

MAIA Biotechnology

Mar 02, 2026

Ateganosine Moves Forward With A Pivotal Year Ahead

Healthcare

MAIA

NYSE

Rating

Outperform

Unchanged

Current Price

\$2.26

Target Price

\$14.00

Market Capitalization

83.69M

Shares Outstanding

37.03M

Float

32.15M

Institutional Holdings

6.8%

12-Month Low/High

\$0.87/\$3.19

Average 90-Day Volume

878720

Fiscal Year End

12/31/2026

Building On Success In 2025, Ateganosine Continues Moving Forward. MAIA has been conducting the Phase 2 THIO-101 trial, testing ateganosine (also known as THIO) in combination with cemiplimab, a checkpoint inhibitor. The trial is now in its third stage after the data showed meaningful improvements in median survival, overall response rates, and disease control rate. Separately, a Phase 3 trial has begun. Based on the reported results, we believe both trials have a high probability of success and could lead to FDA approvals.

Phase 2 THIO-101 Could Support Early Approval. The THIO-101 trial was designed with three stages. Part A confirmed safety and tolerability, while Part B tested three doses to determine the optimal dosing regimen. In December 2025, the Part C Expansion/Registration stage began. This is an open-label arm designed to determine the Overall Response Rate (ORR). Positive data could lead to an application for Early Approval from the FDA.

Phase 2 THIO-101 Data Was Clinically Meaningful. The Phase 2 THIO-101 trial tested the combination of ateganosine and cemiplimab in third-line (3L) NSCLC. The overall survival rate was 17.8 months, compared with the published data for standard of care (SOC) of about 5.8 months. The statistical analysis shows the 95% confidence interval had a lower boundary of 12.5 months. The lower boundary of the 99% confidence interval showed patients can be expect to survive 10.8 months.

We Believe The Phase 3 THIO-104 Trial Has A High Probability Of Success. The Phase 3 THIO-104 trial tests ateganosine against SOC. The Primary Endpoint is an improvement in Overall Survival improvement to 7.8 months, comfortably below the levels indicated by the confidence intervals. This gives the trial has a 95% chance for success in its interim analysis, and a 99% change of success in the final analysis. We therefore see the probability of success as higher-than-usual and believe the stock is a compelling value.

Conclusion. We believe the clinical progress from the Phase 2 trial have not been reflected in the stock price. Data from the Phase 2 THIO-101 Expansion/Registration patients could lead to an application for Early Approval, as well as confirm our high probability of Phase 3 success. We are reiterating our Outperform rating and \$14 price target.

Equity Research

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Refer to the last two pages for Analyst Certification & Disclosures

Revenues (\$ MIL)

Period	2022A	2023E	2024E
Q1	0.0	0.0A	0.0E
Q2	0.0	0.0A	0.0E
Q3	0.0	0.0E	0.0E
Q4	0.0	0.0E	0.0E
	0.0	0.0E	0.0E

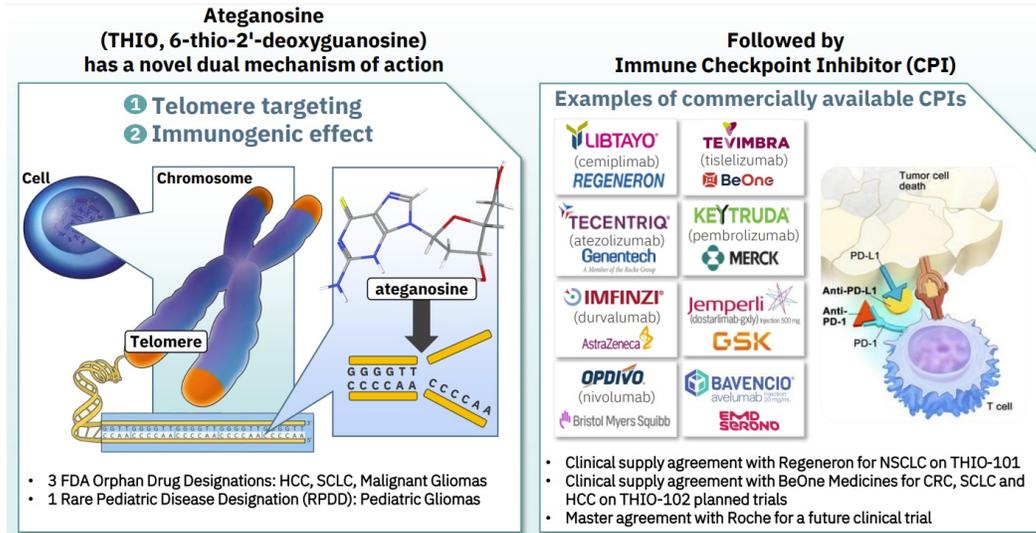
EPS (\$)

