



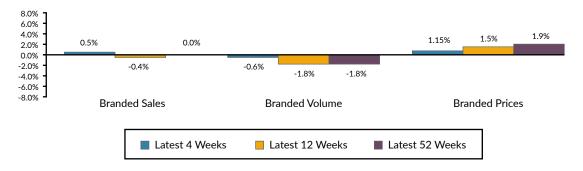
CANNABIS: UP IN SMOKE OR A PENDING BOOM?

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Today's consumer products companies are desperate for growth.

Most major brands, across multiple categories, have a very difficult time differentiating themselves from their competition. Just count the number of different cereal boxes at your local grocery store. Better yet, type "cereal" in Amazon and you get over 6,000 results! The industry has struggled with the issue of profitability and organic growth for many years and many CPG (consumer packaged goods) companies have maintained margins by tenacious focus on cost cutting. The graph below illustrates the pressures the branded food industry is undergoing. Pay particular attention to the negative volume growth. This is for the period ending 10/6/2018 across 103 categories.

Branded Food Industry Metrics



Source: Citi Research and The Nielsen Company (AOC+C)

As a result, the CPG sector is struggling to answer several fundamental questions. Is bigger better? Should we focus on emerging markets? Should we spin off non-core assets (code for "we are losing money with this product")? These are some of the questions management teams are asking themselves. But there is one particular question that has never been considered as an option until a couple of years ago. It appears that major consumer companies are looking outside of their traditional product portfolio in search of high growth opportunities. Yesterday, the hot commodity may have been pet food, today, it's cannabis. In the U.S., this has been somewhat of a taboo subject for major corporations to consider but times have clearly changed. In this paper we explore the opportunities, risks, and key players thus far.

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BACKGROUND: LEGAL ENVIRONMENT GAINING MOMENTUM

On October 17th, Canada became the second country in the world (after Uruguay) to legalize marijuana for both medicinal and recreational use. The expectation of this event has resulted in a massive demand for access to the key cannabis companies in Canada. Investors, bankers, and major corporations are becoming much more comfortable with the sector while also providing a substantial amount of capital for growth. Cannabis focused ETFs have emerged and several venture capital firms dedicated to the sector are growing. The evolution of the cannabis sector in Canada could help set the stage for a similar move in the U.S. The number of states allowing some level of legal cannabis use continues to increase and while it remains illegal at the federal level, momentum for legalized marijuana is growing across the U.S. The following graph shows the progression of support over the last fifty years.

US Poll Data: American support for legalizing marijuana continues to rise

"Do you think the use of marijuana should be made legal or not?"



Source: YouGov, Gallup Data

Even though this issue is backed significantly by more Democrats, Republican support also continues to grow. The stigma of marijuana usage is changing, which may be helping support its legalization.

MEDICINAL BENEFITS ARE GROWING

The medicinal importance is real and well documented for such conditions as epilepsy, chronic pain, and for the treatment of PTSD. The use of natural/holistic modes of treatment have become more popular and given the negatives associated with opioids for pain management, the use of marijuana to manage pain is a growing alternative. In fact, the state of Illinois just signed into law The Alternatives to Opioids Act which allows patients who have been prescribed opioid-based drugs to instead get a temporary medical-cannabis card. Thus far, it appears that we have only begun to explore the ways in which cannabis could be used for the treatment of other ailments and conditions. In addition, the way in which the chemicals in cannabis are transmitted into the body has evolved. In addition to smoking the traditional marijuana cigarette, cannabis can be vaporized, eaten (edible), or taken as an extract (pill or oil). The medicinal portion of the business would more than likely utilize the expertise of players in the pharmaceutical and medical testing industries. Involving these industries in the process would help speed the opportunities for new cannabis based medicines given the very costly and time consuming steps for approving a new drug in the U.S.

MARKET POTENTIAL IS HUGE

The size of the potential market for cannabis is very large. The United Nations estimates that the current size of the global market is \$150 billion on an annual basis. They believe that 3.9% of the global adult population (190 million) uses cannabis which compares to about 1 billion smokers of tobacco. Constellation Brands estimates that the global market will be over \$200 billion in 15 years. In the U.S., the current illicit market is estimated to be around \$50 billion. The graph below compares this market to other major consumer categories in the U.S. The graph was provided by Constellation Brands during a presentation at the Barclays Consumer Staples Conference.

Beer 117
Cigarettes 77
Wine 65
Spirits 58
Total Cannabis

Estimated US Cannabis Sales vs. Other US CPG Categories (US\$ Billions)

Source: Constellation Brands

Barclays has created a unique framework to estimate the size of the cannabis market. They consider four scenarios which take into account different levels of regulation. The scenario which takes into account a world where cannabis is legal grows from \$185 billion today to \$272 billion in ten years.

