11/11/2024

Vape: AIOs in CA, MI, and Canada

Cannabis Sector Equity Research



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Produced for helen.zuanic@zuanicgroup.com at 24 November 2026 01:25

Summary

- In this report we benchmark the vape markets in California, Michigan, and Canada, with a particular focus on the rise of the all-in-one disposable segment (helping fuel growth at companies like Auxly in Canada and Gold Flora in California).

- Indeed, Gold Flora's Gramlin is now a top 3 player in DAIOs in CA (per Headset) with 8.3% segment share (Oct'24), and has the #1 and #2 SKUs in the DAIO segment (4 of the top 10; 8 of the top 20). Auxly's total sales in vape were up 61% yoy in 3Q24 (Hifyre) and the company now leads in the DAIO segment with 37% share.

- DAIOs have room to grow in Canada, where they account for only 22% of the market, compared with 36-37% in California and Michigan. On the other hand, the California DAIO segment has room to consolidate further. The top 5 DAIO brands have 77% share of the segment in Canada and 60% in Michigan, compared with only 31% in California.

- This report is not only relevant to companies selling THC vape cannabis in the US/Canada, but also to vape hardware vendors. Among listed players, the latter include TILT Holdings (US OTCQB: TLLTF; listed in Canada's NEOL); Smoore Holdings (pink SMORF; HK listed); and ISPIRE (NASDAQ: ISPR).

- For greater color on vaping and Gramlin, see these reports: In-Depth Review of the Vape Market and Hardware (10/10/23), Canada Vape Market Deep Dive (2/6/24), and The Rise of Gramlin (11/8/24).

Vaping: California vs. Michigan

Market size and growth trends. Total vape sales in CA reached $99Mn in Oct'24 (29% of the overall CA cannabis market) compared with $47Mn in MI (18%). CA was up 3% yoy in Oct while MI was down 1%. For context, YTD (Jan-Oct), the MI market is up 9%, with vape sales up 2% YTD, while CA is down 6% and vape is flat YTD.

Market structure. In CA, cartridge (inc. pods for close pod systems like STIIIIZY) accounted for >63% of the total vape segment, and all-in-one disposables (non-rechargeable) for <37% (rechargeable AIOs and e-juice accounted for less than 0.2% of the market). A year ago, AIO disposables were only 25% of the CA market, and 16% in Oct'22. The latter have also gained ground in MI, where they were 36% of the total vape market in Oct'24 (36% Oct'23; 24% Oct'22).

Pack sizes. 1g formats dominate, and accounted for 88% of all vape sales in MI in Oct'24 (2g 6.4%) and for 90% in CA (0.5g 5.5%).

Price. Average equiv vape prices per gram in CA were $22.91 in Oct'24 (-22% yoy) vs. $10.17 in MI. For 3Q24, CA average vape prices ($23.92 for the qtr) were down 21%, after -18% in 1H24 yoy, and

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-19% yoy in CY23 (CA vape prices were $42.15 in 3Q21 and $49.25 in 3Q20). MI prices were also in the high 40s back in 2020 ($46.13 3Q20), but have fallen since then to the $10 range (3Q21 $36; 3Q22 $19.70; 3Q23 $14.76); MI prices for 3Q24 were down 28% yoy after -40% in CY23.

Leading brands. the top 3 brands in CA had 30% share in Oct'24 (STIIIZY 18.5%; Plug Play 5.6%; Raw Garden 5.4%); the top 5 had 39%. In MI, the top 3 brands had 25% share in Oct'24 (Mitten Extracts 13%; Breeze Canna 6.6%; MKX Oil 5.4%); the top 5 had 35%.

Closer Look at AIOs Disposables in California

DAIOs posted $36.3Mn in sales in CA in Oct'24 (1.5mn units average price per unit of $24.27), up 47% yoy (units +70% yoy). Sales of cartridges/pods ($63Mn in Oct) fell 13% yoy. The DAIOs market is somewhat less concentrated than cartridges, with the top 5 brands holding 31% share vs. 40%, respectively.

- DAIOs Top 5: CAKE 12.7%, Turn 9.7%, Gramlin 8.3%, STIIIZY 8.1%, and Dime 5.2%. Oct'24 sales for the last two were down 7% and 11% yoy, respectively; Turn was up 93% yoy; Gramlin was only launched in 1Q24, and CAKE only in late 2022 (Oct'24 +2,700% yoy).

