

22nd Century Group, Inc. (XXII - \$3.89 - Buy)

FLASH NOTE

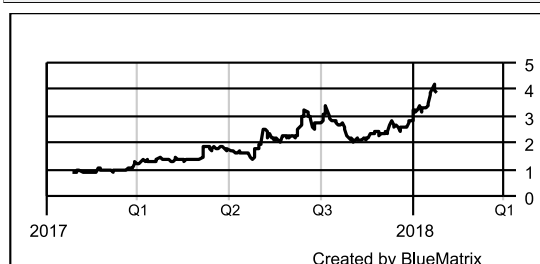
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Sales and trading 7 a.m. to 7 p.m. ET, (646) 465-9090

Sales and trading 7 p.m. to 7 a.m. ET, (646) 465-9063

| Stock Data | 01/25/18 |
|------------------|-------------------|
| 52 Week Range | (\$0.86 - \$4.44) |
| Price Target | \$11.50 |
| Market Cap (mil) | \$480.03 |
| Shares out (mil) | 123.40 |

One year price history XXII



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IQOS Votes Show Skepticism on Health Claims

The FDA's Tobacco Products Scientific Advisory Committee, at the end of a two day meeting regarding the MRTPA (modified risk tobacco product application) of IQOS from Philip Morris voted:

- 1) 8-0 (one abstention) against the claim IQOS lowers the risk of tobacco-related disease.
- 2) 5-4 against the claim IQOS has less risk of harm than cigarettes
- 3) 8-1 in favor of the claim IQOS reduces exposure to harmful and potentially harmful chemicals
- 4) 5-2 against the claim that reductions in exposure to these chemicals will result in lower mortality or morbidity.
- 5) the committee was also skeptical smokers would completely switch to IQOS and most voiced belief in medium to high likelihood consumers would use both IQOS and traditional cigarettes.

There was enough in the votes to hearten the bulls on IQOS, particularly the vote on the claim IQOS reduces exposure to harmful chemicals. The FDA will make a final decision in the coming months.

We believe a negative decision on IQOS is potentially better for 22nd Century since it will push the tobacco companies towards the FDA's goal of reducing nicotine levels in combustible cigarettes. Currently, 22nd Century has the most cost effective way of achieving that goal. The highest value outcome for 22nd Century could be the FDA cutting off the path for tobacco companies to create and market new nicotine delivery devices, like IQOS, and moving aggressively to force the market to offer lower nicotine combustible cigarettes.

The centerpiece of the FDA's regulatory plan is lowering nicotine levels in combustible cigarettes. In our view, 22nd Century controls the technology that the FDA intends to utilize to reduce nicotine addiction for the two-thirds of smokers wanting to quit. This regulatory change will be a multi-year process, and there will be resistance by industry to these changes. However, we think the die is cast and significant changes are coming. With its recent \$54 million capital raise 22nd Century has the resources it needs for the coming multi-year process.

We maintain our Buy recommendation on 22nd Century and reiterate our 12-month price target of \$11.50. We believe 22nd Century's patents, covering nicotine regulation in tobacco plants, is a solution to the FDA's pending regulation of nicotine levels in combustible cigarettes. We believe XXII has the opportunity to license its technology to Big Tobacco at a fraction of the cost they are currently contemplating it will take to comply with potential FDA regulations and this could result in a royalties or licensing stream far surpassing today's market cap. Our price target is based on changes in the US market only.

Valuation:

Our twelve-month price target of \$11.50 is based on the company garnering royalty revenue for its technology on 10% of the US market share in the next five years, discounted at a 20% annual rate.

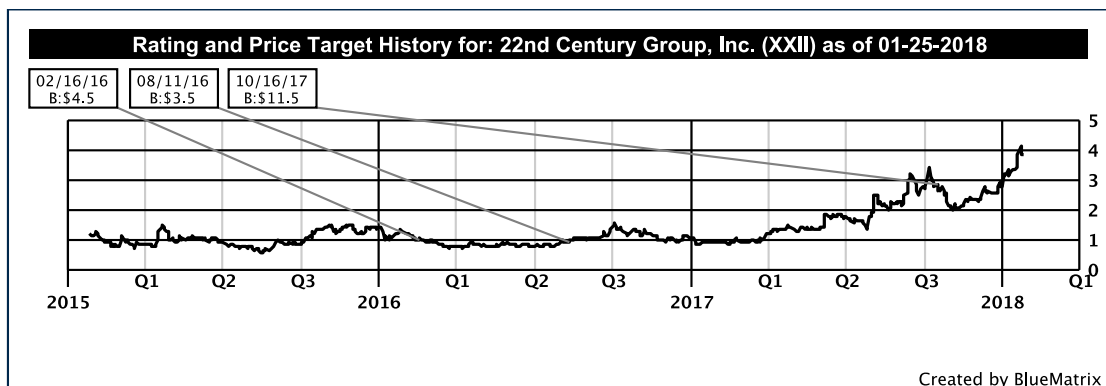
Risks to achievement of target price:

Risks to achieving our price target include delays in the FDA process, ability to find partners for X-22, challenges in attracting contract manufacturing and selling product overseas and possibility of requiring additional capital.

Company description:

22nd Century owns or exclusively controls over 200 issued patents, 50 pending patent applications. The company's proprietary technology enables the control of nicotine levels in tobacco plants by controlling the genes responsible for nicotine production in tobacco plants.

Important Research Disclosures



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| Rating | Count | Percent | IB Serv./Past 12 Mos. | |
|----------------|-------|---------|-----------------------|---------|
| | | | Count | Percent |
| BUY [BUY] | 68 | 70.83 | 25 | 36.76 |
| HOLD [NEUTRAL] | 27 | 28.12 | 3 | 11.11 |
| SELL [SELL] | 0 | 0.00 | 0 | 0.00 |
| NOT RATED [NR] | 1 | 1.04 | 1 | 100.00 |

Regulation Analyst Certification ("Reg AC") —

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Within the past 12 months Chardan Capital Markets has managed or co-managed a public offering for 22nd Century Group, Inc..

RATINGS

Buy: Expected to materially outperform sector average over 12 months and indicates total return of at least 10% over the next 12 months.

Neutral: Returns expected to be in line with sector average over 12 months and indicates total return between negative 10% and 10% over the next 12 months.

Sell: Returns expected to be materially below sector average over 12 months and indicates total price decline of at least 10% over the next 12 months.

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