



January 28, 2014

## Aerie Pharmaceuticals, Inc.

### Channel checks indicate no reason for recent weakness

**Our view:** Weakness could be a buying opportunity as PG324 Phase IIb results are key near-term (mid-2014) and AR-13324 Phase III results are key longer-term (mid-2014).

#### Key points:

Tuesday's weakness resulted in several queries regarding AERI's drivers and expectations. Our checks indicate no fundamental reason for the stock to be down. Planning and timing for Phase IIb PG324 and Phase III AR-13324 studies is on track, results from the Phase IIb PG324 study are expected around mid-2014 and the Phase III AR-13324 study around mid-2015, balance sheet is strong with sufficient cash into 2Q:16 (well beyond the two catalysts). IMS prescription data underscores the opportunity for AERI and provides additional validation for its novel combination by showing both growth in the US glaucoma market, for both 1st and 2nd-line drugs, and Novartis' Simbrinza, a recently launched combination drug. We are buyers at current levels and especially on any pullbacks.

- **Phase II PG324 study reads out mid-2014; provides visibility on blockbuster opportunity.** AERI will evaluate PG324 (combination AR-13324 and latanoprost) in 300 patients and data from the 28 day study could be available around mid-2014/ 3Q:14. The primary efficacy endpoint is superiority of PG324 to AR-13324 and latanoprost.
- **Phase III AR-13324 study could have data in mid-2015; another large drug by itself.** Next up are interim 3-month data from animal ocular toxicity studies and end of Phase II meeting. Two Phase IIIs are expected around mid-2014 with 1,200 glaucoma patients in total (baseline IOPs: 21-26 mmHg) in the US with data around mid-2015. The primary efficacy endpoint is non-inferiority to timolol.
- **Glaucoma prescriptions continue to increase.** 1st-line glaucoma prescriptions totaled ~16M in 2013, up from 15.4M in 2012 (+3.9% Y/Y). 2nd-line prescriptions totaled ~14.7M, up from 14.6M (+1.2% Y/Y). For second line drugs, combinations increased +4.1% Y/Y and carbonic anhydrase inhibitors increased +3.1% while beta blocker and alpha agonist prescriptions declined Y/Y.
- **Novartis' Simbrinza growing albeit slowly.** Simbrinza is a combination of Azopt (brinzolamide), a carbonic anhydrase inhibitor, and brimonidine (alpha agonist). Therefore, while efficacy looks solid, it includes all the side effect and inconvenience baggage associated with these 2nd line drug classes. Despite this prescriptions are increasing and during its analyst day update NVS highlighted Simbrinza and combination therapy as a growth opportunity in Glaucoma. We believe AERI's drugs with their novel, safer, differentiated and more convenience mechanisms and administration should do even better upon launch.

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### Outperform Speculative Risk

NASDAQ: AERI; USD 15.76

Price Target USD 25.00

#### WHAT'S INSIDE

<input type="checkbox"/> Rating/Risk Change	<input type="checkbox"/> Price Target Change
<input type="checkbox"/> In-Depth Report	<input type="checkbox"/> Est. Change
<input type="checkbox"/> Preview	<input checked="" type="checkbox"/> News Analysis

#### Scenario Analysis\*

Downside Scenario	Current Price	Price Target	Upside Scenario
8.00 ↓ 49%	15.76	25.00 ↑ 59%	35.00 ↑ 122%

