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U.S. Cannabis Business Conditions Survey Report

Q4 '21

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Including but not limited to:

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And the Whitney Economics team of Matt Jarvis, Beau Wilbdering, Nancy Gauvreau, and Jeff Wyborny

EXECUTIVE SUMMARY

Despite nearly seven years of legal sales, cannabis and hemp policymaking continues to be done largely without the benefit of supporting economic data. While most lawmakers create policy to promote regulation and control, few have had to consider making policy from the perspective of growing the economic viability of a nascent industry. Still fewer policymakers ask cannabis industry operators from within their states or localities for input on what they need to succeed and what factors are currently limiting their growth.

A Baseline of Data for Cannabis

In light of the many bills being promoted at the federal level (MORE ACT, CAO, SAFE Banking, The Mace Bill, the Joyce Bill), Whitney Economics, with the support of regulators, trade associations and cannabis influencers, went directly to operators in the cannabis industry with the Q4 2021 Cannabis Business Conditions and Operator Sentiment Survey. The objective of the survey was to establish a baseline of data, and identify the successes and the challenges that operators in the industry are facing. The 20 question survey was deployed throughout October 2021, received responses from operators and stakeholders in 20 states, and examined policy, regulatory issues, industry successes and overall industry sentiment.

Informing Policy Makers With Quality Data

Policymakers should have access to quality data in order to make informed decisions, and it is our hope that they leverage this report on an ongoing basis to discern those issues that are most relevant to key stakeholders in the cannabis industry. For regulators and policy makers, this survey presents data that highlights a disconnect between proposed policies and

the critical issues the still-nascent industry is facing. To some observers of the industry, there were some obvious conclusions. Other data may reveal surprises.

Key findings contained in the report:

- The industry is hurting. Only 42% of respondents are turning a profit. Women respondents and non-white respondents are faring much worse in terms of profitability.
- While there are several successes to be celebrated, the concerns of the industry are weighing heavier on the minds of operators and this is impacting industry sentiment.
- Operators are equally as pessimistic as they are optimistic, however, profitability does not play as large a role in that sentiment as does lack of banking, market volatility, and state and federal taxation.
- Despite the desire for inclusion and social equity, most respondents are struggling to survive, placing a greater importance on existential threats.

INTRODUCTION:

In October 2021, Whitney Economics deployed a national survey to cannabis operators and ancillary businesses to get their take on the state of the cannabis industry. The results of the survey, along with insights and impacts are contained in this report.

Cannabis remains illegal at the federal level. Although regulatory programs have been deployed at the state level since 2014, little is known about the industry as a whole. The lack of national systemically-derived data is significantly inhibiting the ability to analyze the market. Federal cannabis specific policies are conflicting with other broader federal policies intended to help small business owners, drive economic development, and address social justice issues. Currently, based upon the data, there are wide gaps between what the cannabis industry needs to grow, mature and flourish and what are being proposed in state and federal legislation. To date, most narratives correctly identify the conflicts in policy, but did not have the data to back up these claims. The data from this survey is intended to help identify key issues from the cannabis industry perspective and allow stakeholders to identify gaps in policies at the state and federal level and the needs of the cannabis industry as a whole.

To illustrate how little is known about the cannabis industry, here are a few examples of the common public perceptions and the realities facing the cannabis industry:

Perception: Everyone is making money and therefore, can pay higher taxes with ease

Reality: Based on the survey, 42% of cannabis respondents claimed they were making a profit and that excessive taxation was one of the most significant issues facing the industry

Perception: The cannabis industry is a niche market. The industry is new, run by unsophisticated operators, and it must therefore be regulated as such

Reality: The cannabis industry is decades old, is very complex and is experienced in operating in an unregulated environment. Overall, the cannabis industry generates sales (illicit and legal combined) in excess of \$100 billion. In 2021, cannabis is forecasted to generate over \$25 billion in legal medical and adult-use revenues. It is forecasted to generate \$45 billion in revenue by 2025. In 2021, there were over 35,000 cannabis licenses issued in 39 states, employing more than 400,000 workers. If the cannabis industry were its own country, it would have a GDP larger than over 120 countries.

Perception: States and the federal government have created a regulatory environment for cannabis that is supportive of growth, inclusion and opportunities for all.

Reality: Rules and regulations are not harmonized and are often in conflict with one another. To some respondents, regulations are driving consolidation, while picking winners and losers. To other respondents, regulations do not go far enough to support their business and the overall growth of the industry.

Regulatory policy is very challenging to create and implement, and there is not yet a "One-size-fits-all" regulatory model for states to emulate.

Perception: The cannabis industry is thriving and the outlook is very positive.

Reality: Most operators are not experiencing jubilation at all. In fact, the confidence in the current and future environment could be characterized as subdued.

It is due to mis-perceptions like these that mis-matches are occurring between the needs of the industry and the policies that are deployed at both the state and federal levels. **It is the intention of this survey to identify key issues facing the cannabis industry and to give cannabis operators a voice at the table, so that mismatches are reduced.**

COMMENT ON CANNABIS POLICY

Cannabis Regulation in the Current Policy Making Environment

There is mixed news with regard to cannabis policy. State regulatory programs are developing, and there are some examples of successful state programs. There is little commonality among states when it comes to regulating cannabis, however. Reform is crucial for the cannabis industry to grow, even at the state level, but federal policy making is moving very slowly. Federal policy toward cannabis businesses does not consider the states, and state regulations do not consider the impact of heavy federal taxes. Additionally, interstate commerce of cannabis is illegal. There has been significant conversation around social equity and social justice in the cannabis space, including in the introduction of the CAO (Cannabis Administration and Opportunity Act).

Current Narrative By Survey Respondents Operating In The U.S. Cannabis Industry

Survey respondents voiced a wide variety of opinions about what policy reforms are needed, and there is unity around a few key issues. First, most survey respondents struggle with IRS code 280E; it represents a massive burden to them. Second, business owners in the cannabis space agree that the industry needs access to financial services, including commercial banking and business credit. Third, cannabis business operators in mature state markets are looking at interstate commerce, as they try to address price instability from oversupply in the legal market, and competition from the illicit market.

Survey respondents wish for their businesses to be treated, regulated and taxed 'like a normal business.' Respondents are asking regulators to support industry growth, and not suppress it.

ABOUT THE WHITNEY ECONOMICS CANNABIS BUSINESS CONDITIONS AND OPERATOR SENTIMENT SURVEY

More data = more transparency = more confidence in the market.

This survey and report are the first in what will become a series of surveys, deployed quarterly directly to cannabis operators across the United States. It has been developed to understand and measure operator sentiment and business conditions across the U.S. cannabis industries.

Whitney Economics has a history of asking farmers, processors, retailers and ancillary businesses about their views on the marketplace. In continuation with this tradition, Whitney Economics has developed a national survey of cannabis operators and ancillary businesses, in order to get their take on the state of the cannabis industry and establish a baseline of data. The results of the survey, along with insights and impacts are contained in this report.

Data on the cannabis industry is hard to come by. There are few if any federal databases available to

access cannabis data from. Yet, without federal systems that help data collection, like NAICS classifications and available banking, the unintended consequences at the federal level are that the government is perpetuating a system where there is less data and less transparency, which results in low confidence. The data collected from the survey will be provided to operators, regulators and policy makers to help key stakeholders make informed decisions and potentially help close the gaps between policies and the industry.

The Whitney Economics quarterly survey of U.S. cannabis operator sentiment and business conditions is the first of its kind. With nearly 400 respondents, the survey captured data across every level of the value chain, including a broad set of ancillary businesses. Approximately 1% of U.S. cannabis licenses were represented in the survey, with the vast majority of respondents coming from the western United States. Despite the strong initial showing of 396 U.S. cannabis license holders, future surveys will aim for for an overall response rate of 3% or approximately 1,100 respondents of the more than 35,000 U.S. licenses currently held.

The initial volume of responses allows Whitney Economics to draw accurate conclusions about the overall market (95% confidence with +/-5% margin of error).

A larger volume of responses (1,000) would enable us to analyze the market in more granular detail, with expanded demographics, more comprehensive geographical coverage and with greater than 99% confidence.

The Q4 2021 Whitney Economics Cannabis Business Conditions and Operator Sentiment Survey was 20 questions long (See appendix #2 for details). It was built and tabulated in Survey Monkey. The average respondent took eight and a half minutes to complete, with a total of 396 respondents. This particular survey was longer than typical for Whitney Economics, as most deployed surveys take between three and five minutes to complete.

Methodology:

From a methodological perspective, there were three general types of questions:

- 1) Questions associated with demographics (Qty: 4)
- 2) Questions intended to definitively answer a specific question (Qty: 9, example Y/N)
- 3) Questions with the opportunity for multiple responses or respondent commentary (Qty:7)

Once the survey was closed, the data was supplemented in two ways:

- 1) We identified which U.S. state was represented by the respondent, removing zip code for security purposes
- 2) We categorized state cannabis markets as either being **emerging markets or mature markets**. We define mature markets as those five state markets that initially deployed adult use cannabis programs from 2014-2016: California, Colorado, Washington, Oregon. Alaska is also considered to be a mature state market, but we did not receive any responses from that state.

Data Correlation Analysis using “R”:

Correlation analysis was run on the data, focusing particularly on demographics and sector affiliations. Correlation data was run using “R” software. In some instances, the sample sizes were too small to generate results with high confidence levels and adjustments to the methodology had to be made. For example, there was not a sufficient number of self-identified African American responses to generate statistically viable results; however when we examine self-identified white vs. non-white groups, sample sizes were sufficiently large enough to formulate results with confidence. With survey data categorized and correlations identified, the Whitney Economics team has documented the results and generated this report.

Survey coverage:

Overall, 1.1% of all U.S. cannabis licensees were represented, with test (5.9%), delivery (3.0%) and processing/manufacturing (2.2%) making up the largest share of their sectors' licensees. No major licensing category received less than 1.2% of all licensees in that category. Other ancillary groups represented were insurance, branding and marketing, advocacy, consulting, materials suppliers and even state legislators.

Distribution of the survey:

While some state regulators (Oregon, for example) deployed the survey directly to its licensees, Whitney Economics also leveraged trade associations (NCIA, NCR, USCC, OCA) and on-line educational platforms to reach out to their licensees / membership as well. Ancillary business responses were also solicited and made up nearly 3% of the total responses. To avoid any bias, Whitney Economics did not receive any compensation for this survey. In addition, with the exception of personal identifiable information, the report is being provided for free to those who took the survey and requested the information. The data is being provided to those who helped distribute the survey.

20 States, and Regional Bias.

There were responses from 20 states. There is a strong regional bias, as Oregon-based respondents made up 76% of the total. This fact demonstrates how influential the support of regulatory bodies can be with regard to survey participation. In future quarterly surveys, we will seek more active participation from regulatory agencies and associations, including CANRA. The large volume of respondents from Oregon is most welcome, and there are sufficient responses from other states to generate a strong sense of general trends throughout the U.S. cannabis industry

Continuing Efforts To Refine and Improve this Quarterly Survey

Whitney Economics is pleased with the results from an overall participation standpoint. It is our goal in future quarterly operator sentiment surveys to capture a larger data set, which will provide deeper insight and greater understanding of the U.S. Cannabis market. In particular, we would like to capture more granular demographic detail, and also capture more detailed information about the business entities themselves.

We will continue to glean both qualitative and quantitative survey responses, as they shed light on how issues are experienced on an individual level. In future surveys, we will standardize the format of our questions to avoid any misinterpretation of questions by respondents. We will also feature special topics in these surveys, in order to capture sentiment about hot button issues in the U.S. cannabis space.

Goals for continuing success include growing the overall number of survey respondents. More survey respondents will allow a far more granular analysis of the industry. We anticipate that the distribution of these surveys will become far more broad-based and sophisticated over time. This survey will continue to target every medical and adult use state, province, protectorate, commonwealth, reservation and separately classified area. This survey aims to maximize participation from licensees operating in every cannabis vertical. It aims to achieve representative diversity in the age, race and gender of license holders, the age of businesses, whether they are local or multi-state/ national, and by business sector.

Conclusion: High Confidence, Low Margin of Error

There can never be perfect confidence in the findings of this, or any, report, but there is a large enough of a volume of responses to speak with confidence on multiple aspects of the overall sentiment and direction of the industry, as reported by licensed operators. The initial volume of 396 respondents allows us to confidently draw specific, meaningful conclusions about the overall market (95% confidence with +/- 5% margin of error). Even though we captured data from operators in 20 states, similar to the sentiment contained in this report, we can do more, and that is our intention moving forward.

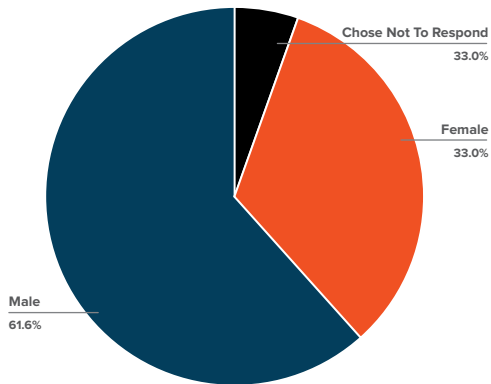


WHO RESPONDED TO THE CANNABIS BUSINESS CONDITIONS AND OPERATOR SENTIMENT SURVEY?

