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Health Care

INITIATING COVERAGE

January 17, 2019

Cannabis: The Beginning Of A Global Seismic Shift

Initiating Coverage On Canopy Growth, Cronos, Aphria

Our Conclusion

Investors rarely get to witness the birth of an industry. Such historic events include the gold rush, inventions of the automobile and aircraft, and the internet. In most instances, investors rush to pour capital into the sector, and while the industries develop, very few companies live up to their lofty expectations. We expect cannabis to follow this course. Dozens of small/medium-sized firms will likely earn moderate revenues and earnings, but our view is that only a handful will come to dominate the global market. We believe Canopy and Cronos are likely to be two of those winners; meanwhile, we view Aphria as a manufacturing and automation expert, but believe concerns about capital allocation and corporate governance could deter investors.

Effective January 17, we initiate coverage of Canopy Growth with an Outperformer rating and $65 price target; Cronos Group, with an Outperformer rating and $22 price target; and Aphria, with a Neutral rating and $10 price target.

Implications

Our investment preference points us toward the Canopy ecosystem (both Growth and Rivers) as well as Cronos, mostly for one reason: best-in-class management. We believe the actions and visions of each of these management teams stand above the rest of the field. This has been reinforced by significant investments from outside firms, including beverage alcohol (Constellation Brands/Canopy) and tobacco (Altria/Cronos). Our view is that the strategies deployed by these companies combined with their strong balance sheets make these companies the most likely to attain the status of industry titan.

As for Aphria, the debate over the value of its international assets, as well as corporate governance concerns, have obscured the value of the company's quality domestic assets, cultivation expertise, and national distribution capabilities. In our opinion, the concerns about corporate governance and, more importantly, capital allocation are not without some validity and are enough to leave us on the sideline when it comes to Aphria stock.

All figures in Canadian dollars, unless otherwise stated.

For required regulatory disclosures please refer to "Important Disclosures" beginning on page 75. Please see "Price Target Calculations" and "Key Risks to Price Target" information on page(s) 30 to 33,48 to 51 and 70 to 73.

Table Of Contents

Canopy Growth Corporation

Outperformer

WEED — TSX

Price as at January 17, 2019	$54.90
12 — 18 Month Price Target:	$65.00

Pharmaceuticals

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All figures in C$ millions, except per share data.

EV/Sales	C2018E	C2019E	C2020E
Canopy Growth Corporation	96.9x	24.1x	14.2x
Large-Cap Canadian LPs	25.2x	8.5x	3.7x
Small-Cap Canadian LPs	18.3x	2.6x	1.3x
All Canadian LPs	20.1x	3.9x	2.3x

EV/EBITDA	C2018E	C2019E	C2020E
Canopy Growth Corporation	na	374.5x	60.0x
Large-Cap Canadian LPs	na	68.2x	12.1x
Small-Cap Canadian LPs	69.9x	10.9x	4.3x
All Canadian LPs	na	17.9x	8.9x

Key Financial Metrics	F2019E	F2020E	F2021E
ROIC	-3.0%	0.4%	1.9%
Net Debt (Cash)	($3,881.6)	($3,340.3)	($3,324.9)
BV / Share	$23.81	$19.51	$19.94
Capital Expenditure	$609.5	$620.0	$220.0

Income Statement	F2019E	F2020E	F2021E
Production Capacity (MM sq. ft)	4.3	5.4	5.6
Kilograms Sold ('000)	35.2	113.9	183.0
Average Selling Price Per Gram	$6.79	$6.14	$5.71
# of Retail Stores	30	51	55
Total Revenues	**257.3**	**776.3**	**1,144.7**
Y/Y Growth %	*230%*	*202%*	*47%*
Consensus Revenue (FactSet)	*252.4*	*806.9*	*1,344.0*
Adj. Gross Profit	**117.0**	**380.1**	**575.5**
%	*45.5%*	*49.0%*	*50.3%*
Adj. SG&A (ex. D&A)	**591.0**	**694.5**	**771.0**
%	*229.7%*	*89.5%*	*67.4%*
Adjusted EBITDA	**(112.5)**	**109.4**	**273.1**
%	*-43.7%*	*14.1%*	*23.9%*
Consensus EBITDA (FactSet)	*(106.0)*	*150.7*	*294.0*
D&A	32.7	66.5	79.2
Interest Income (Expense)	21.9	45.0	40.0
Income Taxes	70.2	95.2	68.7
Adjusted Net Income	**(108.9)**	**32.2**	**145.4**
Adjusted FD EPS	**($0.40)**	**$0.07**	**$0.31**

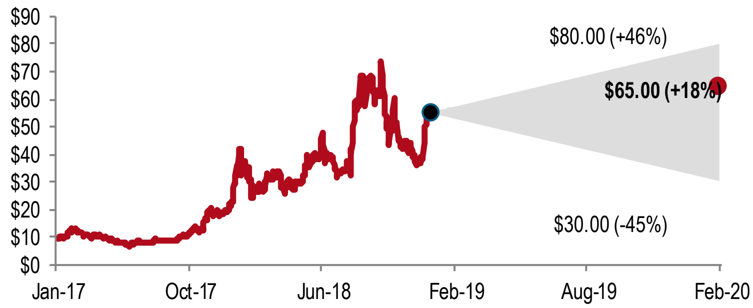
Company Profile

Canopy Growth Corp. is a multi-brand cannabis company seeking to create a dominant global business. Canopy currently has operations in eleven countries across five different continents.

Investment Thesis

- **Global platform & scale:** largest Canadian LP in terms of production, with operations in 12 countries.
- **Strategic backer in Constellation Brands:** vote of confidence from global beverage leader can provide marketing, branding and distribution expertise for future cannabis beverages.
- **Fortress balance sheet:** net cash of ~$4B places WEED in a league of its own when it comes to buying or building the assets necessary to address a rapidly evolving industry.
- **Marketing prowess:** differentiation is challenging due to restrictions, but educational focus, visible partnerships, and ability to influence purchasing decisions makes WEED the industry's flagbearer.

Price Performance and Scenario Analysis



Base Case (Price Target): $65/share

Our price target is a function of various forms of valuation analysis, including EV/EBITDA (2021), DCF, and assessment of displaced markets (such as alcohol and pharmacy) as well as a proliferation of cannabis worldwide. We currently believe $65 is appropriate, reflecting a ~15% discount to the average of the four valuation methods.

Upside Scenario: $80/share

We believe WEED has upside of $80/shr if the company continues to expand its operations across the U.S. and Europe. Canopy's valuation depends on news flow and sentiment across the sector, and so positive news developments can reinforce the market's belief that the company will be the industry leader. $80 reflects a slight premium to the average of our four valuation methodologies.

Downside Scenario: $30/share

Canopy's pro forma cash balance following Constellation's second investment is approximately $11/share. A 10x multiple on F2022 EBITDA would add another $13, leading to $24. However, the company's recent price floor during a time of extremely negative sentiment in the cannabis space (combined with several US listings occurring all at once) was ~$35, so we believe $30 represents appropriate downside.

Quarter in Review - Q3/19E

	Estimate Q3/19E	Last Year Q3/18	Comment
Kilograms Sold ('000)	12.8	2.3	
Average Selling Price per kg	$6.44	$8.30	
Net Revenue	$87.9	$21.7	
Adjusted Gross Profit	$42.0	$12.5	
%	*47.8%*	*57.8%*	
Adj. SG&A (ex. D&A)	$64.9	$19.6	
%	*73.8%*	*0.0%*	
Adjusted EBITDA	-$22.9	-$7.1	
%	*-26.0%*	*-32.6%*	
Fully Diluted EPS	-$0.22	$0.01	

Source: Company reports and CIBC World Markets Inc.

Cronos Group Inc.

Outperformer

CRON — TSX
Price as at January 17, 2019 $17.33
12 — 18 Month Price Target: $22.00
Pharmaceuticals

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All figures in C$ millions, except per share data.

EV/Sales	C2018E	C2019E	C2020E
Cronos Group Inc.	199.7x	39.8x	17.1x
Large-Cap Canadian LPs	25.2x	8.5x	3.7x
Small-Cap Canadian LPs	18.3x	2.6x	1.3x
All Canadian LPs	20.1x	3.9x	2.3x

EV/EBITDA	C2018E	C2019E	C2020E
Cronos Group Inc.	na	195.2x	55.0x
Large-Cap Canadian LPs	na	68.2x	12.1x
Small-Cap Canadian LPs	69.9x	10.9x	4.3x
All Canadian LPs	na	17.9x	8.9x

Key Financial Metrics	F2019E	F2020E	F2021E
ROIC	0.8%	1.8%	2.7%
Net Debt (Cash)	($2,407)	($2,458)	($2,535)
BV / Share	$7.96	$8.20	$8.52
Capital Expenditure	$40.0	$40.0	$40.0

Income Statement	F2019E	F2020E	F2021E
Production Capacity (MM sq. ft)	1.3	1.3	1.3
Production Capacity ('000 kgs)	117.2	117.2	117.2
Kilograms Sold ('000)	16.9	40.5	62.6
Avg. Selling Price Per Gram	$5.60	$5.46	$5.16
Total Revenues	**95.7**	**222.6**	**326.3**
Y/Y Growth %	*402%*	*133%*	*47%*
Consensus Revenue (FactSet)	*104.2*	*240.5*	*na*
Adj. Gross Profit	**45.5**	**118.0**	**172.9**
%	*47.6%*	*53.0%*	*53.0%*
Adj. SG&A (ex. D&A)	**29.9**	**48.1**	**65.5**
%	*31.2%*	*21.6%*	*20.1%*
Adjusted EBITDA	**19.5**	**69.3**	**102.5**
%	*20.4%*	*31.1%*	*31.4%*
Consensus EBITDA (FactSet)	*36.4*	*97.0*	*184.2*
D&A	4.4	5.1	5.8
Interest Income (Expense)	23.8	48.4	49.0
Income Taxes	7.7	26.1	34.4
Adjusted Net Income	**29.2**	**84.4**	**109.3**
Adjusted FD EPS	**$0.08**	**$0.23**	**$0.30**

Company Profile

Cronos Group is a global cannabis company, with a presence across five continents, whose principal activities are the production and sale of cannabis in federally legal jurisdictions. The company seeks to focus on research, IP generation, strategic support and stewardship.

Investment Thesis

• **Sterling balance sheet:** net cash of $2.4B allows the company the ability to invest materially to develop intellectual property and R&D.

• **Strategic partner in Altria:** Altria's investment is a massive vote of confidence in Cronos, and their expertise in marketing, product design, manufacturing and distribution.

• **Differentiated strategy:** have avoided the notion that production is top priority; a series of capital-light deals with optimal incentive alignment has resulted in attractive breadth of assets not reliant solely on cultivation.

• **Best-in-class management:** top executives (as well as board members) have demonstrated industry knowledge and foresight that we believe is a differentiating asset.

Price Performance and Scenario Analysis

Base Case (Price Target): $22/share

Our price target is a function of various forms of valuation analysis, including EV/EBITDA (2021), DCF, and assessment of displaced markets (such as alcohol and pharmacy) as well as a proliferation of cannabis worldwide. We currently believe $22 is appropriate, reflecting a ~20% discount to the average of the four valuation methods.

Upside Scenario: $30/share

We believe upside of $30 for CRON is achievable if the company begins to reach milestones related to its deal with Ginkgo Bioworks. Other potential catalysts include accretive or strategic M&A, as well as outperformance versus consensus estimates. $30 reflects a slight premium to the average of our four valuation methodologies.

Downside Scenario: $10/share

Cronos' pro forma cash balance following the Altria investment is approximately $7/share. If we place a 10x multiple on F2021 EBITDA, this would add another ~$3/share. We believe this to be a punitive multiple given the quality of the company; however, the cannabis space has proven that sentiment can at times decline significantly in short order.

Quarter in Review - Q4/18E	Estimate Q4/18E	Last Year Q4/17	Comment
Kilograms Sold ('000)	1.5	0.3	
Average Selling Price per kg	$5.73	$6.03	
Net Revenue	$9.0	$1.6	
Adjusted Gross Profit	$2.7	-$2.0	
%	*30.0%*	*-125.9%*	
Adj. SG&A (ex. D&A)	$5.9	$2.4	
%	*65.2%*	*0.0%*	
Adjusted EBITDA	-$2.5	-$3.9	
%	*-27.4%*	*0.0%*	
Fully Diluted EPS	-$0.02	$0.01	

Source: Company reports and CIBC World Markets Inc.

Aphria Inc.

Neutral

APHA — TSX
Price as at January 17, 2019 $8.90
12 — 18 Month Price Target: $10.00
Pharmaceuticals

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All figures in C$ millions, except per share data.

EV/Sales	C2018E	C2019E	C2020E
Aphria Inc.	36.7x	8.5x	3.7x
Large-Cap Canadian LPs	25.2x	8.5x	3.7x
Small-Cap Canadian LPs	18.3x	2.6x	1.3x
All Canadian LPs	20.1x	3.9x	2.3x

EV/EBITDA	C2018E	C2019E	C2020E
Aphria Inc.	na	114.0x	12.1x
Large-Cap Canadian LPs	na	68.2x	12.1x
Small-Cap Canadian LPs	69.9x	10.9x	4.3x
All Canadian LPs	na	17.9x	8.9x

Key Financial Metrics	F2019E	F2020E	F2021E
ROIC	-2.1%	4.3%	9.4%
Net Debt (Cash)	($89.6)	($130.8)	($265.3)
BV / Share	$7.26	$7.35	$7.93
Capital Expenditure	$168.4	$65.0	$60.0

Income Statement	F2019E	F2020E	F2021E
Production Capacity (MM sq. ft)	2.4	2.5	2.5
Production Capacity ('000 kg)	175	260	260
Kilograms Sold ('000)	22.7	85.3	137.7
Average Selling Price per gram	$5.99	$4.83	$4.55
Total Revenues	**135.9**	**411.9**	**626.0**
Y/Y Growth %	*268%*	*203%*	*52%*
Consensus Revenue (FactSet)	*178.2*	*546.1*	*856.5*
Adj. Gross Profit	**62.9**	**195.8**	**315.8**
%	*46.3%*	*47.5%*	*50.4%*
Adj. SG&A (ex. D&A)	**80.3**	**95.3**	**112.4**
%	*59.1%*	*23.1%*	*18.0%*
Adjusted EBITDA	**(17.4)**	**100.4**	**203.4**
%	*-12.8%*	*24.4%*	*32.5%*
Consensus EBITDA (FactSet)	*26.8*	*172.1*	*246.1*
D&A	18.7	22.0	23.8
Interest Income (Expense)	7.6	2.8	4.4
Income Taxes	8.7	18.7	47.6
Adjusted Net Income	**(21.4)**	**61.0**	**138.0**
Adjusted FD EPS	**($0.09)**	**$0.24**	**$0.55**

Company Profile

Founded in 2014, Aphria is a licensed producer and seller of medical and adult-use cannabis, legally operating in multiple countries worldwide. The company is focused on innovation, automation and low-cost production.

Investment Thesis

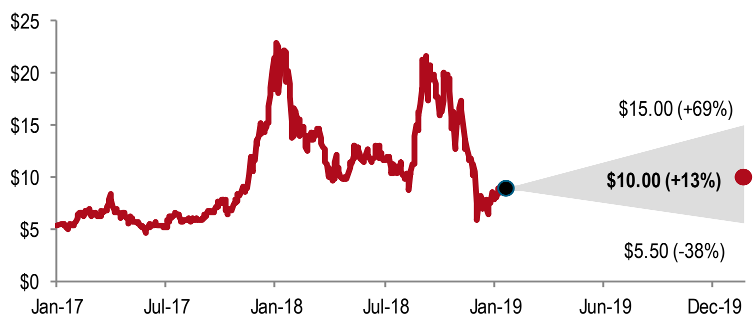
- **Scale of production:** on the verge of becoming second-largest producer by annual capacity; if industry supply constraints persist, this could be very advantageous.

- **Cultivation expertise:** founders' growing experience will prove invaluable; level of automation provides margin benefit vs other players, and provides opportunity for company to become high-margin contract manufacturer of choice to supplement production for own brands.

- **International exposure**: 2018 acquisitions expanded operations to Europe and Latin America. These assets should prove valuable in the future, but are currently in early stages of development.

- **Corporate governance and capital allocation questions**: a recent prominent short-sellers' report questioned the company's governance practices and ability to allocate capital to international assets.

Price Performance and Scenario Analysis



Base Case (Price Target): $10/share

Our price target is a function of various forms of valuation analysis, including EV/EBITDA (2021), DCF, and assessment of displaced markets (such as alcohol and pharmacy) as well as a proliferation of cannabis worldwide. We currently believe $65 is appropriate, reflecting a ~15% discount to the average of the four valuation methods.

Upside Scenario: $15/share

We believe APHA has upside of $15/shr if the market determines corporate governance concerns have been adequately addressed, and if revenues (both domestic and international) ramp faster than expected. The announcement of a strategic partner would also act as a positive catalyst. Our upside scenario represents a modest premium to the average of our four valuation methods.

Downside Scenario: $5.50/share

We believe the stock could approach recent lows if some combination of earnings reductions and further concerns over corporate governance were to occur. An 8x multiple applied to a 25% reduction to our F2021E EBITDA would lead to a value of ~$4.75/shr. Adding ~$0.50 of cash leads us to our $5.50 downside scenario. We believe this is overly punitive, but not impossible given recent volatility.

Quarter in Review - Q3/19E	Estimate Q3/19E	Last Year Q3/18	Comment
Kilograms Sold ('000)	8.2	14	
Average Selling Price per kg	$5.74	$8.30	
Net Revenue	$47.1	$10.3	
Adjusted Gross Profit	$20.7	$7.9	
%	*43.9%*	*77.1%*	
Adj. SG&A (ex. D&A)	$22.3	$5.9	
%	*47.3%*	*57.4%*	
Adjusted EBITDA	-$1.6	$2.0	
%	*-3.4%*	*19.6%*	
Adj. Fully Diluted EPS	-$0.02	$0.08	

Source: Company reports and CIBC World Markets Inc.

Summary

The conclusions reached in this report are a product of many factors: balance sheet strength, insights on branding and marketing efforts, facility quality and progress to date on securing arrangements with buyers and partners. And despite the fact that no Canadian LP has reported a full quarter of results post adult-use legalization, we believe it is still useful to note early observations as they relate to strategy. But the most important determinant for us, and what we believe should be the most important one for all investors, is the quality and direction of management.

Strong Management Teams Are Key

It has been—and continues to be—our opinion that in this industry, it is the strongest management teams that offer investors with the best guideline as to who has the greatest chance of becoming a global (or at least national) titan. In this regard, **we believe the Canopy ecosystem (both Canopy Growth and Canopy Rivers) and Cronos Group provide the best opportunities for future success**. This is the result of countless discussions with the leadership of both of these companies. To this point, it does not surprise us that the two largest investments made to date in this industry have featured Constellation Brands and Altria, giants in the beverages and tobacco world, choosing Canopy Growth and Cronos Group.

Valuation Not The Key Driver Of Returns

Valuation has had little impact on the sector's trading patterns to date, trailing well behind the key drivers of regulatory change, demonstration of operational execution, and investments from outside firms.