Period	2022A	2023E	2024E
Q1	(0.50)	(0.38)A	(0.45)E
Q2	(0.40)	(0.35)A	(0.50)E
Q3	(0.48)	(0.39)E	(0.47)E
Q4	(0.37)	(0.43)E	(0.50)E
	(1.75)	(1.55)E	(1.92)E

Summary. During 2025, MAIA reported data from a Phase 2 trial testing ateganosine (also known as THIO) in combination with cemiplimab (Libtayo, an anti-PD-1 checkpoint inhibitor from Regeneron). The current Phase 2 trial has moved to its third stage after showing meaningful improvements in median overall survival (OS), overall response rates (ORR), and disease control (DC) rate. Separately, the Phase 3 THIO-104 trial has begun. Based on the reported results, we believe both trials have a high probability of success and could lead to FDA approvals.

Ateganosine Works Through Two Mechanisms of Action. Ateganosine is a nucleotide analogue that targets the chromosome’s telomere, structures at the tips of the DNA chain needed for reproduction. As the cell replicates its DNA, ateganosine is taken up by the telomeres, causing DNA errors and leading to death of the cancer cell. As the contents of the dead cell are released, both innate (cGAS/STING) and adaptive (T-cell) immune responses are activated, attracting immune cells into the tumor. Next, treatment with the PD-1 checkpoint inhibitor cemiplimab allows the immune cells to recognize the cancer cell and kill it.

Exhibit 1. Ateganosine Has Two Mechanisms of Action. Upon administration, ateganosine is taken up by cancer cells with active telomerase. It targets the telomers of a chromosome, causing breaks and killing the cell. This results in an immun7e response within the tumor. Next, cemiplimab, an anti-PDL-1 immune checkpoint inhibitor, allows the immune cells to recognize the cancer cells and kill them.



Source: MAIA Biotechnology, Inc.

The First THIO Trials Have Been In NSCLC. Non-small cell lung cancer (NSCLC) is the most common type of lung cancer, with about 85% of all cases. It begins in the cells lining the lung (epithelial cells), then spreads to the lymph nodes, and throughout the lungs.

In July 2025, ateganosine received FDA Fast Track designation for NSCLC, allowing more frequent regulatory engagement, potential rolling review, and eligibility for Accelerated Approval and Priority Review. It has also received Orphan Drug Designations for in hepatocellular carcinoma (HCC, liver cancer), small cell lung cancer (SCLC), and malignant gliomas, as well as Rare Pediatric Disease Designation for pediatric-type diffuse high-grade gliomas (pHGGs).

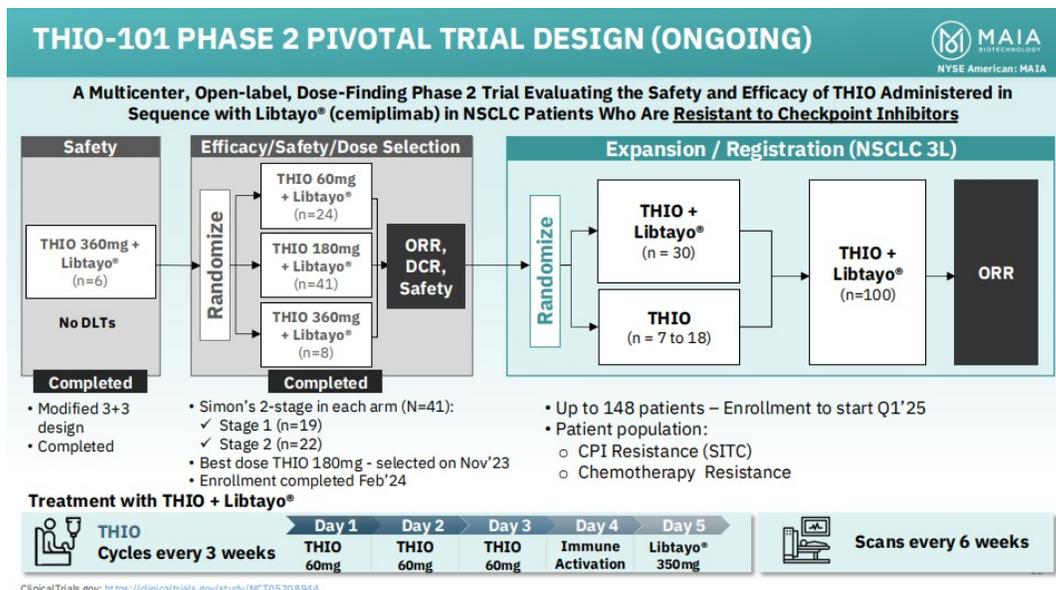
Phase 2 THIO-101 Data Has Moved To Its Third Stage. The Phase 2 THIO-101 trial is testing the combination of ateganosine and cemiplimab in third-line (3L) NSCLC. These patients have advanced cancer and have had two course of chemotherapy, but developed resistance to chemotherapy and checkpoint inhibitors.

