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US MSOs: Pivot Coming?

Cannabis Sector Equity Research



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Summary

We are growing more pessimistic about the Biden-initiated rescheduling process (S3), which should not come as news given where stocks are trading. That said, we believe the current context provides opportunities for the US MSOs to pivot in various ways (international, hemp, buy brands, M&A within the group), while remaining disciplined, and for also to “push the envelope” (as they have correctly done with 280E, in our judgement), seeking NASDAQ-back door listings and or setting up guardrails and structures that allow them to entertain strategic investors.

Potential Pivots and “Pushing the Envelope”

After the Nov election, and FL A3 not passing, and given the medium-term uncertainty (re industry growth and regulations), most MSOs are focused (correctly) on cutting costs, improving cash flow, and, where possible, shoring up their balance sheets (at least pushing out maturities). But we argue there is room for more, in the current industry context: pivots into adjacent fields? actions that “push the envelope” strengthening companies?

Go international? So far, only Curaleaf has dared. The company reported \$30Mn in sales from the international division for 3Q24, up 82% yoy. About \$10Mn of those \$30Mn came from the UK business (reported in retail revenue terms) and nearly \$20Mn from wholesale (a good chunk from Germany, where its affiliate Four20 Pharma is among the market leaders). International is already 10% of Curaleaf, and it should continue to outgrow the US unit. Sure, at \$400Mn annualized retail sales (current levels), the German MMJ market is tiny compared with the US\$32Bn US market, but under some scenarios Germany could be at \$3-4Bn in 1-2 years. Other than PA going rec, we do not see such a TAM growth in the US. More importantly, given its early mover advantage, Curaleaf could be well placed to benefit disproportionately from that TAM (as also could some of the more established Canadian operators). True, investors are not giving Curaleaf credit for the international exposure (the stock premium predates its overseas M&A), but strategically, and thinking long-term we think it can make sense. Clearly, the large Canadian LPs do not need MSOs to help them fund international growth, but well-entrenched sizeable local players (importers/distributors) could be interested in MSO investments (for those that could fund this).

Go hemp? The problem here is the regulatory uncertainty. We may get more clarity once the new Farm Bill is signed into law (supposedly, the Republican-controlled Senate will be farmer-friendly, but let’s see how far they go with hemp derivatives). In the meantime, more states are attempting full bans (most notably and most recently, Texas) and even in FL (where Gov DeSantis temporarily vetoed a ban) it remains unclear how things will play out (a new framework is pending). The various hemp advocates and associations are attempting to place legal challenges against blanket bans in CA and other states, and lobbying state officials, but the legal uncertainty at the state level will deter most MSOs, in our view. But not all. Curaleaf is attempting to sell hemp-infused edibles and drinks (thehempcompany.com), and Wana, part of Canopy USA, too (shopwanderous.com). Kiva’s Camino also sells hemp-infused edibles. Green Thumb licenses its Incredibles edibles brands to a leading player in the hemp space (LFTD Partners) and via its NASDAQ-listed affiliate Agrify, recently



acquired a hemp-infused drinks company ([Señorita](#)). Yes, some states are bifurcating regulations between hemp-infused drinks and other hemp-derived products (NJ and CT, for example; more could follow), but the reg uncertainty is a common theme, nonetheless. All this said, distribution (other than online) will be the acid test. In this sense, Tilray (not an MSO, but a NASDAQ-listed Canadian LP with global reach) could be best equipped to sell hemp-infused drinks owing to its beer and spirits distribution infrastructure in the US (we are not sure if the same applies to Wana, given STZ no longer controls CGC). Besides the reg uncertainty, big question marks remain about the actual size of the hemp-infused market (ex-drinks); as we said in our LFTD Partners report, we do not agree with estimates that have hemp derivatives being as big as US THC cannabis.

Buy brands? Back in the day, buying brands made sense for the MSOs (see Curaleaf buying Select; MariMed buying Betty's Eddies), but without a full national market and state markets remaining protected silos (especially the MSO states), this has become less of a priority. Indeed, MSOs in the past 2-3 years have mostly focused on acquiring and expanding footprint (cultivation, stores), and selling their own brands (and in some cases, licensing 3rd party brands). That said, given what we think should be depressed valuations, there may be an opportunity here. We think this applies in particular to the manufactured formats (vape, edibles), where brands are stickier (and markets more concentrated), and to specific pre-rolls and flower brands (more premium in nature, and or with specific niches targeted). As we have shown in recent reports, MSO brands do not lead in the rapidly growing New York market (the notable exception is private MSO PharmaCann who has gained good presence for its 'LiveWell' and 'matter.' brands). The same applies to the MI market. So, in this context, as the stronger MSOs pivot and build for the future, could they also look to acquire brands with long term potential? The answer may depend on how the US cannabis market develops (how far away are we from national legalization? do "licensed-restricted" states become more competitive like MA and MI have?).