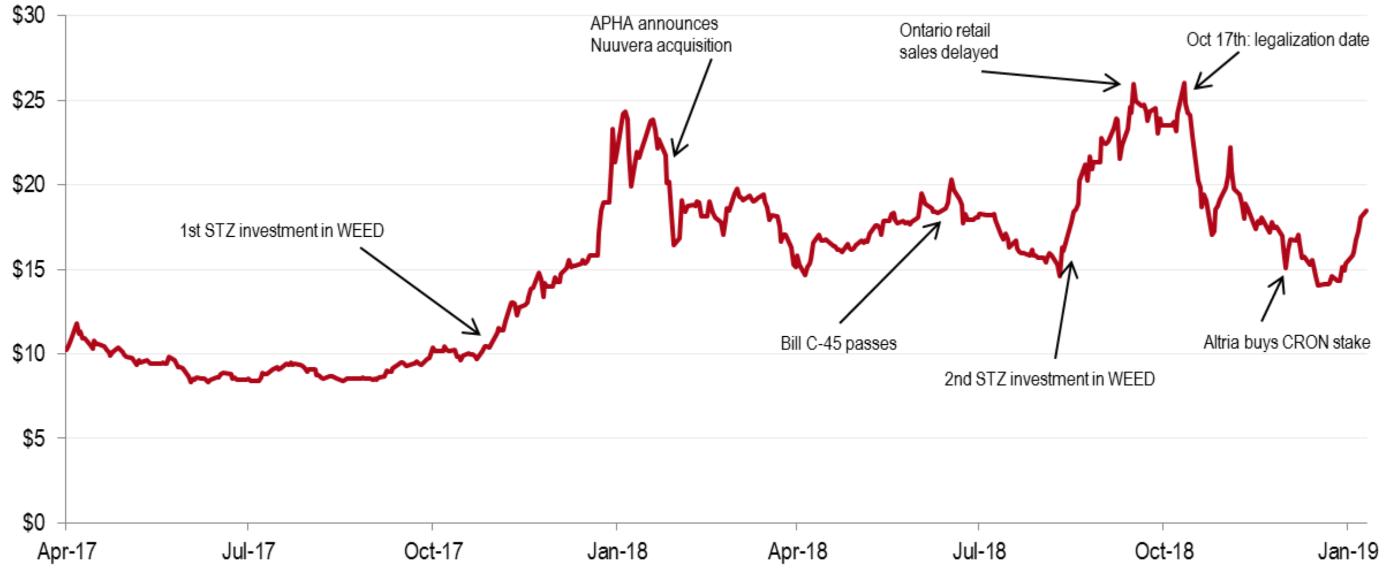
In this industry more than most, the key element of any investor's choice is management's vision for the future, both for the industry as a whole and their own niche within the industry. Valuation is still relevant, but we believe it matters less than in other industries. Valuation has had little impact on the sector's trading patterns to date, trailing well behind the key drivers of regulatory change, demonstration of operational execution, and investments from outside firms. When news related to those subjects is negative, valuation indeed garners scrutiny. For example, at the time of our Canopy Rivers report initiation, the average EV/2020E EBITDA hovered around 40x for the largest names. We stated in that report that "we now believe valuations in the sector to be somewhat puzzling" because it seemed to us that every cannabis-related name enjoyed valuations that assumed all plans would come to fruition.

When regulatory news hits, the reaction can be swift and ferocious, either to the upside or downside. When Bill C-45 was slowed, and it became evident that July 1 would not become Canada's legalization date, all stocks swooned regardless of who had built facilities, signed supply agreements, etc. When it was apparent that Ontario's retail model would be limited to one store per LP, valuations dipped quickly. And following a (somewhat expected) bumpy launch on October 17, most Canadian LPs lost 30%-40% of their value in just over a week as investors "sold the news".

The same can be said on the positive side. The de-scheduling of one particular drug, the prospect of a STATES Act, and sizeable investments (or even rumours of such) from outside industries have all moved valuations sharply upwards. Investors need look no further than this week's announcement from Canopy Growth that it has been granted a license to produce hemp in New York.

Our conclusion is that news flow and the resulting sentiment are the main drivers of returns.

Exhibit 1. Key Industry Events (Price Of HMMJ ETF)



Source: FactSet and CIBC World Markets Inc.

Still Early Innings In A Global Movement

We believe there are more of these investments to come. Constellation Brands and Altria Group have made the first steps, but it is our opinion that the industry will see far more, as cannabis undergoes de-stigmatization and normalization. On the adult-use front, it may take time, but these products are consumed with regularity in markets in which they have been legal (on a state level), such as Colorado and Oregon.

Furthermore, on the medical side, humans have been extracting medicine from plants for centuries, and we believe this is yet another frontier that will see numerous developments in the coming years, as restrictions that have prevented fundamental research are removed. Once specific patient outcomes are proven, we expect interest in cannabis and its derivatives to gain more popularity.

It is worth noting that this industry can encounter significant roadblocks as well. We do not expect a reversal of regulation in any state that has moved towards legalization, but progress can be stalled by incumbent industries lobbying against legalization, as well as intransigent lawmakers thwarting the will of the people. This was witnessed recently in Utah, where voters approved medical legalization as part of this past November's elections, but state lawmakers drastically changed the final bill.

We believe sentiment will continue to be the most important determinant in the cannabis sector, at least in the short term.

Our Favoured Names

We believe Canopy Growth and Cronos are uniquely positioned to succeed in the burgeoning cannabis market because of their balance sheet strength, best-in-class management, and demonstrated ability to execute. We believe Aphria's domestic assets have considerable value, and view the company's automation expertise as attractive, but arguably suboptimal M&A discipline and corporate governance concerns leave us on the sideline. Effective January 17, we add to our coverage of cannabis names. In addition to our current coverage of Canopy Rivers, we initiate coverage on the following:

- **Canopy Growth, Outperformer rating, $65 price target.**
- **Cronos Group, Outperformer rating, $22 price target.**
- **Aphria, Neutral rating, $10 price target.**

This report provides a brief industry update, following from our “Cannabis: Almost Showtime” primer from May 2018, in which we analyze some key market trends. We then assess each of the companies mentioned above in the order shown.

Exhibit 2. Cannabis Scorecard (millions except per share or where noted otherwise)

		Canopy Growth Corporation	Cronos Group Inc.	Aphria Inc.
Ticker		WEED - TSX	CRON - TSX	APHA - TSX
Price		$54.90	$17.33	$8.90
Investment Thesis		Largest, most prominent cannabis company in the world, with unmatched name recognition, and superior capacity and distribution arrangements	Incredibly well-capitalized competitor with excellent management (and key strategic backer) that seeks to focus on research, IP generation, strategic support and brand stewardship	Low-cost production and cultivation expertise offer advantages versus competitors, but corporate governance concerns could weigh on sentiment
Strategic Partnerships		Constellation Brands, Inc ($5 billion investment / 37% ownership)	Altria Group Inc. ($2.4 billion investment / 45% ownership)	None
Valuation (C2020)	**EV/Sales**	14.2x	17.1x	3.7x
	EV/EBITDA	60.0x	55.0x	12.1x
Market Cap.		Basic: $18,362.3 Diluted: $19,547.6	Basic: $5,630.5 Diluted: $6,249.6	Basic: $2,224.4 Diluted: $2,229.9
Net Debt (Cash)		($4,352.5)	($2,441.0)	($129.7)
Enterprise Value		Basic: $14,009.8 Diluted: $15,195.1	Basic: $3,189.5 Diluted: $3,808.6	Basic: $2,094.7 Diluted: $2,100.2
Shares O/S		Basic: 334.5 Diluted: 356.1	Basic: 324.9 Diluted: 360.6	Basic: 249.9 Diluted: 250.5
Production Capacity		Current: 215,000 kg Future: 325,000 kg	Current: 40,150 kg Future: 117,150 kg	Current: 34,500 kg Future: 260,000 kg
Countries with Operations/Exposure		Canada, USA, Germany, Australia, Czech Republic, Chile, Lesotho, Colombia, Denmark, Jamaica	Canada, Israel, Australia, Colombia (Distribution in Poland & Germany)	Canada, Israel, Italy, UK, Bermuda, Argentina, Germany, Jamaica, Malta, Colombia, South Africa, Lesotho
Strengths		**Fortress balance sheet:** net cash of ~$4B places WEED in a league of its own when it comes to buying or building the assets necessary to address a rapidly evolving industry **Marketing prowess:** differentiated branding is currently challenging due to restrictions, but educational focus, visible partnerships with established names, and ability to influence purchasing decisions makes WEED the industry's flagbearer	**Sterling balance sheet:** net cash of $2.4B affords a talented management team the ability to develop R&D and intellectual property, and Altria investment acts as massive validation **Differentiated strategy:** have avoided the notion that production is top priority; a series of capital-light deals with optimal incentive alignment has resulted in attractive breadth of assets not reliant solely on cultivation	**Scale of production:** on the verge of becoming second-largest producer by annual capacity; if industry supply constraints persist, this could be very advantageous **Cultivation expertise:** growing experience from founders will prove invaluable; remarkable level of automation provides margin benefit vs other players
Risks		**Execution:** an incredibly complex supply chain combined with a finicky product increases potential for disruption and challenges quality control **Capital allocation:** buying/building the right brands could prove difficult; risk of poor allocation	**Low initial market share:** with products only available to ~60% of Canada's population, CRON likely begins operations with a ~5% market share in recreational (vs >15% for WEED, ACB, APHA) **Capital allocation:** impressive track record to date, but no certainty on identifying or creating the brands of the future	**Distrust from public markets:** series of short-seller reports have rattled investors' confidence in the company; report is salacious but claims are not without some merit **Lack of brand differentiation:** Outside of one brand with a cult-like following, limited uniqueness or appeal of four recreational brands
Wildcard		What if they can massively disrupt just one of the industries they're targeting (alcohol, sleep aid, mood therapy, pain management, etc)?	What if deal with Ginkgo Bioworks profoundly changes industry?	What if they can become sector's biggest contract manufacturer with industry leading margins?
C2019-2021 Estimates (in CAD $MM)				
• Sales	***C2019***	$644.4	$95.7	$247.5
	C2020	$1,092.1	$222.6	$560.4
	C2021	$1,463.7	$326.3	$709.7
• EBITDA	***C2019***	$41.4 (6.4%)	$19.5 (20.4%)	$18.4 (7.4%)
	C2020	$258.3 (23.7%)	$69.3 (31.1%)	$173.3 (30.9%)
	C2021	$404.5 (27.6%)	$102.5 (31.4%)	$240.8 (33.9%)

Source: Company reports and CIBC World Markets Inc.

This Is America: Capital Flowing South

While our report has focused on Canadian LPs, we must acknowledge that an increasing number of sophisticated investors are beginning to shift capital to U.S.-based operators. Several well-capitalized businesses—MedMen, Green Thumb Industries, CuraLeaf, Trulieve, Acreage Holdings, to name a few—are beginning to gain mind share among investors, as these companies buy and build their operations across America.

To some extent, these businesses have an advantage over Canadian LPs when it comes to exposure to the U.S. market. The companies named above—as well as others—are listed on the CSE and not the TSX, which means those companies can have U.S. cannabis operations while still trading freely as the CSE does not require conforming to U.S. federal law.

Some of these businesses are well-capitalized, though not to the extent of Canopy Growth or Cronos, and we expect they will continue to generate headlines for winning operating or retail licenses in various states. But this does not mean Canadian companies will be shut out of the U.S. market. We expect capital investments and acquisitions to take place, while still remaining onside with U.S. laws.

Furthermore, we believe the companies analyzed in this report will have an advantage when trying to develop operations internationally, as these companies can state that they are in compliance with all local, provincial and federal laws. This culture of compliance tends to be attractive to global partners. The lack of a U.S. presence may be a slight disadvantage initially, but it provides a larger advantage internationally.

Potential Stock Catalysts

October 17, 2018, will likely be considered a milestone date in Canada for some time, but there are still so many elements of this industry yet to unfold. We explore below what we believe to be the most impactful (possible) events for the sector.

Strengthening The Tenth Amendment Through Entrusting States Act (STATES Act)

This is the likeliest path to de facto national legalization of cannabis in the U.S. The Act proposes to legalize the possession, manufacture and distribution of the plant when those activities have been authorized by state law. In other words, if states permit usage, federal law permits it as well. While the law has bipartisan support, it's more likely that we see an incremental approach from Congress to address nuances like banking restrictions and unfair taxation laws.

- **When:** Passage of this Act in 2019 was always optimistic, in our view, even without a government shutdown. Deliberations on this could begin in 2019, but we believe it will not be passed before 2020.
- **What It Means**: We are of the opinion that most investors do not anticipate countrywide legalization in the U.S. this year, so a delay until next year would be somewhat inconsequential. But if the Act can just gain momentum, or appear likely in the future, investor sentiment could turn supremely positive, with most capital directed to U.S.-domiciled businesses. Movements to relax banking and/or taxation would have similar effects, albeit more muted.

Re-scheduling Or De-scheduling Cannabis And/or THC

A key step was already taken in the most recent farm bill, which de-scheduled CBD and hemp from America's controlled substances list, so long as THC content is below 0.3%. A complete de-scheduling of THC is likely a bridge too far for the current administration, but it's possible the DEA considers reclassification away from the current Schedule I controlled substance status.

- **When:** Again, possible in 2019, but we estimate this is unlikely. Ongoing positive sentiment towards the plant could make this quite possible in 2020.
- **What It Means:** Cannabis advocates would likely view such a move as an unacceptable half-measure towards legalization, but a de-scheduling of THC could be perceived by investors as a sign that full-scale legalization is on the table.

Another Global Firm Making A Significant Cannabis Investment

So far, we've seen Constellation Brands and Altria make big splashes in the cannabis market, with investments of $5 billion and $2.5 billion, respectively. Recent reports have suggested that alcohol sales may not be as impacted by cannabis as first thought; however, there are studies and estimates supporting both sides of the argument.

- **Who's next?**: Diageo, Coca-Cola and PepsiCo have all explored cannabis in one form or another. It's logical enough in predicting the next buyer to assess who would be most disrupted by the popularity of cannabinoids. Our view is that future deals are more likely to be in the form of partnerships or JVs, and believe another Molson Coors Canada-HEXO or Tilray-Novartis are more likely than an investment like Constellation, but we won't rule it out. We also believe the most probable outcome is a **large food or beverage business placing a stake in CBD products**, after attaining the green light from America's FDA.

- **What It Means**: Any such partnership or investment would be a boon to the industry, to be sure. There's likely a law of diminishing returns angle here, as was witnessed with Altria/Cronos, but increased investment adds to the legitimacy of the plant's future.

M&A Announcements From Well-capitalized Canadian Players

We expect the better-capitalized Canadian LPs to be acquisitive as soon as regulations allow. Thus far, we've seen Canopy Growth acquire Storz & Bickel, famous for its Volcano and Mighty brand vaporizers, but we could envision a scenario in which Canadian producers acquire popular brands south of the border once laws permit.

- Potential targets: Some of the most popular U.S. brands include Lord Jones, Foria, Organa Brands, Wana Brands, Dixie Brands, Kiva Confections, KIND Concentrates, PAX, Cheeba Chews, Charlotte's Web, Honey Pot, and dozens more.

- Prediction: Well-capitalized Canadian firms need to stay onside with acquisitions, ensuring they do not (if they wish to remain on the TSX) acquire any assets that touch the cannabis plant. We envision Canadian firms looking to add to their arsenal businesses that offer ancillary products such as rolling papers and filters, usage devices (vaporizers, pipes, other instruments), and detection-avoidance/concealer products in the adult-use market. Another attractive segment will be popular food & beverage brands with cult-like followings, in order to accelerate CBD production. Canopy Rivers' latest deal with Greenhouse Juice is an excellent example.

International Progression

We believe it is prudent for investors to expect a global shift that is similar to Canada's evolution, albeit at an unpredictable cadence.

Regulations are changing at an increasing pace worldwide, and we believe 2019 will not deviate from recent trends. Countries across the globe, tired of seeing little to no progress subverting underground economies, are beginning to look at alternative solutions on existing drug policy, and are beginning to question the success of decades of failed efforts. We believe it is prudent for investors to expect a global shift that is similar to Canada's evolution, albeit at an unpredictable cadence. Public opinion, as well as the track record of countries like Canada, will help shape the terms and pace of policy elsewhere.

- **What If?** It's possible that a plethora of countries—Germany, Argentina, Colombia, or England—make a major move in 2019 towards adult-use legalization. In our opinion, it's difficult to conclude that well-capitalized Canadian companies, who have navigated nationwide legalization once, do not have at least a modest advantage over international players in this scenario.

Results From Medical Trials

This industry—Canopy Growth in particular, but also others—is undergoing a litany of clinical trials that are eventually expected to yield significant discoveries. The presence—or conversely, the absence—of these results can materially move share prices, as it would provide a window into the progress on disrupting established external markets.

- **What If?** Clinical trials demonstrate with certainty that CBD treatment significantly reduces the impact and frequency of seizures, and becomes the primary treatment for epilepsy worldwide.

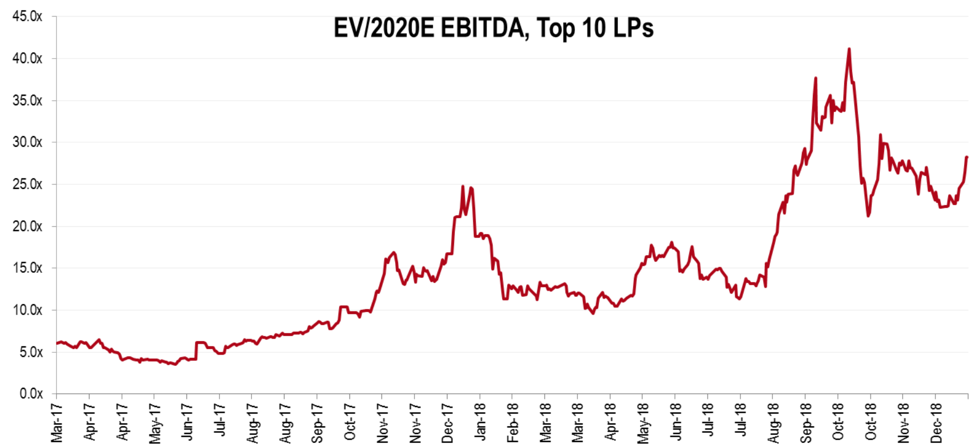
Preliminary Canadian Results

The next two quarters will be fascinating to watch. We don't necessarily believe they will be perfect predictors of future success, but these results have the potential to impact the entire cannabis space.

The Industry: No Shortage Of Valuation Concerns

One of the ways we have tracked the industry is to examine the EV/EBITDA ratio for the 10 largest Canadian LPs, using consensus 2020 estimates. By this measure, the industry currently trades at a 28x multiple. All else equal, the eroding time discount should mean this ratio increases as 2020 approaches, but one takeaway is that despite an abundance of press suggesting a poorly executed launch to Canadian recreational legalization, investors are generally still bullish on the sector, potentially overly optimistic considering an industry product shortage that we believe will endure throughout at least this year.

Exhibit 3. Valuation History—Sector



Source: FactSet and CIBC World Markets Inc.

Another notable observation of the sector's valuation is the spread between the EV/EBITDA multiples of individual companies. There is an incredibly wide divergence between three particular players—Canopy Growth, Cronos and Tilray—and virtually everyone else. We present below the difference in these two groups.

Exhibit 4. Valuation Discrepancy

			EV / sales (consensus)		EV / EBITDA (consensus)	
		EV (fully diluted), $MM	C2019E	C2020E	C2019E	C2020E
Canopy Growth Corp	WEED	$15,502	24.1x	14.2x	374.5x	60.0x
Cronos Group Inc	CRON	$3,809	40.3x	17.3x	197.6x	55.6x
Tilray, Inc	TLRY	$10,561	43.1x	20.6x	na	205.3x
Average			**35.8x**	**17.4x**	**286.0x**	**107.0x**
Aphria Inc	APHA	$2,124	8.6x	3.8x	115.3x	12.3x
Aurora Cannabis Inc	ACB	$8,533	10.2x	6.2x	103.9x	20.4x
CannTrust Holdings Inc	TRST	$782	4.2x	2.7x	15.2x	8.3x
HEXO Corp	HEXO	$1,027	4.3x	2.4x	32.4x	10.2x
Organigram Holdings Inc	OGI	$854	3.9x	2.9x	18.0x	9.4x
The Supreme Cannabis Co Inc	FIRE	$584	3.9x	2.1x	17.9x	10.2x
The Green Organic Dutchman Holdings Ltd	TGOD	$509	1.4x	0.8x	11.1x	3.6x
Average			**5.2x**	**3.0x**	**44.8x**	**10.6x**

Source: FactSet and CIBC World Markets Inc.

