

A stack of US dollar bills is placed on a computer keyboard. The top bill is a \$100 bill, and the stack is thick, suggesting a large sum of money. The keyboard keys are visible in the foreground, and the background is a blurred orange-red gradient.

**WE**

WHITNEY ECONOMICS

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**CANNABIS DELINQUENCIES:  
AN EXISTENTIAL THREAT TO THE  
U.S. CANNABIS INDUSTRY**

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## EXECUTIVE SUMMARY

There are a lot of conversions happening within the industry and among state and federal policy makers about the future state of cannabis. These issues include federal topics, such as:

- **SAFE/SAFER Banking**
- **Rescheduling vs Descheduling**
- **Interstate Commerce**
- **Social Equity and Social Justice**
- **Federal Tax Reform**

While these topics are important in the long term, they do not address the immediate, short-term health of cannabis operators. Basic issues like profitability and cash flow are critical for the industry to be viable and sustainable. **This report articulates how vulnerable the cash flows are for operators in the U.S. cannabis supply chain.**

### **Delinquent Payments and Receivables in U.S. Cannabis**

In previous reports, we examined the business conditions of U.S. cannabis operators. Notably, since 2022, operator profitability has fallen from 42% to 24%. One common theme in the U.S business conditions report was that operators have learned to do more with less. A critical element of doing more with less is cash flow management.

*“I would love to pay my bills, if others would simply pay me first so I could do so.”*

There are two basic elements of cash flow: accounts receivable (what is owed to you) and accounts payable (what you owe to others). Data from our previous surveys indicated that there were potential issues with cash flow and we wanted to explore the data more closely. This United States Cannabis Delinquent Payment Report examines the impact of late payments on operators, and the extent of the issue, across the country.

### **Neither Viable Nor Sustainable**

Based on a survey conducted in Q4 '2023, delinquent accounts receivable are a major issue for U.S. cannabis operators, totaling \$3.8 billion of the \$28.8 billion in total legal cannabis sales. This amount equates to 1.6 months of all U.S. cannabis revenue in 2023. The issue is having an impact across all sectors of cannabis, some more so than others. This is neither viable nor sustainable for cannabis licensees, who operate in a low-margin industry.

### **Selected findings contained in this report:**

- **Overall:** Delinquencies greater than 45 days account for 56.3% of the total delinquencies. This is disproportionately impacting smaller and minority owned businesses and in many cases is resulting in forced market consolidation and individual wealth destruction.
- **Retail:** Retail carries the lowest amount of delinquencies, while carrying the highest amounts of delinquent accounts payable.
- **Cultivation:** It all starts with the plant, yet cultivation is the one sector hit the hardest by delinquent payments.
- **Vertical:** Companies with two or more licenses in their vertical are included in this category. Vertical integration does not necessarily immunize a company from delinquencies. In fact, they carry the majority of the delinquencies, followed by cultivators.

- **MSO:** Delinquencies from large corporations and MSOs accounted for \$1.4 billion or 36.4% of total delinquencies.. At an average of \$34.8 million per large entity, they are significant contributors to late payments, but they are not the only ones.
- **Regulators:** Regulators have played a key role in creating this issue. The current regulatory and economic environment incentivizes delinquent payments. For there to be accountability in the system, delinquent payments can only be addressed at the regulatory level. Policy changes can level the playing field, or they can further exacerbate the issue.

### **This is An Existential Issue for the Cannabis Industry in the United States**

While there is plenty of blame to go around, the single most important finding contained in this report is that

delinquencies are an existential threat for the U.S. cannabis industry. To remain viable, it is critical that the issue be addressed.

### **Vetting and Validating the Data Takes a Village**

Based on data provided by Cannabiz Collects, state regulators, proprietary models and our survey respondents, the data has been triangulated and validated as credible. We would like to thank the cannabis operators across the country who completed our survey with such high-quality inputs and Cannabiz Credit & Cannabiz Collects for providing additional data that validated our findings. It was through this collective effort that we were able to articulate the impacts and shine a light on this important issue.



# INTRODUCTION

Operating a cannabis business is a tough task, and it is getting tougher. With much of the media's attention being focused on the longer term issues such as federal changes to scheduling, banking and taxation, cannabis operators are struggling in the immediate term. In previous reports, Whitney Economics has provided data and insights on the business conditions facing cannabis operators and their lack of profitability. This report examines the impact of these issues on day to day operations, asking if cannabis operators are able to pay their bills, and whether or not they are getting paid by others who owe them. **Based on a survey conducted in Q4'2023, delinquent accounts receivable are a major issue for cannabis operators, and total more than \$3.8 billion.**

Over the years, Whitney Economics has published multiple reports analyzing the cannabis industry from a supply and demand perspective, as well as exploring its business conditions.

- In our 2023 business conditions report, we noted that operators were seeing an industry in crisis, and were lacking in profitability. Only 24% of operators reported profitable operations, which was a decline from the 42% the year before.
- Whilst many analysts have examined the “what if” nature of potential policy changes, we wanted to delve into how operators are reacting to the current dynamics in the cannabis space. What we found was both shocking and compelling.
- Whitney Economics is in contact with hundreds of cannabis and ancillary operators nationwide. While many of them remain optimistic about the future of cannabis in the U.S., a common theme in recent conversations is how cannabis operators are behind on their payments to others. We saw hints of this in our business conditions surveys.
- Companies have been “doing more with less” and hyper-focused on margins. In 2022 and 2023, operators were caught in the squeeze between declining prices and higher input costs. In addition, we saw the roll out of new operations slow down, and have witnessed the nature of business financing changing for operators.

Cash flow has been the main focus of operators, as they struggle with paying their bills, covering their debt service or paying their taxes. Regulators and policy makers have demonstrated little sympathy for the struggling industry. Despite forecasts indicating declining sales-generated tax revenues, policy makers remain focused on maintaining tax revenues rather than focusing on the health of the industry. As a result, instead of providing a more business friendly environment, states have tightened the requirements to participate in the industry, with some states not issuing licenses to operators if they were behind on their taxes. Many of the inputs provided by operators centered around the same thing, **“I would love to pay my bills, if others would simply pay me first so I could do so.”**

Whitney Economics has built its reputation by offering cannabis operators, investors, regulators and policy makers unbiased insights on how the cannabis industry actually works. Our groundbreaking reports on jobs, taxes and business conditions are all meant to examine not only what is going on now or in the past, but what will also likely happen in the future.

This time the focus and analysis was on the immediate term and then offer immediate and then offer policy makers recommendations on what to do next. The cannabis industry is in crisis. It was in hearing the overwhelming theme about cannabis operators either not paying others, or not getting paid, that the U.S. Cannabis Delinquency Report was born.

We explored WHY cannabis operators are struggling and delved deeply in the issues impacting the cannabis industry. We have a history of doing this, with our works on business conditions, profitability, etc., but we view this as one of our most critical works so far. The report articulates that, although the image is of an industry flush with cash, the reality reflects just how little money is flowing in the cannabis space.

