizes our expected contractual cash commitments as of December 31, 2011:

	2012	2013	2014	2015	2016	Thereafter	Total
Long-term debt obligations(1)	$ 1,623	$ 779,636	$550,182	$1,057,000	$ —	$ 700,000	$3,088,441
Cash interest payments(1)	288,338	288,208	186,935	113,433	53,375	106,750	1,037,039
Satellite and transmission	60,517	5,526	13,296	13,156	3,455	18,638	114,588
Programming and content	238,792	182,885	157,106	151,531	8,750	—	739,064
Marketing and distribution	46,153	17,555	12,816	11,644	8,617	3,192	99,977
Satellite incentive payments	11,577	12,660	12,615	12,010	12,913	74,989	136,764
Operating lease obligations	34,662	31,291	26,135	28,528	18,422	195,213	334,251
Other	29,681	10,659	1,602	268	182	—	42,392
Total(2)	$711,343	$1,328,420	$960,687	$1,387,570	$105,714	$1,098,782	$5,592,516

(1) Includes captial lease obligations.

(2) The table does not include our reserve for uncertain tax positions, which at December 31, 2011 totaled $1,524, as the specific timing of any cash payments relating to this obligation cannot be projected with reasonable certainty.

Long-term debt obligations. Long-term debt obligations include principal payments on outstanding debt and capital lease obligations.

Cash interest payments. Cash interest payments include interest due on outstanding debt through maturity.

Satellite and transmission. We have entered into agreements with third parties to operate and maintain the off-site satellite telemetry, tracking and control facilities and certain components of our terrestrial repeater networks. We have also entered into various agreements to design and construct a satellite and related launch vehicle for use in our systems.

Programming and content. We have entered into various programming agreements. Under the terms of these agreements, our obligations may include fixed payments, advertising commitments and revenue sharing arrangements.

Marketing and distribution. We have entered into various marketing, sponsorship and distribution agreements to promote our brand and are obligated to make payments to sponsors, retailers, automakers and radio manufacturers under these agreements. Certain programming and content agreements also require us to purchase advertising on properties owned or controlled by the licensors. We also reimburse automakers for certain engineering and development costs associated with the incorporation of satellite radios into vehicles they manufacture. In addition, in the event certain new products are not shipped by a distributor to its customers within 90 days of the distributor's receipt of goods, we have agreed to purchase and take title to the product.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Satellite incentive payments. Boeing Satellite Systems International, Inc., the manufacturer of four of XM's in-orbit satellites, may be entitled to future in-orbit performance payments with respect to two of XM's satellites. As of December 31, 2011, we have accrued $27,925 related to contingent in-orbit performance payments for XM-3 and XM-4 based on expected operating performance over their fifteen year design life. Boeing may also be entitled to an additional $10,000 if XM-4 continues to operate above baseline specifications during the five years beyond the satellite's fifteen-year design life.

Space Systems/Loral, may be entitled to future in-orbit performance payments. As of December 31, 2011, we have accrued $10,709 and $21,450 related to contingent performance payments for FM-5 and XM-5, respectively, based on expected operating performance over their fifteen-year design life.

Operating lease obligations. We have entered into cancelable and non-cancelable operating leases for office space, equipment and terrestrial repeaters. These leases provide for minimum lease payments, additional operating expense charges, leasehold improvements and rent escalations that have initial terms ranging from one to fifteen years, and certain leases that have options to renew. The effect of the rent holidays and rent concessions are recognized on a straight-line basis over the lease term, including reasonably assured renewal periods. Total rent recognized in connection with leases for the years ended December 31, 2011, 2010 and 2009 was $34,143, $36,652 and $44,374, respectively.

Other. We have entered into various agreements with third parties for general operating purposes. In addition to the minimum contractual cash commitments described above, we have entered into agreements with other variable cost arrangements. These future costs are dependent upon many factors, including subscriber growth, and are difficult to anticipate; however, these costs may be substantial. We may enter into additional programming, distribution, marketing and other agreements that contain similar variable cost provisions.

We do not have any other significant off-balance sheet financing arrangements that are reasonably likely to have a material effect on our financial condition, results of operations, liquidity, capital expenditures or capital resources.

Legal Proceedings

In the ordinary course of business, we are a defendant in various lawsuits and arbitration proceedings, including derivative actions; actions filed by subscribers, both on behalf of themselves and on a class action basis; former employees; parties to contracts or leases; and owners of patents, trademarks, copyrights or other intellectual property. Our significant legal proceedings are discussed under Item 3, Legal Proceedings, in Part I of this Annual Report on Form 10-K.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

(18) Quarterly Financial Data — Unaudited

Our quarterly results of operations are summarized below:

	For the Three Months Ended			
	March 31	June 30	September 30	December 31
2011:				
Total revenue	$ 723,839	$ 744,397	$ 762,550	$ 783,738
Cost of services	$(270,689)	$(273,331)	$ (277,360)	$ (299,719)
Income from operations	$ 164,172	$ 172,982	$ 184,488	$ 154,475
Net income	$ 78,121	$ 173,319	$ 104,185	$ 71,336
Net income per common share — basic(1)	$ 0.02	$ 0.05	$ 0.03	$ 0.02
Net income per common share — diluted(1)	$ 0.01	$ 0.03	$ 0.02	$ 0.01
2010:				
Total revenue	$ 663,784	$ 699,761	$ 717,548	$ 735,899
Cost of services	$(260,867)	$(266,121)	$ (280,545)	$ (291,699)
Income from operations	$ 125,140	$ 125,634	$ 143,069	$ 71,571
Net (loss) income	$ 41,598	$ 15,272	$ 67,629	$ (81,444)
Net income (loss) per common share —basic(1)	$ 0.01	$ —	$ 0.02	$ (0.02)
Net income (loss) per common share —diluted (1)	$ 0.01	$ —	$ 0.01	$ (0.02)

(1) The sum of the quarterly net income (loss) per share applicable to common stockholders (basic and diluted) does not necessarily agree to the net income (loss) per share for the year due to the timing of our common stock issuances.

SIRIUS XM RADIO INC. AND SUBSIDIARIES

Schedule II — Schedule of Valuation and Qualifying Accounts

Description *(in thousands)*	Balance January 1,	Charged to Expenses (Benefit)	Write-offs/ Payments/ Other	Balance December 31,
2009				
Allowance for doubtful accounts	$ 10,860	30,602	(32,795)	$ 8,667
Deferred tax assets — valuation allowance	$3,476,583	138,749	—	$3,615,332
2010				
Allowance for doubtful accounts	$ 8,667	32,379	(30,824)	$ 10,222
Deferred tax assets — valuation allowance	$3,615,332	(21,749)	(42,295)	$3,551,288
2011				
Allowance for doubtful accounts	$ 10,222	33,164	(33,454)	$ 9,932
Deferred tax assets — valuation allowance	$3,551,288	(166,452)	(24,096)	$3,360,740

EXHIBIT INDEX

Exhibit	Description
3.1	Amended and Restated Certificate of Incorporation of the Company, dated March 4, 2003 (incorporated by reference to Exhibit 3.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2002).
3.2	Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Company, dated July 28, 2008 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated August 1, 2008).
3.3	Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Company, dated December 18, 2008 (incorporated by reference to Exhibit 3.3 to the Company's Registration Statement on Form S-3 dated December 30, 2008).
3.4	Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Company, dated May 29, 2009 (incorporated by reference to Exhibit 4.4 to the Company's Registration Statement on Form S-8 dated July 1, 2009).
3.5	Amended and Restated By-Laws of the Company (incorporated by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2001).
3.6	Certificate of Amendment of the Amended and Restated By-Laws of the Company, dated July 28, 2008 (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K dated August 1, 2008).
3.7	Certificate of Designations of Series B-1 Convertible Perpetual Preferred Stock of the Company, dated March 5, 2009 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated March 6, 2009).
3.8	Certificate of Ownership and Merger, dated January 12, 2011 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K dated January 12, 2011).
4.1	Form of certificate for shares of the Company's common stock (incorporated by reference to Exhibit 4.3 to the Company's Registration Statement on Form S-1 (File No. 33-74782)).
4.2	Common Stock Purchase Warrant granted by the Company to Ford Motor Company dated October 7, 2002 (incorporated by reference to Exhibit 4.16 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2002).
4.3	Indenture, dated as of July 31, 2008, among XM Escrow LLC and The Bank of New York Mellon, as trustee, relating to the 13% Senior Notes due 2013 (incorporated by reference to Exhibit 4.77 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2008).
4.4	Supplemental Indenture, dated as of July 31, 2008, among XM Satellite Radio Holdings Inc., XM Satellite Radio Inc., XM Equipment Leasing LLC, XM Radio Inc. and The Bank of New York Mellon, as trustee, relating to the 13% Senior Notes due 2013 (incorporated by reference to Exhibit 4.78 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2008).
4.5	Supplemental Indenture, dated as of July 31, 2008, among XM Satellite Radio Holdings Inc., XM Escrow LLC and The Bank of New York Mellon, as trustee, relating to the 13% Senior Notes due 2013 (incorporated by reference to Exhibit 4.79 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2008).
4.6	Indenture, dated as of August 1, 2008, among XM Satellite Radio Inc., XM Satellite Radio Holdings Inc., XM Equipment LLC, XM Radio Inc., the Company and The Bank of New York Mellon, as trustee, relating to the 7% Exchangeable Senior Subordinated Notes due 2014 (incorporated by reference to Exhibit 4.80 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2008).

Exhibit	Description
4.7	Registration Rights Agreement, dated August 1, 2008, among XM Satellite Radio Inc., XM Satellite Radio Holdings Inc., XM Equipment Leasing LLC, XM Radio Inc., the Company, J.P. Morgan Securities Inc., Morgan Stanley & Co. Incorporated and UBS Securities LLC, relating to the 7% Exchangeable Senior Subordinated Notes due 2014 (incorporated by reference to Exhibit 4.81 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2008).
4.8	Form of Media-Based Incentive Warrant, dated as of January 27, 2009, issued by the Company to NFL Enterprises LLC (incorporated by reference to Exhibit 4.48 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008).
4.9	Investment Agreement, dated as of February 17, 2009, among the Company and Liberty Radio LLC (incorporated by reference to Exhibit 4.55 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008).
4.10	Indenture, dated as of August 24, 2009, between the Company and U.S. Bank National Association relating to the 9.75% Senior Secured Notes due 2015 (incorporated by reference to Exhibit 4.61 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2009).
4.11	Indenture, dated as of March 17, 2010, among the Company, the guarantors thereto and U.S. Bank National Association, as trustee, relating to the 8.75% Senior Notes due 2015 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K dated March 19, 2010).
4.12	Third Supplemental Indenture, dated April 14, 2010, among XM Satellite Radio Inc., certain subsidiaries thereof and The Bank of New York Mellon, as trustee, relating to the 13% Senior Notes due 2013 (incorporated by reference to XM Satellite Radio Inc.'s Quarterly Report on Form 10-Q filed on May 7, 2010).
4.13	Supplemental Indenture, dated April 14, 2010, among XM Satellite Radio Inc., certain subsidiaries thereof and The Bank of New York Mellon, as trustee, relating to the 7% Exchangeable Senior Subordinated Notes due 2014 (incorporated by reference to XM Satellite Radio Inc.'s Quarterly Report on Form 10-Q filed on May 7, 2010).
4.14	Indenture, dated as of October 27, 2010, among XM Satellite Radio Inc., the guarantors thereto and U.S. Bank National Association, as trustee, relating to the 7.625% Senior Notes due 2018 (incorporated by reference to Exhibit 4.1 to XM Satellite Radio Inc.'s Current Report on Form 8-K filed on October 28, 2010).
4.15	Supplemental Indenture, dated January 12, 2011, by and among XM Satellite Radio Inc., the Company, certain subsidiaries thereof and The Bank of New York Mellon, as trustee, relating to the 13% Senior Notes due 2013 (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on January 12, 2011).
4.16	Supplemental Indenture, dated January 12, 2011, by and among XM Satellite Radio Inc., the Company, certain subsidiaries thereof and The Bank of New York Mellon, as trustee, relating to the 7% Exchangeable Senior Subordinated Notes due 2014 (incorporated by reference to Exhibit 4.3 to the Company's Current Report on Form 8-K filed on January 12, 2011).
4.17	Supplemental Indenture, dated January 12, 2011, by and among XM Satellite Radio Inc., the Company, certain subsidiaries thereof and U.S. Bank National Association, as trustee, relating to the 7.625% Senior Notes due 2018 (incorporated by reference to Exhibit 4.4 to the Company's Current Report on Form 8-K filed on January 12, 2011).
4.18	Supplemental Indenture, dated January 12, 2011, by and among the Company, certain subsidiaries thereof and U.S. Bank National Association, as trustee, relating to the 8.75% Senior Notes due 2015 (incorporated by reference to Exhibit 4.24 to the Company's Annual Report on Form 10-K for the year ended December 31, 2010).