We believe the reason for this bifurcation in industry valuations is investors' belief that the three companies in the upper portion of the table are the most likely winners of the global cannabis evolution, with the potential to disrupt many other industries along the way. We believe all other cannabis companies are being perceived—rightly or wrongly—as potentially successful in the Canadian adult-use market, but with unknown prospects abroad.

Investors may look back in a decade and wonder why the consensus view was that WEED, CRON and TLRY were deemed so much more valuable than other competitors. Conversely, it might not be unreasonable when considering companies like ABI-Inbev, Coca-Cola, Diageo, Philip Morris and Novartis—all titans in their respective industries—have a market capitalization of over $100 billion.

Our views on valuation are included in various portions of this report, but we emphasize that valuation is not the critical driver of returns in this industry. If investors to this point had chosen stocks solely based on valuation, their outcomes would be far less attractive than picking the businesses that are believed to be the most disruptive and resilient as the cannabis industry unfolds.

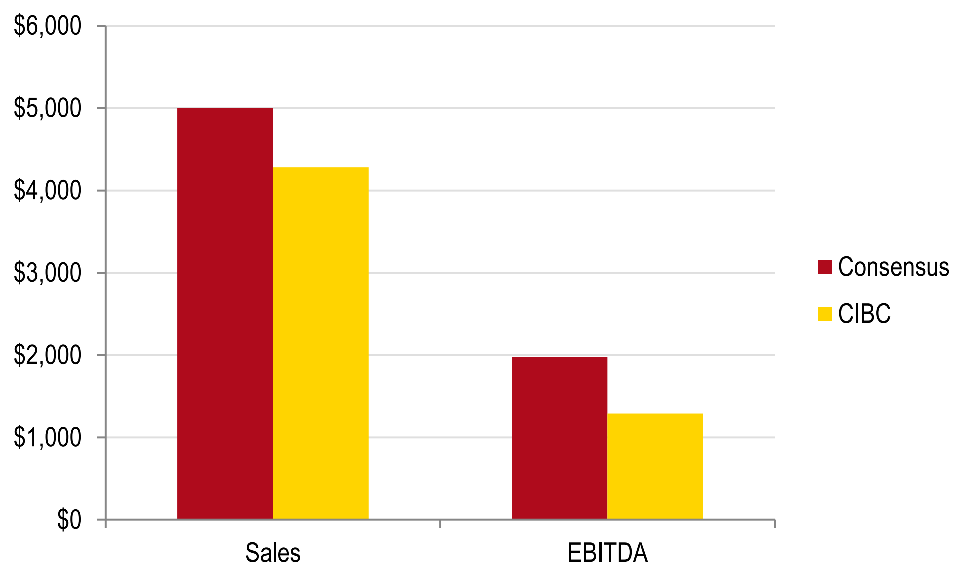
Sobering Thoughts

The medical properties of cannabis have to this point been supported mostly by anecdotal evidence. As bans are lifted, and actual medical research can be performed, we expect to discover far more benefits of the plant than previously thought by most in terms of medicinal value.

On the adult-use side, the results witnessed in states like Colorado, Oregon and Washington have demonstrated that, several years after legalization, demand for recreational use of the product is material, estimated between $215 and $360 per person per year. Data from Statistics Canada is based on estimates (reasonable ones, in our opinion), but the market for adult-use cannabis is seemingly on par with that of spirits and wine.

Though we are optimistic that the future of this industry is bright both on the medical and adult-use fronts, **our estimates for producers' sales and EBITDA are far below the sum of consensus forecasts**. We wish to point out that there are also many producers for which no published estimates exist, who will generate revenue and EBITDA. These figures are not captured in consensus industry forecasts, implying that the Street's estimates for the total industry are even higher than it seems. Therefore, we characterize consensus industry EBITDA estimates as aggressive, and believe that forecasts are likely to come down, which could put pressure on stocks as forecasts adjust.

Exhibit 5. C2020 Industry Forecasts (Canadian Licensed Producers, $ billion)

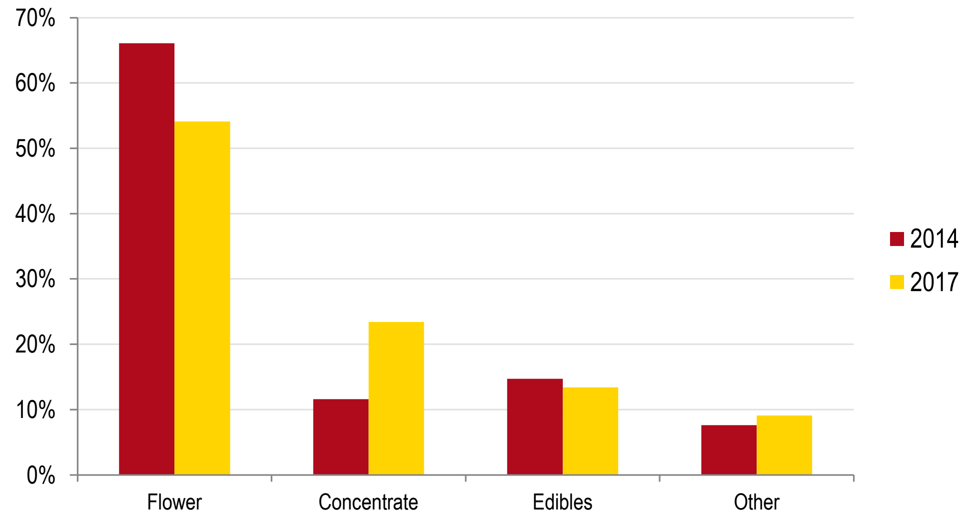


Source: FactSet and CIBC World Markets Inc.

Derivative Products: Where The Market's Going

Canadians are currently only able to legally purchase three products at retail: dried flower, pre-rolled joints and cannabis oil (or capsules). However, in more advanced markets such as Colorado, we are able to clearly see a trend away from flower, and towards concentrates, which include vape pens and extracts known as shatter or wax. Interestingly, edible products have remained mostly stagnant the past few years.

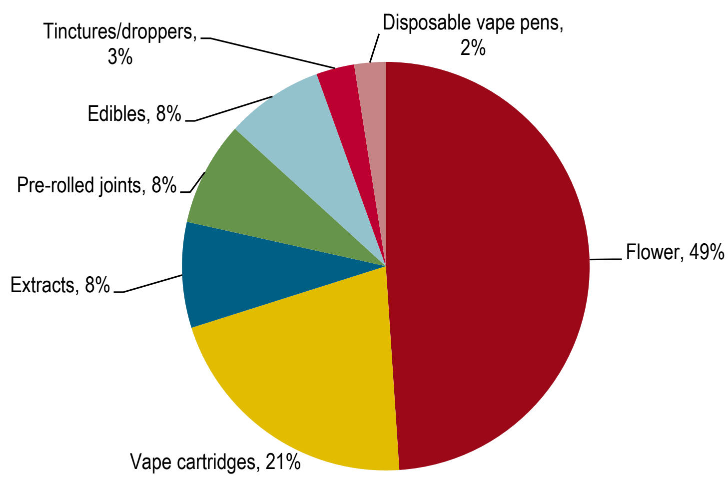
Exhibit 6. Share Of Product Sales In $, Colorado



Source: University of Colorado Boulder Marijuana Policy Group and CIBC World Markets Inc.

Although data from different regions can provide varied outcomes, nationwide statistics paint a similar picture across the U.S. The table below includes actual product sales from January to July 2018, which we have extrapolated to reflect our estimates for a full year.

Exhibit 7. Product Mix In Select U.S. States, 2018E



Source: BDS Analytics and CIBC World Markets Inc.

The concept of product mix is incredibly important in cannabis, as the margin profiles can vary differently for individual products. Years ago, discussion in this industry was dominated by price and cost per gram. We expect this will transition into **price and cost per serving** as tastes and preferences shift towards alternative products. Part of the reason that producers and retailers wish to sell products beyond just flower is not only much greater ability to develop brands, but also better use of cannabis production and extraction.

For simplicity, the data we present below is from a retailer's perspective, but the concept holds regardless of the position on the value chain. Sellers can get better effective prices when selling products beyond simply dried flower.

Exhibit 8. Effective Prices Per Milligram Of THC

	Price, $	mg THC	Price / mg
Flower, 1g	$8	150	$0.05
Oil, 40mg bottle	$90	1,000	$0.09
Gummies (package)	$12	100	$0.12
Large chocolate bar	$15	100	$0.15

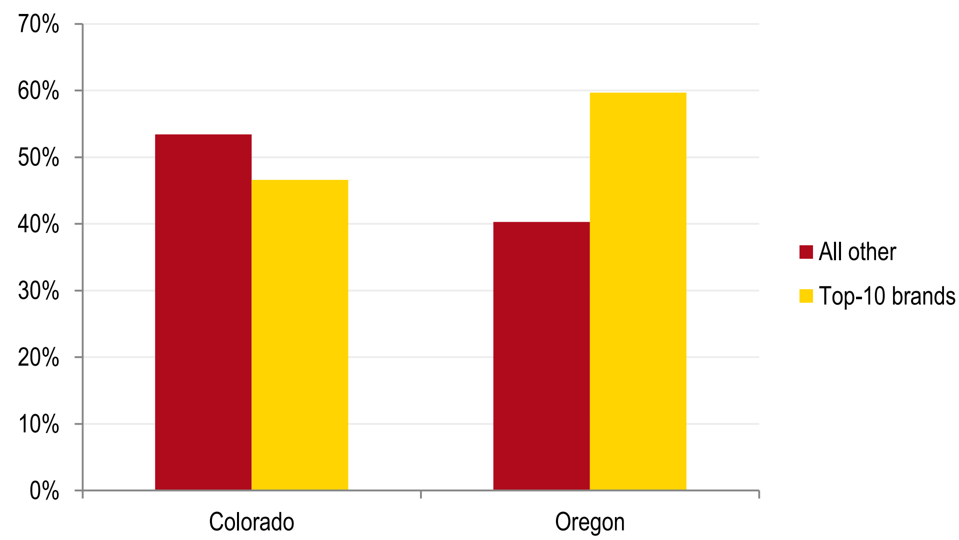
Source: CIBC World Markets Inc.

Brands Matter

Currently in Canada, developing recognizable brands is challenging. Health Canada advertising and labeling restrictions are onerous relative to most legalized states south of the border, and product limitations mean producers are stuck trying to brand more items (i.e. flower) that are considered more commoditized compared to other products.

But it's undeniable that in more developed markets, brands do matter. BDS Analytics, a data provider, states that the "top 10 brands in Colorado and Oregon command both higher prices on average and significantly more market share than competitors".

Exhibit 9. Brand Power, Based On 2018E Sales



Source: BDS Analytics and CIBC World Markets Inc.

Conversely, it's also true that the popularity of the top brands can turn on a whim. For example, while top-10 brands in Colorado capture nearly half the total market, four different brands made their way onto that top-10 list in 2018, demonstrating a much higher churn rate than we see in other established industries.

We highlight these facts to not only demonstrate the importance of brand development, but also the dynamism of this industry. There is an argument to be made that this presents significant risk to any company's M&A strategy when it comes to seeking out the best targets; but an equally compelling argument can be made that this underscores the need for incredibly strong balance sheets in order to succeed.

Canopy Growth Corporation: Marketing Machine

Exhibit 10. Company Highlights ($ figures in mlns., except per share amounts)

					Production capacity	
Price/shr	Market cap.*	EV*	Net cash	Share count	Square footage (licensed)	Annual production capacity (est. kg)
$54.90	$19,548	$15,195	$4,353	356.1	4,300,000	250,000

Valuation - EV/EBITDA		Valuation - EV/Sales		Other		
F2021E	F2022E	F2021E	F2022E	Insider ownership	Institutional ownership	Short interest
55.6x	33.0x	13.3x	9.5x	40%	21%	3%

** Fully diluted, ex-Constellation warrants*

Source: Company reports and CIBC World Markets Inc.

Company History

First Prize. Founded as Tweed Medical Marijuana Co., Canopy Growth was Canada's first publicly traded medical cannabis company, as well as the first geographically diversified licensed producer under current regulations.

Acquisitive Nature. Canopy's been among the most active in M&A within the cannabis space. Its deals have typically involved production capacity in one form or another, but this is frequently a product of current regulations, which stipulate that virtually any company involved in this industry must be a licensed producer. Deals for companies including Bedrocan and Mettrum helped the company scale materially and in relatively short order.

Game-changer. Canopy had arguably been the main ambassador for the industry since its formation, and this was reinforced in October 2017, when the company announced it had received a $250 million investment from beverage alcohol giant Constellation Brands. Nearly a year later, Constellation upped the ante, adding another $5 billion to its holdings, and now owns ~38% of the company.

Industry Flagship. Canopy has helped the Canadian cannabis industry establish significant credibility, and now seeks to expand its name internationally, with hopes of building a global behemoth.

Strategy

Much of the focus within the cannabis industry has been the domestic recreational market. However, for years Canopy has emphasized that it aims to be a **global medical cannabis business**. In fact, co-CEO Bruce Linton suggested during a recent earnings call that the Canadian recreational market consumes only about 25% of his time.

The company aims to dominate the cannabis value chain globally, including, wherever possible, **production, extraction, formulation, branding and retail on a global scale**, beyond the export agreements that are currently in place. Much as Canadian and provincial regulators wish to see investment and employment flow to local sources, we believe this will quickly become the case internationally as well, and this is where being the best-capitalized within the sector provides a significant advantage.

The company considers cannabis to be a "disruptive ingredient" that can have significant consequences for industries such as alcohol, tobacco, sleep aids, pain treatment and mood therapy. Alcohol may be the company's #1 target, not only as a result of the partnership with Constellation Brands, but simply based on the frequency with which management has discussed the concept of varying forms of zero-calorie, clear beverages that can compete with wine, sports recovery drinks, or even coffee.

Canopy's emphasis on addressing other markets should certainly not be ignored. A heightened focus on pre-rolled products (using proprietary rolling technology), significant investment in medical trials (both for animals and humans), as well as a partnership with elderly care homes, demonstrates that Canopy's goals know no bounds.

Key Advantages

Fortress Balance Sheet. When it comes to the question of "what sets Canopy apart?", the simplest answer may be the best one: having $4 billion in the bank instantly makes the company the best-capitalized in the space, with few limits on what it chooses to buy or build within its targeted assets: R&D, brands, IP and technology.

Marketing Prowess. Our own observations are supported by discussions with many industry participants, who concede that Canopy's greatest strength may be its marketing expertise. Product availability and ability to influence recommendations at store level will help to determine market share in the first iteration of adult-use. But beyond that, we believe it will take sustained investment in developing quality brands, and an early start on derivative products, to sustain market leadership, and we believe Canopy Growth is best-positioned to do that.

Greatest Risks

Execution. Purely because of its scale, Canopy's domestic operations are potentially the most complex in the industry today, and this can present challenges in cost management and product quality. A slow start out of the gate could result in lower-than-anticipated market share and reduced estimates for 2019 could put pressure on the stock. This is not something we anticipate, but we concede it's a possibility.

Inability To Use Funds Wisely. Canopy's balance sheet is unparalleled across the industry, but that doesn't guarantee that it will use those funds optimally. While execution is certainly a risk—Canopy's domestic operations are as complex as any manufacturer in the country—it's the $4 billion worth of capital that is most important in determining Canopy's future. It can be challenging to continually deploy capital in an accretive fashion, particularly at this scale.

Exposure To USA

Canopy has been crystal clear about its position as it relates to operating in the U.S.: "Canopy Growth will only conduct business activities related to growing or processing cannabis in jurisdictions where it is federally legal/permissible to do so".

That said, the late December passage of the Hemp Farming Act means that Canopy will participate in the American market now that there is a clear federally-permissible path to do so. We believe this will at first consist of offering CBD products in the states that do not separately disallow the use of those products. However, the ramp-up of these products could be slower than some industry participants would like, as America's Food and Drug Administration (FDA) appears to be taking a cautious view of CBD-infused products.

However, we believe that were the U.S. an entirely open market, similar to that of Canada, Canopy would be ready to actively participate in that market on a moment's notice.

Balance Sheet And Capital Allocation

Capital allocation is perhaps the most often cited priority by investors in this sector, and it's a fair point particularly for Canopy given the magnitude of its available capital. Mr. Linton stated following Constellation's investment that there was roughly $1 billion of M&A in the pipeline. The only thing we can say with some confidence is that WEED is not likely to purchase another Canadian LP, as the company has stated that it has more than sufficient local production capabilities.

We expect Canopy to invest largely outside of Canada. Europe and Latin America are prime candidates, in our view, given their substantial populations combined with an accelerating pace of regulatory change. In particular, it would not surprise us to see Canopy soon announce a deal for Mexican assets to allow the company to capitalize on what is very likely to be the next large adult-use market. Moreover, added exposure to the U.S. has already been achieved, via the ~$400 million acquisition of Ebbu (which provides hemp extraction technology and IP) and the stated intention to invest over $100 million into a hemp facility in New York.

In terms of asset type, we expect production facilities to be built internationally, as the company aims to replicate its existing operations in other countries that allow for domestic cultivation. In North America, we believe the likely areas of investment will include formulation and extraction technology, data analytics, as well as R&D in cosmetics and infused food and beverage.

In our opinion, Canopy has focused on strategic value when executing M&A deals. Some of the deals listed below involve substantial amounts, and with the benefit of hindsight, management may have changed one or two of them, but the M&A path that Canopy has chosen is a major reason it is the world's largest cannabis business today.

Acquisition History

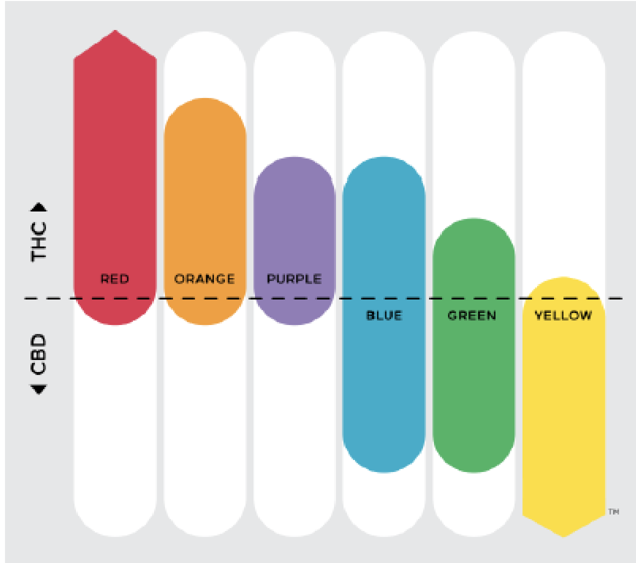
Canopy has been very busy when it comes to M&A, having executed over 20 different transactions. We highlight some of the most important below, as well as an example of the IP that Canopy has targeted; in this instance, the colour-coded categorization system, which guides patients towards their preferred products based on THC or CBD content.

Exhibit 11. Select Deals By Canopy Growth

Company	Country/Region	Price ($MM)	Announcement Date	Assets
Bedrocan Cannabis Corp.	Canada	$60	Jun-15	Licensed indoor growing expertise
Mettrum Health Corp	Canada	$430	Dec-16	Medical prestige, colour-coded classification system, production capacity
BC Tweed Joint Venture Inc.	Canada	$395	May-18	1/3 share not already owned; ~3 MM sq. ft. of production space
Spectrum Cannabis Colombia SAS	Colombia	$205	Jul-18	Access to licenses for production and export as a platform to serve the LatAm market
Hiku Brands	Canada	$293	Jul-18	Consumer brands and retail presence
ebbu, Inc.	USA	$406	Oct-18	Intellectual property and R&D advancements in extraction
Storz & Bickel	Europe	$220	Dec-18	Vaporizer technology and brands (Volcano, Mighty)

Source: Company reports and CIBC World Markets Inc.