\*Implied Total Returns

#### Key Statistics

Shares O/S (MM):	23.2	Market Cap (MM):	366
Dividend:	0.00	Yield:	0.0%

#### RBC Estimates

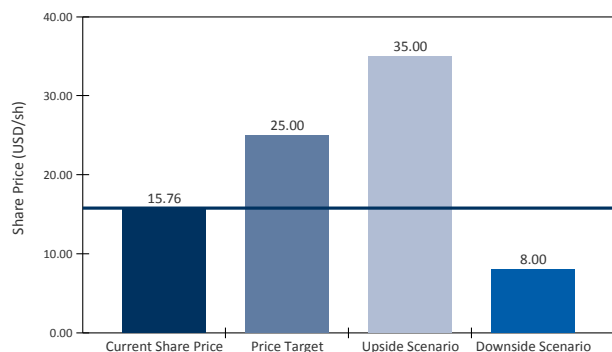
FY Dec	2013E	2014E	2015E	
Revenue	0.0	0.0	0.0	
EPS, Adj Diluted	(1.51)	(1.01)	(1.06)	
P/AEPS	NM	NM	NM	
Revenue	Q1	Q2	Q3	Q4
2013	0.0A	0.0A	0.0A	0.0E
2014	0.0E	0.0E	0.0E	0.0E
EPS, Adj Diluted				
2013	(0.41)A	(0.28)A	(10.81)A	(0.22)E
2014	(0.24)E	(0.25)E	(0.26)E	(0.26)E

All values in USD unless otherwise noted.



## Target/Upside/Downside Scenarios

Exhibit 1: Aerie Pharmaceuticals, Inc.



Source: RBC Capital Markets estimates

## Target price/ base case

We value AERI at \$25 per share, which includes US and EU sales of AR-13324 and PG324. We assign a 65% probability of success (previously 60%) and a value of ~\$17 per share to the US and \$7 per share to the EU opportunity. We assume a US launch in 2017 and an EU launch in 2018. We forecast peak PG324 sales of \$800M and \$600M and AR-13324 sales of \$300 and \$200M the US and EU, respectively. Finally, we assume patent protection through 2030 and include a terminal value based on a discount rate of 15% and a growth rate of -50%.

## Upside scenario

Our upside scenario includes ~\$25 per share in value for the US opportunity and ~\$10 per share in value for the EU opportunity. We forecast peak PG324 sales of \$1.2–1.3B in the US and \$900M–\$1B in the EU and AR-13324 sales of \$200–300MM in the US and \$200–300MM in the EU. We assign products in the pipeline a 60% probability of success, a discount rate of 15%, and a terminal growth rate of -50%.

## Downside scenario

Our downside scenario assumes that PG324 will not be approved in the US or EU. We value the US opportunity for AR-13324 at ~\$5 per share and the EU opportunity at ~\$3 per share. We assume market share ramps up to roughly 15% of total second-line glaucoma prescriptions in the US and 10% in the EU. Under such a scenario, peak sales are forecast to be \$400–500M in the US and \$300–400MM in the EU. We assign AR-13324 a 60% probability of success, a discount rate of 15%, and a terminal growth rate of -50%.

## Investment summary

We believe AERI shares offer the potential for significant upside as both products in development, AR-13324 and PG324, use a new mechanism of action for the treatment of glaucoma, a blockbuster potential market. AR-13324 will enter Phase III trials based on positive Phase IIb data and PG324 a Phase IIb study based on promising preclinical data in 2014. Results from these and additional studies are expected 2014–2016. Millions of patients worldwide suffer from glaucoma, most need multiple medications, and we forecast peak sales of AERI's products at ~\$1B.

AERI owns 100% of the rights to AR-13324 and PG324 worldwide and patent protection extends into 2030, which means the company is free to partner or be acquired. Given that ophthalmology remains an attractive therapeutic area and AERI's product candidates could have a convenient, one drop once per day efficacy and safety profile, progress through clinical and regulatory milestones, as well as a partnership, could all be upside catalysts.

## Potential Catalysts for AERI Shares

- **Phase IIb data for PG324 in 2014.** Important catalyst as it could show differentiation in efficacy vs. latanoprost, the current market leader.
- **Phase III data for AR-13324 in 2015.** Important catalyst as positive data could lead to an NDA and MAA filing.
- **Phase III data for PG324 in 2016.** Key catalyst as clean safety and efficacy beyond latanoprost could make PG324 the first-line drug of choice.
- **Potential partnership for AR-13324 and PG324.** AERI owns worldwide rights to both product candidates and a partnership is likely after Phase III data.
- **Potential approvals and launches in 2017 in the US and 2018 in the EU** following regulatory filings in 2016.