The trial was designed with three stages. Part A was designed to confirmed safety and tolerability, while Part B tested three doses to determine the optimal dosing regimen. In December 2025, the Part C Expansion/Registration stage began. This is an open-label arm designed to determine the Overall Response Rate (ORR). Positive data could lead to an application for Early Approval from the FDA.

Clinical Data Has Shown Strong Improvements. The Phase 2 THIO-101 trial showed several improvements over published data for standard of care alone:

- **Median Overall Survival.** The overall survival rate was 17.8 months, compared with the standard of care (SOC) survival of about 5.8 months. The statistical analysis showed the 95% confidence interval (CI) has lower bound of 12.5 months and a 99% CI lower bound of 10.8 months. This can be interpreted to mean that 99% of the patients will survive 10.8 months compare with the 5.8 months for SOC.
- **Overall Response Rate.** The patients in the trial had an ORR of 38% compared with an expected response rate of 6% to 10 % for SOC.
- **Disease Control Rate.** The rate of Disease Control, defined as the complete responses, partial responses, and stable disease, was 88%. This compares with the rate from chemotherapy alone of 25% to 35%.

Exhibit 2. Schematic Diagram Of The Current THIO-101 Phase 2 Trial. The trial is currently in the Expansion/Registration stage, shown on the right side.



We Believe The Phase 2 Data Bodes Well For Phase 3. The Phase 2 trial results were used to design the Phase 3 THIO-104 trial, testing the ateganosine/cemiplimab combination as a third-line treatment for NSCLC. Patient enrollment began in December 2025, with a target of about 300 patients. Like the Phase 2 trial, these patients have had at least 2 previous treatments with chemotherapy and checkpoint inhibitors but no longer respond to the drugs. Clinical sites will be in the US and other countries to support worldwide approvals.

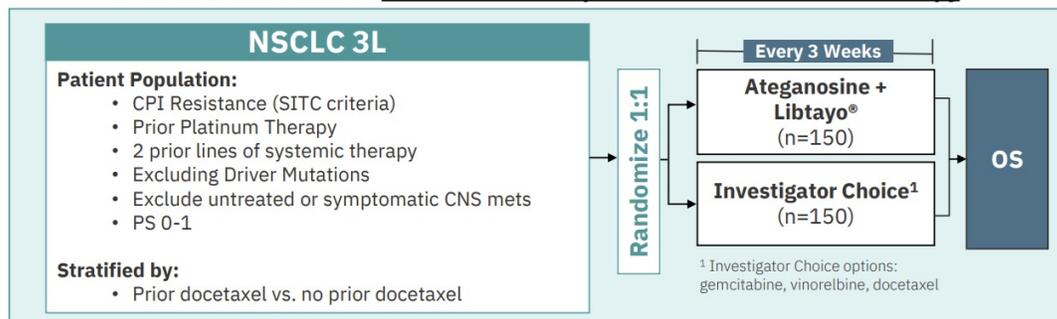
THIO-104 is an open label trial testing the ateganosine/cemiplimab combination against “investigator’s choice” of standard of care chemotherapy. The Primary Endpoint is Overall Survival improvement to 7.8 months, with a hazard ratio (HR) of 0.74 showing with an improvement of about 35% over current treatments. This is comfortably below the levels indicated by the Phase 2 confidence intervals, giving the trial a 95% chance for success in its interim analysis, and a 99% change of success in the final analysis. We believe that the trial has a high likelihood of achieving these endpoints.