Exhibit 12. Spectrum Colour-coded System

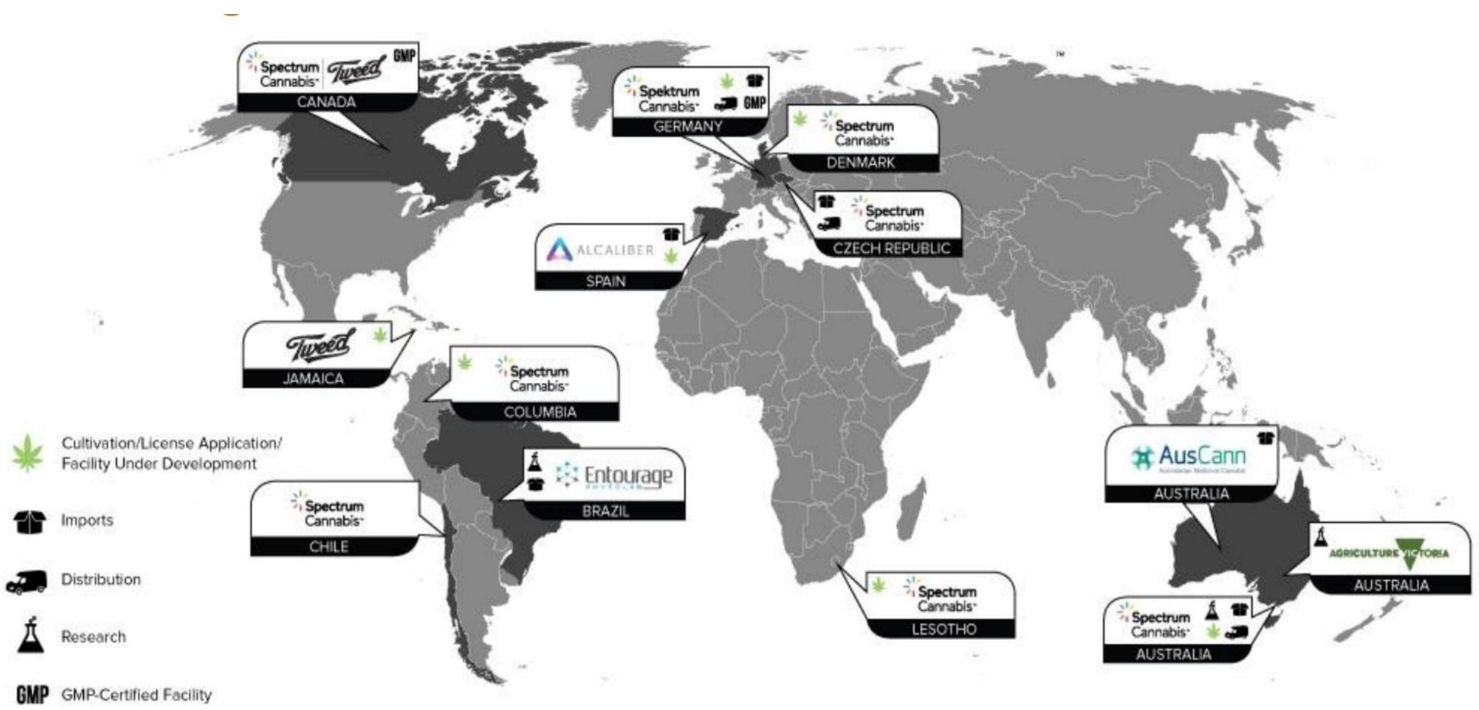


Source: Company reports and CIBC World Markets Inc.

International

Canopy is as international as any of the LPs, with operations in 11 different countries across five continents. Key countries are mostly the same across all the larger LPs, with Germany, Colombia, Brazil and Australia serving as some of the most popular targets. Canopy also has a presence in Chile, Denmark, Jamaica, Lesotho, Czech Republic and Spain.

Exhibit 13. Canopy's International Operations



Source: Company reports

We will not assess the operations in each of these countries individually, but the important takeaway for us is that Canopy will likely continue to export wherever possible to leverage its existing assets, and then seek to essentially copy and paste its Canadian production strategy in other countries once regulations allow for or demand it.

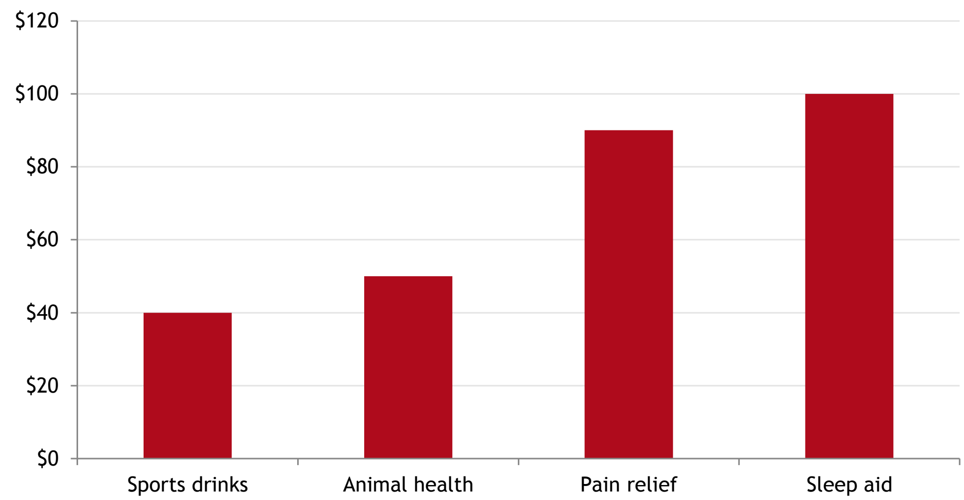
If we have learned anything from the early returns of Canada's recreational experiment, it is that inventory build can take longer than expected. So Canadian companies should have increasing export opportunities in the coming years as nascent international markets seek to supplement their own domestic supplies.

Health And Wellness

Most other LPs have some element of healthcare in their strategy, but we believe Canopy leads the way, and now has the capital to further its lead. Management has identified sleep aid, pain management and mood enhancement as three key targets for disruption. As well, Canopy has created an animal health division to focus on reducing anxiety in pets using CBD. Management believes these industries are ripe for disruption.

The company estimates these industries—sleep aid, over-the-counter pain treatment and pet health—are respectively worth $100 billion, $90 billion, and $45 billion globally. If Canopy can capture just 2% of these markets at a 20% EBITDA margin, that would imply nearly $1 billion in EBITDA.

Exhibit 14. International Market Sizes, $ billion



Source: Company reports and CIBC World Markets Inc.

The research function at Canopy is admirable: the company has 15 clinical health trials (either under way or planned) for humans and another four for animal health, as well as 39 provisional patents filed in the U.S. to address a wide range of afflictions including ALS, fibromyalgia, opioid addiction, and other initiatives. It is becoming clear that scientific discoveries have the ability to expand this industry to be multiple times greater than the status quo.

Beverage Potential

One of the most intriguing elements of Canopy's broad-based strategy is the potential for disruption in beverages.

In addition to the ~$1 trillion beverage alcohol industry, Canopy is also targeting the $40 billion market for sports recovery drinks. We suspect recovery drinks will be one of the first two industries (along with sleep aid products) in which Canopy can capture market share.

It will be no surprise to us to see beverage offerings, such a recovery drink, in retail shops, convenience stores, and on grocery shelves in the coming years.

It will be no surprise to us to see beverage offerings, such as those shown in Exhibit 15, in retail shops, convenience stores, and on grocery shelves in the coming years. The incumbent products in each of their respective categories—alcohol and recovery drinks—are rife with problems or inconveniences that those industries seemingly do not wish to address.

Alcohol, for example, carries with it severe adverse health consequences over the long term, as well as short-term drawbacks such as high caloric intake or inability to be productive following consumption. As for sports recovery drinks, these tend to be sugar-dominant, and in our view have little in the way of clinically-proven support.

Exhibit 15. Early Product Lineup?

Source: Company reports and CIBC World Markets Inc.

Early Returns On Canada

Some investors we have spoken to were surprised they did not see more Canopy products on government websites on October 17. It is our belief that holding back some inventory from Day 1 was somewhat of an intentional strategy, for the following reasons:

- Supplying product when all other LPs were flooding the market would not allow Canopy to stand out.
- Placing inventory on provincial websites (rather than in a retail setting, where the company may have trained the budtenders) affords Canopy no opportunity to describe its products and how they differ from others.
- Canopy has chosen to focus on depth rather than breadth. In other words, it would rather have no out-of-stocks on a more limited SKU count than offer far more products but run the risk of shortages.

All of these reasons are plausible, but we still concede that we were surprised that we did not see a greater share of Canopy products beginning on October 17. One of the reasons Canopy is touted as the industry leader is a significant lead over other LPs when it comes to accumulating inventory and just generally being ready for adult-use legalization. In fact, in the quarter leading up to adult-use legalization, Canopy's $150 million worth of inventory was nearly the equivalent of the next three largest LPs (Aurora, Organigram and CannTrust) combined.

Amid headlines of industry shortages nationwide, would it not be a considerable boost to the company to supply the country? With incessant finger-pointing from politicians, less than urgent action from Health Canada licensing staff, retailers upset about a lack of inventory, and several provincial wholesaling websites nearly bereft of products, in our view Canopy would be well served to announce to the country that it has more than enough to sell. It could have acted as a safety net for the system, and would have been an incredible opportunity to establish WEED as the industry leader.

A deeper dive suggests why Canopy may not have been quite as ready as supporters had believed. Its most recent balance sheet reveals that dry cannabis flower comprised just 10% of the total inventory figure, or about $15 million. We estimate that this is the equivalent of just 3,000 kg, or ~15% of what we expected in terms of first month sales (the company also had another $80 million of work-in-progress dry flower as at September 30, so the actual figure as at October 17 was likely higher). It's our view that the company chose to focus its efforts for the start of legalization on higher-margin items: the company had ~$40MM of oil and/or capsules as at its last balance sheet date.

At any rate, we do not believe that initial hiccups will carry forward into upcoming quarters. We have kept close tabs on provincial websites during the weeks following October's launch, and have noticed an increasing proportion of available SKUs belonging to Canopy's brands, including DNA, LBS and, of course, Tweed.

Distribution

The value of provincial supply deals (or memoranda of understanding, or letters of intent) fluctuates wildly across this industry. Those that have allocated significant supply to provincial wholesalers tout them as incredibly important, whereas other LPs believe that provinces are for the most part under no obligation to purchase anything, and that these announced numbers are merely guidelines.

Our opinion lies somewhere in between these two views. We do believe that consumers will ultimately choose their products irrespective of announced "deals" from provinces. However, insofar as these announcements reflect at the very least an early opportunity to appeal to customers countrywide, then we do believe they have some value. These announcements certainly hold more value than production capacity alone.

Canopy's production advantage exists not only in scale, but also geographic diversity. To date, provincial buyers appear to have rewarded businesses that invest locally, so it is to Canopy's advantage to have such a wide array of cultivation facilities.

Exhibit 16. Distribution Details

Deep Channels Into Recreational Market

8 Supply Agreements Signed To Date • 67,500+ kg/yr. • Other Negotiations Ongoing

36%

Share of Supply Agreements Signed To Date[1]

Province	Supply[2]
AB	30,000 kg/yr., 1 yr.
QC	12,000 kg/yr., 3 yrs.
NL	8,000 kg/yr. , 2 yrs.
MB	6,500 kg/yr. , 1 yr.
BC	5,700 kg/yr., 1 yr.
NB	4,000 kg/yr., 2 yrs.
PEI	1,000 kg/yr., 2 yrs.
YT	300 kg/yr., 3 yrs.

Distribution Drives Revenue, Capacity Alone Does Not

1 Estimated share of supply agreements announced to date by provinces and territories. Includes Canopy Growth estimate of total of supply agreements entered into by Alberta and British Columbia
2. Supply amounts are annualized

11

Source: Company reports.

Retail Exposure

Canopy's flagship brand, Tweed Main Street, is its main retail brick and mortar store. Canopy also purchased Hiku Brands in June, and we believe it will roll out Hiku's Tokyo Smoke stores across the country as well.

The Hiku deal—for which Canopy Growth paid over $200 million in an all-stock deal—was a calculated risk at the time for Canopy. However, given the current state of Ontario regulations, as well as the market capitalization for various retailers with plans similar to Tokyo Smoke (a key Hiku asset), we now view the deal price as a significant overpayment, albeit a relatively small one in the greater scheme of things.

As of this report's publication, Canopy has 28 stores scattered across Saskatchewan, Manitoba and Newfoundland, and we expect openings in Alberta once the temporary pause on retail licences is lifted.

But Ontario's recently announced rules on retail ownership complicate matters. While the laws are more nuanced, producers are allowed to operate a retail site on their production facilities, but otherwise, are not allowed to own more than a 9.9% stake in any retailer.

We believe there are ways around these rules, with the most relevant being a franchising model. This would satisfy the Ontario government's goal of ensuring small business owners can benefit from legalization while also allowing producers to build their brands. We expect Canopy will partner with another party to facilitate this goal, though the company (and the industry in general) won't see a meaningful Ontario brick and mortar presence until 2020.

Brands

Canopy's portfolio of brands is shown in the exhibit below. We expect that at first its Tweed, DNA and LBS brands will be most popular, though in the long run, it is our view that its medical brand, Spectrum, will become the most valuable due to its exposure to potentially impactful products intended to disrupt incumbent providers in adjacent markets.

Exhibit 17. Canopy's Brand Portfolio

Source: Company reports.

Production And Supply Chain

Canopy is among the industry leaders when it comes to production. The company doesn't disclose its capacity in terms of kilograms, but it recently reached 4.3 million square feet of licensed production space. Conservatively, we can assume Canopy is currently capable of producing well over 200,000 kg/year, likely escalating to over 300,000 kg by the end of 2019, more than enough to serve its interests. In addition, we expect Canopy to sign more contracts with other providers, to provide optionality on additional supply.

There will be a time, likely in 18-24 months, when production capacity will not be all that relevant a question. How many investors in Anheuser-Busch Inbev could cite the company's beer-producing capacity? Or Altria's maximum annual cigarette output? It is a relevant question for LPs at the moment only because demand exceeds supply, but we believe this scenario is temporary, and by 2020, we will cease to hear the dubious term known as "funded capacity".

Over time, we believe most producers will wish to subordinate the growing process to other parties, the same way it occurs in other industries. Coca-Cola, for example, has sold off most of its bottling plants, and instead acts as a steward for the brand. We expect this will be the operating model in cannabis as well.

As for supply chain, in a market with uncertainty on both demand and supply, Canopy prioritizes agility and flexibility rather than emphasizing only cost. This is why the company will not have the lowest-cost operations on a per gram basis, but we believe this is irrelevant.

Key Management

Bruce Linton, Founder & Co-CEO— Mr. Linton can probably lay claim to the title of "most famous cannabis CEO", and this does in fact matter. This level of familiarity brings M&A opportunities and the ability to liaise with regulators and other important industry stakeholders. Mr. Linton's background includes running various technology firms, including Martello Technologies, Computerland.ca, and webHancer Corp. He has been in the CEO role of Canopy since 2014, and we consider his vision, execution skills, and ability to act as an ambassador for the industry to have considerable value.

Mark Zekulin—Previously President of Canopy Growth, Mr Zekulin was promoted to co-CEO in early 2018. Mr. Zekulin has vast expertise in law, politics and strategy, and has been the driver of Canopy's medical and patient outreach strategy.

Tim Saunders—Having a capable CFO is even more critical in this fast-moving industry than most, partly because of the sheer volume of M&A (Canopy has done nearly $2 billion in deals since 2014), but also the challenge of presenting investors with useful information despite the accounting industry's insistence on fair value metrics that distort reported numbers.

We will not assess other individuals at Canopy Growth, but we would characterize their management team and executive bench—especially as it relates to marketing, branding, supply chain and medical expertise—as a significant strength.

Other Considerations

- It is worth emphasizing that after looking under the hood for nine months, Constellation Brands decided to increase its initial $245 million investment twenty-fold. STZ does not have a crystal ball, but if there's a greater vote of confidence in one company in this industry, we haven't seen it.

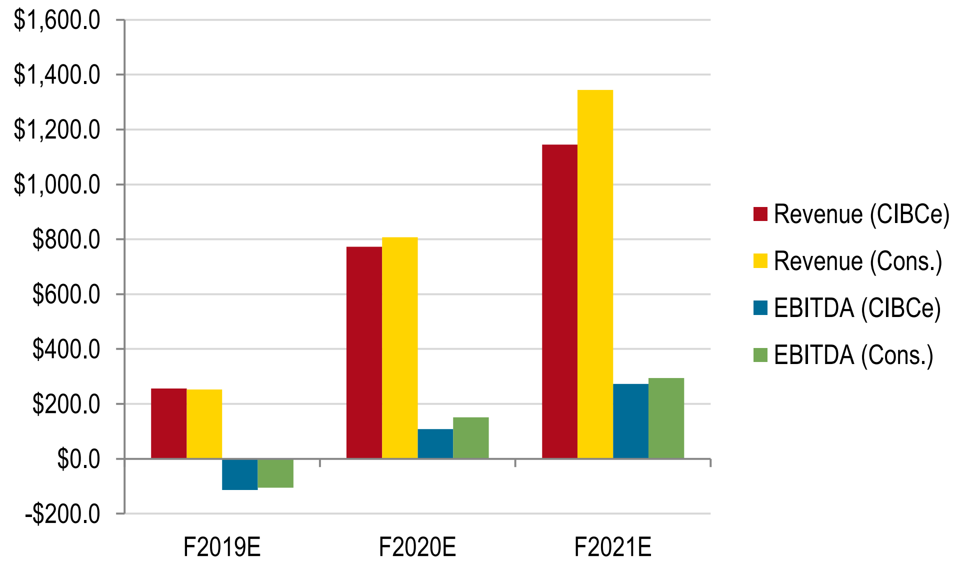
- We continue to believe that **Canopy Rivers presents an intriguing investment for Canopy Growth (WEED owns 27% of RIV), with significant upside**. Rivers offers access to talented entrepreneurs and new IP on attractive terms, while capitalizing on the deep industry expertise of the company's founders from XIB Financial.

- Some have suggested that the actual quality of Canopy's cannabis does not match the hype given to the company. We won't venture too far into this matter, as opinions are subjective and we have only seen a few months of legalization, but while we don't think quality is the only factor, we do believe it matters, and marketing prowess alone will likely not achieve Canopy's long-term goals.

Key Financial Metrics

The exhibit below illustrates our forecasts relative to median consensus estimates.

Exhibit 18. Consensus Vs. CIBC Estimates ($ mlns.)



Source: FactSet and CIBC World Markets Inc.

Conclusion

We believe that Canopy Growth represents the industry's best chance at a global titan. Constellation's second-round investment further affirmed these beliefs.

- **Summary**: incredibly well-capitalized and well-managed with a reasonable likelihood of obtaining a market-leading position domestically, with a good head start on operations internationally. Valuation and a weaker-than-expected start to the adult-use market can cause concern, but predicting this company's downfall has consistently been wrong to date.

- **Upside scenario**: Best-capitalized, most famous cannabis business in the world; top-tier management; production capacity well above almost all peers; potential breakthrough medical products; global aspirations; vote of confidence from Constellation Brands. Best potential for global titan, status, in our view.

- **Downside scenario**: Expensive stock; company has gained publicity among investing public by being most prominent, but significant execution risk exists, and no certainty M&A plays out as intended.

Legal Disclaimer Regarding U.S. Law

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Price Target Calculation

At peak valuation levels between late August and September, we considered Canopy (and to be fair, most other names in the space) overvalued, but believe that the current price reflects an attractive risk-return dynamic on the company we believe is most likely to be an industry giant a decade from now.

It is somewhat challenging to square the idea of valuation of this business with traditional metrics. Looking at next year's EBITDA, or even two years out, doesn't really tell the whole story. This is not dissimilar to other growth stories in other industries throughout the years.

We approach valuation in four different ways, as shown below.

