



Let's Toke Business

The Commerce of Cannabis

Ted Ohashi MBA, CFA

(To have your free has added, removed or to contact us with feedback, industry and corporate news email In letstokebusiness@gmail.com with your name and country.)

Week Ended April 28, 2023

Ted Ohashi's recent articles on Let's Toke Business and the iHub Cannabis Report.....	p1
Trendless large caps on verge of a breakout.....	p2
A possible SAFE Banking 2023 could turn the cannabis stocks upward.....	p3
Participate in our feature: Question of the Week.....	p4
Should I sell Khiron Life to buy Lexaria Bio?.....	p4
The Cannabis Report Model Portfolio.....	p7
Predictmedix uses AI and machine learning to detect cannabis impairment.....	p7
Special Report: What does the U.S. Q1 gross domestic product mean?.....	p13
Will SAFE Banking 2023 save the cannabis industry?.....	p15
Health Canada issues no new licenses for an adjusted total of 970.....	p17

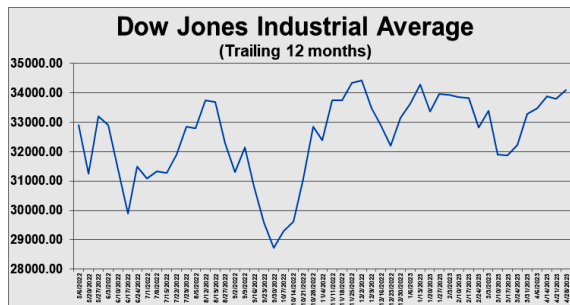
SELECTED ARCHIVED REPORTS

Interview with Chris Bunka, CEO of Lexaria Bioscience.....	p17
Interview with Paul Rosen, CEO of 1933 Industries.....	p20
A multi-billion bluest of blue sky valuation of Lexaria Bioscience.....	p23
What does a maximum blue sky valuation of Khiron Life Sciences look like?.....	p25
Is there something happening with Lexaria Bio?.....	p27
Outlook for large caps and cannabis stocks in 2023.....	p31
Khiron's problems in Colombia resolved very much in their favour.....	p41
Khiron reviews 2021 results and Q1 2022.....	p44
Khiron announces partnership with Fundación Teletón in Mexico.....	p50
See Ted Ohashi's latest articles on Seeking Alpha and investorshub - The Cannabis Report	

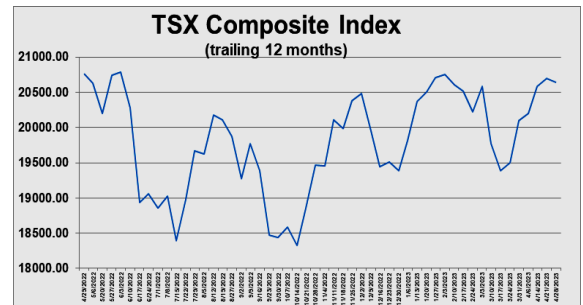
Stock Market Review & Outlook

LTB MARIJUANA INDEX: 1wk -1.3% 1 mo -4.4% 3 mo -15.8% 6 mo -28.1% 1 yr -51.7%

Strength in the large caps was fuelled by some positive earnings reports from stocks such as Alphabet (Google), Amazon, Comcast, Honeywell, McDonald's, Meta (Facebook) and Microsoft.

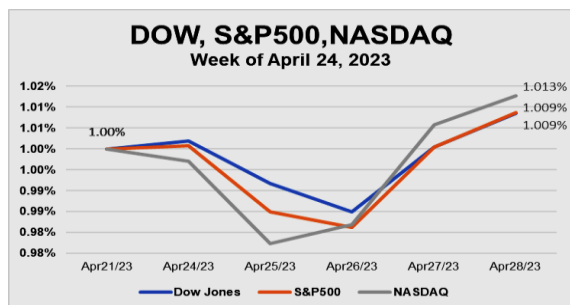


Perhaps even more important was the first estimate for first quarter growth in Gross Domestic Product of 1.1%. This was im-

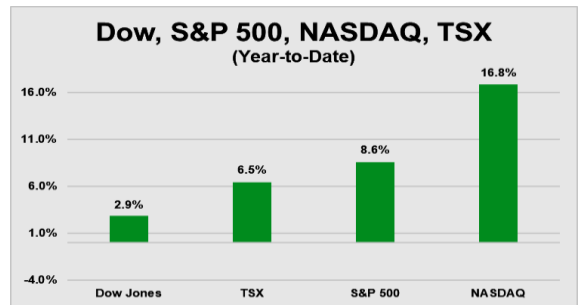


portant on a couple of levels. First, it was another economic report ahead to the Fed Open Market Committee (FOMC) meetings on May 2nd and 3rd that would allow the Federal Reserve to be more dovish with respect to raising interest rates. Second, it is also a growth number that aligns with the idea of an economic soft landing, that is, a slowdown without a recession. That was followed by a positive report on the Producer Price Index that dropped to 3.4% year-over-year compared with 4.4% last month. The results came after mixed results from the Fed's preferred Personal Consumption Expenditures Price Index (PCE) that showed inflation of 5.0% in March, a decline from 5.3% in February. The more difficult result was the 4.6% rise in March Core PCE, that is, the PCE without food and energy. This was a little higher than the expected gain of 4.5% for March. Additionally, the February PCE was revised up to 4.7%.

On balance, however, the economic and inflationary news was positive last week and the markets headed higher. As the chart below left shows, the markets began the week to the downside but as the



economic and inflation news was released, the markets ended the week strong. broke, as a quiet week for the large caps. All three of

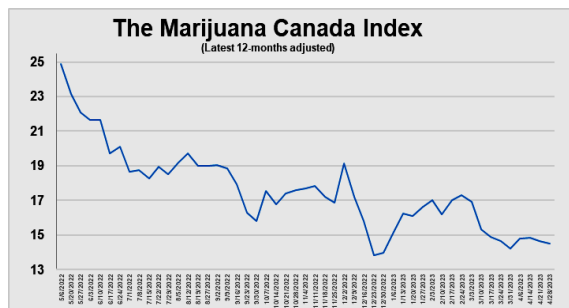


the major indexes we follow had their ups and downs during the week and finished with fractional declines. As I indicated above, the markets remain very sensitive to economic news and its potential impact on interest rates. The chart to the right shows that the markets are off to a good start in 2023

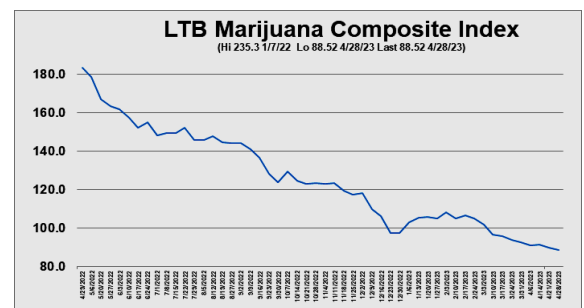
with the tech-heavy NASDAQ group leading the way with the very large cap weighted Dow Jones Industrials lagging at this point.

The large caps clearly demonstrated that bad news is good news for investors right now. Last week, the advance estimate of U.S. Gross Domestic Product (GDP) for Q1 was reported at an annualized 1.1% which is a relatively low rate of growth. That report came on Wednesday and you can see the markets interpreted this as good news for stocks. I have more to say about the GDP report below.

The Canadian cannabis stocks continue to struggle putting together a few good weeks worth of positive returns. Both Canadian indexes I use reported small declines last week despite gains on

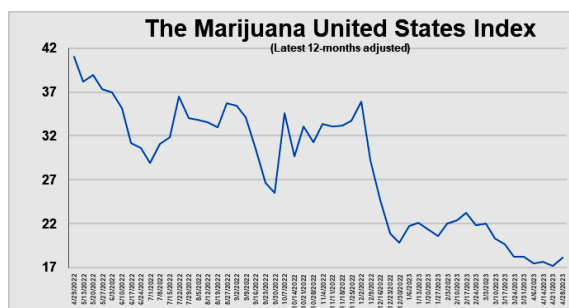


the U.S. side where there was some positive news that will have a spillover effect on the Canadian operators. I am also intro-

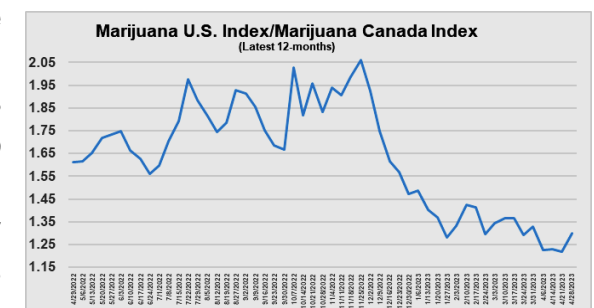


ducing **Predictmedix (CSE: PMED)** that I believe has explosive upside potential. PMED uses Artificial Intelligence and machine learning to gather information about people in a non-invasive (no touching) fashion. All you do is walk through a scanner like the ones at an airport and their Safe Entry Stations can record your vital signs such as temperature and heart rate to determine if a person is Fit for Duty. One of the conditions PMED can identify with a 90% success rate is **cannabis impairment** that is already in a form for use on a mobile or roadside application. See below for a more complete report.

The U.S. cannabis operators popped +5.4%. Just when it appeared there was no chance for legislative change, a SAFE Banking 2023 bill has been tabled in both the House and Senate. As

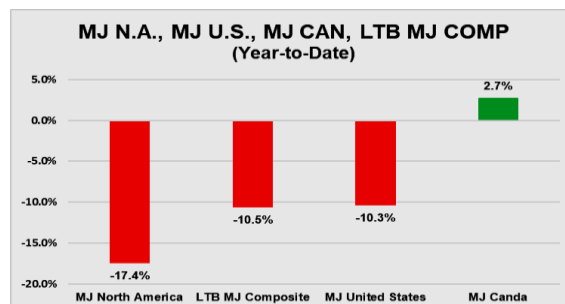


I describe in more detail below, it appears law makers aren't willing to play games with Senate Majority Leader Charles Schumer, Demo-



crat Cory Booker, junior senator from New Jersey and Democrat Ron Wyden, senior U.S. senator from Oregon any longer. Despite Schumer's plans to resurrect their previously failed Cannabis Administration and Opportunity Act (CAOA) as I reported last week, Schumer said he supports the bill but will ensure relief for those wrongly imprisoned will be protected. I describe what is known about this development below. But if SAFE Banking 2023 makes it through the Senate Banking Committee relatively unscathed **we could have the legislative event we've been looking for to inject some life into cannabis stocks that have been in decline for five years.**

As the chart to the right illustrates, after a relatively robust start to the year, only the Marijuana Canada Index currently shows positive results for the year. Given the possibility of passing a SAFE Banking 2023 bill, I believe the outlook has suddenly and unexpectedly changed 180° for the better. Maybe we will see some progress this year after all despite the efforts of Schumer, Booker and Wyden. The Canadian sector should also benefit from an improved investor psychology toward the cannabis sector.



Conclusion: Lexaria Bioscience ([NASDAQ: LEXX](#)) ([NASDAQ: LEXXW](#)) was participating in the new year rally but has settled back. LEXX has a full slate of value-added projects over the next six months not the least of which is its upcoming Investigational New Drug application scheduled for early July. I think this is an excellent opportunity for above average, short term growth. This week **Khiron Life Sciences** ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)) announced a new Chief Financial Officer has been appointed and I am sure they are working hard to get their audited financials completed. **Jushi Holdings Inc.** ([CSE: JUSH](#)) ([OTCQX JUSHF](#)) will benefit if SAFE Banking 2023 is successful. **Organigram Holdings** ([NASDAQ: OGI](#)) ([TSX: OGI](#)) remains my choice for a representative Canadian LP. **1933 Industries** ([CSE: TGIF](#)) ([OTCQX: TGIFF](#)) will also benefit if SAFE Banking 2023 passes into law. **Kiara Holdings Corp.** ([TSXV: KO](#)) continues to demonstrate developing investor interest in their stock. I will reach out to new management shortly. No news on **Speakeasy Cannabis Club** ([CSE: EASY](#)).

If you would benefit from additional input on timing your buys and sells, subscribe to the Cannabis Report by InvestorsHub. For a monthly subscription, ([Ctrl-Click here](#)) For a discount on an annual subscription ([Ctrl-Click here](#)).

Question of the Week

Thank you for sending in your questions and I hope you will keep them coming. It's your questions that keep this feature interesting and useful. Send your questions to: ltbletter@gmail.com Include your initials or a pen name we can use along with your city and country of residence. Questions will be edited for clarity and brevity.

The objective of the 'Question of the Week' feature is to allow readers to ask questions about investing. Things you are wondering about and not what I think you're thinking about.

"I have two questions:

- (a) Is it unusual for a Chief Financial Officer (CFO) to step down as just happened with **Khiron Life Sciences** ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#))? Is it a red flag to investors?

- (b) Would this be an appropriate time to move money from **Khiron Life Sciences** ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)) to **Lexaria Bioscience** ([NASDAQ: LEXX](#)) ([NASDAQ: LEXXW](#))?"

D.G., Maryland, United States

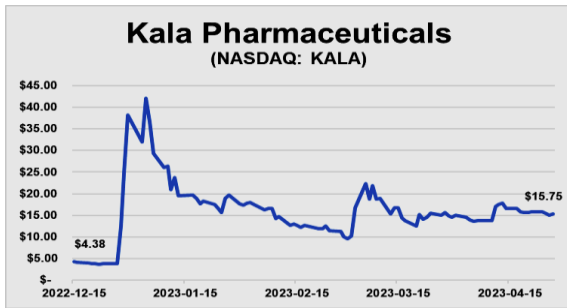
With respect to your first question, it is not unusual for CFO to step down. It happens all the time with senior executives for a variety of reasons. The timing was unexpected, that is, coming right at the point when the audited statements should have been completed. So I would not call it a red flag but more of a pink flag. That is why I talked to management about it and reported back to readers last week. The explanation was essentially the timing was unfortunate so they quickly engaged a new CFO. With financial constraints on operations that we have talked a lot about, the recent financings, especially the public units offering, required the time and resources of accounting people to be applied to activities other than preparing the audited statements. This plus the CFO change resulted in the publication of the final audited statements being delayed from the beginning of May for 30 to 60 days. Assuming these new target dates are met, I think we're looking at a green flag.

With regard to the second question, I don't believe in switching from one stock I like to another. It usually doesn't add value. However, Khiron and Lexaria are currently on two different paths to an expected positive outcome so it is up to each investor to consider the appropriateness of different risks and rewards for their portfolios.

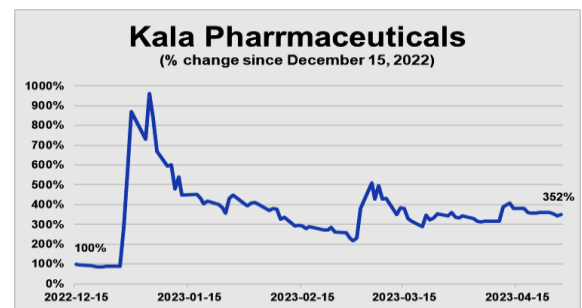
Here are some things to consider in making your decision:

- (a) I estimate that in terms of absolute return potential, KHRN ranks higher. But as I always remind readers, risk and reward are directly related. So KHRN also faces higher risk. I think they will overcome their current challenges but therein lies the risk.
- (b) The short-term visibility on LEXX is clearer. They are scheduled to submit their Investigational New Drug (IND) application to the U.S. Food and Drug Administration (FDA) in early July and I expect them to receive a positive response before Labor Day. So in the next four months I anticipate developments that will have a significant positive impact on the LEXX share price.
- (c) Here are a couple of charts on a company I have referred to before. Kala Pharmaceutical (NASDAQ: KALA) is a clinical-stage biopharmaceutical operator dedicated to the research, development and commercialization of therapies for rare eye diseases. On December 27, 2022, KALA announced the receipt of approval for their IND application from the FDA for the treatment of Persistent Corneal Epithelial Defect (PCED). As the stock price chart below left shows, the reaction in the market was explosive. KALA shares went from \$3.92 per share the day before the announcement to over \$40 per share in just five days trading. It was a five-day, ten-bagger. The chart to the right shows the same price move in percentage terms. It shows KALA rose nearly 1000% in short order and although the initial

speculation has worn off in the intervening months, it is still up over 350%. LEXX and KALA are reasonably comparable although I might argue that hypertension is a much larger market than rare eye



diseases. Although KHRN doesn't have such an event on the horizon that I know of, their shares would have to rise to be-



tween \$0.16 and \$0.45 per share to match the kind of return we might expect to see if LEXX parallels KALA over the next few months. For example, the \$0.16 per share range can easily be reached in my opinion. I mean that was about where KHRN was trading before they undertook the latest equity financing. Although the financing did not go as well as expected, it also means there was less dilution. It is also well known that one strategic alternative for KHRN is to take on a well financed partner. If that were to happen, the upper end of the range and more might well be attained. Again, it's a matter of risk and reward.