Or maybe "push the envelope"? By this we mean, taking matters into their own hands, and testing the limits of regulatory enforcement. Here we would put: NASDAQ-back door listings; setting up structures that facilitate the entry of strategic partners; 280E. To the list of "pushing the envelope", we could add hemp (already mentioned above). Sure, there could be more to add here.

- **NASDAQ:** The Green Thumb indirect take over (control wise) of NASDAQ-listed Agrify is a case in point. The run up in the AGFY share price has allowed the company to raise funds and use the stock to make acquisitions (Señorita hemp drinks), and we would expect AGFY to make further strategic acquisitions that "indirectly" benefit the long-term strategic position of Green Thumb (or should we say of the Green Thumb group?). And even going further, could AGFY set up the necessary guardrails to at some points take a controlling stake in Green Thumb (or buy all of it?). If this is the way, and it works, we assume other NASDAQ-listed stocks could follow. Flora Growth (FLGC)? Urban-gro (UGRO)? The latter recently acquired an extraction facility that would allow it to produce hemp-infused drinks.
- **Challenge 280E:** While Green Thumb is the only MSO so far taking control of a NASDAQ-listed entity, it is, on the other hand, one of the few exceptions among MSOs that have not changed their accounting and payment policies regarding 280E. Most MSOs have filed



amended tax returns for 2020-22 and they expect credit rebates (Trulieve has received >\$100Mn in rebates so far); are booking income tax provisions for 2023 and 2024 as normal corporations (as if 280E does not apply); and have for the most part grown the income tax liabilities on their B/S. Yes, they still show the potential liabilities as long-term in their balance sheets (we discuss [here](#) what the tier 1 MSOs have done so far). Despite the [latest threats from the IRS](#), we believe there is “strength in numbers” (+MSOs to join the challenge) and think that, a) the Trump IRS may take a different view from the Biden IRS; b) we will not speculate in this note about the outcome of the Boies suit, but if successful (i.e., SUCO deciding that CSE is a federal construct, and that thus it does not apply to MJ-legal state programs, given, you know, “states’ rights”; of course, this is totally different from SUCO making cannabis federally legal), then 280E would not apply and depending on the various auditors, could have retroactive benefits going back 2-3 years.

- *Guard-railed structures that allow “strategics”*. NASDAQ listed CGC and SNDL have set up guard-railed structures that allow them to indirectly “own” US plant touching assets (in a non-controlling manner); in the case of CGC this is Canopy USA, and for SNDL we understand the structure will be called Sunstream USA. But this is a case of NASDAQ-listed Canadian LPs taking the initiative. What about the other way around...? Could MSOs take the initiative and set up “guard-railed” structures that allow NASDAQ listed companies (let’s call them “strategic”) to make investments in them. We are not going to get into a full-blown dissertation about the Canadian LPs here, but while they are much maligned for the state of the Canadian rec market, several have successfully diversified into other EBITDA-making industries, expanded internationally, and in some cases found creative ways to get US MJ exposure (again, CGC, SNDL). Also, these potential “strategics” may not be limited to LPs; with the proper structure, how about CPG companies? Pharma? Again, just like with 280E, all this is about pushing the envelope. In short, not unfathomable.

M&A activity or “three-way” trades” among MSOs. We will not delve into detail here and try to reconstruct the MSO map, but we have seen companies like Cannabist sells assets (one VA license to Verano, and FL to Mint/Shango). TILT has announced plans to divest its plant touching business (and focus 100% on its Jupiter vape parts business). There are companies with stretched balance sheets that may be better off selling (or breaking themselves up) and taking stock from a credible buyer. Sure, state level overlap, in those cases with low caps, may limit the options for the larger MSOs, but a buyer could buy the core, and other companies can pick up the rest. There are more private MSOs out there (maybe operating in 2-3 states only) than we realize, and especially those deemed top operators, may be able to get credit and or even have their private stock accepted (we have seen examples of this) in buying assets and expanding.