Exhibit 19. Valuation Methods

Method	Valuation Approach	Price Scenario	Assumptions
Method 1	Traditional EV/EBITDA (F2022)	$69	45x multiple applied to F2022 EBITDA (+69% EBITDA growth from F2021)
Method 2	Displaced Markets	$78	WEED captures 2% of US CBD market, 5% of worldwide medical cannabis market and 0.5% of adjacent markets (animal health, pain relief, sleep aid)
Method 3	Increased Legalization	$81	20% of world population has legal access to cannabis by 2025, with 20% of addressable market using cannabis, with a $300 per person annual spend. Assume WEED captures 5% worldwide market share.
Method 4	DCF	$75	Revenue growth rate of 47% in year 1 declining to 15% in year 10; long-term cash flow growth rate of 6%; WACC 9.3%

Source: CIBC World Markets Inc.

First is to apply an EV/EBITDA multiple on our F2021 and F2022E estimates (with some hypothetical numbers for two additional years). Established alcohol and tobacco firms trade in the 11x-15x EV/EBITDA range. It's not unreasonable, in our view, to apply a multiple three times those levels for Canopy given the potential for significant growth. It's important to note that, when valuing Canopy that the company is by all accounts is in growth mode, and expects to incur spending (both opex and capex) commensurate with their growth expectations.

Exhibit 20. Method 1: Traditional EV/EBITDA ($ mlns. except per share and where noted otherwise)

	F2021E	F2022E	F2023E	F2024E
EBITDA	273.1	460.8	645.2	871.0
% growth		69%	40%	35%
EV/EBITDA multiple	50.0x	45.0x	40.0x	35.0x
	13,657	20,737	25,806	30,484
RIV stake	200	200	200	200
Other minority stakes	136	136	136	136
Net cash	3,325	3,502	3,787	4,207
Equity value	17,319	24,575	29,929	35,027
FD share count	356	356	356	356
$ per share	**$48.64**	**$69.02**	**$84.06**	**$98.37**

Source: CIBC World Markets Inc.

Our second approach is to assess the markets that Canopy may disrupt. Namely, we include the U.S. CBD market, which we estimate to be $20 billion based on various market estimates. We also examine the worldwide medical cannabis market. As it stands, the countries that currently allow medical use—but have fairly rudimentary systems in place—have a combined population of ~650 million people. A per-person medical spend of $60/year (based on Colorado's market, which we deem to be the most developed) would imply industry sales of nearly $40 billion. And adjacent markets, such as animal health, pain relief and sleep aid, should be factored in too. Assuming modest market share capture and a 25% EBITDA margin, it's not difficult to see Canopy generating over $1 billion in pro forma EBITDA.

Exhibit 21. Method 2: Displaced Markets ($ mlns. except per share and where noted otherwise)

CANADA	Canadian EBITDA, F2022	$460.8
US CBD	CBD market estimate, 2021	$20,000
	Market share estimate	2%
	Canopy pro forma US CBD sales	$400
	EBITDA margin	25%
	Est. EBITDA	$100.0
WORLD	Worldwide population in curently legal medical markets (mln)	650
	Annual spending per person, Colorado's medical market	$60
	Pro forma worldwide medical sales	$39,000.0
	Market share estimate	5.0%
	Worldwide Canopy medical sales	$1,950
	EBITDA margin	25%
	Est. EBITDA	$487.5
ADJACENT	Animal health, pain relief, sleep aid	$240,000
MARKETS	Market share	0.5%
	Pro forma sales	$1,200
	EBITDA margin	25%
	Est. EBITDA	$300.0
	Total pro forma EBITDA	$1,348.3
	EV/EBITDA multiple	20.0x
	Enterprise value	$26,966.5
	Plus: net cash, F2022	$3,451.6
	Less: cash deployed to build worldwide market share	-$3,000.0
	Plus: Canopy Rivers and other minority stakes	$336
	Equity value	$27,754.5
	Share count (excluding warrants)	356
	Equity value per share	**$77.95**

Source: CIBC World Markets Inc.

It's also worth noting that this analysis assumes no adult-use legalization of cannabis. This leads to our third method, which is to simplify the calculation (somewhat) by focusing purely on what adult-use consumption could mean for valuation.

Exhibit 22. Method 3: Increased Legalization ($ mlns. except per share and where noted otherwise)

World population (mln)	7,700
Est. legal use by 2025	20%
Potential population in legal countries	1,540
Est. users	20%
Population of users (mln)	308
$ spend per person, annual	$300
Total worldwide sales	$92,400
Market share	5%
Pro forma Canopy sales	$4,620
EBITDA margin	25%
Pro forma global EBITDA, ex-Canada	$1,155
F2025 Canadian EBITDA (F2022e + 15%/yr)	$701
Pro forma Canopy EBITDA, F2025	$1,856
EV/EBITDA multiple	20.0x
	$37,117.1
Discounted to F2022 (@10%)	$27,886.6
Plus: net cash, F2022E	$3,501.6
Less: cash deployed to build worldwide market share	-$3,000.0
Plus: RIV and other minority stakes	$336
Equity value	$28,724.6
share count	356
Equity value per share	**$80.67**

Source: CIBC World Markets Inc.

We also present a 10-year DCF as well. Note that our revenue and EBITDA figures beyond F2022 are not intended to match prior valuation attempts, as they utilize different approaches (this is the case for all our DCF analyses in this report).

Exhibit 23. Method 4: DCF

	1 **2021E**	2 **2022E**	3 **2023E**	4 **2024E**	5 **2025E**	6 **2026E**	7 **2027E**	8 **2028E**	9 **2029E**	10 **2030E**
Revenue	1,144.7	1,600.4	2,080.6	2,704.8	3,516.2	4,043.6	4,650.2	5,347.7	6,149.8	7,072.3
Revenue Growth	48.0%	39.8%	30.0%	30.0%	30.0%	15.0%	15.0%	15.0%	15.0%	15.0%
EBITDA	273.1	460.8	609.5	805.8	1,065.2	1,245.2	1,455.2	1,700.2	1,986.0	2,319.3
EBITDA margin %	23.86%	28.79%	29.29%	29.79%	30.29%	30.79%	31.29%	31.79%	32.29%	32.79%
D&A	79.2	84.1	88.3	92.7	97.3	102.2	107.3	112.7	118.3	124.2
EBIT	193.9	376.7	521.2	713.1	967.8	1,143.0	1,347.9	1,587.5	1,867.7	2,195.0
Interest Paid (Received)	(40.0)	(40.0)	(30.0)	(20.0)	(10.0)	0.0	10.0	20.0	30.0	40.0
Less: Cash Taxes	48.5	94.2	137.8	183.3	244.5	285.7	334.5	391.9	459.4	538.8
Less: Capex	220.0	220.0	231.0	242.6	254.7	267.4	280.8	294.8	309.6	325.0
Less: Change in WC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
After-tax Unlevered Free Cash Flow	**4.7**	**146.6**	**240.7**	**380.0**	**566.0**	**692.0**	**839.9**	**1,013.5**	**1,217.0**	**1,455.5**
% Change		3043.5%	64.1%	57.9%	49.0%	22.3%	21.4%	20.7%	20.1%	19.6%
PV of after-tax unlevered free cash flow	**4.3**	**122.8**	**184.5**	**266.6**	**363.4**	**406.6**	**451.7**	**498.8**	**548.1**	**599.9**
Cumulative PV of FCF	4.3	127.1	311.6	578.2	941.6	1,348.2	1,799.9	2,298.7	2,846.8	3,446.7

	10-year
PV of cash flows	$3,447
Terminal value	$19,466
Enterprise Value	$22,912
Less: Net debt (cash)	(3,881.0)
Equity Value	$26,793
Shares outstanding	356.1
Equity value per share	**$75.25**

ASSUMPTIONS	
Revenue growth rate (years 3-5)	30.0%
Revenue growth rate (years 6-10)	15.0%
Capex growth	5.0%
EBITDA margin growth rate	0.50%
D&A growth rate	5%
Annual reduction in interest income ($MM)	-10
Future tax rate	25.0%
Shares outstanding	356.1
Net debt (cash), F2019E	(3,881.0)
Long-term cash flow growth	**6.0%**

WACC	
Cost of equity	9.9%
Equity risk premium	4.0%
Risk-free rate	2.7%
Beta	1.80
Debt as a % of capital	10.0%
Cost of Debt	5.0%
Normalized Tax Rate	25.0%
WACC	**9.3%**

Source: CIBC World Markets Inc.

We concede that these valuation methodologies require an incredible amount of assumptions and estimates, and there's little way of saying with any certainty how reasonable these are. There's also a great deal outside of Canopy's control when it comes to regulatory matters.

With that in mind, we remind ourselves that valuation has typically not been the critical driver of stock movements for this company and also for this industry. Our view on this industry has been, and continues to be, that investors who are bullish on the future of the industry should target the best management teams who have to date demonstrated the best track records of performance, and should buy these stocks at times when industry valuations are not at or near all-time highs. We place Canopy Growth in this group.

We wish to communicate to any investor in this sector that estimates can change substantially and in short order. We are only just now getting a sense of so many factors: how large this industry is, what it can potentially grow to, the impact of derivative products, and the eventual disruption of other industries. Consensus estimates for Canopy Growth range from $178 million to $546 million for F2021, an absurdly large range for any other company.

Current valuation is not overly attractive, but owing to its pristine balance sheet, large-scale production, cross-Canada supply arrangements, and health & international strategy, and management that is among the best in the industry, we initiate coverage of Canopy Growth with an Outperformer rating. Our $65 price target, a function of the exercises above, implies 41x our F2022 (essentially calendar 2021) EBITDA estimate and 12x F2022E sales.

Key Risks To Price Target

- Valuations within the cannabis industry have proven incredibly volatile in their brief history, and this pattern of rapidly changing sentiment among investors could continue.
- Dilutive capital allocation, both for M&A or operational investments.
- Inability to capture a meaningful proportion of the Canadian adult-use market, due to either onerous regulations, failure of internal strategy, or some other element of execution.
- Unsuccessful attempts to develop a popular cannabis beverage product after allocating significant resources towards it.
- Increased competition from American (or other) cannabis producers.
- International restrictions on exportation, or regulatory constraints that hinder distribution of medical products that the company seeks to develop.
- Owing to the lack of operating history, significant execution risk exists across all companies in the cannabis space.
- The loss of key management, including either co-CEOs or the CFO.

Cronos Group: Beyond Cannabis

Exhibit 24. Key Characteristics ($ figures in mlns., except per share amounts)

					Production capacity	
Price / shr	Market cap.*	EV*	Net cash	Share count*	Square footage (licensed)	production capacity (est. kg)
$17.33	$6,250	$3,809	$2,441	360.6	355,500	40,150

Valuation - EV/Sales		Valuation - EV/EBITDA		Other		
C2020E	C2021E	C2020E	C2021E	Insider (incl. Altria)	Institutional ownership	Short interest
17.1x	11.7x	55.0x	37.2x	48%	19%	1%

** Fully diluted, ex Altria warrants*

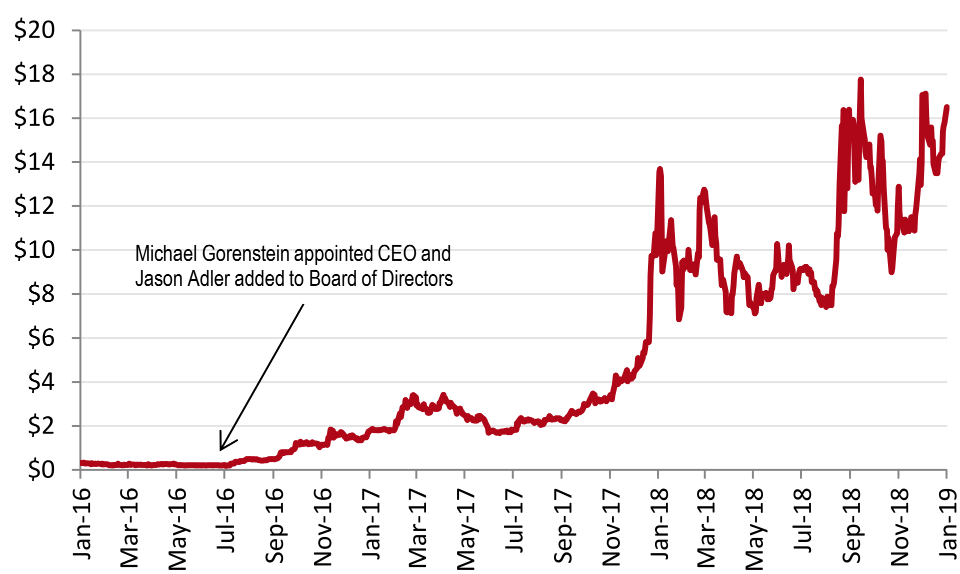
Source: Company reports and CIBC World Markets Inc.

Company History—From Also-ran to Industry Leader

Humble Beginnings And Early Missteps. Cronos Group was originally known as PharmaCan, one of the earliest licensed producers. It was founded in 2013 and, at that time, began investing in the company's first key asset, Peace Naturals, a cultivation facility near Barrie, Ontario. Some 52% of Peace was owned by PharmaCan; the remainder was owned by the Barnes Family Trust. In late 2015, PharmaCan was set to buy the portion of Peace that it did not own, but the deal never closed because of a legal dispute between the two parties.

The Right Stuff. In mid-2016, the company made a critical change, one that would propel PharmaCan (eventually Cronos) to become one of the most valuable cannabis companies in the world, adding Michael Gorenstein to its board of directors, then appointing him to the CEO role. Another critical decision was to add Jason Adler to the company's board. Both individuals come from (among other places) Alphabet Ventures LLC, an investment vehicle that operates in a wide range of domains, typically involving high-growth stories paired with creative investment structures. It was within months after making this decision that CRON stock began to appreciate significantly, as direction of the company became more clear, and the deal for Peace was consummated.

Exhibit 25. CRON Share Price (Formerly MJN)



Source: FactSet and CIBC World Markets Inc.

Making Moves. PharmaCan transitioned to Cronos group in October 2016, and at that time, the company had begun to acquire stakes in other companies, including a 20% interest in Whistler Medical Marijuana Corp. (which has agreed to be sold to Aurora Cannabis), as well as 100% of In The Zone Produce (now renamed OGBC Corp.). In short order, the company achieved a series of key milestones, including exporting product to Germany, breaking ground on its new domestic facility, selling small stakes in non-core assets, becoming the first producer to a listing on the NASDAQ, and establishing a presence internationally, including in Israel, Australia, and most recently, Colombia, through a series of joint ventures.

Game Changers. There are two key achievements lately that set Cronos apart from most of its competitors. The first was announced in early September to, frankly, not much fanfare. The company signed an agreement with **Ginkgo Bioworks** to produce rare cannabinoids at scale. It is this agreement that really accelerates the company's goal of being a cannabinoid company, rather than simply a cannabis company. We explore this deal in greater detail below on page 45.

Vote Of Confidence. The second key development of late will come as no surprise to any follower of the industry. Cronos received the backing of **Altria Group**, one of the world's largest tobacco makers. Altria will purchase a 45% stake in CRON for ~$2.5 billion, with warrants that could give MO majority control. The investment acts as a massive vote of confidence in Cronos and provides the company with sufficient resources to buy and build a global empire.

Strategy—Beyond Cannabis

Cronos is somewhat differentiated among the larger cannabis LPs, as it eschews the notion that the main path to success is ramping capacity at all cost. In fact, the unsophisticated term of "funded capacity" is one that the company avoids quite consciously.

This does not mean production is irrelevant. It remains an important element of CRON's strategy, but far more of the value of this business derives from intellectual property, extraction, genetics, support services and branding. Put another way, **Cronos' strategy is to stop thinking about this industry as cannabis, and rather think about it more as cannabinoids**. This manifests in the company mimicking best practices among other similar industries—alcohol, fragrances, consumer products—in which the most successful businesses prioritize functions such as research, IP and strategic support.

To that point, Cronos was one of the first, if not the first, companies to focus on the synthetic biology of the cannabis plant. We believe Cronos' strategy is to spend less time on the immediate present of cannabis, and rather look two to three years out.

We regard Cronos as less promotional than many other cannabis firms, which is a welcome relief in an industry that contains many visionaries and executives with remarkably impressive backgrounds, but also no shortage of charlatans and promoters.

Key Advantages

Sterling Balance Sheet. Altria's $2.5 billion investment in Cronos Group solidified our conviction in what we had previously believed to be one of the best management teams in the sector. The company now has the ability to materially accelerate its strategy to focus on R&D and intellectual property.

Differentiated Strategy. Most other Canadian LPs have placed production capacity atop their priority list; Cronos' approach to look at the future of cannabis is refreshing. We find compelling the company's argument that most other consumer goods or pharmaceutical businesses do not produce their own goods. The value-added segments of this industry will likely exist beyond farming and production, and we believe Cronos' emphasis on IP and distribution will be proven right.

Altria's $2.5 billion investment in Cronos Group solidified our conviction in what we had previously believed to be one of the best management teams in the sector.

Greatest Risks

Lack Of Scale. Cronos stands out from its peers in that its initial market share in the Canadian adult-use market will be far lower than several other LPs (with far lower valuations). If the pace of legal changes in international markets is delayed, or if the development of active pharmaceutical ingredients takes longer to come to fruition than expected, then investors could increasingly focus on domestic operations, which would likely hurt Cronos.

Capital Allocation. A significant misstep on a material acquisition would set Cronos back and could damage management credibility among investors. We deem this to be unlikely, but given the dilutive nature of much M&A, this must be considered as a potential adverse outcome.

Exposure To USA

Similar to Canopy Growth, Cronos has been abundantly clear that it will not engage in activities related to cultivation, distribution or possession of cannabis in the U.S. so long as it is classified as a controlled substance federally.

But this does not preclude the company from acquiring assets once it is federally legal to do so, or potentially addressing adjacent industries that do not come into contact with the cannabis plant. We believe the company is honing its strategy in other countries in order to prepare for entry into what is expected to be the world's most lucrative cannabis market.

Balance Sheet And Capital Allocation

Prior to the cash injection from Altria, CRON's net cash balance relative to its enterprise value was much lower than its peers. This speaks the company's focus on partnerships which limit its capital spending. The Cronos GrowCo, Ginkgo Bioworks and MedMen deals have all kept cash injections to a minimum, while still maintaining optionality on attractive scientific developments or accretive take-or-pay deals.

We support the company's strategy of eschewing traditional cannabis LP strategies as it relates to production, and believe that, following a 12- to 18-month supply shortage, there will be far more supply in this country than is necessary. Headlines on major media publications may make this prognostication look foolish. But we see a lack of credible arguments against the thesis that Canada's market will evolve in a manner similar to the most developed markets in the U.S., which include Colorado, Washington and Oregon.

In each of those states, there is far more cannabis supply than is necessary to meet the market's needs. In Colorado, data suggests that utilization rates hover around 40%. In Oregon, wholesale cannabis is priced at roughly C$1.65/g, a number that would cause shock and awe across most Canadian LPs, who are accustomed to receiving over three times that in today's markets for dried flower.

Health Canada has preventive measures available to avoid this outcome, most notably through limiting future cultivation or sales licenses, though we believe this is unlikely given mounting public pressure to hasten the licensure process. To be clear, we don't expect quite the price collapse seen in Oregon, which produced 10 times the required cannabis needed by consumers in 2018, but we also do not believe that production capacity is the holy grail of this industry.

Capital Allocation

The question of Cronos' plans for capital allocation just got a lot more interesting (a $2.5 billion cash infusion will do that).

Much like Canopy's commentary immediately following its investment from Constellation Brands, Cronos has been mostly reticent to release details of its plans for capital allocation. And rightly so, for fear of (in our view) driving up asset prices and having other LPs execute copycat strategies.

Cronos has been adamant that its plans for capital do not measurably change despite the new cash balance. We suspect there will be no added cultivation facilities, either domestic or international. Rather, we expect a measured approach in which the main focus is R&D as well as the creation of IP, viewed through the lens of different channels, including adult-use, pharmaceutical and nutraceutical.

Research assets and expertise are likely to be top of mind. We believe Cronos wishes to create a cannabinoid recipe that optimally interacts with the human endocannabinoid system. This can lead to the formulation of active pharmaceutical ingredients and can be combined with developments in device technology.