- (d) The weakness in both stocks is related to financing. KHRN recently completed a round of financings including some debt and equity. The borrowings were very positive in my view as they came from established Colombian lenders when KHRN was at or near its operating low point. The equity funding turned out to be a disappointment as a \$.05 unit made up of a \$.05 share and a two year warrant exercisable at \$.08 financing only attracted gross proceeds of \$690,000.
- (e) LEXX is in a different capital markets situation. In January 2021, LEXX listed on the NASDAQ and did a coincident financing of US \$11 million. That was by far the largest equity financing in LEXX's history and funded all the research and development since then including the work that led to the IND application expected in early July. LEXX has made the decision to continue the R&D on former programs based on promising results and to initiate new studies and that may require additional funding. LEXX has also stated they do not intend to use debt financing.

Conclusion: The bottom line for me is, in The Cannabis Report that is a model portfolio of cannabis and cannabis related companies that I also write I am staying with both LEXX and KHRN. At present,



LEXX is the largest holding in the portfolio followed by KHRN in second place. Which of the two is the largest or smallest holding has

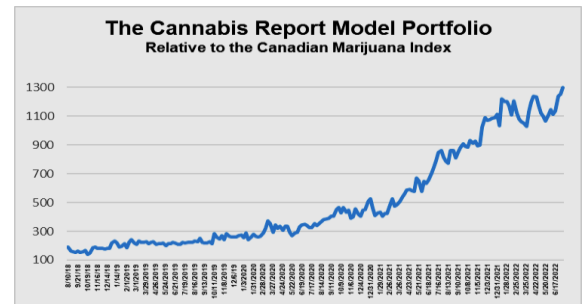


been a function of their respective prices on the market. At the present time, I am comfortable with LEXX as the largest and KHRN as second. I have no plans to buy or sell either one.

The Cannabis Report Model Portfolio

Here's the bottom line as far as I'm concerned and it shows up in the model portfolio which is down in value in such a difficult market for cannabis stocks. The Cannabis Report Model Portfolio is structured and monitored to be as close to an actual portfolio as possible. Rules are in place so that changes to the portfolio are first sent to the administrator who posts the changes on the Internet to subscribers. Each change with my reasons is reported in writing to subscribers before the market opening on the same day the trade is made.

The chart to the right shows this portfolio plotted relative to the MJ Canadian Marijuana Index. By rising to the right, this chart shows the portfolio has consistently outperformed the MJCMI, good markets and bad. The portfolio is benefitting from diversification as different holdings deliver at different times. The two largest holdings are **Khiron Life Sciences** ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)) and **Lexaria Bioscience** ([NASDAQ: LEXX](#)) ([NASDAQ: LEXXW](#)). My latest addition is **Predictmedix** ([CSE: PMED](#)) and is the third largest holding. The smallest positions are **Kiario Holdings Corp.** ([TSXV: KO](#)) that has undergone a major overhaul of ownership and senior management and **Speakeasy Cannabis Club** ([CSE: EASY](#)) that is in court now trying to transfer ownership of assets to an individual member of the Geen family. The most recent addition to the portfolio is **Organigram Holdings** ([NASDAQ: OGI](#)) ([TSX: OGI](#)). **Jushi Holdings Inc.** ([CSE: JUSH](#)) ([OTCQX JUSHF](#)) remains on path toward their revenue and income guidance numbers and **1933 Industries** ([CSE: TGIF](#)) ([OTCQB: TGIF](#)) is, in my view, a turned around company. Cash is around 25%.



If you believe as I do that legal medical and recreational cannabis are here to stay and the industry will continue to grow much faster than the economy as a whole, I recommend you subscribe to the model portfolio report. ([click here to subscribe](#))

New recommendation for our readers

The opportunity is **Predictmedix** ([CSE: PMED](#)) which I see as an ideal, high growth opportunity in today's market with a cannabis link. When I first began to follow the cannabis sector over ten years ago, it didn't take me long to realize that whoever came up with a working cannabis "breathalyzer" test would be the major winner. I have seen many companies come and go trying to reach this pot of gold but none had a compelling product until now. Ladies and gentlemen, my long wait is over. PMED has a working cannabis "breathalyzer" that for accuracy's sake I will call a "scanalyzer" that is actually a spinoff of their major business line. Wouldn't you know it? After almost a decade of searching, I find what I'm looking for in a company that says casually, "Yes. We can do that too."

Here are the reasons I think this is a fit for your portfolios:

- **I spoke to Dr. Rahul Kushwah, Founder and Chief Operating Officer.** Dr. Kushwah developed the world's first genetic test for cannabis pharmacogenetics, was previously on the National Research Council for the Government of Canada in Human Health Therapeutics and has expertise in human diseases, genetics, immunology and regenerative/personalized medicine. He is one of those rare people who can explain complex, scientific ideas to lay people.
- **Predictmedix' products are validated and ready to go:**
 - Clinical studies were performed at a North American hospital for evaluation of PMED's infectious diseases and impairment detection solutions as a prerequisite for certification as a U.S Food and Drug Administration (FDA) approved medical device. The results were published in a peer-reviewed medical journal. PMED now has four successful peer-reviewed publications for its technology.
 - A 400-person clinical study completed by MGM Healthcare, one of the largest government hospital groups in India, provided clinical validation data that shows PMED's technology screens non-invasively for various physiological conditions. "The team at MGM....found Safe Entry to be very accurate at reading vital signs such as temperature, heart rate and respiration rate." The importance of this statement will become apparent shortly.
 - A 1600-person clinical study completed at the University of Raharja, a prominent university in Indonesia to validate and apply for regulatory approval as a medical device. The University will be involved in attaining approval as a medical device and assisting with commercial deployment. Because of the non-invasive nature of PMED's technology, it is anticipated the approval process, already underway, will not require a significant amount of time.
 - In mid-March 2023, PMED announced the start of production of a mobile application for detecting impairment from cannabis and alcohol. Screening with the non-invasive device takes less than 30 seconds with a success rate of over 90%. The National Motorists Association reports that currently, alcohol breathalyzers have up to a 50% margin of error. The use of AI suggests PMED's success rate will improve over time.
 - On March 21, 2023, the U.S. patent office granted PMED a patent (#16/892,369) for the non-invasive detection of impairment caused by alcohol and/or cannabis. In total, PMED reports filing six U.S. patents.
 - Safe Entry Stations are CE Mark (Europe) and ISO 134855 (International) certified.
 - On March 30, 2023, PMED reported a Purchase Order valued at \$500,000 for their AI-Powered Safe Entry Stations from MGM healthcare of India. MGM will also have a role

in the introduction and commercialization of the Safe Entry Stations to the 69,000 hospitals in India.

- On April 19, 2023, PMED announced their Safe Entry Stations will now add blood pressure, heart rate variability and blood oxygen to the list of tests that can be performed. This makes the Safe Entry Stations more useful to prospective customers and paves the way for entry into the clinic and home blood pressure measuring market.
- **Predictmedix has developed a proprietary technology over four years that is a combination of Artificial Intelligence with multispectral cameras** to produce health screening, medical devices similar in concept to the device you walk through at major airports or office buildings that screen for metals and other materials. PMED's Safe Entry Stations use a combination of proprietary Artificial Intelligence (AI) and multispectral camera images to identify fatigue, impairment from alcohol and cannabis, infectious diseases and other vital physiological parameters including blood pressure with a 90%+ accuracy. The use of AI implies that results will improve over time.
- **PMED's business model is attractive for investors for the following reasons:**
 - PMED is a software company. It is not a hardware company. This means manufacturing costs are low, operating profit margins are high and the need for capital is reduced.
 - Unlike most current approaches that test for traces of harmful substances, PMED uses multispectral recognition technologies and AI to screen for impairment, fatigue and infectious diseases. The use of AI promises that PMED's capabilities will increase and improve over time.
 - PMED leases their Safe Entry Stations which means there is recurring revenue. Once installed, revenue is generated monthly over the term of the contract. Each 1,000 units installed could generate revenues of approximately \$60 million per annum.
- **It appears the initial markets will be in the healthcare sector in Asia** where PMED's approval as a medical device is further advanced.
 - i. Statista estimates there are 69,000 hospitals in India and 1.4 billion people.
 - ii. The U.S. International Trade Administration estimates there are 2,813 hospitals in Indonesia and 273.8 million people.
 - iii. Between India and Indonesia there are some 71,813 hospitals and 1.67 billion people.
 - iv. Assuming both Indonesia and India approve PMED's Safe Entry Stations as medical devices, you can plug in your own numbers. I believe 1,000 units of sales in the following two years is reasonably attainable. Remember, each hospital may need multiple Safe Entry Stations.

- v. The manufacturing cost of 1,000 units is estimated at approximately \$10 million. Remember, this is software. The hardware to build a Safe Entry Station is relatively small. In fact, the lease requires a first and last payment upfront which is approximately equal to the construction costs of the Safe Entry Station. The gross margin could be in the range of 83%.
- The advantage of using a Safe Entry Station (SES) in a hospital emergency setting is the ability to triage patients, that is, assess the urgency and nature of treatment required faster, better and cheaper.
 - i. When you enter the emergency department of a hospital today, if you're not bleeding, you're in for a wait.
 - ii. With the SES, you stand under it for around three seconds and by the time you step up to the counter, the healthcare workers already have your vital signs: temperature, pulse and respiration rate and soon blood pressure. This provides valuable information to determine the urgency and nature of your need.
 - iii. This makes the hospital admissions process more efficient and effective. You may still face a wait but if your need is more urgent, you move up in priority.
- **In today's world, security has swiftly risen as a priority.** Safe Entry Stations can be used by schools, shopping malls, the military, government offices, large high-rise buildings and so on. The list is almost endless. During pandemics and there are more coming in the future, almost everyone would prefer to have a Safe Entry Station wherever they are.
- **Another large category within "Safe Entry Stations" is the "Fit for Duty" market.** SESs help to ensure operators of dangerous equipment are not too tired, too impaired or too sick to work safely. A Safe Entry Station not only contributes to employee safety but productivity. There are probably hundreds of potential applications in this segment.
- **For these reasons, I recommend you buy PMED...Wait. Hold that thought! I almost forgot about the cannabis scanalyzer!**
 - The search for a roadside cannabis impairment test has been the search for the holy grail in North America for almost the entire decade I have been analysing cannabis stocks. The persistent problem has been detecting cannabis in a driver's system is relatively easy. Most attempts have approached the problem from the alcohol breathalyzer perspective. The difficult challenge is to prove that the cannabis in a person's system is causing impairment in the ability to drive. The reason is that cannabis or THC can remain in a person's system long after their "high" or THC impairment has passed. Alcohol is generally out of the body within 24 hours. So if you have a high alcohol reading in your system, chances are you were drinking recently. Cannabis or THC can remain in your system for several days and up to a week. So it has not been possible to

link a level of recent cannabis consumption and a person's ability to drive making it a very difficult case to prove in court.

- Hound Labs is trying to detect THC in a driver's breath and relate that to a correlation with THC levels in the blood. Again, this follows the alcohol breathalyzer model: find the evidence of THC and relate that to impairment. As a Hound Labs spokesperson said, "We aren't measuring impairment, we're measuring THC in breath where it lasts a very short period of time, providing objective data THC in breath to law enforcement and employers to use in conjunction with other information they have gathered." In other words, Hound is providing evidence of THC and leaving it to other sources of evidence to establish impairment.
- PMED's scanalyzer is a totally new way of approaching the problem because it was developed with a totally different objective. PMED's scanalyzer was based in the search for signs of impairment using multispectral imaging and Artificial Intelligence. PMED uses multispectral camera images and AI to look for and find signs of impairment such as in speech patterns. Once you have established impairment, the cause is easier to find. PMED has established over 90% accuracy in identifying impairment which seems far superior to current alcohol breathalyzers. Not only that, the PMED scanalyzer is completely non-invasive. No blowing or touching required. In fact, the driver may not even have to get out of the car. Finally, because PMED uses AI, additional use of the scanalyzer will provide more data that indicates accuracy will improve over time.

The DWI Team indicates that "...scientific studies show that breathalyzers have a 50% margin of error compared to blood tests." They go on to explain, factors such as age, gender, rate of consumption, other medications and emotional state effect a person's impairment and such variables cannot be entered into a breathalyzer before analyzing blood/alcohol content.

It appears most other approaches are based on the breathalyzer model: find the cause (alcohol consumption) and prove the effect (impairment). The scanalyzer proves the impairment and the cause is far less important.

The mobile scanalyzer is ready now. On March 15, 2023, PMED announced the start of production of its mobile application for detecting impairment from cannabis and alcohol. From a law enforcement perspective, this does not mean adding a cannabis scanalyzer to the existing alcohol breathalyzer. PMED's scanalyzer will do both and more.

Conclusion: As the chart below shows, PMED has been on a run since mid-December 2022. This makes sense because a lot has come together for the Company in the past three months but this is just the beginning in my opinion. Here are some of the key points that leads me to believe PMED is a potential multi-bagger moving ahead:

- (1) PMED is looking at some major opportunities ahead. The workplace safety market is projected to grow from an estimated US \$14.2 billion market in 2022 to US \$26.7 billion by 2027 for an annual compound rate of growth of 13.5% per annum.
- (2) I think the potential for the roadside impairment testing model is huge. I have been looking for a company with a solution for this problem for almost ten years and I think PMED is it.
- (3) Commercialization has commenced for the Safe Entry Station application in hospitals in India and will likely start soon in Indonesia. Although I expect spectacular revenue growth, as a software product the profit margins will attract investors and PMED will command an above average valuation in my view.
- (4) Although I am reluctant to include the cannabis scanalyzer as an “other market” along with “Fit for Duty” applications, I am particularly attracted by the potential for the cannabis impairment application. This means the scanalyzer has major potential for PMED but so do other possible applications including the ability to identify mental health issues.
- (5) Recently, PMED was trading at a market cap of \$12.6 million. Compared with, say, Cannabix Technologies that is working on an invasive breathalyzer for cannabis that does not use Artificial Intelligence and cannot detect impairment to the best of my knowledge and trades at a market cap of around \$36 million. I can see PMED as a triple just to trade in a fair valuation relationship with Cannabix which does not have as good a cannabis impairment tool and access to the Safe Entry and Fit for Duty Stations.
- (6) PMED announced the closing of a \$.05 per unit financing in mid February 2023. After that, the shares ran up to \$.15 per share giving all shareholders a quick, short-term winner. As a result, the stock has been consolidating between \$.10 and \$.15 per share which is to be expected. In this process, the stock has been moving from weaker hands to stronger hands and when the consolidation is completed, I expect the stock to have an even sharper run up. Just to trade at the same market cap as Cannabix, PMED would more than triple and in a future edition I will make the case than compared to Cannabix, I think PMED is a potential ten-bagger from here.
- (7) I have added **Predictmedix** ([CSE: PMED](#)) to the Cannabis Report portfolio as the third largest holding. I think you should do the same.



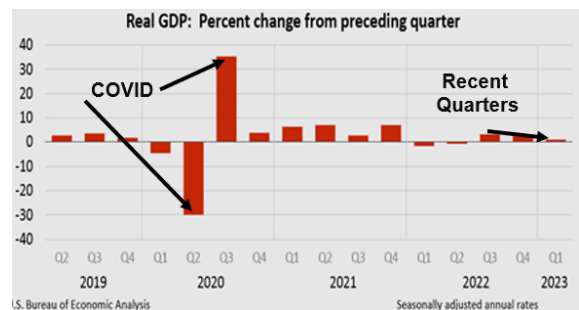
Special Report

What does the 2023 Q1 Gross Domestic Product Advance Estimate mean?

Let's take a quick look at the Gross Domestic Product (GDP) for the quarter ended March 2023. GDP is defined as the total market value of goods and services produced by an economy in a given period of time. If the term "real" is added, it means adjusted for inflation and "current-dollar" means there is no inflation adjustment. The term "annual or annualized rate" means how much the economy would grow if it grew for a year at the rate it did for last three months. Last week's report is the "Advance Estimate" meaning there will be adjustments to this data. The U.S. economy is too large to be able to gather all the economic information in less than a month after the quarter end. However, the errors often cancel out, some are too high and some are too low, so the final result may not be too different.

Here is a summary of the results for the first three months of 2023:

- (a) Real GDP increased at an annual rate of 1.1% in the first quarter of 2023 according to the advance estimate released by the Bureau of Economic Analysis. In the fourth quarter of 2022, real GDP increased 2.6%. The chart to the right shows recent economic growth quarterly. The 2nd and 3rd quarters of 2020 were impacted negatively and then positively by the pandemic. But the more recent quarters are more important because they have been trending gradually downward and the latest quarter simply extended the trend. Current-dollar GDP increased 5.1% at an annual rate. In the previous quarter, GDP increased 6.6%.