- Cartridges Top 5: STIIIZY 24.4%, Raw Garden 8.2%, Plug Play 7.9%, Heavy HItters 5.9%, and Jetty Extracts 4.8%. Oct'24 sales fell 18% for STIIIZY (-13% for the segment), and also fell for Heavy Hitters (-3%) and Jetty (-2%); on the other hand, Raw Garden was up 3% and Plug Play was up 8% (note: sales for the #6-8 brands fell in the high 20s and High 30s; Gelato, Cold Fire, West Coast Cure).

It is remarkable, that the top 3 in the AIO segment are rather new. CAKE and Turn were launched in late 2022, and Gramlin vape sales only began to show in the Headset data in May of this year. For the most part, all three companies are DAIOs specialists. In fact, 100% of Gramlin vape sales come from DAIOs, 99% for Turn (#2 AIO brand), and 87% for CAKE (#1 AIO brand).

In terms of SKUs (top 3 DAIO brands in CA),

- Gramlin: The brand had 8 SKUs (all 1g distillates) among the to 50 DAIOs vape SKUs in CA in Oct'24, including the #1 SKU i (Blue Dream) and #2 (Pineapple Express); the rest were placed 5, 6, 11, 14, 15, an 16. Per Heaset, these 8 SKUs accounted for 87% of all Gramlin DAIO sales (note: the company recently launched live rosin too).. Gramlin's #1 and #2 SKUs were priced at $24.00/g and $24.06/g, well above CAKE (on a per gram basis).

- CAKE: It had 15 SKUs (all distillate) placed among the top 50 DAIO vape SKUs in CA; all CAKE SKUs were in 1.25g sizes. The company's top SKUs ranked #3 (Watermelon OG Designer) and #7 (Passion Orange Guava Designer). The price for the Watermelon OG was $16.88/gram equiv (or $21.10 per item, for the 1.25g pack size).

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- Turn: It had 10 SKUs (in 1g sizes) placed among the top 50 DAIO vape SKUs in CA (inc. two in the top 10); most of these 10 SKUs were live resin or what it calls "blend oils". The #4 SKU was Watermelo Sugar High Live Resin ($25.37/g) and the #9 was Granddaddy Purple Live Resin ($24.29).

- While STIIIZY ranks 4th in DAIOs with 8.1% share, it did so on the back of multiples SKUs, but only had three SKUs among the top 50 DAIOs (#22, #38, #41), and they were priced between $18-20/g.

In MI, the top 5 DAIO brands have 60% of the market compared with 31% of the segment in CA (in other words, CA AIO should have room for further consolidation). Mitten Extracts has 21% share of DAIOs (these are 52% of its total vape sales); Breeze Canna has 15% (DAIOs are 94% of its total vape sales); Muha Meds 12.7% (55%)); Vapin Ape 6.2% (100%; Sauce Essentials 5.2% (100%).

Brief Take on Canada Vape (all in C$)

Vape sales in Canada reached $227Mn in 3Q24 (~US$54Mn in Oct), up 6% yoy. Five companies accounted for 57% of the market (vs. 39% in CA, 35% in MI; both in Oct'24). Average price per gram was C$8.50 in ther qtr, or US$6.20 (well below US$10.91 in MI and US$22.91 in CA). AIOs have grown and taken vape segment share, with Auxly a key beneficiary from that trend. In fact, 3Q24 total vape sales for Auxly were up 61% yoy compared with a 2% drop for Motif and -13% for Decibel. All per Hifyre.

- Structure: 67% of the Canada vape market came from 510 distillate cartridges in 3Q24 compared with 78% in 3Q23. Disposables have gone from 11% of the vape market in 3Q23 to 22% now (vs 36-37% in CA and MI). Live resin 510 carts have remained stable in the 8-9% range. Closed loop pods are less than 2% of the market.

- Leading companies: The top 5 accounted for 60% of the total vape market in Canada in 3Q23 vs. 57% now. The 5 companies (3Q24) were Motif with 20.6% share (22.2% in 3Q23); Auxly 12.9% (8.5%); Decibel 9.7% (11.8%); Cronos 7.3% (#7 in 3Q23 with 4.2% share); and Ayurcann with 6.2% share (#6 with 5.9%). Tilray and BZAM were among the top 5 in 3Q23, but Tilray is now #6 with 4.9% share and BZAM/Final Bell is #11 with 2.6% share.

- Product mix for the top 3 companies: AIOs accounted for 22% of Motif vape sales in 3Q24 (510 carts 78%; closed loop 2%); 62% for Auxly (510 carts 37%), and 29% for Decibel (57% 510 carts; 13% closed loop). So, Auxly'sales of AIOs ($18Mn in 3Q24) accounted for 37% of all AIO sales in Canada in 3Q24 compared with 18% for Motif, and 13% for Decibel.

