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What Next, Post HHS Memo

Cannabis Sector Equity Research



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Summary

Note: US stock markets are closed on Monday 1/15, but Canadian exchanges are open. US plant touching companies trade OTC in the US, and are listed in Canadian exchanges such as TSX, CSE, or Cboe. Most Canadian LPs (often used as a more liquid proxy for US cannabis reform related events) are listed in US exchanges and are also listed in the Canadian exchanges. We are publishing this note ahead of the Canadian open.

- With cannabis under Schedule III, the removal of 280E would a) significantly improve the cash flow picture and creditworthiness of US plant touching companies (see our report [MSO Financial Upside from Rescheduling](#); b) attract new debt and equity capital flows (yes, allowing debt to be swapped for equity), lowering overall cost of capital; c) permit these companies to expand and tap into new growth and investment opportunities; and d) also benefit the ancillary industries supporting them (finance, tech, pix and shovels, and others). To state the obvious, all this would be a major catalyst for the sector.
- Depending on the actual implementation and timing (with an accompanying framework and or safe harbor memo from the DOJ, and or outright federal legalization of medical cannabis), this could also facilitate banking access for the US cannabis operators (making the SAFER Banking Act somewhat of a moot point) and potentially it could also trigger US exchanges to allow the uplisting of US plant touching companies (a key catalyst for a ramp in institutional capital flows to the sector).
- What was new news on Friday? The confirmation of a Schedule III recommendation by the HHS, and a thorough 252-page document by the HHS/FDA articulating the logic for rescheduling (marijuana has a potential for abuse less than the drugs or other substances in Schedules I and II; marijuana has a currently accepted medical use in treatment in the United States; abuse of marijuana may lead to moderate or low physical dependence). Back in 2016, the HHS/FDA could not make the case for rescheduling. Now they did.
- What are the potential next catalysts? 1) DEA announcement or leak (unclear when, but we think by mid/late summer, but some think [...] could be as soon as MLK Day), or maybe the announcement will come from the DOJ; 2) That would be followed by a public comment period (as per protocol, but not necessarily mandated); and 3) the actual enactment and implementation (before or after the election?). All this said, even without enactment, we would expect the industry to take a more proactive stance re 280E (some have already begun to do so) regarding tax payments/provisions/liabilities, with the 8/28 HHS memo calling for rescheduling cannabis to III.
- What do we think happens next? Of course, we do not know (be cautious of those that write and talk as they “know”; we prefer to think in terms of scenarios), but we believe at most we will hear (at some point between now and Sep) that the DEA has agreed to reschedule to III. But the details and framework would be left for after the election. That is our base case scenario. So, a lot could remain up in the air. In that context, what



happens if ex-President Trump wins the presidential election? We call this the “Trump overhang” (i.e., the upside for cannabis stocks could be capped). Sure, if rescheduling is actually fully implemented before the election, it may be tougher to reverse it politically (not that it could not be done). But what if it is still only a proposal (and only part of President Biden’s campaign platform – i.e., “re-elect me to finish the job”, in this case the rescheduling process)?

- As such we see the release of the full HHS document (kudos to attorney Matthew Zorn) as a double-edged sword. If all this is in part political (and part of a re-election platform), the detailed and now public HHS memo to some extent takes the pressure off the White House, in our view. President Biden could say he ordered (Oct’22) an expeditious review of marijuana scheduling, and the HHS has made a very thorough recommendation to the DEA, and the process is ongoing. Moreover, it would be a hedge on the DEA (and give them more time), even though we think it is unfathomable the President’s political team would take it this far and then end up being rebuffed by the DEA (but then again, they were not planning on having the 252 pages disclosed). In a front-page article on Saturday, the New York Times noted “tensions” between DEA career officials and HHS staff on the rescheduling process. We also think rule making will be more complicated (see inside this report) than these various agencies and DOJ have anticipated, so leaving it for after the election would give them more time.
- Trader’s corner (or maybe we should say “day traders”): We try to avoid calling out “trades” in the sector and prefer to think about investment ideas, on fundamentals. The sector is too volatile, with plenty of pumping and quick profit taking (how can we explain the MSOS ETF almost giving up all the gains of the first half of Sep, in just over 12 days before the end of Sep? Did anyone doubt the HHS memo?). True, with increasing retail (investor) awareness these past few days (from a cover article in the New York Times, to the MSOS ETF trending on Reddit forums, and crypto influencers now gravitating to cannabis), we would expect stocks to move up (first, on Monday on probably low volume in the Canadian exchanges, and then in US exchanges when they open on Tuesday). But if we do not get any news out of the DEA in the coming days, when does the profit taking start?
- President Biden’s “nuclear” option? The polls are what they are, but if they worsen for him, will the President’s political team take an even more active stance on cannabis (to attract young voters) a la Justin Trudeau in Canada? We do not discard this event, although, again, the 252-pages may be enough for some in his team. A more aggressive stance (i.e., full nationwide decriminalization or med/rec de-scheduling) would represent opportunities as well as risks for the industry. Anyway, we think the gradual approach is probably better - also, it does not breach international agreements like the UN’s Single Convention on Narcotic Drugs.



Our Analysis

What Was Really New?

In the words of the National Cannabis Roundtable (industry association seeking “cannabis reform that nurtures the nascent domestic industry, protects consumers, and advances social equity”) “the importance of a federal agency publicly acknowledging that cannabis is inappropriately classified as a Schedule I substance and has accepted medical use cannot be overstated. The documentation released today (Friday) also highlights the abundance of research and scientific evidence that HHS and the FDA utilized to make this historic recommendation”.

What is new here,

- We already knew there was letter (memorandum) sent by the HHS to the DEA on 8/29. It was leaked to Bloomberg (why would such a sensitive memo be leaked? because politics, for better or worth, play a big role here), and they wrote about it on 8/30. Then, a heavily redacted version of the memo was released on 10/25. So, the existence of the memo is no new news.
- Schedule III recommendation is news (although widely expected). We have confirmation the HHS is recommending rescheduling cannabis from Schedule I to Schedule III (not II as some [a tiny minority] could have speculated). We could argue the consensus had assumed III anyway (a letter on 11/17 from NCR to the DEA Administrator Anne Milgram assumed so, based on press reports).
- We now have access to the key arguments in a 252-page document (this is new), and the arguments go through the 8-factor analysis. Did anyone think that after an 11-month review, the HHS would come out with flimsy arguments (especially after a 2016 HHS review kept cannabis in Schedule I)? Still, it is positive that new data and research, after seven years, have led the HHS in a new direction.

Memo Take-Aways

Our main take aways from the memo. There is obviously a lot in the 252-page document, but these points caught out attention (no, we are not pharmaceutical experts).

- **The three conclusions,** 1) Marijuana has a potential for abuse less than the drugs or other substances in Schedules I and II; 2) Marijuana has a currently accepted medical use (CAMU) in treatment in the United States; 3) Abuse of marijuana may lead to moderate or low physical dependence or high psychological dependence. *Our take: all very positive (less abuse potential than I and II; passed the CAMU test; moderate dependence), ex the high psychological dependence (but this could also apply to caffeine).*



- **CAMU test.** The FDA conducted Part 2 of the CAMU test for seven indications (anorexia, anxiety, epilepsy, inflammatory bowel disease, nausea and vomiting, pain, and post-traumatic stress disorder). The review of the available information identified mixed findings of effectiveness across indications, ranging from data showing inconclusive findings to considerable evidence in favor of effectiveness, depending on the source. The largest evidence base for effectiveness exists for marijuana use within the pain indication (in particular, neuropathic pain). Note: Part 2 of the CAMU test is about “whether there is scientific support for at least one of these medical uses of a substance – i.e., it considers whether there exists some credible scientific support for the use of marijuana for at least one of the medical conditions.” *Our take: Conclusion #2 implies marijuana passed the CAMU test (because what matters is that it works for at least one condition), but the read of this section of the memo is much less compelling. If there will be FDA federal guidelines, this may mean it can only be prescribed (Rx) for chronic pain, and off label for other conditions (as is the case for Ketamine).*
- **More PC cases for fentanyl, heroin, cocaine, and ketamine, than for marijuana.** “In the epidemiological analyses regarding prevalence of marijuana abuse and associated harms, evaluations included comparators such as heroin (Schedule I), fentanyl (Schedule II), oxycodone (Schedule II), hydrocodone (Schedule II), cocaine (Schedule II), ketamine (Schedule III), benzodiazepines (Schedule IV), zolpidem (Schedule IV), tramadol (Schedule IV), and alcohol (FDA Office of Surveillance and Epidemiology, 2023). Research for the 2015-2021 period, showed abuse cases (as reported to Poison Centers) making up the largest proportion of PC cases: illicit fentanyl (72%), heroin (65%), cocaine (41%) and ketamine (40%). The fifth highest percentage was for cases involving marijuana (36%), followed by alcohol (15%), oxycodone (13%), benzodiazepines (8%), hydrocodone (5%), tramadol (4%), and zolpidem (3%).” *Our take: Positive, as it reinforces the logic of Schedule III.*
- **Alcohol was used as a comparator.** The memo says “It should be noted that although alcohol is well known to be abused, it was explicitly exempted from control under the CSA when it was enacted. Typically, substances that are not controlled under the CSA are not utilized as comparator drugs for scheduling placement considerations because they may not have been formally evaluated for abuse potential in standard preclinical and clinical abuse-related studies. However, alcohol is included in the analyses because of its extensive availability and use in the United States, which is also observed for nonmedical use of marijuana (also known as recreational use of marijuana)”. *Our take: Any references to alcohol in this debate/process, will increase the probability of the alcohol lobby getting involved (we see more downside than upside for that, in terms of a final framework leaving the respective state programs as literally isolated islands).*
- **The hemp precedent:** There are a few references in the memo to the 2018 Farm Bill removing hemp from the definition of marijuana in the CSA (which removed hemp/CBD from control under any drug schedule of the CSA). *Our take: We doubt the DEA would recommend removing marijuana from the CSA given all the “medical use” arguments in*