The inflation adjustment for GDP increased 3.8% in Q1 compared with an increase of 3.6% in Q4. The Personal Consumption Expenditures Price Index, preferred by the Federal Reserve, increased 4.2% compared with 3.7%. The Q1 Core PCE that excludes food and energy prices, increased 4.9% compared with a Q4 increase of 4.4%.

- (b) The rise in real GDP resulted from increases in consumer spending, exports, federal government spending, state and local government spending and non-residential fixed investment. These were partly offset by declines in private inventory investment and residential fixed investment. Imports, which are a subtraction in the calculation of GDP, increased.
- (c) The increase in consumer spending came in both goods and services. In goods, the leading contributor was motor vehicles and parts and in services it was health care, food services and accommodations. In federal government spending, the increase was led by nondefense spending. The rise in state and local government spending was primarily an increase in compensation of state and local government employees.
- (d) The decrease in private inventory investment was led by wholesale trade of machinery, equipment and supplies and manufacturing was led by other transportation equipment,

well as petroleum and coal products. Residential fixed investment was led lower by new single-family construction.

The U.S. Leading Economic Indicators (LEI) that we discussed recently indicate a recession is in the near-term outlook. These graphs from the Conference Board provide a snapshot. The



chart to the left shows the leading indicators are pointing downwards and the economy is



following. The chart above right shows the Conference Board's recession signal is red suggesting a recession is expected in the next twelve months. We probably won't know "officially" we are in a recession for at least a year after it starts because the National Bureau of Economic Research's (NBER) Business Cycle Dating Committee usually does not declare the start of a recession until six and eighteen months after the fact. But let's not forget:

- By the time the NBER declares we are in a recession, the stock market will have already made its decision. That is why I always remind people, formal definitions of recessions are not of much use to investors. By the time the NBER tells us the recession is over, the stock market will have already reached its own conclusion and stock prices will already be much higher.
- We should never forget economists can be wrong and portfolio managers and investment advisories can make mistakes. Right now I would say,
 - (1) Federal Reserve Board Chairman Jerome Powell would love to see the economy produce another two or three quarters of 1.1% growth while inflation continues to drop. This would be the "soft landing" ideal result. But the Fed does not have a good record producing such an outcome.
 - (2) The President and the Democrats would probably prefer to get into a recession quickly so they can campaign on an economy that is recovering at this time next year.
 - (3) The Republicans would rather see the economy stay stronger until early 2024 and then have the economy plunge into a recession so they can campaign on what a poor job the Democrats have done.
 - (4) The stock market bulls would like to see an economy and inflation numbers that are low enough to allow the Federal Reserve to stop raising interest rates. This is the most likely scenario to support rising stock markets.
 - (5) The stock market bears would like the most pessimist outcome that is stagflation; a combination of a weak economy combined with a high inflation rate. This would be particularly damaging to the average American who would see a dramatic decline in their standard of living.

Conclusion: I think each of the five scenarios described above is possible but the most likely is a recession starting this year. As a rule of thumb, I expect the stock market to bottom when it is generally accepted we are in a recession and long before it is formally anointed by the NBER. However, this cycle low for stocks might still be well below current levels. This means when the next bull market starts, we will likely be well into the next recession. The economic news will be predominantly negative but interest rates will be declining. It will be hard to accept that a new bull market is underway but that is always the situation.

Marijuana Matters

Just when things looked hopeless on the pro-cannabis legalization front, the SAFE Banking Act or really the SAFE Banking Plus Act has been reintroduced in both the House and the Senate as a bipartisan bill. Cannabis company sources called it a “lifeline” which indicates the industry will be almost dead in the water otherwise. Another key takeaway from the report is the bill will go to the Senate Banking Committee next which will be a key indicator as to whether it can get to the Senate floor with enough support to pass a vote.

The House has approved a SAFE Banking-type of bill seven times in the past only to see it blocked each time at the Senate. This bill has 38 Senate and eight House cosponsors. Although he is lacking credibility on pro-cannabis legislation unless it is his own Cannabis Administration and Opportunity Act (CAOA), Senate Majority Leader Charles Schumer (D-NY) expressed support for the bill and promised to make sure criminal justice provisions are included.

The *Secure and Fair Enforcement (SAFE) Banking Act of 2023* was introduced by Senator Jeff Merkley (D-OR), Senator Steve Daines (R-MT), Representative Dave Joyce (R-OH) and Representative Earl Blumenauer (D-OR) and was described as “tweaked” since a similar SAFE Banking Plus bill failed late last session. If the bill advances through committees, it could result in a Senate vote for the first time.

The main purpose of SAFE Banking 2023 is to ensure state-legal cannabis businesses have access to the banking and financial services that any other state-legal business is entitled to. The problem has been most major banks are federally regulated and there is concern of negative regulatory repercussions if they offer services to cannabis operators while cannabis is scheduled as a federally illegal drug. This forced the cannabis industry to operate a cash business which created a number of other issues including simply being forced to pay large bills in cash.

Under SAFE Banking 2023, federal regulators may not take punitive steps against banks dealing with state-legal cannabis businesses by, for example:

- Prohibiting, penalizing or discouraging a bank from providing financial services.
- End or limit a bank’s federal deposit insurance if the bank provides such services.
- Recommend or incentivize a bank to halt banking services to cannabis businesses.

- Take any action on a loan to an owner or operator of a state-legal cannabis business.

The fact that such actions were specifically prohibited is a strong indication that such tactics were being used by federal regulators in the past.

The legislation also creates a safe harbor from criminal prosecution, liability and asset forfeiture for banks, their officers or employees and also extends the safe harbor to underserved communities facing challenges in accessing capital and provides affordable access to financial services.

One issue I would pick up on is the need to rectify the situation with Section 280E, that is, the taxation of state legal cannabis operators. 280E has the effect of taxing state legal operators on the basis of gross profit rather than net profit. Section 280E was enacted in 1982 after a drug dealer of amphetamines, cocaine and cannabis successfully argued in Tax Court that his illegal drug trafficking enterprise should be allowed to deduct typical business expenses before calculating income tax payable. Law makers responded quickly with 280E that restricted deductions for illegal drug dealers to cost of goods sold, effectively taxing criminals on gross operating profit. With cannabis still a Schedule I drug under the federal Comprehensive Drug Abuse Prevention and Control Act of 1970, it is a federally illegal substance and the Internal Revenue Service (the tax man) also a federal agency, 280E is being applied to state legal cannabis operators. Not only that, over the past 40 years, lawyers have been able to make inroads against 280E to reduce its impact. However, the cost of those legal services makes it virtually impossible for smaller operators to apply keeping them fully under the IRS's thumb. A simple amendment to SAFE Banking 280E would enable this injustice to be stopped.

It is not surprising that the news was well received by the U.S. cannabis operators. "The SAFE Banking Act will provide urgently needed relief to cannabis businesses of all sizes and act as a stepping stone to broader reforms," said Matt Darin, CEO of multistate operator Curaleaf,

Of course, the markets responded positively as well. The bills were reintroduced on Wednesday April 26th and widely reported on April 27th. The following data shows examples of the market reaction between the close of April 25th and 27th:

Cresco	+ 6.1%	AdvisorShs Pure US¹	+ 9.0%
Curaleaf	+14.8%	Cambria Cannabis¹	+ 1.0%
Green Thumb	+ 7.6%	NCV American²	+ 7.4%
Trulieve	+ 4.8%	NCV Canadian²	+ 1.9%
Verano	+ 9.4%	1. Exchange Traded Fund	
		2. New Cannabis Ventures stock price Index	

Although the initial market response was a little muted compared to the past, I think that can be explained. First, the cannabis stocks are at the bottom of a five-year bear market. Once burned, twice shy investors are understandably hesitant at yet another hope for legislative action. We are also looking at a recession quite likely starting before the end of the year. We have also seen SAFE

Banking-type of legislation sent from the House seven times and blocked by the Senate each time. As long as Schumer, Booker and Wyden are lurking in the background, anything can happen.

Conclusion: I have said for the better part of the Biden administration, the cannabis sector needs pro-cannabis legislation to break out of the doldrums and SAFE Banking 2023 could be it. We're not out of the woods yet and there are problems on both sides of the aisle. In the Democrat's camp, there is the Schumer, Booker, Wyden trio that has broken faith with the cannabis voter over the first half of the Biden Administration but may be forced to capitulate before it is too late. On the Republican side there is likely a power block that is not ready to accept full legalization but might be willing to compromise on SAFE Banking 2023 which actually has little to do with the actual plant or related products. If SAFE Banking can navigate its way through the Senate Banking Committee and gain some momentum with the help of the pro-cannabis Republicans, cannabis investors may experience the benefits of a tail wind in the stock market which would be a relief.

Applications Watch

Health Canada issued no new licenses this week for an adjusted total number of licenses of 970. Over 40 public companies are LPs or own an interest in one or more LPs. For a complete list of LPs and related information, Ctrl-Click [\(here\)](#)

Selected Archived Articles

On March 30, 2023, I checked in with Chris Bunka, CEO and director of **Lexaria Bioscience** ([NASDAQ: LEXX](#)) ([NASDAQ: LEXXW](#)), a company with a proprietary drug delivery technology, DehydraTECH, that improves the way active pharmaceutical ingredients (APIs) enter the bloodstream by promoting healthier delivery methods and increasing the effectiveness of fat-soluble active molecules and drugs. The Company's technology can be applied to many different drugs and other active ingredients in oral formats including tablets, capsules, oral suspensions – and even foods, beverages and topical preparations. LEXX is expected to submit an Investigational New Drug (IND) application to the FDA.



Ohashi: How is the U.S. Food and Drug Administration (FDA) Investigational New Drug (IND) application for hypertension going?

Bunka: Everything is proceeding well. We had a few small issues but nothing that will change our target date. We still anticipate making the application in early July and we don't control when the FDA will respond but we hope it is between 30 and 60 days.

As part of the process, the FDA requires a couple of tests such as can we manufacture the new drug and stability testing, that is, essentially what is the shelf life of the new drug when stored? We lost a couple of weeks in this process but it won't delay our application.

Let's assume we will be ready to start clinical trials in September 2023 after we receive approval from the FDA. There is preparatory work that needs to be done before we dose our first patient. Let's call that dollar amount 100%. This would include creating the data bases, ordering the monitoring equipment, calibrating the new equipment, training the clinicians, and so on. By dollar amount, we have decided it is prudent to get started on 20% of the work by dollars and committing to the remaining 80% after we have FDA approval. This is just being prudent on our part. So will start on the 20% near the end of April and the rest after we receive FDA approval that we're thinking will be around early August or September when we'll start on the remaining 80% that should enable us to starting dosing patients in early October.

Ohashi: Do you have an update on diabetes?

Bunka: I'll start by saying this was an animal study not human. So we took a population of obese rats and a population of normal, lean rats and lo and behold within seven days or so when we started dosing, these animals started losing weight. Not because of any restrictions on their caloric intake but partly because of increased activity. They were simply physically more active walking around, running around, so obviously that means you're going to burn more calories but also to some degree that we don't fully understand yet. It seems that their metabolic activity also increased so the reduction in weight could not be completely explained by the extra walking or running around so that is a very intriguing finding. Then we also noted that the level of triglycerides in the bloodstream of both lean and obese rats decreased compared to placebo. This was very positive for diabetes and also for weight loss and general health, so that was really interesting. Then we noticed an increase in the good cholesterol levels and also an increase in the bad cholesterol levels but the increase in the good cholesterol overshadowed the quantity of increase in the bad cholesterol. Again at this point we're not entirely sure what is going on but there is no question but that we changed the cholesterol level. Why and how much is all to be determined and we need to see what happens in humans. We haven't determined if we should do another animal study or change the animal or consider moving to a human study. This is something we will be discussing internally over the next couple of months. There are also cost considerations as testing with dogs or humans is quite a bit more expensive.

We are still awaiting results on the dementia study so I don't have anything to report there but we have been promised it will be soon.

We are still waiting on the human nicotine study that has taken much longer than expected. Based on the information I have, we are probably over $\frac{3}{4}$ or so complete which implies in another couple of weeks we should start the last patient dosing. We wanted an American group to do the study and we had a hard time because right now because most people did not want to touch human nicotine testing; number two, we did find three or four groups that would do it but most of them were exceptionally expensive, say, in the range of \$1.2 to \$1.7 million and the group we finally selected was a fraction of that cost because they were much smaller but we didn't have the budget that we could throw an extra \$1 million around. We anticipated they might be slower and that has proven correct.

Finally, we put out news around the third week of February that we might have a novel mechanism of action in last year's hypertension study. If it proves correct that could significantly shorten our time to FDA

approval. The FDA working on novel mechanisms of action right for hypertension and the FDA has clearly displayed they are that interested in finding novel mechanisms of action so that could become fairly significant to us in a strategic sense and lead to a shortened approval time over the longer term. I can also say I there are still a couple a couple more esoteric batches of data yet to be released from that hypertension study. I know this because I know that university based clinicians are in the process of writing and submitting peer reviewed papers on these additional areas so I think we will see at least two additional new peer reviewed papers coming out of that same study.

Ohashi: Not to shamelessly name-drop but have you had any communication with Altria or British American Tobacco lately?

Bunka: We have not had any communication with BAT lately but just happened to have heard from Altria recently as they presented some of their internal findings from analysing the nicotine powders we provided them with last summer. Because of our relationship, we haven't formally issued any information about those discussions and I'm not sure that we will in the near term. But this was in the last two weeks. Also, we have been having discussions with another global nicotine company that is not Altria or BAT.

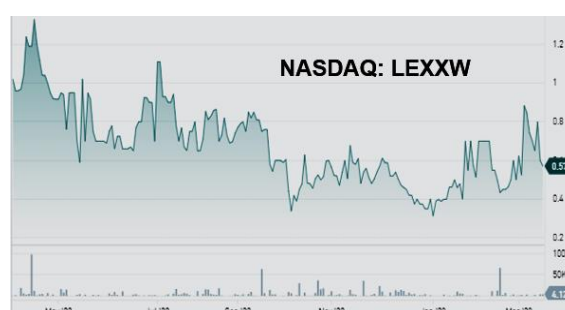
Ohashi: Finally, will you be raising money in the near future?

Bunka: I've said that we had existing cash resources to fund the last round of tests and trials. So we're pretty much covered through our FDA IND application. As we plan our work after that, we will be looking for additional funds. We have a Securities and Exchange Commission (SEC) Form S-3 that simplifies the capital raising process and we will file a Form-S1 for issuing securities on a national exchange. Our circumstances have changed over the past couple of years so we have other opportunities that might change our need for capital and we may have other choices than simply issuing shares and warrants. We will need to raise money at some point but I can't be more specific as to how or when.

Conclusion: Lexaria Bioscience ([NASDAQ: LEXX](#)) ([NASDAQ: LEXXW](#)) has many valuable opportunities ahead but for the time being, I remain focussed on their Investigational New Drug application to the



U.S. FDA that should be ready for submission in early July. A positive response is anticipated from the FDA within 30 – 45 days that



puts us somewhere around Labour Day. Depending on how much the market is in a mood to anticipate a positive response, the share price should enjoy a substantial bounce at this time. As Bunka said in our chat, they are currently working to ensure they will be ready to start FDA approved human testing after Labour Day and before Canadian Thanksgiving. At this point, there will be many more pharmaceutical eyes on the company and I expect today's investors will be well rewarded. If you own it, hold on. If you

don't own it, this is an excellent time to buy it. The stock price corrected in late February and March so you are getting it a price discount.

On March 17, 2023 I spoke with Paul Rosen, Chairman of the Board and largest individual shareholder of 1933 Industries ([CSE: TGIF](#)) ([OTCQB: TGIF](#)).



I look forward to chatting with Rosen because he is also well known for his knowledge and insights in the cannabis industry. I have known Rosen since mid 2020 when he was parachuted in to turn around a failing company. I followed him very carefully as he first stemmed the bleeding at TGIF while doing an excellent job of preserving revenues. After two years, I was comfortable in saying TGIF was no longer a turnaround situation but had advanced into a turned around company.

Rosen was more demanding and withheld judgement. This week, for the first time, I sensed Rosen feels TGIF is well on its way to recovery. He says he is not satisfied and there is more to be done. Right now he is focussed on elevating the company to the next level. Here is a summary of our chat.

Ohashi: It's been a while since we chatted. One of the things that attracted my attention recently is the persistent buying that seems to be in TGIF at \$0.020 to \$0.025 per share.

