

## AMAG Pharmaceuticals, Inc.

AMAG

Analyst: Zach Collins

**BUY on AMAG**

**Price Target: \$ 33.80**

### Key Statistics as of 12/4/15

Market Price: \$21.63  
 Industry: Biotechnology  
 Market Cap: \$721.73 M  
 52-Week Range: \$20.22-77.73  
 1 Year Beta: .51

### Thesis Points:

- Recent Acquisitions provide substantial value creation
- Exponential revenue growth
- New share repurchase program
- High growth industry

### Company Description:

AMAG Pharmaceuticals, Inc. was founded in 1981. AMAG pharmaceuticals focuses their business and clinical expertise on developing and commercializing products that provide clear benefits and improve the lives of the intended consumers. AMAG has a diverse portfolio of products and services that primarily focus on maternal health, anemia management, iron deficiency, cancer supportive care, and umbilical cord stem cell storage and research. AMAG intends on continuing to expand the impact of these and future products and services for their patients by following their growth strategy, which includes organic growth, as well as the pursuit of products and companies that align with their existing therapeutic areas or those that could benefit from our proven core competencies. Currently, their primary sources of revenue come from sales of Makena, CBR Services and Feraheme.



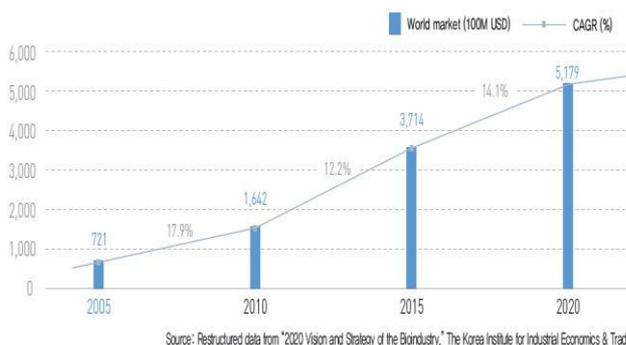
## Thesis

AMAG Pharmaceuticals has positioned themselves with a high potential to become a major player within the biotechnology industry. The recent acquisitions of Lumara Health Inc. in November 2014, and CBR in August 2015, has generated exponential revenue growth for AMAG pharmaceuticals. These acquisitions also provide a catalyst for long term value creation for AMAG Pharmaceuticals. Such value creation has the potential to create substantial value for the shareholders of AMAG. In January 2016, the board of directors for AMAG Pharmaceuticals authorized a program to repurchase up to \$60 million in shares of common stock. As an analyst this suggests that the board for AMAG Pharmaceuticals believes their stock is undervalued in the market. The biotechnology industry as a whole has also demonstrated high growth, which is likely to continue in the near future.

## Industry Outlook

The graph below illustrates the industry growth of the biotechnical industry since 2005, up to analysts' estimates of growth for 2020.

The BT Industry's World Market Outlook



As you can see there has been a significant increase in growth within the biotechnology industry over the past ten years. And as you can see from analysts' estimates for the next four years, this is a trend that is likely to continue in the upcoming future. The primary factors that have influenced this trend include advancements in technology, the development of new drugs, as well as significant improvements to existing drugs, as more in depth research becomes available. As technology continues to rapidly advance, the global

population continues to increase, and the expected life span of humans continues to rise, the demand for products within the biotechnology industry will continue to grow at an increasing rate. This provides high growth potential for any firm within this industry that can capitalize on this trend.

## Porter's Five Forces

### Bargaining power of suppliers: **HIGH**

AMAG Pharmaceuticals sources their particular inventory requirements through a number of different third party suppliers. Of which they do not have any long term contracts with. Due to the nature of the products for AMAG Pharmaceuticals, these materials must be purchased strictly from qualified suppliers.

### Bargaining power of customers: **LOW**

The products produced by AMAG Pharmaceuticals are specifically tailored toward certain consumers that need these products to improve the overall quality of their life.

### Threat of substitutes: **LOW**

The threat of substitutes for AMAG Pharmaceuticals is low as there are no alternatives for the specific products they produce. Consumers can turn to other biotechnology companies for similar products or services, but AMAG Pharmaceuticals possess the intellectual property for all of their specific products, meaning other products and services will not have the exact same effects.

### Existing rivalry: **HIGH**

The intensity of competition within the biotechnology industry is very high. Biotechnology firms are always trying to find a revolutionary drug or service that will change the industry. As bigger companies become interested in the intellectual property of smaller firms, many smaller biotechnical company's end up being bought out.

### Threat of new competition: **LOW**

The biotechnical industry is an industry with extremely high barriers to entry. As each drug these companies within the industry develop, years and years of extensive testing by the FDA must be completed and approved before any new drug can enter into the consumer market.

