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Entertainment, Cable & Media / Consumer

Pandora Media Inc. (P) – Buy

P: Initiating Coverage with a BUY Rating and $13 TP

Coverage Initiation

Market Data	
Price (01/06/12)	$10.01
12-Month Price Target	$13.00
52-Week range	$20.04-9.79
Shares Out. (MM)	191.0
Market cap (MM)	$1,912.1
Avg. daily volume (000)	982.0
Financial Data	
Total Debt/Cap.	0.0%
Price/LTM Rev.	4.1x
Tangible BVPS	$1.27
Net Cash Per Share	$1.16

Strategic Advantages of P:

We believe that an investment in P is a way to play 3 important secular trends in media:

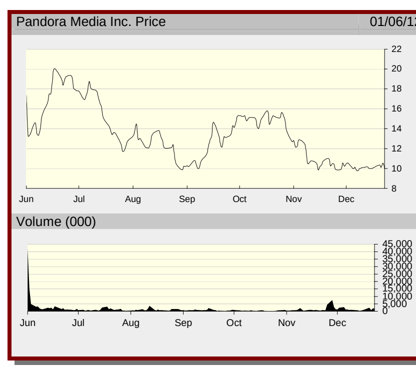
1. **Mobile Ad Growth.** Pandora is THE top downloaded mobile app on many platforms and in the top 5 on all mobile platforms, and therefore is a big ship on this rising tide.
2. **Market Upside Disruption.** Old media is being disrupted by the Internet. P's revenue should hit $275mm in 2012 and disruption theory suggests that it will take much of the old-world US radio industry ad revenue of approximately $15B.
3. **Music has Bottomed.** Music economics bottomed in 2010 and growth returned to the music business in 2011. US recorded music revenue grew for the fist time in 7 years. Music valuations remain compressed because growth was illusive for so long. Music may lead other media out of the digital transition.

We believe that P's valuation is justified by any one of these trends playing out as expected.

We initiate coverage of P with a BUY Rating and $13 TP.

	FY 01/31/11 A	FY 01/31/12 E		FY 01/31/13 E	
		Old	New	Old	New
Rev. (MM)	$137.8		$276.0		$415.9
Growth	*149.6%*	*0.0%*	*100.3%*	*0.0%*	*50.7%*
Op. Mar.	*(0.2%)*		(3.5%)		*(4.2%)*
EPS: 1Q	(0.64)		(0.03)A		
EPS: 2Q	(0.04)		0.02A		
EPS: 3Q	(0.15)		0.02		
EPS: 4Q	(0.30)		(0.02)		
EPS: Year	(1.12)		(0.01)		(0.01)
Growth	*71.9%*	*0.0%*	*98.8%*	*0.0%*	*62.3%*
P/E Ratio	0.0x	nm	nm	nm	nm

Note: Pro forma earnings estimates displayed above do not include one-time items or any stock compensation expenses.



Disclosures applicable to this security: B.
Disclosure explanation on the inside back cover of this report.

Investment Positives

1. **Scheduling**. In the traditional radio business, a change in programming can double revenue. A better scheduler within the same programming genre can grow revenue by 15-25%. P's algorithm is the ultimate scheduler for each individual. It plays a better list for each person, and learns over time. This creates a powerful barrier to entry for new entrants. Therefore P is also play on hyper-personalization, which we believe is a powerful trend.

2. **Rapid Consumer Adoption.** During P's most recent quarter ended October 31, 2011, active users hit a record of 40 million, up 65% y/y. Listener hours in the quarter hit 2.1 billion, up 104% y/y, representing a 66% share of U.S. Internet radio hours, up from 53% in last year's (3Q11) quarter. P now represents 4.3% share of total U.S. radio listening, more than double last year's level of 2.1% in the 3Q11 quarter.

3. **Economic Growth Momentum**. For P's most recent quarter ended October 31, 2011, Pandora (P) reported revenue of $75 million, up 99% y/y. Advertising revenue hit $66.0 million, up 102% y/y and subscription & other reached $9.0 million, up 80% y/y. P raised FY12 guidance.

4. **Market Share Leader.** Pandora has an approximate 66% share of listeners for the rapidly growing internet radio market. The next closest competitor is Clear Channel digital radio assets at approximately 9%. P's momentum has steadily improved, rising from 58% market share in June of 2011 to 66% market share. This is despite the growth of new entrants and increased competition. There are benefits of scale with advertisers as P's pricing power is more than double with today's 40mm users compared with when it had 20 mm users. At 40mm and growing, P is becoming unavoidable for major advertisers. In fact, today 42 of the 50 top branded advertisers buy time on P.

5. **Monetization Gap**. There is a gap between P's consumer adoption and its monetization. P now has a 4.3% share of total U.S. radio listening. However, P's 2012E revenue of approximately $275mm is less than 2% of the US radio ad revenue of approximately $15B (according to Magna Global) in 2011. This suggests upside to us, as this gap closes.