Rosen: Fundamentally, it's a case of supply and demand. Buyers and sellers agreeing on a price and volume creating a trade. But I don't wonder about the buyers as much as the sellers. There are many different motivations for selling. There are even some that result from people being forced to sell stocks they would rather keep. Maybe they need cash at any price. But the puzzle to me is why is anyone selling at such depressed levels in TGIF. I can only conclude that the stock market is looking at 1933 Industries in light of the past and not as a referendum on our future.

Ohashi: I agree with that. Can we start with a general update on what's going on with 1933?

Rosen: There are always a lot of things I'm happy about; things I'm proud about. I was just in Las Vegas last week and there are many good things happening. If you saw our latest quarterly report, I think it was a very good indication of what we're capable of accomplishing. We had the highest revenue in our history combined with, I think, the lowest selling, general and administration (SG&A) expenses that produced the highest gross margin ever achieved.

From an accounting point of view, there is always the goodwill associated with the value of our biological products. Our plants and our inventory. If product prices are down in our market, the auditors want to write down the value of our biological assets in the ground and in the vault. To us, from an operating point of view, this is ancient history. I get a report daily and we adjust our prices as rapidly as we see fit. For that quarter, we squeezed out an actual operating profit but then there is this non-cash write down. If wholesale prices in Nevada are down, and we have had prices go up as well; but if prices are down they will reduce what amounts to goodwill on these assets. Also, unlike some Canadian companies who have taken a very aggressive stance to valuing their biological assets because it makes their bottom line look better and have ended up with write-downs in the hundreds of millions of dollars, we are always quite

conservative. These write-downs don't change the fact that we actually made a profit. It doesn't impact our cash. It is something they come to tell us about long after it has happened and we have already adjusted for it.

I can't comment specifically on what's happened since will report shortly but I will say that I'm driving for higher results every quarter and there are things that are beyond our control that affect our numbers but I can say if I was shareholder, which I am, our last quarter was a positive sign of what we can do and my challenge is to see if we can move forward from here.

Ohashi: so what is your operational over the balance of 2023?

Rosen: One way we can improve upon our results is to make some meaningful improvements in some of our infrastructure. This is necessary if we are going to move to the next level. In concept, if we can improve our operating environment, improve the quality of our processing, it will reflect favourably on our results. So we are going to make some capital investments to our building and layout. We've been working with what was in place when I got here and now I think it is time to make some changes that will get us to best agricultural practices.

I am not satisfied but I was encouraged by the quarter. Like every company in the industry we're going to continue to face challenges. There's been a lot of failures in Nevada with larger growers failing so we know that market conditions are tough. I read most of the financials of the big multistate operators (MSO) and I think it's fair to say that the U.S. cannabis industry is going through a difficult spell. There's been a lot of price compression in multiple markets and we are getting no favors from the government.

Ohashi: that's been a gripe of mine for some time. I mean we're over two years into the Democrat's mandate and they have done nothing for the marijuana industry. I've been very disappointed in the Democrats approach to cannabis.

Rosen: I mean considering where we were with all their promises when they were elected in 2020, I guess they haven't done anything; it's a giant nothing burger. It's absurd that cannabis is a Schedule I drug because that means a drug with great deal of harm potential and no medical benefit. That's a designation made by the Department of Justice (DOJ) in consultation with the Food and Drug Administration (FDA). You have the FDA approving Epidiolex, a plant based cannabis therapy that has become the best in class go to treatment for Dravet syndrome. So you have an irreconcilable inconsistency between two government agencies: the DOJ that says cannabis under Schedule I has no medical benefit and the FDA which has approved a cannabis therapy for a medical condition. I think Biden knows that's an irreconcilable conflict. I think he's moved the needle on some social issues by accelerating pardons.

If there's blame, I think it is not at the administration. It's at the congressional level. SAFE Banking could have passed. The votes were there. Senate Majority Leader Chuck Schumer (D - NY) and Senator Cory Booker (D - NJ) had this dream that if we just pass SAFE it's going to be like a gift to the fat cats. We want a grand bargain where they do it all in one fell swoop. We want to have criminal justice reform and social justice reform all at the same time. They didn't have support for all of these additional policy changes. I think they could have passed SAFE Banking if they just let it pass as a standalone. I think they could have

passed something to fix 280E as well. So I feel the Democrats did blow it and the industry has never fully recovered. The cannabis this industry had a peak valuation in February 2021 shortly after Biden took his oath of office. But yes the Democrats controlled the House, the Senate and the White House and they couldn't pass any reform.

I actually think the Republicans could make this their issue I think it will be popular. It's not an unpopular matter among Republicans. Many Republican states have cannabis programs. I feel that something simple like the DOJ dropping cannabis down to Schedule III or lower and pass SAFE Banking or SAFE Banking Plus. This would mean Section 280E will be rescinded and things would be quite a bit better.

I feel something like this can happen between now and the next election.

Ohashi: How are things in Nevada these days?

Rosen: I was there last week and I think things are good. Not great and not terrible. I think the Nevada unemployment rate is a little above average and tourism is fine. Not outstanding but good. We've experienced some cannabis price compression but not as severe as Michigan, Massachusetts or Oregon. Of course, Flower One implemented a plan of arrangement under the Companies' Creditors Arrangement Act. In Nevada, it is difficult to get the Control Board to issue any kind of license. So the industry has been maintaining the status quo and while that isn't ideal, I think we're seeing some price stability and possibly even some small increases. Nevada is also proceeding with its consumption lounges. It's hard to say what contribution they will make to the overall industry but from what I know, if the lounges are upscale and create a nightclub type of experience, it will attract a clientele. We know people will pay a huge premium to join with other young people for drinks and entertainment. If you can recreate that environment where people consumer cannabis instead of alcohol, then it will work.

Ohashi: Is cannabis tourism a real thing? Do people travel to experience cannabis?

Rosen: I think in the early days, people would travel to Colorado, for example, to buy legal cannabis. But I don't think that happens very much in today's market. I don't think people are but only if we go to super, high level prestige consumption lounges for a phenomenal experience. People will come to Nevada because of the hotels, casinos, entertainment and consumption lounges can piggyback off that. So I think cannabis tourism is a small plus.

Ohashi: Where do you stand with the debenture holders?

Rosen: I have been trying to convince those that have not converted they will have to agree to an extension. I told them it's not likely they'll be paid back in cash at the end of the term. I have a fiduciary duty to all stakeholders and the debenture holders are stakeholders but killing the company to pay off the debenture holders is not in anyone's best interest. The debenture holders don't have much leverage because they are unsecured. We get conversions from time to time. Debenture holders and shareholders will both benefit the most if the company is ultimately successful. I really don't spend much time thinking about it.

Conclusion: In mid 2020, Paul Rosen was already the largest shareholder of **1933 Industries** ([CSE: TGIF](#)) ([OTCQB: TGIFF](#)) when he was brought in on a rescue mission. I was very fortunate to have him share his general approach and be able to watch him put it into action. Things were complicated because he started shortly after the COVID pandemic was being realized by the broader population and travel restrictions made his job even more difficult. But Rosen indicates that the last quarter provided an indication of what the company can do and I look forward to more of the same moving ahead. The U.S. cannabis industry is experiencing a relatively challenging time but with a little positive input on the legislative front with the passage of a SAFE Banking or SAFE Banking Plus package as well as changes to address the problems created by Section 280E I think TGIF will turn into a growing cannabis operator generating excellent returns from its current depressed price in the \$0.02 to \$0.025 range. If you don't own TGIF, I think this is an excellent time to buy an initial position. If you are a shareholder, I think this is an excellent time to average down your cost.



February 24, 2023: A multi-billion bluest of blue sky valuations of Lexaria Bioscience is possible

As regular readers know, one of my market favourites is **Lexaria Bioscience** ([NASDAQ: LEXX](#)) ([NASDAQ: LEXXW](#)). In this article, I lay out my thought process which follows this basic outline:

- (a) What is it about LEXX that the market does not fully realize? (b) What is a company like LEXX worth?
- (c) How do (a) and (b) combine to provide LEXX a “blue sky” potential beyond anyone’s imagination?

(a) What is the market still missing? I believe LEXX is a pharmaceutical incubator. The characteristics of a typical incubator in any industry is generally based on the following four steps:

1. find an undervalued product, good or service and acquire it in some fashion
2. promote, in the best sense, the product, good or service to a higher, more realistic value
3. sell it for an enhanced value retaining an ongoing equity interest in some form
4. go back to 1. and repeat

The problem with the incubator business model is step 1. Is difficult to replicate successfully many times over. But LEXX is more likely to be able to repeat step 1. because their DehydraTECH™ technology underlies not one but many opportunities. Hypertension is the health issue management decided to develop first and I think it is likely to provide investors with significant returns this year. But there already more possible DehydraTECH™ applications and this potential was known on day one. Today, several of these DehydraTECH™ offshoots that have already been identified and partially developed including: other cannabinoid applications, oral nicotine, diabetes, dementia, antiviral drugs and phosphodiesterase inhibitors (Viagra, Cialis, etc.) and more. For LEXX, the issue is not where to go next; it is to select which opportunity to develop next.

(b) What is a company like LEXX worth? Here I will refer to a recent comparable so it should be pointed out that each case will be different except in one important way – the escalation in its valuation is likely to be very substantial. It is clear to me that LEXX is undervalued. Here are the reasons as I see them:

1. LEXX has done extensive pre-clinical work on hypertension and their pre-Investigational New Drug (IND) outline was very well received by the U.S. Food and Drug Administration (FDA).
2. The hypertension market represents a \$5 billion need. I think this should clearly be valued higher than a company in the same position with possible access to a smaller market.
3. In late December 2022, Kala Pharmaceuticals (NASDAQ: KALA) announced FDA approval of its IND application which is similar to the application LEXX expects to make around mid year. KALA was immediately up over 10X and is still trading at 3X its pre-FDA IND approval levels. I reported the KALA case to you earlier as a reasonable comparable. Because each situation is unique, your results may vary but my guess is the order of magnitude may be correct and if anything higher because of the importance of hypertension as a medical challenge. In any case, we don't have long to wait because I expect LEXX to receive approval one or two months after the application is submitted.

I believe LEXX could receive an explosive response in the market because:

- The hypertension market is an extremely large commercial market.
- The FDA has outlined a shorter route to final approval for a unique hypertension approach which LEXX's recent Press Release suggests might apply in this case.
- The marijuana plant has been illegal for multiple decades and longer because of its psychoactive effects. During this time, the plant has not been actively researched despite a large body of evidence that it has improved people's quality of life despite not being scientifically proven. I believe this will result in an explosion of scientific study into cannabidiol (CBD),
- I think the pharmaceutical industry's view toward CBD is well established by Pfizer's 2020, \$6.7 billion acquisition of Arena Pharmaceuticals which is developing a CBD based treatment for bowel disease and Jazz Pharmaceuticals' 2021, \$7.2 billion acquisition of GW Pharmaceuticals.

One study I have reported to you earlier estimates the value change from the initial idea to the end of Phase 2 or the start of Phase 3 at 400X and from the start of Phase 1 to end of Phase 2 or the start of Phase 3 as 12X. Finally, if LEXX was trading at a so-called typical valuation, it would be roughly 6X higher than LEXX's current market cap of under \$20 million.

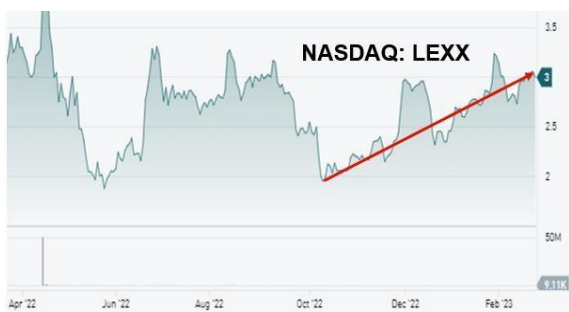
(c) How do (a) and (b) lead to the full blue sky picture of LEXX? The points made above ignore the fact that LEXX has four to six favourable indications of other potentially new drugs based on their DehydraTECH™ technology. Management selected hypertension as the first opportunity to pursue because it offered the greatest potential, short term package. But we can't ignore the potential size of the oral nicotine delivery market at a point in time when the major tobacco giants are moving away from combusting tobacco to deliver nicotine or the potential for a dementia drug at a time when the world population is aging.

It may not be reasonable to multiply the final valuation of LEXX by 4X to 6X but 2X or 3X might be acceptable.

So what is the blue sky, pie in the sky possibility? Here's one formula:

- **\$20 million market cap times 6 to get to a theoretical fair value for where LEXX is now = \$120 million**
- **\$120 million times 12 at the end of hypertension Phase 2 = \$1.4 billion**
- **\$1.4 billion times 2 or 3 to include other potential products = \$2.8 billion to \$4.2 billion.**

Conclusion: Although it is not a forecast, a \$2.8 - \$4.2 billion market cap is a super aggressive, hyper-speculative guesstimate. By the same token, it is not outside the realm of possibilities when you consider



pharmaceutical companies routinely carry multibillion dollar price tags. But I hope it gives some perspective on how undervalued **Lex-aria Bioscience**



(NASDAQ: LEXX) (NASDAQ: LEXXW) at current levels. Based on the charts, I continue to prefer the common at these price levels. For the Cannabis Report Model Portfolio, I owned all LEXXW which I sold and reinvested the proceeds into LEXX.

March 3, 2023 – Can you provide a maximum blue sky valuation along the lines of the one you did for LEXX but for KHRN?

You have to understand that the business of developing a new drug and seeking approval from the U.S. Food and Drug Administration (FDA) is a long established business and the stock market valuation for companies at various steps along the way has been well established. Not only that, I have had a couple of in depth but informal chats with LEXX CEO Chris Bunka about this over the past year and I have written a few articles about this valuation process and the company has issued a couple of Press Releases on the topic as well. What I'm saying is there is a rough formula you can apply to companies in the drug approval business and it is something I have given a lot of thought to over the past year.

This is not the case to the same degree with KHRN. In the past there have been many instances of companies engaged in a loosely similar business model from opening fast food restaurants to retirement communities to funeral homes. Arguably, the U.S. multistate operators (MSO) are a similar business paradigm. One of my personal frustrations on behalf of KHRN has been that an important ingredient for the success of these earlier ventures has been a generally rising stock market. So the growth company would announce plans to open a group of new restaurants and the market would rise on the news. The company would finance at a more attractive level, open the restaurants and see the sales and net income start to

flow. Their valuation would rise on improved revenue and income, rise on the announcement of expansion resulting in an even lower cost of capital. Over 10 – 15 years, this would create a big win-win for all.

For KHRN and to a certain extent the cannabis sector, market conditions have been poor. The cannabis indexes reveal that stock prices have been falling and over that time are down somewhere between 80% and 90%. This means despite positive progress, the cost of capital to KHRN and others has been rising and rising a lot to the point where share price dilution has become the number one problem. Also their isn't a "formula" with respect to these companies as there is with the new drug development operators. So there isn't a template to follow for KHRN as there is for LEXX and others like it.

Having said that, let me give you something to think about. Let's compare what KHRN is doing to the U.S. MSOs. Here are some things to think about:

- (a) Most of the larger MSOs are vertically integrated from seed to sale. KHRN now finds it doesn't need to be vertically integrated and will soon be out of the cultivation and extraction parts of the industry if they aren't already. To me this is advantage KHRN. They are evolving along the lines of giant tobacco, coffee and sugar companies which I think is a good thing.
- (b) Most MSOs sell both medical and adult-use cannabis depending on their jurisdiction. KHRN is dealing only in medical cannabis. Again, advantage KHRN although I am sure others will argue the other way. I see medical cannabis as a more reliable, growth business with an inherent regulatory advantage and nothing rules out adult-use cannabis sales in the long term.
- (c) The MSOs operate in the United States in an increasingly competitive environment. KHRN operates internationally with Colombia and the UK/Germany as its major markets. Advantage MSOs because I think there is a perception that the United States is a more attractive geopolitical environment than Latin America although I think the American competitive environment is more challenging.
- (d) The MSOs are currently operating in the U.S. although there is an argument that the future might see them expand internationally. KHRN has some natural markets including Brazil and Mexico as the questioner asked but also European markets such as Switzerland where they recently entered and not ruling out the U.S. at some time down the road. I give KHRN the nod because they can produce much higher growth on their much smaller base but it's a toss-up.
- (e) In terms of size and financial strength, I think the MSOs clearly have an edge. There is more business risk in KHRN and it will take a few years of growth for KHRN to get over that hump. But this is a normal part of investing in small and microcap companies. Each person must consider the suitability of this type of aggressive, high growth investing.
- (f) I think the MSOs lack anything proprietary in what they are doing whereas I believe KHRN's business plan in the medical cannabis field provides the company with a giant moat. KHRN has a lead using their approach to the medical cannabis market and they have intellectual property in the form of the way in which previous patients were medicated with cannabis and the outcomes. I see this as a significant advantage to KHRN.