## Risks to Our Investment Thesis

- **Pivotal Phase III and earlier-stage studies could fail.** AR-13324 must show non-inferiority to a comparator over a longer period and PG324 must show a benefit in patients, which raises risk of failure.
- **PG324 Phase IIb study could fail.** Our assumption for success is based on pre-clinical data with PG324, and testing it in patients increases risk.
- **AERI could fail to find a partner** for AR-13324 and PG324 outside the US.
- **Sales ramp of AR-13324 and PG324 could lag expectations** as clinicians fail to take up AERI's drugs, payers put up hurdles for reimbursing branded drugs, and cheaper generic drugs with other mechanisms hamper market penetration.



## Valuation

We value AERI at \$25 per share, which includes US and EU sales of AR-13324 and PG324. We assign a 65% probability of success and a value of ~\$17 per share to the US and \$7 per share to the EU opportunity. We assume a US launch in 2017 and an EU launch in 2018. We forecast peak PG324 sales of \$800M and \$600M and AR-13324 sales of \$300 and \$200M the US and EU, respectively. Finally, we assume patent protection through 2030 and include a terminal value based on a discount rate of 15% and a growth rate of -50%.

## Price target impediments

Our price target is dependent solely on the clinical, regulatory and commercial success of AR-13324 and PG324. A Phase IIb study for PG324 and a Phase III study for AR-13324 are expected in 2014 and failure to demonstrate efficacy or safety in one or both of these studies would be a significant setback. Furthermore, any setbacks in regulatory approvals in the US or EU, delay in launch, failure to secure a partnership outside the US for AR-13324 and PG324, increased competition or other limitations to the market potential of these products either due to better efficacy and/or safety outcomes or pricing pressure due to the availability of generic drugs for glaucoma, could negatively impact our valuation.

## Company description

Aerie Pharmaceuticals, Inc. is a biotechnology company targeting ophthalmic disorders specifically glaucoma, which is a blockbuster potential markets. Sales of products targeting glaucoma totaled \$4.5B globally and more than 30 million prescriptions for glaucoma drugs were written in the US alone. AERI's drug candidates work by inhibiting rho-kinase and the norepinephrine transporter, a new mechanism of action, something not seen for glaucoma in nearly two decades. AR-13324 could enter Phase III trials in 2014 and PG324 could enter Phase II trials in 2014 and Phase III trials in 2015. These drugs could be used as stand-alone agents for first- or second-line therapy or combined with existing agents.