We Fear the ALJ Hearing Will Go Nowhere

While we try to stay away from making predictions and prefer to think in terms of scenarios, we are increasingly pessimistic about the outcome of the ALJ hearing (true, given most MSOs’ stance on 280e, this may be a moot point for now, at least for CY25); specifically of the administrative process started by the Biden DOJ/DEA regarding rescheduling cannabis to Schedule III (S3).



Per the administrative process rules, the DEA may be the “proponent” of the Notice of Proposed Rulemaking (NPRM) draft signed by the AG (and not signed by the DEA head), but it is not obvious to us that their testimony will be supportive (they might make the case that “more” is needed). Why do we say this?

- Their two witnesses (both from the DEA): Heather Achbach (will testify about the process used to collect the 43,564 public comments; present them as evidence; and apparently discuss some of the comments too) and Luli Akinfiresoye. The latter will testify about the DEA’s own 8-factor analysis (8FA), which may be in conflict with the HHS’s “novel 2-factor analysis”; will also note the various data sources the [DEA uses](#) (see page 4); and highlight the fact that the actual NPRM “specifically seeks additional data upon which DEA can rely in making its determination as to whether marijuana should be rescheduled”.
- The DEA’s request (as per a [filing from 12/13/24](#)) for Judge Mulrooney to subpoena four staff from HHS to testify “as to the eight factor analysis HHS applied to marijuana”. Does this mean the DEA’s attorneys plan to challenge the HHS staff about their findings and methodology used?
- The DEA’s insistence (as per the same [12/13/24 filing](#)) to include the >43,000 public comments as evidence in the hearing (which could delay the proceedings), despite the fact Judge Mulrooney has hinted he is opposed to that.
- We also continue to worry that the DEA’s strict 8-factor analysis is based on a significantly more methodical pharmaceutical-type review process (see various filings talking about “medical marijuana”, as opposed to just “marijuana”; for more color also see our report on potential [bifurcation](#) from April).

We make the comments above assuming the ALJ hearing begins on 1/21/25 as scheduled, even though various legal challenges and “stays” requests have been presented in various courts. Again, we do not have visibility whether these will succeed, but if they do, the hearing could be delayed (if not the start, its completion).

Once the hearing is completed (if on time, sometime in March), the Judge will have to take all the testimony and evidence and write his own report (non-binding) and submit to the DOJ/DEA. We understand this could take 2-3 months. Let’s say June. The judge being impartial et al, based on the ways things are stacked right now (more Designated Participants against rescheduling than in favor, all of which are testifying after those in favor; apparently no cross examination allowed of the DEA witnesses by those in favor of rescheduling), we think his report may end up more on the “against” camp (tone wise, at least).

And then the new DOJ and DEA will have to decide about the Final Rule Making (how long will they take?). Sure, here we get into the area of hypotheticals (DEA shows its true hand in the hearing; Judge’s report tone; make-up of new DOJ/DEA senior figures more from the Prohibitionist camp). That said, we fear, in this regard, that the “new” DOJ/DEA will be against rescheduling, or at least against rescheduling as per the process began by the Biden administration (would DJT fight them?). if so, they (new DOJ/DEA) may require a whole new review process to be started. What happens



then? There may be some folks in the Trump inner circle that are pro-cannabis (Musk, Kennedy, Ramaswamy), but if this S3 process gets derailed, they may try to go for full descheduling (rather than start a whole new rescheduling process). Let's see how the rest of the GOP feels about that, and whether the new President wants to put political capital into it all.

So, no precise predictions here, but we do not see how the "Biden rescheduling" gets done, as per the current administrative process.

Note: For our other global cannabis macro views, please see [our report from Nov 18](#), but note we have changed our stance on S3 happening, at least in the form of the process began by the Biden administration.