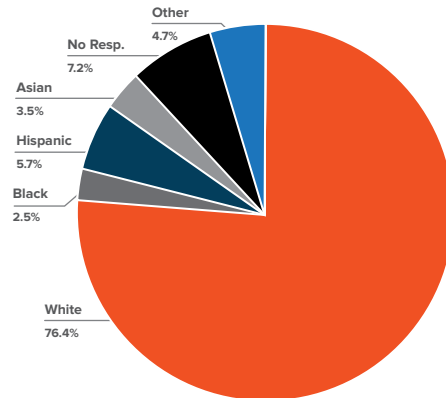
Survey Respondents:

This section examines the demographic and geographic makeup of the survey respondents

Gender Identity of Survey Respondents



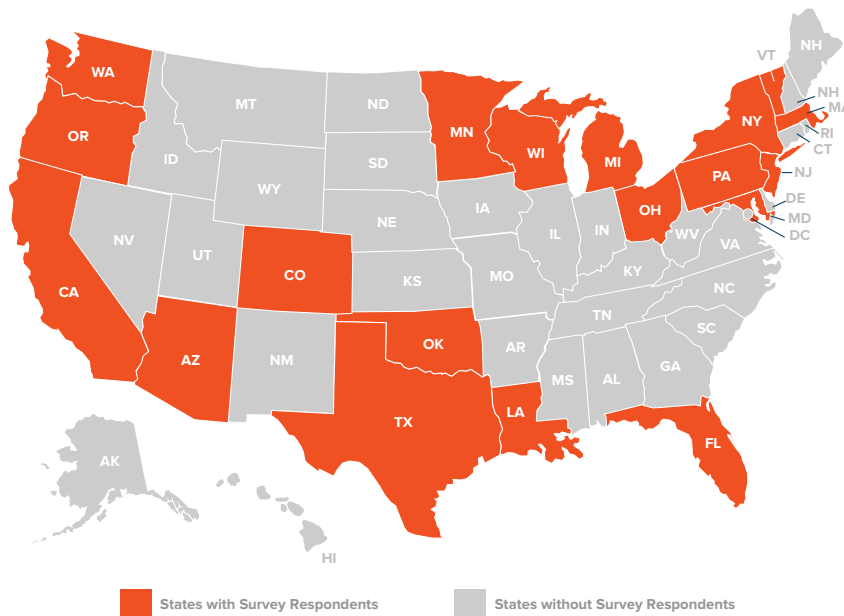
Survey Respondents By Race



Of the nearly 400 survey respondents, 33% identified as female, 61% of respondents identified themselves as male, and 5% of respondents chose not to respond. The majority of respondents to the survey were white. We did not gather enough data to draw any conclusions about specific minority groups, though we noted some trends when looking at the data through a white/non-white lens.

Respondents by State

396 respondents took the Q4 2021 Whitney Economics Cannabis Business Conditions and Operator Sentiment Survey. 20 U.S. states were represented, and the majority of respondents came from Washington, Oregon and California.



DATA AND FINDINGS:

General topics:

This section examines topics where respondents were given simple, limited choices to basic questions. Given the yes/no nature of the questions, responses are quantitative in nature and can be correlated to secondary and tertiary factors.

Profitability: Are you turning a profit?

The intent of this question was to learn the extent to which business operators in the cannabis space were profitable, and when combined with other responses, to determine if, and to what extent, the current regulatory environment is impacting cannabis operator profitability.

There is a general perception that cannabis operators are profitable. Terminology and comparators such as “gold rush” and “green rush” have often been used in the media to describe the cannabis industry. Cannabis policy is also often influenced by the perception that it is a highly profitable industry. When asked specifically about whether or not they are turning a profit, a majority of the respondents reported that they were not profitable. Only 42% of cannabis operators reported turning a profit.

Analysis:

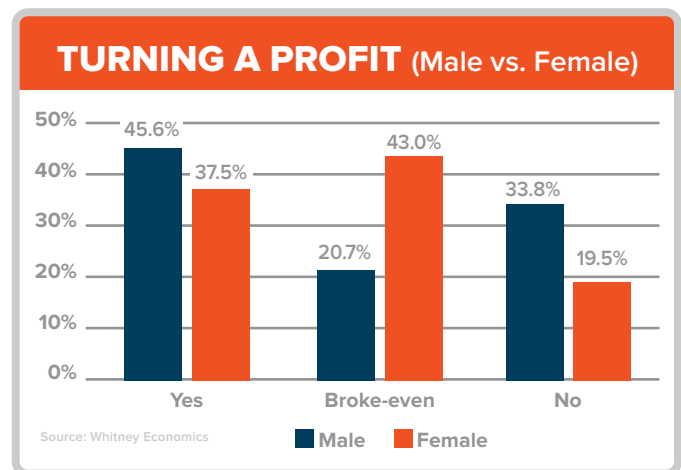
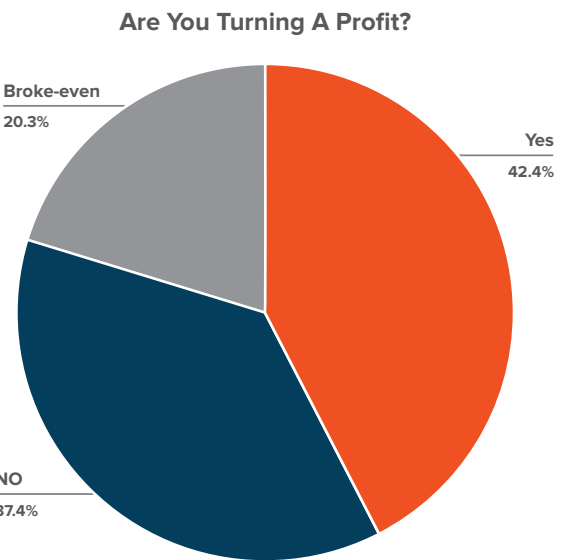
The largest group of respondents was 42%, and they responded that their cannabis businesses were profitable. 20% of the respondents reported making no money. The remaining 37% reported that their businesses are not profitable.

Mature Markets vs. Emerging Markets

We examined whether profitability was correlated with whether the business was in a mature cannabis state market, or an emerging market. We found there was little difference in profitability in mature versus emerging markets; the results were nearly the same, which implies a lack of any potential regional or mature/emerging market bias.

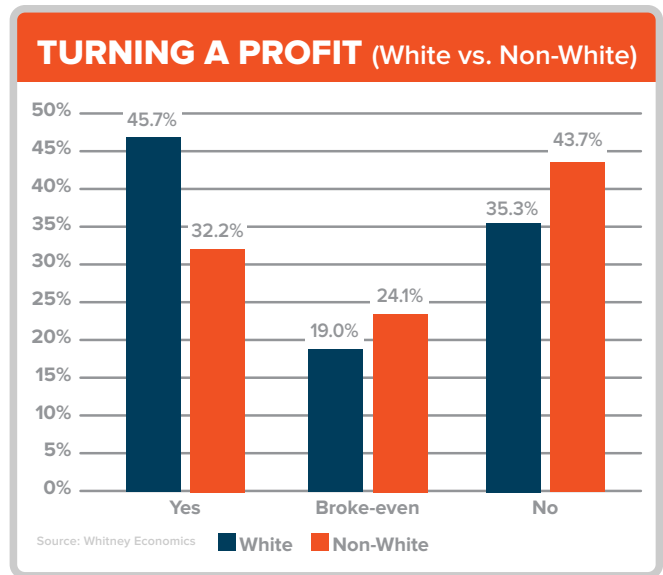
Profitability and Gender

When we examined reported profitability from a gender perspective, we learned that 45.6% of male respondents indicated they were turning a profit, versus 37.5% of female respondents. 62.5% of female respondents were not turning a profit and 54.4% of males were not turning a profit. However, of that 62.5%, female responses tended to indicate a break-even status 43.0% versus 20.7%, rather than losses (19.5% to 33.8%). Breaking this data down differently, 80.5% of female respondents reported either making a profit or breaking even, and 66.2% of male respondents were either profitable or breaking even.



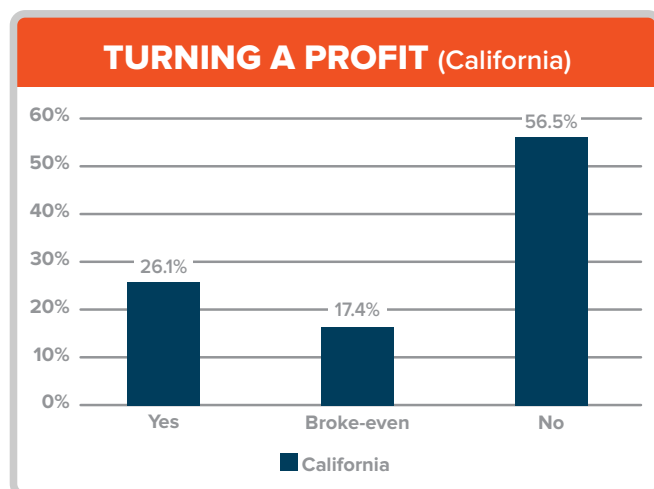
Profitability and Race

From a racial perspective there were not enough respondents who identified as African American, Hispanic, Native American or Asian in the responses to draw individual conclusions about their specific category. However, when responses are bifurcated between white respondents and non-white respondents, white respondents tended to fare better in all categories than non-white respondents. Less than half of respondents reported that their businesses were profitable, and only 32.2% of non-white business owners turned a profit. Of the remaining responses 43.7% of non-white respondents were not turning a profit with 24.1% breaking even.



California Results are an Outlier

California is the largest cannabis market in the United States and as a result, it has received a tremendous amount of focus from investors, operators and policy makers, both within the U.S. and globally. California tallied the second most responses from any of the 20 states represented in the survey. While the results from other states generally aligned with the overall results, in terms of profitability, California companies were significantly less profitable with only 26.1% of respondents reporting turning a profit and 56% reporting not, with 17.4% breaking even. California falls well below the National Profitability Average.



Profitability: Conclusions and Implications

From a demographic perspective, the data show that the further an operator is from being white and male, the less likely they are to be turning a profit in the U.S. cannabis market. The implication of this observation, which is based upon the data, is that current business conditions, including regulations and policies, are disproportionately impacting women-owned and minority-owned businesses. It is clear that operating a profitable cannabis business is not easy for anyone regardless of whether one is operating in an emerging state market or a mature state cannabis market. For the market to improve, systemic changes need to be made at both the state and federal levels. In their written responses, cannabis license owners were very vocal that their industry will need the support of state and federal policymakers in order to survive and prosper moving forward.



DO YOU FEEL THAT THE INDUSTRY IS HEADED IN THE RIGHT DIRECTION?

The intention of this question was to gain some clarity on whether operators have a positive, negative or neutral outlook of the hemp and cannabis industries. In typical economic analysis, business sentiment plays a large role in the pace of growth within the economy. Economies tend to grow when consumers and business leaders feel confident. Industries tend to experience less volatility and greater predictability as they become more mature and business practices become more normalized.

Cannabis in the United States is unique, because the country can be broken down into three distinct markets, the **Illicit Market**, which can be found in every state, the **Emerging State Markets**, and the **Mature State Markets**. Mature state markets serve as a harbinger, while emerging markets represent the economic potential of cannabis.

The Illicit Market - A majority of the U.S. market for cannabis operates in the illicit space, however most of the current growth is driven by growth in the emerging state markets in 2021, 75% of the U.S. demand was supported in the illicit market.

Emerging State Markets are those states that are transitioning from the illicit market to a medical regulatory market or from a medical structure to an adult-use regulated structure.

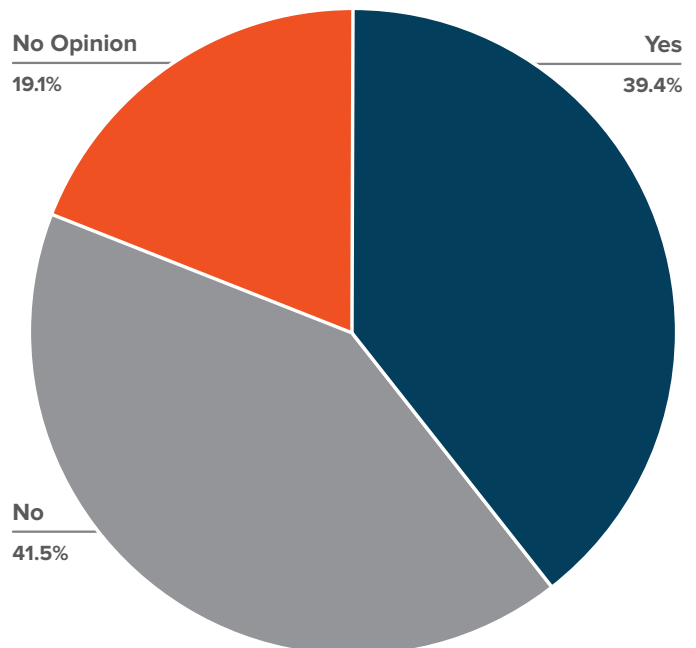
Mature State Markets are those that have had adult use cannabis programs the longest, and include Colorado, Washington, Oregon, Alaska and Maine.

Cannabis production has a long history, particularly in the mountains of northern California and southern Oregon, in the foothills of Kentucky and Tennessee, and in the northeastern states of Vermont and Maine. Many of the legacy operators in those places view the industry much differently than do the new market entrants. As the United States cannabis market

evolves, policy makers will be required to understand the nuances of cannabis culture. While the medical cannabis industry was originally smaller and focused on medical and wellness, it is becoming more commercial, more mainstream, and much more broad in its appeal. Whitney Economics is working to create an accurate picture of business sentiment at this point in time, to measure and understand how business sentiment has changed as the market has evolved, moving away from its illicit and legacy roots and maturing into a normalized national market.

Analysis:

Overall, responses on the direction of the market were equally divided. Based on the overall inputs roughly the same percentage of respondents feel the industry is headed in the right direction as they do in the wrong direction. 39.4% of respondents reported that the industry is headed in the right direction, 41.5% reported that the industry is not headed in the right direction, nearly 20% responded with no opinion at all.



Operators In Emerging Markets Currently View Industry Direction As Favorable

Digging deeper into the data, opinions related to the direction of the market shifted significantly depending upon the market’s stage of development. In newly emergent markets, operators view the direction of the cannabis market in a more positive way. In more mature markets, operators have a more pessimistic view of the direction the industry is taking. Those respondents in emerging markets such as Illinois, New Jersey, New York or Florida had a much more optimistic view of the direction of industry than did respondents from more mature markets such as Colorado, Washington and Oregon.

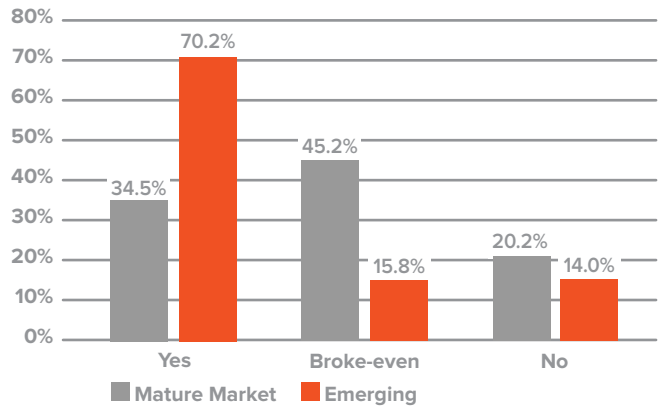
Operating In a Mature Market: a Larger Determinant of Confidence in the Right Direction Than Race or Gender

Market maturation played a larger role in the overall feelings about the direction of the market than did gender or race. There was little statistical difference about the opinion of the direction based on race or gender.