Conclusion: if you share my vision and confidence in what KHRN has been able to deliver in a “proof of concept” sense, then a sampling of current multistate operators gives you a very general idea of what is possible. I think it is only fair to be reminded of the fact that KHRN is still a very small company with sales of roughly \$20 million and a market cap of approximately \$22 million. But I think the risk/reward potential for **Khi-ron Life Sciences** ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)) is extremely favourable. I have confidence in this group and on a “bluest of blue sky” basis, I think market caps at or above the upper range of the MSOs of \$2 to \$4 billion as shown here, are within reach. It will take time, for example, Curaleaf was founded in 2010 and Green Thumb in 2014 but I think given the leadership of Founder and CEO Alvaro Torres and the team he has assembled, it can be done.

U.S. Multistate Operators by Market Cap	3/3/2023 (millions)
Curaleaf	\$ 3,800
Green Thumb	\$ 2,900
Trulieve	\$ 1,600
Verano	\$ 1,500
Cresco	\$ 750
Jushi Holdings	\$ 175

January 13, 2023: Is there something happening with Lexaria Bio? In the investment business, so much of the activity is reaction. We react to economic news, acquisitions, earnings reports and so on. The nice thing about an extended holiday period such as Christmas to New Years is the time it gives you to think and act; not react.

It was during one of these pensive moments over the holidays that I realized there was something to think about with respect to **Lexaria Bioscience** ([NASDAQ: LEXX](#)) ([NASDAQ: LEXXW](#)). As regular readers know, I have continuously followed LEXX the longest of any cannabis related company in The Cannabis Report model portfolio and the Let's Toke Business newsletter. I have been through the many market disappointments over the past six years as LEXX reported very significant accomplishments that investors basically ignored. I remember so well in 2020 when I learned that LEXX was going to go for a NASDAQ listing and saying at the time this was a brave decision that might prove to be the pivotal event in the history of LEXX. Despite a US \$11 million financing, by far the largest in LEXX's history and the research this capital financed, the market continued to disappoint even as LEXX did not.

The one thing I did know from my many decades looking investment opportunities is that small companies on the road to becoming large companies must, in the collective wisdom of the market, attain a critical mass. Once that happens, the response of the market is totally different. Before critical mass, investors don't seem to care. Good news is ignored and bad news triggers an overblown sell off. After critical mass, investors jump on good news sometimes giving too much incremental valuation; overestimating the positives while ignoring bad news. Attaining critical mass is an important milestone in the history of any public growth company.

I have gotten to know Chief Executive Officer Chris Bunka very well during this time. I have also gained an appreciation for President John Docherty's role and skills but Chris Bunka has been my major contact. I have learned, for example, when Bunka issues a Press Release it is for a specific reason. Also, I absolutely know Bunka is very skilled in managing and publicizing small cap companies having an extensive background in venture capital. Bunka knows news releases from microcap companies published in the second half of December have less impact because investor minds are focused elsewhere. In fact, one

popular strategy is to “save” news from late December for publication in the initial trading days of the new year. With all of that in mind, I ask myself, why did LEXX issue Press Releases on:

- December 20th - **Lexaria’s Human Oral Nicotine Study Begins Dosing** ([read here](#))
- December 21st - **Lexaria's DehydraTECH-CBD Achieves Superior Human Blood Absorption Levels** ([read here](#))
- December 29th - **Lexaria Receives First Granted Patent in Canada** ([read here](#))

Nothing I mused about was new. In fact, I have reported on all of these issues since LEXX's NASDAQ listing in early 2021 ranging from the facts of the press releases in December to my qualitative assessment of Chris Bunka and other non-quantitative matters. What I am doing is taking each little factoid and a few non-factoids as if they were beads and I put them on a string in the order of my choosing. Someone else might take the same beads and end up with a different necklace.

Bead #1 – I thought LEXX attained critical mass in early 2021 when the NASDAQ listing and financing were completed. I speculate that Bunka has reached the same conclusion and consciously or subconsciously, he is delivering that message. Despite the lackluster markets keeping LEXX stock depressed while even while on the verge of making its hypertension investigational new drug (IND) application, don’t forget LEXX has many other important things going for it. The hypertension IND application is not the end of the story, it’s the beginning.

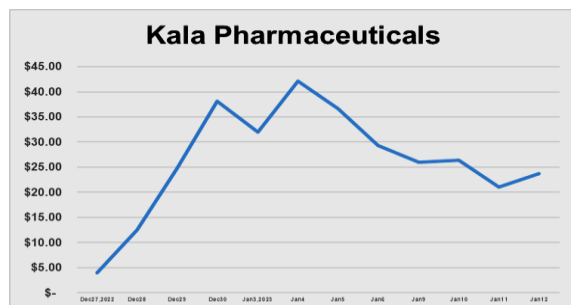
Beads #2, #3 and #4 – the December 2022 press releases covered the start of human dosing for NIC-H22-1 that was important but not critical for publication on December 20, 2022; the December 21, 2022 release “announced” superior CBD absorption using DehydraTECH-CBD™ something that had been generally known for three or four; and the receipt of the first patent in Canada on December 29, 2022, again important news it was not mission critical on December 29, 2022. However, for some reason, Bunka chose to make these releases in December although it seems to me they could have been put out in January. I suggest Bunka feels he is running out of time. We know their hypertension IND application is coming up in the near future and I have been pounding home the point for at least 3 – 6 months. This is a major milestone for LEXX. It’s going to attract eyes to their technology and the other potential applications. This could be critical mass time.

Bead #5 – If these press releases did not contain factual, mission critical information in the last two weeks of December, then why would a market savvy guy like Bunka put them out? If you assume I am correct and the messages wouldn’t reach a news hungry retail investor market, they must have been directed to the biopharmaceutical scientific community or institutional investors as a reminder that DehydraTECH™ has this and other significant, potential applications. Whatever market result they get out of hypertension, and I am sticking to my expectation of an “explosive” result, there are at least one or two more possible uses, such as nicotine delivery, where they have very strong evidence of a potential application.

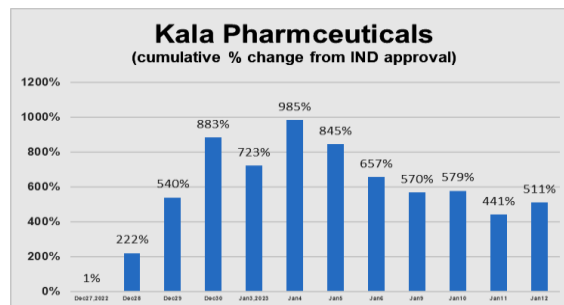
Bead #6 – Why is it worth the time and effort for LEXX to publish those press releases over the Christmas holidays? I think the events surrounding Kala Pharmaceutical (NASDAQ: KALA), that happened about this time, might have been a factor. KALA is a clinical-stage biopharmaceutical operator dedicated to the research, development and commercialization of therapies for rare eye diseases. On December 27, 2022,

just a little over two weeks ago, KALA announced the receipt of approval for their IND application from the U.S. Food and Drug Administration (FDA) for the treatment of Persistent Corneal Epithelial Defect (PCED).

As these two charts show, when Kala received its IND approval, the response in the market was explosive. Kala shares went from \$3.92 per share the day before the announcement to over \$40 per share in just



five trading days. It was a five-day, ten-bagger. And eleven days after the news was released and some of the



emotion was washed out of the market, the chart on the right shows KALA was still holding on to a five-fold gain. It should be noted that Kala announced the submission of its FDA IND application on November 28, 2022, less than a month before FDA acceptance.

KALA and LEXX are reasonably comparable. KALA is a recent example of a company that did what LEXX is in the process of doing, that is, submitting an Investigational New Drug (IND) application to the FDA and having it approved. From a market cap perspective, the two were similar. Before the news broke KALA was actually a little smaller than LEXX and is now a little over double. I would argue the commercial potential for hypertension is much larger but it might be more competitive so I'm not going to argue the point. Let's just say they are similar. Finally, I conclude that KALA is running some six months ahead of LEXX right now based on the IND application and approval time. In any case, I think the two are close enough to take the KALA example as general guidance to what might be possible in the case of LEXX.

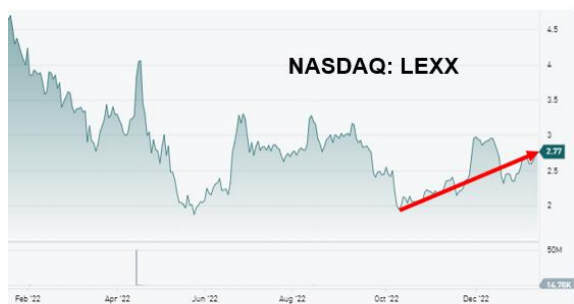
Bead 7 – I always try to have my brain tuned to the investment opportunity and with LEXX, this is the most exciting time in their history and it is also the scariest time. Scary in a good way. In the six years I have been following LEXX, about 90% of the time, I thought the shares were greatly undervalued. Today, I think they are the most undervalued they have ever been. I also know that LEXX's original plan was to take the hypertension application to FDA phase 2 and look for a bigger pharma company to carry it through to final approval. I expect them to be at that point in the next 3 to 6 months.

➤ **Most exciting:** within the next few months, I expect LEXX to submit its IND application. When this is done, the stock should respond positively. KALA rose 20% when this was announced. Then within a month or two of submission, I anticipate LEXX will receive FDA approval. In KALA's case, the gain has been in the range of 5X to 10X. For LEXX that would mean a stock price in the US \$13.50 – US \$27.00 range using the example of KALA. LEXX is sticking to its six-month approval time but based on KALA, it could be as little as a month. My own forecast would lean toward the KALA experience because LEXX spent extra time and money in preparation for this event and the initial response from the FDA was excellent.

- **Scariest:** what is frightening to me is that the cannabis sector has been in a bear market for approximately four years that has pushed LEXX to what I judge to be its most undervalued position in all six years I have been following the company. LEXX's market cap is just shy of US \$20 million. In the biopharmaceutical sector, \$20 million is a pittance. Pharma licensing deals are often \$20 million to \$80 million or more in combined upfront and milestone payments. Assuming LEXX makes its IND application to the FDA in the next six months or so, a number of large, biopharmaceutical companies will look at LEXX, or may already be looking and think why bother with licensing a DehydraTECH™ application when we can buy the whole the company for, say, \$40 million. In the kind of market we have been through, an offer for the company at double its recent market price would tend to be looked on as attractive and acceptable to many shareholders. But I think a successful acquisition of LEXX in the \$40 - \$50 million market cap range would be tragic. Equivalent to highway robbery with patient and loyal investors the losers..

Conclusion: if I string my beads together, here is the bracelet I end up with.

- First, an IND application in the first half of 2023, most likely toward mid-year and FDA approval within a month or two after based on the Kala Pharma example last month around Christmas. This not only



promises a significant return on LEXX for investors, I think it will be the tipping point at which time **Lexaria Bioscience** ([NASDAQ: LEXX](#)) ([NASDAQ: LEXXW](#))



[LEXXW](#)) bursts into the consciousness of the international pharmaceutical industry. I'm not ruling out the possibility that it has already begun which is why I have been urging readers to make sure they have LEXX in their portfolios. In the Cannabis Report for ADVFN that I produce, LEXX is always in spirited competition to be the largest position in the portfolio.

- Second, the December press releases I discussed above might have been management's response to pharmaceutical industry interest and intended as a heads up that LEXX is reaching critical mass. When I put my investment hat on, stop thinking as a retail investor and imagine I am a multi-billion dollar pharmaceutical company, here is what comes to mind. Why waste my time and an amount of money that doesn't represent a decimal point of my balance sheet to formulate an offer for a licensing agreement that involves negotiating an upfront cash payment, milestone payments, the need to publish a news flow for a microcap company and if it all works out, an ongoing royalty payment? The licensor's (eg. LEXX) market cap is under \$20 million. We could offer them double their current stock price and given the depressed level of the markets, their shareholders might jump at the chance to have a winner in their portfolio after such a discouraging time. For us, it would be a steal. Absolute highway robbery.

This is a scenario that I said above, scares me. Great opportunities like LEXX are hard to find and I don't want readers to miss out on this opportunity.

Outlook for the large cap and cannabis stocks in 2023 (December 30, 2022)

Historical Review – when COVID hit and was accepted as a serious problem, the Dow Jones Industrials dropped 13.7% in March 2020, the worst month in over 30 years and dropped -23.2% in the first quarter of 2020, the worst first quarter for the Dow on record. At that time, most inexperienced investors were in a state of shock and many professionals were not much better. As often happens, the market then began an extended advance starting from the bear market low in March 2020 and running until December 2021.

	2022 Return	Recent Hi/Lo Return
Large Cap Stocks		
United States		
Dow Jones Industrial Average	-8.8%	-21.5%
Standard & Poor's 500	-19.4%	-24.8%
NASDAQ Composite	-33.1%	-36.4%
Canada		
Toronto Stock Exchange Composite	-8.7%	-18.3%

This set up 2022 as an extension of the bull market or a transition from the bull market to a bear market. As the table below shows, 2022 was a bad stock market year. It was not quite as bad in Canada. In 2022, the Dow Jones Average was down -8.8%, the Standard & Poor's 500 was down -19.4% and the NASDAQ Composite dropped -33.1%. In so doing, each of the indexes also met the -20% threshold used to define a bear

market although the Dow and S&P 500 are just barely across the line. The Toronto Stock Exchange has not yet produced a correction of bear market proportions primarily due to the fact that high inflation goes hand in hand with higher commodity prices and Canada is a resource-oriented economy.

The cannabis sector experienced a fourth consecutive dismal year. The various cannabis stock indexes produced by either Let's Toke Business or New Cannabis Ventures show 2022 returns of between a

	2022 Return	Bear Market Return*
Cannabis Sector		
Canada		
LTB** Marijuana Composite Index	-57.8%	-92.3%
NCV*** Canadian Cannabis LP Index	-62.9%	-94.6%
United States		
NCV American Cannabis Operator Index	-65.2%	-86.3%
* the cannabis "recent" highs go back 2 - 4 years.		
** LTB = Let's Toke Business		
*** NCV = New Cannabis Ventures		

decline of -57.8% and a drop of -65.7%. As explained in the footnotes, the cannabis sector has been in a sharp decline for up to five years. The 2022 decline relates, in my opinion, to the fact that the Democrats went into the Biden administration's first midterm without passing any pro-cannabis legislation. In fact, Senators Schumer, Booker and Wyden blocked every attempt by the Democrat controlled House to pass SAFE Banking plus or minus the Harnessing Opportunities by

Pursuing Expungement Act (HOPE) Act late in the session. I said over a year ago, when Schumer et al promised to bring forward their Cannabis Administration and Opportunity Act (CAOA) it wouldn't pass. When they missed deadlines and didn't bring forward the bill until just before the June 2022 summer break, I said it had no chance to pass. And when Booker said they could pass some pro-cannabis legislation during the lame duck session after the midterms, I expressed the strong opinion that wouldn't happen. As each of these expectations failed to come through, the cannabis indexes continued to decline.

The Let's Toke Business Stock Market Model – is a hypothetical model for a complete stock market cycle I have developed over time. It breaks a complete stock market cycle into three parts: (1) The Dynamic Phase of a Bull Market, (2) the Trading Phase of a Bull Market and (3) the Bear Market. This is not a predictive model, that is, I am not trying to forecast where the market is going. Over the years, it has

stock prices both up and down during each phase. In the Dynamic Phase of a bull market, stock prices are generally rising strongly. Because the Dynamic Phase is the longest of the three phases, there may be more corrections but, as I explained above, they tend to be smaller, typically in the 3% to 5% range. As the cycle transitions from the Dynamic to the Trading Phase, the volatility increases. In fact, this is the defining characteristic of a Trading Phase compared to the Dynamic Phase. In the Trading Phase, the corrections become much larger; generally, in the 5% to 10% range which tends to moderate the rate of increase in stock prices.

Finally, as we move into the Bear Market, the pattern changes again and becomes almost the direct opposite of the Dynamic Phase. In other words, in a Bear Market stock prices tend to decline relentlessly with very minor and occasional rallies of 3% to 5%. But bear markets are volatile as half of the best one day returns on the S&P 500 have happened during bear markets. A sign of the end of a bear market is an unexpected disaster such as a high-profile bankruptcy. At some point, investors capitulate by first ignoring good news then ignoring bad news.