the memo. However, the DEA may suggest rescheduling medical cannabis to Schedule III and removing rec cannabis from the CSA. In both cases this would be a win for the industry as 280E would no longer apply. While this may seem farfetched, it may help the FDA getting around the issue that all Schedule III substances require a prescription (Rx). Again, this supports our thesis there may not be time for a full framework to be enacted before the Nov election.

What is Left Unsaid?

What is left unsaid, in our view,

- **Will rescheduling bifurcate med and rec?** In general, the memo talks about marijuana as one, although the constant references to “for medical use” (CAMU) make us wonder how the DEA will decide on rescheduling. The study notes 38 states plus DC have approved marijuana for medical use, and 23 (plus DC) for nonmedical use.
- **Does rescheduling mean medical marijuana will be legalized at the federal level?** There is only one CSA (i.e., there are no 50 different CSAs). If marijuana is placed on Schedule III, we would expect the DEA to treat it as it does other Schedule III substances (i.e. under a federal construct).
- **Federal vs. states.** The 10/6/22 request from President Biden to the HHS/DOJ was “to initiate the administrative process to review expeditiously how marijuana is scheduled under federal law.” The consensus assumption is that state programs will not be altered (other than tax 280e no longer applying at the federal level), but we are not so certain.

What is Next (that matters to stocks)

These are the next steps,

- **DEA response:** The DEA must issue a formal response, which they will send to the DOJ. Will this be leaked again? When will this happen? It could be any day, but if this is political, we think mid/late summer (ahead of the election makes sense). But we will not make predictions for an actual date (social media has this going from MLK Day to 4/20 to other dates). But we do assign 90% probability to at least a DEA headline (or leaked memo) accepting rescheduling to III, at some point.
- **Comments:** Although there could be procedural exceptions, the DEA is supposed to allow for a public comment period, where the “public” can challenge its proposal.
- **Framework:** Next, we still believe, these agencies (HHS, FDA, DEA) together with the DOJ will need to work on a framework for this change to be implemented. The so-called “rule making” by the DEA is mostly confined to the “scheduling” part. In the end, what this framework looks like will make a difference to stocks. Its final shape is not immediately obvious to us, notwithstanding the “consensus narrative” that has long emerged.



- **Enactment:** Full implementation before the election? We are skeptical of this scenario, as we explain below.

On the (potential) Framework

Covering the industry for the last few years, we have learned the cannabis industry has significant lobbying muscle (which we had underestimated), both at the state level and at the federal level. In fact, this is augmented by the fact that we are mostly talking about a “blank canvas”, as there is nothing in place (i.e., you are not lobbying to change something that may itself already have its vested interests, but to create something from scratch). In general, this has mostly worked in the industry’s favor, until someone raises their hand (Section 10 re SAFER Banking, or “choke point” in political parlance) or comes out with a radically different program (at the state level, see NY at the beginning, and more recently DE).

- **The consensus narrative:** The thesis espoused by the industry and its lobbyists (we call it the “consensus narrative”) is that rescheduling to III will do away with tax rule 280E (as it only applies to I and II) and that the respective states’ programs (where med and or rec are legal) will remain in place, with no changes in terms of federal oversight (as cannabis would remain federally illegal). Some from the industry have gone further, saying that with rescheduling then the FDA will crack down against unsanctioned unlicensed hemp derivatives. This thesis also argues that given cannabis is not bifurcated into med or rec under Schedule I, that no bifurcation will apply under Schedule III.
- **Federal rules, at least some:** Rescheduling to III will require a federal framework (and we do not mean by this one that just says “leave it to the states”), in our view. Schedule I substances (call it FDA-approved drugs, chemical compounds, or just substances) do not have medical use, and hence are prohibited (to state the obvious, they are unregulated because they are prohibited). But Schedule III substances, like ketamine, anabolic steroids, and testosterone, all require a Dr’s prescription (Rx), and not just a so-called “recommendation” as per the various states’ medical programs. We are not aware of any substance in Schedule III, which does not require a Dr’s prescription. In short, we do not see how these agencies can propose rescheduling cannabis without a federal construct.
- **What the new rules could look like:** At the least, moving medical cannabis to Schedule III (yes, we expect bifurcation) would require Rx prescriptions and even perhaps some form of FDA oversight; CBD has no FDA oversight, but it is not classified as Schedule III (hemp, and thus CBD, was removed from the Controlled Substances Act in the 2018 Farm Bill). Other rules will be tougher to implement initially (interstate trade? a 3-tier system? Sales via pharmacies as in GA?).
- **Other industries are watching this and could become a part of the process (via the comment period, for example).** As with Section 10 in SAFE Banking (Choke Point), we expect the so-called “blank canvas” may eventually have someone raise their hand on the other side (call it the pharmaceutical industry, and or the alcohol and tobacco lobby). For example, could the pharmaceutical industry start lobbying for other Schedule III, IV, and

V, to be prescribed without prescriptions (and only recommendations)? Sure, states may have different rules for the sale of alcohol (and tobacco), but interstate trade is allowed, and a 3-tier system is required.

In the end, we believe legalization of medical cannabis at the federal level would be a good thing for the industry (although the details will matter). Federal legalization of medical cannabis (which would require at a federal level greater FDA oversight and control) would facilitate banking access (making SAFER a moot point) and probably even allow for US plant touching companies to uplist in US exchanges (several companies outside the US where med cannabis [or rec] is legal, are listed in US exchanges). In this context, a new DOJ Memo would only need to focus on rec.

The Companies

In a report from late Aug ([MSO Financial Upside from Rescheduling](#)), we quantified in detail the financial benefits for various MSOs if 280E is repealed. Relative to market cap (cash flow savings), the biggest beneficiaries (in this order) would be StateHouse, AYR, Jushi, and Cannabist. The table below summarizes some of those findings.

Table 1: OCF Boost Without 280E

Company	OCF Boost with no 280E	Market Cap	% impact on mkt cap	EV	% impact on EV	BDND/Rev Leverage
Acreage	55.0	31.4	175%	300.4	18%	-1.2x
Ascend	36.0	314.6	11%	884.5	4%	-1.1x
AYR	84.0	200.8	42%	853.5	10%	-1.2x
ColCare	133.0	227.0	59%	789.7	17%	-1.1x
Cresco	112.0	858.3	13%	1564.4	7%	-0.9x
Curaleaf	169.0	3451.5	5%	4949.1	3%	-0.9x
4Front	16.4	83.0	20%	360.6	5%	-2.3x
GoodGrow	na	28.3	na	88.3	na	-0.7x
Green Thumb	83.0	3141.2	3%	3522.9	2%	-0.4x
ianthus	na	194.7	na	376.0	na	-1.2x
Jushi	61.0	128.5	47%	477.0	13%	-1.0x
MariMed	9.0	119.8	8%	203.6	4%	-0.4x
Planet 13	18.5	241.4	8%	252.0	7%	0.1x
Schwazze	19.0	121.7	16%	343.7	6%	-1.1x
StateHouse	59.0	14.9	396%	200.8	29%	-1.8x
TerrAscend	86.0	722.0	12%	1024.7	8%	-1.0x
Tilt	na	10.6	na	120.6	na	-0.7x
Trulieve	162.0	1152.7	14%	1948.6	8%	-0.6x
Verano	123.0	1815.0	7%	2455.4	5%	-0.7x
Vext	3.0	33.4	9%	69.2	4%	-1.0x

Source: Company reports; Z&A estimates

The relative magnitude of tax payments varies across MSOs (and not everyone is paying). In CY22 these 20 MSOs paid a combined \$735Mn. As per companies' filings, we see Curaleaf, Trulieve, and Green Thumb accounted for 57% of total income taxes paid by the 20 companies in our sample, although they only accounted for ~40% of sales. In the appendix we show more color on this topic.