Exhibit	Description
4.19	Supplemental Indenture, dated January 12, 2011, by and among the Company, certain subsidiaries thereof and U.S. Bank National Association, as trustee, relating to the 9.75% Senior Secured Notes due 2015 (incorporated by reference to Exhibit 4.25 to the Company's Annual Report on Form 10-K for the year ended December 31, 2010).
4.20	Collateral Agreement, dated January 12, 2011, by and among the Company, certain subsidiaries thereof and U.S. Bank National Association, as collateral agent, relating to the 9.75% Senior Secured Notes due 2015 (incorporated by reference to Exhibit 4.5 to the Company's Current Report on Form 8-K filed on January 12, 2011).
**10.1	Operational Assistance Agreement, dated as of June 7, 1999, between XM Satellite Radio Inc. and Clear Channel Communications, Inc. (incorporated by reference to Exhibit 10.10 to Amendment No. 1 to XM Satellite Radio Holdings Inc.'s Registration Statement on Form S-1, File No. 333-83619).
**10.2	Technology Licensing Agreement among XM Satellite Radio Inc., XM Satellite Radio Holdings Inc., WorldSpace Management Corporation and American Mobile Satellite Corporation, dated as of January 1, 1998, amended by Amendment No. 1 to Technology Licensing Agreement, dated June 7, 1999 (incorporated by reference to Exhibit 10.3 to XM Satellite Radio Holdings Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007).
***10.3	Third Amended and Restated Distribution and Credit Agreement, dated as of February 6, 2008, among General Motors Corporation, XM Satellite Radio Holdings Inc. and XM Satellite Radio Inc. (incorporated by reference to Exhibit 10.63 to XM Satellite Radio Holdings Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007).
**10.4	Third Amended and Restated Satellite Purchase Contract for In-Orbit Delivery, dated as of May 15, 2001, between XM Satellite Radio Inc. and Boeing Satellite Systems International Inc. (incorporated by reference to Exhibit 10.36 to Amendment No. 1 to XM Satellite Radio Holdings Inc.'s Registration Statement on Form S-3, File No. 333-89132).
10.5	Assignment and Novation Agreement, dated as of December 5, 2001, between XM Satellite Radio Holdings Inc., XM Satellite Radio Inc. and Boeing Satellite Systems International Inc. (incorporated by reference to Exhibit 10.3 to XM Satellite Radio Holdings Inc.'s Current Report on Form 8-K filed on December 6, 2001).
**10.6	Amendment to the Satellite Purchase Contract for In-Orbit Delivery, dated as of December 5, 2001, between XM Satellite Radio Inc. and Boeing Satellite Systems International Inc. (incorporated by reference to Exhibit 10.4 to XM Satellite Radio Holdings Inc.'s Current Report on Form 8-K filed on December 6, 2001).
10.7	Amended and Restated Assignment and Use Agreement, dated as of January 28, 2003, between XM Satellite Radio Inc. and XM Radio Inc. (incorporated by reference to Exhibit 10.7 to XM Satellite Radio Holdings Inc.'s Current Report on Form 8-K filed on January 29, 2003).
**10.8	Amended and Restated Amendment to the Satellite Purchase Contract for In-Orbit Delivery, dated May 23, 2003, among XM Satellite Radio Inc. and XM Satellite Radio Holdings Inc. and Boeing Satellite Systems International Inc. (incorporated by reference to Exhibit 10.53 to XM Satellite Radio Holdings Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2003).
**10.9	Amendment to the Satellite Purchase Contract for In-Orbit Delivery, dated July 31, 2003, among XM Satellite Radio Inc. and XM Satellite Radio Holdings Inc. and Boeing Satellite Systems International Inc. (incorporated by reference to Exhibit 10.54 to XM Satellite Radio Holdings Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2003).

Exhibit	Description
**10.10	December 2003 Amendment to the Satellite Purchase Contract for In-Orbit Delivery, dated December 19, 2003, among XM Satellite Radio Inc., XM Satellite Radio Holdings Inc. and Boeing Satellite Systems International Inc. (incorporated by reference to Exhibit 10.57 to XM Satellite Radio Holdings Inc.'s Annual Report on Form 10-K for the year ended December 31, 2003).
*10.11	Form of Option Agreement between the Company and each Optionee (incorporated by reference to Exhibit 10.16.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1998).
*10.12	Form of Director Non-Qualified Stock Option Agreement (incorporated by reference to Exhibit 10.25 to Amendment No. 5 to XM Satellite Radio Holdings Inc.'s Registration Statement on Form S-1, File No. 333-83619).
*10.13	CD Radio Inc. 401(k) Savings Plan (incorporated by reference to Exhibit 4.4 to the Company's Registration Statement on Form S-8 (File No. 333-65473)).
*10.14	Employment Agreement, dated as of June 3, 2003, between the Company and David J. Frear (incorporated by reference to Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2003).
*10.15	Amended and Restated Sirius Satellite Radio 2003 Long-Term Stock Incentive Plan (incorporated by reference to Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2004).
*10.16	Employment Agreement dated November 18, 2004 between the Company and Mel Karmazin (incorporated by reference to Exhibit 10.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2004).
*10.17	Restricted Stock Unit Agreement, dated as of August 9, 2005, between the Company and James E. Meyer (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K dated August 12, 2005).
*10.18	First Amendment, dated as of August 10, 2005, to the Employment Agreement, dated as of June 3, 2003, between the Company and David J. Frear (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K dated August 12, 2005).
*10.19	Form of Non-Qualified Stock Option Agreement (incorporated by reference to Exhibit 10.2 to XM Satellite Radio Holdings Inc.'s Current Report on Form 8-K filed June 1, 2007).
*10.20	Form of Restricted Stock Agreement (incorporated by reference to Exhibit 10.3 to XM Satellite Radio Holdings Inc.'s Current Report on Form 8-K filed June 1, 2007).
*10.21	XM Satellite Radio Holdings Inc. 2007 Stock Incentive Plan (incorporated by reference to Exhibit 10.5 to XM Satellite Radio Holdings Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2007).
*10.22	Sirius XM Radio 401(k) Savings Plan, as amended and restated effective January 1, 2009 (incorporated by reference to Exhibit 10.30 to the Company's Annual Report on Form 10-K for the year ended December 31, 2009).
*10.23	Agreement to Forfeit Non-Qualified Stock Options, dated as of May 13, 2009, between Mel Karmazin and the Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed May 13, 2009).
*10.24	Second Amendment, dated as of February 12, 2008, to the Employment Agreement, dated as of June 3, 2003, between the Company and David J. Frear (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated February 13, 2008).

Exhibit	Description
*10.25	Employment Agreement, dated as of September 26, 2008, between the Company and Dara F. Altman (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 1, 2008).
*10.26	Letter Agreement dated June 30, 2009 amending the Employment Agreement dated November 18, 2004 between Mel Karmazin and the Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed July 1, 2009).
*10.27	Sirius XM Radio Inc. 2009 Long-Term Stock Incentive Plan (incorporated by reference to Exhibit 4.9 to the Company's Registration Statement on Form S-8 dated July 1, 2009).
*10.28	Employment Agreement, dated as of July 28, 2009, between the Company and Scott A. Greenstein (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed July 29, 2009).
*10.29	Employment Agreement, dated as of October 14, 2009, between the Company and James E. Meyer (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed October 16, 2009).
*10.30	Employment Agreement, dated as of January 14, 2010, between the Company and Patrick L. Donnelly (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed January 15, 2010).
*10.31	First Amendment, dated as of February 14, 2011, to the Employment Agreement dated as of October 14, 2009, between the Company and James E. Meyer (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed February 15, 2011).
*10.32	Employment Agreement, dated as of July 21, 2011, between the Company and David J. Frear (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 22, 2011).
*10.33	Employment Agreement, dated as of August 23, 2011, between the Company and Dara F. Altman (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on August 24, 2011).
*10.34	Form of Director Non-Qualified Stock Option Agreement (filed herewith).
*10.35	Form of Non-Qualified Stock Option Agreement (filed herewith).
21.1	List of Subsidiaries (filed herewith).
23.1	Consent of KPMG LLP (filed herewith).
31.1	Certificate of Mel Karmazin, Chief Executive Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.2	Certificate of David J. Frear, Executive Vice President and Chief Financial Officer, pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.1	Certificate of Mel Karmazin, Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.2	Certificate of David J. Frear, Executive Vice President and Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith).

Exhibit	Description
****101.1	The following financial information from our Annual Report on Form 10-K for the year ended December 31, 2011 formatted in eXtensible Business Reporting Language (XBRL): (i) Consolidated Statements of Operations for the years ended December 31, 2011, 2010 and 2009; (ii) Consolidated Balance Sheets as of December 31, 2011 and 2010; (iii) Consolidated Statements of Stockholder's Equity and Comprehensive Income (Loss) for the years ended December 31, 2011, 2010 and 2009; (iv) Consolidated Statements of Cash Flows for the years ended December 31, 2011, 2010 and 2009; and (v) Notes to Consolidated Financial Statements.

* This document has been identified as a management contract or compensatory plan or arrangement.

** Pursuant to the Commission's Orders Granting Confidential Treatment under Rule 406 of the Securities Act of 1933 or Rule 24(b)-2 under the Securities Exchange Act of 1934, certain confidential portions of this Exhibit were omitted by means of redacting a portion of the text.

*** Confidential treatment has been requested with respect to portions of this Exhibit that have been omitted by redacting a portion of the text.

**** In accordance with Rule 406T of Regulation S-T, the XBRL related information in Exhibit 101.1 to this Annual Report on Form 10-K shall not be deemed to be "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and shall not be part of any registration statement or other document filed under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.

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

FORM 10-Q

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

For the quarterly period ended April 30, 2012

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	**94-3352630**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
2101 Webster Street, Suite 1650 Oakland, CA	**94612**
(Address of principal executive offices)	(Zip Code)

(510) 451-4100
(Registrant's telephone number, including area code)

SXM REB EX 43

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

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

Large accelerated filer ☐ Accelerated filer ☐

Non-accelerated filer ☒ (Do not check if a smaller reporting company) 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 number of shares of registrant’s common stock outstanding as of May 25, 2012 was: 166,654,653

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Pandora Media, Inc.

FORM 10-Q Quarterly Report

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

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

	As of January 31, 2012	As of April 30, 2012
Assets		
Current assets:		
Cash and cash equivalents	$ 44,126	$ 44,690
Short-term investments	46,455	35,900
Accounts receivable, net of allowances of $590 and $448 at January 31 and April 30, 2012, respectively	66,738	70,531
Prepaid expenses and other current assets	2,806	3,247
Total current assets	160,125	154,368
Property and equipment, net	15,576	15,246
Other assets	2,314	2,247
Total assets	$ 178,015	$ 171,861
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 2,053	$ 1,595
Accrued liabilities	3,838	5,642
Accrued royalties	33,822	38,136
Deferred revenue	19,232	21,741
Accrued compensation	11,962	9,517
Total current liabilities	70,907	76,631
Other long-term liabilities	2,568	3,380
Total liabilities	73,475	80,011
Stockholders' equity:		
Preferred stock, $0.0001 par value; 10,000,000 shares authorized as of January 31 and April 30, 2012, respectively; no shares issued and outstanding as of January 31 and April 30, 2012	—	—
Common stock, $0.0001 par value: 1,000,000,000 shares authorized as of January 31 and April 30, 2012, respectively; 163,569,361 and 166,465,483 shares issued and outstanding as of January 31 and April 30, 2012, respectively	16	17
Additional paid-in capital	205,955	213,489
Accumulated deficit	(101,426)	(121,654)
Accumulated other comprehensive loss	(5)	(2)
Total stockholders' equity	104,540	91,850
Total liabilities and stockholders' equity	$ 178,015	$ 171,861

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

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

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012
Revenue:		
Advertising	$43,661	$ 70,597
Subscription services and other	7,379	10,187
Total revenue	51,040	80,784
Costs and expenses:		
Cost of revenue	4,360	6,917
Product development	2,731	4,119
Marketing and sales	12,964	23,460
General and administrative	6,943	10,612
Content acquisition	29,158	55,818
Total costs and expenses	56,156	100,926
Loss from operations	(5,116)	(20,142)
Other income (expense):		
Interest income	2	32
Interest expense	(109)	(124)
Other income (expense), net	(1,509)	—)
Loss before provision for income taxes	(6,732)	(20,234)
Provision for income taxes	(22)	6
Net loss	(6,754)	(20,228)
Accretion of redeemable convertible preferred stock	(70)	—
Increase in cumulative dividends payable upon conversion or liquidation of redeemable convertible preferred stock	(2,320)	—
Net loss attributable to common stockholders	$ (9,144)	$ (20,228)
Basic and diluted net loss per share attributable to common stockholders	$ (0.61)	$ (0.12)
Weighted-average number of shares used in computing basic per share amounts	14,900	165,404