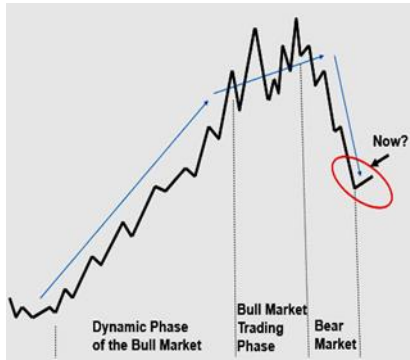
The summary looking forward from August 2022, was that it seemed too soon to call the bear market ended and I suggested we might be heading for a double bottom which now appears much clearer. I said then and I reiterate now, "This makes sense if we also assume the economy recovers in the third quarter and falls into a clear recession in 2023 as many economists expected. Based on the economic data, however, I think weakness will be drawn out. After two lackluster quarters, (Q1 and Q2 of 2022) the third quarter could be better. After that, however, I would not be surprised to see the economy moved into an uncontested recession and the market make a double bottom. If this happens, we will be looking at stagflation that is very difficult to deal with because if you raise interest rates to fight inflation, the economy will suffer even more. On the other hand, if you reduce interest rates to stimulate the economy, you will also be promoting higher inflation."

I was also waiting for the market to confirm its direction. "The characteristic to watch for now is whether the next correction makes a higher or lower low. A lower low will confirm we are still in a Bear Market. A higher low will indicate a change in trend from down to up."

As often happens the message from the market is unclear. In the intervening months, the market made a high low that suggests a change in trend from down to up but that was followed by a lower high which is indicative of a continuation of a downtrend.

- A factor that become of specific interest today is the relationship between bear markets and recessions. Based on the data we are looking at, there have been 26 bear markets but only 15 recessions. This prompted economist Paul Samuelson to say, "The market has predicted nine of the past five recessions." Samuelson's point was over the past 100 years, roughly two out of three bear markets followed by a recession while one out of three has not. Therefore, it is also possible and to have a bear market in stocks and not an economic recession.

At the end of my previous review, here is where I thought we were. At the time of our last market update,



two out of the three major U.S. indexes had declined more than the bear market defining decline of -20%. Both the Standard and Poor's and NASDAQ Composite had exceeded the -20% hurdle but the Dow Jones Industrial Average had not. So, we were very close to being in a

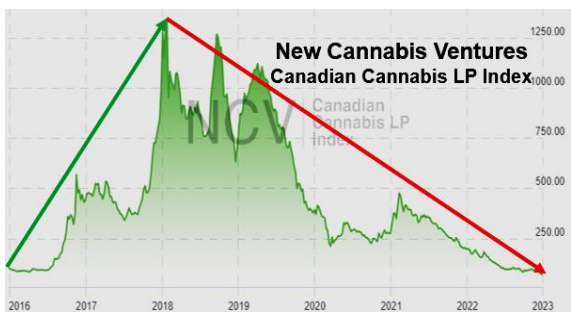
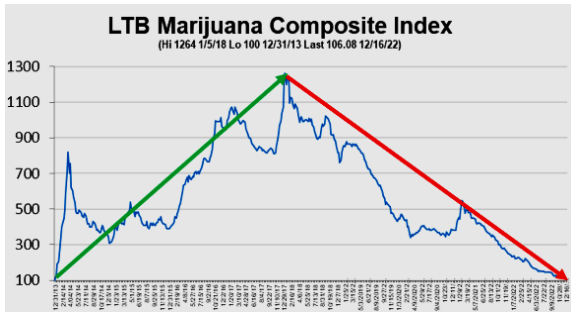


bear market as far as the Dow and S&P were concerned while the NASDAQ were well into bear market territory as were the cannabis stocks. I thought this might lead to a double bottom in the stock market and a recession 2023.

The Cannabis Sector – 2022

For the cannabis group, it was a fourth consecutive year of dismal results. Here is a smattering of indexes that show just how bad it has been.

This chart is the LTB Marijuana Composite Index from December 2013 to December 2022. It shows in the first four years, this sector increased 12.5-fold and has virtually given it all back in the ensuing five years. This is a broadly based index having representation of between 50 – 100 companies at different points along the way. In addition, it includes representatives of the very largest and smallest cap cannabis companies. It is very indicative of the sector.



This chart is the New Cannabis Ventures Canadian Licensed Producer's Index. It has a shorter time frame starting in January 2016 and its content is probably higher cap on average than the LTB Marijuana Composite above. However, the indicated price moves are alike. This index rose 11.8-fold in the first two years followed by an ensuing almost five years in which it gave it all up plus a little. Each index confirms the other's results as very similar.

I think it is fair to conclude that the cannabis sector is depressed. In both Canada and the U.S., the cannabis industry has its problems. From an operating point of view, the underground market remains a major negative for operators. Illegal operators do not have the costs of staying within the government mandated regulations and do not have to pay taxes, which means legitimate operators have a difficult time competing. From a regulatory point of view, governments have ignored cannabis operator needs,

have been slow to enact regulations and, in some cases, are handicapping those companies trying to comply with the law. With leftist governments in both the U.S. and Canada, politicians seem more concerned with correcting historical wrongs than they are with correcting current issues. But there is hope for improvement on the regulatory front.

Looking Ahead to 2023 – The larger cap, blue chip sector

Several things were clarified in 2022, particularly later in the year. I expect these will have an impact on the markets moving forward.

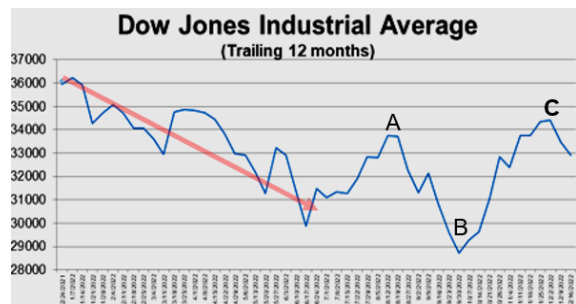
- **Interest rates:** are going to continue to rise in 2023 although the pace might be slower. On the back of five consecutive months of declines in the Consumer Price Index, the Federal Reserve Board reduced the rate of increase in the Federal Funds rate to 0.5% from a series of 0.75% hikes. Chairman Jerome Powell said unequivocally that interest rates may not rise as fast in 2023 but the Fed's forecast showed no interest rate declines next year and 17 of 19 officials believe rates will go above 5%.
- **Inflation:** the Fed funds rate reached a 15-year high last year but inflation reached a 40-year high. Powell stated that the 2% target for inflation would not change so despite recent improvements, there is still a long way to go. Consumers in the economy know inflationary pressures still exist. Investors remain skittish which suggests there will be financial volatility moving ahead.
- **Labor markets:** Chairman Powell also made it clear that persistent strength in the labor market is a problem. In fact, economists enter 2023 with the sense that the labor market has become the key to shaping Fed policy moving ahead.
- **Recession:** economists and investors remain focussed on the economy and the ability of the Fed to bring down inflation without producing a recession, the so-called "soft landing." The Fed's record with soft landings is not particularly good. In fact, it is terrible. The best Powell can point to is that in the case of a recession, it will be short and shallow. But that reminds me of the Fed statement just over a year ago that the rise in inflation will be transitory implying it will go away on its own. That didn't happen with inflation and I doubt a short and shallow recession is in the future either.

Conclusion: looking ahead to 2023, I think we will have a year in which the economy gradually weakens. The Fed will be watching the labor data and inflation to determine their response. If this data remains as strong as it is, interest will continue to rise. As we see these numbers in the months ahead, we must keep two factors in mind:

1. The current labor numbers, such as the unemployment rate, is still at the levels that prevailed in the full employment days just prior to the pandemic. A bump up in the unemployment rate to 4.2% from its current 3.7% simply represents a return to the rate that prevailed one year ago. Again, we must avoid the temptation of becoming overly optimistic over relatively small changes in the labor market statistics.
2. Even if the Consumer Price Index continues to decline, the Fed's target growth rate is 2% and that will not change. I think it would be a mistake to get too excited because inflation has dipped below, say,

5% or 6%. This is still 2½ - 3 times higher than the target range and the Fed has emphasized inflation must provide evidence of staying at 2%. This is not likely to be attained during 2023.

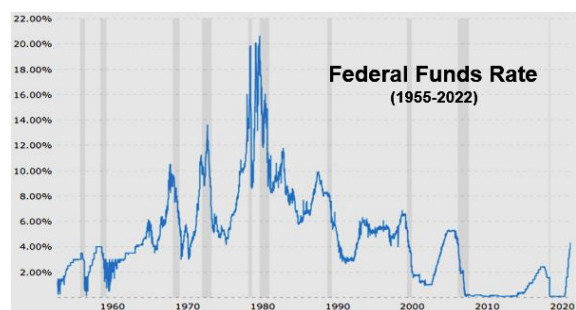
- The stock market during 2022 painted a fairly accurate picture of what was going on. In the first half of the year as the Fed began to ramp up its battle with inflation and interest rates started to rise, stock



prices trended lower. Then investors turned their attention to when the Fed would begin to ease back on interest rate hikes, the stock market made a higher, high shown on the chart as point “A” indicating a possible change in trend from down to up. But the Fed not only persisted with higher rates, it indicated this was not going to change and the market fell to a lower, low indicated as “B” on the chart. This meant the stock market trend was not going to changing to up but the

previous downtrend was going to continue. But then investors moved to a position that interest rates would peak, perhaps by mid-2023 and this created enough optimism to drive stock prices up to a higher, high shown as “C” on the chart. This indicated the possibility that interest rates would be declining by the second half of 2023. “Just a minute,” said the Fed in their December report that showed no declines in the Fed Funds rate in 2023. This triggered a sell-off in stocks that continues into 2023.

3. For most people, inflation and rising interest rates are a slow and relatively painless process. In comparison, unemployment is quick and painful. So far, the U.S. recession has been a financial recession



emphasizing inflation and interest rates. In 2023, I think the recession will be felt on Main Street and as that happens, we

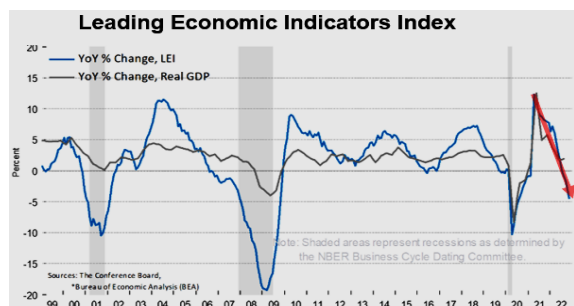


will begin to see more pessimism from the average American.

4. The following two charts show the history of the Federal Funds rate and the Dow Jones Industrials compared to recessions. Here I am focussed on the timing. The charts below show that the Fed Funds rate tends to turn up and down ahead of the economy while the Dow Jones is a recognized leading economic indicator. The Fed Funds rate has been rising for some six months, it has been pointing toward a slowdown in economic activity. Similarly with stock prices and depending on which index you choose, a bear market has already been identified.
5. The Conference Board of the United States has assembled The Conference Board Leading Economic Index® (LEI) to help forecast economic conditions. This is a diffusion index that combines the impact of each of the ten leading indicators which are are:

1. The [United States Department of Labor](#)'s monthly report on the unemployment rate, average hourly earnings and the average workweek hours from the Employment Situation report
2. The [United States Department of Labor](#)'s weekly report on first-time claims for state unemployment insurance
3. The [United States Census Bureau](#)'s monthly consumer goods and materials report from the Preliminary Report on Manufacturers' Shipments, Inventories, and Orders
4. The [United States Census Bureau](#)'s monthly non-defense capital goods report from the Preliminary Report on Manufacturers' Shipments, Inventories, and Orders
5. The [United States Census Bureau](#)'s monthly report on building permits from the Housing Starts and Building Permits report
6. The spread between the interest rates of 10-year [United States Treasury notes](#) and the [federal funds rate](#)
7. The Federal Reserve's inflation-adjusted measure of the M2 [money supply](#)
8. The [Institute for Supply Management](#)'s monthly ISM Index of Manufacturing including: supplier deliveries, imports, production, inventories, new orders, new export orders, order backlogs, prices and employment.
9. The [S&P 500](#)
10. The [University of Michigan Consumer Sentiment Index](#)'s consumer expectations.

Here is the message has been delivering in recent months. The LEI recorded a sharp decline of -1.0% for November following a drop of 10.9% in October. In November, nine of the ten leading indicators declined.



Only stock prices, as measured by the Standard & Poor's 500 index rose. Over the preceding six months, the LEI has dropped -3.7%. The Conference Board concludes that the decline in the LEI in recent months indicates the tightening by the Federal Reserve Board is having an impact on the U.S. economy. This leads to the conclusion that a "...U.S. recession is likely to start around the beginning of 2023 and last through mid-year."

Of course, the LEI, like any other forecasting tool, is not perfect. One reason is the relationship between each leading indicator is not perfect. Any individual indicators may not produce the expected result in a given cycle. Another consideration is that economic data is always subject to revisions which the Conference Board does monthly if the source data is revised. An annual revision is done with the report published in January that will be the case with next month's report.

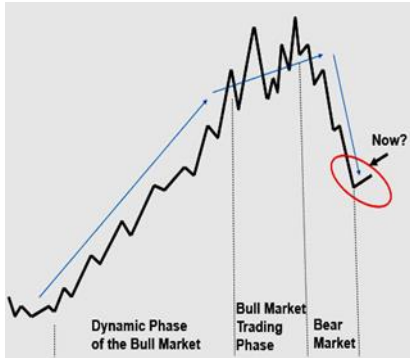
My conclusion is the larger cap, blue chip stocks will face some strong headwinds in 2023. Certainly, the Federal Reserve Board seems to be intent on keeping interest rates high all year and, at this point in time, there is no sign that interest will decline in the next twelve months. At best, rates might plateau at a historically high level. This pressure will remain until the last holdout in the economy, the labor sector, gives in. The process will be a difficult one for the Democrats who count labor as an important part of their support. But with the railway workers, Biden was forced to step in and when he thought he had a settlement, four out of twelve unions rejected it. This forced Biden and the Democrats to impose a settlement on the union. This will be a contentious issue in 2023. As I have said, interest rates look to remain high in 2023 and the Fed has said the problem of inflation will not be beaten until it returns to a permanent level near the 2% per annum target level.

The midterm elections did not go as well for the Republicans as they hoped. However, they did reclaim control of the House and that will make it much harder for the White House to pass their inflationary borrow and spend projects. This promises a little more fiscal stability and less inflationary pressures on the U.S. economy.

What does that mean for the large cap sector in 2023?

- (1) Although Federal Reserve policies have triggered many recessions, rarely has the Fed provided such clear guidance of their intentions. At this point we can expect higher interest rates in 2023, no declines in interest rates in 2023 and the Fed intends to keep upward pressure on interest rates until they are convinced inflation is likely to hold at the 2% per annum level.
- (2) Clearly, we are headed for an economic slowdown and quite likely a recession. Bearing in mind that the stock market has forecast 9 of the past 5 recessions, there is a chance that a recession can be avoided. The Fed is focussed on labor markets so we can expect increases in the unemployment rate in 2023.
- (3) Looking at the major indexes such as the Dow Jones, Standard & Poor's 500 and NASDAQ Composite, the Dow and S&P have met the lower end of the -20% definition of a bear market while the NASDAQ has fallen well into bear market territory. There is still downside for stock prices but the decline has already started. Expect markets to be choppy to lower as they have been recently.
- (4) At some point ahead, perhaps in the second half of 2023, there will be strong evidence that the economy is weakening and might be entering a recession, the prevailing sentiment will be negative and stock prices will begin to rise. Meanwhile, pundits will be predominantly bearish and question how the market can rise when the economy is so soft. At that time, it will be important for investors to remember the stock market is a leading indicator of the economy and it should turn up before the general economy is in recovery.

Conclusion: my expectations for the blue chip sector are little changed from early August 2022. I think we have already experience some downside in stock prices and there may be more to come. However,



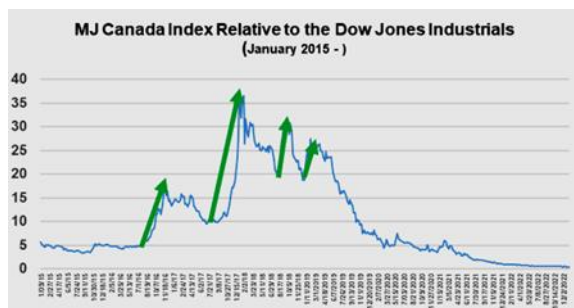
as investors we are always looking ahead but my model is not based on forecasts that are normally inaccurate at best and wrong at worst. Instead, I focus on where we are in the market cycle and use that to determine what we should be doing with portfolios. As the chart to the left shows we are currently in a bear market



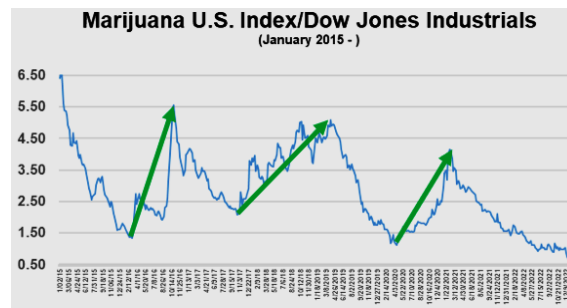
but we are not at the beginning but nearer the end. The chart above right shows the Dow has barely penetrated the definition of a bear market while the cannabis sector is beyond almost any level of decline that anyone might have reasonably expected.