6. **A Call on Mobile**. Pandora ranks among the most popular downloads for mobile platforms, including smartphones. It is #1 on iPad and #2 on iPhones. P is a top-5 downloaded app on all smartphones. Consumers are used to consuming music on the go. There are no new behaviors that P must teach consumers as they move more of their life to mobile devices. Pandora generates ad revenue from three primary sources: graphical, mobile and audio. Although the mobile advertising market is small, it is growing 65% annually, according to IDC. Mobile is expected to grow from $0.9B in 2010 to $6.8B in 2014, representing a 69% growth rate. P is a big well-positioned boat on this rising tide.

7. **Pricing Power**. On the PC, P currently generates approximately $35 in ad revenue per 1,000 listener hours (combined mobile + web) compared to approximately $70 for terrestrial radio. We believe that P is essentially selling out its ad inventory on the PC device, which gives it pricing power. Therefore, we expect this gap to narrow, reaching approximately $50 by FY17.

8. **Market Size**. Veronis Shuler (VSS) data shows that audio consumption comes in 2 forms; 20% is active listening and 80% is passive listening. Most of the music

innovation over the Internet has come in the active listening segment, as evidenced by iTunes, Napster, Mog, Rhapsody, Spodify, eMusic, etc. VSS data shows that approximately 80% of radio listening is done in a lean-back mode while multitasking, including while driving. P competes in this segment that requires no curation by listeners. Even today, 240mm people in the US listen to the radio every week, despite having huge amounts of owned music.

9. **Pandora Growth Among Auto Companies.** Pandora has entered into partnerships with seven automakers, Including Mercedes, Ford, Hyundai, BMW (mini) Toyota (Lexus and Scion), GM, and Daewoo (all N/R), to offer Pandora in its automobiles. This is up from just 2 companies one year ago. We estimate that approximately 50% of radio listening takes place in the car. We believe that P will continue to strike deals with the major auto manufacturers, making its products available to more potential users. P has also signed deals with after-market stereo component companies to sell P content over their devices.

10. **Proprietary Music Algorithm**. The Music Genome Project is the basis of the algorithm that P uses in its business, and it represents a significant barrier to entry. It is based on 250-400 characteristics (depending on the type of music) that enable users to find music they enjoy. P's algorithm then creates a "radio station" for each individual listener. P catalogues the attributes of 240 genres. 90,000 artists, and 900,000 songs. Much of these learnings feed into P's recommendation engine, to aid discovery of new music. P typically adds 10,000 songs/month. P is rarely missing any popular bands or songs for a week or two.

11. **Local Ad Upside.** The majority of Pandora's ad revenues are generated from national ad budgets, while we estimate that the majority of ad sales in radio are generated from the local level. Pandora recently announced the formation of an ad sales team focused on generating sales through local ad revenue. We believe this focus on local advertising could provide Pandora with significant ad growth.

12. **Barriers to Entry.** Not only is P's algorithm difficult to replicate owing to its enormous database, but over time we expect the social aspects of Ps business to growth. Social sharing may shift the basis of P's barrier to entry from scale economies to network effects.

Risks to our Target Price

1. **Cost Uncertainty** Cost of content represented approximately >50% of P's revenue in FY3Q12. Pandora currently has a deal whereby royalty rates increase at an annual rate of about 7% through December of 2015. If P is unable to realize a reasonable royalty rate increase beyond 2015, the financial viability of Pandora could be negatively impacted. The good news is that P can NOT be denied the music, because it's a compulsory license. The risk is that content costs increase dramatically, resulting in margin pressure and losses.

2. **Competition**. Pandora faces growing competition. On the terrestrial radio side, P competes with Clear Channel (N/R), CBS and Citadel (N/R). P also faces competition from subscription services such as Sirius Satellite Radio, eMusic, Rhapsody (all N/R). Several cloud services such as iTunes, Amazon and Google, also compete with P. Free services like Grooveshark, Spotify, and Slacker (all N/R) give away music for free, making it hard for P to attract listeners and premium

subscribers. P's premium subscriber base pays $3/month, and we believe that the total number of premium subscriber is approximately 1mm.

3. **Revenue Mix Shift**. As stated earlier, mobile platforms represent an increasing percentage of revenues for Pandora.

   - **Revenue.** This platform generates lower revenue than PC usage and has a lower margin contribution. We estimate that P sells its web ad inventory at a rate of $60 revenue per thousand listener hours (RPM), versus $20 RPM on mobile devices (our estimates). As the usage of mobile platform grows for its product, P's average revenue per RPM should decline.
   - **Margins.** We estimate that P pays a straight 40% of revenue to the content owners (ex: music labels) for every song listened to. We estimate that it costs P about $18 RPM per hour for the content. This is regardless of revenue. Therefore, the a $60 average price-point on the web, P makes money on an hour of listening the web. However, at an average price-point of $20 on mobile, P's profit is much lower. This implies margin pressure on P as mobile listening increases as a percent of total. However, mobile is following the trajectory of the web, so we expect mobile pricing to grow over time.