- Companies that in CY22 paid more than 10% of sales in income tax: Acreage, Cannabist, Curaleaf, Green Thumb, MariMed, and Trulieve.
- Companies that paid between 5% to 10% of sales in income tax: AYR, Cresco, Goodness Growth, Planet 13, Schwazze, and Verano.
- Paid up to 5% of sales: Ascend, 4Front, StateHouse, TerrAscend
- Companies that did not pay: iAnthus, TILT, and Vext (or it was not disclosed).
- In the appendix, we show the \$ amount paid, and as % of gross profits too.

Table 2: Income Taxes Paid

	CY20	CY21	1Q22	2Q22	3Q22	4Q22	CY22	1Q23	2Q23	3Q23
INCOME TAXES PAID (\$Mn)										
Acreage	3.0	16.4	2.4	19.0	0.3	10.8	32.5	7.6	-3.4	1.7
Ascend	2.4	11.4	-27.4	12.2	3.3	46.2	15.5	-48.9	12.8	-5.8
AYR	5.6	41.3	23.5	7.2	-1.4	1.7	30.9	0.9	0.1	6.1
Cannabist	7.7	22.6	0.1	43.7	7.7	0.0	51.4	0.7	7.6	6.6
Cresco	13.5	74.0	6.9	30.5	2.6	6.8	46.8	32.2	1.6	0.6
Curaleaf	21.5	91.8	2.0	107.6	11.1	35.2	156.0	1.4	108.2	-63.4
4Front	0.0	0.2	1.1	1.0	0.0	0.0	2.1	0.7	0.3	0.0
Goodness Growth	0.4	5.9	0.0	3.0	7.8	-7.8	5.1	0.0	1.1	0.0
Green Thumb	72.6	148.1	0.1	64.7	30.5	22.9	118.2	0.2	52.0	28.3
iAnthus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jushi	1.3	7.1	3.9	4.7	2.7	0.5	11.7	0.3	2.8	0.0
Marimed	1.2	0.6	0.1	11.8	0.7	2.0	14.6	5.3	1.0	0.6
Planet13	13.0	13.0	0.0	0.0	7.9	0.0	7.9	3.0	0.0	4.6
Schwazze	0.0	2.1	0.0	6.8	3.0	2.5	12.3	0.0	3.5	1.5
StateHouse	2.0	2.3	0.0	2.2	0.0	2.6	2.6	0.0	0.0	1.7
TerrAscend	11.2	37.1	0.0	9.2	0.0	0.7	9.9	-0.6	-4.0	0.0
Tilt	0.0	1.2	0.0	0.1	0.2	0.2	0.4	0.0	0.0	0.0
Trulieve	105.2	178.7	0.0	104.2	57.5	-15.0	146.7	0.0	121.0	-7.8
Verano	10.2	28.0	0.0	37.3	20.6	12.8	70.7	36.4	15.3	26.6
Vext	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: negative number means, reported taxes paid were reverse

Source: Company reports; Z&A estimates

How much ST tax debt do the MSOs have in their books? In terms of short-term income tax liabilities shown in the balance sheet at the end of CY22,

- Highest: ST tax liabilities were 31% of sales 4Front, 29% at Verano, and 28% at StateHouse.
- 10% to low teens: Acreage, AYR, Cresco, Curaleaf
- 5% to <10%: Ascend, Cannabist, Jushi, Marimed, TerrAscend
- 1% to 5%: Planet13, Schwazze, TILT, Trulieve
- 0% (or not disclosed): Goodness Growth, Green Thumb, iAnthus, Vext.



- As seen in the next table, since the end of CY22, this ratio has increase for most companies YTD, with the exception of Jushi, MariMed, Planet13, TILT, Trulieve, and Verano. But in the case of Jushi and Trulieve this may be more related to an accounting decision (the companies will start booking tax provisions as normal corporations as if they were not subject to 280E).
- We do not factor deferred tax liabilities (shown in the appendix). That said, companies like Curaleaf and Jushi book long term tax liabilities (separate from deferred tax liabilities) under the names “uncertain tax provisions” (\$108Mn for Curaleaf as of 3Q23, or 8% of annualized sales) and “unrecognized tax benefits” (\$99Mn for Jushi as of 3Q23, or 38% of annualized sales).

Table 3: ST Income Tax as % of Annualized Sales

	CY20	CY21	1Q22	2Q22	3Q22	4Q22	CY22	1Q23	2Q23	3Q23
ST INCOME TAX PAYABLE as % of ANNUALIZED SALES										
Acreage	13%	13%	13%	9%	12%	11%	10%	13%	15%	18%
Ascend	13%	11%	13%	11%	12%	8%	9%	10%	10%	11%
AYR	14%	8%	4%	5%	7%	8%	10%	12%	15%	17%
Cannabist	0%	6%	6%	0%	1%	7%	7%	9%	9%	9%
Cresco	8%	6%	7%	7%	10%	12%	11%	10%	12%	15%
Curaleaf	13%	12%	15%	10%	12%	11%	12%	15%	15%	18%
4Front	20%	23%	27%	26%	25%	29%	31%	32%	34%	42%
Goodness Growth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green Thumb	3%	0%	3%	1%	1%	0%	0%	3%	1%	1%
iAnthus	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Jushi	2%	3%	21%	3%	5%	6%	7%	11%	12%	2%
Marimed	0%	14%	16%	8%	9%	8%	9%	6%	7%	9%
Planet13	2%	1%	4%	0%	0%	3%	3%	2%	1%	3%
Schwazze	0%	2%	3%	0%	2%	5%	5%	8%	8%	10%
StateHouse	12%	17%	23%	14%	23%	30%	28%	34%	37%	39%
TerrAscend	19%	5%	15%	5%	9%	9%	9%	13%	16%	16%
Tilt	0%	0%	0%	1%	0%	1%	1%	1%	1%	1%
Trulieve	1%	3%	6%	2%	0%	4%	4%	3%	0%	0%
Verano	21%	21%	25%	18%	24%	28%	29%	27%	24%	26%
Vext	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Source: Company reports; Z&A estimates

All the above said, we expect companies to take a more proactive stance re 280E given the HHS recommendation. Certainly, 280E has put a tremendous burden on companies' cash flows, with those paying in full absorbing an equivalent tax rate close to 80% of profit before tax compared with the 21% statutory tax rate that would apply without 280E. Given these pressures, as we noted before, companies pay 280E taxes in varying degrees; some have been accumulating ST tax debt; some have taken more drastic action and have begun providing ex 280E. We expect these trends to become more of the norm (and not the exception), with some companies now taking the view 280E is moot since the HHS memorandum of 8/28/23 (now fully disclosed).



What it All Means for Cannabis Stocks

We try to avoid calling out “trades” in the sector and prefer to think about investment ideas, on fundamentals. We have a strong long term positive view of the industry, but when it comes to very short-term trades (see option activity for maturities on Fri 1/19), we prefer to pass. The sector is too volatile (see next charts comparing MSOS ETF for the last 10 days, 1-year, and since Oct’20), with plenty of pumping and quick profit taking. How do we explain the MSOS ETF, which almost doubled in the first half of Sep, giving up most of those gains by end of Oct? Did anyone doubt the existence of the HHS memo? Then to the sector volatility, add the actual stock volatility (see the wide disparity in the last 10 and 30 days regarding individual MSO stock performance).

Table 4: MSOS ETF – From 8/27 to 10/31



Source: FactSet

- With more retail investor awareness these past few days, from a cover article in the New York Times on Saturday 1/13, to the MSOS ETF trending on Reddit forums, and crypto social media influencers now gravitating to cannabis stocks (suddenly experts on these), we would expect cannabis stocks to move up (first on Monday in the Canadian exchanges, and then in the US exchanges when they open on Tuesday).
- But will institutional investors rush in, partly on FOMO and or bullish medium-term views? We do not think so, but’s let see how the MSO stocks recently listed in the TSX (Curaleaf, TerrAscend) perform on Monday (or Canadian LPs seen as proxies). All this said, what happens to the MJ trade if we do not get any news out of the DEA in the coming days? when does the profit taking start?