## Recent Acquisitions

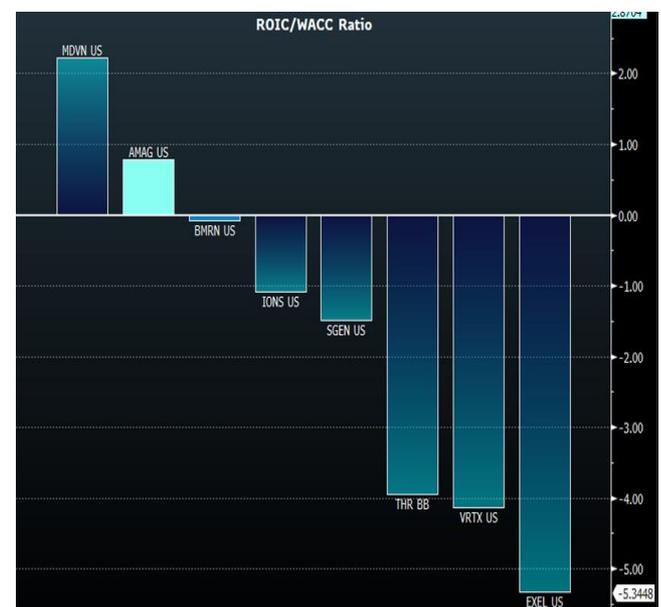
In November 2014, AMAG Pharmaceuticals acquired Lumara Health for \$600 million in cash consideration to gain access to the sales force of Makena. Makena (hydroxyprogesterone) is a man-made form of a female hormone called progesterone. Makena is used to lower the risk of premature birth in women, particularly for a woman who has already had a premature baby and may be at high risk. This drug is injected intramuscularly at a weekly dose of 250mg to be effective, and was approved by the FDA in February of 2011. Makena prescriptions are dispensed through the preferred pharmacy of the consumer or purchased directly by hospitals, government agencies and integrated delivery systems. Based on market research conducted by the research team at AMAG, they estimate that approximately 35% of the at-risk patient population uses Makena. This a considerable percentage of market share if you consider the market cap of this firm, as well as how quickly it has gained market share since its approval. There is also significant potential for Makena to acquire additional market share, as the sales and marketing teams at AMAG continue to focus on multi-channel distribution methods to promote Makena. AMAG has also developed a Makena Care Connection that will screen and enroll patients in financial assistance programs to help lower the out of pocket costs for commercially insured patients whose plans cover Makena.

In August 2015, AMAG Pharmaceuticals acquired CBR for \$700 million in cash consideration. CBR is the largest private newborn stem cell bank in the world, which offers pregnant women and their families the ability to preserve their newborns' umbilical cord blood and cord tissue for potential future use. This is an up and coming market in the biotechnology industry with significant growth potential. AMAG Pharmaceuticals market and sell CBR services directly to consumers who pay for their services. As of December 31, 2015, CBR stored approximately 633,000 umbilical cord blood and cord tissue units, which AMAG estimates to represent approximately more than half of all privately held umbilical cord blood and cord tissue units. CBR is the first stem cell bank to partner with reputable research institutions on FDA regulated clinical trials exploring the potential regenerative ability of these stem cells to

help treat conditions that have no cure today. In 2005, legislation on the education of umbilical cord preservation for future stem cell use and is regulated in more than 20 states that support educating expected parents on the use of stem cells. Stem cells have been used and proven to treat over 80 diseases including various cancers, blood disorders, immune disorders, metabolic disorders, spinal cord damage, and heart disease. In the 2014 fiscal year, revenue growth for AMAG was nearly 54%. And in the following year, AMAG generated revenue growth of 236%, from \$124 million in 2014, to \$418 million in 2015 as a result of these acquisitions.

The current level of liquidity for AMAG is considerably low due to the extensive amount of debt they had to take on for these acquisitions. But as their revenue growth continues to increase, and AMAG pays off their debt, the liquidity position of the firm will substantially improve.

The following cross sectional analysis shows AMAG Pharmaceuticals ROIC/WACC ratio compared to peers within the industry. The peers identified in this analysis include Medivation Inc. (MDVN), BioMarin Pharmaceutical Inc. (BMRN), Ionis Pharmaceuticals Inc. (IONS), Seattle Genetics Inc. (SGEN), Vertex Pharmaceuticals Inc. (VRTX), and Exelixis Inc. (EXEL).



This chart illustrates how AMAG Pharmaceuticals is generating a higher ROIC/WACC ratio than most of their peers. This demonstrates how AMAG is creating more value for their firm than that of their competitors within the industry.