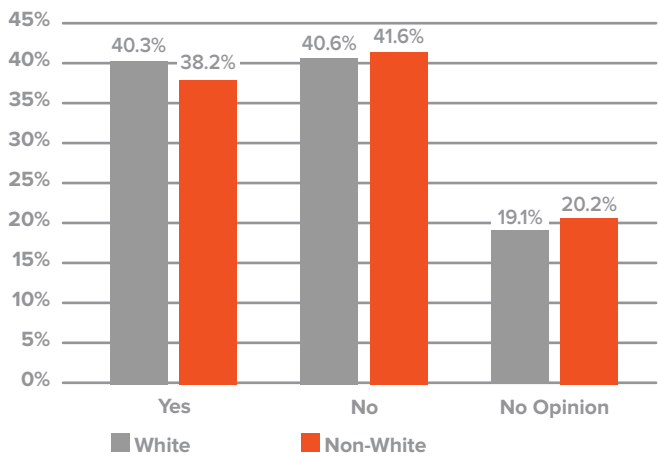
Women were more optimistic about the future of the industry than were men, but only slightly. Men were generally more likely to offer no opinion on the future of the U.S. cannabis industry

There is a strong correlation between profitability and having a positive view of the direction of the industry. In the case of those respondents who are profitable, but who still view the market’s direction with pessimism, respondents are overwhelmingly concerned with three key issues: safe banking, market volatility and state/federal taxes. Based on the qualitative inputs from the survey, it appears that much of this pessimism is borne more from serious operational regulatory-based issues than from whether the operation is profitable.

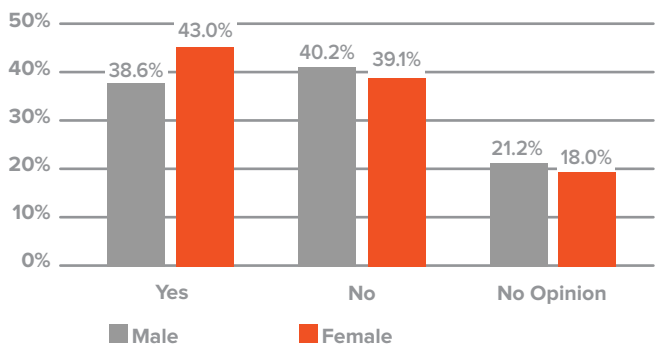
IS INDUSTRY HEADING IN RIGHT DIRECTION? (Emerging vs. Mature Markets)



IS INDUSTRY HEADING IN RIGHT DIRECTION? (White vs. Non-White)

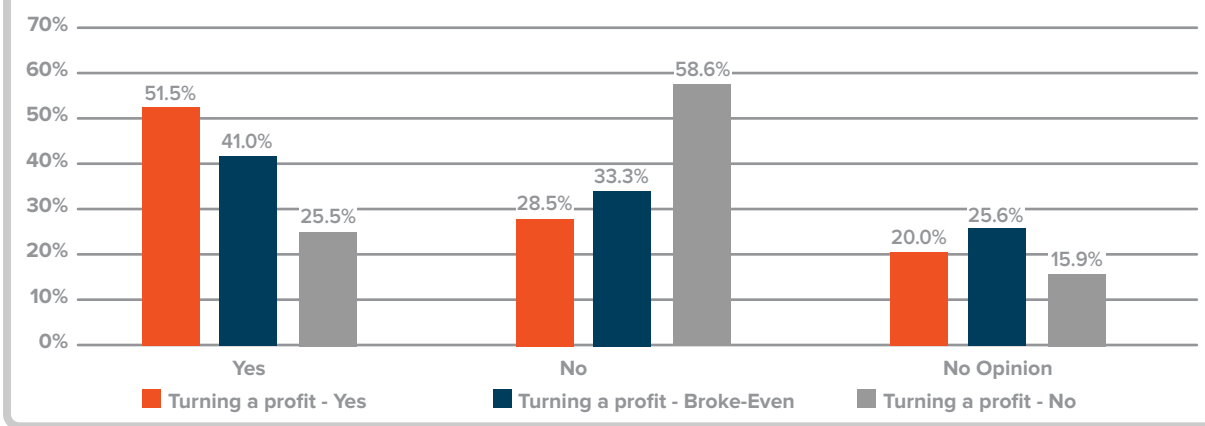


IS INDUSTRY HEADING IN RIGHT DIRECTION? (Male vs. Female)



IS INDUSTRY HEADING IN RIGHT DIRECTION?

(Based on Profitability)

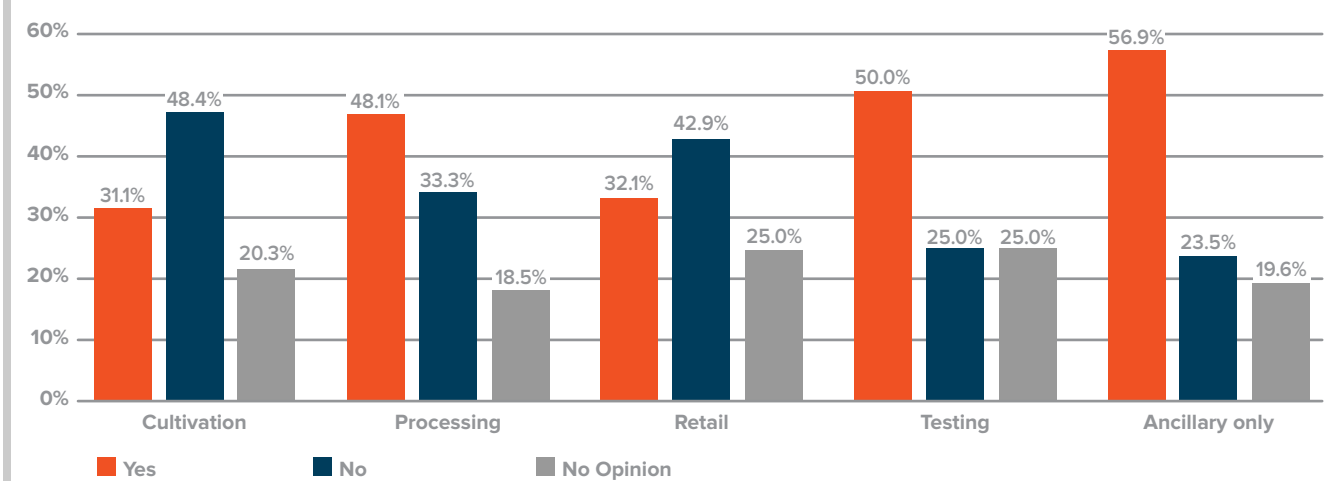


Relationship Between Market Sector and Optimism/Pessimism

Respondents from the Retail and Cultivation sectors were far more pessimistic about the overall direction of the U.S. cannabis industries, while Ancillary Businesses, Testing and Processing were more optimistic.

IS INDUSTRY HEADING IN RIGHT DIRECTION?

(By Sector)



Vertically Integrated Operators Are More Confident and More Optimistic

The survey showed very clearly that the more vertically integrated company is, the more optimistic the respondent felt about the future of the cannabis industry in the United States.

Is the industry headed in the right direction?	Yes	No	No Opinion
Vertically integrated 2 or more businesses	38.6%	45.6%	15.8%
Vertical +3 or more	42.9%	38.6%	18.6%
Vertical +4 or more	45.2%	35.7%	19.0%

CONCLUSION - OUTLOOK & IMPLICATIONS

Divided Outlooks on if the industry is headed in the right direction

Among survey respondents, the general sentiment on the direction of the market was obviously mixed. Outlooks and opinions among cannabis operators remain divided whether they are from mature versus emerging state markets, whether they are vertically integrated, or whether they are experiencing profit or loss. It is rare to find unity in confidence that any industry is moving in any direction, regardless of the industry. Sentiment associated with the general direction of an industry is a fundamental economic indicator. This is one of the reasons why we placed such emphasis on examining responses from so many perspectives. We should note that mixed responses are a common theme throughout this report, and that outlooks are also frequently contingent upon other factors like regulatory changes, federal reform or market maturation.

Implications

The implications of divided outlooks are significant. For investors and policy makers in the cannabis space, there is certainly not a one-size-fits-all approach that has worked well enough to be replicated. Cannabis industry operators should be aware that right now, based on the lack of consensus, the critical tools they need to deploy are disciplined focus, vision for their businesses, and planning in order to navigate during this period of uncertainty. It will continue to be important to secure business quickly and for an extended duration. Industry operators should continue to check in with their suppliers and clients to ensure they are still in business. Proactively working with suppliers and clients during uncertain times demonstrates good business practices and breeds deep loyalties.



BUSINESS CONFIDENCE: WHAT IS THE CONFIDENCE LEVEL FOR YOUR BUSINESS FOR THE NEXT YEAR?

The initial intention of this question was to measure the level of confidence that business operators have with regard to the next year. The question was also intended to enable Whitney Economics to compare the past year's successes with the upcoming year's outlook. Operator confidence can be used as a gauge to understand if there is a high degree of confidence in the current regulatory structure.

The survey provided respondents with five answers from which to choose.

1) No confidence - "I'm outta here" - The least amount of confidence and an implied business failure

2) Low confidence - "I hope I am still in business"

3) Medium confidence - "50/50: It's a toss up. Hopeful. Work still needs to be done"

4) High confidence - "Rocking it. Looking forward to next year"

5) Highest confidence - "We are going to crush it. We're positioned to win, and the sky's the limit!"

In traditional industries, business confidence is a leading economic indicator that is useful for accurately monitoring the current economic situation, and providing advanced warnings about potential inflection points in the economy. In the context of U.S. cannabis, low confidence could portend a shift in investment strategies or a decline in business health in general.

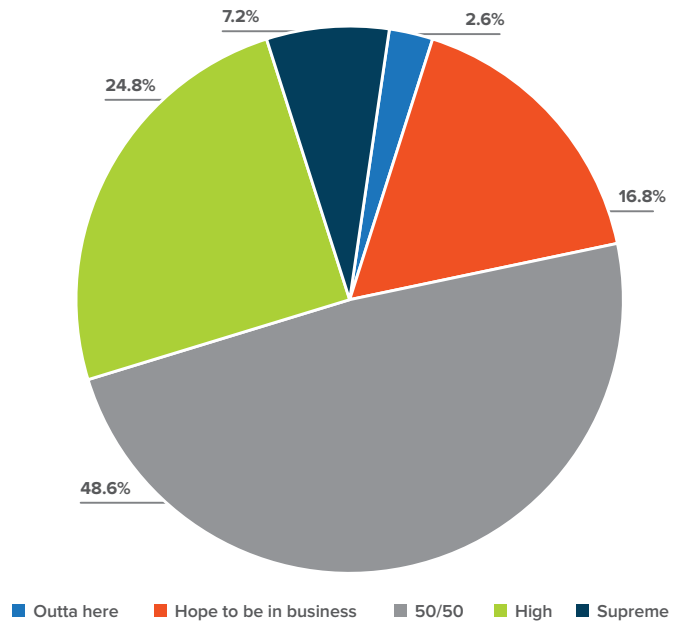
Overall Outlook. Mostly positive but 50% view it as a toss-up

Overall, there was more positive an outlook (32% of responses were High Confidence and Highest confidence) than negative (19.4% of responses were No Confidence and Low Confidence), however, nearly 50% (48.4%) responded that the next 12 months looks like a toss-up, and that work still needs to be done.

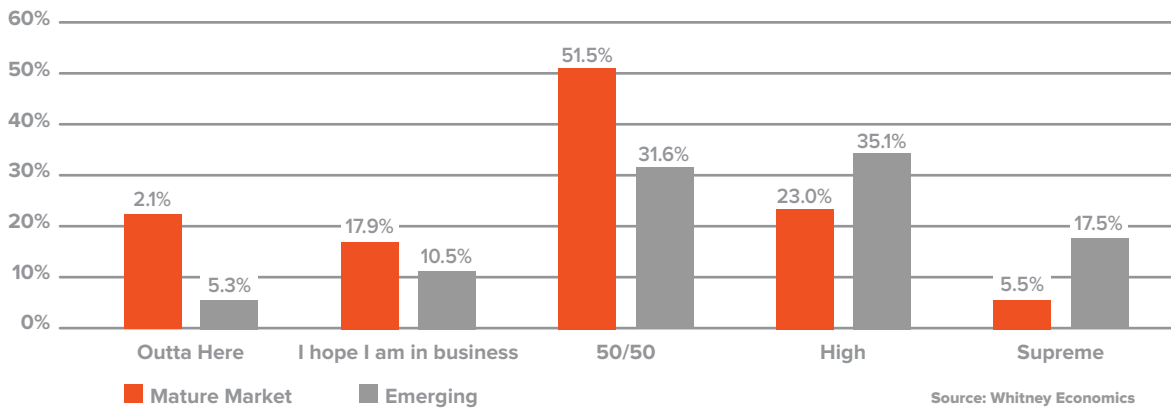
Confidence From Respondents In Emerging State Markets vs. Mature State Markets

Emerging markets had a significantly higher confidence level for the next 12 months, with 52.6% having a positive view (Responses 4&5) versus 28.5% of mature markets expressing a positive view. A majority of the difference in views between emerging and mature states landed in the toss-up category, with 51.5% of the mature states viewing the next 12 months as a toss-up versus 31.6% for emerging.