Table 7: MSOS ETF – Since Oct 2020 (before the Presidential Election and GA run-offs)



Source: FactSet

Table 8: Individual Stock Performance

14-Jan-24	Stock Performance			
	Last	Last	Last	Last
Ticker	5d	30d	90d	12mo
US MSOs				
ACRDF	-20%	7%	-26%	-74%
AAWH	25%	22%	55%	-3%
AYRWF	10%	20%	45%	101%
CXXIF	-2%	25%	-2%	42%
CBSTF	-13%	43%	-33%	-32%
CRLBF	8%	30%	16%	0%
CURLF	-1%	18%	13%	14%
FFNTF	3%	14%	-45%	-46%
GDNSF	2%	11%	58%	44%
GLASF	7%	20%	32%	153%
GRAMF	67%	174%	145%	30%
GRUSF	2%	-2%	4%	161%
GTBIF	5%	23%	29%	52%
ITHUF	1%	8%	22%	41%
JUSHF	5%	18%	-13%	-14%

14-Jan-24	Stock Performance			
	Last	Last	Last	Last
Ticker	5d	30d	90d	12mo
US MSOs (cont'd)				
LOWLF	-10%	-21%	-41%	-83%
MRMD	12%	5%	-18%	-25%
PLNH	3%	16%	3%	-16%
SHWZ	-5%	30%	0%	-51%
STHZF	7%	-24%	-16%	-62%
TSNDF	4%	45%	4%	29%
GNRS	0%	na	na	na
TLTTF	5%	27%	-38%	-55%
TCNMF	2%	16%	21%	-17%
VRNOF	5%	27%	19%	71%
VEXTF	1%	7%	18%	11%
Index				
S&P 500	0%	2%	11%	20%
NASDAQ	2%	1%	15%	-10%
MSOS ETF	4%	27%	16%	16%

Source: FactSet



Thinking Long Term

To state the obvious, this is a real consumer/wellness industry (addressing a consumer need), that could be 3-7x larger (domestically) by 2030, on our estimates. Legal sales are already approaching \$30Bn in the US (and we estimate illicit sales at \$70-80Bn in the US). If we took Michigan per cap spend on the US population, the US market would be \$112Bn. But with legalization, we would expect innovation, distribution, and acceptance (less stigma) to expand the market much further (say, \$150Bn). True, we do not know the shape of that future market (a tier-system? imports allowed? interstate trade would be a given, no?), but we believe those companies now building a sustainable moat will benefit as the industry grows and surely also consolidates.

A company with, say, 20% retail share on a \$150Bn market would have sales of \$30Bn (all this not factoring non-US sales, which could add another \$50-100Bn to the global market). Adjust that number to wholesale (using 0.5x), take 25% EBITDA margin and a 20-30x EBITDA multiple, and that said company could be worth by then over \$110Bn. Only four MSOs (and one in Canada, Tilray) have market caps over \$1Bn, with the largest (Curaleaf) at only ~\$3Bn. So, the upside could be significant. True, for long-term investors this will be about choosing the right company. Depending on how regs change, some of the Canadian LPs could also have a significant a role to play in the US industry (some of those LPs already do so in Canada and internationally).

So, lots of conviction about the long term.

Note: Regarding eventual DOJ guidelines, NCR's public statement on Friday 1/12 said, "we all agree that more federal action is needed outside of the scope of the CSA review in order to right the wrongs of the misguided War on Drugs that we hope to see the Department of Justice also swiftly take action on. Within the purview of the CSA, moving cannabis to Schedule III will allow for additional critical medical research to be conducted and will allow for state legal cannabis businesses to be treated in a more equitable manner under federal tax law. Without the extreme tax burdens caused by 280E, the regulated cannabis industry will be better equipped to combat the threat to public safety and health posed by the illicit market and a better ability to reinvest in their workforces and the communities they serve. We look forward to working with the Biden Administration and Congress to move forward meaningful federal cannabis reform that protects consumers, advances social equity, addresses past injustices, creates economic growth, and supports existing regulated state markets."



Table 9: Companies mentioned in this report.

Company name	Ticker	Ticker	Rating	Company name	Ticker	Rating
US MSOs				Canada LPs		
4Front Ventures		FFNTF	Not rated	Aurora Cannabis	ACB	not rated
Acreage Holdings		ACRDF	Not rated	Auxly Cannabis Group	CBWTF	not rated
Ascend Wellness		AAWH	Not rated	Avant Brands	AVTBF	not rated
AYR Wellness		AYRWF	Not rated	BZAM	BZAMF	not rated
Columbia Care		CCHWF	Not rated	Canopy Growth Corporation	CGC	not rated
Cresco Labs		CRLBF	Not rated	Cronos Group	CRON	not rated
Curaleaf Holdings		CURLF	Not rated	Decibel Cannabis Co	DBCCF	Overweight
GlassHouse Brands		GLASF	Not rated	Organigram Holdings	OGI	not rated
Gold Flora		GRAM	Overweight	Rubicon Organics	ROMJF	not rated
Greenlane Holdings		GNLN	Not rated	SNDL	SNDL	not rated
Green Thumb Industries		GTBIF	Overweight	Tilray Brands	TLRY	not rated
Jushi Holdings		JUSHF	Not rated	Village Farms Intl	VFF	Overweight
MariMed Inc		MRMD	Overweight	Other		
Planet 13 Holdings		PLNHF	Overweight	New Lake Capital Partners	LFly	Overweight
Schwazze		SHWZ	Not rated	Chicago Atlantic REFC	REFI	Overweight
StateHouse Holdings Inc		STHZF	Neutral	Leafly	LFly	Not rated
TerrAscend Corp.		TSNDF	Not rated	Smooore International	SMORF	Not rated
TILT Holdings, Inc.		TLLTF	Overweight	Springbig	SBIG	Not rated
Trulieve Cannabis		TCNNF	Not rated	WM Technology	MAPS	Neutral
Verano Holdings		VRNOF	Overweight			
Vext Science, Inc.		VEXTF	Not rated			

Note: others mentioned are either brands or private companies

Source: Z&A



Link to Our Recent reports

[MAPS: Initiating Coverage](#) (1/11/24)

[StateHouse Holdings: Initiating Coverage](#) (1/10/24)

[Gold Flora: Initiating Coverage](#) (1/10/24)

[Village Farms: Initiating Coverage](#) (12/18/23)

[Decibel Cannabis: Initiating Coverage](#) (12/18/23)

[Winning Brands in California](#) (12/15/23)

[NY State MSO Upside?](#) (12/13/23)

[Key Insights by Canadian Provinces](#) (12/7/23)

[REFI Coverage Initiation](#) (12/5/23)

[NLCP Coverage Initiation](#) (12/5/23)

[Canada's Fast Growing Vape and Pre-Roll Segments](#) (11/29/23)

[MSO Beneficiaries from Key States Going Rec](#) (11/21/23)

Link to our December Webinars

[Vape Market and Hardware Trends](#) (12/14/23)

[NLCP CEO: Fireside Chat](#) (12/13/23)

[Canada Panel: VFF and DB](#) (12/7/23)



Appendix I: MSOs Tax Related Data

Zuanic & Associates



Exhibit 1: Income Taxes Paid

	CY20	1Q21	2Q21	3Q21	4Q21	CY21	1Q22	2Q22	3Q22	4Q22	CY22	1Q23	2Q23	3Q23
INCOME TAXES PAID (\$Mn)														
Acreage	3.0	1.6	4.4	0.4	10.0	16.4	2.4	19.0	0.3	10.8	32.5	7.6	-3.4	1.7
Ascend	2.4	3.1	3.7	7.7	26.0	11.4	-27.4	12.2	3.3	46.2	15.5	-48.9	12.8	-5.8
AYR	5.6	21.9	7.9	8.2	3.3	41.3	23.5	7.2	-1.4	1.7	30.9	0.9	0.1	6.1
Cannabist	7.7	0.1	4.2	6.1	12.2	22.6	0.1	43.7	7.7	0.0	51.4	0.7	7.6	6.6
Cresco	13.5	0.8	58.4	10.8	3.9	74.0	6.9	30.5	2.6	6.8	46.8	32.2	1.6	0.6
Curaleaf	21.5	-0.2	82.8	1.0	8.2	91.8	2.0	107.6	11.1	35.2	156.0	1.4	108.2	-63.4
4Front	0.0	0.2	0.0	0.0	0.0	0.2	1.1	1.0	0.0	0.0	2.1	0.7	0.3	0.0
Goodness Growth	0.4	0.0	0.0	0.0	0.0	5.9	0.0	3.0	7.8	-7.8	5.1	0.0	1.1	0.0
Green Thumb	72.6	15.1	60.3	34.2	38.4	148.1	0.1	64.7	30.5	22.9	118.2	0.2	52.0	28.3
iAnthus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jushi	1.3	0.7	5.0	0.4	1.0	7.1	3.9	4.7	2.7	0.5	11.7	0.3	2.8	0.0
Marimed	1.2	0.0	0.4	0.0	0.2	0.6	0.1	11.8	0.7	2.0	14.6	5.3	1.0	0.6
Planet13	13.0	0.0	0.0	11.6	1.4	13.0	0.0	0.0	7.9	0.0	7.9	3.0	0.0	4.6
Schwazze	0.0	0.0	0.0	0.0	2.1	2.1	0.0	6.8	3.0	2.5	12.3	0.0	3.5	1.5
StateHouse	2.0	0.0	0.0	0.0	2.3	2.3	0.0	2.2	0.0	2.6	2.6	0.0	0.0	1.7
TerrAscend	11.2	4.5	11.9	20.7	0.0	37.1	0.0	9.2	0.0	0.7	9.9	-0.6	-4.0	0.0
Tilt	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.1	0.2	0.2	0.4	0.0	0.0	0.0
Trulieve	105.2	0.0	80.0	40.4	58.3	178.7	0.0	104.2	57.5	-15.0	146.7	0.0	121.0	-7.8
Verano	10.2	0.0	16.3	0.1	11.6	28.0	0.0	37.3	20.6	12.8	70.7	36.4	15.3	26.6
Vext	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: negative number means, reported taxes paid were reverse