- Pricing (all C$): If we look at the top 11 players (Motif to BZAM), average price per gram varies widely. Companies near the market average of C$8.50 per gram included (in order of market share) Motif ($8.35), Decibel ($8.82), Heritage ($8.84), Adastra ($8.41), Weed Me ($8.56), and Tilray ($8.27). Those below were Cronos ($7.49) and Ayurcann ($7.01). In

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the "premium" segment we would include Auxly ($9.69), Cannara Biotech ($9.99), and BZAM ($9.99)

- Top 10 DAIO SKUs in 3Q24: Auxly had 6 of the top 10 DAIO SKUs, including the top 4 (all 95g, and under the Back Forty brands), including #1 Peach Lemonade and #2 Watermelon Ice. Motif had the #5 (Boxhot Peach OG), 7, and 10 positions (the #5 and #7 SKUs were all 1ml; the #10 was 0.5ml). Decibel had the #7 DAIO SKU (General Admission Tiger Blood; 1ml).

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Table 1: Stocks mentioned in this report

Company name	Ticker	Ticker	Rating
US MSOs			
4Front Ventures		FFNTF	Not rated
Acreage Holdings		ACRDF	will cover
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	Not rated
StateHouse Holdings Inc		STHZF	Neutral
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

Company name	Ticker	Rating
Canada LPs		
Aurora Cannabis	ACB	Neutral
Auxly Cannabis Group	CBWTF	not rated
Avant Brands	AVTBF	not rated
Avicanna	AVCN	will cover
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	will cover
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 REFC	REFI	Overweight
Innovative Industrial Properties	IIPR	will cover
New Lake Capital Partners	NLCP	Overweight
RIV Capital	CNPOF	not rated
SHF Holdings	SHFS	not rated
Silver Spike Inv Corp	SSIC	will cover
Other		
Intercure	INCR	Overweight
LFTD Partners Inc.	LIFD	Overweight
Ispire Technology	ISPR	will cover
Smoore International	SMORF	will cover

Source: Z&A ratings

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Appendix I: Valuation Comps

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Exhibit 1: Valuation Multiples Comps – US MSOs