# U.S. CANNABIS OVERVIEW

There is billions of dollars of demand for cannabis in the U.S. Only a small percentage of the demand is satisfied via legal regulated markets. Of the \$105 billion in Total Market Demand (TAM) only \$28.8 billion of demand was satisfied through legal state regulated channels. Cannabis is federally illegal in the U.S. Despite its illegality, state-based regulatory programs have been established in 38 states for medical purposes, with 24 also allowing for sales of cannabis for adult-use purposes. Given this state-versus-federal dynamic, the cannabis industry does not operate like traditional industries. Cannabis operators are not afforded many traditional federally sanctioned benefits such as bankruptcy protection or common business tax deductions. Also, as a result of federal prohibition, typical agencies in charge of data collection are not collecting data on the cannabis industry. These agencies include the Bureau of Labor and Statistics, the Department of Census and the Bureau of Economic Analysis. A lack of public data limits the ability of policy makers and regulators to make informed decisions.

In addition to the lack of data collection, the federal illegality also creates distortions in the marketplace. For example, cannabis operators may find it difficult to obtain banking services, basic financial services, even insurance. Cannabis operators also cannot participate in interstate commerce as all cannabis produced in a given state system must remain in that state. This lack of interstate commerce limits growth and opportunities for expansion. Cannabis operators are also taxed heavily, which puts an undue burden on operators operating on razor thin margins. States have also added a heavy layer of regulatory compliance onto cannabis operators. The cost of compliance is very high in most cases. It is no surprise that in a recent survey on business conditions, cannabis operators reported that only 24% of operators nationally were profitable.

Despite these obstacles, the U.S. market continues to grow. States in our analysis are broken into three categories; 1) Mature states, 2) Ramping states, and 3) Emerging states.

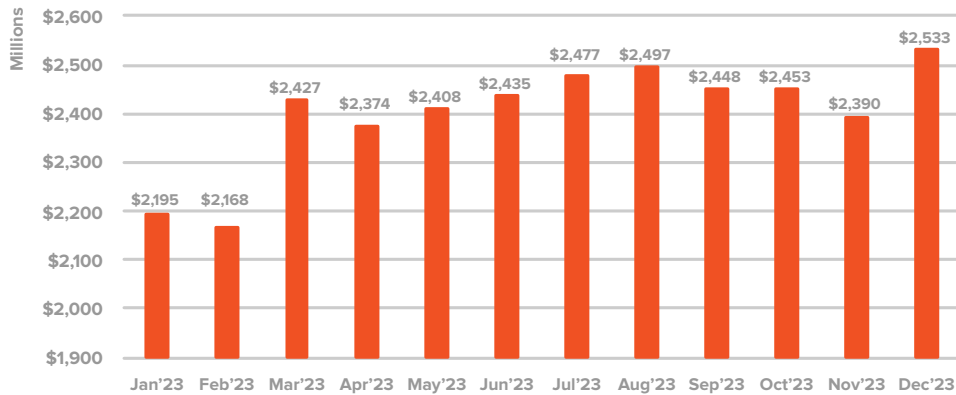
- 1. Mature state markets** have deployed legal programs and have converted a majority of the total potential demand into the legal marketplace.
- 2. Ramping state markets** are states that have deployed legal regulatory programs but are still in the process of converting consumers away from the illicit market and into the legal one. Ramping

states tend to be the source of the largest amount of growth and are the largest contributors to growth from 2024 through 2030 and beyond.

- 3. Emerging state markets** are those that have just recently deployed a legal program, but is still in its first few years of operation. Emerging states tend to have large amounts of demand that remain supported by illicit suppliers. In recent years, mature markets have seen a general decline in their overall markets, or whose growth has leveled off. Emerging states are still experiencing growth as they continue to convert consumers into their legal systems.

Given this backdrop, the total legal revenues associated with cannabis sales in the U.S. totaled \$28.8 billion in 2023. This is an increase from \$26.1 billion the year before. The average U.S. retail sales were \$2.4 billion per month. Typically, we report data on an annualized basis, but we wanted to provide this level of granularity as we discuss the amounts of delinquent accounts receivables. This perspective provides context to the extent of the delinquent A/R issue. At \$3.8 billion in total, delinquent accounts receivables equate to 1.6 months of revenue overall. Put a different way, this amount of delinquent receivables is forcing operators to run their businesses for an entire year, but on roughly 10.4 months' worth of cash flow.

## 2023 U.S. MONTHLY LEGAL CANNABIS REVENUE



Source: Whitney Economics

The average retail sales per dispensary increased throughout the year, from \$195 thousand per month in January to \$212 thousand by December. This average is based on the number of licenses issued by state regulators. Basing averages off of licenses issued gives a conservative estimate, as not all licenses' issues

were actually active and operating. Overall, average revenue per retailer was \$2.37 million. **The average sales per retail license, used in this analysis was \$2.40 million, so despite the fact that the data was self-reported, the quality of the inputs into the survey were validated as accurate and credible.**

Ave Retail 2023	Monthly Ave	YoY Retail	Anualized Data
January	\$195,418.34	-4.85%	\$2,345,020
February	\$176,790.25	-9.69%	\$2,121,483
March	\$196,023.49	-5.49%	\$2,352,282
April	\$195,630.50	-9.63%	\$2,347,566
May	\$198,306.44	-6.62%	\$2,379,677
June	\$205,415.62	-1.80%	\$2,464,987
July	\$195,557.28	-19.33%	\$2,346,687
August	\$201,048.18	-14.73%	\$2,412,578
September	\$200,498.12	-9.41%	\$2,405,977
October	\$201,659.33	-2.79%	\$2,419,912
November	\$194,025.10	-2.11%	\$2,328,301
December	\$212,490.82	-1.84%	\$2,549,890

Source: Whitney Economics, State Cannabis Regulators

## ABOUT THE DATA

The data used in this analysis has been validated through multiple means. It compared survey data with actual data from regulators and state departments of revenue. It took a representative sample from the surveys and projected the total for the U.S. based on the total number of licenses issued by state. These totals were then compared to official state data (ex. total U.S. retail revenues, average retail revenues). Non-retail revenues were validated against existing Whitney Economic models and also via interviews of licensed operators in each sector. The percentage of delinquencies were compared to account data provided by Cannabiz Credit. Projected delinquency amounts per state were also compared to data that was provided by Cannabiz Credit.

### Why Delinquencies are an Important Indicator

While it may seem obvious to many, delinquent payments in a supply chain can wreak havoc. They disrupt the cash flow required to run a business. If payments are delayed for one business, it can create a ripple effect throughout the supply chain, especially a supply chain that already operates on razor thin margins.

### Why are Things so Tight?

Working on razor thin margins has been the state and status quo of the U.S. cannabis industry. With high finance fees, higher input costs, and high federal taxation, there is very little left at the end of each month. As such, it is difficult for cannabis operators to pool up cash in the current environment. Additionally, cannabis operators do not have access to traditional finance tools, such as bridge loans. So, if a cannabis operator gets behind on payments, it is very difficult for them to catch back up. This level of economic distress can be addressed most effectively through federal policy changes, however in the interim, most operators (with limited cash flows and limited access to capital) will continue to struggle.

### Cannabis Operators are Incentivized to Delay their Payables

With interest rates on cannabis loans often in the 25% - 33% range, **cannabis operators are incentivized to delay payments to others as a means to preserve cash flow and avoid taking on additional debt.**

Individuals interviewed for this report, indicated that **this is an intentional tool used by operators** who have the upper hand in the supply chain, normally retailers. It just makes good business sense to delay payments, when there is little repercussions from not paying.