Source: Company reports; Z&A calculations



Exhibit 2: Income Tax as % of Sales

	CY20	1Q21	2Q21	3Q21	4Q21	CY21	1Q22	2Q22	3Q22	4Q22	CY22	1Q23	2Q23	3Q23
INCOME TAXES PAID / SALES														
Acreage	3%	4%	10%	1%	17%	9%	4%	31%	0%	19%	14%	14%	-6%	3%
Ascend	2%	5%	4%	8%	29%	3%	-32%	12%	3%	41%	4%	-43%	10%	-4%
AYR	4%	37%	9%	9%	3%	12%	24%	7%	-1%	1%	7%	1%	0%	5%
Cannabist	4%	0%	4%	5%	9%	5%	0%	34%	6%	0%	10%	1%	6%	5%
Cresco	3%	0%	28%	5%	2%	9%	3%	14%	1%	3%	6%	17%	1%	0%
Curaleaf	3%	0%	27%	0%	3%	8%	1%	32%	3%	10%	12%	0%	32%	-19%
4Front	0%	1%	0%	0%	0%	0%	4%	3%	0%	0%	2%	2%	1%	0%
Goodness Growth	1%	0%	0%	0%	0%	11%	0%	14%	42%	-41%	7%	0%	5%	0%
Green Thumb	13%	8%	27%	15%	16%	17%	0%	25%	12%	9%	12%	0%	21%	10%
iAnthus	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Jushi	2%	2%	10%	1%	1%	3%	6%	6%	4%	1%	4%	0%	4%	0%
Marimed	2%	0%	1%	0%	1%	1%	0%	36%	2%	6%	11%	15%	3%	2%
Planet13	18%	0%	0%	35%	5%	11%	0%	0%	31%	0%	8%	12%	0%	18%
Schwazze	0%	0%	0%	0%	8%	2%	0%	15%	7%	6%	8%	0%	8%	3%
StateHouse	3%	0%	0%	0%	15%	4%	0%	6%	0%	10%	2%	0%	0%	6%
TerrAscend	8%	8%	20%	42%	0%	19%	0%	14%	0%	1%	4%	-1%	-6%	0%
Tilt	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Trulieve	20%	0%	37%	18%	19%	19%	0%	33%	19%	-5%	12%	0%	43%	-3%
Verano	4%	0%	8%	0%	5%	4%	0%	17%	9%	6%	8%	16%	7%	11%
Vext	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Source: Company reports; Z&A calculations



Exhibit 3: Income Taxes Paid as % of Gross Profits

	CY20	1Q21	2Q21	3Q21	4Q21	CY21	1Q22	2Q22	3Q22	4Q22	CY22	1Q23	2Q23	3Q23
INCOME TAXES PAID / GROSS PROFITS														
Acreage	6%	8%	18%	2%	36%	17%	8%	62%	1%	53%	32%	29%	-16%	8%
Ascend	4%	11%	11%	19%	84%	8%	-117%	37%	9%	111%	12%	-137%	45%	-13%
AYR	6%	89%	35%	21%	6%	30%	58%	18%	-3%	3%	16%	2%	0%	13%
Cannabist	12%	0%	8%	8%	36%	12%	0%	86%	15%	0%	26%	2%	15%	18%
Cresco	7%	1%	58%	10%	4%	18%	6%	27%	3%	8%	11%	38%	2%	1%
Curaleaf	7%	0%	53%	1%	6%	16%	1%	61%	7%	46%	27%	1%	74%	-42%
4Front	0%	2%	0%	0%	19%	0%	8%	8%	0%	3%	5%	7%	4%	0%
Goodness Growth	2%	0%	0%	0%	0%	30%	0%	29%	82%	-92%	17%	0%	11%	0%
Green Thumb	24%	14%	49%	26%	30%	30%	0%	51%	23%	18%	23%	0%	41%	21%
iAnthus	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Jushi	3%	4%	22%	2%	5%	8%	20%	18%	10%	2%	12%	1%	9%	0%
Marimed	4%	0%	2%	0%	1%	1%	0%	79%	4%	13%	23%	34%	6%	4%
Planet13	38%	0%	0%	66%	8%	20%	0%	0%	75%	0%	17%	27%	0%	41%
Schwazze	0%	0%	0%	0%	17%	4%	0%	27%	12%	11%	15%	0%	14%	7%
StateHouse	7%	0%	0%	0%	47%	9%	0%	15%	0%	24%	6%	0%	0%	14%
TerrAscend	14%	13%	34%	96%	0%	33%	0%	40%	0%	2%	10%	-2%	-11%	0%
Tilt	0%	0%	0%	0%	0%	2%	0%	1%	2%	3%	1%	0%	0%	0%
Trulieve	27%	0%	55%	26%	44%	32%	0%	59%	34%	-10%	22%	0%	85%	-5%
Verano	8%	0%	16%	0%	27%	8%	0%	38%	17%	12%	17%	33%	13%	20%
Vext	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Source: Company reports; Z&A calculations



Exhibit 4: ST Income Tax Liabilities

	CY20	1Q21	2Q21	3Q21	4Q21	CY21	1Q22	2Q22	3Q22	4Q22	CY22	1Q23	2Q23	3Q23
SHORT TERM INCOME TAX PAYABLE (\$Mn)														
Acreage	14.8	18.9	21.2	27.4	24.6	24.6	30.6	21.3	29.2	24.2	24.2	29.7	34.0	40.4
Ascend	18.3	22.5	22.5	42.1	36.2	36.2	43.8	44.1	54.1	34.7	34.7	46.8	47.0	59.9
AYR	21.4	10.2	14.0	21.4	28.9	28.9	17.2	20.8	32.8	46.0	46.0	56.9	69.7	77.7
Cannabist	0.0	0.0	0.0	30.0	26.5	26.5	31.7	0.0	5.9	34.0	34.0	42.6	46.9	44.7
Cresco	36.1	55.2	18.9	32.4	46.9	46.9	64.2	59.0	82.3	94.8	94.8	80.4	92.4	110.6
Curaleaf	79.6	110.1	63.4	130.1	139.2	139.2	182.9	137.2	167.3	162.9	162.9	202.3	209.9	237.3
4Front	11.5	13.3	16.7	21.5	24.0	24.0	27.6	29.7	32.8	36.6	36.6	39.2	41.2	38.5
Goodness Growth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Thumb	16.1	30.2	0.5	16.5	1.5	1.5	32.8	6.5	9.0	4.4	4.4	30.6	9.8	16.1
iAnthus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jushi	1.3	1.3	0.1	0.0	6.6	6.6	51.0	9.9	15.8	19.9	19.9	29.4	32.6	4.1
Marimed	0.0	0.0	0.0	0.0	16.5	16.5	20.1	10.0	11.7	11.5	11.5	8.7	9.6	14.0
Planet13	1.2	3.7	0.0	0.0	1.1	1.1	3.9	0.1	0.1	2.8	2.8	2.1	0.8	2.9
Schwazze	0.0	0.0	0.0	1.0	2.0	2.0	3.3	0.9	3.6	7.3	7.3	12.6	14.1	18.3
StateHouse	7.4	8.6	10.1	13.4	10.2	10.2	15.6	19.3	27.9	30.4	30.4	33.8	37.3	39.3
TerrAscend	27.7	32.5	25.7	10.9	9.6	9.6	28.8	13.2	23.1	23.1	23.1	34.7	45.9	58.7
Tilt	0.1	0.1	0.0	0.0	0.0	0.0	0.1	1.1	0.6	1.0	1.0	1.5	1.8	1.4
Trulieve	5.9	42.4	0.0	0.0	27.6	27.6	77.7	23.9	4.7	49.8	49.8	35.7	0.0	0.0
Verano	46.9	71.6	57.8	130.2	154.5	154.5	203.9	161.4	222.3	252.8	252.8	247.7	227.1	251.0
Vext	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: Company reports; Z&A calculations