US$Mn	Z&A Spot EV / Sales			Z&A Spot EV / EBITDA			Financial Net Debt				Broadly Defined Net Debt			
							Sales		EBITDA		Sales		EBITDA	
10-Nov-24	Current	CY24e	CY25e	2023	2024	2025	CY24	Current	CY24	Current	CY24	Current	CY24	Current
US MSOs	**0.7x**	**1.6x**	**1.3x**	**3.0x**	**10.7x**	**7.0x**								
Acreage Holdings	2.2x	1.3x	na	45.6x	6.8x	na	-1.0x	-1.6x	-4.9x	-33.2x	-1.2x	-2.0x	-6.1x	-40.9x
Ascend Wellness	1.1x	1.1x	1.0x	5.6x	5.5x	4.9x	-0.4x	-0.4x	-2.0x	-2.0x	-0.8x	-0.9x	-4.2x	-4.3x
Ayr Wellness	1.0x	0.9x	0.8x	3.9x	4.0x	3.0x	-0.7x	-0.8x	-3.2x	-3.1x	-0.6x	-0.7x	-2.8x	-2.7x
Cannabist Co	0.9x	0.9x	0.9x	6.4x	6.7x	5.3x	-0.5x	-0.5x	-4.0x	-3.8x	-0.8x	-0.8x	-5.7x	-5.4x
Cansortium	4.6x	na	na	16.4x	na	na	na	na	na	na	na	na	na	na
Cresco Labs	1.6x	1.6x	1.5x	5.4x	5.5x	5.2x	-0.5x	-0.5x	-1.9x	-1.8x	-0.8x	-0.8x	-2.8x	-2.7x
Curaleaf	2.6x	2.7x	2.5x	12.4x	11.9x	9.8x	0.0x	0.0x	0.0x	0.0x	-1.3x	-1.3x	-5.9x	-6.2x
4Front Ventures	2.3x	na	na	16.3x	na	na	na	-1.1x	na	-7.6x	na	-1.8x	na	-12.8x
Glass House	3.5x	3.6x	na	13.7x	18.1x	na	-0.2x	na	-1.0x	na	-0.4x	-0.4x	-2.0x	-1.5x
Gold Flora	1.0x	1.0x	0.8x	-16.7x	53.3x	7.4x	na	-0.3x	na	na	na	-0.9x	na	na
Goodness Growth	1.6x	1.6x	na	4.8x	6.9x	na	-0.6x	-0.6x	-2.7x	-1.9x	-1.0x	-1.0x	-4.3x	-3.0x
Green Thumb	2.1x	2.1x	2.0x	6.4x	6.6x	6.3x	-0.1x	-0.1x	-0.3x	-0.3x	-0.1x	-0.1x	-0.4x	-0.3x
Grown Rogue	-24.5x	na	na	17.9x	na	na	na	na	na	na	na	na	na	na
iAnthus	1.2x	na	na	5.8x	na	na	na	-0.9x	na	-4.4x	na	-0.9x	na	-4.5x
Jushi	1.5x	1.4x	1.3x	6.6x	6.7x	5.8x	-0.6x	-0.6x	-2.9x	-2.8x	-1.1x	-1.2x	-5.4x	-5.3x
MariMed	1.0x	1.0x	0.8x	8.9x	7.9x	4.3x	-0.4x	-0.4x	-3.2x	-3.6x	-0.5x	-0.5x	-4.0x	-4.6x
Planet 13	1.3x	1.3x	1.0x	-131.5x	14.2x	6.0x	0.1x	0.2x	1.7x	-15.4x	-0.1x	-0.1x	-0.7x	6.4x
Schwazze	1.1x	1.1x	na	8.4x	5.4x	na	-0.9x	-0.9x	-4.1x	na	-1.1x	-1.1x	-5.1x	na
StateHouse	1.8x	na	na	18.6x	na	na	na	-1.0x	na	-10.6x	na	-1.7x	na	-17.9x
TerrAscend	2.9x	2.9x	2.8x	14.6x	14.8x	13.0x	-0.9x	-0.9x	-4.8x	-4.7x	-1.9x	-1.9x	-9.4x	-9.3x
TILT	1.0x	0.9x	0.7x	-23.2x	na	18.1x	-0.5x	-0.6x	20.8x	12.4x	-0.9x	-1.0x	37.1x	22.2x
Trulieve	1.7x	1.8x	1.7x	6.7x	5.2x	5.3x	-0.2x	-0.2x	-0.7x	-0.8x	-0.5x	-0.5x	-1.6x	-2.0x
Verano	1.4x	1.5x	1.2x	4.4x	4.4x	3.9x	-0.3x	-0.3x	-0.9x	-0.9x	-0.6x	-0.6x	-1.9x	-1.9x
Vext	1.9x	1.8x	na	15.1x	8.9x	na	-0.9x	-0.9x	-4.3x	-7.4x	-0.9x	-1.0x	-4.3x	-7.4x

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

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Exhibit 2: Spot EV calculation – US MSOs

US$Mn 10-Nov-24	FactSet Spot EV	Z&A Spot EV	US$ price	mn shares	mn deriv	Total Mkt Cap	Financial net debt	Net leases	Income tax liab.	Conting Cons.	ITM deriv inflow	Total BDND	Pref Stock Min Int
US MSOs													
Acreage Holdings	247	346	0.22	125.0	34.6	35	-252	-2	-57			-311	
Ascend Wellness	638	633	0.66	213.9	13.3	151	-226	-134	-123			-483	
Ayr Wellness	645	448	0.94	114.0	31.1	136	-359	4	-11	0	55	-311	
Cannabist Co	570	449	0.14	472.7	8.2	69	-269	-26	-86			-380	
Cansortium	140	126	0.10	304.9	5.6	30	-59	-9	-29			-97	
Cresco Labs	985	1,166	1.28	442.6	9.2	578	-395	-56	-128	-9		-588	
Curaleaf	2,448	3,614	2.25	742.3	11.2	1,699	8	-1,115	-672	-18		-1,796	119
4Front Ventures	249	170	0.04	915.2	3.8	37	-79	-8	-40	-6	0	-134	
Glass House	526	752	7.80	74.8	1.7	596	-42	0	-8	-33		-83	72
Gold Flora	130	131	0.07	287.6	0.0	19	-37	-31	-41	-4		-113	
Goodness Growth	110	156	0.41	144.7		59	-61	-9	-27			-97	
Green Thumb	2,350	2,406	9.25	237.0	9.3	2,278	-114	-26	-25	0	37	-128	
Grown Rogue	75	89	0.62	143.5		89	0	0	0	0		0	
iAnthus	47	209	0.01	6,615.3		47	-156	-6				-162	
Jushi	346	381	0.39	196.7	0.0	77	-165	-1	-139			-305	
MariMed	140	156	0.15	380.6	5.0	57	-63	-1	-16			-80	19
Planet 13	116	163	0.48	325.2	0.3	155	19	-7	-16	-5		-8	
Schwazze	183	198	0.15	80.2		12	-151	-2	-33	0		-186	
StateHouse	144	200	0.02	256.4	138.6	6	-114	-10	-54	-22	7	-192	2
TerrAscend	490	913	0.91	351.2	15.3	333	-293	-169	-6	-114		-581	
TILT	111	111	0.01	390.5	4.4	5	-59	-44	-3			-106	
Trulieve	1,465	2,092	7.77	186.0	3.3	1,471	-264	-20	-333	-5		-622	
Verano	1,070	1,252	2.04	346.4	8.7	724	-266	-6	-251	-4		-527	
Vext	48	66	0.14	245.5	3.4	34	-32	0				-32	