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

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Pandora Media, Inc.
Condensed Consolidated Statements of Comprehensive Loss
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012
Net loss	$(6,754)	(20,228)
Other comprehensive loss:		
Unrealized gains on marketable securities, net	—	3
Other comprehensive loss:	$(6,754)	(20,225)
Total comprehensive loss	$(6,754)	$(20,225)

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

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Pandora Media, Inc.
Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012
Operating Activities		
Net loss	$ (6,754)	$(20,228)
Adjustments to reconcile net loss to net cash provided (used in) by operating activities:		
Depreciation and amortization	759	1,541
(Gain) loss on disposition of assets	—	32
Stock-based compensation	936	5,500
Remeasurement of preferred stock warrants	1,523	—
Amortization of premium on investments	—	92
Amortization of debt issuance cost and debt discount	1	66
Changes in assets and liabilities:		
Accounts receivable	1,007	(3,793)
Prepaid expenses and other assets	(1,406)	(433)
Accounts payable and accrued liabilities	(624)	1,022
Accrued royalties	3,006	4,314
Accrued compensation	2,781	(2,445)
Deferred revenue	1,546	2,509
Reimbursement of cost of leasehold improvements	—	1,243
Net cash provided (used in) by operating activities	2,775	(10,580)
Investing Activities		
Purchases of property and equipment	(2,086)	(1,243)
Purchase of short-term investments	—	(17,641)
Maturities of short-term investments	—	28,100
Net cash provided by (used) in investing activities	(2,086)	9,216
Financing Activities		
Repayments of debt	(164)	—
Proceeds from issuance of common stock	145	1,928
Net cash provided by (used in) financing activities	(19)	1,928
Net increase in cash and cash equivalents	670	564
Cash and cash equivalents at beginning of period	43,048	44,126
Cash and cash equivalents at end of period	$43,718	$ 44,690

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

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements

1. Description of Business and Basis of Presentation

Pandora Media, Inc. (the "Company" or "Pandora") provides an internet radio service in the United States, offering a personalized experience for each of its listeners. The Company has developed a form of radio that uses intrinsic qualities of music to initially create stations that then adapt playlists in real-time based on the individual feedback of each listener.

The Company was incorporated as a California corporation in January 2000 and reincorporated as a Delaware corporation in December 2010.

Basis of Presentation

The interim unaudited condensed 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 the Company and its wholly-owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. In the opinion of the Company's management, the interim unaudited condensed consolidated financial statements include all adjustments, which include only normal recurring adjustments, necessary for the fair presentation of the Company's financial position for the periods presented. These interim unaudited condensed consolidated financial statements are not necessarily indicative of the results expected for the full fiscal year or for any subsequent period and should be read in conjunction with the audited consolidated financial statements and related notes included in the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2012.

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 for determining selling prices for elements sold in multiple-element arrangements, the allowance for doubtful accounts, the fair value of common stock through the date of the Company's initial public offering ("IPO") in June 2011, stock-based compensation, fair values of investments, income taxes, and accrued royalties. To the extent there are material differences between these estimates, judgments, or assumptions and actual results, the Company's 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.

Fiscal Year

All references herein to a fiscal year refer to the 12 months ended January 31 of such year, and references to the first, second, third and fourth fiscal quarters refer to the three months ended April 30, July 31, October 31 and January 31, respectively.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

2. Summary of Significant Accounting Policies

There have been no material changes to the Company's significant accounting policies as compared to those described in the Company's Annual Report on Form 10-K for the fiscal year ended January 31, 2012.

Concentration of Credit Risk

For the three months ended April 30, 2011 the Company had one customer that accounted for 12% of total revenue. For the three months ended April 30, 2012, the Company had no customers that accounted for more than 10% of the Company's total revenue.

As of January 31 and April 30, 2012, the Company had no customers that accounted for more than 10% of the Company's total accounts receivable.

Recently Issued Accounting Standards

Effective February 1, 2012, the Company adopted Accounting Standards Update ("ASU") No. 2011-04, "Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and International Financial Reporting Standards ("IFRS")." The ASU updates the accounting guidance to clarify and align Fair Value Measurement within U.S. GAAP and International Financial Reporting Standards. In addition, the ASU updates certain requirements for measuring fair value and for disclosure around fair value measurement. It does not require additional fair value measurements and the ASU was not intended to establish valuation standards or affect valuation practices outside of financial reporting. The adoption of ASU 2011-04 did not have a significant impact on the Company's consolidated financial position or results of operations.

Effective February 1, 2012, the Company adopted ASU No. 2011-05, "Presentation of Comprehensive Income." The adoption of ASU 2011-05 concerns presentation and disclosure only and did not have an impact on the Company's consolidated balance sheets or results of operations. ASU 2011-05 requires retrospective application and separate consolidated statements of comprehensive income are included in these financial statements.

Effective February 1, 2012, the Company adopted ASU No. 2011-12, "Deferral of the Effective Date for Amendments to the Presentation of Reclassification of Items Out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05." The adoption of ASU 2011-12 concerns presentation and disclosure only and did not have an impact on the Company's consolidated financial position or results of operations.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

3. Composition of Certain Financial Statement Captions

Cash, Cash Equivalents and Short-term Investments

Cash, cash equivalents and short-term investments consisted of the following:

	As of January 31, 2012	As of April 30, 2012
	(in thousands)	
Cash and cash equivalents:		
Cash	$ 6,604	$ 5,411
Money market funds	31,614	34,780
Commercial paper	2,893	4,499
Corporate debt securities	3,015	—
Total cash and cash equivalents	$ 44,126	$44,690
Short-term investments:		
Commercial paper	$ 27,587	$23,789
Corporate debt securities	17,968	9,607
U.S. agency notes	900	2,504
Total short-term investments	$ 46,455	$35,900
Cash, cash equivalents and short-term investments	$ 90,581	$80,590

The Company's short-term investments have maturities of less than 12 months and are classified as available for sale. As of January 31 and April 30, 2012 the cost basis of the Company's cash and cash equivalents approximated their fair values and as a result, no unrealized gains or losses were recorded as of January 31 and April 30, 2012.

The following tables summarize the Company's available-for-sale securities' adjusted cost, gross unrealized gains, gross unrealized losses and fair value by significant investment category as of January 31 and April 30, 2012 (in thousands).

	As of January 31, 2012			
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value
Money market funds	$31,614	$ —	$ —	$31,614
Commercial paper	30,481	—	(1)	30,480
Corporate debt securities	20,987	1	(5)	20,983
U.S. agency notes	900	—	—	900
Total cash equivalents and marketable securities	$83,982	$ 1	$ (6)	$83,977

	As of April 30, 2012			
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value
Money market funds	$34,780	$ —	$ —	$34,780
Commercial paper	28,288	1	(1)	28,288
Corporate debt securities	9,609	—	(2)	9,607
U.S. agency notes	2,504	—	—	2,504
Total cash equivalents and marketable securities	$75,181	$ 1	$ (3)	$75,179

The Company's 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, 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.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

The unrealized losses on the Company's available-for-sale securities were primarily a result of unfavorable changes in interest rates subsequent to the initial purchase of these securities. As of April 30, 2012, the Company owned 12 securities that were in an unrealized loss position. The Company does not intend nor expect to need to sell these securities before recovering the associated unrealized losses. It expects to recover the full carrying value of these securities. As a result, no portion of the unrealized losses at April 30, 2012 is deemed to be other-than-temporary and the unrealized losses are not deemed to be credit losses. No available-for-sale securities have been in an unrealized loss position for 12 months or more. When evaluating the investments for other-than-temporary impairment, the Company reviews 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 the Company's intent to sell, or whether it is more likely than not it will be required to sell, the investment before recovery of the investment's amortized cost basis. During the three months ended April 30, 2012, the Company did not recognize any impairment charges.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

4. Fair Value

The Company records 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. As of January 31 and April 30, 2012 the Company did not hold any Level 3 assets.

When determining fair value, whenever possible the Company uses observable market data, and relies 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 January 31 and April 30, 2012:

	Fair Value Measurement Using		
	Quoted Prices in Active Markets for Identical Instruments (Level 1)	Significant Other Observable Inputs (Level 2)	Total
	(in thousands)		
Fair values as of January 31, 2012			
Assets:			
Money market funds	$ 31,614	$ —	$31,614
Commercial paper	—	30,480	30,480
Corporate debt securities	—	20,983	20,983
U.S. agency notes	—	900	900
Total assets measured at fair value	$ 31,614	$ 52,363	$83,977
Fair values as of April 30, 2012			
Assets:			
Money market funds	$ 34,780	$ —	$34,780
Commercial paper	—	28,288	28,288
Corporate debt securities	—	9,607	9,607
U.S. agency notes	—	2,504	2,504
Total assets measured at fair value	$ 34,780	$ 40,399	$75,179

The Company's money market funds are classified as Level 1 within the fair value hierarchy because they are valued primarily using quoted market prices. The Company's 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.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

5. Commitments and Contingencies

Legal Proceedings

Pandora has been in the past, and continues to be, a party to privacy and patent infringement litigation which has consumed, and may continue to consume, financial and managerial resources. The Company is also from time to time subject to various other legal proceedings and claims arising in the ordinary course of its business. Management believes that the liabilities associated with these cases, while possible, are not probable, and therefore the Company has not recorded any accrual for these as of January 31, 2012 and April 30, 2012. Further, any possible range of loss cannot be reasonably estimated at this time. The Company does not believe the ultimate resolution of any pending legal matters is likely to have a material adverse effect on its business, financial position, results of operations or cash flows.

In June 2011, a putative class action lawsuit was filed against Pandora in the United States District Court for the Northern District of California alleging that it unlawfully accessed and transmitted personally identifiable information of the plaintiffs in connection with their use of the Company’s Android mobile application. In addition to civil liability, the amended complaint includes allegations of violations of statutes under which criminal penalties could be imposed if the Company were found liable. Pandora’s motion to dismiss the first amended complaint was filed on March 23, 2012. No hearing date is currently set.

In September 2011, a putative class action lawsuit was filed against Pandora in the United States District Court for the Northern District of California alleging that it violated Michigan’s video rental privacy law and consumer protection statute by allowing Pandora listeners’ listening history to be visible to the public. Pandora’s motion to dismiss the complaint was filed on November 28, 2011. No hearing date is currently set.

In April 2011, Augme Technologies, Inc. filed a complaint in the United States District Court for the District of Delaware against Pandora alleging patent infringement. The complaint alleges that Pandora infringes an Augme patent and seeks injunctive relief and monetary damages.

The Company currently believes that it has substantial and meritorious defenses to the claims in the lawsuits discussed above and intends to vigorously defend its position.

On December 29, 2011, Hartford Casualty Insurance Company filed a complaint in the U.S. District Court for the Northern District of California seeking a declaratory judgment that it has no obligation to defend or indemnify Pandora in relation to certain pending and formerly pending privacy class actions. Pandora and Hartford entered into a settlement agreement with respect to Hartford’s claims on May 18, 2012.

The outcome of any litigation is inherently uncertain. Based on the Company’s current knowledge it believes that the final outcome of the matters discussed above will not likely, individually or in the aggregate, have a material adverse effect on its 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 the Company’s business.

Guarantees and Contingencies

The Company is party to certain contractual agreements under which it has agreed to provide indemnifications of varying scope and duration for claims by third parties relating to its intellectual property. 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, the Company has not incurred, does not anticipate incurring and therefore has not accrued for, any costs related to such indemnification provisions.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

6. Income Taxes

For the three months ended April 30, 2012 the Company recorded a tax benefit of $6,000 compared to a tax expense of $22,000 for the three months ended April 30, 2011. The effective tax rate for the three months ended April 30, 2012 was less than one percent based on the estimated tax loss for the fiscal year.

There were no material changes to the unrecognized tax benefits in the three months ended April 30, 2012 and the Company does not expect significant changes to unrecognized tax benefits through the end of the fiscal year. Because of the Company's history of tax losses, all years remain open to tax audit.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

7. Debt Instruments

On May 13, 2011, the Company entered into a $30 million credit facility with a syndicate of financial institutions. The amount of borrowings available under the credit facility at any time is based on the Company's monthly accounts receivable balance at such time, and the amounts borrowed are collateralized by the Company's personal property (including such accounts receivable but excluding intellectual property). Under the credit facility, the Company can request up to $5 million in letters of credit be issued by the financial institutions.

The credit facility contains customary events of default, conditions to borrowing and covenants, including restrictions on the Company's ability to dispose of assets, make acquisitions, incur debt, incur liens and make distributions to stockholders. The credit facility also includes a financial covenant requiring the maintenance of minimum liquidity of at least $5 million. During the continuance of an event of a default, the lenders may accelerate amounts outstanding, terminate the credit facility and foreclose on all collateral.

As of April 30, 2012, the Company had $520,000 in letters of credit outstanding and had $29.48 million of available borrowing capacity under the credit facility. On December 30, 2011, the Company entered into a cash collateral agreement in connection with the issuance of letters of credit which were used to satisfy deposit requirements under facility leases. As of April 30, 2012, the $520,000 cash collateral was considered to be restricted cash. The amount is included in other assets on the Company's balance sheet.