Acquisition History

Cronos' M&A track record is unusual compared to other LPs in that virtually all arrangements thus far have been structured as joint ventures. This somewhat complicates matters for investors, and creates reported financial results that do not always make obvious the advancements of those JVs. But these arrangements—by definition—also reduce capital outlays, align incentives and offer moderate downside protection. These JVs will require funds to accelerate operations, of course, but Cronos' pursuit of international exposure is structured differently than the typical path of most LPs.

Exhibit 26. Cronos' M&A History

Company	Country/Region	Price/Terms	Announcement Date	Assets
Cronos Israel	Israel	At least $15 million in committed capital	Sep-17	Strategic JV with Kibbutz Gan Shmuel for the production, manufacture and global distribution of medical cannabis. Cronos holds a 70% stake in nursery/cultivation operations, and a 90% stake in manufacturing and distribution operations.
Cronos Australia	Australia	A minimum of $10 million in committed capital	Feb-18	50/50 JV with NewSouthern Capital Pty Ltd. Serves as supply and distribution hub for Australia, New Zealand and Southeast Asia.
MedMen Canada	Canada	No financial terms released	Mar-18	50/50 partnership between the two companies. MedMen is the largest cannabis retail chain in California, which legalized adult-use cannabis in 2018. A major advantage of this JV involves data analytics. Partnering with a retail player of MedMen's scale allows Cronos to capture data on popular strains, product types, pricing/promotion strategy, all without bearing the full responsibility of building and scaling a full-fledged retail operation on its own. As for Ontario, we suspect the company is exploring creative structures to operate within the rules, but we believe Ontario's announcement threw a legitimate speed bump into the JV's plans on the retail front.
Cronos GrowCo	Canada	No financial terms released	Jul-18	50/50 JV with a group of investors led by Bert Mucci, which has begun to build an 850,000 sq. ft. greenhouse facility in Kingsville, ON to boost Cronos' production. In August 2018, GrowCo announced it had signed a five-year take-or-pay contract with Cura Select to provide a minimum of 20,000 kg per year.
NatuEra	Colombia	No financial terms released	Aug-18	50/50 JV with Agroidea SAS, a Colombian agricultural service-provider with expertise in cultivation, R&D and production management. To date, the JV has been issued a licence to cultivate non-psychoactive plants for the production of derivative products.
Gingko Bioworks	USA	Cronos to reimburse up to US$22 million in expenses and will issue up to ~15 million common shares.	Sep-18	Landmark deal within the industry that should allow Cronos to develop specific cannabinoids at a fraction of the current cost.
Technion	Israel	US$6 million in committed capital	Oct-18	Access to R&D for cannabinoid-based skin-care treatments.

Source: Company reports and CIBC World Markets Inc.

International

Cronos has a moderately developed international presence, which currently reaches to six countries across five continents. The company currently has some sort of footprint (in addition to Canada) in Israel, Australia, Germany, Poland and Colombia.

Exhibit 27. Cronos' Global Footprint

Source: Company reports.

Similar to our analysis on Canopy, we will not assess the operations in each of these countries individually, but the important takeaway is that the company is targeting international exposure and is choosing to use a regional hub model in which certain targeted countries will serve as launching boards for others. Initially targeted countries typically have some appealing feature, whether it's access to high-quality R&D (Israel), low-cost cultivation (Colombia), or proximity to highly populated areas (Australia). In Europe, the company seeks to take advantage of a market with supply shortages via exclusive five-year supply agreements in Germany (with Pohl-Boskamp, an international pharmaceutical manufacturer/supplier) and Poland (with Delfarma, an international pharmaceutical wholesaler).

We expect the significant increase in capitalization will expedite the company's plans to establish a growing international presence.

Health And Wellness

Similar to most of its other arrangements, Cronos has to date addressed the health and wellness side of the business through partnerships. One such partner in this field is Technion Research & Development Foundation (of the Technion-Israel Institute of Technology). The goal of the venture is to develop solutions for three specific skin-care ailments: psoriasis, acne and skin repair.

The other partnership that Cronos has entered is with Aleafia Health Inc., with the goal of managing and treating insomnia and daytime sleepiness.

Early Returns On Canada

It is challenging to evaluate with any certainty the sales velocity of Cronos' products since October 17. But our view is that while Cronos seeks to establish a presence in the recreational retail market, its inventory leading up to legalization was below that of most other LPs with similar market values, so we do not necessarily anticipate immediately substantial product sales.

It is apparent that Cronos' strategy is to focus more on product depth rather than breadth. A search of the company's products across various sites reveals ubiquity of its effect-based marketing strategy: its Rest, Reflect and Rise products are visible across multiple sites, in dry flower and pre-roll, as well as oil (to a lesser extent).

We think there is merit to management's overall strategy that immediate recreational sales are important, but they by no means are the only determinant in long-run success, particularly given the eventual goal of focusing more on cannabinoids than just traditional products on the market today.

Distribution

Cronos' products are for the moment available in Ontario, BC, Nova Scotia and PEI. This gives the company exposure to ~55% of retail consumers and we believe its decision to prioritize these areas of the country is a product of pricing and population.

Unlike other LPs, Cronos did not list the size of its arrangements with provinces, and the company's view is that the investor community is misconstruing these announcements from other LPs, and that there is no certainty behind them. To be fair, for the next six months, it seems as though provincial wholesalers will buy product from anyone who will sell it, so these "supply deals" have little meaning in the short term. Whether or not they have significance in the long run is questionable, in our view.

Beyond provincial supply, Cronos is one of the few LPs to have arranged a supply deal with another distributor. In August, the company announced its 50-50 JV Cronos GrowCo had entered into a supply agreement with Cura Select Canada to provide a minimum of 20,000 kg per year for five years. What differentiates this type of deal from those announced via provinces is that this arrangement is take-or-pay. It's not unreasonable, in our view, to assume revenue and EBITDA of $2/g and $1/g, respectively, which translates to $40 million and $20 million for GrowCo, solely from this contract.

Retail Exposure

Cronos' exposure to retail is based on its 50-50 JV with MedMen Canada. MedMen is considered a leading cannabis retailer in the U.S., with operations in 12 states, including California, Nevada, Florida, New York and others.

MedMen's strategy focuses on operating flagship-style storefronts in high-traffic locations in highly populated cities. The company has not yet publicly commented on where it seeks to operate north of the border, but we believe that downtown Toronto, Vancouver and Montreal, as well as tourist destinations like Niagara Falls, will be key targets for the company. A key goal for MedMen (as well as Cronos) is the vision for mainstreaming cannabis.

In our visits to MedMen locations, we have been impressed at the branding and store experience, but perhaps the most impactful element of the company's strategy has been real estate-sourcing. It has opened stores in famous areas, including 5th Avenue in New York, as well as Abbot Kinney Boulevard in Los Angeles. It has disclosed that its sales per square foot exceed US$6,500 and that its targeted store economics include $20 million in revenue and a 20% EBITDA margin.

Exhibit 28. Cronos Retail (via MedMen)

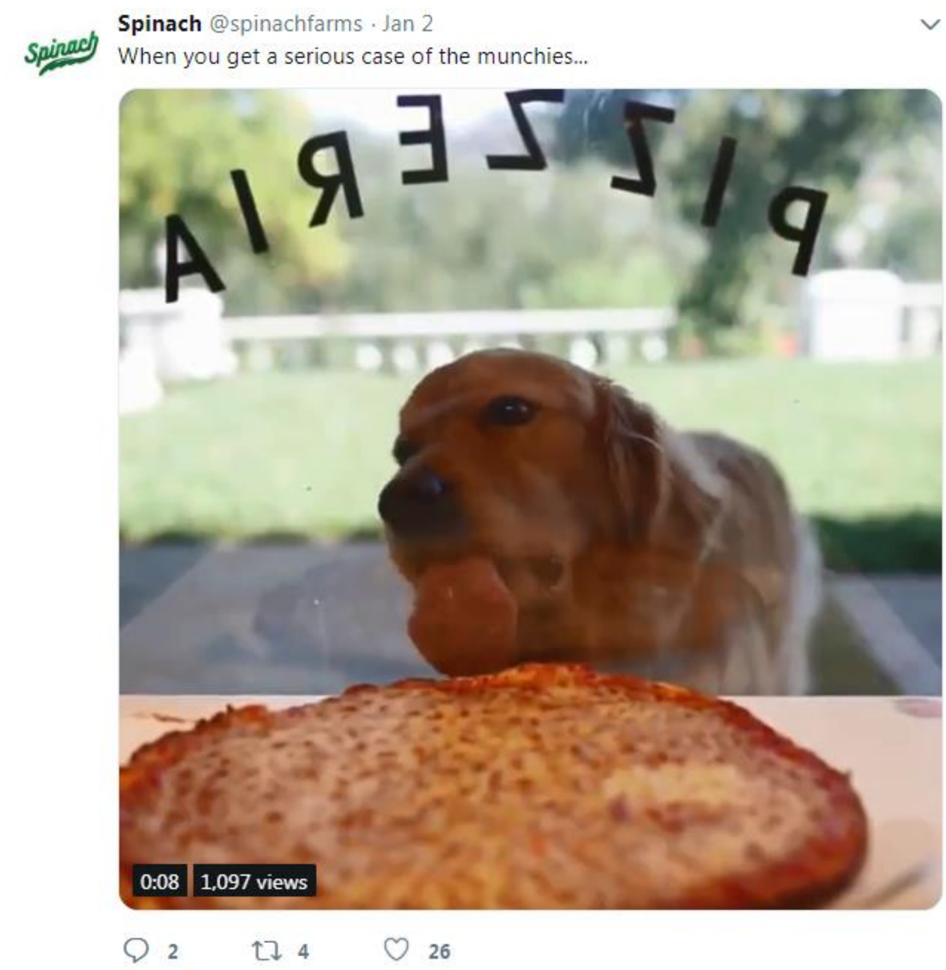
Source: CIBC World Markets Inc.

Brands

Cronos' go-to-market strategy includes different brands that each cater to different consumers. The company targets medical patients through its Peace Naturals brand, and emphasizes quality with hand-trimmed, non-irradiated flower and terpene-rich oils.

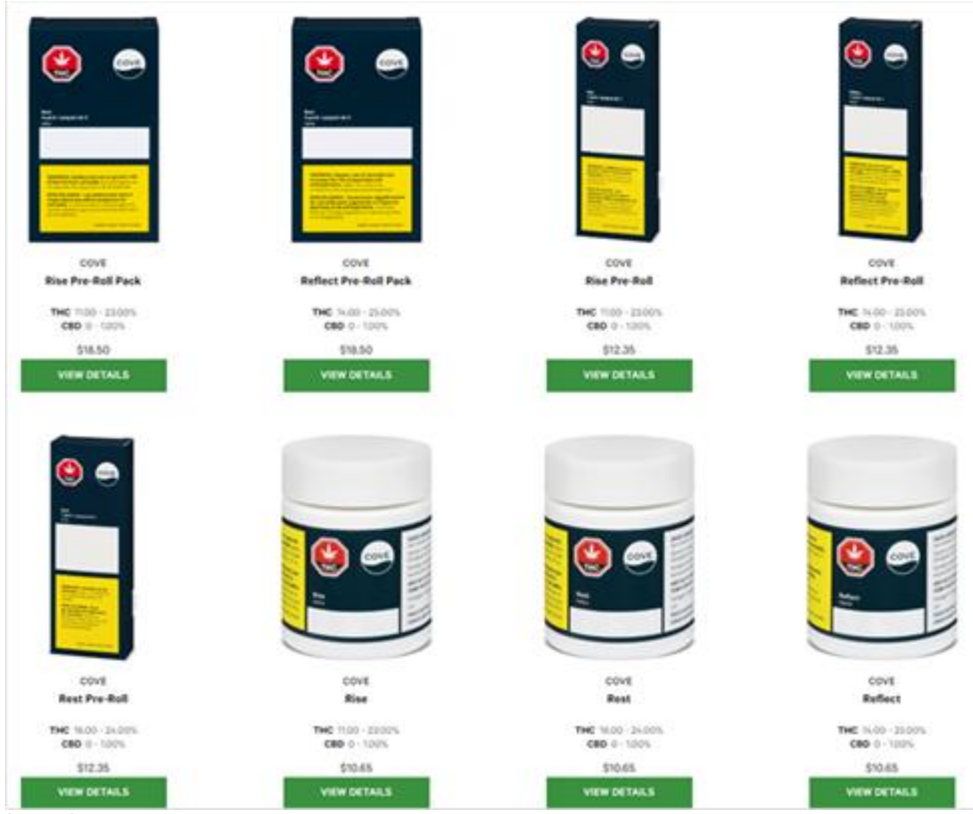
On the recreational side, Cronos has a two-pronged strategy. Its premium offering is Cove, which targets discerning consumers willing to pay extra for a higher-quality experience. It also offers a more mainstream recreational brand, Spinach, which allows for creative marketing, including clever taglines including GET YOUR GREENS and Farm-To-Bowl. Finally, the company is also planning to launch its OGBC brand in BC, which aims to leverage the excellent growing reputation of Okanagan Valley combined with small-batch, hand-crafted operations. The value of these types of assets was recently witnessed with the recent announcement of Aurora Cannabis, which agreed to purchase Whistler Medical Marijuana for ~$175 million (Cronos owns ~20% of Whistler).

Exhibit 29. Recent Spinach Branding On Twitter



Source: Company reports.

Exhibit 30. Available Cove Products



Source: Company reports.

Production And Supply Chain

We support the CEO's view on this matter that vertical integration in cannabis has largely been a function of regulatory requirements than anything else to this point. To be able to realistically do any form of research or development of IP, it is only possible with the use of a cultivation licence.

As stated, unlike many of the other LPs, Cronos' strategy is far less reliant on production assets. The company points to many examples—in tobacco, beverages, and other consumer products—in which the creation of the end product is not performed at the company level. Rather, the focus for Cronos is supplying top-quality genetics as well as technical services and support to farmers and growers. Management believes this strategy is much easier than scaling potentially tens of thousands of agricultural employees worldwide.

We support this view and believe that other cannabis producers over time will shed their production assets, or will look to take minority stakes in future arrangements, as the market transitions from a dearth of supply to a state of overcapacity, which we estimate will occur in early to mid-2020.

In the meantime, we characterize the company's production capacity as more than sufficient, with ~40,000 kg on an annual basis. By the second half of 2019, this will likely expand significantly due to the ramp-up of Cronos GrowCo, which will act as a contract manufacturer.

Exhibit 31. Production Footprint

Facility	Location	Grow Type	Square Footage	Estimated Annual Capacity (kg)
Existing Capacity[1]				
Peace Naturals - Buildings 1,2,3, 4[2]	Stayner, ON, Canada	Indoor	325,000	38,500
Peace Naturals - Greenhouse	Stayner, ON, Canada	Greenhouse	28,000	1,500
OGBC	Armstrong, BC, Canada	Indoor	2,500	150
Existing Capacity			**355,500**	**40,150**
Capacity In Progress				
Cronos Israel - Phase I[3]	Hadera, Israel	Greenhouse	45,000	5,000
Cronos Australia - Phase I[4]	Melbourne, VIC, Australia	Indoor	20,000	2,000
Cronos GrowCo[5]	Kingsville, ON, Canada	Greenhouse	850,000	70,000
NatuEra[6]	Cundinamarca, Colombia	Greenhouse	*	*
Capacity In Progress			**915,000**	**77,000**
Pro Forma			**1,270,500**	**117,150**

acilities where construction is substantially complete, regulatory approvals required to commence operations have been received and cannabis cultivation has commenced.
ne operational in phases. Currently, Building 4 engages in the cultivation of cannabis, with Peace Naturals having received an amendment to its license to cultivate cannabis in Building 4 on August 31, 2018. It is so engage in processing, extraction, finishing and packaging and shipping activities following receipt of the applicable regulatory approvals or amendments to the Peace Naturals license. While construction of -grade and industrial-grade kitchen and certain additional cultivation and processing areas are in the process of being equipped and made operational in phases. The research and development areas and certain re in final design phases.
est in the cultivation company, and a 90% interest in each of the manufacturing, distribution and pharmacies companies of Cronos Israel (as defined herein).
ty interest in Cronos Australia
ty interest in Cronos GrowCo
ty interest in NatuEra . NatuEra is in the design phase and initial planned capacity is still being finalized.

1

Source: Company reports.

Key Management

Michael Gorenstein, President, CEO & Chairman—Mr. Gorenstein's background covers a wide swathe of experience. He was most recently a former partner at Alphabet Ventures LLC, a New York-based multi-strategy investment management firm, and prior to that gained experiences as a corporate attorney specializing in M&A and capital markets transactions. Interestingly, Mr. Gorenstein to this day is a member of Gotham Green Partners, a private equity firm focused on early-stage investing in cannabis businesses. Most recently, this has included providing seed capital to publicly listed firms including Cannex Capital, Lift & Co., and iAnthus Capital. His background in corporate law (Sullivan & Cromwell) also provides the company with a reputational advantage versus some other competitors in the industry whose corporate governance practices have come under scrutiny from regulators.

We consider Mr. Gorenstein to be one of the most insightful, forward-thinking CEOs we have encountered in all our meetings with cannabis executives to date, and believe his presence at Cronos provides significant value. We also believe his role as head of the company is a major reason a global tobacco giant chose Cronos above other LPs.

William "Billy" Hilson, CFO—Mr. Hilson is a Certified Public Accountant who has significant experience in the pharmaceutical world, which should prove critical for Cronos' growth. Mr. Hilson was the CFO of both Merck KGaA and Serono S.A., having gained exposure to operations, strategy, sales, marketing, international tax and various forms of financing. Mr. Hilson's education also lends well to this industry: he has attained degrees in both science and genetics.

David Hsu, COO—Leading Cronos' operations is Mr. Hsu, whose career has included time with financial services firm Deloitte/CRG partners, specializing in turnaround consulting. His expertise includes financial and operational restructuring, growth creation, and lean manufacturing.

Much of the remainder of the executive team, which we certainly consider to be among the industry leaders, appears to have been sourced from Mr. Gorenstein's past stops, including Sullivan & Cromwell LLP and the Wharton School of Business.

The Ginkgo Deal

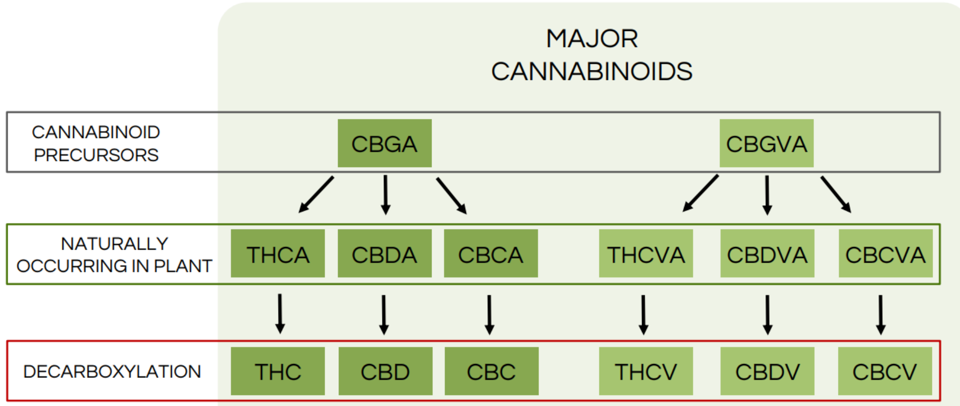
Cronos' deal with Ginkgo bears some discussion, as we believe this is an arrangement (and an industry topic) that the market has not paid enough attention to. The two companies seek to **use biosynthesis to create targeted cannabinoids—beyond just THC and CBD—at a fraction of their current cost**. This likely will not impact the adult-use flower market, but it has vast potential implications for the medical and nutraceutical markets.

Taking a step back, we are by no means experts in the field of biotechnology. But it is simple enough to understand the concept here: creating an alternative path to production at far lower costs and much higher purity has the potential to overwhelmingly disrupt the cannabis industry.