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## Share Repurchase Program

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In January 2016, the board of directors authorized a share repurchase program to repurchase up to \$60 million in shares of the company common stock. This repurchase program does not have an expiration date, and can be discontinued at any time. This program allows AMAG Pharmaceuticals to purchase their stock from time to time under the discretion of AMAG top management. The timing and number of shares purchased will depend on a number of different factors, including the share price, the general macroeconomic conditions surrounding the market, the industry as a whole, the volume of shares traded, as well as the working capital requirements of the firm. The introduction of a share repurchase program suggests that the board of directors as well as the management team of AMAG believe their stock is currently undervalued and can prove to be a buy signal in the market.

The stock price of AMAG began to fall towards the end of July in 2015, when the FTC notified that they were conducting an investigation on the unfair methods of competition with respect to Makena. At this time the stock was trading at around \$75 a share. Investigations like this are fairly common within the biotechnical industry, but can have a significant impact on the markets view of the company. AMAG is confident that they will get through the investigation. If the investigation comes up empty, the stock price for AMAG will likely jump back up aggressively.

premium was put on the stock when valuing it through the proforma. Despite the risk associated with this company as well as the recent decline in AMAG's stock price, the high return potential outweighs this level of risk. Especially when considering how close AMAG is to trading around their 52 week low. For the above reasons identified and the analysis conducted for AMAG financials, this stock is a BUY.

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## Conclusion

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After a thorough analysis of AMAG Pharmaceuticals it is clear that this company is undervalued. What cannot be emphasized enough is the high growth potential within this industry. And with the recent acquisitions made by AMAG Pharmaceuticals, they have positioned themselves in a way to capture a significant portion of additional market share, as well as create long lasting value to the firm. To compensate for the obvious riskiness of the firm in terms of their high level of debt, a substantial risk

**AMAG Pharmaceuticals, Inc.**  
(amag)

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**BULLISH**

Analysis by Zach Collins

Current Price:

\$21.63

Intrinsic Value:

\$27.52

Target 1 year Return: 56.24%  
Probability of Price Increase: 100%

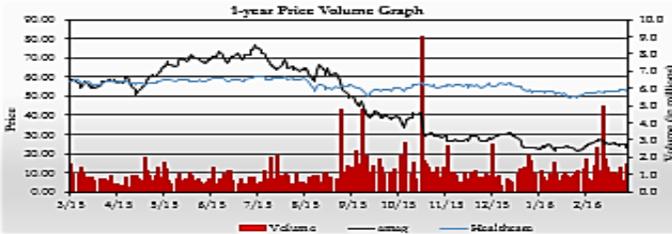
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Dividend Yield:

0.0%

Target Price:

\$33.80

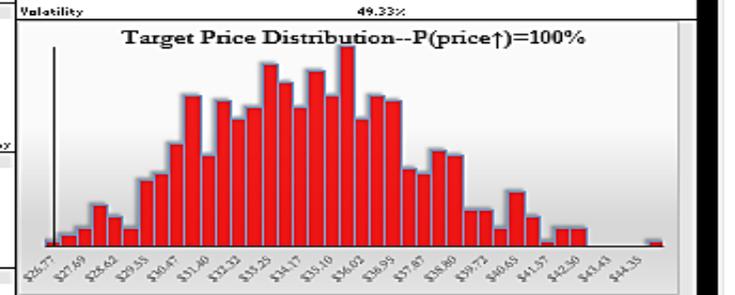


Description	
AMAG Pharmaceuticals, Inc., specialty pharmaceutical company, provider of products and services with a focus on maternal health, anemia management, and cancer supportive care in the United States.	
General Information	
Sector	Healthcare
Industry	Biotechnology
Last Guidance	November 3, 2015
Next earnings date	May 4, 2016
Estimated Country Risk Premium	10.00%
Effective Tax Rate	40%
Effective Operating Tax Rate	-13%

Market Data	
Market Capitalization	\$721.73
Daily volume (mil)	0.72
Shares outstanding (mil)	34.75
Diluted shares outstanding (mil)	35.31
% Shares held by institutions	55%
% Shares held by investment Managers	8%
% Shares held by hedge funds	37%
% Shares held by insiders	0.95%
Short interest	22.42%
Days to cover short interest	6.43
52-week high	\$77.73
52-week low	\$20.22
Levered Beta	0.66
Volatility	49.33%

Quarter ending	Part Earning Surprise
12/31/2014	-1.28%
3/31/2015	5.78%
6/30/2015	28.75%
9/30/2015	-15.44%
12/31/2015	-5.80%
Mean	2.20%
Standard error	7.5%

EBITDA	Peer
28.26%	Aegerion Pharmaceuticals, Inc.
36.88%	Acarda Therapeutic, Inc.
101.22%	Inir Pharmaceuticals, Inc.
-26.39%	BioMarin Pharmaceutical Inc.
-38.73%	United Therapeutic Corporation
20.24%	Alexion Pharmaceutical, Inc.
25.1%	Haloxyme Therapeutic, Inc.
	Jazz Pharmaceuticals Public Limited Company