Table 1: Companies mentioned in this report

Company name	Ticker	Ticker	Rating
US MSOs			
4Front Ventures		FFNTF	not rated
Acreage Holdings		ACRDF	not rated
Ascend Wellness		AAWH	not rated
AYR Wellness		AYRWF	not rated
Cannabist		CCHWF	not rated
Cansortium		CNTMF	will cover
Cresco Labs		CRLBF	Overweight
Curaleaf Holdings		CURLF	will cover
GlassHouse Brands		GLASF	not rated
Gold Flora		GRAM	Overweight
Goodness Growth		GDNSF	not rated
Green Thumb Industries		GTBIF	Overweight
Grown Rogue		GRUSF	not rated
Jushi Holdings		JUSHF	Overweight
MariMed		MRMD	Overweight
Planet 13 Holdings		PLNHF	Overweight
Schwazze		SHWZ	will cover
StateHouse Holdings Inc		STHZF	not rated
TerrAscend		TSNDF	not rated
TILT Holdings		TLLTF	Neutral
Trulieve Cannabis		TCNNF	will cover
Verano Holdings		VRNOF	Overweight
Vext Science, Inc.		VEXTF	Overweight
Tech			
Leafly		LFLY	not rated
Springbig		SBIG	not rated
WM Technology		MAPS	Neutral

Source: Z&A

Company name	Ticker	Rating
Canada LPs		
Aurora Cannabis	ACB	Neutral
Auxly Cannabis Group	CBWTF	will cover
Avant Brands	AVTBF	will cover
Avicanna	AVCN	not rated
BZAM	BZAMF	not rated
Cannara Biotech	LOVFF	not rated
Canopy Growth Corporation	CGC	will cover
Cronos Group	CRON	not rated
Decibel Cannabis Co	DBCCF	Overweight
Organigram Holdings	OGI	not rated
Rubicon Organics	ROMJF	not rated
SNDL	SNDL	not rated
Tilray Brands	TLRY	Neutral
Village Farms Intl	VFF	Overweight
Finance Companies		
AFC Gamma	AFCG	Overweight
Chicago Atlantic BDC	LIEN	will cover
Chicago Atlantic REFC	REFI	Overweight
Innovative Industrial Properties	IIPR	not rated
New Lake Capital Partners	NLCP	Overweight
RIV Capital	CNPOF	not rated
SHF Holdings	SHFS	not rated
Other		
Intercure	INCR	not rated
LFTD Partners Inc.	LIFD	Overweight
Ispire Technology	ISPR	will cover
Smooere International	SMORF	will cover