In the past, the CEO has raised the example of what Ginkgo has done in the fragrance world with Robertet, a company that white-labels perfume for brands like Chanel. Rather than having to cultivate roses, the company is able to use DNA sequencing with organisms and enzymes in order to synthesize the terpenes to make rose oil at a fraction of the cost and with higher purity.

Beyond the process, Ginkgo appears to be an excellent choice as partner. The company, which is consistently listed among CNBC's Top 50 Disruptors list, has raised a stunning US$430 million in financing and is reportedly worth up to $2 billion. It counts Bill Gates among its early investors and its major clients include Bayer and America's Department of Defense.

Exhibit 32. Cannabinoid Map



Source: Company reports.

The technology to do all this does not yet exist. But it has the potential to profoundly alter the way cannabinoids are produced, and if this technology does come to fruition, we'll likely learn that the cannabis market—current supply constraints and all—is massively overbuilt.

Other Considerations

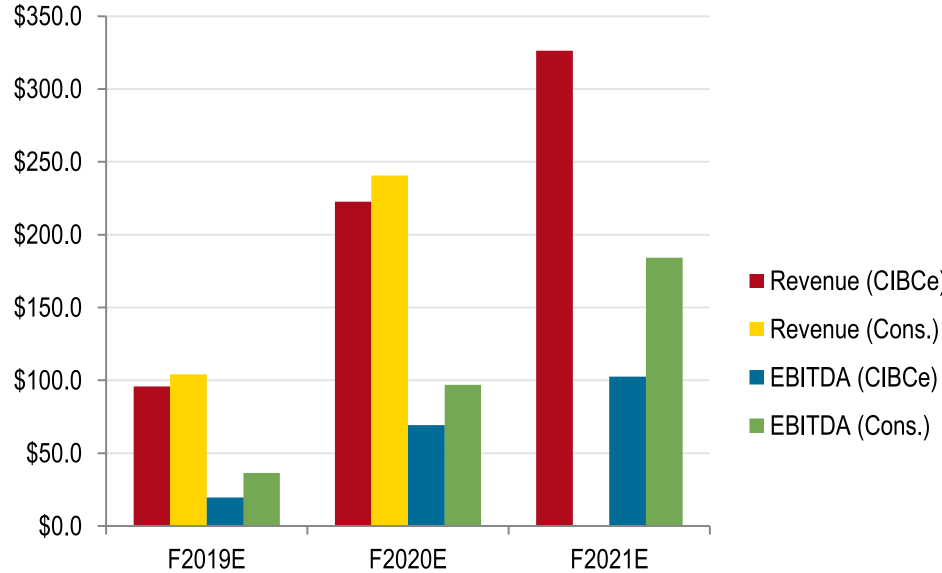
- The advantage of the investment from Altria isn't as simple as cashing a cheque for $2.5 billion. **Receiving the backing of an incredibly successful tobacco firm carries weight**. It is a significant vote of confidence to be chosen by such a partner among so many other LPs, particularly ones with much lower current valuations.

- We consider the **presence of Jason Adler on the company's board of directors to be an important intangible asset**. Adler was a key player in helping to build Cronos, and while he is not involved in day to day operations, we believe his advisory will serve as a key asset to Cronos in the coming years, especially as it relates to his knowledge of the U.S. market.

Key Financial Metrics

The exhibit below illustrates our forecasts relative to median consensus estimates.

Exhibit 33. Consensus Vs. CIBC Estimates (F2021E Consensus Unavailable) ($ figures in millions)



Source: FactSet and CIBC World Markets Inc.

Conclusion

We believe that Cronos' days of flying under the radar are mostly over. The capital injection from Altria has served to notify the industry that this company—which has taken a very different approach than most—is a force to be reckoned with.

- **Summary**: Exceptionally well-funded with best-in-class management. Approach to expansion—use of JVs and eschewing production—are unorthodox for this industry, but may prove to be the optimal path. Valuation and lack of an immediately dominant adult-use presence are notable risks, but the track record and resumés of this management team are second to none.
- **Upside scenario**: Worldwide cannabis titan that discovers and develops industry standard for medical and nutraceutical products. Excellent ability to navigate regulations; prudent capital management combined with pristine balance sheet; development of industry-leading practices; disciplined capital allocation; backing of major tobacco firm. Potential to become industry's flagship.
- **Downside scenario**: Expensive stock versus other players; competitors beat Cronos to biosynthesis solutions; poor capital allocation, especially in the U.S., leading to value destruction and a lack of confidence among investors, causing valuation to normalize to level of most other LPs.

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Price Target Calculation

Similar to our approach for Canopy Growth, we use different measures in an attempt to evaluate the future prospects of Cronos. Running a similar exercise yields the results below.

Exhibit 34. Valuation Methods

Method	Valuation Approach	Price Scenario	Assumptions
Method 1	Traditional EV/EBITDA (F2021)	$21	45x multiple applied to F2021E EBITDA
Method 2	Displaced Markets	$34	CRON captures 1% of US CBD market, 2.5% of worldwide medical cannabis market and 0.25% of adjacent markets (animal health, pain relief, sleep aid)
Method 3	Increased Legalization	$32	20% of world population has legal access to cannabis by 2025, with 20% of addressable market using cannabis, with a $300 per person annual spend. Assume CRON captures 2.5% worldwide market share.
Method 4	DCF	$20	Revenue growth rate of 47% in year 1 declining to +15% in year 10; long-term cash flow growth rate of 6%; WACC 9.9%

Source: CIBC World Markets Inc.

Exhibit 35. Method 1: Traditional EV/EBITDA ($ mlns. except per share and where noted otherwise)

	F2020E	F2021E	F2022E	F2023E
EBITDA	69.3	102.5	133.2	173.2
% growth			30%	30%
EV/EBITDA multiple	50.0x	45.0x	40.0x	35.0x
	3,464	4,611	5,329	6,061
Incoming Whistler proceeds	33	33	33	33
GrowCo stake	150	150	150	150
MMEN stake	99	135	148	156
Australia, NatuEra stakes	50	50	50	50
Net cash	2,458	2,531	2,623	2,741
Equity value	6,255	7,510	8,333	9,191
FD share count	360.6	360.6	360.6	360.6
$ per share	**$17.35**	**$20.83**	**$23.11**	**$25.49**

Source: CIBC World Markets Inc.

Exhibit 36. Method 2: Displaced Markets ($ mlns. except per share and where noted otherwise)

CANADA	Canadian EBITDA, F2021	$102.5
US CBD	CBD market estimate, 2021	$20,000
	Market share estimate	1.0%
	Canopy pro forma US CBD sales	$200
	EBITDA margin	25%
	Est. EBITDA	$50.0
WORLD	Worldwide population in curently legal medical markets (mln)	650
	Annual spending per person, Colorado's medical market	$60
		$39,000.0
	Market share estimate	2.5%
	Worldwide Cronos medical sales	$975
	EBITDA margin	25%
	Est. EBITDA	$243.8
ADJACENT MARKETS	Animal health, pain relief, sleep aid	$240,000
	Market share	0.25%
	Pro forma sales	$600
	EBITDA margin	25%
	Est. EBITDA	$150.0
	Total pro forma EBITDA	$546.2
	EV/EBITDA multiple	20.0x
	Enterprise value	$10,924.5
	Plus: net cash, F2021	$2,535.3
	Less: cash deployed to build worldwide market share	-$1,500.0
	Plus: JV stakes	$332.7
	Equity value	$12,292.5
	Share count (excluding warrants)	360.6
	Equity value per share	**$34.09**

Source: CIBC World Markets Inc.

Exhibit 37. Method 3: Increased Legalization ($ mlns. except per share and where noted otherwise)

World population (mln)	7,700
Est. legal use by 2025	20%
Potential population in legal countries	1,540
Est. users	20%
Population of users	308
$ spend per person, annual	$300
Total worldwide sales	$92,400
Market share	2.5%
Pro forma Cronos sales	$2,310
EBITDA margin	25%
Pro forma global EBITDA, ex-Canada	$578
F2025 Canadian EBITDA (F2021e + 15%/yr)	$179
Pro forma Cronos EBITDA, F2025	$757
EV/EBITDA multiple	20.0x
	$15,134.6
Discounted to F2021 (@10%)	$10,337.1
Plus: net cash	$2,458.3
Less: cash deployed to build worldwide market share	-$1,500.0
Plus: JV stakes	$332.7
Equity value	$11,628.1
share count	360.6
Equity value per share	**$32.24**

Source: CIBC World Markets Inc.

Exhibit 38. Method 4: 10-year DCF ($ mlns. except per share and where noted otherwise)

	1 2021E	2 2022E	3 2023E	4 2024E	5 2025E	6 2026E	7 2027E	8 2028E	9 2029E	10 2030E
Revenue	326.3	407.9	509.8	637.3	796.6	916.1	1,053.5	1,211.6	1,393.3	1,602.3
Revenue Growth	46.6%	25.0%	25.0%	25.0%	25.0%	15.0%	15.0%	15.0%	15.0%	15.0%
EBITDA	102.5	130.1	165.2	209.7	266.1	310.6	362.5	422.9	493.3	575.3
EBITDA margin %	31.41%	31.91%	32.41%	32.91%	33.41%	33.91%	34.41%	34.91%	35.41%	35.91%
D&A	5.8	6.1	6.4	6.7	7.0	7.4	7.8	8.2	8.6	9.0
EBIT	96.7	124.1	158.8	203.0	259.1	303.2	354.7	414.7	484.7	566.3
Interest Paid (Received)	(49.0)	(39.0)	(29.0)	(19.0)	(9.0)	1.0	11.0	21.0	31.0	41.0
Less: Cash Taxes	34.4	40.8	47.0	55.5	67.0	75.6	85.9	98.4	113.4	131.3
Less: Capex	40.0	44.0	48.4	53.2	58.6	64.4	70.9	77.9	85.7	94.3
Less: Change in WC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
After-tax Unlevered Free Cash Flow	**28.1**	**45.4**	**69.9**	**101.0**	**140.5**	**170.6**	**205.7**	**246.5**	**294.1**	**349.7**
% Change		61.7%	54.0%	44.5%	39.2%	21.4%	20.5%	19.9%	19.3%	18.9%
PV of after-tax unlevered free cash flow	**25.5**	**37.6**	**52.7**	**69.3**	**87.8**	**97.0**	**106.4**	**116.1**	**126.1**	**136.4**
Cumulative PV of FCF	25.5	63.1	115.8	185.1	272.9	369.9	476.3	592.4	718.4	854.9

	10-year
PV of cash flows	$855
Terminal value	$3,736
Enterprise Value	$4,591
Less: Net debt (cash)	(2,458.3)
Equity Value	$7,049
Shares outstanding	360.6
Equity value per share	**$19.55**

ASSUMPTIONS	
Revenue growth rate	25.0%
Revenue growth rate (years 6-10)	15.0%
Capex growth	10.0%
EBITDA margin growth rate	0.50%
D&A growth rate	5%
Annual reduction in interest expense ($MM)	-10
Future tax rate	25.0%
Shares outstanding	360.6
Net debt (cash), F2020E	(2,458.3)
Long-term cash flow growth	**6.0%**

WACC	
Cost of equity	9.9%
Equity risk premium	4.0%
Risk-free rate	2.7%
Beta	1.80
Debt as a % of capital	0.0%
Cost of Debt	5.0%
Normalized Tax Rate	25.0%
WACC	**9.9%**

Source: CIBC World Markets Inc.

Much as Canopy Growth's deal with Constellation served as an act of validation for that company, Cronos' arrangement with Altria is a massive endorsement of this company.

We believe the majority of the market does not view Cronos through the right lens. Many see competitors with larger production capacity trading at far lower EV/EBITDA multiples, and conclude that those stocks offer better risk/return profiles. Our investment recommendations go beyond purely what is the cheapest Canadian LP based on F2021E EV/EBITDA. **We seek to identify the companies with the greatest chance of surviving and building lasting dynasties. In this regard, we view Cronos as one of the front-runners**. Similar to Canopy, valuation has traditionally not been a critical mover of the stock and we suspect Cronos' future will be similar.

Effective January 17, we initiate coverage of Cronos Group with an Outperformer rating. Our price target of $22 is based on the exercises above and implies ~54x our F2021 EBITDA forecast and 17x F2021E revenue.

Key Risks To Price Target

- Valuations within the cannabis industry have proven incredibly volatile in its brief history, and this pattern of rapidly changing sentiment among investors could continue.
- Inability to capture a meaningful proportion of the Canadian adult-use market, due to either onerous regulations, failure of internal strategy (lack of national distribution), or other reasons.
- Inability to deploy capital in an accretive fashion.

- Lower initial Canadian adult-use market share leading investors to value the company at significantly lower levels.
- Increased competition from American (or other) cannabis producers.
- International restrictions on exportation, or regulatory constraints that hinder distribution of medical products that the company seeks to develop.
- Owing to the lack of operating history, significant execution risk exists across all companies in the cannabis space.
- The loss of key management, including the CEO, CFO, COO, or key board members.

Aphria Inc.: Never A Dull Moment

Exhibit 39. Company Highlights ($ figures in mlns., except per share amounts)

					Production capacity	
Price/shr	Market cap.*	EV*	Net cash	Share count*	Square footage (licensed, est.)	production capacity (est. kg)
$8.90	$2,230	$2,100	$130	251	344,000	35,000

Valuation - EV/Sales		Valuation - EV/EBITDA		Other		
F2020E	F2021E	F2020E	F2021E	Insider ownership	Institutional ownership	Short interest
5.1x	3.4x	20.9x	10.3x	8%	19%	14%

Fully diluted

Source: Company reports and CIBC World Markets Inc.

Company History

Early Mover. Aphria was founded in 2014 by Cole Cacciavillani and John Cervini, two entrepreneurs with significant experience and expertise in developing commercial-grade farming operations. The Leamington-based company enlisted the help of Vic Neufeld, formerly the head of Jamieson Wellness, to become its CEO.

One of the earlier Canadian LPs, Aphria has had a meaningful head start on other producers in terms of establishing scale and acquiring other businesses. Such growth has meant that APHA has consistently been one of the largest cannabis businesses as measured by market capitalization, and one that has more than once been reported to be in talks with large firms from outside the space.

Cultivation Advantage. Aphria's focus has from its inception been mostly on low-cost production. Embracing and adopting greenhouse technology was the key to achieving that goal. To be sure, as much as there is a lack of reliability on cost-reporting in this industry, APHA's expertise in farming and cultivation has meant its costs are typically below the rest of the industry.

M&A Activity And Controversy. More recently, the company has become one of the most acquisitive in the space, evidenced by deals for Nuuvera, Broken Coast Cannabis and a host of international assets in 2018. These deals were not without controversy, beginning with Nuuvera, which came with accusations of insider dealing and poor disclosure, which we address later in this report.

More recently, it has become impossible for investors to miss the short-sellers' report from Hindenburg Research, which accused the company of, among other things, insider dealing, inflating the values of international assets, and poor corporate governance. Even more recently, Aphria became the recipient of a hostile takeover bid from Green Growth Brands, which proposed what is in our opinion a highly conditional offer that we assess on page 67.

Not to be outdone, the company announced as part of its Q2 earnings that Mr. Neufeld and Mr. Cacciavillani will be stepping down from their existing management roles, but will continue to serve as directors.

Strategy

Much like the other two companies examined in this report, Aphria's ambitions are not restricted to simply serving the Canadian recreational market. Aphria not only intends to grow its domestic medical business, but it aims to have a **meaningful international presence, all supported by its reputation for low-cost cultivation and innovation in production**.

Aphria's strategy appears to be less focused on disrupting other markets (alcohol and tobacco), with a greater emphasis on achieving medical outcomes and gaining a global reach. The company currently distributes cannabis to Australia and Europe, with ambitions for far more. Meanwhile, management believes its supply agreement with Shoppers Drug Mart is incredibly valuable, and the company is involved with numerous research and university partners in an attempt to generate positive outcomes for patients.

It is our opinion that the emphasis on low-cost production may have merit in the short term, but that its importance will dissipate as this market evolves. Most industry experts we engage on this subject believe that low-cost production will at some point (likely within three to five years) be available to virtually all producers, with more value generated in brand stewardship, product innovation and striking distribution agreements. Assets like Broken Coast will in our opinion continue to have value (witness Aurora Cannabis' recent acquisition for Whistler Medical Marijuana Corp. for ~$175 million), as we believe a high-quality flower market will persist for decades. And Aphria's current distribution footprint across Canada is impressive. But cheap, local cultivation, in our view, cannot be the central tenet of the leading cannabis companies in the next 10 years.

Key Advantages

Scale of production. In an industry rife with supply constraints, an LP whose only roadblock to achieving annualized production of 255,000 kg/year is Health Canada inspection has the potential for an early mover advantage versus its peers.

We now believe that Canada's current supply shortage will last longer than we had previously contemplated. If this turns out to be true, Aphria's capacity superiority will have increased value, at least in the short run.

We now believe that Canada's current supply shortage will last longer than we had previously contemplated. If this turns out to be true, Aphria's capacity superiority will have increased value, at least in the short run.

Cultivation expertise. Being one of the earliest LPs to begin operations is certainly an advantage over most, but the real asset here is the experience of the two founders, Cole Cacciavillani and John Cervini. These two individuals have between them decades of experience in running greenhouses and preparing products for sophisticated, large-scale retailers such as Costco and Walmart. Few competitors can boast this combination of proficiency in both cannabis and greenhouse procedures.

Greatest Risks

Distrust of public markets. This is far and away the greatest risk facing the company. With a litany of other potential investments in this sector, we believe investors are right to at least ask the question of why choose a company that has been subjected to claims about insider dealing and potentially questionable capital allocation. Even if investors believe these claims have no merit, with the stock trading at ~12x C2020E EBITDA, it's not as if APHA offers abnormally compelling value versus other peers (CannTrust at 8.3x, Supreme at 10.2x, or Hexo at 10.2x). A cynic could put forth the argument that no other large-cap cannabis producer has had such corporate governance questions surround it.

Lack of brand differentiation. The advantage of increased production will have less value in the long run if Aphria is not able to develop its brands into favourites among consumers. In this regard, the Broken Coast asset stands out as being an industry favourite, with real potential to grow (so long as capacity can increase, for which plans have been delayed) but we wonder if the other brands—Solei, Riff, Goodfields, and Good Supply—have defining consumer appeal beyond simply availability.

Balance Sheet And Capital Allocation

Like many of the LPs within this sector, Aphria is well-capitalized, having previously taken advantage of buoyant markets to raise capital at optimal times. Net cash (including marketable securities) of $130 million (or $0.50/share) as at the last quarter represents suitable downside in most other industries, and it is probably sufficient in this one. But it is unquestionably lower than the other two industry peers we assess in this report. And factoring in our estimate of $120 million of capex over the next 18 months, Aphria will be under some pressure to generate meaningful cash from operations if it wishes to expand into new jurisdictions.

We expect the company to decelerate its pace of acquisitions, if only because of the level of scrutiny that will follow. As well, much of the company's strategy to gain ground internationally depends less on building out its physical infrastructure, and more on relaxing regulations in countries in which APHA already has a presence.

It is our opinion that Aphria is more likely to become an acquisition target (beyond just the offer from Green Growth Brands (GGB)) than it is an acquiror. Any outside investor looking to procure a plug-and-play cultivator could step in to buy Aphria's assets to own that portion of the value chain.

Capital allocation

Whereas cultivation and farming expertise are what we would characterize as Aphria's best strengths, it is our opinion that where the company has shown some weakness is in capital allocation (as well as corporate governance, which we discuss later). The company has not been quite as active as some of its peers when it comes to growth by acquisition, but there have been two key deals—Nuuvera and LATAM Holdings—that have generated significant scrutiny from investors.

In terms of what type of assets Aphria may wish to target in the coming months and years, we suspect cultivation space is now sufficient for the company's goals. So we expect the main priority will be increasing automation and investing in high-quality extraction assets to allow for greater focus on derivative products.