Overall Outlook for the Respondent's Business (Over the next 12 months)



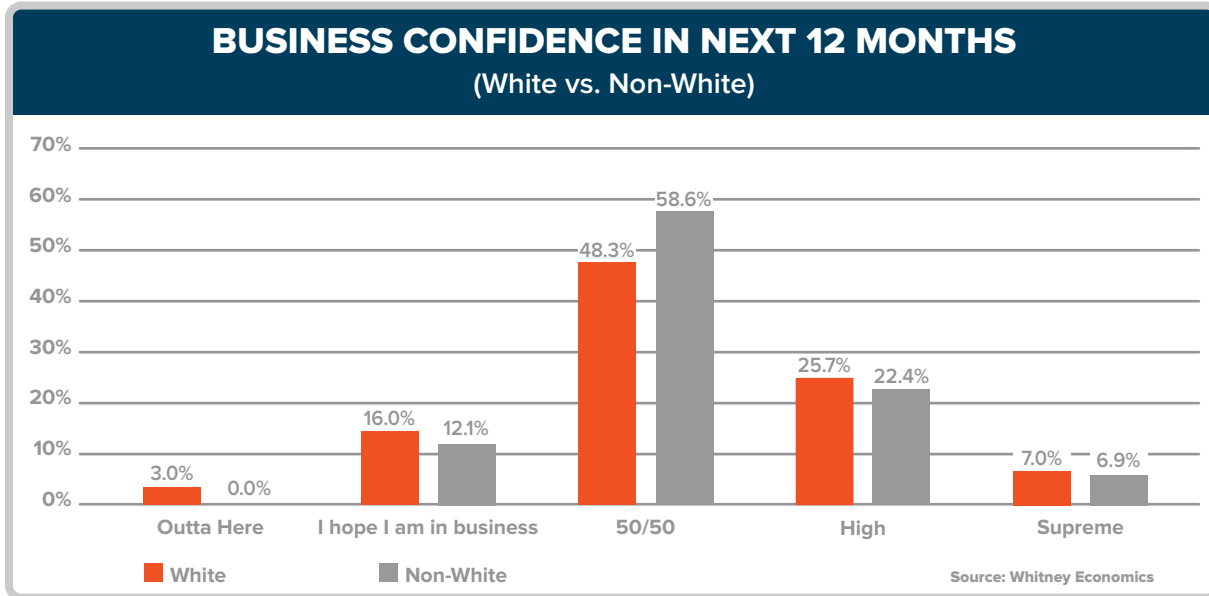
BUSINESS CONFIDENCE IN NEXT 12 MONTHS (Mature vs. Emerging)



Operator Confidence And Race

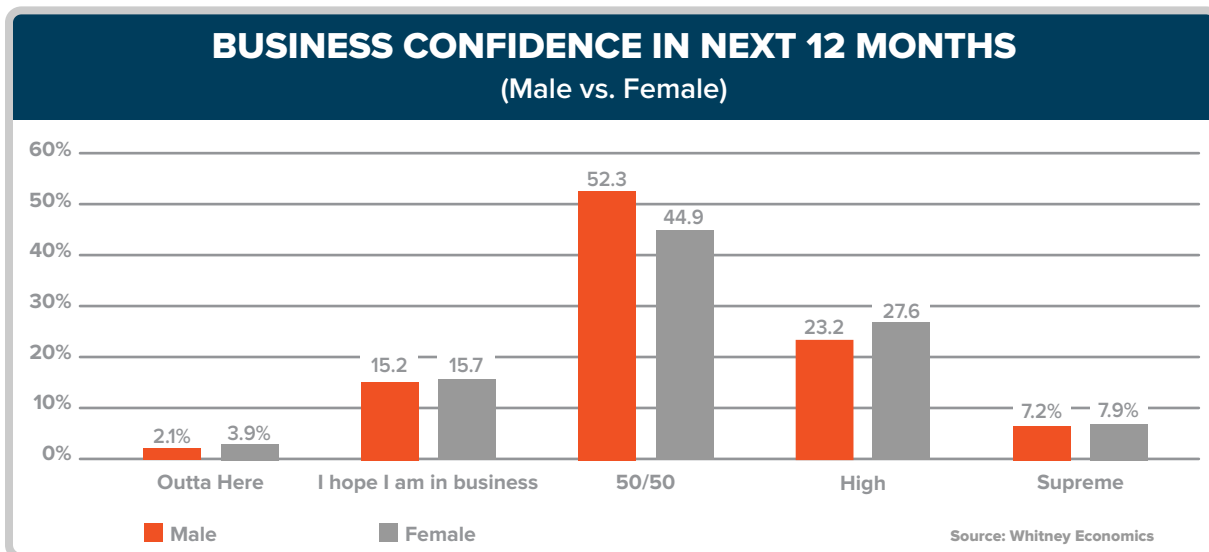
When broken down by race, white respondents had a slightly higher level of confidence (32.7%) than non-white (29.3%), however non-whites were more optimistic

overall with no responses recorded at the lowest level of confidence (outta here) and 12.1% low confidence, whereas whites had 19.0% negative responses.



Gender plays little determinable role in cannabis operator confidence levels for the next 12 months. Male and female respondents had very similar

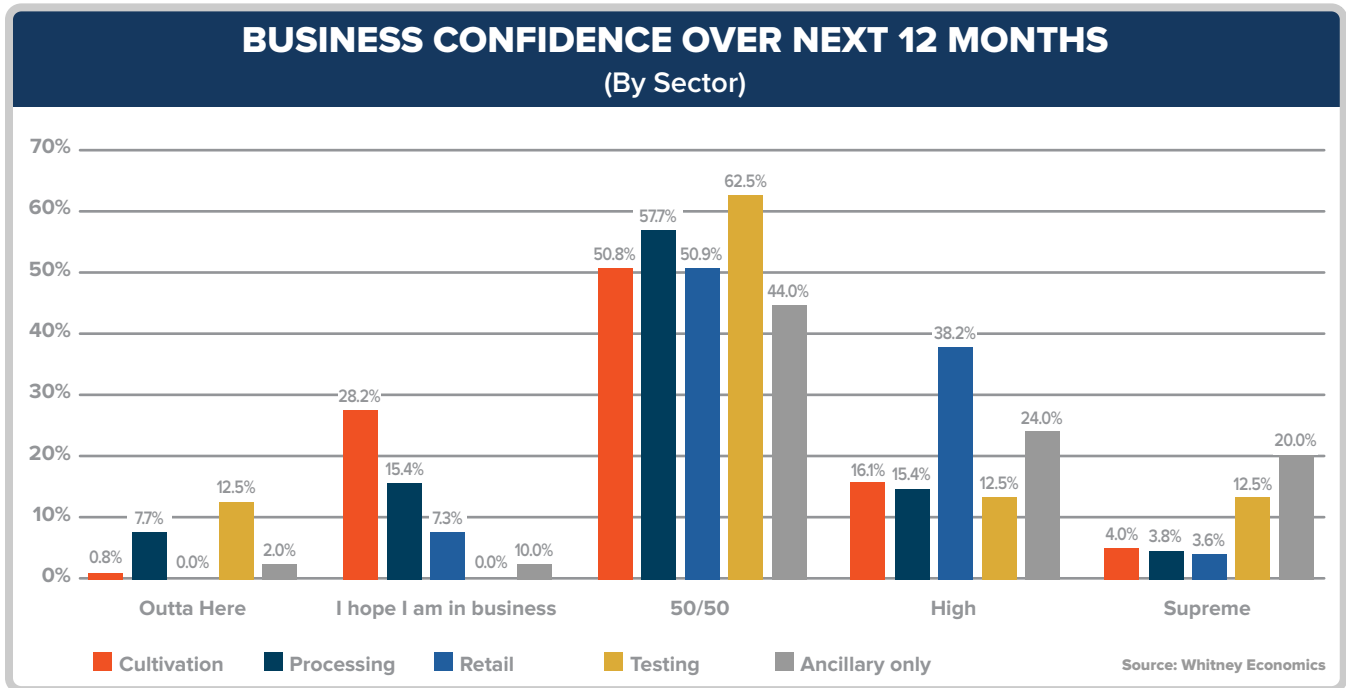
response rates, although females skewed positive, whereas males were more neutral.



Business Confidence By Sector

In terms of sector level confidence, what we found perhaps most surprising is that despite heavy federal taxes and a lack of banking, the retail sector has the highest level of confidence than any other sector

besides ancillary. This result was taken prior to the SAFE Banking act being removed from key federal legislation. Retail had no responses in the “outta here” category and 41.8% combined in the highest two levels of confidence.



What is your confidence level for your business in the next 12 months?	Outta Here	I hope I am in business	50/50	High	Supreme
Cultivation	0.8%	28.2%	50.8%	16.1%	4.0%
Processing	7.7%	15.4%	57.7%	15.4%	3.8%
Retail	0.0%	7.3%	50.9%	38.2%	3.6%
Testing	12.5%	0.0%	62.5%	12.5%	12.5%
Ancillary only	2.0%	10.0%	44.0%	24.0%	20.0%

Confidence and Vertical Integration

Data showed that confidence levels were higher than average among respondents who reported that their businesses are vertically integrated. It is generally true that in business, greater flexibility often leads to greater optimism, and therefore it stands to reason that if a

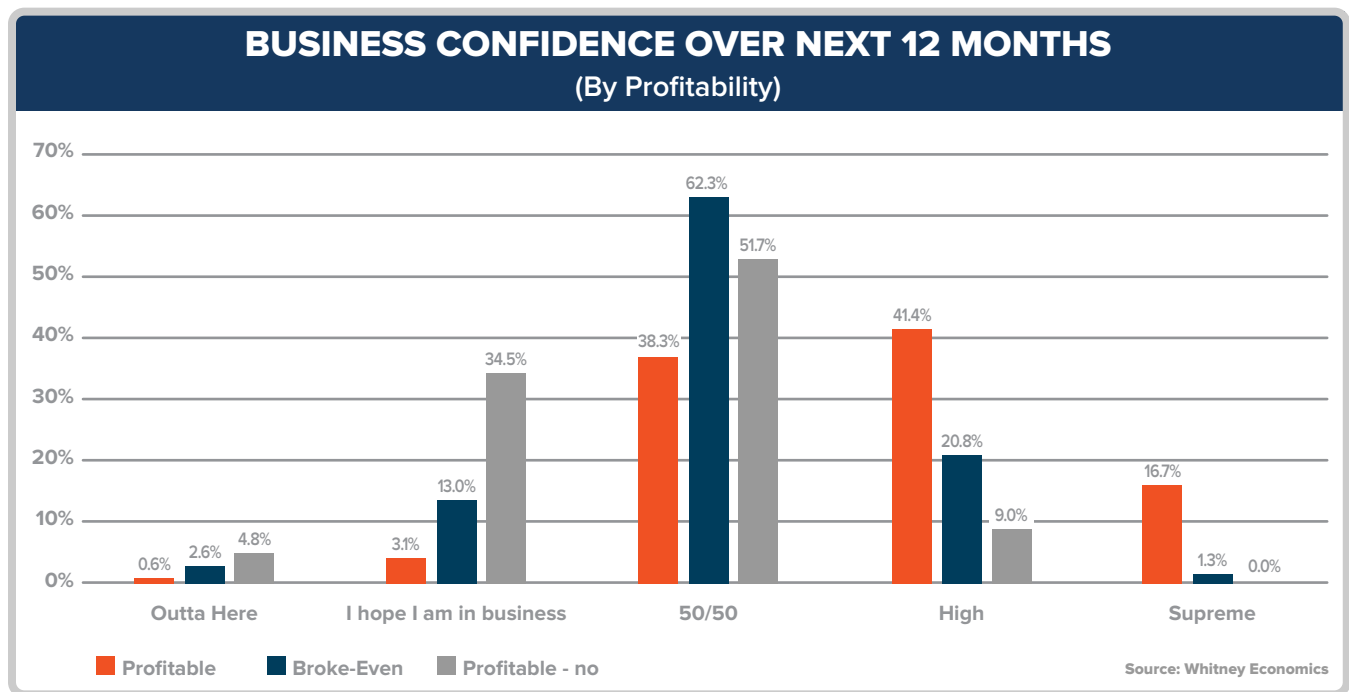
cannabis business has more options for success, then it will generally have a more positive future outlook. Those less vertically integrated businesses, which have fewer options for revenue generation, reported seeing vertically integrated competitors as an existential threat.

What is your confidence level for your business in the next 12 months?	Outta Here	I hope I am in business	50/50	High	Supreme
Vertically integrated 2 or more business	4.0%	14.0%	46.7%	26.7%	8.7%
vertical +3 or more	1.4%	6.8%	49.3%	32.9%	9.6%
vertical +4 or more	0.0%	4.8%	47.6%	38.1%	9.5%

Confidence and Profitability

Among cannabis industry operators, a confident outlook was understandably tied to profitability. There was a greater propensity for those who were profitable

to have an extremely high confidence in their future, whereas those operators who were not profitable, or who were simply breaking even, to have much less confidence in a positive outcome in the coming year.



Conclusions and Implications - The Most Confident and The Least Confident

Overall there was a low degree of confidence conveyed by cannabis industry operators in terms of what they expect over the next 12 months. Cannabis cultivation was the sector with the least amount of confidence in the future. This is unsurprising because cultivators are hit hardest when there is oversupply, and so they are subjected to the greatest price volatility. Demand for cannabis flower is the most elastic of any other product of which Whitney Economics is aware, and as such, oversupply in a

market creates a hyper-competitive environment for cultivators. If there is an over saturation of cultivation licenses, then cultivators are subjected to the greatest pricing variability and, due to the agricultural nature of their work, some of the greatest risk. Retailers also face tremendous risk, due to heavy taxes, but they are much more upbeat about the future of their businesses. In fact, no retail respondents are planning to leave the industry, and only 7% of retail respondents have a negative outlook. Ancillary businesses recorded the highest levels of confidence.



BUSINESS SUCCESSES: HOW IS IT GOING? PLEASE SELECT YOUR MOST SIGNIFICANT BUSINESS SUCCESSES SO FAR THIS YEAR.

This section will provide a combination of both quantitative data and qualitative response provided by the respondents on issues they face as an operator.

The intention of this question was to provide the opportunities for the survey respondent to celebrate the successes of their businesses. To provide an opportunity to highlight what is working so that it could then be compared against what is not working. This would also enable policy makers the opportunity to focus policies on improving the industry (by providing solutions) versus trying to implement policy solutions to things that are not broken.