Source: FactSet and company reports

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Exhibit 3: Valuation Multiples Comps – Canada LPs

Multiples	Z&A Spot EV / Sales			Z&A Spot EV / EBITDA			Financial Net Debt				Broadly Defined Net Debt			
							Sales		EBITDA		Sales		EBITDA	
10-Nov-24	Current	2024	2025	Current	2024	2025	Current	CY24	Current	CY24	Current	CY24	Current	CY24
Aurora Cannabis Inc.	1.4x	1.4x	1.3x	11.1x	13.7x	9.1x	na	na	na	na	0.0x	na	-0.4x	na
Auxly Cannabis Group Inc.	0.5x	na	na	2.8x	na	na	-0.4x	na	-2.0x	na	-0.5x	na	-2.8x	na
Avant Brands Inc	0.7x	na	na	2.0x	na	na	-0.2x	na	-0.4x	na	-0.4x	na	-1.2x	na
BZAM Ltd	0.3x	na	na	3.4x	na	na	-0.2x	na	-2.4x	na	-0.3x	na	-3.4x	na
Cannara Biotech	0.7x	na	na	5.1x	na	na	0.0x	na	0.0x	na	0.0x	na	0.0x	na
Canopy Growth Corporation	4.6x	4.0x	3.8x	-54.8x	-67.5x	394.3x	-1.3x	-1.1x	15.3x	18.8x	-1.3x	-1.1x	15.3x	18.8x
Cronos Group Inc	-2.4x	-2.3x	-1.9x	6.0x	7.2x	456.8x	na	na	na	na	7.7x	7.4x	-19.3x	-23.1x
Decibel Cannabis Company Inc	0.9x	0.9x	0.6x	5.0x	4.5x	3.0x	-0.4x	-0.4x	-2.1x	-1.9x	-0.4x	-0.4x	-2.1x	-1.9x
Nova Cannabis Inc	0.4x	na	na	12.0x	na	na	0.0x	na	-0.1x	na	0.0x	na	-0.9x	na
OrganiGram Holdings Inc	1.0x	1.0x	0.8x	18.9x	29.5x	11.7x	na	na	na	na	0.5x	0.5x	9.7x	15.1x
Rubicon Organics, Inc.	0.5x	na	na	7.2x	na	na	0.0x	na	-0.4x	na	0.0x	na	-0.4x	na
SNDL Inc.	0.7x	0.7x	0.7x	16.3x	426.9x	na	na	na	na	na	0.2x	0.2x	4.4x	116.7x
Tilray Brands, Inc.	1.2x	1.2x	1.1x	12.0x	15.7x	11.6x	0.0x	0.0x	-0.3x	-0.4x	-0.1x	-0.1x	-0.9x	-1.2x
Village Farms International, Inc.	0.3x	0.3x	0.3x	-6.9x	14.2x	4.7x	0.0x	0.0x	1.0x	-2.0x	0.0x	0.0x	1.0x	-2.1x

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

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Exhibit 4: Spot EV calculation – Canada LPs