### Delayed Payments are Hurting Other Businesses in the Industry

With so little cash flowing throughout the system, not everyone can survive. A person interviewed for this report said that he spends a majority of his time tracking down delinquent payments, sometimes in excess of 90% of his week, instead of operating his company. He conveyed that he cannot have a business if he cannot pay his loans and loses his property. This is just one example of many about the impact delinquent payments are having on cannabis operators. Until this issue is addressed, it appears that the economic damages to these small business operators will continue, as [small cannabis businesses find ways to hurt each other.](#)



# AVERAGE CANNABIS REVENUE BY SECTOR

This section provides data on the average revenues generated by operators in each sector. Parsing data by sector will help reveal and articulate the scope and extent of the delinquent payments issue. It will also show which sectors suffer the most.

Average revenues vary significantly by sector. It all starts with the plant (Cultivation). Once the plants are harvested, the flower and trim can either be transferred into the retail system, sold to processors and product manufacturers or be sold to wholesalers and distributors. Generally, flower and pre-rolls account for between 50% - 60% over overall retail cannabis sales, while derivative products (products derived from processed oils) make up the rest of the market. Cannabis processors and product manufacturers provide a value-added service and tend to have better margins than cannabis cultivators and retailers.

The degree to which cannabis cultivation is limited at the state level is an important factor when it comes to delinquent payments. Depending upon the type of cannabis regulation and licensing structure in a state market, there are different power dynamics at play. In states where there is excessive supply or an unlimited number of cultivation licenses, the power dynamic rests upstream with processors, distributors or retailers. These businesses are price makers rather than price takers in states with unlimited cultivation. On the other hand, in states where there is a shortage of supply, the power dynamics shift to the cultivators. Raw material prices are more stable and payments tend to be on time, since the other operators are dependent upon raw material supply.

In the US cannabis market, it is the cultivators who generally have the least amount of power in the value chain, and, as a result, they have the biggest problems with delinquent accounts receivable.

## Data Validity and Accuracy is Confirmed

Despite the fact that the survey respondents are self-reporting their revenues, we have validated and triangulated the data. The accuracy of the data appears to be very credible.

- For example, based on the survey responses, the total revenues in 2023, when projected to the entire U.S. was \$28.6 billion, whereas revenue based on data from state regulators and departments of revenue indicate the overall U.S. legal cannabis revenues ended the year at \$28.8 billion. This represents only a 0.7% difference between the self-reported data and the actual validated data coming from the states.
- Additionally, the average revenue per retail location report via the surveys came in right at \$2.4 million, whereas average revenue per retail licenses issued in 2023 based on state data averaged \$2.37M (98.75%). This affirms the integrity of the data and that it is not inflated or deflated due to its nature of being self-reported.
- Cultivation, processing, distribution and laboratory revenues were all validated via interviews by operators in those sectors, as well as with publicly available data.

Average Revenue per Sector	
Retail	\$2,400,000
Cultivation	\$1,305,882
Processing/Manufacturing	\$2,742,857
Distribution	\$3,400,000
Lab	\$1,200,000
Vertical	\$6,847,826

Source: Whitney Economics, Delinquency Survey 2024

By grounding this report in the total annual revenues of each sector, we help to provide context for delinquencies. In general, there is not enough revenue being generated at the cultivation level to be able to afford delayed accounts receivable. Retailers are incentivized not to pay their bills. A cash flow crunch is being created for many operators, and it is putting licensees at risk.

## DELINQUENCY DATA

Based on the data provided by survey respondents and validated using information from Cannabiz Credit, the total amount of delinquent accounts receivables in the U.S. cannabis industry is \$3.8 billion. With the average monthly total U.S. sales revenue in 2023 at \$2.37 billion, the total delinquent accounts receivable

in the U.S. cannabis sector amounts to 1.6 months of delinquency. In simple terms, on average cannabis operators in the U.S. have to run their 12 month business on 10.4 months of cash flow. With tight margins and high taxes this is an extremely tough feat to pull off while remaining profitable or in business.

Delinquent A/R	U.S. Amount
Retail	\$5,960,000
Cultivation	\$1,011,914,400
Process/Manufacturing	\$257,624,800
Distribution	\$10,592,000
Lab	\$25,393,500
Vertical	\$2,510,732,410
<b>Total</b>	<b>\$3,822,217,110</b>

Source: Whitney Economics, Delinquency Survey 2024

Vertically integrated firms are leading the way in terms of average delinquent accounts receivable, followed by cultivation, retail, processing and laboratories. It is somewhat counter intuitive that vertically integrated companies carry the most delinquencies on a dollar basis, as they should be able to control all of the factors of production. Yet, vertically integrated firms also generated the most revenues on average, so on a percentage basis, it is certainly not the worst. Perhaps one of the most disconcerting findings from the survey is that while cultivators carry a large amount of delinquency, they are really not generating a lot of revenue. Cultivators are disproportionately impacted by the issue of delinquent payments.

- Overall, 82% of survey respondents indicated they have delinquent accounts receivables.
- 29.5% of respondents overall, indicated that they are forecasting the amount of total delinquency to increase moving forward while only 19.1% indicated they expect the amount of delinquency to decrease.

- 57.3% indicated that delinquent accounts receivables have a greater impact on their business than the federal tax code 280E. Whereas 32.1% chose 280E as having the larger impact, with 11.3% choosing “other”.
- In addition, 44% of respondents indicated that delinquent receivables are impacting their ability to service their debt payments.
- 34% of respondents indicated that delinquent receivables are impacting their ability to pay their taxes.

The overall results are conclusive. Delinquent payments are a serious issue facing the cannabis industry. The issue is widespread and far reaching. With the sources for capital constrained, and the cost of capital increasing, the impact on businesses will only increase in consequence unless this issue is addressed.

# STATES WITH THE GREATEST LEVELS OF DELINQUENCIES

Cannabiz Collects assists operators with collection of past due debt. It has an extensive database of accounts in arrears, the amount in collection and the state where the delinquency took place. It also has data from their clients on the percentages of accounts at various stages of delinquency.

Cannabiz Collects provided data for this report on collections in every cannabis regulated state. Below is a summary of the percentage of claims by state relative to all the claims they manage.

Grand Total	% of Claims by States	License Structure	Stage
California	64.3%	Unlimited	Mature
Colorado	10.3%	Unlimited	Mature
Michigan	4.7%	Unlimited	Mature
Oregon	4.4%	Unlimited	Mature
Massachusetts	3.2%	Unlimited	Mature
Oklahoma	2.5%	Unlimited	Mature
Nevada	1.3%	Limited	Mature
Washington	1.2%	Unlimited / Limited Retail	Mature

Source: Cannabiz Collects

## Top Delinquencies in U.S. are generally from mature states with unlimited license structures

Unless specifically regulated for payment compliance, unlimited license states tend to have the most regulatory issues, over supply issues, lowest operator margins and not surprisingly, the greatest levels of payment issues. There have been different

approaches by regulators on how to address this, from not renewing a license if the operators is behind on state taxes (Oregon), to mandating cash on delivery payments (Washington), while most state regulators do not address this from a compliance and regulatory perspective. This is a gap in the regulatory process in those states that impacts smaller operators and minority owned businesses the most.



# DELINQUENCY BY SECTOR

This section examines the delinquency issues facing each sector of the U.S. cannabis industry. It also

provides summaries and other observations from the survey responses.

## CULTIVATION

### Delinquent Accounts Receivable in the Cultivation Sector

The cultivation industry generated an estimated \$9.9 billion in revenue in 2023. Past due delinquencies were an estimated \$1.0 billion. This is in excess of 10% of the entire annual revenues for the sector. Although the cultivation sector accounts for just over 20% of the entire industry revenues, it accounts for 26.5% of all past due delinquencies.