Overall summary:

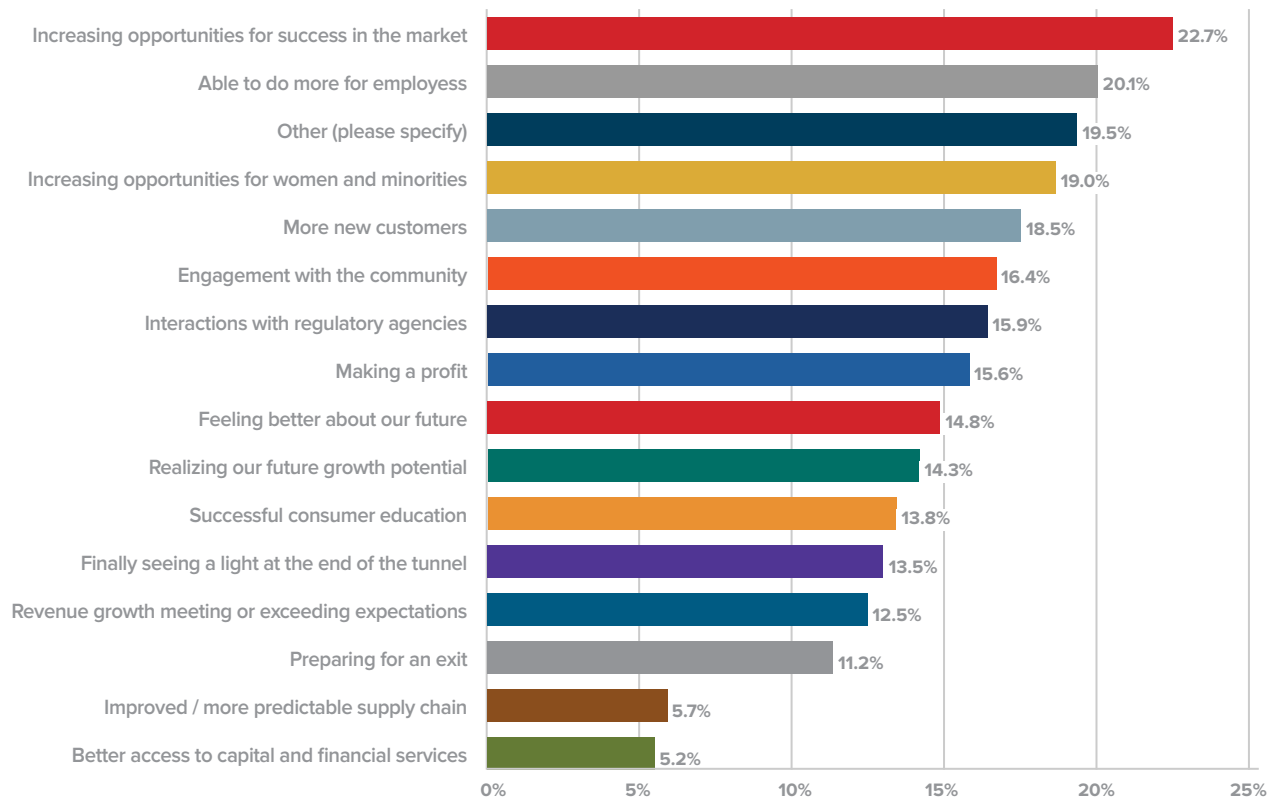
In general, there was no clear topic that rose to the level of the majority view. This implies that the results and successes are unique to each business. Although the survey gave the opportunity to choose as many successes as the respondent felt appropriate, the number of responses to this question (average 2.36) was far fewer than the average number of the responses to questions regarding the challenges the industry is facing (4.6).

Key Business Issues

Given that there was no general consensus regarding successes, of the leading responses one can infer

that generally owners were proud of their successes. They felt good about offering opportunities to their employees, to women and minorities and that they were educating the general public to the point where they were attracting new customers. Part of this sentiment may be skewed by the fact that Covid-19 significantly increased the level of demand in the market, but this fact should not diminish how one feels about their business. Given the fact that respondents were more willing to demonstrate help needed shows that despite the successes more work still needs to be done.

HOW IS IT GOING? PLEASE SELECT YOUR MOST SIGNIFICANT BUSINESS SUCCESS SO FAR THIS YEAR.



The two categories that received the most responses, increasing opportunities for the future and ability to do more for employees are more operationally focused results. While a portion of this optimism could be attributed to profitability (58% - Increasing opportunities, 62% - doing more for employees), the key message here is that when given the opportunity to do more for the community and their employees, business operators are doing it and are defining that more as a success over profits.

It is notable, that despite its critical role in determining success or failure in the industry, of the 384 respondents to this question, only 22 mentioned improved or more predictable supply chain and even fewer (20) mentioned better access to capital and financial services (Banking).

Qualitative Analysis - Business Success

Overall, there were 87 additional comments ranging in sentiment from very positive to very negative.



Positive comments from the respondents regarding successes in the past year.

While many of the comments centered around what was limiting their success, most positive comments centered around operations. The qualitative comments that were positive often had a counterbalancing negative caveat. In some senses, simply staying in business was deemed a success.

- We have been able to establish our genetics that have increased our revenues, but current market conditions and pricing have offset any gains. We still face many hurdles: everything from lack of funding, over production of product, lack of good workers, higher wages and supply cost.

Negative comments were centered around the operational struggles.

- I don't have a lot of positive things to say about the industry at the moment
- None. Business has been poor this year on all fronts
- Have not seen profitability for over 5 years
- Nothing- we have too many licensees and illegal grows
- No significant improvement
- Nothing to report here, success wise
- After 4 years of doing everything perfect we are seeing the price we sell for at half what it costs. Unsustainable, while stores are selling with no reduction. Too much product especially with black market out of control
- Still being hurt by the over abundance in the state. Also the state allowing dispensaries to chain together which was told to us in the beginning that wouldn't happen. Now these dispensaries only accept more than 20 pounds at a time.
- Meaningful advocacy which preserves and enlarges the rights and remedies of medical cannabis patients
- New product line brought to market made it through the most difficult part of the pandemic while staying in business
- Increasing recognition of safety and efficacy by mainstream medicine of Cannabinoids as Medicine
- Sold out before all harvests
- Surviving another year
- We are being hurt by these big tobacco tactics that we were assured would not happen. We are being driven out of business.
- Market is kind of flooded have to try to get new customers and sell product on consistent basis
- I haven't seen any significant improvements. It's actually been worse.
- This year is becoming the most challenging yet, and we've been in business since 2016
- Market is crap
- Honestly it is a struggle to keep up cashflow, as the industry conditions constantly change, and almost always for the worst for cultivators.
- Business is consistent, its the fact that retail doesn't get to write off any expenses that are the problem, I am working my ass off and literally paying enormous amount in income taxes, so boiling down my point is the hard work isn't paying off
- Not a lot positive, unfortunately

Conclusions and Implications

Overall, the operators are quite proud of their accomplishments, particularly when it comes to doing more for their customers and employees and trying to expand their business opportunities. Operators are simply asking to be given a chance and a level playing field in which to operate. **However, most of this success is overshadowed but the significant concerns that operators have for the future of their businesses.**

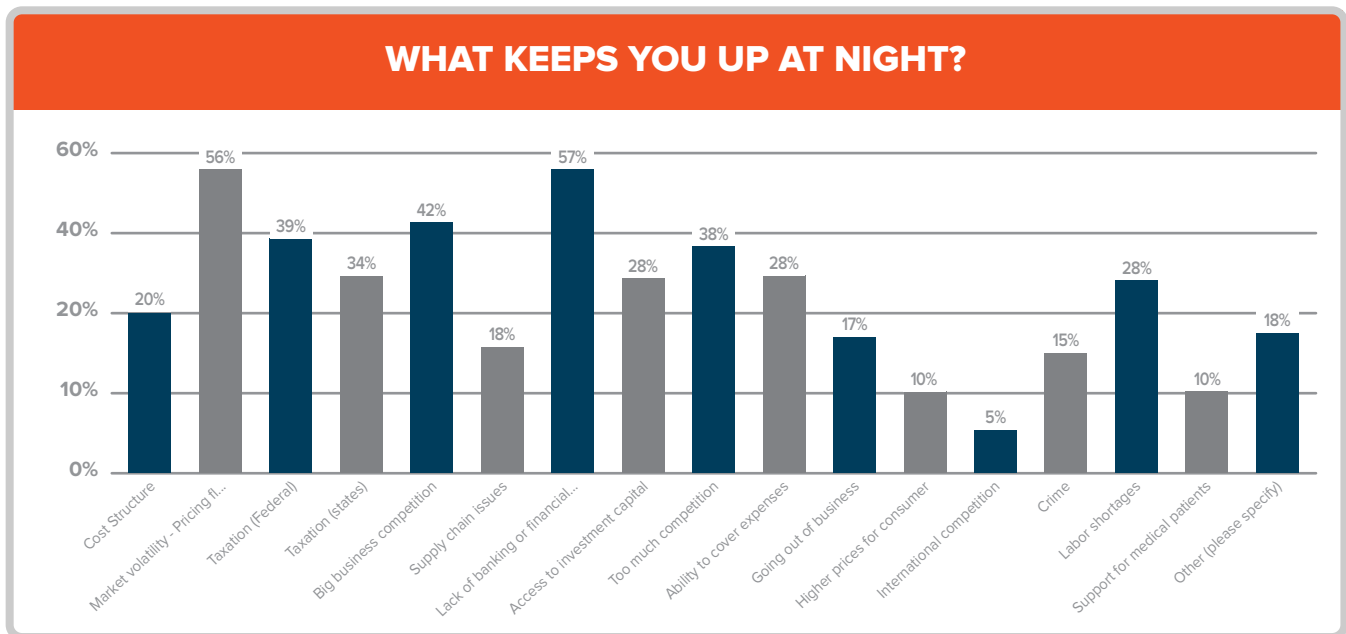
Operators have expressed the desire to be left alone or provided more support to grow and be successful, but there is a measured amount of cautious optimism that this support will materialize in the near term. Even though cannabis operators are proud of what they are doing, their pride is largely being overshadowed by their fears. They just want to be given the opportunity to continue doing what they are doing and expand on their success.



WHAT KEEPS YOU UP AT NIGHT? WHAT ARE THE MOST SIGNIFICANT BUSINESS ISSUES FACING YOU AS AN OPERATOR?

The intention of this question was to contrast the successes articulated by the respondent with the challenges. This is an attempt to articulate the top challenges one faces when viewed from multiple

perspectives, operators, industry and regulatory. This question comes specifically from the business operator perspective associated with their own business.



There are several fundamental themes that reveal themselves in the data. Key among them are:

- Price Volatility
- Banking Issues
- Taxation Issues
- The Dual Threat of Legal and Illicit Competitors

Below we will address some of our observations along each of the key issues

Price Volatility is Forcing Smaller and Independent Operators to Make Tough Decisions

Cannabis oversupply is driving smaller and independent operators either out of business or into the arms of larger corporate competitors who are looking to expand their market share at a discount.

In addition, smaller operators are unable to raise their prices, due to concern about pushing their customers back into the illicit market. Smaller operators are challenged when operating in dynamic markets, particularly those with large price fluctuations. These challenges are acutely felt in state markets, like OR, CA and CO, that have unlimited licenses.

Cannabis operators are worried that too many licenses result in oversupply, falling prices and compressed margins, all of which reduce profitability. Oversupply leads to falling prices, and is at the heart of state market volatility. Smaller operators feel the stress of this situation in a profound way, and are being forced to make tough choices, all of which keep them up at night.

Banking Issues: Cannabis Operators Face Economic and Social Costs With Disproportionate impact

Cannabis has long been the subject of proposed reform on Capitol Hill. Although cannabis reform has bi-partisan support, little actual progress has been made. Given that this does look to be resolved in the near future, the lack of banking and access to capital is a source of concern that is keeping many operators in the industry up at night.

Lack of Banking Services Places Heavy Financial Burden on Operators

Access to banking and normal financial services is one of the most pressing issues facing the U.S. cannabis industry. Currently the cannabis industry has limited access to bank accounts and even less access to traditional financial services. These financial services are not complex instruments. Rather, they are normal business tools, like bridge loans, construction loans, real estate loans, credit card processing, and revolving credit. Without normal tools, the ability of operators to expand and grow their business is limited. Lack of access to capital also prevents the industry from including and welcoming minorities. These are heavy financial burdens that are placed upon cannabis operators. In addition to added costs, operators are forced to look to secondary credit markets because they have no access to banking credit at banking rates, adding further financial stress to smaller operators, and favoring larger corporations. From a banking perspective, it is easier to operate as a normal business than a cannabis business, and within the cannabis industry, it is easier to be a larger operator than a smaller one.

Lack of Banking Services: Impact On Public Safety, Social Justice & Economic Justice

Access to traditional financial services is not just a business issue. At its core, the lack of Canna-banking is very much a public safety issue, a social justice issue and an economic justice issue that appears to favor large operators over small; white operators over non-white; and richer organizations over poorer. Cannabis operators face the stark reality of being forced to store large sums of money at their homes and workplaces.

These facilities, despite having security cameras and other measures are still easy targets for criminal elements. Cannabis operators have always worried about where they can safely put their money. Sadly, there is not one legal regulated market in the United States where a legal cannabis employee has not been murdered for the cash earned from normal cannabis operations.

Tax Concerns For Operators

Taxes are one of the top expenses cannabis operators have. There is no harmonized tax policy between the state and federal levels. Operating under the assumption that cannabis licensees are flush with cash, tax policy makers at every level of government don't want to miss out on their piece of the tax revenue pie. Current federal policy, which was developed during the 1980's war on drugs, was implemented with the sole purpose of disincentivizing participation in the market for illicit drugs. As state regulated cannabis programs were deployed, and the nature of the cannabis space evolved, federal tax policy did not keep pace. **As a result of this basic inconsistency, cannabis business operators often pay a federal effective tax rate in excess of 70%.** This is often overlooked by policymakers, and it is handcuffing business operators' ability to earn a profit. Data reflecting this concern is showing up prominently throughout the survey results. Cannabis business operators have long sought meaningful tax reform in highly specific ways, but federal policy makers have not found a path toward making this happen. Operators continue to face the prospect of being taxed out of business, and that's what keeps them up at night.

A Battle Fought on Two Fronts: Competition From Big Business & Illicit Competition

Small and medium sized cannabis business operators are experiencing competition from well-resourced, large corporations. They are also experiencing competition from the illicit cannabis market, which is currently thriving in every U.S. state, regulated or not. As a result, these operators are stretched thin due to being forced to compete on two fronts. In their responses, these smaller cannabis business owners

are indicating their frustration at the fact that at some point they will be stretched to a point that they will be forced to give up. In this untenable moment, they're saying that something will need to give.

Small and medium sized cannabis business operators, who are genuinely attempting to operate legitimate businesses in obedience of the law, will likely face one of three situations:

- be forced out of business
- get absorbed by larger operators
- return to the illicit market where they won't have to pay taxes

Legal cannabis operators continue to express the desire to do things legally. However, when they perceive that they have to fight so hard, and they don't feel the support they need from the regulators and legislators, they ask "What do I need to do to catch a break?" It is difficult for cannabis business operators to reconcile how the system appears to be so stacked against them, when it seems to favor either large corporations by driving consolidation, or illicit actors that compete for the same group of customers. When smaller businesses don't have as many alternatives for ongoing profitable operation as do larger, vertically integrated operators, there is seemingly little they

can do to address this conundrum. Operators are kept up at night worrying about how to survive in an environment where there is little support, extremely strong competition from illicit dealers from one side, and the existential threat of corporate competition on the other. **Their only solution is to advocate for a level playing field and hope that reform will occur sooner, and not later.**

Conclusions and implications

Cannabis business operators are exhausted. Survey respondents have shouldered the burden of multiple significant issues, each of which, if taken individually, could upend their plans, or worse, destroy their business. Mitigating large risks from one set of issues is much more manageable than addressing multiple issues on many fronts. When significant issues are combined, it can be overwhelming. All businesses plan in order to have as few problems as possible, and cannabis operators are weighed down by managing existential risks while trying to stay afloat in a restrictive regulatory environment. **From pricing fluctuations and lack of banking or financial services to heavy taxation and competition on multiple fronts, cannabis operators are understandably concerned for their business and experiencing sleepless nights, wondering what it will take to survive and what issue they will have to confront next.**



KEY CANNABIS INDUSTRY ISSUES:

This section will examine responses to questions specifically related to the industry as a whole.