- **On the cannabis side, the markets were let down by the regulators/politicians.** In fact, if I think the greatest mistake that was made by investors in the cannabis sector would be overlooking the regulated nature of the business that would evolve and the ineptitude that politicians would demonstrate in putting regulations in place. Not only that, the Senate has refused to consider any pro-cannabis legislation sent to them by the House because of Charles Schumer, Cory Booker and Ron Wyden's desire to jam through their Cannabis Administration and Opportunity Act. (CAOA) They did this with the knowledge that CAOA had virtually no chance to pass before the midterm election.
- In 2023 and into 2024, this might prove to have an unintended positive consequence of helping cannabis investors by helping the cannabis industry. There are some pieces of legislation that failed to pass in the last Congress because Schumer, Booker and Wyden that have a much better chance in the new setting. These would include:
 - (a) **The Safe and Fair Enforcement Act (SAFE Banking Act):** In the U.S. at the present time, 39 states and the District of Columbia have legalized the medical use of cannabis and 21 states and the District of Columbia have legalized recreational or adult-use cannabis. Federally, however, marijuana is still listed as a Schedule 1 drug which is defined as a drug or other substance that has a high chance of being abused or causing addiction and has no Food & Drug Administration (FDA) approved medical use in the United States. While you can argue parts of the definition, in June 2018, the FDA approved Epidiolex® as a cannabidiol (CBD) based prescription drug used to treat certain seizures. So marijuana does not even fit the definition of a Schedule 1 drug. However, a Schedule 1 drug is illegal under U.S. federal law and most U.S. banks are federally regulated so bankers have been reluctant to offer services to state-legal cannabis companies. SAFE Banking does nothing more than pave the way for federal banks to offer the normal banking services that are available to any other legal business operating in the United States. But Schumer, Booker and Wyden have blocked SAFE Banking from reaching the floor of the Senate for consideration.

- (b) **Section 280E of the U.S. Internal Revenue Code:** over 40 years ago when Ronald Reagan was President, a convicted cocaine, amphetamines and marijuana trafficker argued in tax court that under Federal tax law, he should be allowed to deduct ordinary business expenses such as rent, packaging, telephone and car expenses for his illicit drug business. This was the well-known *Edmondson v. Commissioner* case which the trafficker won. In 1982, Congress enacted Section 280E to prevent businesses engaged in certain illegal activities from recovering costs or claiming related business deductions in calculating taxable income. Section 162(a) allows taxpayers to deduct ordinary and necessary expense incurred to carry on business in arriving at a taxable income. Section 280E specifically prevents a business that involves trafficking in Section 1 and Section 2 drugs from Section 162(a). Schedule 1 drugs are marijuana, heroin, lysergic acid diethylamide (LSD), ecstasy and magic mushrooms while Section 2 includes cocaine, methamphetamine and oxycodone. Marijuana, as a Schedule 1 drug, is federally illegal and since the Internal Revenue Service (IRS) is federal jurisdiction, it taxes state-legal cannabis businesses as if Section 280E applies. The result is that state-legal cannabis businesses pay effective taxes of 70% up to 100% in cases where the business is not properly tax structured. Although SAFE Banking has a much higher public profile, U.S. operators will tell you that Section 280E is the more important problem.
- (c) **SAFE Banking Plus** is a reference to passing SAFE Banking with some provisions appended for dealing with social issues such as the release of people in prison for minor, non-violent cannabis charges. The idea has strong support but the “Plus” side of such an act haven’t been specified.
- **Even if legislation is passed, can the cannabis sector ignore bear-ish trends in the major markets?** I think so. As the charts below suggest, the cannabis sector has strongly outperformed and



underperformed the large cap sector in the past. The chart to the left shows the relative performance of the MJ Canada Index relative to the Dow and the chart



above right shows the Marijuana U.S. Index relative to the Dow. Both charts show there have been notable periods of outperformance in the past by the cannabis sector. The other factor that comes into play is the fact that the prime driver I expect will move the cannabis stocks upwards in the first half of 2023 is not dependent on a strong economy or lower inflation and interest rates. Finally, SAFE Banking simply levels the playing field for state-legal industries giving cannabis operators access to the same level of banking services as any other legal business. Similarly, correcting the application of Section 280E again simply taxes state-the punitive 70% to 100% rates that could apply. After all, the impact of Section 280E is tax your gross income instead of your net income.

- My general expectation is that pro-cannabis legislation will be enacted by the middle of 2023. This means the market will begin to discount such an event around the middle of the first quarter. My best guess is that it will be a form of SAFE Banking Plus.
- As a result, I expect the cannabis sector to experience the first up year following five down years. If the cannabis market improvement is prompted by pro-cannabis legislation passing through Congress, I think the multistate operators (MSO) will be the market leaders but the sector in general will improve.

Khiron's problems in Colombia resolved very much in their favour – January 6, 2023

Last week, I alerted you to the fact that the Colombian Government had approved medical cannabis products for approval under the national health care plan and the positive impact this would have on **Khiron Life Sciences** ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)). That information was acknowledged in a Press Release by KHRN on Thursday January 5, 2023. The market responded favorably but I think it was a reaction to some additional information KHRN included in their press release.

On January 5, 2023, KHRN highlighted these four points and I have shown in bold italics the news I think was most important to investors. As there was no public information prior to this release, it constitutes a “positive surprise” from an investment point of view.

- (a) On December 30, 2022, the Ministry of Health of Colombia reaffirmed the inclusion of plant-based medical cannabis products, i.e., Khiron products, in the mandatory insurance coverage system
- (b) Starting January 1st, 2023, every insurance provider in Colombia, is mandated to cover the costs of medical cannabis prescriptions for patients**
- (c) Khiron will immediately start filling backlogged orders of insurance-covered prescriptions in Colombia
- (d) New Contract Awarded: Additionally, in December 2022, Zerenia™ Colombia entered into a contract with the largest Government-owned insurance company in the city of Bogota with over one million people under coverage, to provide healthcare services with medical cannabis for its patient population**

Here are my comments on (a) to (d) above:

- (a) In a market driven by a high degree of pessimism, anything that might raised the possibility of medical cannabis being dropped by from the health insurance plan by a new government would attract an overly negative market response. But I don't think this was a likelihood. New President of Colombia, Gustavo Petro, is more pro-cannabis than his predecessor. What was important is how long it would take for things to return to normal. For KHRN, the timing of events in Colombia and Germany was unfortunate as it overlapped the planned switchover to Pharmadrug in Germany meaning there has been a period of time when revenue from two

major markets were at near zero levels. **The fact that both Germany and Colombia are back to “normalized” conditions at the beginning of KHRN’s first quarter of 2023 is very important.**

- (b) The insurance coverage for medical marijuana in Colombia was not a question of “if” but “when.” With a new government, it was hard to estimate but most went from weeks to months. Resolution 2808 of 2022 was signed by the Ministry of Health on December 30, 2022, clearing the way for it to be in effect on January 1, 2023. This was a positive outcome that continued the practice of the former government. Furthermore, there had been some ambiguities whether plant-based magistral preparations from medical cannabis were included in the insurance coverage. This is now once and for all clearly confirmed. The new government is fully committed with the use of medical cannabis as a covered treatment under the Colombian health system.
- (c) In addition, it was not known if past prescriptions would be honored but Torres has said KHRN will tackle the backlog of orders. I estimate the revenue loss was between two and four months of revenue. With CEO Alvaro Torres saying that **KHRN would attempt to deal with the backlog means there will likely be some recovery of lost business carried forward from the third and fourth quarters of 2022 into the first quarter of 2023. Certainly not all but some.**
- (d) Additionally, in December 2022, Zerenia™ Colombia entered into a contract with the largest Government-owned insurance company in the city of Bogota with over one million people under coverage, to provide healthcare services with medical cannabis for its patient population. In addition, Zerenia™ Colombia (Khiron’s wholly owned medical cannabis clinic network), has entered into a contract to provide "Integrative Health Services and Pharmacotherapeutic Treatment with Medical Cannabis" with the largest Government-owned insurance company in the city of Bogota, with more than 1.2 million insured individuals. This is the first time an insurance company in Latin America is contracting medical cannabis specific services and products. This represents an opportunity for Khiron and Zerenia to expand its client and patient base within Colombia, while continuing to differentiate itself with its unparalleled expertise in medical cannabis and proprietary scientific evidence.

I hope this announcement is not lost in the positive response to the news that the government has reaffirmed medical cannabis for inclusion in the medical insurance plan but, in this version, coverage is mandated. With this agreement, Khiron and Zerenia™ has contracted with the largest Government-owned insurance company in Bogota with 1.2 million insured individuals to provide "Integrative Health Services and Pharmacotherapeutic Treatment with Medical Cannabis." This provides Khiron and Zerenia™ a marketing and branding advantage and opportunity to a extremely large number of people.

Conclusion: this was certainly good news that I reported last week was on the way. While the news did not reach the broader international markets until the January 5, 2023, it was widely publicized in Colombia



earlier in the week. Here is a screenshot of a Spanish-language news report on the leading news channel in Colombia on January 4, 2023. You will note that the background shot is of Khiron/Zerenia™ products. You can't buy that sort of publicity. In my opinion, the Khiron/Zerenia™ brand for medical cannabis is already well established in Bogota and Colombia but the recently announced agreement with the largest government-owned health insurer in Bogota will solidify its standing.

These charts show the share price of **Khiron Life Sciences** ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)) responded well to the positive news which hasn't always been the



case. In my opinion, this means KHRN had reached a rock bottom price and KHRNW the stock have developed a small but growing market following



that is watching them and will respond to good news. This has not always been the case.

As regular readers know, in the financial markets there is always the next issue to think about. What worries me at this time is investors will see the recent jump in the stock price as an opportunity to sell. I think this would be a tragic error. Although the recent bump up in the price of the shares and warrants



looks substantial (and it was in terms of recent stock prices), it is really nothing in the context of the longer term. Here is the four-year chart of KHRN. From this perspective, last week's market was very important in the short term but almost immaterial in the long term. As I like to remind people, to recover a 50% decline, you need a 100% advance. I first brought KHRN to the attention of readers on the other side of that early 2019 peak so I am looking for a lot more than \$0.10 per share on the

stock. Certainly a dime is better than a nickel but it is far short of a dollar or two.

I certainly think you should hold on to **Khiron Life Sciences** ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)), following its recovery move last week. In fact, I think it is still a hot buy. KHRN is not out of the woods yet but I believe the risk/reward ratio is very attractive. As founder and Chief Executive Officer, Alvaro Torres said with respect to the affirmation of medical cannabis for Colombia's health insurance plan and the agreement with the largest government-owned insurer in Bogota,

“These two achievements, will allow us to revert to predictable recurring revenues, shorter collection periods and improved cashflow.”

Special Report: May 2, 2022

Khiron Life Sciences Shareholder Conference Call

Khiron Life Sciences ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)) had their conference call recently to review fiscal 2021 annual and fourth quarter results. As usual, it made me realize once again what an amazing job Alvaro Torres and his team have done and are doing. This is my summary of a one-hour call. I have identified some added observations that confirm KHRN's success added at the end. Enjoy!

Alvaro Torres, CEO, Khiron Life Sciences:

The results for 2022 so far begin to show how unique and strong we are. We are growing in each market we are in. We have a unique way of capturing and retaining patients in Latin America and Europe. We have very high margins.

2021 Milestones:

- Revenue was \$12.8 million up 60% in 2021
- \$4.6 million in cannabis revenue or 36% of total 2021 revenue
- 79% growth rate over past five quarters.
- It appears medical cannabis revenue will exceed health services revenue in 2022
- Gross margins from the medical cannabis revenue stream of over 73% for the year
- Colombian gross margins of 85% and European gross margins of 55%.
- Gross margins in the health services division increased to 20.5% In 2021.
- Gross profits reached \$4.9 million, up 230% YoY
- Europe now accounts for over 30% of our cannabis sales
- Europe will be an increasingly important driver of our growth in 2022
- These overall results were accomplished under very difficult circumstances
- We are looking at revenue of \$4.5 million in Q1 2022.
- In March we exceeded \$1 million in cannabis sales worldwide which is just getting started
- We had 140,000 patient interactions in 2021, an increase of over 40%.
- In the first quarter of 2022, patient interactions were already at 41,000

- In March and April we were running around 16,000 per month
- Directors and Officers Insurance costs will decline from \$2.2 million to \$350,000 in 2022.
- In 2021, general and administrative expenses declined 15% YoY
- We do not need a cultivation license and operation in Uruguay. We export from Colombia
- Similarly, we stopped selling the Kuida wellness line so we took a write-off there as well
- Expect to be cash neutral by the end of the current fiscal year (December 2022) due to expense reductions and high margins.

We are selling medical cannabis in Colombia, Peru, the U.K., Germany and Brazil and have high expectations that we will be selling in Mexico very soon. We are just completing construction of our first clinic in Rio de Janeiro, Brazil. We have shown we can grow during very difficult circumstances. Our brand is one of the leaders in Latin America and the U.K. Our revenue stream is made up of:

1. **Health services:** we offer medical services to people with chronic pain, mental pain, sleep disorders and other health conditions. This is a funnel that enables us to introduce sales of high margin medical cannabis products.
2. **Medical cannabis:** focus is on educating doctors, producing and sourcing high quality medical cannabis products and creating brand loyalty. In Q1 of 2022, medical cannabis sales exceeded the revenue to our health services division and represented 55% of sales.

In 2022, we expect leading markets to be Colombia and the U.K. and total sales of medical cannabis to exceed revenue from health services.

Medical insurance coverage is an important factor and we operate in two countries that have health plans covering medical cannabis: Colombia and Germany. In 2021, we sold 52,000 oil-based cannabis units and over 68% of those were covered by insurance. Today, over 80% of units sold are covered by insurance. Also in 2021, 60% of all patients with medical cannabis were returning patients and in March 2022, 75% were returning patients. The key toward building sustainable growth is having a brand and returning patients because they see the value of using medical cannabis. Also, the cost of retaining a patient is less than acquiring a new one. We have strong patient flow and high conversion rates to medical cannabis and we're just getting started. This is also helping us develop a lot of data that we are now taking to other countries and regions to help us there. With the right data and product mix, doctors are assured we can help them treat their patients.

Peru accounts for around 5% of medical cannabis sales but it is even more important because it is the first country where we have been able to register a finished CBD medical cannabis product and very soon we will have our first registered THC medical cannabis product. Our next step is to export those products for sale throughout the rest of Latin America. We are also working on being able to import high THC product into Peru. All of this will become increasingly important in the second half of 2022.

In Mexico, we have always had a major opportunity and we are about to realize on this potential. We have already been educating doctors and medical professionals, so we have people who are ready to prescribe. We have made a partnership with Teleton that has 24 clinics and 600,000 patients. We have to deal with regulatory matters in Mexico that are out of our control but we are ready to get started.

Franziska (Franzi) Katterbach, President Khiron Europe:

Khiron entered the European market in 2019 with a strategy combining our clinics and a high quality and agile supply chain allowing us to make an impact on the European cannabis market as well as diversifying our revenue stream and providing more growth opportunities. In 2021, we made an important contribution to Khiron's operating results. In the fourth quarter of 2021, we were 40% of Khiron's medical cannabis revenues and in 2022 we will continue to grow. We have an understanding of medical cannabis based on our knowledge gained in Latin America plus the incredible amount of historical evidence from our clinics that we add to every day combined with our strong local team.

2021 was a challenging year for everyone but we were able to build a presence in the U.K. and Germany that are two of the largest markets in Europe. Our Khiron 20/1 flower (18% – 22% THC and <1% CBD by weight) is the most prescribed in the U.K. and our Khiron 114 is the most popular CBD dominant flower in the German market. We can take advantage of this momentum to increase our market share and expand our medical sales with additional flower and extracts.

Germany has a progressive medical cannabis law that includes coverage by statutory health insurance and is undoubtedly the largest and most mature cannabis market in Europe. But the true potential for cannabis patients remains untapped and that is opportunity for us. In 2021, we launched Khiron 114 that enjoyed great popularity among prescribers and patients and that allowed us to positively influence the discussion in the German public on the topic of medical cannabis. We also have a strong focus on constantly educating medical prescribers on our product. This will continue in 2022.

Khiron has a comparatively long history in the U.K. market that we entered in 2019 as a founding member and exclusive Latin American supplier for Project 2021. As we have in Germany, Khiron has a focus on educating doctors and we continue to build out our medical training for health care professionals using our fully digital education platform – Khiron Academy. We opened the first Zerenia™ clinic there in November 2021 which was a major milestone. With the popularity of our Khiron 20/1 product and our growing team of experts there, the outlook remains very positive.