#### Farmers are really struggling.

- Those with purchasing power and critical functions tend to have the lowest levels of delinquencies, but the cultivation industry appears to be drawing the short end of the stick.
- Survey responses tell the whole story:
  - “Bad debt and slow payments are causing us to consider leaving the business.”

- “Between inflexible rules that stifle creativity and impose high costs, and greatly delayed payments from wholesalers, both MSO and local, we are barely able to make it from year to year. Some of the delinquencies stretch over 18-20 months. As outdoor growers, we are basically being squeezed with both pricing pressures and payment delinquencies. At the bottom of the market, our only way of surviving is to reduce cultivation and labor costs, resulting in poor quality in product.”
- “Two years ago, we just grew enough to pay taxes and our license fees. Last year we jumped back in but had poor output due to cutbacks in costs. Seems a downward spiral that we may not survive much longer in.”
- Some are adapting to the environment and adjusting their business practices:
  - “In 2020-2021 delinquent payments almost put us out of business. We are now firm but still struggle to collect some debts.”

	Delinquent A/R	U.S. Amount	Percentage of Total
	Retail	\$5,960,000	0.2%
*	Cultivation	\$1,011,914,400	26.5%
	Process/Mfg	\$257,624,800	6.7%
	Distribution	\$10,592,000	0.3%
	Lab	\$25,393,500	0.7%
	Vertical	\$2,510,732,410	65.7%
	<b>Total</b>	<b>\$3,822,217,110</b>	<b>100.0%</b>

Source: Whitney Economics, Delinquency Survey 2024

Given the extent of this issue, survey respondents indicated that regulatory intervention mandating timely payments would be welcomed. Overall, every one of the survey responses from cultivators indicated that they have past due receivables issues.

- 64.7% of respondents indicated that the amount due in payments is in excess of their monthly revenue.

- 77.4% of the delinquencies were in excess of 45 days past due.
- 37.5% said that delinquencies were impacting their ability to service their debt.
- Only one respondent indicated problems paying taxes resulting from delinquent accounts receivable.

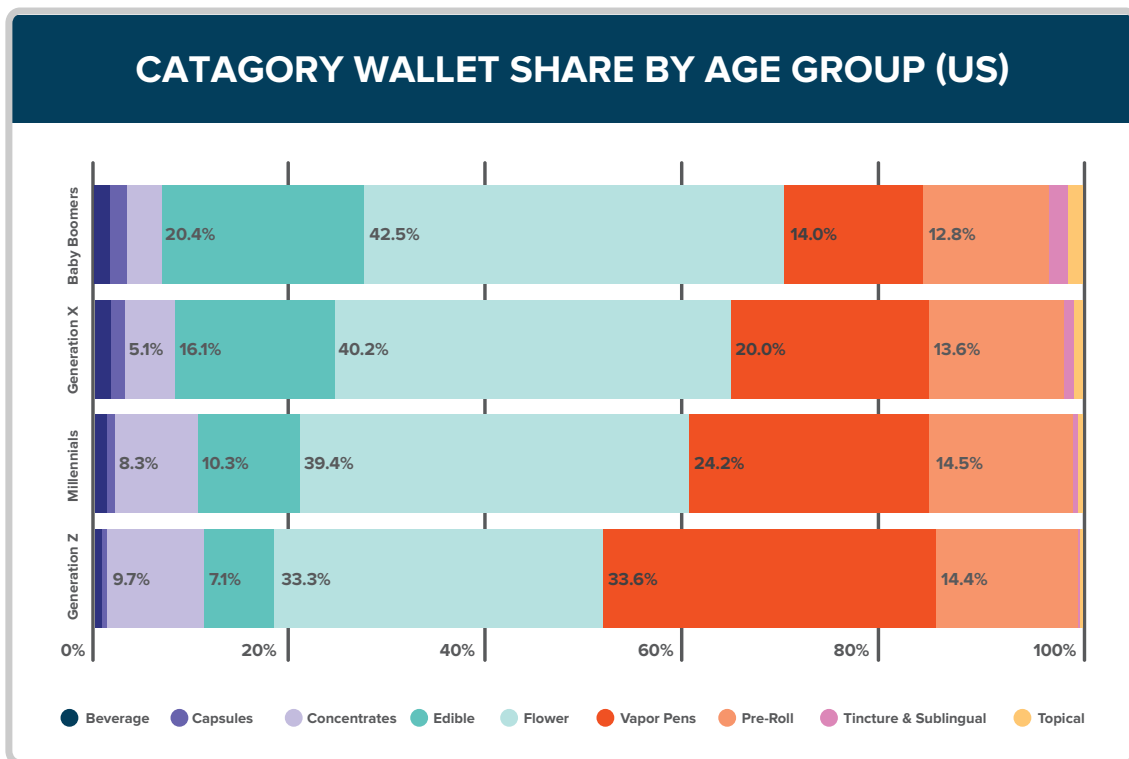
# PROCESSING / PRODUCT MANUFACTURING

## Delinquent Accounts Receivable in the Processing / Product Manufacturing Sector

Processed and manufactured goods play an important role in the cannabis industry. Processed materials, either as an ingredient or as a manufactured good, represent between 45% and 50% of the total retail revenues in the U.S. Flower and pre-rolls account for between 50% - 55% of retail sales, while processed goods make up the rest.

Below is a chart from Headset that breaks the market share down by demographics.

- Fewer young people want cannabis flower.
- Cannabis flower and pre-rolls represent greater than 55% of Baby Boomers, 54% of Generation X, 53% of Millennials and 45% of Generation Z.



Source: Headset.IO

Essentially, if a cannabis retail operator wants to sell a gummy, beverage, vape or anything else non-flower oriented, they need to source their extracted or processed raw materials from a manufacturer. In order to do this legally, the manufacturer must operate within their state. Given the importance of oil processors in the market, it is of little surprise that delinquency rates are low among oil processors. The processing

and manufacturing sectors account for 6.7% of all delinquencies in the cannabis industry.

As a comparison, average delinquent accounts receivable in other industries may run 6%, however processors and product manufacturers indicated that 3.2% of their total revenue was delinquent. So, this sector is functioning about as normally as one would expect.

Delinquent A/R	U.S. Amount	Percentage of Total
Retail	\$5,960,000	0.2%
Cultivation	\$1,011,914,400	26.5%
* Process/Mfg	\$257,624,800	6.7%
Distribution	\$10,592,000	0.3%
Lab	\$25,393,500	0.7%
Vertical	\$2,510,732,410	65.7%
<b>Total</b>	<b>\$3,822,217,110</b>	<b>100.0%</b>

Source: Whitney Economics, Delinquency Survey 2024

### Processors and manufacturers have issues getting paid by retailers and distributors

The processing and manufacturing sectors account for 6.7% of all delinquencies in the cannabis industry. Every survey respondent indicated that there were issues with delinquent payments. 28.5% of those who responded indicated that they were behind on their payments to others. This would be expected, given the market dynamics and the fact that this sector lies in between the cultivation sector and the retail sector. Processors do not have an incentive to pay for raw materials, but do run into issues with retailers, wholesalers and those closer to the customers. If account receivables are delayed, account payables can accumulate.

A processing sector respondent highlights the dynamic between supplier and retailer and sums it up like this: "Receivables are probably the biggest challenge we face. The combination of few retailers having lines of credit to buy inventory coupled with the high cost of labor for on-site cash pickups (especially when payment isn't ready) makes for a "perfect storm" in the receivable's world."