Total debt issuance costs associated with the credit facility were $1.0 million, which are being amortized as interest expense over the four-year term of the credit facility agreement. For the three months ended April 30, 2012, $0.1 million of debt issuance costs were amortized and included in interest expense.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

8. Stock-based Compensation Plans and Awards

The Company's 2011 Equity Incentive Plan (the "2011 Plan") provides for the issuance of stock options, restricted stock units and other stock-based awards. Each fiscal year, (beginning with the fiscal year that commenced February 1, 2012 and ending with the fiscal year commencing February 1, 2021), the number of shares in the reserve under the 2011 Plan may be increased by the lesser of (x) 10,000,000 shares, (y) 4.0% of the outstanding shares of common stock on the last day of the prior fiscal year or (z) another amount determined by the Company's board of directors. The 2011 Plan is scheduled to terminate in 2021, unless the board of directors determines otherwise. The 2011 Plan is administered by the compensation committee of the board of directors of the Company.

Valuation of Awards

The per-share fair value of each stock option with a service period condition but not a market condition was determined on the date of grant using the Black-Scholes option pricing model using the following assumptions:

	Three Months Ended April 30, 2011	2012
Expected life (in years)	5.72-7.02	6.67
Risk-free interest rate	2.28%-3.30%	1.52%
Expected volatility	54%-57%	56%
Expected dividend yield	0%	0%

Stock Options

A summary of stock option activity for the three months ended April 30, 2012 is as follows:

	Options Outstanding Stock Options	Weighted-Average Exercise Price	Aggregate[(1)] Intrinsic Value
	(in thousands, except share and per share data)		
Balance as of January 31, 2012	34,810,926	$ 2.43	$ 379,355
Granted	1,350,000	10.63	
Exercised	(2,750,045)	0.70	
Cancelled	(182,925)	4.00	
Balance as of April 30, 2012	33,227,956	$ 2.90	$ 209,017
Equity awards available for grant at April 30, 2012	13,726,781		

(1) Amounts represent the difference between the exercise price and the fair value of common stock at period end for all in the money options outstanding based on the fair value per share of common stock.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

Restricted Stock Units

The fair value of the restricted stock units ("RSUs") is expensed ratably over the vesting period. RSUs vest annually on a cliff basis over the service period, generally four years. The Company recorded stock-based compensation expense related to RSUs of approximately $1.8 million during the three months ended April 30, 2012. As of April 30, 2012, total compensation cost not yet recognized of approximately $37.1 million related to non-vested RSUs, is expected to be recognized over a weighted average period of 3.68 years.

The following table summarizes the activities for our RSUs for the three months ended April 30, 2012:

	Number of Shares	Weighted-Average Grant-Date Fair Value
Unvested at January 31, 2012	1,426,975	$ 12.03
Granted	1,932,762	11.94
Vested	—	—
Canceled	(24,775)	13.93
Unvested at April 30, 2012	3,334,962	$ 11.95

Stock Option Awards with Both a Service Period and a Market Condition

On March 22, 2012 Mr. Joseph Kennedy, the Company's Chief Executive Officer, was granted a non-statutory stock option to purchase 800,000 shares of common stock. This option grant to Mr. Kennedy was intended to be in lieu of an annual equity grant for fiscal 2014. This option includes both a service period and a market vesting condition. The stock option will vest if the 60-day trailing volume weighted average price of the Company's common stock exceeds $21.00 per share, or if there is a sale of the Company for at least $21.00 per share, in each case prior to July 6, 2017. If the market condition is met, the performance option will vest ratably over four years, beginning on July 6, 2013, subject to severance and change of control acceleration. To the extent that the market condition is not met, the option will not vest and will be cancelled. The Company used a binomial model to value the option with a market condition. The Company used Monte Carlo simulation techniques that incorporate assumptions as provided by management for the term of option from grant date (in years), risk-free interest rate, stock price volatility and beginning stock price. The Company does not adjust compensation cost recognition for subsequent changes in the expected outcome of the market-vesting conditions.

The following assumptions were used to value the grant using the Monte-Carlo simulation option pricing model: 10-year term, risk-free interest rate of 2.33%, expected volatility of 70% and a beginning stock price of $10.63. The grant-date fair value for the option was $6.08. As of April 30, 2012, total compensation cost not yet recognized of approximately $4.7 million related to this grant, is expected to be recognized over a period of 5.2 years.

Stock-based Compensation Expenses

The weighted-average fair value of stock option grants made during the three months ended April 30, 2011 and 2012 was $3.21 and $6.02, respectively. As of April 30, 2012, total compensation cost related to stock options granted, but not yet recognized, was $46.4 million which the Company expects to recognize over a weighted-average period of approximately 2.68 years.

The total grant date fair value of stock options vested during the three months ended April 30, 2011 and 2012 was $0.8 million and $3.4 million, respectively. The aggregate intrinsic value of all options and warrants exercised during the three months ended April 30, 2011 and 2012 was $2.4 million and $32.4 million, respectively.

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

Stock-based compensation expenses related to all employee and non-employee stock-based awards was as follows (in thousands):

	Three Months Ended April 30,	
	2011	2012
	(unaudited)	
Stock-based compensation expenses:		
Cost of revenue	$ 64	$ 263
Product development	177	986
Marketing and sales	423	2,930
General and administrative	272	1,321
Total stock-based compensation, recorded in costs and expenses[(1)]	$ 936	$ 5,500

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Pandora Media, Inc.

Notes to Condensed Consolidated Financial Statements - Continued

9. 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 income per share is computed by giving effect to all potential shares of common stock, including stock options, restricted stock units, convertible preferred stock warrants and redeemable convertible preferred stock, to the extent dilutive. Basic and diluted net loss per share was the same for the three months ended April 30, 2011 and 2012 as the inclusion of all potential common shares outstanding would have been anti-dilutive.

The following table sets forth the computation of historical basic and diluted net loss per share (in thousands except per share amounts):

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012
Numerator		
Net loss	$ (6,754)	$ (20,228)
Accretion of redeemable convertible preferred stock	(70)	—
Increase in cumulative dividends payable upon conversion or liquidation of redeemable convertible preferred stock	(2,320)	—
Net loss attributable to common stockholders	$ (9,144)	$ (20,228)
Denominator		
Weighted-average common shares outstanding used in computing basic and diluted net loss per share	14,900	165,404
Net loss per share, basic and diluted	$ (0.61)	$ (0.12)

Net loss was increased by the cumulative dividends payable upon conversion or liquidation of redeemable convertible preferred shares earned during the period to arrive at net loss attributable to common stockholders for the three months ended April 30, 2011. Dividends were accrued up through the conversion at the close of the IPO in June, 2011.

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 (in thousands):

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012
Options to purchase common stock	37,633	33,228
Warrants to purchase convertible preferred stock	403	—
Restricted stock units	—	3,335
Convertible preferred stock	137,295	—
Total common stock equivalents	175,331	36,563

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion of our financial condition and results of operations in conjunction with the condensed consolidated financial statements and the notes thereto included elsewhere in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the fiscal year ended January 31, 2012 filed with the Securities and Exchange Commission pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All references herein to a fiscal year refer to the 12 months ended January 31 of such year, and references to the first, second, third and fourth fiscal quarters refer to the three months ended April 30, July 31, October 31 and January 31, respectively.

This Quarterly Report on Form 10-Q contains "forward-looking statements" that involve substantial risks and uncertainties. The statements contained in this Quarterly Report on Form 10-Q 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 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 the section titled "Risk Factors" included in this Quarterly Report on Form 10-Q and our Annual Report on Form 10-K for the fiscal year ended January 31, 2012. 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. These and other factors could cause our results to differ materially from those expressed in this Quarterly Report on Form 10-Q.

Some of the industry and market data contained in this Quarterly Report on Form 10-Q are based on independent industry publications, including those generated by Triton Digital Media or ("Triton") 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., unless the context indicates otherwise.

"Pandora" and other trademarks of ours appearing in this report are our property. This report may contain 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.

Overview

Pandora is the leader in internet radio in the United States, offering a personalized experience for each of our listeners. We have pioneered a new form of radio – one that uses intrinsic qualities of music to initially create stations and then adapts playlists in real-time based on the individual feedback of each listener. As of April 30, 2012, we had approximately 150 million registered users, which we define as the total number of accounts that have been created for our service at period end. As of April 30, 2012 approximately 100 million registered users have accessed Pandora through smartphones and tablets. For the three months ended April 30, 2012, we streamed 3.09 billion hours of radio and as of April 30, 2012, we had 51.9 million active users during the prior 30 day period. According to a March 2012 report by Triton, we have more than a 70% share of internet radio among the top 20 stations and networks in the United States. Since we launched our free, advertising-supported radio service in 2005 our listeners have created over 2.8 billion stations.

Since we started the Music Genome Project in 2000, we have continuously built our song catalog, refined the genotyping model and developed proprietary algorithms for building personalized playlists for our listeners based both on our analysis and feedback data from our listeners.

Our comedy service leverages similar technology to the technology 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.

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The mobile version of our Pandora service, the Pandora app, is available for smartphones including the iPhone, Android and Blackberry phones, and for tablets including the iPad, Android tablets and Blackberry Playbook.

One key element of our strategy is to make the Pandora service available everywhere in the United States that there is internet connectivity. To this end, we partner with manufacturers of home entertainment systems and other consumer electronics products to integrate the Pandora service with their products. We also develop relationships with major automobile manufacturers and their suppliers to integrate the Pandora service with automobiles. We are currently available on models of Ford, Lincoln, Mercedes-Benz, MINI, BMW, Hyundai, Scion, Toyota, Lexus, Chevrolet, Buick, GMC and Honda. Additionally, Cadillac, Suzuki, Nissan and Kia have publicly announced their plans for future Pandora integrations.

Business Model

We derive the substantial majority of our revenue from the sale of display, audio and video advertising for delivery across our traditional computer-based, mobile and other connected device platforms. We also offer a paid subscription service to listeners, which we call Pandora One. While historically our revenue growth was principally attributable to selling display advertising through our traditional computer-based platform, the rapid adoption of our service on mobile and other connected devices is changing this mix. This expansion of our services also presents an opportunity for us to reach our audience anytime, anywhere they enjoy music, and therefore offer additional distribution channels to current and potential advertisers for delivery of their advertising messages.

Growth in our active users and distribution platforms has fueled a corresponding growth in listener hours. Our total number of listener hours is a key driver for both revenue generation opportunities and content acquisition expenses, which are the largest component of our operating expenses:

- *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. In turn, our ability to generate revenue depends on the extent to which we are able to sell the inventory we have.
- *Content Acquisition Expenses*. Listener hours drive substantially all of our content acquisition expenses. With respect to each sound recording streamed to each listener, we pay royalties to the copyright owners both of sound recordings and of the underlying musical works, subject to certain exclusions, and we record these royalties as content acquisition expenses. Under U.S. law, we are guaranteed the right to stream any lawfully released sound recordings. Royalties for sound recordings are negotiated with and paid through SoundExchange. Royalties for musical works are negotiated with and paid through publishing companies such as Entertainment World Inc. or EMI; or performance rights organizations such as the American Society of Composers, Authors and Publishers, or ASCAP; Broadcast Music, Inc., or BMI; and SESAC Inc. or SESAC. Royalties are calculated using negotiated rates documented in master royalty agreements and based on sound recordings streamed, revenue earned or other usage measures. If we cannot agree on royalty rates, the dispute will be resolved by the Copyright Royalty Board, or CRB, in the case of SoundExchange, and by the rate court in the case of ASCAP and BMI. In May 2011, we started streaming spoken word comedy content, for which the underlying literary works are not currently entitled to eligibility for licensing by any performing rights organization for 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, however we pay royalties to SoundExchange at federally negotiated rates for the right to stream this spoken word comedy content.

Given the royalty structures in effect with respect to content acquisition, our content acquisition costs increase with each additional listener hour, subject to certain exclusions, regardless of whether we are able to generate more revenue. As such, our ability to achieve operating leverage depends on our ability to increase our revenue per hour of streaming through increased advertising sales.

As our mobile listenership increases, we face new challenges in optimizing our advertising products for delivery on mobile and other connected device platforms. The mobile advertising market is nascent and faces technical challenges due to fragmented platforms and lack of standard audience measurement protocols.

In addition, we expect to increase the number of audio ad campaigns for both traditional computer-based and mobile platforms, placing us in more direct competition with broadcast radio for advertiser spending, and these advertisers predominantly focus on local advertising. By contrast, display advertisers have been predominantly national brands. To successfully sell audio ads, we may have to convince a substantial base of local advertisers of the benefits of advertising on the Pandora service.

In fiscal 2011 and 2012, we substantially increased our expenditures for product development, marketing and sales and general and administrative expenses to generate growth and provide support infrastructure for that anticipated growth. We expect increased levels of operating expenses into the future.