Question: Margins: Answer Torres: We made some changes with our auditors on the way we record our revenue in certain regions as principals and not agents which had an impact. But in the first quarter of 2022, our Latin America gross margin was 85% and our European gross margin was between 55% and 65%. We are currently negotiating with suppliers on price and we are not seeing any price decreases in our top line sales.

Question: Patients/Retention: Answer Torres: Our patient interactions will always have a slight seasonal effect because in the fourth quarter a lot of people are on holiday. In the first quarter of 2022, we had 41,000 patient interactions but in March and April we were already running around 16,000 per month.

Our patient interactions will grow with new clinics and the expansion of the number of services for patients in the clinics. As these figures show we are already seeing this happen. It is always cheaper for us to be able to retain a patient than get a new one but our cost of attracting a new patient is also declining as we make it easier for the patients to get to our clinics. Also, as more insurance companies are available to our patients in the 2nd and 3rd quarters, I think we will see that number continue to grow.

Question: Costs: **Answer Torres:** one of the big issues was our Directors and Officers insurance costs that were around \$2.2 million last year where we have been able to negotiate a much better rate of around \$350,000 this year. Also, we did have some sales and marketing expenses for the Kuida line which we have stopped, at least for now.

Question: Europe – U.K. or Germany: **Answer Katterbach:** Germany was our largest European market in 2021 but by the fourth quarter we could see a trend developing with the U.K. picking up. In the fourth quarter I would say the clinic opening and the popularity of our high THC flower drove sales. I would describe our position in the U.K. as dominant. In Germany we are seeing a pickup in health insurance reimbursements which is a good sign. It means our internal group educating doctors is starting to have an effect. This should continue in 2022 and beyond. For the year, I think we will probably see a close to 50/50 sales relationship continue.

Question: Growth vs Capital: **Answer Torres:** We are not looking at much more capex in Colombia because we have just had a couple of major openings. The other thing we are working on is to shorten the 90-day period it takes to get reimbursements from the insurance companies in Colombia. We are also looking for ways to fund our working capital needs without creating dilution. The more we can point out to finance companies that we are an international operator and not just a small, Colombian company, the better our chances. If we are able to make an agreement, it will help us greatly.

Question: How long to reach potential in Germany: **Answer Katterbach:** Cannabis is not self-selling. Sales depend on educating the doctors and this takes some time and money. We see the results every day. Looking at the pharmacies and the insurance reimbursements, there is constant growth. The key is to “own” the doctors with our training and our data. Once you do that, you end up with a very loyal prescriber base. We are currently around 100,000 patients in Germany and the potential is in the millions if you project from the experience with the number of medical cannabis users in a legalized jurisdiction like Canada.

Question: Other countries in Europe: **Answer Katterbach:** There are other open markets that we are watching very closely like Poland or Czechoslovakia. There is also France which launched a trial over the next couple of years. Italy could be interesting. For Khiron, we first look at revenue potential. For example, the French pilot project requires the dispensation of cannabis for free so this is not a fit for us at this time. Another market with great potential is the United States. They have an unusual model because you can cultivate medical cannabis but you can’t sell it. However, they are looking at changing their regulatory framework.

Question: Sales guidance: Answer Torres: We are looking at \$22 to \$28 million of revenue this year driven mostly by cannabis sales in Colombia, Germany and the U.K. with Mexico projected to make a top line contribution in November. We are seeing growth continue so there is nothing exceptional that has to happen to achieve these levels. We are very comfortable with that kind of top line expectation.

Katterbach added the coalition government in Germany has already said they plan to legalize adult use cannabis. We don't know how and when this is going to happen but it would be a major opportunity for us. We have the product and we have the supply chain so this could be very important for Khiron.

Here are a couple of questions I asked Alvaro Torres after the conference call.

Can your cash last until you break even? We face the challenge of continuous growth and to have the working capital that is required. In Colombia and Germany, most of our sales are covered by government health insurance and it takes 90 – 120 days to get reimbursed. We have to be able to reduce that time or finance our receivables for that period of time. I've been working on this for three months or so and it is taking time to get it done. We are actually creating our own problem because of our high growth. If our sales through government health plans in Colombia and Germany double, the amount we have to finance for 90 days or more also doubles.

How is the clinic in Brazil coming along? We have to coordinate getting our product into Brazil when the clinic opens. Right now we can meet the sales guidance from Colombia, the U.K. and Germany. So the Zerenia™ clinic in Rio is under construction and we will try to time the completion for when we are able to have the product ready.

But we are in such a unique position. We have the number one selling brand of medical cannabis in Colombia where we have a really, really dominant market share. We have the top selling brand in the U.K. Who would have thought that we would ever be in this position? And we are in a very good place in Germany. So that is our real focus right now because these markets produce revenue and a high gross margin. That is why it is so important to get that cash flow in.

In this quarter, sales in Europe will exceed sales in Latin America which is unbelievable if you were looking ahead from 2 – 3 years ago. Of course, things will swing back in 2023 when we expect to be operating in Mexico and Brazil but no one is doing what we are doing.

We are like all investors and shareholders. I am disappointed in the stock and the financial markets. But Khiron is not the stock and the stock is not Khiron. Cannabis is not going to go away any time soon. The Colombian people want more medical cannabis. The German people want more medical cannabis and so do the people in the United Kingdom. We are a small company based in Colombia that has been able to dominate these three markets and we will keep doing it. Every day we sell more medical cannabis than the day before. Nobody else can make such a claim. No one can do what we are doing the way we are doing it. When we publish our first quarter report, everyone will see our growth continued and this is still early days for the industry so the growth will keep going. Our challenge is getting our receivables turned into cash faster. Don't forget we have no debt. We don't owe anyone, anything.

Conclusion: For the umpteenth time in a row, **Khiron Life Sciences** ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)) Chief Executive Officer Alvaro Torres explained how the company is able to execute its business plan over and over. Franzi Katterbach expressed it in a slightly different way when she said, “Medical cannabis isn’t self-selling.” Time after time, both Torres and Katterbach reiterated how important it was to educate doctors or prescribers to be successful in selling medical cannabis. With their evidence-based model, KHRN continues to demonstrate high rates of sales growth coupled with high gross margin on medical cannabis sales.

The markets have always had a problem fairly reflecting KHRN’s achievements, in my opinion. However, I see the major reduction in D&O insurance costs as a third party upgrading and re-evaluation of KHRN and its business. Travellers Insurance says, “Directors and Officers (D&O) liability insurance protects your organization's directors and officers from personal financial loss that may result from allegations and lawsuits of wrongful acts or mismanagement carried out in their appointed capacity. Wrongful acts may include...misrepresentation to shareholders, creditors and others....”

Many small cap companies cannot attract qualified Directors or Officers without such protection. Clearly, the liability insurance companies have sharply upgraded their view of Khiron; their business and risks. I suggest the markets will be next.

KHRN also makes the more difficult decisions. During the pandemic, KHRN moved their Kuida line of CBD infused skin products to the back burner. Now they have turned off the heat. Kuida will still be there but for the foreseeable future they will not be spending any money on the project. In addition, they no longer need their cultivation license and assets in Uruguay because they can outsource product. KHRN has taken steps to clean up the balance sheet by writing off items related to the above.

Torres also provided sales guidance for fiscal 2022 of between \$22 - \$28 million assuming business as usual in existing markets and revenue from Mexico starting in November. The number is not a great revelation. If first quarter sales are approximately \$4.5 million, that’s \$18 million annualized without any growth. Annual sales of \$22 million is a growth of 22% in the final three quarters and \$28 million is growth of 55% over the balance of the year. These targets are comfortably in range.

What is important to me is that up until now, management has not considered it prudent to provide revenue guidance and now they do. This means in management’s eyes the revenue streams are large enough, strong enough and assured enough to make a revenue projection. Again, this is another indication of how KHRN’s business is changing and becoming more sustainable and, therefore, more predictable. They are not generating one-off sales. Their revenue stream has become reproduceable with a 75% patient retention rate. To me, this is an important sign of positive growth in the business.

With a market cap of \$31 million based on Yahoo Finance, KHRN looks very undervalued trading at around 1.1 to 1.4 times a conservative estimate of 2022 sales.

As an analyst/investment advisor/portfolio manager for many years, in my eyes Khiron Life Sciences ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#)) is a large cap



company in small cap clothing. They have a well thought out business plan that is working. They have a data base that is a valuable intellectual property



that is currently adding 16,000 patient interactions per month and growing. They have substantial growth potential in the markets they are in and they expect to add Mexico later this year with other new markets available if they choose. Management is telling us in an indirect manner that their business has matured to the point where they can issue sales guidance for investors. Their Directors and Officers insurer has made a major upgrade in their assessment of certain risks involving KHRN leading to a substantial reduction in insurance premiums this year. The market assessment will catch on eventually and when it does, in my view the results will be spectacularly rewarding. The beating handed out by the markets last week carried KHRN to price levels that make current prices seem like an extremely attractive buying opportunity.

Alvaro Torres has put together an excellent team to carry out the plan they have developed over time. KHRN is a stock you can buy for your grandchildren and they will thank you.

Khiron Life Sciences ([TSXV: KHRN](#)) ([OTCQX: KHRNF](#)) ([TSXV: KHRN-WT.V](#)) ([Frankfurt: A2JMZC](#))

announced it has formed a partnership with Fundación Teletón, the world's largest non-profit organization for children with physical disabilities, cancer and autism. In Mexico, Teletón has 22 Rehabilitation Centers, 1 Autism Center and 1 Children's Hospital for Cancer and has treated 454,000 people since 1999. According to a March 9, 2021 article by Emilia Acevedo in Winter 2021 Digital Print – Sana Sana titled 'Fundación Teletón: A Makeshift Mexican Hero During COVID,' "Fundación Teletón has been a national hero in Mexico and a source of pride for Mexican society, earning recognition from many Latin American countries since its foundation in 1997."

The partnership between Khiron Life Sciences and Fundación Teletón includes:

- Establishment of Khiron's Zerenia™ medical cannabis clinics within Teletón's network in Mexico.
- Distribution of Khiron's medical cannabis products in Teletón's pharmacies.
- Training of Teletón's Health Care Practitioners on delivery of medical cannabis.

The news was well received and when you read and appreciate the backstory, you will understand why KHRN is able to accomplish things beyond the reach of most other cannabis companies.

To put those times into perspective, cannabis had been illegal in Mexico since 1920 but personal possession of small amounts was decriminalized in 2009 and low THC cannabis was legalized for medical purposes in 2017. This was back when the recently minted cannabis stocks were still soaring high. Licensed producers such as Canopy Growth, Aphria and Aurora Cannabis were drowning in cash. Mexico was touted as the next big thing in cannabis with a population over three times as large as Canada that made it prospectively the largest cannabis market in the world.

As a result, when KHRN announced the appointment of Mr. Vicente Fox, former President of Mexico, as a director on July 17, 2018, it was a real feather in their cap. President Fox was an internationally recognized cannabis advocate and the word on the street was there had been other major cannabis companies recruiting him. Three months later, on October 31, 2018 when the Supreme Court of Mexico declared the prohibition of cannabis was unconstitutional and ordered the Congress of Mexico to formally legalize cannabis within 90 days, it appeared there were no hurdles left.

Then we learned lessons about the Mexican government as they missed the Supreme Court deadline several times with the court extending its deadline each time. As 2018 turned into 2019 that became 2020 and eventually 2021, the Chamber of Deputies, effectively the lower house of the Mexican government, passed a bill legalizing adult use marijuana on March 10, 2021 but when it was not voted on by the Senate (upper house), the Supreme Court legalized adult use cannabis on June 28, 2021.

Early on as these delays continued, KHRN remained interested in Mexico and President Fox stayed committed to KHRN but everyone realized there might be a delay. KHRN maintained an interest in Mexico but focussed on other regions and we now know. However, with the Mexican Supreme Court action, in July 2021, KHRN CEO Alvaro Torres travelled to Mexico and held several days of meetings with the largest hospitals in Mexico City. Torres and the team still had to do the work but President Fox made introductions at the highest levels to people that Torres refers to as “the decision makers.” In fact, Fundación Teletón was their first meeting of that week.

Since that time, KHRN’s Mexico team has been working quietly but steadily with the people at Teletón. Of course, it helped that KHRN had their proprietary data to show how much cannabis had benefitted patients in Colombia and how. But it should be no surprise that it was also very important to Teletón to be sure they weren’t going to be embarrassed by this entry into the emerging medical cannabis field and partnership with KHRN. The cherry on top was the statement by Arturo Pichardo, Corporate Medical Director of Teletón who said, “Teletón and Khiron's Zerenia™ clinic network complement each other perfectly with our strong patient focus, as we share the same values about our common mission. This partnership is good news for patients with various medical conditions throughout Mexico.” As a result, when the partnership was announced, KHRN’s stature in Mexico was immediately and dramatically elevated and that can only lead to additional acquisitions/agreements to come.

As Torres said in our earlier interview, KHRN is still waiting for a license to import their medical cannabis products into Mexico. When that happens, KHRN will probably be the first or at least one of the first granted the necessary approvals. In the meantime, they will have been busy educating doctors. It shouldn’t be overlooked that the press release reminded everyone, “Khiron has also partnered with

Mexico's top university Tecnológico de Monterrey to provide medical cannabis training to doctors across the country, based on Khiron's education programs and real-world evidence from its Zerenia™ clinics across Latin America.”

Summary: I have spoken to CEO Alvaro Torres and been in touch with Board Chair Chris Naprawa and I could sense their excitement. Of course, I am also very optimistic about the partnership with Fundación Teletón that has 24 centres in Mexico compared to the 16 clinics currently operated by KHRN globally. If by the end of 2023, KHRN has added a Zerenia™ clinic associated with each Teletón centre, that will not only keep KHRN extremely busy in Latin America, it could also mean half of KHRN's Zerenia™ clinics will be in Mexico in some 21 months. This probably won't happen, not because Mexico this growth wasn't accomplished in Mexico but because KHRN plans to open a Zerenia™ clinic in Brazil next month which has a population over 60% larger again than Mexico.

The growth potential of Brazil is also exciting.

As I think about what KHRN has accomplished in Mexico, I feel confident in saying no one else could have done it as well in that timeframe. Not only that I don't think anyone else can do it starting today. No one else has the intellectual property in the form of real-world data on cannabis. No one else has the ability to educate doctors on prescribing cannabis. Finally, no one else has the team of people with the leadership abilities of Alvaro Torres supported by senior management including Chris Naprawa and Juan Diego Alvarez, to name a couple and a strong team with boots on the ground to work with.

If I look back over the previous two years and see what KHRN has accomplished in Mexico from a medical cannabis perspective, I think their accomplishments over the next two years will be just as impressive because I understand KHRN plans to expand rapidly in Mexico. Even without taking into account Brazil that is coming up next, Mexico converts KHRN's hold on Latin America into a stranglehold. And at the same time as Torres told us in the previous interview, things are going extremely well in Europe.

Conclusion: the news on Mexico appears to have gained some traction with investors as both the stock price and the warrants moved strongly higher as shown and not only held but continued to build on those gains. Perhaps it is because Mexico is one of the largest Latin American markets. If that is so, you will be interested to know that the first Zerenia™ clinic is expected to open in Brazil next month. By population, Brazil is the largest addressable market in Latin America with a 60% larger population than Mexico. On the other hand, it might be because KHRN Director Vicente Fox is a former President of Mexico and has played in active role in KHRN's activities there.

Although it is difficult to match being a former country President, let's not forget Dr. Eduardo Faveret has been the Medical Director for KHRN in Brazil since July 2021. In 2013, Dr. Faveret was one of the first Brazilian physicians to prescribe medical cannabis and has treated over 3,000 patients since.

Dr. Faveret's introduction said he "...will lead patient prescriptions, physician outreach and education, and data-driven product development for Khiron in Brazil, leveraging relationships and deep medical cannabis expertise developed throughout 30-year career." In discussions with KHRN CEO Torres, I know the

company is will positioned to expand Zerenia™ clinics in key cities following the addition of Dr. Faveret and initial sales in Brazil in July 2021.

This means in the very near term, **Khiron** [\(TSXV: KHRN\)](#) [\(OTCQX: KHRNF\)](#) [\(TSXV: KHRN-WT.V\)](#) will



be expanding its Colombian base into two of the largest markets in LatAm, that is, Mexico and Brazil. In addition, the Company is enjoying



strong growth in Europe in the U.K. and German markets. I think the financial markets are about to give KHRN the respect that has been lacking for several years and shareholders will be the winner. I believe a reappraisal of KHRN is just getting started so it's not too late to establish a new position or to add to existing holdings.

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