C$Mn 10-Nov-24	FactSet Spot EV	Z&A Spot EV	C$ 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 Inc.	367	450	7.02	54.9	1.2	394	27	-43		0		-16	40
Auxly Cannabis Group Inc.	179	58	0.05	0.0	0.0	0	-41	-15		-2		-58	
Avant Brands Inc	217	22	0.80	10.5	0.3	9	-5	-8				-13	
BZAM Ltd	112	45	0.00	180.8	0.2	0	-31	-14				-45	
Cannara Biotech	85	56	0.62	90.0	0.0	56	0	0	0			0	
Canopy Growth Corporation	na	1,158	6.28	131.6	1.5	836	-323					-323	
Cronos Group Inc	-66	-363	2.84	277.0	6.4	806	1,170	-2				1,168	
Decibel Cannabis Company Inc	68	79	0.08	581.9	16.3	45	-34	0				-33	
Nova Cannabis Inc	1	118	1.76	62.1		109	-1	-8				-9	
OrganiGram Holdings Inc	156	156	2.28	103.8	0.0	236	80		0			80	
Rubicon Organics, Inc.	27	25	0.39	56.2	4.3	24	-1	0				-1	
SNDL Inc.	493	626	2.84	264.3	16.2	797	209	-38				171	
Tilray Brands, Inc.	1,415	1,503	2.14	634.4	0.0	1,357	-42	-49		-21		-112	35
Village Farms International, Inc.	158	134	1.22	81.0		99	-19	-1				-19	15

Source: FactSet and company reports

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Exhibit 5: Stock Performance

10-Nov-24	Stock Performance		
Ticker	Last 30d	Last 90d	Last 12mo
US MSOs			
Ascend	-21%	-30%	-38%
Ayr	-49%	-50%	-33%
Cannabist	-32%	-42%	-65%
Cansortium	-40%	-21%	3%
Cresco	-21%	-21%	11%
Curaleaf	-23%	-33%	-29%
4Front	-20%	-60%	-73%
GlassHouse	-10%	-15%	81%
Gold Flora	-26%	-48%	-41%
Vireo	-15%	-22%	132%
Grown Rogue	-9%	-5%	116%
Green Thumb	-9%	-21%	1%
iAnthus	-33%	-52%	-69%
Jushi	-22%	-30%	-29%
MariMed	-1%	-15%	-54%
Planet13	-19%	15%	-33%
Schwazze	-40%	0%	-75%
StateHouse	#N/A	-53%	-42%
Trulieve	-33%	-24%	64%
TerrAscend	-27%	-33%	-44%
Vext	-16%	-30%	-36%
Verano	-39%	-44%	-48%

	Stock Performance		
Ticker	Last 30d	Last 90d	Last 12mo
Canadian LPs			
Aurora	-5%	-28%	7%
Avant	-23%	-42%	-83%
Auxly	22%	20%	240%
Cannara	4%	-4%	-34%
Canopy	8%	-34%	-23%
Cronos	-6%	-11%	9%
Decibel	38%	31%	-46%
Entourage	-30%	-15%	-55%
High Tide	17%	47%	90%
Nova	1%	31%	129%
OGI	-4%	7%	23%
Rubicon	-5%	-19%	-13%
SNDL	5%	-2%	36%
Tilray	-6%	-16%	-13%
VFF	0%	-13%	14%
CBD			
CVSI	-1%	-9%	26%
CWEB	4%	-8%	-50%
LFID	-24%	-33%	-70%
International			
InterCure	-17%	-9%	26%
PharmaCielo	-40%	35%	132%

	Stock Performance		
Ticker	Last 30d	Last 90d	Last 12mo
MJ Fincos			
AFCG	-1%	1%	-11%
CNPOF	-20%	13%	41%
IIPR	-15%	-4%	40%
NLCP	-10%	-13%	41%
SHFS	-32%	-41%	-47%
SSIC	3%	8%	37%
REFI	2%	3%	5%
Tech			
LFLY	-23%	-31%	-78%
SBIG	13%	-10%	-35%
MAPS	-11%	-18%	-30%
Vape parts			
GNLN	-43%	-12%	-60%
ISPR	-6%	-8%	-29%
SMORF	11%	11%	66%
TLLTF	0%	-40%	-71%
Index			
S&P 500	*5%*	*12%*	*36%*
S&P 477	*-1%*	*1%*	*18%*
Nasdaq	*10%*	*15%*	*53%*
MSOS ETF	*-24%*	*-29%*	*-13%*
YOLO ETF	*-11%*	*-13%*	*6%*

Source: FactSet

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Appendix II: Bio and Disclaimers

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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.*

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Disclosures and Disclaimers

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Disclosure: Zuanic & Associates offers advisory and research services, and it also organizes investor events and conferences. The firm is often engaged by various operators in the cannabis industry (both plant touching companies and those providing services, private and public, in North America and overseas) on an ongoing or ad hoc basis. Several of the companies discussed in this report are paying customers of the services provided by the firm.

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