Select what you feel are the top issues that the U.S. cannabis industry is facing overall.

The intention of this question is to examine what the respondents feel will be the top issues for the cannabis industry in the upcoming year. This will provide a prediction of how the industry expects the industry and business environment to evolve. Combined with the questions about whether the industry is moving in the right direction and what the key regulatory issues are, investors, policy makers and operators should have a

clear picture about risks and opportunities for the next 12 - 24 months.

Overall, the current narrative is that there are 4 major issues facing the industry

- 1) access to banking and financial services
- 2) federal and state tax reform
- 3) the ability to access markets via interstate trade

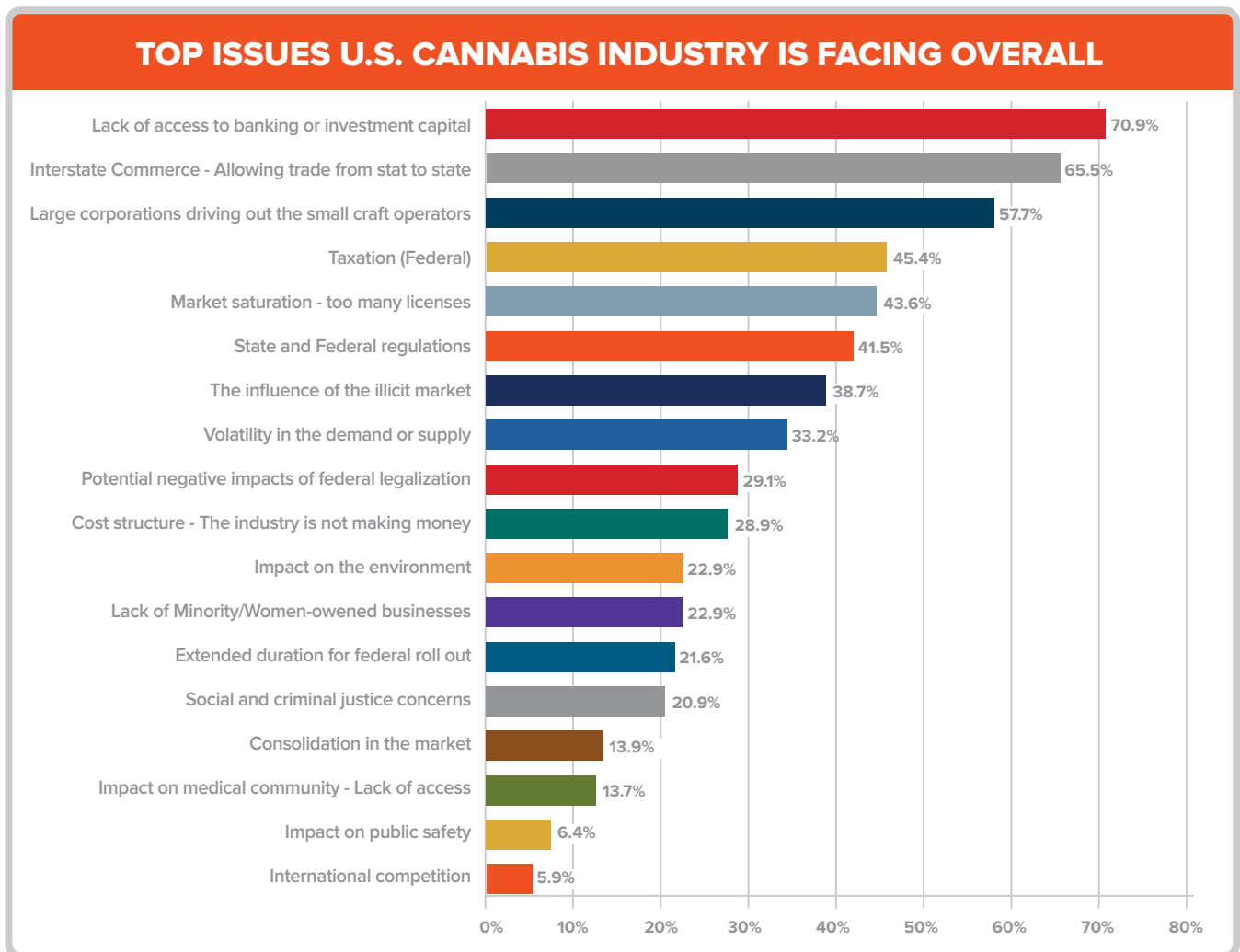
4) providing access to minority communities, particularly those disproportionately impacted by the war on drugs

A High Density of Responses

Respondents had a much larger density of responses to issues facing the industry when compared to successes experienced by their own operations. On the average, respondents chose 6.4 issues facing the industry versus 2.4 successes experienced by their firm. This highlights the difficulties that the operators perceived that they are facing and will be facing in the future.

The concentration of responses fell largely into four buckets, the top (71.9%) being access to banking or financial services. Interstate commerce (65.5%) was the second most common response to industry issues in the next 12 months followed by consolidation / large operators driving out smaller entities (57.7%) and federal taxation (45.4%). This data is generally in line with the broader narrative of the industry.

International competition (5.9%) and public safety issues (6.4%) received the lowest number of responses reflecting that these do not appear to be significant enough concerns for the industry in the next 12 months.



Conclusions and Implications

The top issues over the next 12 - 24 months are forecasted to be the same as those that the industry has experienced in the past 12 months, but the impact of these issues will become more acute. The issue of larger firms driving consolidation by buying up smaller firms is rising in importance, as the dual impacts of paying very high rates of federal taxes and market

saturations begin to take too big a toll on smaller operators. Declining margins and lower prices caused by oversupply will adversely impact some more mature markets, while new markets that are ramping will have to address the challenges associated with banking and taxation. The biggest wildcard facing the industry will be regulatory adjustments made at the federal level.



WHERE WILL THE INDUSTRY BE IN A YEAR?

The intent of this question is to cull the insights presented by respondents, and to glean their perspective on the industry for the next 12 months. The responses are entirely qualitative in nature and are presented in summary with the following word cloud:

Additionally, we have chosen a representative group of quotations from survey respondents:

(-) “Unfortunately, it looks as if there will not be any positive movement at the Federal level in order to allow for banking access. Without banking access there is limited ability for any business to thrive. The industry will continue to be crippled and viewed negatively because they are not deemed legitimate at all levels of government.”

(+/-) “With more states bringing new and expanded medical and adult-use programs online, the market will continue to grow in the next year. We'll still be fighting for legalization, tax/banking/finance changes, and figuring out what to do when big companies with deep pockets enter/expand in the cannabis markets.”

(-) “Small operations are likely to be forced out by big business, reducing choice for consumers and limiting opportunity for small businesses. Illegal producers taking advantage of hardships placed on legal businesses through excessive regulations and slow response from regulatory agencies.”



(+) “I think both the SAFE banking act and the MORE act will have been passed within a years' time. We are ever-closer to allowing adult use within Orleans Parish, thanks to NOLA City Council Members.”

(+) “Federalization seems inevitable. With it will come great opportunity for interstate commerce, and Oregon is poised to be the growing and distribution capital of the United States. Changes to how cannabis businesses are taxed will also create more prosperity and opportunity.”

(+/-) “The issue is each state is making its own regulations and doesn't seem like states are talking to one another. I think in a year's time, I hope the growers and producers are more educated on the requirements

the labs are held to and the difficulties they face.”

(-) “Most states will be crippled by unnecessary regulations and taxation. Oregon makes more money off cannabis, by far than any other commodity while the industry is sustained overwhelmingly by low wage workers dependent on state and federal financial assistance. I foresee the only federal success stories in this industry coming from deep-pocketed corporate entities who can afford to operate at a loss for many years while having employees dependent on government subsidies.”

(-) “There are too many hurdles and fluctuations to make an educated guess where we will be. A major concern is increase in taxes which will drive consumers to the illicit market. Being located in Southern Oregon, just an increase in taxes could easily put us out of business. We already see a dramatic slow down from the illicit market when harvest season is upon us.”

(-) “I am hoping we can utilize banks. Why an industry worth billions of dollars and employs hundreds of thousands of working Americans can’t use a bank should be an embarrassment to all governing bodies, and more so local and state.”

(+/-) “If Federal legalization does not occur within a year, then it will be very much the same, and the tribulations will be state based issues, except for the black market. That will persist until Fed legalization. When Fed Legalization occurs, it will depend entirely on how that occurs to make any realistic projections and is virtually pointless to do so until then.”

Conclusions and implications: Respondents are Taking a Wait-and-See Approach

These qualitative responses seem to indicate that operators are walking on eggshells, and are taking a very cautious, wait-and-see approach, as they don’t

have enough certainty to choose a path forward. In general, this elevated level of caution is putting operators in a reactive position, as opposed to a proactive one, which is making it more difficult for them to plan. Some are more positive than others, but the majority of operators are largely conflicted, with passion for their work on the one hand, and caution due to sharp lessons from market forces on the other. To a certain extent, cannabis industry operators are damned if they do, and damned if they don’t. The cannabis industry is constantly competing against the local illicit market on one flank, and well-resourced and organized corporate competitors on the other. The cannabis industry also faces the challenge of addressing the persistent negative perception of the industry, and that will take time to move past. Additionally, the current, highly dynamic regulatory environment toggles the advantage in favor of illicit sellers, who don’t pay taxes, and corporations, who have the resources to wait for smoother seas.

Regardless of Size, Contingency Planning Will Save The Day

Those larger business entities in the cannabis space that are well-financed and have flexibility are well positioned for success, because they generally do a lot of planning and can weather unforeseen issues and the dynamic nature of the market better than those with fewer resources. For smaller operators, contingency planning will play a critical role in the success or failure at this stage of the evolution of the marketplace.

Industry participants and observers should look for a period of consolidation over the next twelve months for those that cannot successfully navigate in this dynamic environment.

In sum, the next twelve months will be difficult to predict.



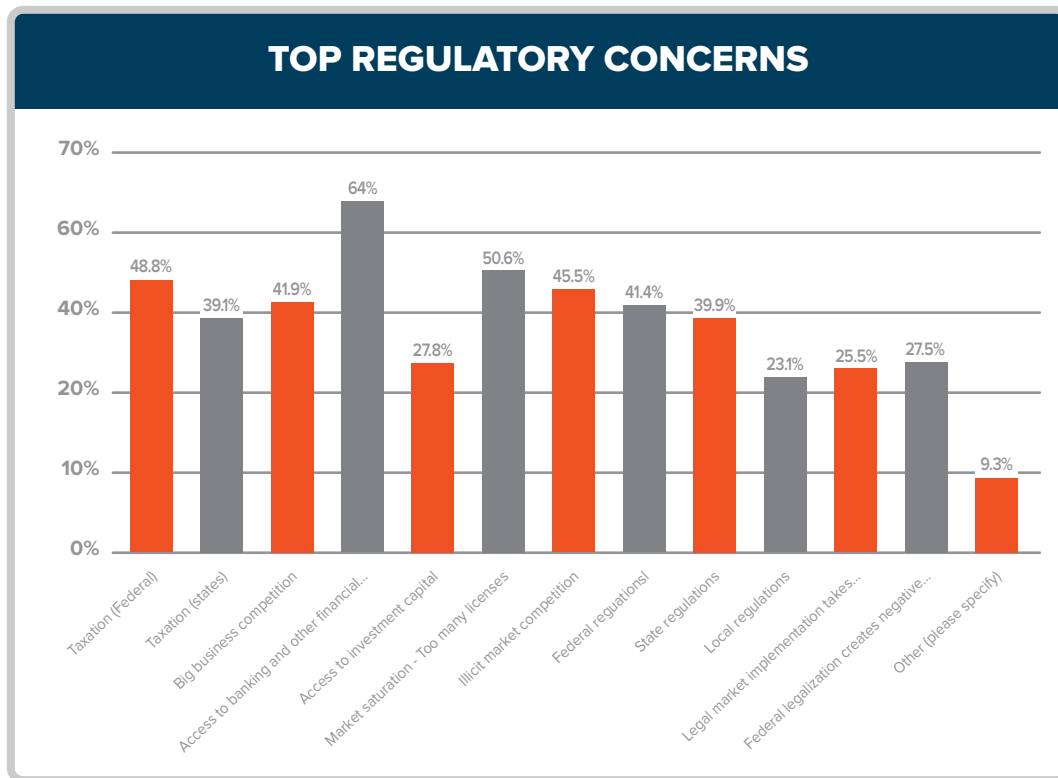
KEY REGULATORY ISSUES:

This section examines those portions of the survey relating to how respondents view current regulations and key regulatory issues.

What are the most significant regulatory issues the industry is facing as a stakeholder?

The intention of this question was to examine the impact that regulations and regulators are having on businesses across the U.S. cannabis value chain. Our hope is that we will shed some light on key regulatory issues, and enable policy makers and regulators to

develop a greater understanding of their impacts on the cannabis industry. Because of the gap between what industry operators say they need, and the rules established by regulatory bodies, it is apparent that future governance will require ongoing partnership, communication and education between regulators and industry operators.



Based on the responses, the most pressing regulatory concerns are:

- federal (48.84%) and state taxation (39.07%)
- access to banking, (64.01%)
- market saturation, (50.64%)
- competition from the illicit market (45.5%)

Critical Regulatory Issues for Cannabis Operators

There are several critical issues that are negatively impacting the cannabis industry that could be resolved very quickly at both the state and federal levels. Providing banking and financial services and tax reform to the industry are the top federal issues facing the industry. Without these reforms, business will

remain at risk of failure and policies disproportionately impacting small, minority or women owned businesses. Normalizing banking and tax policy is not a heavy lift politically, however these reforms are getting caught up in the political fray. Many of these policy reforms are being included in larger reform packages which have stalled in congress. Leadership in both chambers are resisting the opportunity to break these reforms out individually, which in turn, could delay passing these reforms for several years. Although the voice of the industry is strong and in unison, those pleas are falling on deaf ears in Washington.

Cannabis Regulatory Issues: Federal Issues, State Issues, & Joint State-Federal Issues

State regulators are more responsive to regulatory concerns, but market structures take time to adjust and often take legislative interventions. Looks for progress at the state level, to converge over the next 12 - 24 months as more state programs come on line and national regulatory associations help share policies and insights on how to implement successful regulatory programs. Currently there is no one size fits all example at the state level, but there is a greater flexibility and willingness to respond (to a point) to changes that will help the industry.