4. Cyclical Issues. If the economy weakens and advertising budgets are cut, this could negatively impact P.

FINANCIAL OUTLOOK & EARNINGS ESTIMATES

In the following table, we introduce our quarterly estimates for the 4th quarter of FY12 and our annual estimates for FY13.

Quarterly Estimates for 4Q12 and Annual Estimates for FY13

FYE 1/31:	4Q12E	2012E	2013E
Rev Current ($m)	$83	$276	$416
Previous ($m)	-	-	-
Consensus ($mm)	$83	$276	$417
EPS Operations	($0.02)	($0.01)	($0.01)
Previous	-	-	-
Consensus	($0.02)	($0.06)	($0.01)
P/E Current		NA	NA
Source: Yahoo Finance, Needham & Company estimates			

12-MONTH TARGET PRICE OF $13

Our target price of $13 is based on a DCF valuation. We use a WACC of 9.7% for Pandora and a long-term nominal GDP growth rate of 1%. The standard DCF is widely used on Wall Street because it is a rigorous bottom-up valuation of the enterprise based on discounting its long-term cash flows and removing the impact of non-cash accounting conventions. Positives and negatives of this valuation methodology are highlighted beside the calculation in Table 5.

Our $13 target price embeds a 10-year EBITDA growth rate of 43% annually beginning in 2013.

VALUATION INFORMATION

Our BUY rating is based on several forms of valuation, summarized in Table 1:

Table 1: P: Valuation Summary & Conclusions

2013E Valuation Multiples			Embedded Expectations Metrics		
1	EV/Sales	7.8	9	Breakeven DCF (Calculated as the 10-Yr EBITDA CAGR required to justify current share price)	27.0%
2	EV/OIBDA	737.0			
3	P/E	(2,094.6)			
4	FCF/Share	$0.08			
5	EV/FCF	144.5			
6	FCF Yield	1%			

Source: Needham & Company estimates.

1. The "Breakeven DCF" valuation methodology uses the current share price to calculate the market's growth expectations for the enterprise, including capital efficiency trends. This valuation methodology concludes that Pandora must achieve a 10-year OIBDA compound annual growth rate of approximately 27% to justify its current share price. (Please see Table 5.)
2. In Table 6, we summarize several valuation multiples for Sales, OIBDA and P/E. Pandora's EV/FCF trading multiple is approximately 144.5x 2013E and has a 1% FCF Yield in FY13E.
3. In Table 8, we present our Comparative Industry valuation metrics.

PANDORA MANAGEMENT SUMMARY:

Joseph Kennedy, Chief Executive Officer, President and Chairman of the Board. Mr. Kennedy has served in his current position with Pandora since 2004. Prior to working for Pandora, Mr. Kennedy was President and COO of E-LOAN, an on-line financial services company, and prior to his employment at E-LOAN, he worked in various management positions at Saturn Corporation, an automobile manufacturer. Mr. Kennedy holds a BS from Princeton University and an MBA from Harvard University.

Steven Cakebread, Chief Financial Officer. Mr. Cakebread has served in his current position since joining Pandora in 2010. Previously, he worked in various financial management positions for Xactly Corporation, salesforce.com, Autodesk, and Silicon Graphics. Mr. Cakebread holds a BS from UC Berkeley and an MBA from Indiana University.

Thomas Conrad, Chief Technical Officer. Mr. Conrad joined the Company in 2004 and has served in various engineering and technical posts with Pandora. Prior to his Pandora employment, Mr. Conrad worked at companies including Pets.com, Documentum, Relevance Technologies, Berkeley Systems and Apple. While at these companies, he worked in various engineering management positions. Mr. Conrad holds a BS in computer engineering from the University of Michigan.

COMPANY DESCRIPTION

Pandora Media is a provider of internet radio service in the US which allows individual listeners to program unique and individual listening experiences. Pandora technology is able to take into account the listening preferences of a listener and in real time generate a play list suited to a listeners individual taste. Pandora went public in June, 2011 at a price of $16 per share and raised a total of $94.5M. At October 31, 2011, Pandora had a total of 40 million active users.

