



January 4, 2017

Key Metrics

AXSM - NASDAQ	\$6.45
Pricing Date	Jan 3 2017
Price Target	\$20.00
52-Week Range	\$15.74 - \$5.25
Shares Outstanding (mm)	19.1
Market Capitalization (mm)	\$123.2
3-Mo Average Daily Volume	31,950
Book Value/Share	\$1.82
Price/Book	3.5x

EPS FY: December

	2015A	Prior 2016E	Curr. 2016E	Prior 2017E	Curr. 2017E
1Q-Mar	--	--	(0.31)A	--	(0.41)E
2Q-Jun	--	--	(0.36)A	--	(0.41)E
3Q-Sep	(0.41)	--	(0.38)A	--	(0.37)E
4Q-Dec	(0.12)	--	(0.39)E	--	(0.36)E
FY	(0.88)	--	(1.43)E	--	(1.54)E
P/E	NM		NM		NM

REVENUE

	2015A	Prior 2016E	Curr. 2016E	Prior 2017E	Curr. 2017E
1Q-Mar	--	--	0.0A	--	--
2Q-Jun	--	--	0.0A	--	--
3Q-Sep	0.0	--	0.0A	--	--
4Q-Dec	0.0	--	0.0E	--	--
FY	0.0	--	0.0E	--	0.0E

Company Description:

Axsome Therapeutics, Inc., a clinical stage biopharmaceutical company, develops therapies for the management and treatment of central nervous system disorders. Its product candidates include AXS-02, which is in Phase III trial for the treatment of complex regional pain syndrome, knee osteoarthritis, and chronic low back pain; and AXS-05 for the treatment resistant depression and agitation in Alzheimer's disease.

Axsome Therapeutics, Inc.

Rating: Buy

IND for phase II/III of AXS-05 in Alzheimer's Disease cleared by FDA, Reiterate BUY and \$20 PT

Investment Highlights:

- **Efficacy and Safety Trial Commencement Expected in 1H17.** This morning Axsome announced that the FDA cleared their IND for a phase II/III of AXS-05 in Alzheimer's Disease (AD). The placebo-controlled, randomized, double-blind, multicenter phase II/III trial is set to enroll 330 patients and will begin in 1H17. The trial will seek to evaluate the safety and efficacy of AXS-05 in AD in patients with agitation across three treatment arms of AXS-05, placebo, or bupropion. The trial's primary endpoint is a 29-item scale used to systematically assess agitation, the Cohen Manfield Agitation Inventory (CMAI).
- **Metabolism Inhibition May Lead to Potential Increase in Bio-availability of Dextromethorphan.** Studies have shown that Dextromethorphan (DM) is active at multiple central nervous system (CNS) receptors. However, DM's rapid metabolism into dextrophan (DXO) makes it difficult to achieve the plasma levels required for potential therapeutic activity. The addition of Bupropion to DM serves to improve AXS-05's mechanism of action through two means: 1) Applied as a drug delivery method, the bupropion helps slow the metabolism of DM to DXO; 2) Active at CNS receptors, Bupropion has potential to provide synergistic effects. In our view, the concept of compounds designed to slow the metabolism of DM to DXO stand on a conceptually strong foundation and can be seen in AVP-786. Avanir's AVP-786 is approved under the brand name Nuedexta for the treatment of pseudobulbar affect in the US.
- **Valuation.** We derive our target price of \$20 through a risk adjusted DCF analysis, assuming an 8% discount rate and 50% probability of success applied to all cash flows and the terminal value, based on a 6 multiple of projected 2022 EBITDA.
- **Risks.** Other than typical risks associated with investing in companies in the healthcare industries, such as R&D, regulatory, manufacturing, and commercialization risks, investing in Axsome Therapeutics, Inc. carries several firm-specific risks: 1) potential multiple binary events; 2) intense competition; 3) pricing and reimbursement pressures; 4) The company has not shown a history of profitability; 5) additional funding may be required to successfully develop and commercialize its products; and 6) high stock price volatility.

Required Disclosures

Price Target

\$20

Valuation Methodology

We derive our target price of \$20 through a risk adjusted DCF analysis, assuming an 8% discount rate and 50% probability of success applied to all cash flows and the terminal value, based on a 6 multiple of projected 2022 EBITDA.

Risk Factors

Other than typical risks associated with investing in companies in the healthcare industries, such as R&D, regulatory, manufacturing, and commercialization risks, investing in Axsome Therapeutics, Inc. carries several firm-specific risks: 1) potential multiple binary events; 2) intense competition; 3) pricing and reimbursement pressures; 4) The company has not shown a history of profitability; 5) additional funding may be required to successfully commercialize its products; and 6) high stock price volatility.

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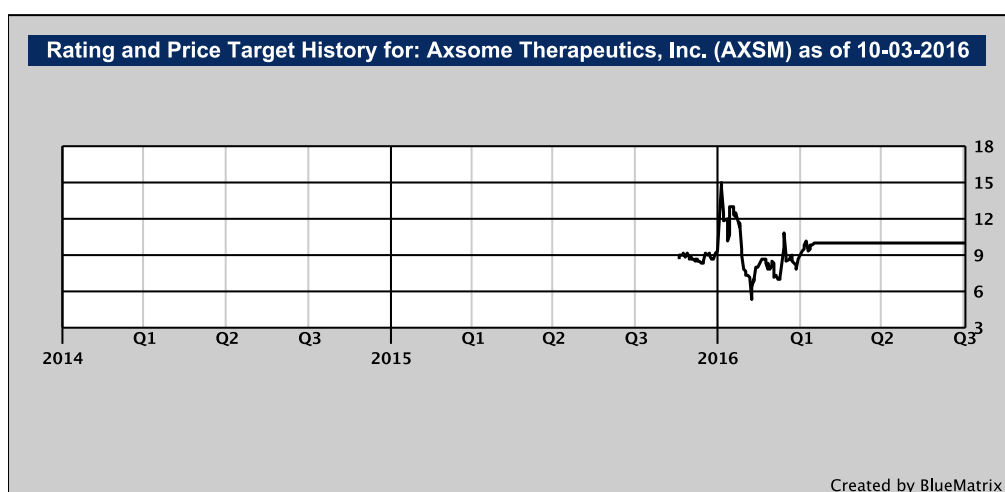
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Rating	Investment Banking Services/Past 12 Mos.	
	Percent	Percent
BUY [BUY]	86.36	38.16
HOLD [HOLD]	13.64	25.00
SELL [SELL]	0.00	0.00

Meaning of Ratings

- A) A Buy rating is assigned when we do not believe the stock price adequately reflects a company's prospects over 12-18 months.
- B) A Hold rating is assigned when we believe the stock price adequately reflects a company's prospects over 12-18 months.
- C) A Sell rating is assigned when we believe the stock price more than adequately reflects a company's prospects over 12-18 months.

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Aegis Capital Corp.
(212) 813-1010
810 Seventh Avenue, 18th Floor
New York, New York 10019