The trial has a pre-specified interim overall survival analysis planned in FY2027. If the results are positive, we believe the trial could lead to an application for full FDA approval. Our models are based on an estimated third-line NSCLC population of about 50,000 patients.

We point out that the patients in these trials have advanced disease with few effective treatment options. Patients receiving third-line treatment have already received platinum-based chemotherapy drugs and become resistant to checkpoint inhibitors. Testing in patients with no other treatments is typical for drug development, showing the effects can be attributed to the additional drug. Following an approval in the third-line setting, we expect clinicians to see the survival improvement as supportive of the mechanism of action and start treating their patients with the drug before the disease progresses. We have excluded earlier, off-label use from our revenue models, but estimate the population advanced NSCLC patients who could potentially be eligible for first-line therapy at about 125,000 patients.

Exhibit 3. Design Of The Phase 3 THIO-104 Trial. The Phase 3 trial is an open-label design testing ateganosine with cemiplimab against a standard of care chemotherapy regimen (Investigator’s Choice). Target enrollment is for 150 patients in each arm, or about 300 patients total.

A Multicenter, Open-label, Pivotal Phase 3 Trial Evaluating the Efficacy of Ateganosine (THIO) Administered in Sequence with Libtayo® (cemiplimab) in NSCLC Patients Who Are Resistant to Checkpoint Inhibitors and Chemotherapy



Primary Endpoints Target OS: 9.3m v. 5.8m (HR 0.62); Minimum OS: 7.8m v. 5.8m (HR 0.74)

Secondary Endpoints DCR; ORR; DoR; PFS; Safety

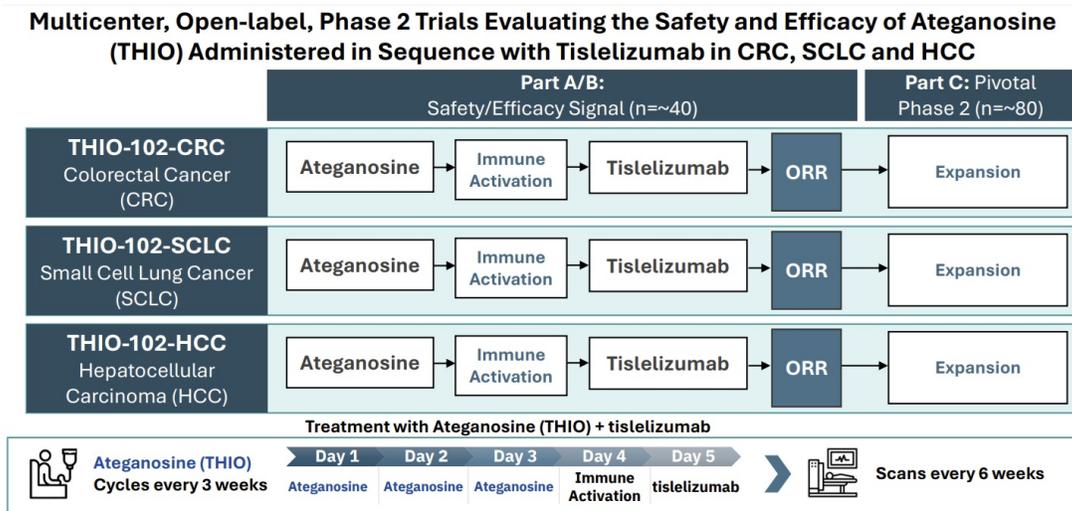
Exploratory Endpoints PK and PD: activity of Ateganosine (THIO) in circulating tumor cells measured by specific biomarkers

Source: MAIA Biotechnology, Inc.

THIO-102 Has Been Planned With Three Tumor Types. Ateganosine has shown efficacy in preclinical models of several types of solid tumors, including small cell lung cancer, colorectal cancer, and hepatocellular carcinoma. The THIO-102 trial has been designed to test ateganosine with tislelizumab, an anti-PD-1 checkpoint inhibitor from BeOne Medicines (formerly BeiGene, Ltd) in several tumor types.