Table 2A

Pandora Media: Quarterly Financial Projections, 2012E

$ and shares in thousands, except per share data

	4/30/11A	12/11	7/31/11A	12/11	10/31/11A	12/11	1/31/12E	12/11	Year	12/11
Revenue:										
Advertising	$43,661	137%	$58,258	118%	$65,985	102%	$73,000	76%	$240,904	102%
Subscription and Other	$7,379	134%	$8,708	112%	$9,023	80%	$9,950	62%	$35,060	90%
Total Revenues	**$51,040**	**136%**	**$66,966**	**117%**	**$75,008**	**99%**	**$82,950**	**74%**	**$275,964**	**100%**
Costs and Expenses										
Costs of Revenues	$4,296	80%	$5,460	118%	$6,076	97%	$6,802	90%	$22,634	96%
Gross Profits	$46,744	143%	$61,506	117%	$68,932	99%	$76,148	73%	$253,330	101%
Product Development	$2,554	70%	$3,426	119%	$3,194	82%	$4,562	138%	$13,736	104%
Marketing and Sales	$12,541	131%	$14,502	115%	$15,165	56%	$21,982	53%	$64,190	77%
General and Administrative	$6,671	170%	$8,410	192%	$9,484	146%	$9,125	83%	$33,690	138%
Content Acquisition	$29,158	131%	$33,723	130%	$37,658	108%	$43,964	84%	$144,503	108%
Total Costs and Expenses	$50,924	131%	$60,061	132%	$65,501	96%	$79,632	76%	$256,118	102%
Operating Income, Before SBC	($4,180)		$1,445		$3,431		($3,484)		($2,788)	
Stock Based Compensation	($936)				($2,675)		($3,300)			
Operating Income	($5,116)	82%	$1,445	-42%	$756	-34%	($6,784)	495%	($9,699)	2921%
Depreciation and Amortization	$759		$956		$1,272		$745		$3,732	1330%
Stock Based Compensation	$936		$2,128		$2,675		$3,300		$9,039	4608%
Other	$0		$0		$0		$0		$0	
Adjusted EBITDA	($3,421)	45%	$4,529	82%	$4,703	311%	($2,739)	140%	$3,072	2227%
Other Income (Expenses)										
Interest Income	$2	0%	$1		$28		$1		$32	
Interest Expense	($109)	9%	($261)	123%	($123)	6%	$0	-100%	($493)	-19%
Other	($1,509)		($2,976)	297%	$0		$0		($4,485)	516%
Income Before Taxes and Extraordinary	($6,732)	124%	($1,791)	-210%	$661	-37%	($6,783)	421%	($14,645)	798%
Provisions for Income Taxes	($22)		($21)		($23)		$0		($66)	
Net Inc (Loss) and Comprehensive Inc (Loss)	($6,754)	125%	($1,812)	-211%	$638	-39%	($6,783)	372%	($14,711)	734%
Change in Fair Value of Warrant	($70)		$2,976		$0		$0		$2,906	
SBC	($2,320)		$2,128		$2,675		$3,300		$5,783	
Net Loss Attributable to Common Shareholders	($9,144)	84%	$3,292	-946%	$3,313	-287%	($3,483)	-8%	($6,022)	-45%
EPS-Reported	**($0.61)**	**-4%**	**($0.02)**	**-38%**	**$0.00**	**-102%**	**($0.04)**	**-88%**	**($0.67)**	**-34%**
EPS-Non GAAP	($0.03)	-95%	$0.02	-149%	$0.02	-111%	($0.02)	-94%	($0.01)	-99%
Weighted Avg. Diluted Shares	14,900		82,389		191,014		191,050		119,838	
Calculation of OIBDA										
Operating Income	($5,116)		$1,445		$756		($6,784)		($9,699)	
Plus:										
Depreciation	$759		$956		$1,272		$745		$3,732	
SBC	$936		$2,128		$2,675		$3,300		$9,039	
OIBDA	($3,421)	45%	$4,529	82%	$4,703	311%	($2,739)	140%	$3,072	2227%
Non-Cash Pre Tax Imp Loss + NC Int	$0		$0		$0		$0		$0	
OIBDA	**($3,421)**	**-211%**	**$4,529**	**82%**	**$4,703**	**311%**	**($2,739)**	**140%**	**$3,072**	**-45%**

Sources: Company reports, Needham & Company estimates.

Table 2B

Pandora Media: Footnotes to Consolidated Revenue Detail

$ in thousands, except per subscriber data

	2012E									
	4/30/11A	12/11	7/31/11A	12/11	10/31/11A	12/11	1/31/12E	12/11	Year	12/11
Total Listening Hours-Ad Supported										
Total Listening Hours	1,473	-88%	1,650	-86%	2,100	110%	2,320	125%	7,543	-38%
Overall Active Users	34	152%	37	128%	40	38%	46	133%	46	115%
Monthly Hours Per User	14	-100%	15	-100%	16	-98%	17	-98%	16	-100%
Revenue Per Hour	30	-100%	35	-100%	33	-97%	32	-97%	33	-100%
Impressions per Hour	8.3	-89%	8.8	-88%	8.6	-89%	8.8	-88%	8.6	-89%
CPM, Cost per Impression	$3.58		$4.01		$3.80		$3.64		$3.76	
Total Subscriptions										
Total Listening Hours	164	-98%	194	-98%	203	-98%	226	-98%	197	-98%
Revenue Per Hour	$30		$35		$31		$31		$31.96	
Other	407	-96%	200	-98%	200	-98%	200	-98%	252	-97%

Sources: Company reports, Needham & Company estimates.