Exhibit 5: ST Income Tax Liabilities as of Annualized Sales

	CY20	1Q21	2Q21	3Q21	4Q21	CY21	1Q22	2Q22	3Q22	4Q22	CY22	1Q23	2Q23	3Q23
ST INCOME TAX PAYABLE as % of ANNUALIZED SALES														
Acreage	13%	12%	12%	14%	11%	13%	13%	9%	12%	11%	10%	13%	15%	18%
Ascend	13%	9%	7%	11%	10%	11%	13%	11%	12%	8%	9%	10%	10%	11%
AYR	14%	4%	4%	6%	6%	8%	4%	5%	7%	8%	10%	12%	15%	17%
Cannabist	0%	0%	0%	6%	5%	6%	6%	0%	1%	7%	7%	9%	9%	9%
Cresco	8%	8%	2%	4%	5%	6%	7%	7%	10%	12%	11%	10%	12%	15%
Curaleaf	13%	11%	5%	10%	11%	12%	15%	10%	12%	11%	12%	15%	15%	18%
4Front	20%	14%	15%	21%	21%	23%	27%	26%	25%	29%	31%	32%	34%	42%
Goodness Growth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Green Thumb	3%	4%	0%	2%	0%	0%	3%	1%	1%	0%	0%	3%	1%	1%
iAnthus	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Jushi	2%	1%	0%	0%	3%	3%	21%	3%	5%	6%	7%	11%	12%	2%
Marimed	0%	0%	0%	0%	13%	14%	16%	8%	9%	8%	9%	6%	7%	9%
Planet13	2%	4%	0%	0%	1%	1%	4%	0%	0%	3%	3%	2%	1%	3%
Schwazze	0%	0%	0%	1%	2%	2%	3%	0%	2%	5%	5%	8%	8%	10%
StateHouse	12%	17%	16%	19%	17%	17%	23%	14%	23%	30%	28%	34%	37%	39%
TerrAscend	19%	15%	11%	6%	7%	5%	15%	5%	9%	9%	9%	13%	16%	16%
Tilt	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	1%	1%	1%	1%
Trulieve	1%	5%	0%	0%	2%	3%	6%	2%	0%	4%	4%	3%	0%	0%
Verano	21%	15%	7%	16%	18%	21%	25%	18%	24%	28%	29%	27%	24%	26%
Vext	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Source: Company reports; Z&A calculations

Exhibit 6: Uncertain Tax Provisions

	CY20	1Q21	2Q21	3Q21	4Q21	CY21	1Q22	2Q22	3Q22	4Q22	CY22	1Q23	2Q23	3Q23
"UNCERTAIN TAX PROVISIONS" (BOOKED AS LT LIABILITIES SEPARATE FROM DEFERRED LIABILITIES), ALSO CALLED "UNRECOGNIZED TAX BENEFITS" BOOKED AS LT LIABILITIES														
Acreage	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Ascend	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
AYR	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Cannabist	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Cresco	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Curaleaf	2.7	2.7	129.1	112.7	0.0	0.0	56.4	44.3	58.2	0.0	0.0	0.0	0.0	107.6
4Front	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Goodness Growth	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Green Thumb	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
iAnthus	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Jushi	23.8	23.8	24.8	52.5	60.1	60.1	48.9	68.2	62.4	57.2	57.2	59.1	60.5	98.9
Marimed	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Planet13	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Schwazze	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
StateHouse	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
TerrAscend	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Tilt	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Trulieve	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Verano	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d
Vext	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d	n/d

Note: n/d means not disclosed (and we assume it must be zero if it not disclosed)

Source: Company reports; Z&A calculations



Exhibit 7: Deferred Tax Liabilities

	CY20	1Q21	2Q21	3Q21	4Q21	CY21	1Q22	2Q22	3Q22	4Q22	CY22	1Q23	2Q23	3Q23
DEFERRED TAX LIABILITIES														
Acreage	34.7	34.3	27.9	27.0	27.1	27.1	26.7	26.2	29.9	9.6	9.6	10.6	10.6	10.7
Ascend	0.0	0.0	0.0	0.0	1.4	1.4	0.3	0.0	0.0	33.6	33.6	31.4	31.6	37.1
AYR	14.7	83.1	80.4	76.3	70.1	70.1	70.5	69.4	68.0	72.4	72.4	72.4	72.4	72.4
Cannabist	32.4	36.1	92.9	69.8	79.5	79.5	74.9	85.9	67.4	2.9	2.9	3.8	0.0	0.0
Cresco	41.2	43.5	71.1	62.7	85.7	85.7	84.2	82.8	77.0	75.1	75.1	74.4	75.2	45.4
Curaleaf	226.5	222.6	340.4	303.5	257.8	257.8	342.6	334.8	332.3	309.0	309.0	304.4	318.2	311.0
4Front	6.5	7.2	7.2	7.2	7.8	7.8	7.2	6.9	6.9	8.3	8.3	8.0	7.6	7.3
Goodness Growth	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Green Thumb	35.6	37.2	43.1	125.7	81.8	81.8	81.8	81.8	80.9	62.6	62.6	62.6	62.6	62.6
iAnthus	32.1	32.1	32.1	32.1	27.5	27.5	31.6	31.6	31.6	23.8	23.8	23.8	23.8	23.8
Jushi	23.8	23.8	24.8	52.5	60.1	60.1	48.9	68.2	62.4	57.2	57.2	59.1	60.5	98.9
Marimed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Planet13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	1.5	1.5
Schwazze	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.0	0.2	0.0
StateHouse	16.2	16.0	16.2	22.3	0.0	0.0	19.9	18.7	18.4	0.0	0.0	0.0	4.1	11.1
TerrAscend	27.3	27.3	57.1	54.3	14.3	14.3	72.7	73.1	40.4	30.7	30.7	34.5	35.6	38.3
Tilt	23.3	24.1	23.5	23.1	0.1	0.1	26.0	0.0	0.0	1.4	1.4	2.2	0.0	0.0
Trulieve	23.6	22.0	29.8	40.1	251.3	251.3	243.4	237.6	220.2	224.7	224.7	216.2	211.9	205.4
Verano	49.1	238.2	251.4	323.2	262.2	262.2	256.3	259.3	249.7	196.5	196.5	193.4	189.3	183.3
Vext	5.0	5.4	5.8	6.4	6.9	6.9	8.4	9.1	9.2	3.4	3.4	5.3	4.1	3.1

Source: Company reports; Z&A calculations



Appendix II: Valuation Comps



Exhibit 8: Valuation Comps – US MSOs

US\$Mn 14-Jan-24	Z&A Spot EV / Sales			Z&A Spot EV / EBITDA			Financial Net Debt				Broadly Defined Net Debt			
	2023	2024	2025	2023	2024	2025	Sales		EBITDA		Sales		EBITDA	
							CY24	Current	CY24	Current	CY24	Current	CY24	Current
US MSOs	2.1x	1.8x	1.8x	10.4x	8.5x	7.7x								
Acreage Holdings	1.3x	1.2x	na	9.4x	5.9x	na	-0.8x	-0.9x	-4.2x	-3.7x	-1.0x	-1.2x	-5.3x	-4.6x
Ascend Wellness	1.7x	1.5x	1.5x	8.6x	7.3x	6.4x	-0.4x	-0.4x	-2.0x	-2.1x	-1.0x	-1.0x	-4.7x	-4.8x
Ayr Wellness	1.8x	1.7x	1.6x	7.6x	6.7x	5.9x	-0.8x	-0.9x	-3.2x	-3.7x	-1.3x	-1.4x	-5.1x	-5.7x
Cannabist Co	1.5x	1.4x	1.3x	10.2x	7.7x	6.3x	-0.5x	-0.5x	-2.7x	-3.3x	-1.0x	-1.1x	-5.5x	-6.9x
Cresco Labs	2.0x	2.1x	1.9x	9.6x	8.5x	8.0x	-0.6x	-0.5x	-2.3x	-2.1x	-0.9x	-0.9x	-3.8x	-3.6x
Curaleaf	3.7x	3.5x	3.1x	16.5x	14.0x	11.1x	-0.5x	-0.5x	-1.9x	-2.2x	-1.0x	-1.0x	-3.9x	-4.6x
4Front Ventures	3.1x	2.7x	na	27.7x	13.3x	na	-0.7x	-1.0x	-3.5x	-6.9x	-2.1x	-3.0x	-10.3x	-20.1x
Glass House	3.7x	2.8x	na	23.4x	10.0x	na	-0.1x	na	-0.4x	na	-0.4x	-0.4x	-1.5x	-2.0x
Gold Flora	1.2x	1.1x	na	na	na	na	na	-0.1x	na	na	na	-0.5x	na	na
Goodness Growth	1.0x	0.9x	na	4.1x	3.7x	na	-0.5x	-0.5x	-2.1x	-1.8x	-0.6x	-0.6x	-2.6x	-2.1x
Green Thumb	3.4x	3.2x	2.9x	11.2x	10.7x	9.5x	-0.1x	-0.1x	-0.5x	-0.5x	-0.3x	-0.3x	-1.2x	-1.1x
iAnthus	2.2x	na	na	na	na	na	na	-0.8x	na	-7.5x	na	-1.1x	na	-9.3x
Jushi	1.8x	1.7x	1.7x	11.8x	8.8x	8.1x	-0.7x	-0.7x	-3.4x	-4.7x	-1.3x	-1.3x	-6.4x	-9.0x
MariMed	1.4x	1.2x	1.0x	7.6x	5.3x	4.1x	-0.2x	-0.2x	-1.0x	-1.6x	-0.4x	-0.4x	-1.7x	-2.7x
Planet 13	2.5x	1.5x	1.5x	-13.8x	13.2x	10.1x	0.1x	0.2x	1.0x	21.4x	-0.1x	-0.1x	-0.6x	-11.5x
Schwazze	1.9x	1.7x	na	5.7x	4.1x	na	-0.9x	-0.9x	-2.1x	-3.1x	-1.1x	-1.2x	-2.7x	-3.9x
StateHouse	2.0x	na	na	na	na	na	na	-1.1x	na	-57.5x	na	-1.8x	na	-92.6x
TerrAscend	3.2x	2.7x	2.4x	14.2x	10.9x	8.8x	-0.5x	-0.5x	-2.0x	-1.9x	-0.8x	-0.8x	-3.2x	-3.1x
TILT	0.7x	0.7x	0.6x	20.2x	12.0x	8.1x	-0.3x	-0.3x	-5.1x	-5.7x	-0.6x	-0.6x	-11.0x	-12.3x
Trulieve	1.8x	1.7x	1.7x	6.4x	6.2x	6.1x	-0.5x	-0.5x	-1.7x	-1.7x	-0.7x	-0.7x	-2.5x	-2.6x
Verano	2.6x	2.5x	2.3x	8.0x	7.7x	7.1x	-0.3x	-0.3x	-0.9x	-0.8x	-0.6x	-0.7x	-2.0x	-1.8x
Vext	1.9x	1.2x	na	9.7x	4.8x	na	-0.6x	-1.1x	-2.4x	-8.1x	-0.6x	-1.1x	-2.5x	-8.3x