Appendix I: Valuation Comps

Zuanic & Associates

Exhibit 1: MSOs Valuation Multiples

US\$Mn 16-Dec-24	Z&A Spot EV / Sales			Z&A Spot EV / EBITDA			Financial Net Debt				Broadly Defined Net Debt			
							Sales		EBITDA		Sales		EBITDA	
	Current	CY24e	CY25e	Current	CY24e	CY25e	CY24	Current	CY24	Current	CY24	Current	CY24	Current
US MSOs	1.5x	1.4x	1.3x	8.5x	6.2x	5.3x								
Ascend Wellness	1.1x	1.1x	1.0x	6.0x	5.5x	5.0x	-0.4x	-0.4x	-2.2x	-2.4x	-0.9x	-0.9x	-4.6x	-5.1x
Ayr Wellness	0.8x	0.8x	0.8x	3.5x	3.5x	3.2x	-0.8x	-0.8x	-3.4x	-3.4x	-0.7x	-0.7x	-2.9x	-2.9x
Cannabist Co	0.9x	0.9x	0.9x	6.9x	6.7x	5.1x	-0.6x	-0.6x	-4.4x	-4.5x	-0.8x	-0.8x	-6.2x	-6.4x
Consortium	1.1x	1.1x	na	3.8x	3.8x	na	na	na	na	na	na	na	na	na
Cresco Labs	1.4x	1.4x	1.4x	4.9x	5.0x	5.2x	-0.5x	-0.5x	-1.8x	-1.8x	-0.8x	-0.8x	-2.8x	-2.7x
Curaleaf	1.9x	1.8x	1.7x	8.2x	8.2x	6.9x	-0.5x	-0.5x	-2.3x	-2.3x	-0.9x	-0.9x	-3.8x	-3.8x
4Front Ventures	1.9x	1.9x	na	7.1x	7.1x	na	na	-1.0x	na	-3.8x	na	-1.7x	na	-6.5x
Glass House	2.6x	3.4x	na	8.0x	18.6x	na	-0.1x	na	-0.7x	na	-0.3x	-0.2x	-1.7x	-0.8x
Gold Flora	1.0x	1.0x	0.8x	11.7x	54.1x	7.3x	na	-0.3x	na	na	na	-0.9x	na	na
Goodness Growth	1.5x	1.5x	na	-87.5x	6.3x	na	-0.5x	-0.5x	-2.1x	29.1x	-0.9x	-0.9x	-3.7x	51.1x
Green Thumb	1.8x	1.9x	1.8x	5.9x	5.9x	5.9x	-0.1x	-0.1x	-0.2x	-0.2x	-0.1x	-0.1x	-0.4x	-0.4x
Grown Rogue	3.5x	3.5x	na	4.7x	4.7x	na	na	na	na	na	na	na	na	na
iAnthus	1.2x	1.2x	na	9.1x	9.1x	na	na	-1.0x	na	-7.3x	na	-1.0x	na	-7.5x
Jushi	1.5x	1.4x	1.3x	8.7x	7.2x	6.1x	-0.6x	-0.7x	-3.3x	-4.0x	-1.2x	-1.2x	-6.1x	-7.4x
MariMed	0.9x	1.0x	0.8x	8.2x	7.8x	4.7x	-0.4x	-0.4x	-3.3x	-3.5x	-0.5x	-0.5x	-4.2x	-4.5x
Planet 13	1.0x	1.1x	na	25.2x	27.6x	na	0.2x	0.1x	4.0x	3.7x	-0.1x	-0.1x	-1.7x	-1.5x
Schwazze	1.1x	1.1x	na	7.8x	5.2x	na	-0.9x	-0.9x	-4.2x	na	-1.1x	-1.1x	-5.2x	na
TerrAscend	1.8x	1.7x	1.7x	9.6x	8.9x	8.4x	-0.6x	-0.6x	-2.9x	-3.1x	-1.0x	-1.0x	-5.3x	-5.7x
TILT	1.0x	0.9x	1.0x	-17.7x	-17.7x	87.6x	-0.5x	-0.6x	13.0x	9.9x	-0.9x	-1.0x	22.7x	17.3x
Trulieve	1.4x	1.4x	1.3x	4.2x	4.0x	4.1x	-0.3x	-0.3x	-0.7x	-0.8x	-0.6x	-0.6x	-1.8x	-1.8x
Verano	1.3x	1.3x	1.2x	4.3x	4.2x	4.0x	-0.4x	-0.4x	-1.3x	-1.4x	-0.7x	-0.8x	-2.5x	-2.5x
Vext	1.7x	1.7x	na	5.4x	7.1x	na	-0.9x	-0.9x	-3.6x	-2.8x	-0.9x	-0.9x	-3.6x	-2.7x

1) We take FactSet consensus estimates for CY24e and CY25e multiples; 2) By "current", we mean the latest reported qtr annualized

Source: FactSet and company reports

Exhibit 2: MSOs EV Calculations

US\$m	FactSet	Z&A	US\$	mn	mn	Total	Financial	Net	Income	Conting	ITM deriv	Total	Pref Stock
16-Dec-24	Spot EV	Spot EV	price	shares	deriv	Mkt Cap	net debt	leases	tax liab.	Cons.	inflow	BDND	Min Int
US MSOs													
Ascend Wellness	586	605	0.41	214.5	13.3	93	-241	-134	-137			-512	
Ayr Wellness	612	371	0.41	114.0	31.1	60	-359	4	-11	0	55	-311	
Cannabist Co	536	409	0.06	472.7	8.2	29	-269	-26	-86			-380	
Cansortium	140	118	0.07	304.9	5.6	22	-59	-9	-29			-97	
Cresco Labs	895	1,011	1.00	441.0	8.9	450	-365	-56	-130	-10		-561	
Curaleaf	2,021	2,469	1.59	743.8	11.2	1,197	-678	-24	-389	-56		-1,146	126
4Front Ventures	233	148	0.02	915.2	3.8	14	-79	-8	-40	-6	0	-134	
Glass House	426	656	6.18	81.0	3.5	522	-25	0	-4	-32		-61	72
Gold Flora	130	130	0.02	287.7	0.1	7	-40	-34	-44	-4		-123	
Goodness Growth	95	152	0.27	230.3	4.1	63	-51	-10	-29			-89	
Green Thumb	2,104	2,116	8.08	236.2	9.3	1,983	-82	-28	-23	0	0	-133	
Grown Rogue	75	93	0.66	143.5		95	5	-2	-2			1	
iAnthus	34	195	0.01	6,615.3		34	-156	-5				-161	
Jushi	326	361	0.29	196.7	0.0	56	-165	-1	-139			-305	
MariMed	133	153	0.13	381.3	6.7	51	-66	-1	-17			-83	19
Planet 13	94	131	0.38	325.2	0.3	123	19	-7	-16	-5		-8	
Schwazze	173	187	0.01	80.2		1	-151	-2	-33	0		-186	
TerrAscend	402	527	0.60	355.8	3.1	216	-172	-5	-128	-4		-310	
TILT	109	111	0.01	390.6	4.4	2	-62	-44	-2			-108	
Trulieve	993	1,622	4.82	186.0	3.3	912	-300	-21	-384	-5		-710	
Verano	795	1,104	1.24	356.9	8.6	453	-355	-6	-285	-4		-651	
Vext	47	62	0.12	245.5	3.4	31	-32	1				-31	