Federal Issue: Access To Banking

The current state of access to banking and other financial services for cannabis industry operators is a federal regulatory issue. Current laws force cannabis businesses to operate on a cash basis only, while at the same time limit their access to business capital. These laws have created a public safety crisis, as well as added costs and potential transparency issues. It also creates liquidity issues. Unfortunately, it is not uncommon for cannabis workers to be murdered in robberies due to the fact that the operations have cash on site. Banking is not only a public safety issue, but also a social equity issue as the lack of banking disproportionately impacts minor as women owned businesses.

Federal Issue: Burdensome Taxation due to IRS Code 280e

Federal taxation is a federal issue that is impacting

nearly every plant touching operator in the cannabis industry. IRS Code 280e limits the ability for cannabis operators to take common business deductions on their federal taxes. The result of this tax policy is that operators, especially at the retail level, may pay an effective tax rate in excess of 70%. This creates economic stress on businesses to the point that they may literally be taxed out of business. State and local policy makers often do not consider federal taxation when establishing their tax policy, which creates further stress on operators. Attempts to reform cannabis policy at the federal level have had limited support until recently. It is slowly evolving into a bi-partisan issue. However, despite the impact on the industry, federal tax reform is not likely to make any progress in Congress during this current legislative cycle.

State Issue: Market Saturation

Market saturation is a combination of having too many licenses with too little demand in a siloed market with too much supply driving down prices and margins and profitability. Many of the respondents in this survey were from Oregon. Oregon, until recently, did not control the number of licenses issued. As a result, Oregon has experienced periods of imbalance between supply and demand. This creates instability in the market impacting not only the operators, but also investors. The impacts of market saturation creates regulatory issues when there is stress in the system impacting operators. When pressed, operators may make poor choices that require regulatory intervention. There is only so much demand to go around in each state market. Until there is a national market to support, market saturation is a risk factor that must be managed by each state regulator.

Joint State-Federal Issue - A Thriving Illicit Market

Illicit market competition is a significant state and federal regulatory issue. Currently, it is estimated that 75% of all demand in the U.S. is satisfied with the illicit channel. Consumers are extremely price sensitive. If prices in the regulated market are too high (due to taxes or regulatory costs), the consumers are savvy enough to procure supply from illicit suppliers. Not

only do operators have to compete with each other, they also have to compete with unregulated actors. This issue not only hurts legal operators, but limits the economic benefits of legalization in terms of tax revenues and jobs and business creation. Illicit cartels are overwhelming state regulators and law enforcement, particularly in the western states of Oregon and California. It is no surprise that this is a top regulatory issue in the eyes of the survey respondents.

There Is No Policy That Effectively Addresses The Illicit Cannabis Market

A major issue that has been one of the most difficult to address is the illicit market. There are currently no policies that are effective in limiting the impacts the illicit market is having on the legal industry. The nature of the illicit market is to not follow the law. Illicit market cannabis operators have generations of experience in

avoiding the law. The illicit market has to be accounted for, and in the meantime, operators and investors will simply have to accept its existence as a risk factor for the foreseeable future.

Conclusions and Implications

Regulatory issues can literally make or break a cannabis operator. They can also determine winners or losers in a given market. Until regulators at the state level consider federal regulations and vice versa, operators and investors will continue to suffer the brunt of the impact of the state and federal dysfunction. Given consumers can toggle back and forth between the legal and illicit markets, until these key regulatory issues are addressed, there will continue to be a robust illicit market that will limit the growth of the regulated industry for the foreseeable future.



WHAT HELP DO YOU NEED FROM THE FEDERAL GOVERNMENT?

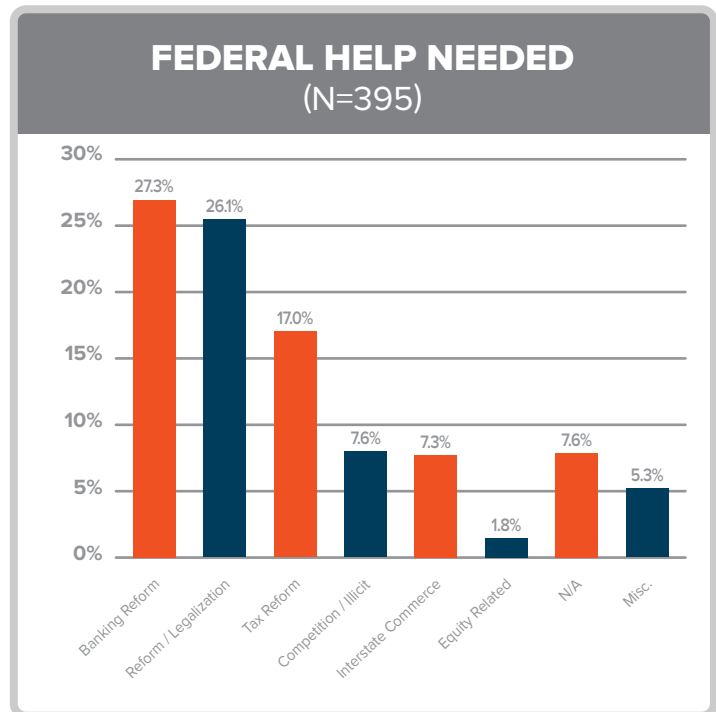
The intention of this question was to give each respondent the opportunity to speak directly to federal policy makers. We were seeking qualitative responses. Because this report will be provided to members of congress, the question was intentionally open-ended.

Of the 396 survey participants, 374 (94.4%) provided comments in some form. Clearly, respondents were eager to provide inputs, despite their qualitative nature. When we compared these qualitative responses to other questions related to key issues facing the industry, there was a notable alignment between the hard quantitative data and the more narrative qualitative responses.

Specific comments from survey respondents centered around five issues:

1. Banking reform
2. Tax reform/280e
3. Legalization/de-scheduling

4. Interstate commerce
5. Addressing competition, including the illicit market



Banking, regulatory reform and tax reform tended to dominate the responses. More than one third of survey respondents included multiple items where help was needed. When survey respondents made an multiple selections, the most common additional reference was for tax reform, followed equally by banking, interstate commerce, and legal/regulatory reform.



NOTABLE QUOTES ON STATE AND FEDERAL REGULATION FROM SURVEY RESPONDENTS:

Banking:

- De-schedule or reschedule so that we can be taxed fairly and so that we can access financial services. They're painting a target on our backs today from criminal elements by forcing us to use cash.
- Let us use the banks. Help or get out of the way.
- Allow banking, business loans and treat cannabis like any other business.
- We need to be able to take out a traditional loan. Our cultivation facility is on the same property as our home, meaning that we cannot access a traditional home loan. We currently pay 10% interest to a hard money lender

Reform:

- Let us operate as a normal business.
- Based on what we've seen out of the US Senate, they should stay out entirely and let the states move forward.
- Clear, simple national industry blueprint that creates more certainty around how the national industry will be shaped. It's difficult to make investments in national expansion with the current national regulatory approach.

Taxation:

- Allow our industry to receive the same federal tax deductions as other business
- The single largest issue in cannabis is Tax Code 280E. Until 280E is taken off of the industry we can not grow to the full potential of the industry.

Competition:

- Bigger punishments for illegal grow operation based on scale. Promote interstate access. Support taxation for first few years until its stable.
- break up the monopolies created in limited license states allowing those mega corporations to consolidate in open states while not facing any competition in their home markets.

Interstate Commerce:

- Allow for interstate commerce, access to regular banking and allow us to run a business just like any other business in the U.S. We need to be able to write off business expenses just like anyone else. We should not be penalized because of our industry. It makes it impossible to see profit.
- Based on what we've seen out of the US Senate, they should stay out entirely and let the states move forward.

Miscellaneous Comments: The Government Should:

- Be honest with us
- Just stay out of the way of businesses
- Get to know a variety of types and sizes of cannabis businesses to better understand the challenges

Conclusion and Implications: What help do you need from the federal government?

Overall, survey respondents who own licenses to operate cannabis businesses are looking for specific support from the federal policy makers. Respondents note that their ability to remain viable, and to operate successful businesses requires federal reform. There is a palpable concern by respondents that the federal

government will not recognize their concerns about the industry, and will further perpetuate the system that puts their businesses and investments at risk. Given the current difficult environment in Washington, D.C., little optimism for regulatory reform is expressed, even though there are some critical issues that are long overdue for reform.

Among the most common qualitative responses were that operators want limited government involvement in their business, and that they wish to be treated, regulated and taxed fairly, like in any other industry.



SPECIAL TOPIC - THE CANNABIS ADMINISTRATION AND OPPORTUNITY ACT (CAOA)

“The Cannabis Administration and Opportunity Act aims to end the decades of harm inflicted on communities of color by removing cannabis from the federal list of controlled substances and empowering states to implement their own cannabis laws.”

- U.S. Senate CAO A Summary

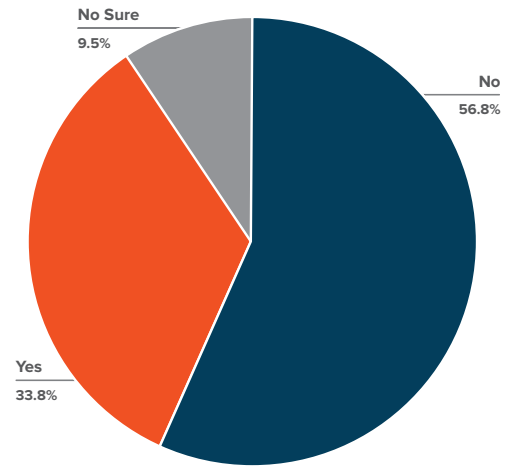
At the time of the deployment of this survey in late 2021, a draft of the CAO A was shared by U.S. Senators to operators and thought leaders in the industry. The bill’s sponsors were asking for inputs from stakeholders in the cannabis space. As a result, we added survey questions on the CAO A as a special topic. Feedback from survey respondents regarding the CAO A was mixed. Cannabis operators were asking whether or not the proposed legislation truly helped the industry. Informal polling indicated that many operators were aware of the bill but that they were not aware of the bill’s implications. Other survey

respondents were not even aware of the existence of the draft legislation at all.

The intention of survey questions related to the CAO A was to determine whether or not the respondents had read the bill and, further, to offer an opinion on whether the bill reflected or supported the needs of cannabis business operators. In other words, we intended to see if the stated intention of the bill aligned with the needs of cannabis industry operators. This qualitative data allows us to identify some of the disconnects between the needs of operators in the cannabis industry and what federal policy makers are proposing.

Have you seen or read the first public draft of the Cannabis Administration and Opportunity Act (CAOA)?

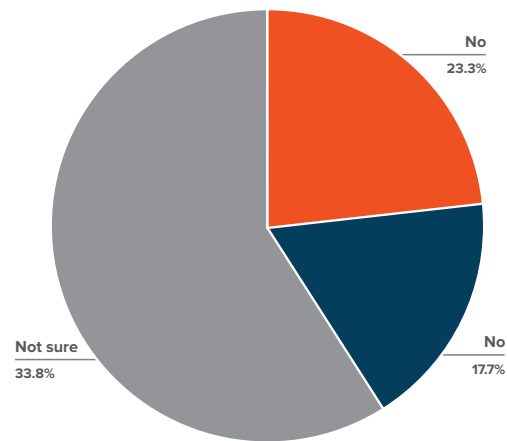
Survey respondents were asked, 'Have you seen or read the first public draft of the Cannabis Administration and Opportunity Act?' Overall, 58.6% of the respondents did not read the draft. This should be surprising to many industry officials, as the CAO A has been promoted as one of the most important cannabis reform bills. Another 9.5% of survey respondents were not even sure what the CAO A was. In fact, only 33.8% of the respondents had read the draft.



Does the Cannabis Administration and Opportunity Act (CAOA) seem to reflect or support your priorities?

Survey respondents were asked, "Does Cannabis Administration and Opportunity Act (CAOA) seem to reflect or support your priorities as a business owner?"

- 23.3% of respondents said the CAO A did not reflect or support their priorities as business owners
- 17.7% of respondents said that it did reflect or support their priorities as business owners
- 59.0% of respondents said that they were not sure



Concerns With the CAO A - Qualitative Responses - Summary

When they were asked if they had any concerns about the proposed CAO A legislation, a majority of qualitative responses were centered around three specific issues:

- The high level of proposed federal taxation contained in the bill
- The amount of federal red tape that will be required to support the regulation
- The lack of any required reform at the state level, now that federal reform is being delivered

Several respondents made qualitative comments centered on:

- The need to improve regulatory processes and structures
- Resistance to the potential breakup of vertically integrated business structures in states

- Concerns that the FDA would be the lead regulatory agency

Other comments and concerns raised about the CAO A, per survey respondents

- The proposed legislation favors larger firms over smaller ones
- The proposed legislation will embolden the illicit market
- Smaller firms need more support at the federal level
- Too many complexities associated with determining the taxes to be paid, to whom they should be paid and when/how often they should be paid.
- Concern around the proposed solutions regarding equity, expungement and reparations
- The bill is doomed to failure due to the dysfunctional nature of our legislature

“Our concern is that the CAO A and other progressive legislation continues to gets caught up in the bureaucracy and partisan deadlock that keeps our industry from being able to operate like any other legal industry (writing off expenses, having access to investment capital, protecting our employees, public trading, etc.)”

- survey respondent Q4 2021



Conclusion - Does the CAO A reflect the views of the industry?

The fact that only a few respondents had read the bill, and a sizable number were not aware of its existence, demonstrates that business operators are likely preoccupied just staying afloat; too busy to participate in legislative processes at the federal level. These facts also demonstrate just how important national trade associations are in conveying the needs of the industry to lawmakers.