Our total revenue has grown from $51.0 million in the three months ended April 30, 2011 to $80.8 million in the three months ended April 30, 2012. At the same time, our total cost and expenses have grown from $56.2 million in the three months ended April 30,

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2011 to $100.9 million in the three months ended April 30, 2012, principally as a result of the growth in content acquisition expenses. As the volume of music we stream to listeners increases, our content acquisition expense will also increase, regardless of whether we are able to generate more revenue. In addition, we expect to invest heavily in our operations to support anticipated future growth. As a result of these factors, we expect to continue to incur operating losses on an annual basis through at least the end of fiscal 2013.

Key Metrics:

We track listener hours because it is a key indicator of the growth of our business. We also track the number of active users as an additional indicator of the breadth of audience we are reaching at a given time, which is particularly important to potential advertisers.

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. We believe this server-based approach is the best methodology to forecast advertising inventory given that advertisements are frequently served in between tracks and are often served upon triggers such as a listener clicking thumbs-down or choosing to skip a track. 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.

Active users are defined as the number of distinct registered users 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.

The tables below set forth our listener hours for the three months ended April 30, 2011 and 2012 and our active users as of January 31 and April 30, 2012.

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012
Listener hours (in billions)	1.61	3.09

	As of January 31, 2012	As of April 30, 2012
Active users (end of period, in millions)	47.6	51.9

Basis of Presentation

Revenue

Advertising Revenue. We generate advertising revenue primarily from display, audio and video advertising, which is typically sold on a cost-per-thousand impressions, or CPM, basis. Advertising campaigns typically range from one to 12 months, and advertisers generally pay us based on a minimum number of impressions or the satisfaction of other criteria, such as click-throughs. We may earn referral revenue when, for example, a listener clicks on an advertisement and signs up for membership with an advertiser. We also have arrangements with advertising agencies and brokers pursuant to which we provide the ability to sell advertising inventory on our service directly to advertisers. We report revenue under these arrangements net of amounts due to agencies and brokers.

For the three months ended April 30, 2011 and 2012, respectively, advertising revenue accounted for 86% and 87% of our total revenue. We expect that advertising will comprise a substantial majority of revenue for the foreseeable future.

Subscription Services and Other Revenue. We generate subscription revenue through the sale and activation of access to a premium version of the Pandora service for $36 per year or, on some devices, $4 per month, which currently includes an ad free environment and, on devices that support it, higher quality audio. We receive the full amount of the subscription payment, net of any applicable commissions and processing fees at the time of sale; however, subscription revenue is recognized on a straight-line basis over the subscription period. For the three months ended April 30, 2011 and 2012, subscription services and other revenue accounted for 14% and 13%, respectively, of our total revenue.

Deferred Revenue. Our deferred revenue consists principally of both prepaid but unrecognized subscription revenue and 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.

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Costs and Expenses

Costs and expenses consist of cost of revenue, product development, marketing and sales, general and administrative and content acquisition expenses. Content acquisition expenses are the most significant component of our costs and expenses followed by employee-related costs, which includes stock-based compensation expenses. We expect to continue to hire employees in order to support our anticipated growth. In any particular period, the timing of additional hires could materially affect our 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. Cost of revenue consists of hosting costs, infrastructure and the employee and employee-related costs associated with supporting those functions. Hosting costs consist of content streaming, maintaining our internet radio service and creating and serving advertisements through third-party ad servers. Infrastructure costs consist of equipment, software, facilities and depreciation. We make payments to third-party ad servers for the period the advertising impressions or click-through actions are delivered or occur, and accordingly, we record this as a cost of revenue in the related period.

Product Development. Product development expenses consist of employee compensation, information technology, consulting, facilities-related expenses 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(s) generating system. We have generally expensed product development as incurred. Certain website development and internal use software development costs may be 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 intend to continue making significant investments in developing new products and enhancing the functionality of our existing products.

Marketing and Sales. Marketing and sales expenses consist of employee and employee-related costs including salaries, commissions and benefits related to employees in sales, marketing and advertising departments. In addition, marketing and sales expenses include external sales and marketing expenses such as third-party marketing, branding, advertising and public relations expenses, and infrastructure costs such as facility and other supporting overhead costs. We expect marketing and sales expenses to increase as we hire additional personnel to build out our sales force and ad operations team and expand our business development team to establish relationships with manufacturers of an increasing number of connected devices.

General and Administrative. General and administrative expenses include employee and employee-related costs consisting of salaries and benefits 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, and infrastructure costs for facility, supporting overhead costs and merchant and other transaction costs, such as credit card fees. We expect to incur additional expenses in future periods as we continue to invest in corporate infrastructure, including adding personnel and systems to our finance and administrative functions. We expect to continue to incur expenses associated with being a public company, including increased legal and accounting costs, investor relations costs and compliance costs in connection with section 404 of the Sarbanes-Oxley Act.

Content Acquisition. Content acquisition expenses principally consist of royalties payable for streaming music or other content to our listeners. Royalties are calculated using negotiated rates documented in master royalty agreements and are based on both percentage of revenue and listener metrics. The majority of our royalties are payable based on a fee per track, while in other cases our royalties are payable based on a percentage of our revenue.

We periodically test our royalty calculation methods to ensure we are accurately reporting and paying royalties. The performance rights organizations have the right to audit our playlist and payment records, and any such audit could result in disputes over whether we have paid the proper royalties. If such a dispute were to occur, we could be required to pay additional royalties, and the amounts involved could be material.

For royalty arrangements under negotiation, we accrue for estimated royalties based on the available facts and circumstances and adjust these estimates as more information becomes available. The results of any finalized negotiation may be materially different from our estimates.

In 2009 we, together with other webcasters, negotiated new royalty rates on performances with SoundExchange for calendar years 2006 to 2015. The agreement reduced rates originally established by the Copyright Royalty Board for calendar years 2006 to 2010 and established new rates for calendar years 2011 to 2015.

Provision for Income Taxes. Since our inception, we have been subject to income taxes only in the United States. In the event we expand our operations outside the United States, we will become subject to taxation based on the foreign statutory rates and our effective tax rate could fluctuate accordingly.

Income taxes are 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.

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Results of Operations

The following table presents our results of operations for the periods indicated as a percentage of total revenue. The period-to-period comparisons of results are not necessarily indicative of results for future periods.

	Three Months Ended April 30,	
	2011[2]	2012[2]
	(unaudited)	
Revenue:		
Advertising	86%	87%
Subscription services and other	14	13
Total revenue	100	100
Costs and expenses:		
Cost of revenue[1]	9	9
Product development[1]	5	5
Marketing and sales[1]	25	29
General and administrative[1]	14	13
Content acquisition	57	69
Total costs and expenses	110	125
Loss from operations	(10)	(25)
Other income (expense):		
Interest income	—	—
Interest expense	—	—
Other expense, net	(3)	—
Loss before provision for income taxes	(13)	(25)
Provision for income taxes	—	—
Net Loss	(13)%	(25)%

(2) Amounts may not sum due to rounding.
(1) Includes stock-based compensation as follows:

Cost of revenue	0.1%	0.3%
Product development	0.3	1.2
Marketing and sales	0.8	3.6
General and administrative	0.5	1.6

Comparison of the Three Months Ended April 30, 2011 and 2012

Revenue

	Three Months Ended April 30,		
	2011	2012	$ Change
	(in thousands)		
Advertising	$43,661	$70,597	$26,936
Subscription services and other	7,379	10,187	2,808
Total revenue	$51,040	$80,784	$29,744

Three months ended 2011 compared to 2012. Advertising revenue increased $26.9 million due to an increase in the number of advertising campaigns enabled by higher listener hours across our traditional computer as well as mobile and other connected device platforms, and by an increase in the size of our sales force as compared to the prior year period. Subscription revenue increased $2.8 million due to an increase in the number of subscribers.

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Costs and Expenses

Cost of Revenue

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012	$ Change
	(in thousands)		
Cost of revenue	$ 4,360	$ 6,917	$ 2,557

Three months ended 2011 compared to 2012. Cost of revenue increased $2.6 million primarily due to a $0.9 million increase in hosting services costs as a result of a 92% increase in listener hours, $0.8 million higher employee-related expenses driven primarily by a 45% increase in headcount and $0.6 million due to higher infrastructure costs.

Product Development

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012	$ Change
	(in thousands)		
Product development	$ 2,731	$ 4,119	$ 1,388

Three months ended 2011 compared to 2012. Product development expenses increased $1.4 million primarily due to $1.5 million higher employee-related expenses driven by a 30% increase in headcount, partially offset by lower professional services fees.

Marketing and Sales

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012	$ Change
	(in thousands)		
Marketing and sales	$ 12,964	$23,460	$10,496

Three months ended 2011 compared to 2012. Marketing and sales expenses increased $10.5 million primarily due to an $8.7 million increase in employee-related expenses driven by a 75% increase in headcount along with an increase in external sales and marketing expenses of $1.2 million related to marketing events and marketing research.

General and Administrative

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012	$ Change
	(in thousands)		
General and administrative	$ 6,943	$ 10,612	$ 3,669

Three months ended 2011 compared to 2012. General and administrative expenses increased $3.7 million primarily due to a $2.4 million increase in employee-related expenses driven by a 44% increase in headcount and higher overall compensation, and a $0.9 million increase in professional services fees.

Content Acquisition

	Three Months Ended April 30, 2011	Three Months Ended April 30, 2012	$ Change
	(in thousands)		
Content acquisition	$29,158	$55,818	$26,660

Three months ended 2011 compared to 2012. Content acquisition expenses increased $26.7 million due to increased royalty payments driven by increased listener hours, higher royalty rates due to scheduled rate increases and higher revenue.

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Other Income (Expense)

	Three Months Ended April 30, 2011	2012	$ Change
	(in thousands)		
Interest income	$ 2	$ 32	$ 30
Interest expense	(109)	(124)	(15)
Other income (expense)	(1,509)	—	1,509
Total other expense	$ (1,616)	$ (92)	$ 1,524

Three months ended 2011 compared to 2012. Total other expenses decreased $1.5 million due to the absence in the 2012 period of expenses related to the remeasurement of the fair value of our preferred stock warrants which existed as of April 30, 2011 but were converted into shares of common stock upon the closing of our IPO on June 20, 2011.

Provision for Income Taxes

Three months ended 2011 compared to 2012. For the three months ended April 30, 2012 the Company recorded a tax benefit of $6,000 compared to a tax expense of $22,000 for the three months ended April 30, 2011. The difference was primarily driven by changes in state tax statutes which resulted in lower tax obligations in some states.

Off-Balance Sheet Arrangements

Our liquidity is not dependent on the use of off-balance sheet financing arrangements and as of April 30, 2012 we had no such arrangements. There has been no material change in our contractual obligations other than in the ordinary course of business since our fiscal year ended January 31, 2012.

Quarterly 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.

Our results may reflect the effects of some seasonal trends in listener behavior due to increased internet usage and sales of media-streaming devices during certain vacation and holiday periods. For example, we expect to experience increased usage during the fourth quarter of each calendar year due to the holiday season, and in the first quarter of each calendar year due to increased use of media-streaming devices received as gifts during the holiday season. We may also experience higher advertising sales during the fourth quarter of each calendar year due to greater advertiser demand during the holiday season and lower advertising sales during the first quarter of each calendar year due to seasonally adjusted advertising demand. While we believe these seasonal trends have affected and will continue to affect our operating results, our trajectory of rapid growth may have overshadowed these effects to date. We believe that our business may become more seasonal in the future and that such seasonal variations in listener behavior may result in fluctuations in our financial results.

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. For example, an advertiser which accounted for more than 10% of our advertising revenue for the first two quarters of fiscal 2012 did not meet this threshold for the first quarter of fiscal 2013. 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.

Liquidity and Capital Resources

As of April 30, 2012 we had cash, cash equivalents and short-term investments totaling $80.6 million, which consisted of cash and money market funds held at major financial institutions, debt instruments of the U.S. government and its agencies, commercial paper and investment-grade corporate debt securities. Our principal uses of cash during the three months ended April 30, 2012 were funding our operations 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 12 months.

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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.

Credit Facility. On May 13, 2011, we entered into a $30 million credit facility with a syndicate of financial institutions. 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. Under the credit facility, we can request up to $5 million in letters of credit be issued by the financial institutions.

As of April 30, 2012, the Company had $520,000 in letters of credit outstanding and had $29.48 million of available borrowing capacity under the credit facility. On December 30, 2011, the Company entered into a cash collateral agreement in connection with the issuance of letters of credit which were used to satisfy deposit requirements under facility leases. As of April 30, 2012, the $520,000 cash collateral was considered to be restricted cash. The amount is included in other assets on the Company's balance sheet.

Capital Expenditures

Consistent with previous periods, future capital expenditures will primarily focus on acquiring additional hosting and general corporate infrastructure. Based on current estimates, we believe that our anticipated capital expenditures will be adequate to implement our current plans.

Historical Trends

The following table summarizes our cash flow data for the three months ended April 30, 2011 and 2012.