1) By "current", we mean the latest reported qtr annualized; 2) Multiples calculated using FactSet consensus (when available) for 2023, 2024, and 2025

3) As there are no CY23 sales consensus estimates for Gold Flora, iAnthus, and StateHouse, we take "current" sales for each of them

Source: FactSet and company reports



Exhibit 9: EV Math – US MSOs

US\$Mn 14-Jan-24	FactSet Spot EV	Z&A Spot EV	US\$ price	mn shares	mn deriv	Total Mkt Cap	Financial net debt	Net leases	ST income tax liab.	Conting Cons.	ITM deriv inflow	Total BDND	Pref Stock Min Int
US MSOs													
Acreage Holdings	222	300	0.22	138.1	6.7	31	-214	-21	-34			-269	
Ascend Wellness	758	885	1.43	206.7	13.3	315	-244	-266	-60			-570	
Ayr Wellness	725	853	2.46	76.6	5.0	201	-417	-158	-78	0		-653	
Cannabist Co	726	790	0.53	428.9		227	-272	-246	-45	0		-563	
Cresco Labs	1,091	1,564	1.93	436.5	8.2	858	-415	-174	-111	-6		-706	
Curaleaf	3,856	4,949	4.60	741.9	8.4	3,451	-672	-281	-345	-81		-1,378	119
4Front Ventures	308	361	0.13	648.6		83	-95	-141	-41	0		-278	
Glass House	371	599	5.60	75.3	3.2	440	-26	-11	-21	-29		-87	72
Gold Flora	6	154	0.33	288.3	0.3	96	-16	-32	-5	-5		-58	
Goodness Growth	147	88	0.26	108.7		28	-50	-11				-60	
Green Thumb	2,956	3,523	12.55	236.6	13.7	3,141	-162	-262	-16	-33	91	-382	
iAnthus	191	376	0.03	6,510.5		195	-146	-36				-181	
Jushi	423	477	0.65	196.6	1.1	129	-184	-62	-103	0		-348	
MariMed	133	204	0.31	376.1	5.5	120	-38	-13	-14			-65	19
Planet 13	151	252	0.80	301.7	1.2	241	20	-27	-3			-11	
Schwazze	148	344	0.71	171.3		122	-176	-28	-18	0		-222	
StateHouse	150	201	0.04	255.6	141.0	15	-114	-13	-39	-24	7	-184	2
TerrAscend	728	1,025	1.97	351.2	15.3	722	-186	-51	-59	-6		-303	
TILT	112	121	0.03	381.5	5.0	11	-51	-58	-1			-110	
Trulieve	1,242	1,949	6.09	186.0	3.3	1,153	-537	-173	-81	-4		-796	
Verano	2,093	2,455	5.14	343.4	9.8	1,815	-292	-95	-251	-2		-640	
Vext	48	69	0.22	149.8	0.4	33	-35	-1				-36	

Source: FactSet and company reports

Exhibit 10: Valuation Comps – Canada LPs

US\$Mn 14-Jan-24	Z&A Spot EV / Sales			Z&A Spot EV / EBITDA			Financial Net Debt				Broadly Defined Net Debt			
	Current	2024	2025	Current	2024	2025	Sales		EBITDA		Sales		EBITDA	
							Current	CY24	Current	CY24	Current	CY24	Current	CY24
Canada LPs														
Aurora Cannabis Inc.	1.2x	1.1x	0.9x	22.2x	10.1x	5.9x	na	na	na	na	0.0x	0.0x	-0.9x	-0.4x
Auxly Cannabis Group Inc.	1.4x	na	na	338.9x	na	na	-1.1x	na	-273.2x	na	-1.3x	na	-310.1x	na
Avant Brands Inc	2.1x	na	na	15.0x	na	na	-0.3x	na	-2.1x	na	-0.7x	na	-4.9x	na
BZAM Ltd	0.8x	na	na	-2.1x	na	na	-0.4x	na	1.0x	na	-0.5x	na	1.4x	na
Canopy Growth Corporation	3.3x	2.9x	2.6x	-19.2x	-276.1x	29.8x	-1.5x	-1.3x	8.7x	125.0x	-1.5x	-1.3x	8.7x	125.0x
Cronos Group Inc	-0.8x	-0.7x	-0.6x	1.3x	3.1x	4.2x	na	na	na	na	8.4x	7.9x	-13.5x	-33.2x
Decibel Cannabis Company Inc	0.9x	0.8x	0.7x	4.0x	3.3x	2.8x	-0.3x	-0.3x	-1.6x	-1.3x	-0.4x	-0.3x	-1.8x	-1.5x
High Tide, Inc.	0.4x	0.4x	0.3x	13.0x	5.9x	4.0x	0.0x	0.0x	-0.7x	-0.3x	-0.1x	-0.1x	-2.6x	-1.2x
Nova Cannabis Inc	0.4x	0.4x	0.3x	3.8x	3.6x	2.8x	0.0x	0.0x	-0.1x	-0.1x	-0.2x	-0.2x	-2.0x	-1.8x
OrganiGram Holdings Inc	1.0x	0.8x	0.7x	-11.0x	21.1x	8.1x	na	na	na	na	0.4x	0.3x	-4.5x	8.6x
Rubicon Organics, Inc.	0.7x	0.6x	na	6.5x	3.9x	na	0.0x	0.0x	-0.3x	-0.2x	0.0x	0.0x	-0.3x	-0.2x
SNDL Inc.	0.4x	0.4x	0.4x	6.3x	10.0x	6.0x	na	na	na	na	0.1x	0.1x	0.9x	1.5x
Tilray Brands, Inc.	0.2x	0.1x	0.1x	3.1x	1.3x	0.7x	-0.1x	-0.1x	-2.0x	-0.9x	-0.2x	-0.1x	-2.5x	-1.1x
Village Farms International, Inc.	0.5x	0.4x	0.4x	9.9x	8.6x	5.6x	0.0x	0.0x	-1.0x	-0.8x	-0.1x	-0.1x	-2.0x	-1.8x

Source: FactSet and company reports

Exhibit 11: EV Math – Canadian LPs

C\$Mn 14-Jan-24	FactSet Spot EV	Z&A Spot EV	C\$ price	mn shares	mn deriv	Total Mkt Cap	Financial net debt	Gross leases	ST income tax liab.	Conting Cons.	ITM deriv inflow	Total BDND	Pref Stock Min Int
US MSOs													
Aurora Cannabis Inc.	188	302	0.61	475.1	16.9	290	53	-51		-14		-12	
Auxly Cannabis Group Inc.	145	159	0.01	1,009.0	249.9	13	-128	-17		0		-145	
Avant Brands Inc	44	54	0.14	258.3	3.4	36	-7	-10				-18	
BZAM Ltd	54	67	0.13	180.8	0.2	23	-31	-14				-45	
Canopy Growth Corporation	na	912	6.02	82.9	1.7	499	-413					-413	
Cronos Group Inc	-95	-105	2.65	381.1	7.8	1,010	1,119	-3				1,116	
Decibel Cannabis Company Inc	102	107	0.15	409.0	16.7	60	-42	-6				-48	
High Tide, Inc.	194	221	2.36	75.1	0.5	177	-12	-31				-44	
Nova Cannabis Inc	4	104	0.89	57.2		51	-4	-49				-53	
OrganiGram Holdings Inc	131	129	2.25	80.5	1.2	181	53		0			52	
Rubicon Organics, Inc.	33	30	0.50	56.1	6.9	28	-1	0				-1	
SNDL Inc.	263	406	1.97	236.7	12.8	467	232	-171				61	
Tilray Brands, Inc.	1,977	175	2.49	0.0		0	-115	-10		-20		-145	30
Village Farms International, Inc.	139	173	1.11	110.2		122	-17	-18				-35	16