Table 3

Pandora Media: Annual Income Statement Summary Projections, 2010A-2013E

$ in thousands, except per share data

	2010A	2011A	2012E	2013E
Revenue:				
Advertising	$50,147	$119,333	$240,904	$371,291
Subscription and Other	$5,042	$18,431	$35,060	$44,624
Total Revenues	**$55,189**	**$137,764**	**$275,964**	**$415,916**
Costs and Expenses				
Costs of Revenues	$7,892	$11,559	$22,634	$33,522
Gross Profits	$47,297	$126,205	$253,330	$382,393
Product Development	$6,026	$6,736	$13,736	$23,571
Marketing and Sales	$17,426	$36,250	$64,190	*$99,820*
General and Administrative	$6,358	$14,183	$33,690	$42,256
Content Acquisition	$32,946	$69,357	$144,503	$217,719
Total Costs and Expenses	$62,756	$126,526	$256,118	$383,365
Operating Income	($15,459)	($321)	($9,699)	($17,572)
Depreciation and Amortization	$1,143	$1,578	$3,732	$3,900
Stock Based Compensation	$477	$1,455	$9,039	$16,600
Other	$0	$0	$0	$0
Adjusted EBITDA	($13,839)	$2,712	$3,072	$2,928
Other Income (Expenses)				
Interest Income	$62	$31	$32	$5
Interest Expense	($898)	($612)	($493)	$0
Other	($458)	($728)	($4,485)	$0
Income Before Taxes and Extraordinary	($16,753)	($1,630)	($14,645)	($17,567)
Provisions for Income Taxes	$0	($134)	($66)	$0
Net Inc (Loss) and Comprehensive Inc (Loss)	($16,753)	($1,764)	($14,711)	($17,567)
Accretion of Redeemable Convertible Preferred Stock	($218)	($300)	$2,906	$0
SBC and Other	($6,461)	($8,978)	$5,783	$16,600
Net Loss Attributable to Common Shareholders	($24,875)	($11,042)	($6,022)	($967)
EPS-Reported	**($3.84)**	**($1.01)**	**($0.67)**	**($0.09)**
EPS-Non GAAP		($1.12)	($0.01)	($0.01)
Weighted Avg. Diluted Shares	6482	10,761	119,838	194,238
Calculation of OIBDA:				
Operating Income	($15,459)	($321)	($9,699)	($17,572)
Plus:				
Depreciation	$0	$261	$3,732	$3,900
Amortization	$0	$192	$9,039	$16,600
OIBDA	($15,459)	$132	$3,072	$2,928
OIBDA, Pre-Impairment	**($15,402)**	**$5,565**	**$3,072**	**$2,928**

Sources: Company reports, Needham & Company estimates.

Table 4

Pandora Media: Target Price Calculation, 2013E-2022E

$ and shares in millions, except per share data

Valuation Conclusions		% of Total
Sum of PV of Free Cash Flow [1]	$1,137	42%
PV of Terminal Value Discounted at WACC [1]	$1,505	55%
Value of Operations (WACC Method)	**$2,641**	**97%**
Plus: Excess Cash at 10/31/11	$91	
Plus: NPV of Tax Step Up	$0	
Plus: Minority Interest	$0	
Less: Unfunded Retirement Liabilities	$0	
Enterprise Value	**$2,732**	**100%**
Less: Debt at 10/31/11	$0	
Less: Lease Obligations	($15)	
Less: Preferred Stock Outstanding	$0	
Less: Value of Options & Restricted Sk, After-tax	($220)	
Common Equity Value	**$2,497**	**91%**
Fully Diluted Shares Out, 2012E	191	
DCF Value/Share	**$13.07**	
Current Share Price @ 1/5/12	**$10.54**	
Upside Potential (DCF-Current Price/Current Price)	**24%**	

Standard Discounted Cash Flow (DCF) Valuation

Why We Calculate: DCF is a rigorous bottoms-up valuation of the enterprise focusing on cash flows (not accounting)

Strengths

1 Focuses on operations. Removes financing
2 Focuses on FCF. Removes non-cash accounting
3 Explicitly forecasts capital needs (WC & CapX)
3 Uses a levered beta (widely available)
4 Ent value focus captures entire business model

Weaknesses

1 Many assumptions. Valuation can be manipulated
2 Terminal value big & based on low visiblity projections
3 Model assumes constant debt/equity ratio
4 Complex to calculate
5 Calculates the enterprise value first, then equity value

[1] Calculation of the Value of Operations (WACC Method)