	Three Months Ended April 30,	
	2011	2012
	(in thousands) (unaudited)	
Net cash provided by (used in) operating activities	$ 2,775	$(10,580)
Net cash provided by (used in) investing activities	(2,086)	9,216
Net cash provided by (used in) financing activities	(19)	1,928

Operating Activities

In the three months ended April 30, 2011, net cash provided by operating activities was $2.8 million including our net loss of $6.8 million and non-cash charges of $3.2 million. In addition, cash inflows from changes in operating assets and liabilities included an increase in accrued royalties of $3.0 million due to the timing of royalty payments and an increase in the number of listeners, an increase in accrued compensation of $2.8 million related to higher employee bonus compensation due to higher revenue, and an increase in deferred revenue of $1.5 million primarily related to an increase in customers purchasing subscriptions for Pandora One, partially offset by cash outflows of $1.4 million in prepaid expenses and other assets primarily related to deferred costs associated with this offering.

In the three months ended April 30, 2012, net cash used in operating activities was $10.6 million, including our net loss of $20.2 million and non-cash charges of $7.2 million. Net cash used in operating activities included $3.8 million higher accounts receivable primarily due to increased billings, and $2.4 lower accrued compensation due commission and bonus payments, partially offset by $4.3 million higher accrued royalties due to an increase in listening hours and scheduled royalty rate increases, $2.5 million higher deferred revenue due to an increase in customers purchasing subscriptions for Pandora One and a $1.2 million reimbursement of leasehold improvement costs related to our Oakland, California facility.

Investing Activities

Cash used in investing activities in the three months ended April 30, 2011 was $2.1 million consisting primarily of capital expenditures for server equipment.

Cash provided by investing activities in the three months ended April 30, 2012 was $9.2 million consisting of $28.1 million in maturities of short-term investments, partially offset by $17.6 million in purchases of short-term investments and $1.2 million in capital expenditures primarily related to leasehold improvements.

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Financing Activities

Cash used in financing activities in the three months ended April 30, 2011 was $19,000 consisting of repayment of debt of $0.2 million partially offset by proceeds from the issuance of common stock of $0.1 million.

Cash provided by financing activities in the three months ended April 30, 2012 was $1.9 million consisting of proceeds from issuance of common stock.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our condensed consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these condensed 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 condensed consolidated financial statements. We believe that our critical accounting policies reflect the more significant estimates and assumptions used in the preparation of the condensed consolidated financial statements.

There have been no material changes to our critical accounting policies and estimates as compared to those described in our Annual Report on Form 10-K for the fiscal year ended January 31, 2012 under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations — Critical Accounting Policies and Estimates."

Item 3. Quantitative and Qualitative Disclosure About Market Risk

There have been no material changes in our primary market risk exposures or how those exposures are managed from the information disclosed in Part II, Item 7A of our Annual Report on Form 10-K for the fiscal year ended January 31, 2012. For further discussion of quantitative and qualitative disclosures about market risk, reference is made to our Annual Report on Form 10-K.

Item 4. 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 its 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 Quarterly Report on Form 10-Q, 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 April 30, 2012.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting during the three months ended April 30, 2012 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

The material set forth in Note 5 of Notes to Condensed Financial Statements in Part I, Item 1 of this Quarterly Report on Form 10-Q is incorporated herein by reference.

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Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. Before deciding to invest in our common stock, you should carefully consider each of the risk factors described in "Part I - Item 1A. Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended January 31, 2012 and all information set forth in this Quarterly Report on Form 10-Q. Those risks and the risks described in this Quarterly Report on Form 10-Q, including in the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations," could materially harm our business, financial condition, operating results, cash flow and prospects. If that occurs, the trading price of our common stock could decline, and you may lose all or part of your investment.

There have been no material changes to the Risk Factors described under "Part I - Item 1A. Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended January 31, 2012, other than:

If music publishers withdraw all or a portion of their digital music catalogs from performing rights organizations, we may be forced to enter into direct licensing agreements with these publishers at rates higher than those we currently pay, or we may be unable to reach agreement with these publishers at all, which could adversely affect our business, financial condition and results of operations.

If music publishers withdraw all or a portion of their catalogs from performing rights organizations (or "PROs") such as ASCAP, BMI or SESAC, we may no longer be able to obtain licenses for such publisher's withdrawn catalogs. Under these circumstances, digital music webcasters, such as Pandora, who have been able to secure licenses for such publisher's musical compositions would need to enter into direct licensing arrangements with music publishers. Although we continue to be licensed by the PROs, it is currently unclear what specific effect a publisher's limited withdrawal from a PRO would have on us. For example, EMI withdrew its catalog from ASCAP in May 2011, and as a result we entered into a separate license agreement with EMI in March 2012. If we are unable to reach an agreement with respect to the repertoire of any music publisher who withdraws all or a portion of its catalog(s) from a PRO, or if we are forced to enter into direct licensing agreements with publishers at rates higher than those currently set by the PROs (or the U.S. District Court having supervisory authority over ASCAP and BMI) for the performance of musical works, our ability to stream music content to our listeners may be limited or our operating costs may significantly increase, which could adversely affect our business, financial condition and results of operations.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

In June 2011, our registration statement on Form S-1 (File No. 333-172215) was declared effective for our initial public offering ("IPO"). There have been no changes regarding the use of proceeds from our IPO from the disclosure in our Annual Report on Form 10-K for the fiscal year ended January 31, 2012.

Item 6. Exhibits

		Incorporated by Reference					
Exhibit No.	Exhibit Description	Form	File No.	Exhibit	Filing Date	Filed By	Filed Herewith
10.19†	Offer Letter with Simon Fleming-Wood, dated August 5, 2011						X
10.20†	2013 Corporate Incentive Plan						X
10.21†	Stock Option Agreement with Joseph Kennedy, dated March 22, 2012						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

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Exhibit No.	Exhibit Description	Incorporated by Reference Form	File No.	Exhibit	Filing Date	Filed By	Filed Herewith
101	Interactive Data Files Pursuant to Rule 405 of Regulation S-T: (i) Condensed Balance Sheets as of April 30, 2012 and January 31, 2012, (ii) Condensed Statements of Operations for the Three Months ended April 30, 2012 and 2011, (iii) Condensed Statements of Cash Flows for the Three Months ended April 30, 2012 and 2011 and (iv) Notes to Condensed Financial Statements						X

† Indicates management contract or compensatory plan

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, Pandora Media, Inc. has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PANDORA MEDIA, INC.

Date: June 1, 2012

By: /s/ Steven Cakebread

Steven Cakebread
Executive Vice President and Chief
Financial Officer

(Duly Authorized Officer and Principal Financial and Accounting Officer)

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Auto

How to Listen to Pandora in the Car

Regardless of the way you listen to Pandora in your car, be sure to AVOID BEING DISTRACTED while driving. Cl...

Pandora and BMW

Pandora is supported by all BMW models equipped with factory option 6NR, "BMW Apps." Please contact your local...

Pandora and Ford

There's a new way to listen to Pandora® internet radio in select Ford and Lincoln vehicles. Now you can listen...

Pandora and Mercedes-Benz

The Mercedes-Benz Media Interface Plus works with the free Pandora iPhone app to provide direct control of Pan...

Pandora and MINI

The MINI Connected Interface will support Pandora on all MINIs that have MINI Connected installed. Please cont...

Pandora and Scion

Scion is pleased to announce that all 2012 Scion vehicles have the option of upgrading to a premium audio syst...

SXM REB EX 44

Pandora and Buick

Buick is proud to announce the 2012 Verano, Regal*, and LaCrosse* models will be available with Buick IntelliL...

Pandora and GMC

Take Your Life Wherever Life Takes You. The new IntelliLink1 system in the 2012 GMC Terrain will intuitively ...

Pandora and Alpine

Alpine has a variety of receivers that work with Pandora®. Each receiver directly controls the free Pandora a...

Pandora and Pioneer

Pioneer has a wide range of products that work with the free Pandora iPhone app to provide direct control of P...

Have a question? Ask or enter a search term here. Search

How to Listen to Pandora in the Car

Regardless of the way you listen to Pandora in your car, be sure to **AVOID BEING DISTRACTED** while driving.

Click here to learn more about driver distraction.

Pandora-enabled stereo and navigation units

Click here for information about Pandora in Your Car.

This requires the purchase of a car stereo or navigation unit that supports Pandora-specific controls.

All of the currently available systems that support full integration with car stereo controls still require a smartphone to handle the actual music streaming. However, with these systems your car stereo will provide direct access to Pandora features--you won't have to touch your smartphone to control the music.

For your safety:

ONLY use your mobile device when allowed by law and conditions permit safe use.

ALWAYS set up your mobile device and start Pandora before beginning to drive. Avoid interacting with your device while the vehicle is in motion.

NEVER let your use of a mobile device distract you from the driving task. Always drive safely, with your hands on the wheel and eyes and attention on the road.

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Home › Auto › Pandora and BMW

Pandora and BMW

The Ultimate Driving Machine®

Pandora is supported by all BMW models equipped with *factory option 6NR*, "BMW Apps." Please contact your local authorized BMW center for further details.

BMW Apps currently support direct control of the Pandora iPhone app via an iPhone 3GS, or iPhone 4 running iOS 4.3.1 or greater. Other supported smartphone platforms may permit A2DP stereo Bluetooth audio streaming.

Updating to the latest version of the Pandora app on your smartphone may be required. See links below for download instructions.

Please be sure to **avoid distracted driving**. For more specific tips on how to avoid distracted driving, please click here.

For further info on the **BMW ConnectedDrive**, click here.
To locate your local authorized **BMW center**, click here.
For information on installing the Pandora iPhone app, click here.

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Home › Auto › Pandora and Ford

Pandora and Ford

There's a new way to listen to Pandora® internet radio in select Ford and Lincoln vehicles. Now you can listen through SYNC® AppLink™.

Use your voice, not your hands, to control mobile apps while driving. SYNC® AppLink™ and the free Pandora mobile app work from your smartphone to let you control your personalized Pandora stations with your voice or with thumb controls on your steering wheel.

AppLink with voice control is available now as a downloadable software update for the SYNC®-equipped 2011 Ford Fiesta and comes factory-installed in the 2012 Fusion, Mustang and Lincoln MKZ.

In vehicles that don't support AppLink™, SYNC can use your Bluetooth-enabled phone or media device to wirelessly stream Pandora through your vehicle's sound system. SYNC® AppLink™-supported phones include **Android devices running Android OS 2.1+**, the**iPhone 3GS and iPhone 4 running latest iOS 4.x** and **BlackBerry® devices running latest BlackBerry OS**.

For information on supported smartphones, click here.

Updating to the latest version of the Pandora app on your smartphone may be required. See links below for download instructions.

Please be sure to **avoid distracted driving**. For more specific tips on how to avoid distracted driving, please click here.

For further info on SYNC® AppLink™, including usage and troubleshooting tips, click here

For information about installing the Pandora Android app, click here

For information about installing the Pandora iPhone app, click here

For information about installing the Pandora BlackBerry app, click here

For a video demo of how SYNC® AppLink™ works, please click here.

To download the SYNC® AppLink™ software update now, click here.

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Home › Auto › **Pandora and Mercedes-Benz**

Pandora and Mercedes-Benz

Mercedes-Benz

The **Mercedes-Benz Media Interface Plus** works with the free Pandora iPhone app to provide *direct control of Pandora* from your in-dash stereo controls.

The Mercedes-Benz Media Interface Plus will support Pandora on all vehicles that have the "iPod / MP3 Media Interface" (*factory option code 518*) installed. Please contact your local authorized Mercedes-Benz dealer for further vehicle applicability.

The Media Interface Plus currently supports direct control of the Pandora iPhone app via an iPhone 3G, 3GS, or iPhone 4. Other supported smartphone platforms may permit A2DP stereo Bluetooth audio streaming and a limited number of AVRCP control features.

Please be sure to **avoid distracted driving**. For more specific tips on how to avoid distracted driving, please click here.

For further information about the Mercedes Media Interface Plus and supported vehicle models, please contact your local authorized Mercedes-Benz dealer:
http://www.mbusa.com/mercedes/dealers/state

For information about installing the Pandora iPhone app, click here.

For information on compatibility with devices and vehicle models, click here.

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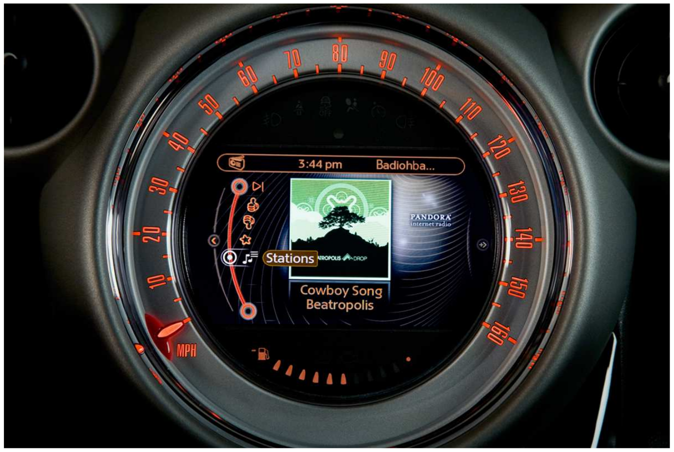
Home › Auto › **Pandora and MINI**

Pandora and MINI

The **MINI Connected Interface** will support Pandora on all MINIs that have *MINI Connected* installed. Please contact your local authorized MINI dealer for further vehicle applicability.