- **Colorectal cancer (CRC).** With over a million cases annually, colorectal cancer is the third most common cancer.
- **Small cell lung cancer (SCLC).** About 15% of all lung cancers are small cell lung cancer (SCLC). This typically starts in the central portions of the chest, and spreads rapidly. It is the most aggressive type of lung cancer.
- **Hepatocellular carcinoma (HCC)** This is the most common primary liver cancer (about 90% of all cases), and associated with conditions such as cirrhosis, hepatitis, and NASH.

Exhibit 4. Schematic Diagram of the Phase 2 THIO-102 Trial. The trial has been designed with three arms, testing ateganosine with tislelizumab in colorectal cancer, small cell lung cancer, and hepatocellular carcinoma.



Source: MAIA Biotechnology, Inc.

Conclusion. We believe the clinical progress from the Phase 2 trial and Phase 3 have not been reflected in the stock price. Data from the Phase 2 THIO-101 Expansion/Registration patients could lead to an application for Early Approval, as well as confirm our high probability of Phase 3 success. We are reiterating our Outperform rating and \$14 price target.

Company Profile

MAIA Biotechnology is a clinical-stage biotechnology company developing telomere-targeting drugs to treat cancer. The lead product, THIO, is a modified nucleoside in a Phase 2 trial for non-small cell lung cancer in combination with Libtayo (cimiplimab, from Regeneron). A Phase 3 trial began treating patients in December 2025.

Fundamental Analysis

In our analysis, we give MAIA Biotechnology a rating of 4.0 checks out of 5 checks. This falls in the upper half of our "above average" range. Our positive fundamental rating is based on the company's position in the oncology and immuno-oncology fields which are expected to continue their growth in sales and market share. Management has extensive experience in research and development, with a track record of developing successful products in the pharmaceutical industry. For further explanation of our fundamental analysis, please refer to the disclosures at the end of this report.

Valuation Summary

Our Outperform rating and valuation are based on our FY2027 EPS estimate of \$2.70, discounted at 30% per year with a multiple of 15X for a price target of \$14 per share. This correlates with a market valuation of about \$170 million, which we believe is justified for a novel immunotherapy drug serving several large patient populations and several orphan drug indications.



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Noble intends to seek compensation for investment banking services and non-investment banking services (securities and non-securities related) within the next 3 months.

Noble is not a market maker in the Company.

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The fundamental assessment rating system is designed to provide insights on the company's fundamentals both on a macro level, which incorporates a company's market opportunity and competitive position, and on a micro/company specific level. The micro/company specific attributes include operating & financial leverage, and corporate governance/management. The number of check marks that a company receives is designed to provide a quick reference and easy determination of the company's fundamentals based upon the following five attributes of the company (weighting reflects the importance of each attribute in the overall scoring of company's fundamental analysis):

Attribute	Weighting
Corporate Governance/Management	20%
Market Opportunity Analysis	20%
Competitive Position	20%
Operating Leverage	20%
Financial Leverage	20%

For each attribute, the analysts score the company from a low of zero to a high of ten based upon the analysis described below. The final rating and resulting check marks is a result of dividing the overall score (out of 100%) by ten.

Rating	Score	Checks
Superior	9.1 to 10	Five Checks
Superior	8.1 to 9	Four & A Half Checks
Above Average	7.1 to 8	Four Checks
Above Average	6.1 to 7	Three & A Half Checks
Average	5.1 to 6	Three Checks
Average	4 to 5	Two & A Half Checks
Below Average	3 to 3.9	Two Checks
Below Average	2 to 2.9	One & A Half Checks
Low Quality	0 to 1.9	One Check

While these are the attributes currently used for the analyst's fundamental analysis, the attributes and weighting may be reviewed, updated with additional attributes, and/or changed in the future based on discussions with the analysts and recommendations from the Director of Research.

Following is the description of each attribute in the fundamental analysis.

Corporate Governance/Management

We believe that a review of corporate governance and assessment of the senior management are important tools to determine investment merit. Good corporate governance aligns management with the interests of stakeholders. As such, analysts are to rank the company on the basis of good corporate governance principles that may include rules and procedures, board composition and staggered term limits, rights and responsibilities, corporate objectives, monitoring of actions and policies, and accountability. In addition, analysts will assess issues with controlling shareholders and whether decisions have been made in the past that were in the interests of all shareholders. In addition, management will be assessed based on industry experience, expertise, and/or track record.