### Product manufacturers are forecasting delinquencies to increase more than decrease.

- 57% of cannabis product manufacturers indicated that this is impacting their ability to service their debt payments.
- 28.5% of manufacturers stated that this was impacting their ability to pay their taxes.

### Processors and manufacturers are able to control their destiny more so than cultivators.

- While the manufacturing sector generates nearly the same amount of revenue as cultivators (\$7.8B vs. \$9.9B), their delinquency is only a quarter the amount of cultivators (\$258M vs. \$1.01B).
- As processors and product manufacturers are not able to write off as many expenses on their federal taxes, the importance of federal tax code 280E is higher than in the cultivation sector.
- Respondents are evenly split in terms of which is having the most impact on their business, delinquencies or 280E taxes.

# WHOLESALE / DISTRIBUTION

## Delinquent Accounts Receivable in Cannabis Wholesale and Distribution Sectors

The U.S. cannabis wholesale and distribution sector generated over \$1.8 billion in 2023. Depending upon the specific state and its market structure, wholesalers and distributors can play a major role in getting products from cultivators and product manufacturers into the hands of retailers and consumers.

Wholesalers and distributors generally work on margins and typically only pay others when they get paid themselves. If they do have to pay, payment terms are typically elongated. If funds do not come in on time, they are stuck borrowing on the spot market at very high interest rates. Margins can be very thin. If the market allows, distributors often work on a consignment model. As such, they are incentivized not to pay for as long as possible.

### Distributor comment

*“Our lingering Accounts Payable is a direct result of our open Accounts Receivable. We pay obscene interest rates on capital to fund our customers’ inventory and expansion.”*

### Payment issues at every turn

Overall, distributors have a poor track record on payments. Each respondent indicated that there were issues with payments to others and with payments received. All respondents felt that delinquencies were going to increase in the future. In an effort to control costs, wholesalers and distributors often contract their workers, whose payments are also stretched thin.

### Distributor comment

*“Forced to be independent contractors with no base or mileage or gas stipend. Paid only 10% on collected commissions... walk in to delinquent accounts... and half on NET 30,45 or 90 days”*

	Delinquent A/R	U.S. Amount	Percentage of Total
	Retail	\$5,960,000	0.2%
	Cultivation	\$1,011,914,400	26.5%
	Process/Mfg	\$257,624,800	6.7%
*	Distribution	\$10,592,000	0.3%
	Lab	\$25,393,500	0.7%
	Vertical	\$2,510,732,410	65.7%
	<b>Total</b>	<b>\$3,822,217,110</b>	<b>100.0%</b>

Source: Whitney Economics, Delinquency Survey 2024

In some states like California, wholesalers are also the tax collectors. Delayed tax payments have forced the state to reform the structure and implement strong policies in order to ensure tax payments were made

on time. Even with these regulatory policies in place, respondents indicated that they struggled to service their debt payments as well as their tax payments.

*“Wholesale and Distribution is a tough business. Based on our monthly tracker, we have seen a lot of companies come and go in this space.”*

- Beau Whitney, Whitney Economics

# LABORATORY

## Delinquent Accounts Receivable in Cannabis Laboratory and Testing Sector

Laboratory testing is a crucial part of the U.S. cannabis industry. Without testing, cannabis products cannot be approved for sale to the consumer. Labs do not generate much revenue. In fact, each cannabis testing lab averages about \$1.2 million per year.

Despite their critical role, laboratory companies face delinquent payments, just like all other sectors in the industry.

- All responding labs indicated that they have delinquent receivable issues
- All labs indicated that delinquencies were greater than one month’s worth of revenue.
- Interestingly, since labs provide more support services, 75% indicated that delinquent payments had more of an impact on their business than federal IRS Code 280E.

Delinquent A/R	U.S. Amount	Percentage of Total
Retail	\$5,960,000	0.2%
Cultivation	\$1,011,914,400	26.5%
Process/Mfg	\$257,624,800	6.7%
Distribution	\$10,592,000	0.3%
* Lab	\$25,393,500	0.7%
Vertical	\$2,510,732,410	65.7%
<b>Total</b>	<b>\$3,822,217,110</b>	<b>100.0%</b>

Source: Whitney Economics, Delinquency Survey 2024

## Labs are not Immune from this Issue

- Labs represent 0.7% of the total industry delinquency.
- Because of low revenues combined with the cost of testing, delinquencies can add up quickly.
- Currently, roughly 7.1% of lab revenues are delinquent.

*“The presence of elevated accounts receivable at one of the most critical aspects of the cannabis supply chain is an indicator that delinquencies are a major issue that should be addressed at the regulatory and legislative levels.”*



# VERTICALLY INTEGRATED OPERATORS

## Delinquent Accounts Receivable in Vertically Integrated Cannabis Operators

Vertical integration is a business structure whereby one operator controls all factors of production. In the case of cannabis, a vertically integrated operation would span from cultivation all the way to retail and the end consumer.

The specifics of vertical integration are defined at the state level, by both legislature and regulators. In states like Florida, vertical integration is mandated. In states like Oregon, a company does not have to be vertically integrated, but can build a business that is vertically integrated with multiple licenses. Typically, laboratories are exempt from this business structure. This is done to maintain impartiality and integrity in the testing process.

## Vertical Integration is Difficult and Costly

Building a vertically integrated cannabis business is costly. Companies in Canada that attempted vertical integration have experienced heavy overhead and finance costs, and many have divested from this strategy. There is a trend among large cannabis operators to move toward a low-touch, outsourced model. Large corporations and multi-state operators

(MSOs) in the U.S. have also begun to divest from this type of business structure. The cost of capital has only increased and, as markets mature, the costs now appear to outweigh the benefits.

## Advantages of Vertical Integration

Given that vertically integrated companies control all factors of production, they tend to have more revenue streams than non-vertically integrated companies. We calculate that vertically integrated companies generated \$25.8 billion total in 2023, which represents 53.5% of all revenues in the cannabis value chain.

## Big Players Have Big Problems

- The greater the revenue in the vertical, the more that delinquencies are forecasted to increase.
- Total percentage of annual revenue that is delinquent 9.72%
- Total percentage 45 days or more past due: 48.8%
- 60% responded that delinquent payments have a greater impact on their business than federal tax policy 280E (29%)
- 52.5% of respondents indicated this is impacting their ability to service their debt
- 47.5% indicated that delinquencies are impacting their ability to pay taxes

	Delinquent A/R	U.S. Amount	Percentage of Total
	Retail	\$5,960,000	0.2%
	Cultivation	\$1,011,914,400	26.5%
	Process/Mfg	\$257,624,800	6.7%
	Distribution	\$10,592,000	0.3%
	Lab	\$25,393,500	0.7%
*	Vertical	\$2,510,732,410	65.7%
	<b>Total</b>	<b>\$3,822,217,110</b>	<b>100.0%</b>

Source: Whitney Economics, Delinquency Survey 2024

By controlling all factors of production, one would think that delinquencies would be minimal, however surprisingly, this is not necessarily the case. With the exception of

a few states, even if a company produces a product within their vertical, they still need other retailers and operators to support the product so that the vertical

can scale. With increased revenues comes increased risks of delinquency, the risks simply are shifted. **While vertically integrated companies represent 53.5% of total revenues, based on the survey responses, they carry 65.7% of the delinquencies.**

### **Vertically integrated operator comments (Operators that Have Two or More Businesses in their Structure)**

- “The recent <name redacted> bankruptcy has shed light on how bad actors in the industry can profit and grow off the backs of the supply chain. I have seen an alarming increase of asset only dispensary purchases which wipe out the debt of the lenders and the owners disappear. We have made the decision as a company to halt all future investment or reinvestment of capital into the cannabis market due to the failure of the industry, industry groups and the government from protecting small operators.”