The MINI Connected Interface currently supports direct control of the Pandora iPhone app via an iPhone 3G, 3GS, or iPhone 4 running iOS 4.2 or greater. Other supported smartphone platforms may permit A2DP stereo Bluetooth audio streaming.

Updating to the latest version of the Pandora app on your smartphone may be required. See links below for download instructions.

Please be sure to **avoid distracted driving**. For more specific tips on how to avoid distracted driving, please click here.

For further info on the **MINI Connected Interface**, click here.

To locate your local authorized **MINI dealer**, click here.

For information on installing the Pandora iPhone app, click here.

For a video featuring Pandora and the MINI Connected system, please click here.

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Pandora and Scion

Scion is pleased to announce that all 2012 Scion vehicles have the option of upgrading to a premium audio system which includes a new Pioneer™ audio system that features Pandora® internet radio.

The system includes Bluetooth hands-free and Bluetooth streaming audio.

For more information: http://www.scion.com/

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Home › Auto › Pandora and GMC

Pandora and GMC

Take Your Life Wherever Life Takes You.

The new IntelliLink1 system in the 2012 GMC Terrain will intuitively connect your life to your car. With one system, integrate your smartphone, iPod, MP3 player, Bluetooth2 device and a USB3 drive to your vehicle, so wherever you go, your life goes with you. Access your songs, your phone book, Pandora internet radio and over 180 channels of content, whenever, wherever and however you want. Control it with your voice, from the high-resolution, full-color touch screen radio or from your steering wheel. Whatever way you want, IntelliLink makes it easy to use. It's your life linked to your vehicle. It's professional grade engineering.

1. Available on SLT 2 6 cylinder only from 11/28-2/13/12. Available on SLE2/SLT1/SLT2 beginning 2/13/12. Full functionality requires compatible Bluetooth and Smartphone. Some devices require USB connectivity. Data plan rates apply.
2. To find out which Bluetooth phones are compatible, visit www.gm.com/bluetooth
3. Not compatible with all devices.

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Home › Auto › Pandora and Buick

Pandora and Buick

Buick is proud to announce the 2012 Verano, Regal*, and LaCrosse* models will be available with Buick IntelliLink, which uses Bluetooth or USB to connect the driver's smartphone to a new 7- or 8-inch, high-resolution, full-color touch screen display radio. IntelliLink expands on Buick's current Bluetooth and USB capabilities to allow smartphone control via voice activation and steering wheel-mounted controls.

What does that mean to you? It means you can create personalized radio stations based on your favorite artists and stream them through Pandora® internet radio, all while keeping your hands on the wheel and eyes on the road.

*Available late 2011

To find out which Bluetooth phones are compatible, visit www.gm.com/bluetooth

Discover Buick at www.buick.com

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Pandora and Alpine

Mobile Media Solutions

Alpine has a variety of receivers that work with Pandora®. Each receiver directly controls the free Pandora app for iPhone, Android or BlackBerry. All models allow you to Bookmark, rate songs with a Thumbs-Up/Thumbs-Down, and create new Pandora® stations right from the receiver.

CDE-HD138BT Advanced Bluetooth CD/HD Radio Receiver -- click here
Uses the Pandora app for Android and BlackBerry

CDE-HD137BT Advanced Bluetooth CD/HD Radio Receiver – click here
Uses the Pandora app for Android and BlackBerry

CDE-136BT Bluetooth CD Receiver – click here
Uses the Pandora app for iPhone

CDE-135BT Advanced Bluetooth CD Receiver – click here
Uses the Pandora app for Android and BlackBerry

Please be sure to **avoid distracted driving**. For more specific tips on how to avoid distracted driving, please click here.

To purchase, visit Alpine's Store Locator to find a retailer near you: http://www.alpine-usa.com/stores

For information about installing the Pandora Android app, click here
For information about installing the Pandora BlackBerry app, click here
For information about installing the Pandora iPhone app, click here.

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Home › Auto › Pandora and Pioneer

Pandora and Pioneer

Pioneer

Pioneer has a wide range of products that work with the free Pandora iPhone app to provide direct control of Pandora from your in-dash navigation unit.

An iPhone is required for these systems. An update to a recent iOS version may also be required.

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For further information about Pandora and Pioneer, please click here.

For information about installing the Pandora iPhone app, click here.

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PANDORA internet radio

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Press Release

Hyundai Offers Pandora in Every New Veloster

New 2012 Vehicle Model Plays to Music Lovers with Pandora

OAKLAND, Calif., Sept. 29, 2011 /PRNewswire via COMTEX/ --

Pandora (NYSE: P), the leading personalized radio service, announced today that its automotive partner Hyundai began to deliver the all-new Pandora-enabled 2012 Veloster to dealers nationwide this month. The Veloster is a new model that is targeted towards drivers who seek to bring the "digital age" to the driving experience.

(Logo: http://photos.prnewswire.com/prnh/20110615/SF20192LOGO)

Pandora is offered as a free, standard feature in every new Veloster. This Hyundai integration with Pandora makes it possible for drivers to enjoy their personalized Pandora stations behind the wheel. At launch, the Veloster is compatible with the iPhone and connects to the dashboard using Bluetooth technology.

Pandora executive vice president of business and corporate development Jessica Steel said, "The car is an extremely popular venue for radio listening and we are thrilled that people can now listen to Pandora personalized radio right in the dash of their new Hyundai Veloster."

"Veloster is a fun-to-drive, three-door coupe that exemplifies Hyundai's commitment to offering drivers the latest and greatest in-vehicle connectivity and technology," said Scott Margason, director Product Planning, Hyundai Motor America. "Having Pandora internet radio easily accessible in the Veloster enhances the drive experience, allowing Veloster customers to listen to their favorite music everywhere they go."

ABOUT HYUNDAI MOTOR AMERICA

Hyundai Motor America, headquartered in Costa Mesa, Calif., is a subsidiary of Hyundai Motor Co. of Korea. Hyundai vehicles are distributed throughout the United States by Hyundai Motor America and are sold and serviced through more than 800 dealerships nationwide. All Hyundai vehicles sold in the U.S. are covered by the Hyundai Assurance program, which includes the 5-year/60,000-mile fully transferable new vehicle warranty, Hyundai's 10-year/100,000-mile powertrain warranty, 5-years of complimentary Roadside Assistance and the Hyundai Trade-in Value Guarantee.

Journalists are invited to visit our news media website: www.hyundainews.com and follow us on Twitter: @Hyundai.com

ABOUT PANDORA

Pandora (NYSE: P) gives people music they love anytime, anywhere, through connected devices. (OK, we've added comedy as well so we're also up for playing some jokes you'll love.) Personalized stations launch instantly with the input of a single "seed" - a favorite artist, song or genre. The Music Genome Project®, a deeply detailed hand-built musical taxonomy, powers the personalization of Pandora® internet radio by using musicological "DNA" and constant listener feedback to craft personalized stations from a growing collection of hundreds of thousands of recordings. Tens of millions of people in the U.S. turn on Pandora to hear music they love. www.pandora.com

SOURCE Pandora Media, Inc.

PANDORA® internet radio

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Press Release

Honda Joins Roster of Pandora Automotive Partners

OAKLAND, Calif., Nov. 16, 2011 /PRNewswire/ -- Pandora (NYSE: P), the leading personalized radio service, announced today that automaker Honda is now counted among Pandora's growing roster of automotive partners. The addition makes for a total of 14 automotive brands to date that have announced or now offer an in-vehicle integration of Pandora internet radio. The Honda implementation was announced as part of today's unveiling of the 2012 CR-V at the Los Angeles Auto Show. The 2012 CR-V is scheduled to be available for purchase on December 15 at dealers nationwide.

(Logo: http://photos.prnewswire.com/prnh/20110615/SF20192LOGO)

Honda is one the world's largest automakers and the compact SUV, the CR-V, is the most popular in its class. Pandora comes to life as a standard feature in the CR-V and includes important Pandora features that help personalize the user's stations including thumbs-up, thumbs-down and track skip. Connectivity to Pandora in the CR-V is enabled by a smartphone and the system is currently compatible with the iPhone.

Pandora Executive Vice President of Business and Corporate Development Jessica Steel said, "Pandora listeners love to take their personalized stations wherever they go, and that is especially true of the car where almost half of all radio listening occurs. We are excited that Honda is able to roll out a live implementation to customers so shortly after their announcement."

ABOUT PANDORA

Pandora (NYSE: P) gives people music they love anytime, anywhere, through connected devices. (OK, we've added comedy as well so we're also up for playing some jokes you'll love.) Personalized stations launch instantly with the input of a single "seed" - a favorite artist, song or genre. The Music Genome Project®, a deeply detailed hand-built musical taxonomy, powers the personalization of Pandora® internet radio by using musicological "DNA" and constant listener feedback to craft personalized stations from a growing collection of hundreds of thousands of recordings. Tens of millions of people in the U.S. turn on Pandora to hear music they love. www.pandora.com

SOURCE Pandora

Mollie Starr, +1-510-842-6996, or Deborah Roth, +1-510-842-7928, both of Pandora Communications and Public Relations, press@pandora.com, or Dominic Paschel, VP, Corporate Finance and Investor Relations of Pandora, +1-510-842-6960, investor@pandora.com

SXM REB EX 46

PANDORA
internet radio

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Press Release

Pandora Announces Cadillac As Newest Automotive Partner

New Cadillac CUE Infotainment System to Feature Pandora

OAKLAND, Calif., Oct. 12, 2011 /PRNewswire via COMTEX/ --

Pandora (NYSE: P), the leading personalized radio service, announced today that Cadillac is the latest one of the company's twelve automotive partners. Cadillac announced the launch of its new CUE (Cadillac User Experience) system, featuring Pandora, at the CTIA Wireless Association's Enterprise and Applications conference in San Diego.

(Logo: http://photos.prnewswire.com/prnh/20110615/SF20192LOGO)

Pandora will be incorporated into the Cadillac CUE system, which will be in the upcoming XTS and ATS luxury sedans and will be a key feature of all future Cadillac vehicles beginning in 2012. CUE will support Android, BlackBerry and iPhone smartphones.

Pandora executive vice president of business and corporate development Jessica Steel said, "We're honored that Cadillac elected to feature Pandora as part of their CUE launch and are delighted that Cadillac drivers will soon have the option to easily listen to their personalized Pandora stations in their cars."

"CUE will transform the luxury in-vehicle experience by integrating popular mobile app technologies, like Pandora, creating an optimal, personalized driving experience," said Don Butler, vice president, Cadillac Marketing.

ABOUT PANDORA

Pandora (NYSE: P) gives people music they love anytime, anywhere, through connected devices. (OK, we've added comedy as well so we're also up for playing some jokes you'll love.) Personalized stations launch instantly with the input of a single "seed" - a favorite artist, song or genre. The Music Genome Project®, a deeply detailed hand-built musical taxonomy, powers the personalization of Pandora® internet radio by using musicological "DNA" and constant listener feedback to craft personalized stations from a growing collection of hundreds of thousands of recordings. Tens of millions of people in the U.S. turn on Pandora to hear music they love. www.pandora.com

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Acura Joins Line-Up of Pandora Automotive Partners

OAKLAND, Calif., Jan. 9, 2012 /PRNewswire/ -- Pandora (NYSE: P), the leading personalized radio service, today announced that Acura is now an official automotive partner. Acura unveiled the partnership today at the North American International Auto Show in Detroit. Pandora now has 23 automotive total partnerships between automotive brands and aftermarket manufacturers. Acura will first feature Pandora on two vehicle models, the RDX and the all-new ILX, both of which are slated to appear on dealer lots this spring.

(Logo: http://photos.prnewswire.com/prnh/20110615/SF20192LOGO)

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Pandora Unveils Mazda as Latest Brand to Join Extensive Line-Up of Automotive Partners

More than 50 models across 19 automotive brands that feature Pandora currently available at dealerships

OAKLAND, Calif., June 6, 2012 (8:35 a.m. EST) - Pandora (NYSE: P), the leading internet radio service, today announced that Mazda has joined the growing roster of major car manufacturers who have announced plans to integrate Pandora into the radio of their vehicles. Mazda models that will feature Pandora are expected to be available at dealers beginning in the fall of 2012. The Mazda in-dash entertainment system will support hallmark Pandora functions such as thumbs-up, thumbs-down and track skip; In-car connectivity is made possible via a paired iPhone running the Pandora application.