## Aerie Pharmaceuticals - Income Statement FYE December 31

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(in MM; except per share)	1Q:13A	2Q:13A	3Q:13A	4Q:13E	2013E	1Q:14E	2Q:14E	3Q:14E	4Q:14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E
<b>REVENUES</b>																			
AR-13324													6.5	69.1	147.3	235.5	251.0	223.0	190.2
PG324														7.5	31.8	101.8	180.8	308.4	452.0
Product Sales													6.5	76.5	179.1	337.2	431.8	531.4	642.2
Royalties														10.0	24.8	44.6	54.4	63.9	73.6
Other																			
<b>Total Revenues</b>													6.5	86.6	203.9	381.8	486.2	595.2	715.8
<b>EXPENSES</b>																			
COGS													0.6	7.7	17.9	33.7	43.2	53.1	64.2
R&D	3.2	3.2	2.4	3.4	12.1	3.8	4.0	4.3	4.5	16.5	20.0	22.5	20.0	10.0	5.0	5.0	5.0	5.0	5.0
SG&A	1.7	1.7	3.3	1.8	8.5	1.9	1.9	2.0	1.8	7.5	8.5	15.0	30.0	37.5	45.0	67.4	86.4	106.3	128.4
Other																			
<b>Total Expenses</b>	4.9	4.9	5.7	5.2	20.6	5.6	5.9	6.2	6.3	24.0	28.5	37.5	50.6	55.2	67.9	106.2	134.5	164.4	197.6
<b>Operating Income (Expense)</b>	(4.9)	(4.9)	(5.7)	(5.2)	(20.6)	(5.6)	(5.9)	(6.2)	(6.3)	(24.0)	(28.5)	(37.5)	(44.2)	31.4	136.0	275.6	351.7	430.8	518.1
<b>OTHER</b>																			
Interest income				0.1	0.1	0.1	0.1	0.1	0.1	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Interest expense	(0.2)	(0.2)		(0.1)	(0.4)	(0.1)	(0.1)	(0.1)	(0.1)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
Other			(5.1)																
<b>Total Other Income (Expense)</b>	(0.2)	(0.2)	(5.1)	0.1	(0.3)	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
<b>Income before Tax</b>	(5.1)	(5.1)	(10.9)	(5.1)	(20.9)	(5.6)	(5.9)	(6.2)	(6.3)	(23.8)	(28.3)	(37.2)	(43.9)	31.7	136.3	275.9	352.0	431.1	518.4
<b>Taxes</b>														10.8	46.3	93.8	119.7	146.6	176.3
<b>Net income (loss)</b>	(5.1)	(5.1)	(10.9)	(5.1)	(20.9)	(5.6)	(5.9)	(6.2)	(6.3)	(23.8)	(28.3)	(37.2)	(43.9)	20.9	89.9	182.1	232.3	284.5	342.2
EPS, Basic (GAAP)	(\$0.41)	(\$0.28)	(\$0.81)	(\$0.22)	(\$1.51)	(\$0.24)	(\$0.25)	(\$0.26)	(\$0.26)	(\$1.01)	(\$1.06)	(\$1.24)	(\$1.44)	\$0.67	\$2.84	\$5.63	\$7.04	\$8.45	\$9.97
EPS, Diluted (GAAP)	(\$0.24)	(\$0.19)	(\$1.13)	(\$0.16)	(\$0.94)	(\$0.17)	(\$0.18)	(\$0.19)	(\$0.19)	(\$0.74)	(\$0.81)	(\$0.97)	(\$1.13)	\$0.53	\$2.24	\$4.46	\$5.60	\$6.75	\$7.99
Shares outstanding, Basic	12.5	18.4	1.0	23.3	13.8	23.4	23.6	23.7	23.8	23.6	26.6	29.9	30.5	31.1	31.7	32.4	33.0	33.7	34.3
Shares outstanding, Diluted	21.0	26.9	9.6	31.8	22.3	31.9	32.1	32.2	32.3	32.1	35.1	38.4	39.0	39.6	40.2	40.9	41.5	42.2	42.8
<b>Operating Ratios</b>																			
COGS													10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Gross Margin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
R&D	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	308.7%	11.6%	2.5%	1.3%	1.0%	0.8%	0.7%
SG&A	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	463.0%	43.3%	22.1%	17.7%	17.8%	17.9%	17.9%
Operating Margin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-681.7%	36.3%	66.7%	72.2%	72.3%	72.4%	72.4%
Taxes	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%
Net Margin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-677.1%	24.2%	44.1%	47.7%	47.8%	47.8%	47.8%