- “The same dispensaries and corporations tend to be the culprits in late payments, making it hard to have a strong relationship with these accounts while also trying to collect payments.”
- “With better access to banking and financing, all financial problems for our organization could be fixed within days.”
- “Delinquent payments from retail are the largest hindrance to our ability to consistently operate, expand, and offer more employee benefits. Time and expense to maintain collections is costly.”

Vertically integrated companies can spread their expenses throughout their structure in order to reduce tax liabilities. Current federal tax policy favors vertical integration, but as policies eventually change, so too will business structures. Despite the size of the company or its business structure, margins are thin, and delinquent payments are a major issue facing these cannabis operators.

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## **RETAIL**

### **Cannabis Retailers Have Power, Leverage and Influence**

Cannabis retailers hold a tremendous amount of leverage in the industry and have control of the fate of their cannabis suppliers. They can choose if and when they pay their suppliers. In some states, suppliers are required to consign their products to the retailers. This often results in prolonged periods without payment and can also increase the risk of diminished quality and degraded products being returned to the supplier.

### **Cannabis Retailers Bear the Heaviest Tax Burden, Have the Lowest Rate of Delinquent Receivables**

Cannabis retailers in most states are the ones responsible for paying taxes to the state (it varies from state to state, but retailers in all states are responsible for some portion of the tax payments). In addition to the state tax responsibility, retailers face the highest levels of federal taxation. Cannabis retailers often pay an effective tax rate of 70%. In a 2023 analysis of the impact of federal taxation on cannabis retailers, our analysis showed the cannabis industry paid an

additional \$2.1 billion in federal taxes. This figure is in comparison to what these operators would have been taxed if they were treated like ordinary American businesses. Cannabis retailers accounted for \$1.8 billion of the \$2.1 billion of additional tax liabilities.

- Not a single retail response noted issues with delinquent accounts receivables. Although several did mention that the delinquencies that they do have are coming from large corporations or MSOs
- 88% of retailer forecasted that future delinquent receivable amounts to be the same, with the remainder forecasting that they will increase in the future
- Understandably, 88% of cannabis retailers listed federal tax code 280E as having a larger impact to their business than delinquent payments
- The retailers that mentioned debt service issues were also experiencing tax payment issues
- The same grouping of responses that noted delinquent issues with larger corporations and MSOs also indicated that they had delinquent accounts payable. Many survey responses indicated this, implying there is a ripple effect when payments do not come in.

	Delinquent A/R	U.S. Amount	Percentage of Total
*	Retail	\$5,960,000	0.2%
	Cultivation	\$1,011,914,400	26.5%
	Process/Mfg	\$257,624,800	6.7%
	Distribution	\$10,592,000	0.3%
	Lab	\$25,393,500	0.7%
	Vertical	\$2,510,732,410	65.7%
	<b>Total</b>	<b>\$3,822,217,110</b>	<b>100.0%</b>

Source: Whitney Economics, Delinquency Survey 2024

## Threshold of Viability for U.S. Cannabis Retailers

Retailers need a certain level of revenues to remain viable. This threshold of viability is in the range of \$2.0 - \$2.5 million per year. With high acquisition costs, high labor expenses and high federal taxes, revenues below the level of \$2-\$2.5 million can cause economic distress for the operator. The average revenue of a retail respondent was \$2.4 million per year. This is affirmed by, and in line with, the national average of \$2.37 million. With revenues at or near the threshold of viability, there is economic stress at the retail level. At this level of revenue, cash is king and must be managed with discipline and intention.

### ***In the United States, cannabis retail is a “cash now” business***

- With heavy taxation at the federal levels, and low margins, cash flow is especially critical for retailers. As a result, ***retailers are incentivized not to pay their suppliers or their taxes.***
- Since retailers control access to the consumer, delinquent accounts receivables are almost non-existent.

- Retail operators have to deal with large amounts of cash on hand, and have taken steps to mitigate that risk, even building it into their payment processing procedures.

### ***Cannabis retailer comment:***

***“all past due accounts payable are due to the payee not requesting payment - lack of banking means cash payment, our policy is payments are by appointment and must be requested, as large amounts of cash are not kept at the store due to security reasons. Anyone who requests payment gets paid as long as they follow procedure.”***

Despite overwhelming commentary that retailers are contributing to the delinquency issue, there is a general denial by retailers that they are doing so. This could be a result of the sampling and of those who responded. However, with the low levels of delinquency of their own, the data indicates that retailers are a significant contributor to the delinquency issue facing other U.S. cannabis operators.

# A NOTE ABOUT LARGE CORPORATIONS AND MSOS

A common theme in this analysis and respondent commentary was related to the delinquencies associated with large corporations and Multi-State Operators (MSOs). Anecdotally, many operators have maligned MSOs for their potential to dominate the market. Many state policy makers have attempted to limit the influence of large corporations within the legal regulated system. There were several questions related to the impact of large corporations and MSOs included in the survey.

Large corporations and MSOs account for 54.2% of the \$28.8 billion in retail revenue, and 52.5% of revenues derived from the rest of the supply chain. The level of delinquent receivables attributed to MSOs is \$1.4 billion or 36.4% of the \$3.8 billion in total delinquencies. On the surface, attributing 36.4% of the delinquencies would seem low, based on the level of revenues that large corporations are responsible for.

<b>MSO Delinquency --&gt;</b>	<b>\$1,390,503,126</b>	<b>MSO Share of Total --&gt;</b>	<b>36.4%</b>
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One of the common complaints about larger corporations that operate in multiple jurisdictions, is that they take money out of one market in order to allocate it in another. This ends up hurting the smaller operators who rely on these revenues staying with the state. There are roughly 40 – 50 larger corporations and MSOs operating in the U.S. cannabis market. This implies that on the average, the larger corporations and

MSOs are each carrying approximately \$34.8 million in delinquencies. One MSO interviewed for this report, mentioned that in some cases the operators that the MSO is not paying are also delinquent to the MSOs. As a result from this scenario, there may lead to higher levels of delinquent accounts receivables attributed to the MSOs.

<b>MSO related Delinquency</b>	<b>\$1,390,503,126</b>
<b>Average per MSO (qty 40)</b>	<b>\$34,762,578</b>

At \$1.4 billion in overall delinquency and an estimated \$35 million per MSO and large corporation, delinquent receivables attributed to these businesses are significant. They further the narrative related to the influence big business may have over smaller ones. Larger companies have the means to sustain low margin, cash flow intensive business models, have better access to capital and more resources in general to compete in this space.

Given the fact that regulatory policy combined with higher costs of capital, the current environment incentivizes operators, both big and small, to delay their payments. Those smaller firms cannot sustain this for as long as larger ones can. Conditions like this may lead to forced consolidation in the overall market, and drive

small and minority owned businesses out of the market.