CONSUMER ATTRACTION

Most of the recent interest in cannabis is centered on its recreational benefits. Several major consumer product companies are considering the market, including the threat to their own products. So far, most of the action has been from beverage companies, including: Coca-Cola, Diageo, and Constellation Brands. The level of interest has ranged from rumors or speculation to major investment. This interest could easily extend to the tobacco companies and healthcare-related industries. As of this writing Bloomberg posted the following headline, "Altria in talks to buy stake in cannabis company Aphria." Walmart has also said that it is exploring selling cannabis products in Canada. So far, the biggest move has been from Constellation Brands which recently announced a \$4 billion investment in Canopy Growth Corporation. The following is a marketing piece from Lagunitas, which is owned by Heineken. After taking a look at it you should better understand the angle the beverage companies are working. This particular product is currently available in dispensaries throughout California.

"This IPA-inspired sparkling beverage is made using everything Lagunitas knows about hops — but with zero alcohol, zero calories, and zero carbs. Infused with THC from the finest, sun-grown cannabis at

AbsoluteXtracts. It's good to have friends!"

Generally, those companies potentially impacted by the legalization of cannabis have started with relatively small investments in order to get a more intimate understanding of the business. This has been done through joint venture (JV) agreements or measured equity investments. In August 2018,



Molson Coors and The Hydropothecary Corporation announced a standalone JV with plans to develop non-alcoholic, cannabis infused beverages for the Canadian market. Constellation Brands began its foray into the business with a 9.9% equity stake in Canopy Growth for a cost of C\$245 million. As the relationship between these companies strengthened, Constellation increased its stake to 38% for a cost of C\$5 billion. As part of the transaction, Constellation will nominate four directors to Canopy Growth's seven member Board of Directors. Constellation will issue high grade bonds to pay for the transaction. Effectively, management is using its mature industries (beer, wine, spirits) to invest in a potential high growth area. We project the company will get back to its pre-acquisition leverage in about two years after suspending share repurchase and using cash flow to reduce debt.

GOVERNMENT ANGLE

There is also a big opportunity for government to enjoy the tax revenue from cannabis sales. We would expect that excise tax on cannabis to be aggressive, similar to tobacco. When Colorado legalized marijuana in 2014, total taxes were about 30%. California has a 15% statewide tax on all medicinal and recreational cannabis products plus other taxes. According to CFN Media, in 2016, the sale of medicinal cannabis was about \$2.7 billion in California alone. This number could exceed \$5 billion in 2018 given the change to legal recreational usage. With this big growth opportunity comes job creation at all types of skill levels (scientists, retail) and pay scales. According to BDS Analytics, 121,000 people were employed in the cannabis industry in 2017. BDS predicts that number could more than double by 2021.

BROAD SCALE LEGALIZATION HAS MAJOR RISKS

While there appears to be great potential for growth in cannabis there are some very important risks to consider. First, and foremost is the legal and political risk. If the regulatory environment for marijuana doesn't continue to open up then the upside is greatly reduced. Earlier, we mentioned Barclay's framework for market growth. One of the scenarios assumes today's legal environment is unchanged in 2028. In that case, the market grows to \$40 billion instead of the \$272 billion described above. Another risk is that cannabis just isn't as profitable as expected. Government has to examine the impact taxes have on the demand for cannabis in the illegal market. Too much tax and buyers will continue to utilize the black market which will impact sales for legitimate business owners. This is well documented in the tobacco industry. According to British American Tobacco, over 480 billion cigarettes are sold illegally each year.

Also, consideration needs to be given to cannabis as a commodity much like any other agricultural crop. There are better places in the world to grow marijuana than Canada. A flood of cannabis from open borders in Mexico, for example, could drive down prices and impact margins. This could make it less profitable for companies and governments. Finally, there is a substantial risk that negative health developments would change the demand for cannabis products, as we have witnessed in the tobacco industry. These developments could become more pronounced as the user rate across the world grows and as science and research around cannabis progresses. Concerns include the impact on brain functionality (especially for children), a path to heavier drug usage, and long term mental effects. Regulating the use of cannabis would be a large undertaking. Educating users on issues like secondhand smoke and the impact of using marijuana while pregnant would be absolutely necessary. Also, there would need to be enforcement regarding driving while under the influence or where/who is able to buy cannabis products. These kinds of concerns are complicated and solutions would take time to develop.

KEY TAKEAWAYS

The topic of cannabis has created a lot of interest lately. A more friendly legal environment in North America has led to a major capital raise for the industry in Canada. Those involved are well known consumer based companies with lots of money and the hope to capitalize on a potential growth opportunity. In addition, there is a medicinal side to the business which is very exciting given positive results for a list of specific indications which is expected to grow. The opportunity is not without major risk. Developing the cannabis industry to the size anticipated will magnify related social issues and health benefits/liabilities. The potential seems to be there if managed in a responsible way. We expect the breadth of interest in the cannabis industry to grow. Why stop at the beverage angle? Why shouldn't food companies be exploring the opportunity for edible products or cosmetic companies incorporating cannabis ingredients in their skin products? In any case, it is imperative that peripheral industries assess the threat or opportunity and invest accordingly.

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