Source: Company reports and RBC Capital Markets estimates.																			
<b>Balance Sheet - Select Items</b>																			
Cash and cash equivalents	2.4	4.6	69.5	69.5	80.1	75.8	71.2	66.5	66.5	134.4	101.4	61.7	75.0	140.1	280.8	492.4	755.0	1,072.1	
Prepaid expenses and other current assets	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
<b>Total current assets</b>	3.5	7.1	71.9	71.9	82.5	78.2	73.6	68.9	68.9	140.8	110.3	73.2	100.8	197.5	386.3	626.4	918.8	1,269.0	
Property, plant and equipment, net	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	(0.1)	(0.1)	(0.2)	(0.3)	(0.4)	(0.4)	(0.5)	(0.6)	(0.7)	
<b>Total assets</b>	3.7	7.2	72.1	72.1	82.6	78.3	73.7	69.0	69.0	140.8	110.2	73.0	100.5	197.1	385.8	625.8	918.2	1,268.3	
<b>Current Liabilities</b>																			
<b>Total current liabilities</b>	11.8	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.1	18.6	19.1	19.6	20.1	20.6	22.2	23.9	25.7
<b>Total liabilities</b>	4.6	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
Share Capital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Share Premium	0.1	1.1	69.5	69.5	69.5	69.5	69.5	69.5	69.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5	163.5
Accumulated deficit	(74.0)	(84.8)	(88.4)	(88.4)	(88.4)	(92.4)	(96.7)	(101.3)	(106.0)	(106.0)	(128.2)	(159.3)	(197.0)	(170.0)	(73.9)	114.3	352.7	643.4	991.7
<b>Total stockholders' equity</b>	(12.7)	(22.4)	42.5	42.5	38.5	34.1	29.5	24.8	24.8	96.6	65.5	27.8	54.9	150.9	339.2	577.6	868.2	1,216.5	
<b>Total liabilities and stockholders' equity</b>	3.7	7.2	72.1	72.1	82.6	78.3	73.7	69.0	69.0	140.8	110.2	73.0	100.5	197.1	385.8	625.8	918.2	1,268.3	
<b>Cash Flow Statement - Select Items</b>																			
Net Income (loss)	(5.1)	(5.1)	(20.9)	(5.1)	(20.9)	(5.6)	(5.9)	(6.2)	(6.3)	(23.8)	(28.3)	(37.2)	(43.9)	20.9	89.9	182.1	232.3	284.5	342.2
Depreciation and amortization	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Stock based compensation	0.4	1.5	1.5	3.5	3.5	1.5	1.5	1.5	1.5	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
<b>Net cash provided (used) by operating activities</b>	(5.1)	(2.5)	(11.6)	(3.5)	(7.5)	(4.0)	(4.3)	(4.6)	(4.7)	(17.5)	(26.0)	(32.9)	(39.6)	13.4	65.2	140.8	211.7	262.7	317.2
Purchase of property and equipment and intangible assets	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)	(0.0)	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Net cash used in investing activities	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)	(0.0)	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Proceeds from issuances				68.4	68.4														
<b>Net cash provided by (used in) financing activities</b>	7.0	13.3	68.4	88.7	88.7														
Decrease in cash and cash equivalents	(5.1)	4.5	1.7	64.8	81.2	(4.0)	(4.3)	(4.6)	(4.7)	(17.6)	67.9	(33.0)	(39.7)	13.3	65.1	140.7	211.6	262.6	317.1
<b>Cash and cash equivalents at the beginning of the year</b>	2.9	(2.1)	2.9	4.6	2.9	84.1	80.1	75.8	71.2	84.1	66.5	134.4	101.4	61.7	75.0	140.1	280.8	492.4	755.0
<b>Cash and cash equivalents at the end of the year</b>	(2.1)	2.4	4.6	69.5	84.1	80.1	75.8	71.2	66.5	66.5	134.4	101.4	61.7	75.0	140.1	280.8	492.4	755.0	1,072.1