High ranking example: Board and management that is aligned with the interests of shareholders with incentives based on stock price appreciation and with an experienced management team known for exceptional shareholder returns.

Low ranking example: Concentrated ownership without independent directors that do not necessarily align with all shareholders' interests.

The Market Opportunity Analysis

In this review, the analyst assesses the company's macro environment as a measure of understanding the industry. Factors considered include the size and growth potential of the industry under various economic conditions, the emerging demands in the market, technological benefits/disruptions, competition, geographical opportunities, and customer demands/needs, and an assessment of supply and distribution channels. In addition, the analyst will review legal and regulatory trends, as well as potential shifts in consumer or social behavior and natural environment changes.

High rank example: A company in an industry that is growing revenues well above GDP rates (which are on average 2% plus) and/or may have unmet or underserved needs in a rapidly growing market opportunity.

Low rank example: A mature industry that is in secular decline and likely to grow below GDP rates.

Competitive Position

The evaluation of the company's competitive position is another macro environment attribute designed to measure the relevance, market share, position and value proposition, and sustainable differentiations of the company and its products/services within its industry. Ease of entry into the industry and the ability of other well-funded players to potentially enter the market would be determined. As such, the assessment would consider the company's strengths and advantages of its products/services against weaknesses and limitations. This may include the company's current brand awareness, pricing and cost structure, current market strategies and geographic penetration that may affect demand for its products/services. In addition, the company's competitors would be evaluated.

High rank example: An analyst would consider the company's product to be superior to its competitors and that should allow the company to gain market share.

Low rank example: A company with a "me-too" product that does not have any significant technology advantages in an industry that has low barriers to entry.

Operating Leverage

Simplistically, operating leverage is determined by the operating income relative to changes in revenue. The analyst will calculate the impact on sensitivity on gross margins and variable costs to determine operating leverage. The analyst will take into account the ability of the company to cut fixed and variable costs in a challenged revenue environment and technological changes that may impact operating expenses. In addition, the analyst is to assess corporate strategies that include capital investment, which may be required for sustainable revenue growth, marketing expenses, and the company's ability to attract and retain talent and/or employees. The analyst should focus on the revenue opportunity and determine the price elasticity of demand for the company's products or services. In other words, the analyst is to rank the company based on improved operating margins going forward on an absolute and relative basis.

High rank example: A company that has improving margins for the foreseeable future, with significant price elasticity.

Low rank example: A company that is in a challenged revenue environment with a fixed cost structure and limited ability to cut costs, indicating an outlook for declining margins.

Financial Leverage

A strict definition of financial leverage is total debt divided by total shareholder's equity. Financial leverage analysis is to determine the company's ability to improve shareholder value by means of utilizing its balance sheet to grow organically or to acquire assets. Analysts may look at the company's debt to cash flow leverage ratio, interest coverage ratios, or debt to equity ratios. In addition, the interest rate environment and the outlook for interest rates are a factor in determining the company's ability to manage financial leverage. Finally, the analyst is expected to determine the ability to service the debt given the industry and/or company profile, such as cyclical, barriers to entry, history of bankruptcy, consistency in revenue and profit growth, or predictability in sales and profits and large cash reserves. The analyst is expected to take into account capital intensity of the company and the anticipated of capital allocation decisions.

High rank example: A company with predictable and growing revenue and cash flow with modest debt levels. This may indicate that the company could improve shareholder value through growth investments, including acquisitions, using debt financing.

Low rank example: A company in a cyclical industry in a late stage economic cycle that has above average debt leverage and is in an industry that has a history of financial challenges, including bankruptcies.

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Senior Equity Research Analyst focusing on the Biotechnology and Specialty Pharmaceuticals industry. 16 years of industry experience. BA in Economics from Tulane University and an MBA from Columbia Business School. FINRA licenses 7, 24, 63, 86, 87

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Outperform: potential return is >15% above the current price	86%	15%
Market Perform: potential return is -15% to 15% of the current price	14%	4%
Underperform: potential return is >15% below the current price	0%	0%

NOTE: On August 20, 2018, Noble Capital Markets, Inc. changed the terminology of its ratings (as shown above) from "Buy" to "Outperform", from "Hold" to "Market Perform" and from "Sell" to "Underperform." The percentage relationships, as compared to current price (definitions), have remained the same.

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