## Many Contributing Factors that Stoke the Confusion about MSOs

To a certain extent, there are competing public policies here: one supporting small and minority owned businesses, and one that drives market consolidation. A policy change that would level the playing field for all operators would allow smaller firms a better chance to compete. However, like many nascent industries, there is a rapid expansion of market entry, followed by an equally rapid consolidation. While large businesses and MSOs are contributing significantly to the problems associated with payment delinquencies, they are by no means the only reason for these issues. There are plenty of contributing factors to this complex problem.

## SPECIAL TOPIC – CANNABIS DEBT COLLECTIONS & CREDIT MONITORING

### **Cannabis Industry is facing declining margins and economic stress**

The cannabis industry for years has experienced declining profitability, lower revenues and shrinking margins. One result of this decline has been the inability for operators to pay their bills on time. The lack of access to traditional financial tools has exacerbated this as well.

### **Fiscal tightness has opened the doors for other business**

The lack of financing has opened the doors to predatory lenders. Extreme interest rates tend to wreak economic havoc on these operators as the payback period is often short and the cash required to service the debt reduced free cash flows. Operators are left with the unenviable choice of paying their debt obligations or paying their vendors. With limited options to increase prices (Due to consumer pricing sensitivity and federal taxation taking most of the price increases), once an operator gets behind, it is extremely difficult to catch back up.

### **Companies are emerging to help collect unpaid bills – CannaBIZ Collects ([www.cannabizcollects.com](http://www.cannabizcollects.com))**

On the opposite side of this ledger are the vendors who are not getting paid. Without money coming in on a regular basis, operators can struggle to keep their lights on and doors open. If payments are too delayed, operators may need to spend more time chasing down payments than they devote to their actual business. CannaBIZ Collects was founded in 2017 to solve this problem by helping plant-touching and ancillary cannabis companies collect on a purely contingency basis. Their business model supports the needs of this industry since they only charge a percentage upon a successful recovery, instead of paying high hourly legal fees to chase a debt.

### **Finally, a way to make better cannabis credit decisions - The Cannabiz Credit Association (CCA) ([www.cannabizcredit.com](http://www.cannabizcredit.com))**

The Cannabiz Credit Association was formed to help

companies with delinquent receivables issues and to help them share data and information on how to avoid risks to their business. The CCA tracks transactions and delinquencies and tries to resolve them proactively before they become a problem with their members. The platform has in excess of 30,000 data points in which to derive insights on the trends in A/R and has flagged over 6,000 debtor claims. All in all, it encompasses more than \$450M+ worth of collection and anonymous member-submitted AR data to date.

*“Our mission is to build a strong trade association membership base of likeminded cannabis industry businesses. We aim to collect and share data that will help these members make smart decisions and pave a path forward for a better tomorrow. We are helping operators adapt and change as the cannabis industry evolves.”*

Adam Cavanaugh, the President of the CCA

### **The CCA help identify problems early, freeing up resources**

This service has been helping companies collect on their delinquent accounts so that operators can focus on their primary business. This is freeing up resources required to navigate in the turbulent waters in the cannabis industry. Adam added. “We are trying to drive accountability into the industry through our platform” It is through identifying aging receivables, that the cannabis platform can help operators.

### **Having a clean house shows well**

Some of the other benefits of keeping accounts receivables in control is that it allows a company to differentiate itself to investors and operators, when others struggle. This is particularly important now, as more and more financing is debt oriented rather than through equity issuance. By demonstrating good fiscal controls, it shows that other parts of the operations are well managed.

# POLICY CHALLENGES AND RECOMMENDATIONS

Cannabis policy either makes or breaks opportunities for cannabis operators. While it takes several years to deploy a fully functioning regulatory program, a successful program must be flexible and adaptable in such a dynamic environment.

The difficulties facing state policymakers and regulators are nested in how to balance the following factors:

- Cannabis is still a federally illegal drug
- Policy makers must develop strategies to address public safety and illicit activities
- Cannabis policy must also incorporate social equity and social justice
- Cannabis policy must allow for a new market and ensure policies enable a functioning marketplace

## Something has to change

In 2023, Whitney Economics published a business conditions report that highlighted the fact that cannabis operators were not profitable, they were under economic duress and the environment favored larger entities. In addition, the health of the industry was in question. This was leading to an increase in illicit activity, diversion and business failures that disproportionately impact smaller and minority-owned businesses.

Throughout 2023 and into 2024, rather than address the health of the industry, policy makers have proposed stricter policies. These policies appeared to prioritize tax collections and public safety over enabling a balanced and functional marketplace. This imbalance has created an environment of desperation for many cannabis business owners.

With federal illegality still in place, and limited options available to address short termed gaps in financing, there is an incentive for self-preservation, even if that means putting others out of business. This is not a sustainable model as it fails to support the key objectives of cannabis policy. The current environment actually increases illicit activity, hurts small and minority owned businesses and increases public safety risks.

With respect to the area of public policy there are a series of policy recommendations that are a result of this analysis.

- **Promote policies that are more flexible.**
  - The cannabis environment will remain very dynamic until well after federal reform is implemented.
  - Policies cannot remain static
- **Adopt policies that are more pro-business.**
  - With 24.4% of cannabis operators in 2023 making a profit, further declines in profitability will force operators out of business.
  - With the lack of federal protections, a failed business results in personal wealth destruction. A healthier business environment will reduce wealth destruction levels
- **Create regulatory policy that outlines expectations with respect to on-time payments.**
  - Rather than punish operators who do not pay their taxes, like in Oregon, create an environment that preserves cash flows, that will enable operators to pay their bills on time.
- **Within the regulatory framework, adopt policies of accountability for those who do not pay.**
  - Restrict license issuance, renewal or the ability to sell products based on payment expectations.
- **Create a level playing field that does not incentivize delays in payments.**
  - By requiring everyone to make payments under the same guidelines, the system will not be subject to manipulation that favors some, while disproportionately impacting others

The above policy recommendations already exist in the policy toolsets of legislators and regulators across the United States. They will help maintain public safety, while at the same time addressing the health of the industry.

## SUMMARY

Solutions take a balanced approach. With the recognition that cannabis is a tough business to operate in, regulators and policy makers need to work together to support cannabis businesses. There are many headwinds for cannabis operators, investors and regulators to address. Some of these headwinds are typical to all businesses, while some are unique. There is not much that is typical when it comes to the cannabis industry, especially given that it is federally illegal. Regulators must step in to address the delinquency issue or be willing to accept a cannabis environment that will have more illicit activity, less legal participation, and a decline in public safety.

The federal illegality of cannabis has created distortions in the market. These distortions are remarkable for what they have prevented. Illegality has prevented a banking system, it has prevented a legal interstate commerce system, and it has prevented a reasonable tax structure, to name a few. These distortions create real problems for cannabis operators and cannabis state systems and impact the ability to meet legislative and regulatory public policy objectives.

Within the states, policy makers and regulators can make or break opportunities for their constituents. As much as policy makers and regulators try to avoid picking winners or losers, they are doing exactly that by perpetuating a system that incentivizes delays in payments.

### **Delinquent payments are a significant issue in the U.S. cannabis industry**

- At \$3.8 billion dollars, this problem is only getting bigger as it currently represents 1.6 months of revenue of the ENTIRE U.S. legal sales in 2023.
- MSOs and large corporations represent \$1.4 billion of this, but they are not the only contributor.
- Regulators are also a key contributor to this problem and they are already empowered to fix this.
- Delinquent payments tend to impact those who have less power in the marketplace.
- While retailers enjoy little accountability, cultivators, small business and minority owned business bear the brunt of this issue.