Source: Company reports and RBC Capital Markets estimates.



## Required disclosures

### Conflicts disclosures

The analyst(s) responsible for preparing this research report received compensation that is based upon various factors, including total revenues of the member companies of RBC Capital Markets and its affiliates, a portion of which are or have been generated by investment banking activities of the member companies of RBC Capital Markets and its affiliates.

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An analyst's 'sector' is the universe of companies for which the analyst provides research coverage. Accordingly, the rating assigned to a particular stock represents solely the analyst's view of how that stock will perform over the next 12 months relative to the analyst's sector average. Although RBC Capital Markets' ratings of Top Pick (TP)/Outperform (O), Sector Perform (SP), and Underperform (U) most closely correspond to Buy, Hold/Neutral and Sell, respectively, the meanings are not the same because our ratings are determined on a relative basis.

#### Ratings

**Top Pick (TP):** Represents analyst's best idea in the sector; expected to provide significant absolute total return over 12 months with a favorable risk-reward ratio.

**Outperform (O):** Expected to materially outperform sector average over 12 months.

**Sector Perform (SP):** Returns expected to be in line with sector average over 12 months.

**Underperform (U):** Returns expected to be materially below sector average over 12 months.

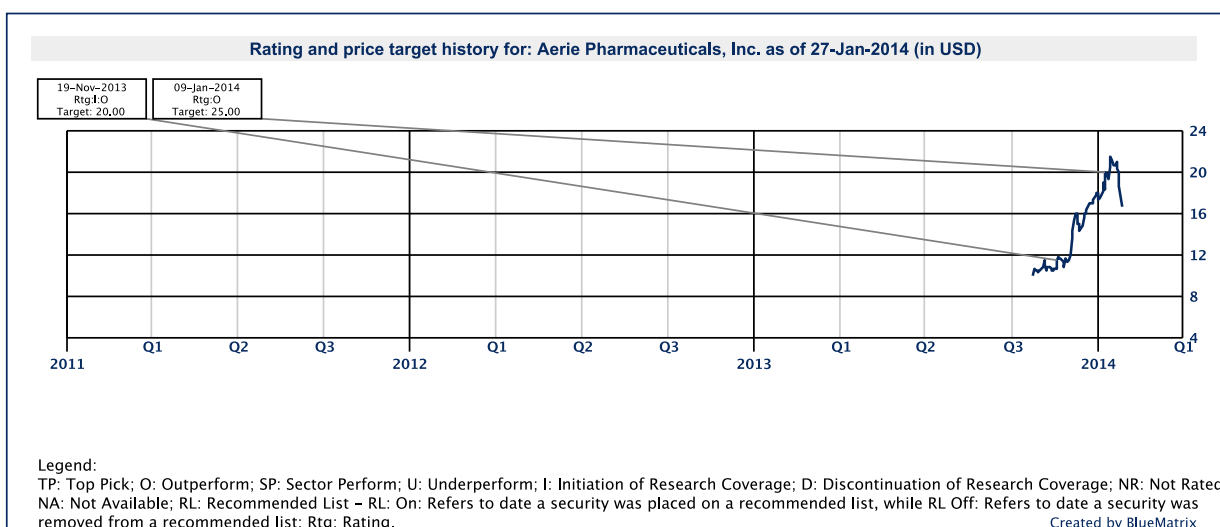
#### Risk Rating

As of March 31, 2013, RBC Capital Markets suspends its Average and Above Average risk ratings. The **Speculative** risk rating reflects a security's lower level of financial or operating predictability, illiquid share trading volumes, high balance sheet leverage, or limited operating history that result in a higher expectation of financial and/or stock price volatility.

## Distribution of ratings

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Distribution of ratings				
RBC Capital Markets, Equity Research				
As of 31-Dec-2013				
Rating	Count	Percent	Investment Banking Serv./Past 12 Mos.	
			Count	Percent
BUY [Top Pick & Outperform]	791	51.13	274	34.64
HOLD [Sector Perform]	666	43.05	179	26.88
SELL [Underperform]	90	5.82	14	15.56



References to a Recommended List in the recommendation history chart may include one or more recommended lists or model portfolios maintained by RBC Wealth Management or one of its affiliates. RBC Wealth Management recommended lists include a former list called the Prime Opportunity List (RL 3), the Guided Portfolio: Prime Income (RL 6), the Guided Portfolio: Large Cap (RL 7), the Guided Portfolio: Dividend Growth (RL 8), the Guided Portfolio: Midcap 111 (RL 9), the Guided Portfolio: ADR (RL 10), and the Guided Portfolio: Global Equity (U.S.) (RL 11). RBC Capital Markets recommended lists include the Strategy Focus List and the Fundamental Equity Weightings (FEW) portfolios. The abbreviation 'RL On' means the date a security was placed on a Recommended List. The abbreviation 'RL Off' means the date a security was removed from a Recommended List.

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