Source: FactSet and company reports

Exhibit 3: LPs Valuation Multiples

Multiples 16-Dec-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
Aurora Cannabis	1.2x	1.2x	1.1x	9.8x	11.9x	8.3x	na	na	na	na	0.0x	na	-0.4x	na
Auxly Cannabis Group	0.5x	na	na	2.8x	na	na	-0.4x	na	-2.0x	na	-0.5x	na	-2.8x	na
Avant Brads	0.6x	na	na	1.7x	na	na	-0.1x	na	-0.4x	na	-0.4x	na	-1.2x	na
BZAM	0.4x	na	na	3.4x	na	na	-0.2x	na	-2.4x	na	-0.3x	na	-3.4x	na
Cannara Biotech	0.8x	na	na	5.8x	na	na	0.0x	na	0.0x	na	0.0x	na	0.0x	na
Canopy Growth	3.6x	3.3x	3.0x	-42.8x	-49.9x	2175.4x	-1.3x	-1.2x	15.3x	17.8x	-1.3x	-1.2x	15.3x	17.8x
Cronos Group	-2.9x	-2.6x	-2.2x	7.2x	8.8x	102.5x	na	na	na	na	7.8x	7.0x	-19.7x	-24.0x
Decibel Cannabis	0.8x	0.8x	0.6x	4.8x	4.3x	3.1x	-0.4x	-0.4x	-2.1x	-1.9x	-0.4x	-0.4x	-2.1x	-1.9x
Organigram Holdings	0.9x	na	na	-12.7x	na	na	na	na	na	na	0.5x	na	-7.4x	na
Rubicon Organics	0.5x	na	na	7.1x	na	na	0.0x	na	-0.4x	na	0.0x	na	-0.4x	na
SNDL	0.6x	0.6x	0.6x	13.8x	361.9x	na	na	na	na	na	0.2x	0.2x	4.4x	116.6x
Tilray Brands	1.0x	0.9x	0.9x	9.5x	12.2x	9.0x	0.0x	0.0x	-0.3x	-0.4x	-0.1x	-0.1x	-0.9x	-1.2x
Village Farms International	0.2x	0.3x	0.3x	-6.4x	10.5x	4.1x	0.0x	0.0x	1.0x	-1.6x	0.0x	0.0x	1.0x	-1.6x

1) We take FactSet consensus estimates for CY24e and CY25e multiples; 2) By "current", we mean the latest reported qtr annualized

Source: FactSet and company reports

Exhibit 4: LPs EV Calculations

C\$Mn 16-Dec-24	FactSet Spot EV	Z&A Spot EV	C\$ 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
Aurora Cannabis	313	396	6.06	54.9	1.2	340	27	-43		0		-16	40
Auxly Cannabis Group	162	58	0.03	0.0	0.0	0	-41	-15		-2		-58	
Avant Brads	145	19	0.53	10.5	0.3	6	-5	-8				-13	
BZAM	112	45	0.00	180.8	0.2	0	-31	-14				-45	
Cannara Biotech	85	64	0.71	90.0	0.0	64	0	0	0			0	
Canopy Growth	na	905	4.37	131.6	1.5	582	-323					-323	
Cronos Group	-116	-436	2.71	271.8	6.3	755	1,193	-2				1,191	
Decibel Cannabis	66	75	0.07	576.7	16.3	42	-34	0				-33	
Organigram Holdings	136	136	2.08	103.8	0.0	216	80		0			80	
Rubicon Organics	26	24	0.38	56.2	4.3	23	-1	0				-1	
SNDL	408	531	2.50	264.3	16.2	702	209	-38				171	
Tilray Brands	1,101	1,189	1.67	622.4	0.0	1,042	-42	-49		-21		-112	35
Village Farms International	147	124	1.13	79.4		89	-19	-1				-19	15