### **The cannabis industry is under economic duress**

In 2022 only 24.4% of U.S operators were profitable, meaning 75.6% were either breaking even, or losing money. If smaller operators continue to be exposed to cash flow issues related to delinquent payments, many of the policy objectives centered around small and minority participation will fail. The survey data is overwhelming in its call for intervention. It is now up to policy makers to address these critical issue facing the cannabis industry.



# APPENDICES

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## APPENDIX 1:

# Acknowledgments

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We would like to express our appreciation to those companies and organizations that helped support our survey and report

- **Cannabiz Credit Association & Cannabiz Collects**
- **Cannabis Advisory Group**
- **National Cannabis Roundtable**
- **Minority Cannabis Business Association**
- **United States Cannabis Chamber of Commerce**
- **Cal-Asian Chamber of Commerce**
- **Cannabis Industry Association of Oregon**
- **NH Cannabis Association**
- **NM Cannabis Chamber of Commerce**
- **OK Cannabis Association**
- **Colorado Cannabis Association**
- **Cohn Reznick**
- **CANMD**
- **GCNC**
- **Vangst**
- **GlassHouse Group**
- **Beard Brothers**
- **Columbia Laboratories**
- **Integrity Labs**

A special thanks to the team at Whitney Economics

- **Beau Wilberding, Report Editing**
- **Nancy Gauvreau, Data and Research**
- **Key Holder Media, Report Deployment**
- **Slow Fast Go, Report Design and Layout**
- **The Other Room, Website Management**

## APPENDIX 2:

# About the Author / Statement of Conflicts

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### ***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, and business communities. In 2022, Beau presented data and insights about cannabis and hemp economics at the United Nations.

His white papers analyzing the adult-use, medical and industrial cannabis markets have been referenced in the Wall Street Journal, Washington Post, New York Times, USA Today, the Associated Press, as well as in leading cannabis industry publications.

Beau 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. Whitney Economics does not take a position on the issue of cannabis legalization or on pending legislation.



**Beau Whitney**  
**WHITNEY ECONOMICS**

### ***Statement Of Conflicts***

Whitney Economics does not take a position on this issue of cannabis legalization, however there are potential conflicts while presenting economic and market 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.
- Whitney Economics is a member of the European Industrial Hemp Association.
- Mr. Whitney is a founder of Every Day Hemp Company, an Oregon-based manufacturer of hemp based plastic products.

## APPENDIX 3:

# About CCA and Cannabiz Collects

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## About Cannabiz Credit Association (CCA)

The Cannabiz Credit Association is the primary, member-based organization that advocates for better business practices and credit standards for cannabis companies, worldwide. The mission of the CCA is to

build a strong trade association membership base of like minded cannabis industry businesses. CCA collects and shares data that helps these members make smart decisions and pave a path toward a better tomorrow.

*For more information about  
Cannabiz Credit Association, contact:*

[info@cannabizcredit.com](mailto:info@cannabizcredit.com)

[www.cannabizcredit.com](http://www.cannabizcredit.com)



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## About CannaBIZ Collects

CannaBIZ Collects is the first and leading cannabis debt collection agency in the USA. Founded in 2017, CannaBIZ Collects has worked with over 1,000 cannabis clients and has processed over \$100M of cannabis collection claims.

CannaBIZ Collects operates on a purely contingency basis, focusing on assisting cannabis-related businesses to recover their outstanding balances. Their goal is to save cannabis companies time and energy in order to concentrate on generating new revenue while they handle the collection of delinquent debts.

*For more information about  
CannaBIZ Collects, contact:*

[info@cannabizcollects.com](mailto:info@cannabizcollects.com)

[www.cannabizcollects.com](http://www.cannabizcollects.com)



## APPENDIX 4:

# Methodologies

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- A survey was conducted by Whitney Economics over a 2-month period from November to December 2023.
- The duration of the survey was extended periodically based on requests from multiple organizations.
- Once the level of participation declined, the survey was closed.
- All data was self reported.
- The average duration of the survey was 4 minutes 13 seconds.
- Whitney Economics also conducted interviews of operators and ancillary business in the cannabis industry.
- The aggregated data was then validated by regulatory and publicly available data. In other words, we were successful in triangulating the data.

Once the survey was closed, the data analysis began

- The first level of analysis was to tally up all of the responses in whole.
  - **The next analysis broke out the responses by sector (retail, cultivation, vertical, etc)**
  - **A tertiary level of analysis was conducted to assess if responses varied by the size of the organization or the amount of revenues that were generated each month.**

- Once the data analysis was completed based solely on the responses, the findings were extrapolated based on the total number of licenses in each sector in the U.S.
  - **Extrapolations were based on the ratio of responses in a given sector versus the total number of licenses nationally**
  - **It is noteworthy that not all licenses that are issued nationally are active, but Whitney Economics uses the total number of licenses in order to have a uniform basis of comparison and to drive conservatism in the averages**
- The extrapolations were then compared to industry standards, regulatory data and other publicly available data. The comparisons of the extrapolations versus regulatory data or public data served to either validate or not, the level of accuracy of the extrapolations
  - **For example the total retail revenue extrapolated in the survey data was compared to the total retail revenues reported by regulators and departments of revenues in the legal states.**
- The accuracy of the data was independently verified within a small percentage of error, typically between 1% -2%

## APPENDIX 5:

# Survey Questions

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The delinquent payment survey was intended to be detailed enough to be insightful, and short enough to incentivize participation. The average survey length was 4 minutes 13 seconds. The most commonly skipped question was # 17.

1. What is your 5-digit zip code (For control purposes only)
2. ROUGHLY how much revenue does your business generate each month? (Ranges from \$0 - \$5 million)
3. Is YOUR COMPANY behind in payments to others? a.k.a. Accounts Payable (Yes/No)?
4. Is the amount you are behind greater than your monthly revenue (Yes/No)?
5. By what percentage are YOUR delinquent payments to others greater than or less than your typical monthly revenue? (Type whole number 0 - 100)
6. Are OTHER COMPANIES behind in payments to YOU? a.k.a. Accounts Receivables (Yes/No)
7. Is the amount of payments that OTHER COMPANIES are behind on greater than your monthly revenue? (Yes/No)
8. By what percentage are OTHER COMPANIES delinquent payments greater than or less than your typical monthly revenue? (Type whole number 0 - 100)
9. What percentage of delinquencies from OTHERS is coming from large operators (MSOs, Large corporations, etc)?
10. In the coming months, do you anticipate the amount owed to YOU will increase, decrease or stay about the same?
11. What Percentage of delinquent receivables to YOU are 45 days or more past due?
12. Which factor is having a greater impact on your company? (Delinquency, 280E or other)
13. Are delinquent payments (receivables) impacting your ability to service your debt payments (principal and/or interest)?
14. Are delinquent payments (receivables) impacting your ability to pay state or federal taxes?
15. What type of cannabis business does your business license enable? (select all that apply)
16. Short Comments? (Voluntary)
17. Do you want to be contacted by Whitney Economics? If yes, include contact information here.

## APPENDIX 6:

# Data Sources, Citations

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### Delinquent ratios

<https://www.dnb.com/perspectives/finance-credit-risk/accounts-receivable-aging-report.html>

<https://www.gmtresearch.com/en/accounting-ratio/delinquent-accounts-receivabletotal-receivables/>

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### Wholesale/ Distribution

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