



CHARDAN

Company Update

July 28, 2019

Industrial & Consumer Technology

22nd Century Group, Inc. (XXII - \$1.86 - Buy)

COMPANY 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	07/26/19
Price	\$1.86
52 Week Range	(\$1.58 - \$3.29)
Price Target	\$11.50
Market Cap (mil)	\$231.84
Shares out (mil)	124.64
3-Mo Avg Vol	1,225,697
Cash (mil)	\$51.9
Total Debt (mil)	\$1.5

Revenues (\$ millions)					
Yr Dec	2018A	2019E		2020E	
	Actual	Curr	Prev	Curr	Prev
YEAR	26.4	21.3	-	21.3	-

EPS (\$)					
Yr Dec	2018A	2019E		2020E	
	Actual	Curr	Prev	Curr	Prev
YEAR	(0.06)	(0.15)	-	(0.18)	-

One year price history XXII



XXII (Buy, PT\$11.50). CEO Resignation. Public Comments Open on MRTPA

President and CEO, Henry Sicignano, announced his resignation from the company Friday after the market closed. While the Board conducts a search for Mr. Sicignano's replacement, COO Michael Zercher will fill the role. We expect the company to continue to focus on its PMTA and MRTP applications with the FDA, working to bring the nicotine NPRM to fruition and building a position in the hemp market.

Mr. Sicignano joined the company in 2010 as President and was appointed CEO on March 3, 2015. At that time the share price was \$0.82 per share, the company had \$3.8 million in cash, and trailing twelve month revenue was less than \$1 million. As of Friday's close the shares had appreciated 127% to \$1.86, cash at the end of March 2019 was \$51.8 million, plus an equity investment valued at an additional \$6 million and the company generated \$26.6 million in revenue for the twelve months ending March 31, 2019. Also, the company has filed with the FDA an MRTPA (modified risk tobacco product application) and PMTA (pre-market tobacco application) for very low nicotine cigarettes and awaits FDA action on an NPRM mandating non-addictive levels nicotine in combustible cigarettes.

Mr. Sicignano's guidance of the company's FDA applications and positioning for an FDA rule-making on non-addictive nicotine levels in cigarettes has been incalculable but he will have to view the ultimate resolution of this process from a metaphorical Mount Nebo.

Late last week the FDA announced the availability for public comment on 22nd Century's MRTPAs for VLN King and VLN Menthol King, combustible cigarettes. The comment period will end at least 180 days from now and at least 30 days after the final documents from the applications are made available to the public.

We also expect the FDA to schedule a meeting of the Tobacco Products Scientific Advisory Committee (TPSAC) in the next 6 to 9 months. TPSAC reviews and evaluates scientific issues, and provides advice, and recommendations to the FDA. The FDA is not required to follow TPSAC's recommendations. With the public comment period and TPSAC review this would put the FDA's decision on 22nd Century's application into Spring of next year.

We believe this MRTTP can be an effective tool for the FDA when it issues an NPRM (Notice of Proposed Rulemaking) that builds on the ANPRM issued in March of 2018 that requested comment on limiting nicotine in combustible cigarettes to non-addictive levels. The FDA is required to consider technical achievability of its orders and 22nd Century, with this MRTTP application, is demonstrating that technical achievability. We believe issuance of the NPRM was delayed by the resignation of commissioner Scott Gottlieb earlier this year. An NPRM could be issued before a new commissioner is nominated and approved, but we think it is much more likely to occur after a new commissioner is installed.

As the FDA moves down the path of mandating non-addictive levels of nicotine in cigarettes, 22nd Century could have a time-to-market advantage over current providers in the market and/or a unique tool for the industry to be in compliance. This advantage is somewhat mitigated by the financial strength of the tobacco industry and FDA approval of a reduced risk order for IQOS. Both of these gives the tobacco industry time to comply and a path to reduced dependence on combustible cigarettes.

With \$52 million in cash, 22nd Century has the resources to wait for a reasonable transition period to a non-addictive nicotine world, but the longer a decision takes and the longer the transition period is, the worse it is for 22nd Century.

Another path for the company is utilizing its expertise in ancillary markets. The company is investing in the hemp market. XXII recently entered into a collaboration and research agreement with Natural Good Medicines (NGM) that calls on NGM to process hemp and cannabis plant lines owned by NGM. 22nd Century has certain exclusive rights to NGM's plant lines. Also, 22nd Century entered into a worldwide R&D agreement with KeyGene, that will focus on developing hemp and cannabis plants with specific medical and therapeutic profiles. KeyGene is an AgBiotech company that specializes in crop improvement using molecular breeding. KeyGene believes this is the fastest and most cost-effective path to market for specialized crops.

In exchange for \$6 million over the initial five year term, KeyGene will work exclusively with 22nd Century on the Cannabis Sativa L. plant and will work specifically to create a genetic database, develop improved varieties, create a molecular genetic map of the cannabis plant genome, analyze the genomic sequences of multiple species of hemp/cannabis plants and initiate generation of plant lines with distinctive profiles. This is still early days for 22nd Century and the hemp market but it could generate considerable value as the hemp market grows.

The company has \$52 million in cash, or almost 4 years of cash at the company's current burn rate. However, investments in the hemp market will lower the company's cash balances modestly and we think a substantial cash balance is necessary in order to combat the likely delaying tactics of the tobacco industry when rule changes are implemented by the FDA.

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.

Required Research Disclosures



Created by: BlueMatrix

Distribution of Ratings/IB Services Chardan Capital Markets

Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [BUY]	70	74.47	16	22.86
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NOT RATED [NR]	0	0.00	0	0.00

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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.

22nd Century Group, Inc. (XXII) - \$1.86 - Buy)

Price Target \$11.50

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RISKS TO ACHIEVEMENT OF TARGET PRICE:

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