FYE 1/31:	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	CAGR '13-22E
OIBDA (after sk comp exp & corp):	$3	$4	$6	$9	$12	$18	$25	$36	$51	$73	$105	43.0%
- Depreciation	($4)	($2)	($2)	($3)	($3)	($3)	($2)	($2)	($3)	($2)	($1)	
+ Option Exercise Procee	$10	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50	
+ Int & Inv Income only	$0	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	
EBIT	$9	$58	$59	$61	$64	$70	$78	$88	$104	$126	$159	
Cash Taxes (at 0%)	($2)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Plus: Depreciation	$4	$2	$2	$3	$3	$3	$2	$2	$3	$2	$1	
Plus: Sk Based Comp Exp	$17	$40	$40	$40	$40	$40	$40	$40	$40	$40	$40	
Working Capital Change	$6	$10	$20	$25	$40	$50	$60	$70	$80	$90	$100	
Less: Capital Spending	($4)	($2)	($2)	($3)	($3)	($3)	($3)	($3)	($3)	($2)	($1)	
FCF from Operations	$30	$108	$119	$126	$144	$160	$178	$198	$224	$256	$299	12.0%
PV Discounted at WACC [2]		$108	$108	$105	$109	$111	$112	$114	$117	$123	$130	
Sum of PV of Free Cash Flow											$1,137	
Terminal Value of 2022E FCF [3]											$3,450	
PV of Terminal Value at WACC [2]											$1,505	
Discount Period		0	1	2	3	4	5	6	7	8	9	

[2] Calculation of WACC: (Updated 8/20/11)	
10-Year Risk Free Rate ("RFR")	2.0%
Equity Risk Premium (Ibbotson-Arithmetic)	5.0%
Levered Beta	1.90
Target Equity/(Debt + Equity)	75%
Debt Rating	BBB-
Debt Spread	5.0%
Marginal Tax Rate ("T")	41.0%
WACC	9.7%

(RFR+(Equity Risk Premium x Beta)) x Equity/Total Capital + ((RFR + Debt Spread) x (1-T) x Debt/Total Capital).

[3] Calculation of Terminal Multiple (WACC Method)	
WACC	9.7%
Long-term Nominal GDP Growth	1.0%
WACC-GDP Growth	8.7%
FCF Terminal Multiple [1/(WACC-Growth Rate)]	11.6
EBITDA Terminal Mutiple	32.9

Sources: Company Reports, Needham & Company estimates.

Table 5

Pandora Media: Breakeven Discounted Cash Flow (DCF) Valuation Calculation, 2013E - 2023E

$ and shares in millions, except per share data

Valuation Conclusions		2013E
Sum of PV of Free Cash Flow [1]		$1,032
PV of Terminal Value Discounted at WACC [1]		$1,131
Value of Operations (WACC Method)		$2,163
Plus: Excess Cash at 10/31/11		$91
Plus: NPV of Tax Step Up		$0
Plus: Minority Interest		$0
Enterprise Value		$2,253
Less: Debt at 10/31/11		$0
Less: Lease Obligations		($15)
Less: Preferred Stock Outstanding		$0
Less: Value of Options & Restricted Sk, After-tax		($220)
Common Equity Value		$2,018
Fully Diluted Shares Out, 2012E		191
Breakeven DCF Value/Share		$10.56
Current Share Price @	1/5/12	$10.54
Discount to DCF Value (DCF-Current Price/DCF)		0%

Breakeven Discounted Cash Flow Valuation

Why We Calculate: BE DCF uses the current share price to calculate the market's growth expectations for the enterprise.

Strengths

1 Makes no assumption about growth for first 10 years
2 Prevents over-optimism by working backwards
3 Data widely available and model well understood
4 Explicitly forecasts capital needs (WC & CapX)
5 Uses a levered beta (widely available)

Weaknesses

1 Terminal value big & based on low visiblity projections
2 Model assumes constant debt/equity ratio
3 Complex to calculate
4 Calculates the enterprise value first, then equity value

[1] Calculation of the Value of Operations (WACC Method)

FYE 1/31:	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	Required LT Growth Rate
OIBDA (after sk comp exp & corp):	$3	$4	$5	$6	$8	$10	$12	$16	$20	$25	$32	27.0%
- Depreciation	($4)	($4)	($4)	($4)	($4)	($4)	($4)	($4)	($4)	($4)	($4)	
+ Option Exercise Procee	$10	$50	$50	$50	$50	$50	$50	$50	$50	$50	$50	
+ Int & Inv Income only	$0	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	
EBIT	$9	$55	$56	$57	$59	$61	$63	$67	$71	$76	$83	
Cash Taxes (at 0%)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	
Plus: Depreciation	$4	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	
Plus: Sk Based Comp Exp	$17	$40	$40	$40	$40	$40	$40	$40	$40	$40	$40	
Working Capital Change	$6	$10	$20	$25	$40	$50	$60	$70	$80	$90	$100	
Less: Capital Spending	($4)	($4)	($4)	($4)	($4)	($4)	($4)	($4)	($4)	($4)	($4)	
FCF from Operations	$32	$106	$117	$123	$140	$152	$165	$178	$192	$208	$224	
PV Discounted at WACC [2]		$106	$107	$103	$106	$105	$104	$102	$101	$99	$98	
Sum of PV of Free Cash Flow											$1,032	
Terminal Value of 2023E FCF [3]											$2,593	
PV of Terminal Value at WACC [2]											$1,131	
Discount Period		0	1	2	3	4	5	6	7	8	9	