Trade Associations - Conduits of Information between the Industry and the Congress

Despite the fact that industry respondents did not read the CAO A, the inputs and critique of the CAO A

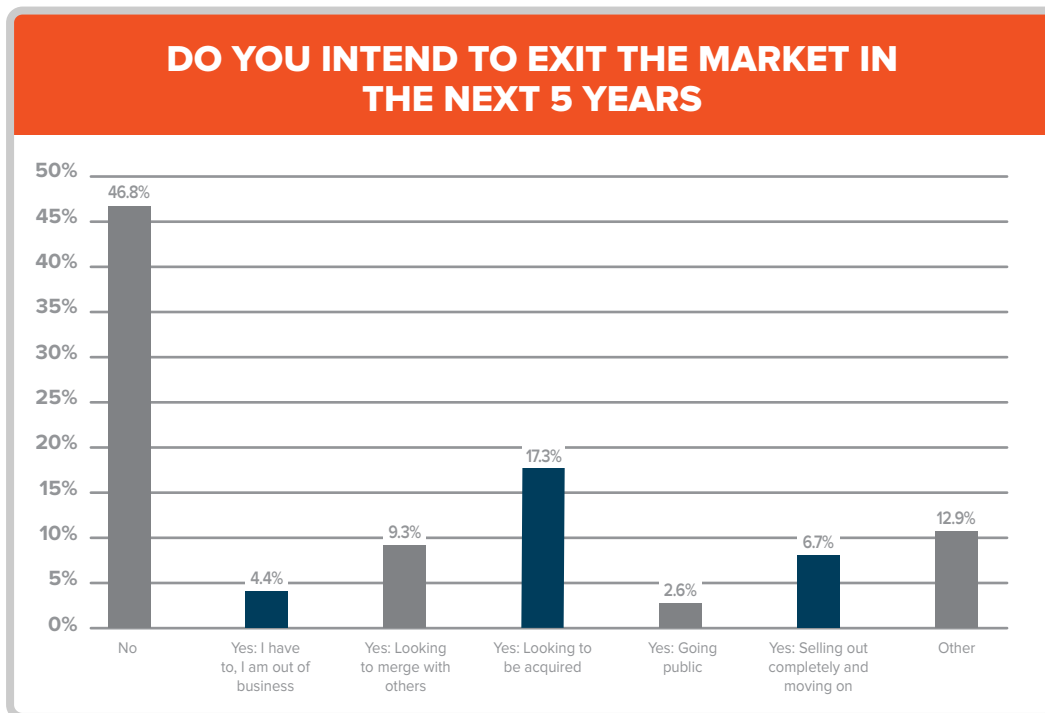
provided by the trade association that were conveyed to lawmakers closely reflected the concerns of the industry. Trade associations have provided excellent representation for the industry as intermediaries between the industry and policymakers. Trade associations and industry operators largely agree that the CAO A clearly does not reflect the industry’s needs, and it further demonstrates the serious disconnect between lawmakers and the cannabis industry itself.



CONSOLIDATION VS. GOING IT ALONE - WHAT ARE YOUR PLANS FOR THE FUTURE? DO YOU INTEND TO EXIT THE MARKET IN THE NEXT 3-5 YEARS?

In order to create a determination about where cannabis operators believe the industry is going, we asked them to provide some inputs on their outlook for the next 3-5 years. The intention of this question was to determine if operators wanted to continue to

go it alone, look for some type of liquidity event in the form of a merger, acquisition or public offering, or to completely exit the market in either a voluntary or forced event.



In terms of the intention of cannabis operators, respondents indicate overwhelmingly that they do not intend to exit the market in the next 3-5 years. In fact 48.6% of survey respondents intend to remain independent, as opposed to consolidating into other operations. 29.2% of respondents intend to participate in mergers, acquisitions or public offering activities. 12.9% did not choose either option, instead providing qualitative responses about their intention.

Indecision is Driven by Market Uncertainty and the Likelihood of Regulatory Changes

While the majority of cannabis operators had strong

intentions of either staying in or leaving the market in the future, those who did not cited two reasons for their indecision:

Uncertainty - there is too much uncertainty in the cannabis market to know how it's going to go

Regulatory Changes - future plans are dependent upon regulatory changes at the state and federal levels.

The responses to these questions may be of some help to policy makers in more clearly understanding the intention of operators in the cannabis industry.

Getting clarity here may play a role in shaping policies that don't force the market in one direction or the other. Survey respondents have responded that they prefer to remain independent and stay vertically integrated. However, the CAO is likely to force market consolidation and lead to the breakup of established, vertically integrated companies. This example shows how the needs of operators in the cannabis industry are seriously disconnected from, and sometimes at odds with, the policies that are being written to regulate, tax and support it.

Qualitative Responses to 'What are your plans for the future? Do you intend to exit the market in the next 3-5 years?'

- "It is impossible to plan appropriately for the long term when you have no idea where regulations will be next week."
- "It really depends on what happens with local and state legislation the next couple years."
- "No, unless we're forced out because of too much regulation, taxes and big business."
- "Not sure what will happen, there's a lot of uncertainty."
- "Unknown. We are going to continue to monitor the regulatory conditions of the market."

- "Depends on the Federal Government lifting Schedule One designation. Cannabis has been legal since 2012, almost a decade; where is the Federal Government?"
- "Possibly leaving. I can't continue to operate without realizing some profit. There's no outlet for my product as the few corporations that operate most of the dispensaries are already supplied."
- "Hope to continue but market forces are making it difficult."
- "This will depend on federal tax relief."
- "Trying to keep our heads above water. They structure the market to fail here, with over-population of licenses. We need more avenues to move our products, like multiple state sales. Also, the ability to move our products abroad would help."

Conclusions And Implications

Based upon the qualitative responses offered by survey respondents, we can conclude that cannabis industry operators in the United States are highly uncertain about where the market is going. Survey respondents feel that regulatory issues are to blame for regulatory uncertainty. For most survey respondents, they also see the future of the industry as reliant upon some element of regulatory reform.



DO YOU HAVE A 5 YEAR PLAN?

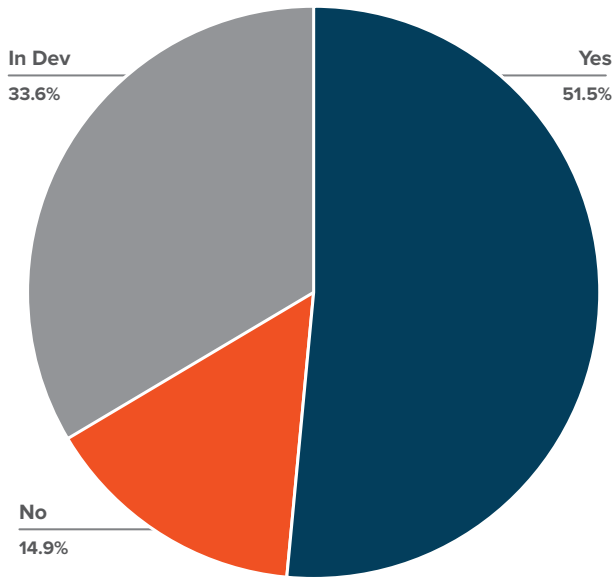
It is clear that the future of the industry will be profoundly shaped by regulations and regulatory changes. Those cannabis operators that are able to quickly adapt will have a greater chance of success. As is the case with any business, the ability to adapt requires careful planning. The intention of the question asking respondents if they had a 5 year plan was to assess if companies had a roadmap for success, or if companies were simply 'winging it' without a plan.

Determining whether a business is operating with a plan is also an informal measure of the overall levels of business maturity and sophistication.

Approximately Half of Respondents Are Following A Plan

Most respondents (51.5%) said their companies have a 5 year plan, which means that the remaining respondents (48.5%) either do not have a plan or are currently developing one.

Do You Have A Five Year Plan?



Looking At A Set Of Responses In More Granular Detail

- 30.7% of respondents who planned to sell their companies did not have a 5 year plan.
- 34.6% of respondents who planned to sell their companies had business plans still in development.
- Of those companies that responded that they are going out of business, 35% do not have a business plan.
- Of those companies that responded that they are going out of business, 47% have a business plan.

These results seem counter intuitive given the intention to sell out completely.

Lack of 5 Year Plans Demonstrates Immaturity, Exposure and Risk.

It is quite curious that 48.5% either did not have a 5 year plan or had one in development. This may be a function of how quickly the industry has evolved since 2014 or a function of the regulatory structure being too lenient in the application process. Still, approximately half of the operators in the industry do not have a plan. This is a sign of an immature industry. As more states have come on line, more regulators have business plan requirements as part of the application process.

Conclusion and Implications:

The industry is too immature and unprepared to take advantage of regulatory changes that are currently in development. With most operators too involved in the day to day operations to keep up with proposed legislation both at the state and federal levels, they will be in a position to take advantage of potential opportunities that new legislation presents. In addition, they are not active enough in the political discussions to represent their needs to the policy makers and legislators. As such, their businesses are essentially at risk of being negatively impacted by pending policy changes, creating opportunities for larger firms to drive consolidation through discounted acquisition. Policy makers will not help nurture the industry and help develop it, instead they are choosing to attempt to control the market further introducing risks. As a result, if things remain on this path, there will be a decline in the U.S. industry to the point where it will lose its leadership position globally and will open the door to international competition. Only those with resources and planning will remain competitive.



WHAT HAVE WE LEARNED FROM THIS SURVEY AND WHERE DO WE GO FROM HERE?

What We Already Know About The U.S. Cannabis Industry

Industry participants and observers already know that the cannabis industry is a complex organism with a lot of moving parts. As more parties get involved, there is a growing realization among operators that in regulated cannabis environments, almost every operational issue is interrelated with regulations, and there is no such thing as a one-size-fits-all solution for states.

Density Of Responses

Density of responses around worries and concerns was more than twice that of successes and achievements

Specific issues that were highlighted by a majority of respondents include price volatility, tax policy (IRS Code 280e reform, specifically), access to normal business banking & financing, and the dual threat of illicit and corporate competition.

It's Time For A Basic Federal Framework For Cannabis

Businesses should not pay a 70% effective federal tax rate. There is no Green Rush that is occurring. There is a growing group of motivated people who are committed to operating their businesses and increasing the legitimacy of the cannabis industry. Regulatory frameworks are uniquely administered in each U.S. state, and Washington DC. By participating in a patchwork system of siloed markets and distinct regulatory strategies without a basic federal framework,

business operators are struggling to compete and to understand their path forward. Currently there is no mechanism for harmonizing policies between the states and the federal government. This conflicts with broader policies of supporting small businesses and the inclusion of minority communities, and it is limiting the overall growth and development of the nascent cannabis industry. While proposed federal policy is in the form of large, sweeping changes, there is not enough political support to see it through. There are, however, several incremental changes that create a way forward and that can provide some relief. Even these incremental changes aren't moving through the legislative process. In the meantime, 42% of U.S. cannabis businesses are turning a profit, while 58% of U.S. cannabis businesses are not.

The Way Forward Is Collaboration Between Industry Groups, Regulators And Policy Makers

Education and understanding between industry groups and regulators is crucial to the growth of U.S. cannabis verticals. Regulators, policy makers and operators must build communication around changes and nuances in the market, and they should have the data they need to make informed decisions. This is why Whitney Economics intends to deploy similar operator sentiment and business conditions surveys on a regular basis. More data will help stakeholders to better understand the dynamics of a rapidly changing U.S. cannabis market.

APPENDIX #1

Beau Whitney, Cannabis Economics, Operations and Supply Chain Expert

Beau Whitney is the founder and Chief Economist at Whitney Economics, a global leader in cannabis and hemp business consulting, data, and economic research. Whitney Economics is based in Portland, Oregon.

Serving an international clientele, Beau is considered one of the leading cannabis economists in the U.S. and globally. His applications of economic principles to create actionable operational and policy recommendations has been recognized by governments, and throughout the economic, investment, business communities.

Drawing upon his previous hi-tech experience, Beau has applied his supply chain and operations expertise to the cannabis industry, where he has designed and implemented efficiencies into the cultivation, extraction, edible manufacturing, wholesale and retail distribution operations of a vertically integrated cannabis operation, that eventually went public in 2015.

His Whitney Economics and New Frontier Data white papers analyzing the adult-use, medical and industrial cannabis markets have been referenced in Bloomberg, the Wall Street Journal, Washington Post, New York Times, USA Today, the Associated Press, as well as in leading cannabis industry publications. Whitney is a member of the American Economic Association, the Oregon chapter president of the National Association

for Business Economics, is a member of multiple regulatory advisory committees throughout the U.S. and participates on the Oregon Governor's Council of Economic Advisors.

Beau has provided policy recommendations at the state, national and international levels and is considered an authority on cannabis economics and the supply chain.

Statement Of Conflicts

Whitney Economics does not take a position on the issue of cannabis legalization, however there are potential conflicts while presenting economic analysis.

- Whitney Economics receives compensation for business and economic analysis of the cannabis industry.
- Mr. Whitney has previously held positions and licenses within the legal regulated cannabis industry.
- Mr. Whitney currently has investments in a cannabis investment fund, Mantis Growth Investments, and he is a member of the fund's Board of Directors.
- Mr. Whitney serves in an unpaid role as Chief Economist for the National Industrial Hemp Council.
- Mr. Whitney is a paid contractor, serving as Chief Economist for the National Cannabis Industry Association
- Whitney Economics is a member of the European Industrial Hemp Association.

APPENDIX #2

There were 20 questions total. The average survey took 8m:26s to complete and was completed by 400 respondents. Overall, 1.1% of all U.S. cannabis licensees

were represented, with Delivery (15.2%), Test (5.9%) and processing/manufacturing (3.2%) making up the largest share of their sector's licensees.

- 1. Demographics: Please describe your gender identity.**
- 2. Demographics: Please describe your race/ethnicity. (select all that apply)**
- 3. Enter your zip code (This will be kept confidential, and will only be used only as a unique identifier)**
- 4. What type of business do you represent? (select all that apply)**
- 5. How is it going? Please select your most significant business successes so far this year.**
- 6. Are you turning a profit?**
- 7. What keeps you up at night? What are the most serious operational / business issues you are experiencing as a participant in the cannabis industry? (Choose all that apply)**
- 8. What are the most significant regulatory concerns you have as a stakeholder in the cannabis industry (Choose all that are significant to you)**
- 9. Do you feel that the industry is headed in the right direction?**
- 10. Make a comment on the larger cannabis industry in the United States. Give us your take on where the industry will be in a year.**
- 11. Select what you feel are the top issues that that the U.S. cannabis industry is facing overall.**
- 12. What do you need the federal government to do to help you to be successful? How can the federal government effectively support your business? (Briefly describe)**
- 13. Have you seen or read the first public draft of the Cannabis Administration and Opportunity Act (CAOA)?**
- 14. Does Cannabis Administration and Opportunity Act (CAOA) seem to reflect or support your priorities as a business owner?**
- 15. Please briefly list your concerns, if any.**
- 16. What is your confidence level for your business in the next 12 months?**
- 17. What are your plans for the future? Do you intend to exit the market in the next 3-5 years?**
- 18. Do you have a five-year plan that you intend to follow?**
- 19. Do you want to receive future updates from Whitney Economics on Hemp and Cannabis? If so, please list your email below.**
- 20. Contact Information**