Pandora Chief Marking Officer, Simon Fleming-Wood said, "With more than 100 million registered smartphone users and partnerships with 19 automotive brands, Pandora is well on its way to becoming a standard part of the in-vehicle experience. We are thrilled to welcome new automotive partners like Mazda who are key in helping us deliver the future of radio to people in one of the most popular venues for radio listening - the car."

To date, Pandora has announced partnerships with a total of 19 automotive brands and seven aftermarket manufacturers to offer personalized radio via the in-dash entertainment system using the connectivity of a smartphone. There are more than 50 models that feature Pandora currently available at dealerships with additional models expected in 2012.

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Pandora is currently for U.S. listening only

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RSS Content

Pandora Celebrates Leap Day with Limited Interruptions

Multi-Platform Campaign Gives Listeners More Music, Fewer Breaks; Showcases New Lexus GS, the First Lexus Model to Include Pandora in the Enform® Information and Navigation System

OAKLAND, Calif., Feb. 28, 2012 /PRNewswire/ -- Pandora (NYSE: P), the leading personalized radio service, in partnership with Lexus, today announced the company's first multi-platform limited interruption experience on Leap Day (February 29, 2012). Lexus will give Pandora listeners a full-day of more music and limited breaks across Pandora's web, smartphone and iPad platforms.

(Logo: http://photos.prnewswire.com/prnh/20110615/SF20192LOGO)

On Leap Day, Lexus will partner with Pandora to bring a limited interruption experience to Pandora listeners everywhere. Lexus is the first partner to give Pandora ad-supported listeners more music with fewer ad and audio ad breaks across multiple platforms to support the launch of the highly anticipated 2013 Lexus GS.

The all-new Lexus GS is the first of two Lexus models to offer Enform, the Lexus in-dash information and navigation system. Lexus Enform® connects safely and seamlessly with compatible smartphones and allows drivers to enjoy their personalized stations while on the road. The system can be controlled using voice–recognition technology or the Remote Touch system. The new 2013 Lexus GS is now available in showrooms.

Pandora's Senior Vice President of Strategic Solutions, Heidi Browning said, "This Leap Day listeners will get a unique and exceptional experience thanks to our valued, long-term partner Lexus. We're excited to continue working with Lexus to help them associate their premium brand with a premium experience on Pandora."

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ABOUT LEXUS

Since its debut in 1989, Lexus has earned a reputation for high-quality products and exemplary customer service from its 229 dealers. Lexus is the luxury hybrid leader, offering four hybrids that provide the best in innovative technology and first-class luxury. When it began, Lexus offered two models of vehicles. Now, more than 20 years later, Lexus offers variations of 10 vehicles, from the sporty CT 200h hybrid to the V10 supercar, the LFA.

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Francisca Fanucchi of Pandora Communications and Public Relations, press@pandora.com, +1-510-344-7735, or

Deborah Roth of Pandora Communications and Public Relations, press@pandora.com, +1-510-842-7928, or
Dominic Paschel, VP, Corporate Finance and Investor Relations, investor@pandora.com, +1-510-842-6960

Kia Motors America, Inc.
111 Peters Canyon Road
Irvine, CA 92606
Kiamedia.com

Scott McKee
949.468.4813
smckee@kiausa.com

News Release

Shelby Hunt
Zeno Group for Kia Motors America
310.566.3985
shelby.hunt@zenogroup.com

KIA MOTORS AMERICA DEBUTS UVO E-SERVICES AT 2012 CONSUMER ELECTRONICS SHOW

Second Generation Infotainment System Builds on Award-Winning Foundation with Addition of New Smartphone-Based Connectivity

- Free smartphone app will provide new levels of connected car experiences, including telematics, parked vehicle locator and advanced vehicle relationship management
- UVO eServices incorporates a suite of new safety and security features such as crash notification assistance, roadside assistance, curfew limit and speed alert

LAS VEGAS, January 10, 2012 – Kia Motors America (KMA) today unveiled UVO eServices, the next iteration of the company's innovative voice-activated infotainment system, during the 2012 Consumer Electronics Show (CES). Showcased in Kia's stunning Optima Hybrid midsize sedan, UVO eServices represents an evolution from the original UVO system's capabilities, adding a new telematics suite ("eServices") that is powered by a free smartphone app that will provide drivers with an innovative in-vehicle connectivity experience including navigation, diagnostics capabilities and added convenience features. Powered by Microsoft®[1], UVO is short for "Your Voice," and provides consumers easy-to-use voice and touch-activated experiences to manage music files and hands-free mobile phone operation. Also at CES, KMA debuted the In-Vehicle Infotainment (IVI) concept, which demonstrates Kia's forward-thinking technology and concepts in the realm of connected car.

"UVO was a breakthrough for Kia, and signaled the brand's ambitious plans to become an in-vehicle technology leader by enabling drivers and passengers to use all of their personal technologies more safely and easily, while creating additional entertainment experiences," said Henry Bzeih, who heads the connected car program for KMA. "With smartphone penetration nearing 50-percent in the U.S., UVO eServices extends our award-winning system's abilities far beyond the original offerings by utilizing one of the industry's first app-based approaches for telematics. The development focus for UVO eServices was to deliver the connectivity, services and notifications valued by vehicle owners while also adding safety features, diagnostic information and innovations such as our parked vehicle locator to create user-friendly experiences that exceed people's expectations."

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1 Microsoft is a registered trademark of Microsoft Corporation in the United States and/or other countries.

UVO continues to offer drivers hands-free mobile phone management capabilities and hands-free control of music from a variety of media sources, including CD, radio, USB, media player, and the Digital Jukebox. Users will now be able to control the on-board navigation system through voice commands when the vehicle is outfitted with the UVO eServices/navigation package. Also new with UVO eServices is an enhanced telematics suite, which includes a number of maintenance, and infotainment functions, including Crash Notification Assist, Roadside Assist, Automatic Diagnostics, Manual Diagnostics, Scheduled Diagnostics, vehicle maintenance, eServices Guide, Trip Info, safe- and eco-friendly driving awards, Send2Car, Curfew Limit, Speed Alert, Geo Fencing, Car Care Web and Park Assist. These functions, with the exception of eServices Guide and Crash Notification Assist, are run through the owner's smartphone equipped with the free UVO eServices app.

Key Features of UVO eServices:

- **eServices Guide**: accessed via the touch-screen or voice command, eServices Guide places a phone call to a voice response system that explains UVO eServices to the driver in an interactive manner.

- **Car Care Web**: Through the UVO eServices owner's portal, known as "Car Care Web," owners can check vehicle diagnostics, vehicle status, maintenance schedules, driving behavior, My Car Zone alerts, and schedule appointments with their preferred or nearby dealer via their home computer or mobile device. Owners also can earn awards for safe and eco-friendly driving viewable on Car Care Web should they rank high enough among their fellow UVO eServices owners.

- **Send2Car**: Also available to UVO eServices owners is Send2Car, a feature that allows owners to send a destination from Google Maps to their smart phone. After the phone receives the destination, it will send the destination to the vehicle's navigation system the next time the phone is paired via *Bluetooth*®[2] wireless technology. In addition, all destinations sent from Google Maps will be copied to the owner's Car Care Web. (Send2Car is only available with UVO eServices vehicles equipped with navigation).

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2 The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Kia is under license. Other trademarks and tradenames are those of their respective owners. A compatible Bluetooth® wireless technology-enabled cell phone is required to use Bluetooth® wireless technology. The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc.

- **Vehicle Diagnostics**: If UVO's eServices identifies a problem by way of the Automatic Diagnostics function, it will communicate the vehicle's list of issues and its location to Kia's 24/7 call center or will schedule an appointment online with the nearest Kia dealership upon user request. With Manual Diagnostics, at the owner's preference, UVO eServices can connect the user with Kia's 24/7 call center or schedule an appointment online with the nearest Kia dealership, should an issue be found. Additionally, the user can take advantage of Scheduled Diagnostics from their smartphone, setting a monthly diagnostic check of the vehicle. Upon completion, any issues found are automatically forwarded to Car Care Web.

- **Crash Notification Assist**: In case of an airbag deployment, the Crash Notification Assist function will alert emergency services. After a 10-second delay, during which time the driver has the option to cancel the call, UVO will dial 9-1-1, read the vehicle's location out loud to the emergency services operator and allow the operator to speak with the vehicle occupants.

- **My Car Zone**: UVO eServices also helps drivers stay up to date on their vehicle's whereabouts while away from the car. Curfew Limits in terms of time stamps or even GPS coordinates through 'Geo Fencing' (a predetermined area plotted in the navigation system) can be set. If the car leaves that area or is used outside of predetermined hours, the owner receives a detailed alert on his or her smartphone the next time the driver pairs the phone with the vehicle via *Bluetooth*® wireless technology. The Speed Watch function also allows owners to set a predetermined maximum speed for the car, and receive an alert if exceeded, while the smartphone app adds a trip-information function that gives a summary of total and individual journey distances and times.

- **Park Assist:** If the driver happens to forget where they parked the car, the Park Assist function helps find it by sending the location of the vehicle when it is parked to the driver's phone. If preferred, the owner also can take pictures of the surrounding area for reference, write a reminder note, email his or her location and set an alarm if the car is parked at a meter. To guide the owner back, the UVO eServices smartphone app will display the owner and the vehicle's locations on a map. Optionally, the owner can look through the phone's integrated camera where an icon on the phone's screen will point to the vehicle's location.

<u>In-Vehicle Infotainment Concept</u>

Kia's all-new IVI concept, intended to deliver navigation, media playback and networked computer functions all from a single unit, is designed to be the hub of a vehicle's information and entertainment systems and represents a glimpse into the future of IVI systems.

Featuring wireless connectivity with smartphones and tablets, an integrated app store, user-recognition system and augmented reality navigation, as well as a combination of touch- and speech-interface options controlled principally through an 11.6-inch multi-touch screen, Kia's IVI concept allows users to transfer music, contacts and directions between smartphone or tablets and the vehicle. In addition, once the user's smartphone or tablet is synced with the vehicle, many of the device's features and apps become available through the IVI system. The IVI concept also features revolutionary wireless charging, enabling users to charge devices without the need for conventional wired chargers. The key features of Kia's IVI concept include navigation, media, smart device interlock, and an app store.

<u>Key Features of the IVI Concept:</u>

- **Navigation**: Working in conjunction with exterior vehicle cameras, downloadable apps, and the in-car voice recognition system, the IVI concept features an augmented reality navigation system. This system takes satellite navigation a step further, providing clear and concise turn-by-turn directions, including information such as POIs, as well as integrating a traffic-signal recognition system onto a virtual map on the center screen.

- **Media**: In addition to the online Pandora music service, the IVI system is capable of playing a multitude of music and movie formats, all of which can be controlled through the voice recognition system.

- **Smart Device Interlock**: The Smart Device Interlock effectively tethers the user's smartphone to the IVI system via a specially developed app. Once the device and IVI are linked, the user can download information about their car, including where it is parked, send and receive route instructions and browse media in the car.

- **App Store**: Accessing the app store via the icon on the main menu of the IVI concept, users can download a variety of apps to suit their needs, such as weather updates, news, navigation or games.

Kia's Unprecedented Growth

Kia Motors is the one of the world's fastest moving global automotive brands; from 2009-2011 Kia launched more new vehicles in the U.S. than any other automaker, and under the guidance of chief design officer Peter Schreyer earned a reputation as an industry leader in automotive styling. Kia Motors America's full line of fuel-efficient and fun-to-drive cars and CUVs has earned critical acclaim and dramatically increased consumer awareness, perception and consideration for the brand. In 2011, KMA recorded its 17th consecutive year of market share growth, thanks in part to the largest increase of any major brand in perceived quality[3] and the industry's highest brand loyalty ranking[4]. Kia's U.S.-based manufacturing facility in West Point, Georgia – KMMG – is responsible for the creation of more than 10,000 plant and supplier jobs and builds the company's two best-selling vehicles in the U.S. – the Sorento CUV and Optima midsize sedan[5]. Kia's value and technology-laden 2012 model year lineup also includes the Sportage compact CUV, Soul urban passenger vehicle, Optima Hybrid, Forte compact sedan, Forte 5-door compact hatchback, Forte Koup two-door coupe, all-new Rio and Rio 5-door sub-compacts and Sedona minivan.

About Kia Motors America

Kia Motors America is the marketing and distribution arm of Kia Motors Corporation based in Seoul, South Korea. KMA offers a complete line of vehicles through more than 755 dealers throughout the United States and serves as the "Official Automotive Partner of the NBA." In 2011, KMA recorded its best-ever annual sales total and became one of the fastest growing car companies in the U.S. Kia is poised to continue its momentum and will continue to build the brand through design innovation, quality, value, advanced safety features and new technologies.

Information about Kia Motors America and its full vehicle line-up is available at its website – www.kia.com. For media information, including photography, visit www.kiamedia.com.

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3 Source: Automotive Lease Guide Spring 2011 Perceived Quality Study
4 Source: Experian Automotive Q2 2011 market analysis
5 Optima Hybrid is not built at KMMG