[2] Calculation of WACC: (Updated 8/20/11)

10-Year Risk Free Rate ("RFR")	2.0%
Equity Risk Premium (Ibbotson-Arithmetic)	5.0%
Levered Beta	1.90
Target Equity/(Debt + Equity)	75%
Debt Rating	BBB-
Debt Spread	5.0%
Marginal Tax Rate ("T")	41.0%
WACC	9.7%

(RFR+(Equity Risk Premium x Beta)) x Equity/Total Capital + ((RFR + Debt Spread) x (1-T) x Debt/Total Capital).

[3] Calculation of Terminal Multiple (WACC Method)

WACC	9.7%
Long-term Nominal GDP Growth	1.0%
WACC-GDP Growth	8.7%
FCF Terminal Multiple [1/(WACC-Growth Rate)]	11.6
EBITDA Terminal Mutiple	81.1

Sources: Company Reports, Needham & Company estimates.

Table 6

Pandora: Valuation Multiples (Sales, OIBDA, P/E)

$ and shares in millions, except per share data

Valuation Conclusions		2013E
Market-Based Enterprise Value [1]		$2,158
2013E Sales (From Annual Projections)		$276
EV/Sales		**7.8**
Market-Based Enterprise Value [1]		$2,158
2013E OIBDA (From Annual Projections)		$3
EV/EBITDA		**737.0**
Target Price		$13.00
Target Price EV/2014 OIBDA		**575.1**
Current Price	1/5/12	$10.54
2013E EPS (From Annual Projections)		($0.01)
P/E Ratio		**(2,094.6)**

[1] Calculation of Market-Based Enterprise Value

Year End 1/31:		2013E
Current Share Price	01/05/12	$10.54
Fully Diluted Shares Out		191
Market Capitalization		$2,014
Less: Excess Cash		($91)
Plus: Tax Step Up - Minority Interest (See PMV)		$0
Plus: Unfunded Retirement Liabilities		$0
Plus: Debt at 12/31/12		$0
Plus: Lease Obligations		$15
Plus: Preferred Stock Outstanding		$0
Plus: Options & Restricted Sk Outstanding		$220
Market-Based Enterprise Value		$2,158

Sources: Company Reports, Needham & Company estimates.

Table 7

Pandora: Free Cash Flow Valuation Metrics

$ and shares in millions, except per share data

Valuation Conclusions		2013E
FCF/Share [2]		$0.08
Current Price	1/5/12	$10.54
FCF Yield		**1%**
FCF [2]		$15
2013E OIBDA (From Annual Projections)		$3
FCF Conversion Rate (FCF/OIBDA)		**510%**
Market-Based Enterprise Value [1]		$2,158
FCF [2]		$15
EV/FCF		**144.5**
Net Debt/OIBDA		(31.0)
Net Debt		($91)
Net Debt/Market Cap		**-4.5%**

[2] Calculation of Free Cash Flow

Year End 1/31:	2013E
OIBDA	$3
Plus: Option Exercise Proceeds	$10
Less: Cash Interest Expense	($0)
Cash Portion of Minority Interest	$0
Less: Preferred Dividends	$0
Less: Operating Cash Taxes	$0
Less: Change in Working Capital	$6
Less: Capital Spending	($4)
Free Cash Flow	$15
Less: Dividends	$0
Free Cash Flow After Dividends	$15
Shares Outstanding	191
FCF/Share	$0.08
FCF/Share After Dividends	$0.08

Sources: Company Reports, Needham & Company estimates.