Source: FactSet and company reports

Exhibit 12: Valuation Comps – Other

US\$m	Company name	Ticker	Listing	1/14/2024	Mkt	Net	Ent	1yr Forward	Consensus		Cons	Net debt		
				Price	Cap				(mn)	(Debt)	Value	EV/Sales	EV/EBITDA	Sales
US\$m			US\$	US\$MN	Shares			EV/Sales	EV/EBITDA	Sales	EBITDA	mgn %	1yF EBITDA	
Service Providers														
	AFC Gamma	AFCG	NASDAQ	12.02	245	20	-17	262	4.0x	#N/A	65	#N/A	#N/A	#N/A
	Chicago Atlantic	REFI	NASDAQ	16.27	289	18	-52	341	5.6x	#N/A	61	#N/A	#N/A	#N/A
	Innovative Industrial Prop	IIPR	NYSE	93.21	2,607	28	-14	2,621	8.5x	10.5x	310	250	81%	-0.1x
	New Lake Capital Partners	NLCP	US OTC	16.79	359	21	42	317	6.8x	#N/A	47	#N/A	#N/A	#N/A
	River North	RIV	NYSE	11.40	245	21	34	210	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	SHF Holdings	SHFS	NASDAQ	1.26	30	24	7	23	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	Silver Spike BDC	SSIC	NASDAQ	8.43	52	6	85	-32	-2.1x	#N/A	16	#N/A	#N/A	#N/A
	Leafly	LFLY	NASDAQ	4.95	11	2	-4	14	0.4x	-4.1x	38	-4	-9%	1.0x
	Springbig	SBIG	US OTC	0.15	4	27	-6	10	0.3x	2.7x	31	4	12%	-1.6x
	WM Technology	MAPS	NASDAQ	0.90	50	55	0	50	0.3x	1.8x	199	28	14%	0.0x
	Greenlane Holdings	GNLN	NASDAQ	0.53	1	2	-8	8	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	GrowGeneration	GRWG	NASDAQ	2.47	151	61	23	128	0.6x	-63.2x	220	-2	-1%	-11.4x
	HydroFarm	HYFM	NASDAQ	0.94	42	45	-165	207	0.9x	19.7x	225	10	5%	-15.7x
	Scotts Miracle Gro	SMG	NYSE	58.95	3,331	57	-2,874	6,205	1.7x	11.2x	3,703	554	15%	-5.2x
	urban-gro	UGRO	NASDAQ	1.47	16	11	6	10	0.1x	-40.3x	113	0	0%	-21.6x
CBD, CPG, Pharma, International														
	Charlotte's Web	CWBHF	US OTC	0.20	31	152	9	22	0.3x	-1.9x	78	-12	-15%	-0.8x
	Clever Leaves	CLVR	NASDAQ	2.99	4	1	4	1	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	CV Sciences	CVSI	US OTC	0.04	6	152	-1	7	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	Turning Point Brands	TPB	NYSE	25.16	440	17	-314	754	2.0x	7.7x	384	98	25%	-3.2x
	IM Cannabis	IMCC	NASDAQ	0.29	2	8	-7	9	0.2x	20.4x	42	0	1%	-15.3x
	InterCure	INCR	NASDAQ	1.47	67	46	-2	69	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	Ispire Tech	ISPR	NASDAQ	10.03	544	54	45	499	1.8x	11.6x	282	43	15%	1.1x
	Little Green Pharma	LGPPF	US OTC	#N/A	#N/A	298	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	PharmaCielo	PCLOF	US OTC	0.18	29	155	-9	38	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
	Smoore Intl	SMORF	US OTC	0.74	4,525	6,078	2,106	2,419	0.2x	0.9x	15,181	2,836	19%	0.7x
	Jazz Pharma	JAZZ	NASDAQ	118.94	7,519	63	-4,936	12,455	3.1x	6.6x	4,071	1,879	46%	-2.6x

Source: FactSet and company reports

Exhibit 13: Stock Performance

11-Jan-24	Stock Performance		
Ticker	Last 30d	Last 90d	Last 12mo
US MSOs			
FFNTF	-5%	-55%	-58%
ACRDF	-25%	-40%	-77%
AAWH	-11%	34%	-21%
AYRWF	-18%	23%	61%
CXXIF	6%	-5%	16%
CBSTF	13%	-38%	-37%
CRLBF	-6%	-2%	-17%
CURLF	1%	3%	5%
GLASF	15%	19%	136%
GRAMF	73%	67%	-9%
GDNSF	-2%	61%	45%
GTBIF	1%	13%	35%
ITHUF	0%	0%	0%
JUSHF	-16%	-29%	-32%
LOWLF	2%	-37%	-80%
MRMD	-7%	-21%	-32%
PLNH	-5%	-13%	-21%
RWBYF	na	na	na
SHWZ	28%	5%	-50%
STHZF	126%	-17%	-55%
TSNDF	14%	-9%	19%
GQRS	na	na	na
TLLTF	-1%	-50%	-58%
TCNNF	-2%	10%	-23%
VRNOF	8%	8%	54%
VEXTF	7%	12%	1%

Stock Performance			
Ticker	Last 30d	Last 90d	Last 12mo
Canada			
ALEAF	na	na	-71%
ACB	-7%	-9%	-47%
CBWTF	0%	3%	-30%
AVTBF	3%	-18%	-15%
BZAMF	-14%	-12%	-68%
CGC	-38%	-33%	-81%
CRON	1%	9%	-17%
DBCCF	14%	-8%	22%
ETRGF	-21%	-29%	-41%
HITI	8%	18%	13%
NVACF	3%	53%	1%
OGI	9%	23%	-56%
ROMJF	17%	17%	-54%
SNDL	6%	-2%	-29%
TLRY	9%	2%	-28%
VFF	2%	3%	-44%
YOLO ETF	3%	3%	-15%
CBD, CPG, Pharma, International			
CWBHF	-15%	-30%	-63%
CLVR	39%	8%	-73%
CVSI	-1%	-7%	11%
TPB	4%	19%	19%
IMCC	-19%	-49%	-76%
INCR	21%	15%	-59%
ISPR	7%	28%	#N/A

Stock Performance			
Ticker	Last 30d	Last 90d	Last 12mo
Service Providers			
AFCG	1%	4%	-24%
AGFY	-11%	-46%	-86%
REFI	2%	7%	4%
IIPR	7%	26%	-8%
NLCP	17%	29%	3%
PW	15%	-14%	-85%
RIV	5%	8%	-7%
SHFS	41%	109%	8%
SSIC	-12%	-12%	-14%
LFLY	-16%	-33%	-60%
SBIG	7%	15%	-81%
MAPS	10%	-26%	-24%
GNLN	-6%	-7%	-85%
GRWG	-2%	-4%	-41%
HYFM	-11%	-17%	-24%
SMG	5%	30%	2%
UGRO	43%	33%	-49%
CBD, CPG, Pharma, International			
LGPPF	#N/A	#N/A	#N/A
PCLOF	73%	22%	-26%
SMORF	-10%	-18%	-60%
JAZZ	-1%	-6%	-21%
Index			
S&P 500	3%	10%	22%
MSOS ETF	1%	2%	3%

Source: FactSet



Appendix III: Bio and Disclaimers



Analyst Bio

Pablo Zuanic is a well-known and highly rated equity analyst following the cannabis and psychedelics sector. Over the past four years he launched coverage of over 35 companies (MSOs, LPs, CBD, ancillary, psychedelics), kept close track of sectoral trends, and followed the reform process in the US and elsewhere. His firm Zuanic & Associates publishes equity research on the cannabis and psychedelics sectors, both from a macro/sectoral level in a thematic manner, as well as specific reports on listed stocks. The research service is aimed at institutional investors and corporations. The firm is also available for short term consulting and research advisory projects (www.zuanicassociates.com). At various points in his career, Pablo was II ranked and called as expert witness in industry investigations. He has a deep global background having covered stocks over the past 20 years in the US, Europe, Latin America, and Asia, across consumer sub sectors. Prior employers include JP Morgan, Barings, and Cantor Fitzgerald. An MBA graduate of Harvard Business School, he started his career as a management consultant, which brings a strategic mindset to his approach to equity research. Pablo can be contacted at pablo.zuanic@zuanicgroup.com.



Disclosures and Disclaimers

About the firm: Zuanic & Associates is a domestic limited liability company (LLC) registered in the state of New Jersey. The company's registered address is Five Greentree Centre, 525 Route 73, N Suite 104, Marlton, New Jersey 08053, USA. Pablo Zuanic is the registered agent. The firm publishes equity research on selected stocks in the cannabis and psychedelics sector, as well as thematic macro industry notes. The firm also provides consulting and advisory services. Potential conflicts of interest are duly reflected in the respective specific company reports.

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