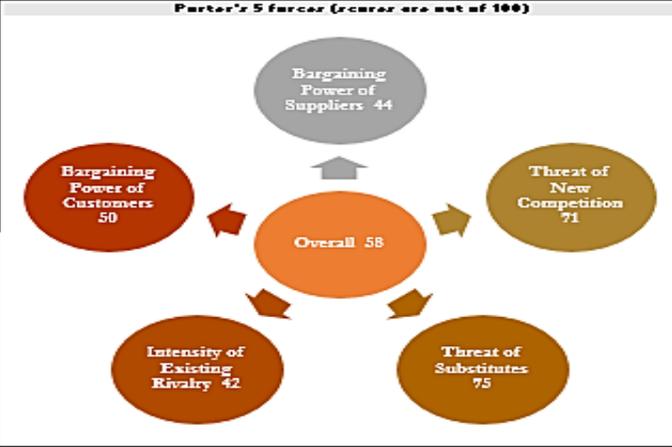
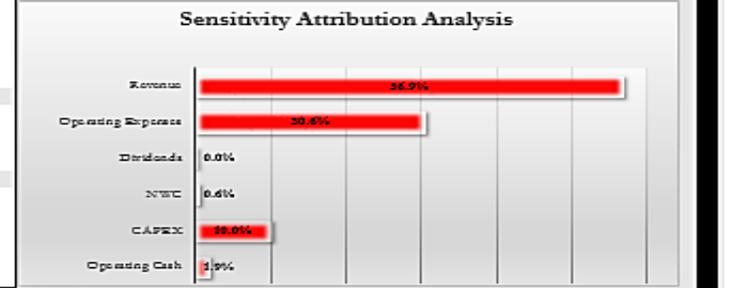


Management	Position
Heiden, William	Chief Executive Officer and President and Chief Operating Officer
Thamar, Frank	Chief Information Officer
McBride, Nathan	Chief Compliance Officer and Senior Vice President, Seco
Blasad, Robert	
Vittiglio, Joseph	
Lennax, Linda	Vice President of Investor R

Total compensation grant	Total return to shareholder
-16.25% per annum over 2y	70.22% per annum over 2y
5.68% per annum over 2y	9.81% per annum over 2y
N/A	N/A

Profitability	amag (LTM)	amag (5 years historical ave)	Industry (LTM)
ROIC	35.4%	-40.39%	12.40%
NOPAT Margin	84%	1.01%	19.7%
Revenue/Inverted Capital	0.42	-39.91	0.63
ROE	44.3%	9.24%	14.06%
Adjusted net margin	76%	-0.92%	16.8%
Revenue/Adjusted Book Value	0.58	-10.05	0.84

Invested Funds	amag (LTM)	amag (5 years historical ave)	Industry (LTM)
Total Cash/Total Capital	20.8%	31.8%	30%
Estimated Operating Cash/Total Capital	6.3%	5.9%	N/A
Non-cash working Capital/Total Capital	-3.9%	-2.8%	7%
Inverted Capital/Total Capital	85.7%	74.1%	63%



Period	Revenue growth
Base Year	236.3%
12/31/2016	30.6%
12/31/2017	20.8%
12/31/2018	7.5%
12/31/2019	3.0%
12/31/2020	3.0%
12/31/2021	3.0%
12/31/2022	3.0%
12/31/2023	3.0%
12/31/2024	3.0%
12/31/2025	3.0%
Continuing Period	3.0%

Valuation	NOPAT margin	ROIC/WACC
Base Year	83.6%	4.12
12/31/2016	24.4%	0.96
12/31/2017	26.0%	0.97
12/31/2018	22.2%	0.82
12/31/2019	22.3%	0.81
12/31/2020	23.5%	0.85
12/31/2021	22.4%	0.85
12/31/2022	21.5%	0.87
12/31/2023	20.6%	0.88
12/31/2024	19.8%	0.91
12/31/2025	19.1%	0.93
Continuing Period	18.4%	0.97

Period	Invested Capital
Base Year	\$5.72
12/31/2016	\$6.33
12/31/2017	\$14.71
12/31/2018	\$14.49
12/31/2019	\$987.78
12/31/2020	\$1,919.82
12/31/2021	\$2,407.35
12/31/2022	\$2,682.21
12/31/2023	\$2,772.21
12/31/2024	\$2,884.59
12/31/2025	\$2,903.97
Continuing Period	

Net Claim	Price per share
Base Year	\$717.50
12/31/2016	\$1,004.67
12/31/2017	\$1,152.99
12/31/2018	\$1,140.31
12/31/2019	\$1,148.50
12/31/2020	\$950.51
12/31/2021	\$751.53
12/31/2022	\$551.00
12/31/2023	\$351.36
12/31/2024	\$151.10
12/31/2025	-\$52.90
Continuing Period	