Table 8

Summary Comparative Financial & Valuation Information

$ and shares in millions, except per share data

Laura Martin's Coverage	Ticker	Market Cap ($B)	Rating	2012E Multiples: EV/ EBITDA	P/E	EV/ FCF	FCF Yield	Break-even DCF	1/5/12: Target Price	Current Price	Target/ Current	Conflicts Disclosure
1 AOL, Inc.	AOL	$1	BUY	4.8	54.4	6.4	15.7%	-8.6%	$20.00	$15.44	30%	B
2 CBS	CBS	$19	BUY	7.7	12.5	11.7	12.1%	2.7%	$30.00	$27.98	7%	B
3 Discovery Communications	DISCA	$16	HOLD	9.0	14.7	16.9	6.9%	1.6%	NA	$41.04		B, G
4 Disney	DIS	$72	HOLD	7.5	13.8	18.9	6.1%	4.3%	NA	$39.50		B
5 Madison Square Garden	MSG	$2	BUY	8.7	23.6	(18.8)	-5.5%	6.4%	$37.00	$28.91	28%	B
6 News Corp	NWS	$46	HOLD	7.0	13.6	15.0	6.9%	2.3%	NA	$18.49		B, G
7 Nielsen Company BV	NLSN	$11	HOLD	10.8	27.8	38.4	4.3%	6.2%	NA	$29.35		B
8 Pandora Media	**P**	**$2**	**BUY**	**737.0**	**NM**	**144.5**	**0.7%**	**27.0%**	**$13.00**	**$10.54**	**23%**	**B**
9 Scripps Networks Interactive	SNI	$7	BUY	6.9	13.4	14.6	7.4%	2.9%	$62.00	$43.34	43%	B
10 Time Warner Inc	TWX	$37	HOLD	7.7	11.7	23.9	6.2%	2.1%	NA	$36.79		B
11 Time Warner Cable	TWC	$21	BUY	5.4	11.4	23.4	8.4%	0.8%	$95.00	$64.96	46%	B
12 Viacom	VIAB	$26	BUY	7.8	11.0	15.6	8.3%	1.8%	$63.00	$46.97	34%	B
13 Yahoo!	YHOO	$19	BUY	3.5	16.9	6.9	4.7%	-9.0%	$20.00	$15.64	28%	B, G
Total/Average (1)		**$280**		**7.2**	**18.7**	**14.4**	**6.8%**	**1.1%**			**NM**	

$ in millions, except per share data	WACC	Revenue 2012E	OIBDA 2012E	EPS 2012E	EV	Net Debt	Debt/ OIBDA	Debt Rating	FCF	FCF/ Share	Dividend/ Share	Div. Yield
1 AOL, Inc.	12.5%	$2,194	$306	$0.28	$1,478	($444)	(1.5)	BBB-	$231	$2.43	$0.00	NA
2 CBS	10.1%	$14,402	$3,412	$1.89	$26,365	$6,944	2.0	BBB-	$2,247	$3.40	$0.20	0.7%
3 Discovery Communications	9.3%	$4,209	$2,104	$2.38	$18,851	$3,247	1.5	BBB	$1,113	$2.83	$0.00	NA
4 Disney	8.7%	$40,893	$11,060	$2.54	$83,257	$10,792	1.0	A	$4,407	$2.41	$0.40	1.0%
5 Madison Square Garden	9.1%	$1,166	$266	$0.99	$2,324	($305)	(1.1)	BBB-	($124)	($1.60)	$0.00	NA
6 News Corp	10.1%	$33,405	$6,869	$1.14	$47,843	$5,317	0.8	BBB+	$3,192	$1.27	$0.15	0.8%
7 Nielsen Company BV	10.4%	$5,565	$1,656	$0.98	$17,927	$5,650	3.4	Ba2	$467	$1.25	$0.00	NA
8 Pandora Media	**9.7%**	**$276**	**$3**	**($0.01)**	**$2,158**	**($91)**	**(31.0)**	**BBB-**	**$15**	**$0.08**	**$0.00**	**NA**
9 Scripps Networks Interactive	8.7%	$2,137	$1,005	$2.81	$7,529	$719	0.7	BBB+	$516	$3.22	$0.30	0.6%
10 Time Warner Inc	8.9%	$29,646	$7,116	$3.15	$54,748	$15,266	2.1	BBB	$2,290	$2.28	$0.94	3.1%
11 Time Warner Cable	10.3%	$19,642	$7,625	$4.47	$40,863	$20,673	2.7	BBB	$1,747	$5.47	$1.92	3.0%
12 Viacom	9.1%	$14,914	$4,258	$3.78	$33,348	$6,344	1.5	BBB+	$2,137	$3.88	$0.60	1.3%
13 Yahoo!	9.0%	$4,430	$1,690	$0.87	$6,181	($2,870)	(0.1)	A-	$900	$0.73	$0.00	NA

(1) P is excluded from this calculation given its NM number.

Sources: Needham & Co, LLC estimates, Company documents, FirstCall, Yahoo Finance.

Analyst: Laura Martin, CFA (917) 373-3066. LMartin@Needhamco.com

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I, Laura Martin, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company (ies) and its (their) securities. I also certify that I have not been, am not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this report.

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Price, Rating, and Price Target History: Pandora Media Inc. (P/NYSE) as of 1-6-12

Source: Factset (Prices) / Needham (ratings and target price)

Disclosures applicable to this security: B.

Disclosures applicable to this security: B.

Disclosures applicable to this security: B, G.

Price, Rating, and Price Target History: Google, Inc. (GOOG/NASDAQ) as of 1-6-12

Source: Factset (Prices) / Needham (ratings and target price)

Disclosures applicable to this security: B, G.

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Strong Buy	6	5
Buy	61	16
Hold	30	9
Under Perform	1	0
Rating Suspended	1	0
Restricted	1	50
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