Source: FactSet and company reports

Exhibit 5: Stock Performance

16-Dec-24	Stock Performance		
Ticker	Last 30d	Last 90d	Last 12mo
US MSOs			
Ascend	-27%	-58%	-65%
Ayr	-52%	-80%	-80%
Cannabist	-46%	-74%	-84%
Cansortium	-21%	-58%	-26%
Cresco	-21%	-40%	-33%
Curaleaf	-22%	-46%	-59%
4Front	-54%	-68%	-86%
GlassHouse	-23%	-33%	33%
Gold Flora	-52%	-71%	-80%
Vireo Growth	-36%	-43%	15%
Grown Rogue	3%	2%	130%
Green Thumb	-10%	-22%	-21%
iAnthus	-25%	-61%	-81%
Jushi	-18%	-46%	-48%
MariMed	-21%	-22%	-56%
Planet13	-23%	-38%	-45%
Schwazze	-91%	-95%	-98%
StateHouse	MN/A	-25%	-70%
Trulieve	-26%	-56%	-9%
TerrAscend	-20%	-48%	-56%
Vext	-2%	-33%	-40%
Verano	-35%	-61%	-69%

Stock Performance			
Ticker	Last 30d	Last 90d	Last 12mo
Canadian LPs			
Aurora	-9%	-26%	-10%
Avant	-23%	-56%	-88%
Auxly	-19%	-15%	103%
Cannara	19%	7%	-23%
Canopy	-21%	-35%	-43%
Cronos	-15%	-11%	-2%
Decibel	-10%	0%	-46%
Entourage	45%	2%	-31%
High Tide	19%	43%	102%
Nova	MN/A	MN/A	MN/A
OGI	-7%	-20%	11%
Rubicon	6%	-20%	-22%
SNDL	-11%	-14%	20%
Tilray	-19%	-32%	-38%
VFF	-1%	-20%	3%
CBD			
CVSI	-29%	-30%	-2%
CWEB	-23%	-26%	-48%
LFID	-19%	-4%	-77%
International			
InterCure	-2%	-30%	-2%
PharmaCielo	27%	55%	141%

Stock Performance			
Ticker	Last 30d	Last 90d	Last 12mo
MJ Fincos			
AFCG	1%	-7%	-22%
CNPOF	5%	-32%	3%
IIPR	1%	-19%	13%
NLCP	12%	-4%	36%
SHFS	-6%	-40%	-65%
LIEN	0%	12%	35%
REFI	3%	2%	1%
Tech			
LFLY	-16%	-29%	-76%
SBIG	-24%	8%	-42%
MAPS	73%	29%	48%
Vape parts			
GNLN	-24%	-64%	-73%
ISPR	3%	-16%	-27%
SMORF	5%	13%	74%
TLLTF	-18%	-57%	-71%
Index			
S&P 500	1%	8%	29%
S&P 477	2%	-1%	17%
Nasdaq	1%	10%	42%
MSOS ETF	-20%	-45%	-42%
YOLO ETF	-11%	-27%	-15%

Source: FactSet



Appendix II: Bio and Disclaimers

Zuanic & Associates



Analyst Bio

Pablo Zuanic is a well-known and highly rated equity analyst following the broader cannabinoids (THC cannabis, hemp derivatives, CBD) and consumer sectors. Over the past six years he has launched coverage of over 40 companies in the US, Canada, and overseas; plant-touching as well as service providers (tech; finance); and has also worked with several private companies. He follows closely the reform process in the US, Canada, Germany, Australia, and elsewhere, and relies on a fundamental and data-driven approach to keep track of sectoral trends. His firm Zuanic & Associates publishes equity research, both from a macro/sectoral level in a thematic manner, as well as on listed stocks. The research service is aimed at institutional investors, corporations, and regulators. The firm is also available for short-term consulting and research advisory projects. Approaching the third year since its inception, the firm has collaborated with over 25 companies (in North America and overseas; plant touching and service providers; public and private), both on an on-going basis as well for specific projects. At various points in his career, Pablo Zuanic was ranked in the Institutional Investor magazine surveys and was 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. *He can be contacted via the company's portal www.zuanicassociates.com; via email at pablo.zuanic@zuanicgroup.com; or via X @420Odysseus.*



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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