We also believe that the company will immediately expand to the U.S. once federal regulations allow. Aphria currently has the ability to do this through its arrangement with Liberty Science Corp. Aphria has the option to purchase 80 million shares of this business at $1/share once federal legalization occurs. Aphria previously held a traditional equity stake in Liberty Science before divesting it for regulatory purposes (and receiving the options instead) and retaining the opportunity to re-enter the business in the future.

Acquisition History

We summarize Aphria's most impactful M&A deals below. The deals that have drawn the ire of short sellers, Nuuvera and LATAM Holdings, are assessed in the next section.

Exhibit 40. Aphria's Acquisition History

Target	Price ($MM)	Stock vs. Cash	Date	Goodwill as a % of purchase price	Key reasons for acquisition
LATAM Holdings	$296	100% stock	Sep 2018	TBD	Strategic base in LATAM
Nuuvera	$479	12% cash; 88% stock	Mar 2018	79%	Gaining exposure to Europe & Africa
Broken Coast	$214	100% stock	Feb 2018	68%	Premium domestic adult-use brand
Althea	$2.5	100% cash	Jan 2018	na	Exposure to Australian (and potentially Asian) market
Cannway Pharmaceuticals	$4	100% stock	Jan 2016	30%	Access to Canadian veteran customer base

Source: Company reports and CIBC World Markets Inc.

International

As mentioned, Aphria has been an active player in international markets, following the Nuuvera acquisition (now referred to as Aphria International) as well as its LATAM deal. The company thus far has appeared as inclined as any other LP to gain a foothold internationally, with operations in five continents and no fewer than eight countries—Colombia, Argentina, Jamaica, Germany, Italy, Malta, Lesotho, Australia—beyond Canada.

Exhibit 41. Aphria's International Footprint

Source: Company reports.

Health And Wellness

The company has invested over $50 million into its Extraction Centre of Excellence, as it also believes—similar to many other LPs—that cannabis will transition from a product to primarily an ingredient for other items.

While the company's literature and our conversations with management do reveal involvement in medical initiatives, it is our view that Aphria is more focused on the adult-use market. It's important to note this is not an indictment of any kind. We believe in the decades to come that adult-use will comprise a large majority of this industry (much as it does in currently legal jurisdictions).

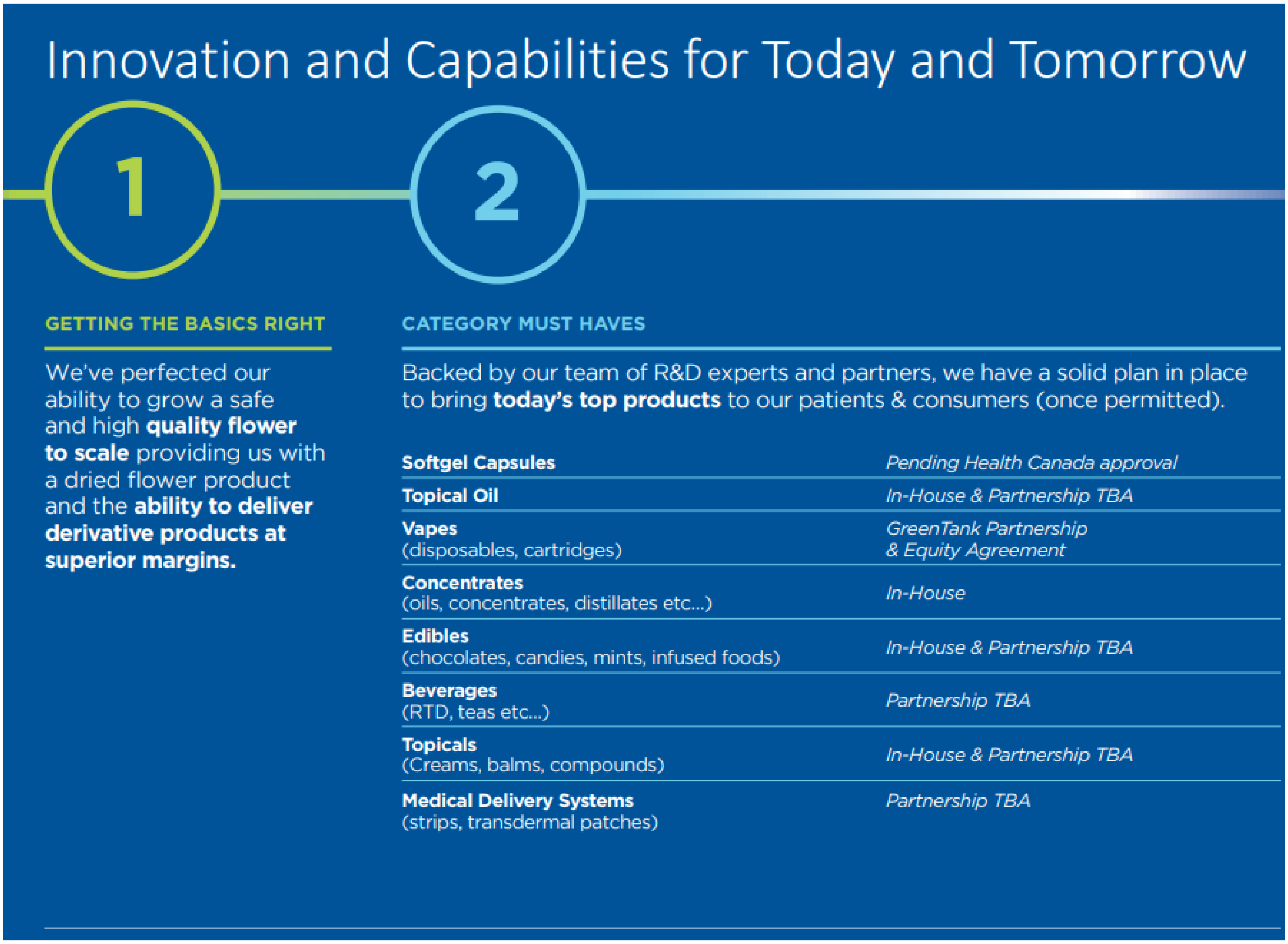
Beyond Flower

Aphria acutely understands that the future of this industry is likely far more complicated than simply growing cannabis flower and selling to existing adult-use consumers who have transitioned from illicit markets.

Exhibit 42 below demonstrates the various areas of growth within the industry, including oils, softgels, vaping technology, beverages, topicals and others. This is prudent planning. However, we believe investors are right to ask the question about how much work still must be done in order to tackle these questions.

It is reasonable, in our view, to expect not only one of the first LPs, but also one of the best-capitalized to have fewer "TBA" entries when it comes to the derivative products that will comprise the majority of this industry in the future. We may be incorrect and ultimately proven wrong on the level of progress on these initiatives, but investors would be encouraged by greater detail on these matters.

Exhibit 42. Partnerships: Still Much Work To Do



\Source: Company reports.

Early Returns On Canada

Aphria is one of the few Canadian LPs who have reported figures from a quarter that at least partly included the beginning of adult-use legalization. Revenues and EBITDA were below consensus estimates, but we believe this is more because of overly optimistic expectations from the Street rather than any underperformance from Aphria. An adjusted gross margin of ~47% is below what we had expected, particularly as the quarter included a meaningful amount of medical sales (1,444 kg, or 42% of the total), which carry higher gross margins because of the direct-to-patient model. But this metric can be inconsistent at a time of facility expansion, which Aphria is undergoing.

This subject—capacity expansion—is probably the one that investors have some right to be concerned about. **Aphria had previously said that its expansion to 255,000 kg of annual production capacity would likely be complete by January 2019; this has now been deferred to the end of calendar 2019.** While this speaks more to the backlog within Health Canada rather than anything within

Aphria's control, it is still a notable delay and could either hinder market share capture in 2019 or force the company into buying from other LPs (at inflated costs) in order to meet supply commitments.

Distribution

Aphria was one of the most prominent LPs during summertime when companies were eager to announce the results of their supply arrangements with provincial wholesalers. Its largest published allocation was for Quebec, in which the company will provide up to 12,000 kg/year for three years. Similar details were released for BC (5,000 kg), Manitoba (2,700 kg) and New Brunswick (2,500 kg, through Nuuvera), though those came with only a one-year commitment. Aphria also announced it would supply the province of Alberta, albeit only for a modest 870 kg.

Attaining countrywide distribution is important, but we believe the key region for this company is Ontario. Pricing is by no means the most attractive in Aphria's home province, but population and proximity are what matter most here.

The Emblem Deal

In mid-September, Aphria signed a deal that may act as a window into the company's future. It agreed to produce ~35,000 kg/year for another licensed producer, Emblem Corp. Wholesale production in this industry is something that is not often discussed, but it has been happening for years. LPs who are either short on product or have surpluses have typically been willing to do deals with friendly partners, and both sides come away with something they want.

But the Aphria/Emblem deal is the largest wholesale contract we've come across. Some may argue that accepting reduced pricing means that Aphria should focus its efforts elsewhere, but we disagree. It's our view that Aphria will (likely in C2020) be capable of producing far more in cannabis and cannabis extract than it will sell through provincial wholesalers, and so to use some excess capacity to serve other LPs is a prudent course of action.

Furthermore, it provides protection against the risk that the company is not able to establish popular brands with consumers, which is a risk we believe is valid considering its competitors are so deep-pocketed and can afford greater marketing investments.

The arrangement begins in May this year, and runs to April 2024. Aphria has to date received only a non-refundable deposit of ~$23 million, and the terms of this are not quite what we would characterize as take-or-pay. But receiving the near certainty of a buyer for ~15% of production provides an excellent backstop for Aphria and we believe we will see more of these types of deals in the future, as Aphria becomes more of a producer and less of a brand steward. We do not think deals like this can be signed every year, as pricing will likely deteriorate (if other markets are any guide), but a future for Aphria as a contract manufacturer could be quite attractive financially.

Exhibit 43. Potential Revenue And EBITDA From Emblem Deal ($ mlns.)

Year	KGs	Pro forma revenue @ $2.75/g	Pro forma EBITDA @ $1/g
1	25,000	$68.8	$25.0
2	30,000	$82.5	$30.0
3	35,000	$96.3	$35.0
4	40,000	$110.0	$40.0
5	45,000	$123.8	$45.0

Source: Company reports and CIBC World Markets Inc.

Retail Exposure

For the most part, Aphria has avoided the retail angle of the market, with more passive plans than many peers. Involvement in the retail segment currently consists of a $10 million investment in Fire & Flower (F&F) by way of a convertible debenture deal. Details were not disclosed, but we believe Aphria's investment amounts to a stake between 5%-9%. F&F is a retailer over a dozen locations currently open, mainly in Alberta. We are mostly unfamiliar with F&F's operations, though the company is considered a sophisticated operator among other retailers that we engage.

It was likely believed at the time of the F&F deal that the company would target significant openings in Ontario, but as mentioned, this market is still in flux. Plans have now been delayed twice, with an incredibly tepid 25 stores set to open in April. A growing chorus of municipalities choosing to opt out of having (legal) retail stores has added to the uncertainty when it comes to private retail in the province, though we believe the choices of these municipalities will be temporary.

Brands

We have reproduced Aphria's brand portfolio below. The four on the left—Solei, Riff, Good Supply, and Goodfields—were announced in September, while Broken Coast was acquired in February 2018.

It is our belief that Broken Coast will be considered the brand with the highest quality, though the brand will by definition have its limits. It's impossible to produce small batches/high grades, but also achieve industrial scale.

Solei—"designed for current and novice users and pairs an assortment of carefully curated strains and product formats with different experiences".

RIFF—"a community and cannabis brand that is co-created by the Co.LAB, a collective of creators and artists who love a good joint effort. The brand will have high potency offerings available for experienced users".

Good Supply—"A value-priced brand without the frills, designed for the everyday cannabis user".

Goodfields—"for current and new cannabis users interested in quality cannabis from a trusted source, cultivated with care".

Exhibit 44. Aphria's Adult-use Brands

Source: Company reports.

There is much uncertainty in this industry when it comes to what will appeal to consumers, but our opinions are informed by our retail and consumer backgrounds.

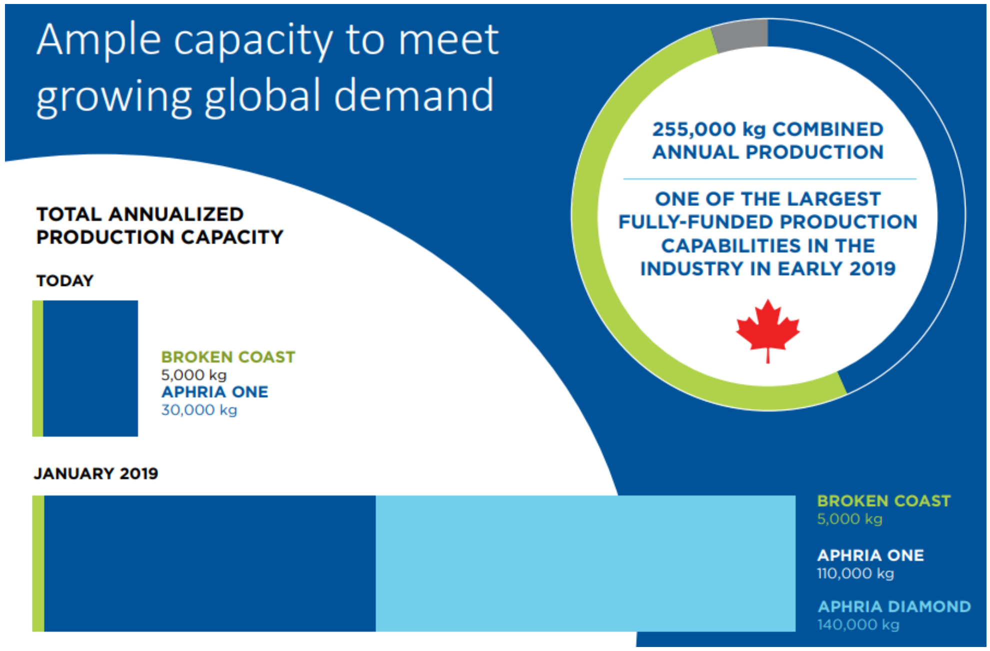
Our assessment of these brands is that there are some good ideas here, and likely some will succeed, but we wonder about the amount of overlap (two are designed for both current and new/novice), as well as the similarity of names (Good Supply vs. Goodfields).

The Broken Coast brand, however, is one we believe will excel. While we estimate that brand cost Aphria around 20x pro forma EBITDA, it establishes credibility for the company among heavy users and connoisseurs, in our opinion, and brings strategic value.

Production And Supply Chain

Aphria is on the verge of significantly increasing its production capacity; however, as mentioned, the company awaits Health Canada approval to jump to its goal of 255,000 kg/year (up from ~35,000 kg currently). The key difference is the near-finalization of the expansion of Aphria One (expanding from 30,000 kg/year to 110,000 kg/year) as well as the construction of Aphria Diamond (140,000 kg/year), of which APHA owns 51%. The final 5,000 kg is provided by Broken Coast for a combined total of 255,000 kg/year, the third-largest producer in Canada by our estimates. We believe management is being abundantly cautious in communicating that its expansion will occur by year-end, but it appears to be the consensus opinion among industry participants we speak with that production and sales licensing bottlenecks are persistent and probably growing.

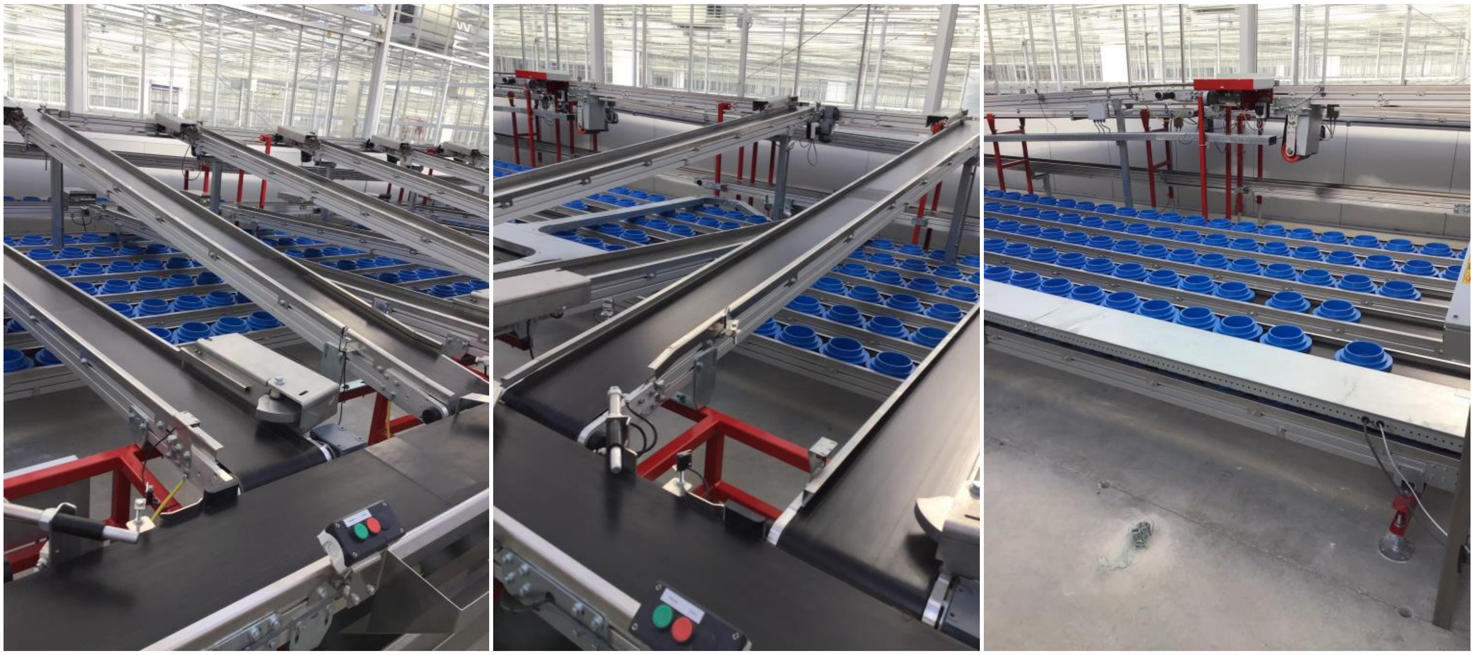
Exhibit 45. Aphria's Production Capacity



Source: Company reports

We have discussed the prospect of LPs shedding their production assets, or at the very least not investing in expanding them any further. We do not believe this to be the case with Aphria, as this is exactly where we believe the company's expertise lies. The company's management (and founders) intend to use technology that exists for traditional greenhouse operations, and transfer that IP to the cannabis industry.

Exhibit 46. Aphria's Automation At Work



Source: CIBC World Markets Inc.

We believe Aphria will have an efficiency and cost advantage over most producers in the country. Over time, we can foresee a future in which multiple LPs have outsourced their cultivation function to Aphria due to its geography (Leamington's climate is ideal for greenhouse operations), growing expertise, and capacity that is multiple times larger than most small and medium-sized producers.

Southern Glazer's Deal

When it comes to capturing retail shelf space, most Canadian LPs have scaled up themselves. In Canopy's case, this has included hiring a significant salesforce; for Aurora, this has meant (in part) acquiring a 25% stake in Alcanna, an Alberta-based retailer.

Aphria's announcement in May 2018 that it had retained Great North Distributors (a subsidiary of Southern Glazer's Wine & Spirits) was certainly against the grain. Southern Glazer's is the largest wine/spirits distributor south of the border and has a significant presence in Canada as well, representing brands like Bacardi, Canadian Club, and Courvoisier.

Glazer's role is a bit different when it comes to cannabis (it will not transport or warehouse any product), but the idea is still the same: ensure Aphria's brands get significant space and attention from retailers. Management released no financial details related to the Glazer deal, but we believe it likely is based on cost recovery with a royalty element through both online and brick and mortar sales.

Key Management

Vic Neufeld, current CEO. Mr. Neufeld has been with Aphria since 2014 when he joined the company as its CEO; however, concurrent with its Q2 earnings call, the company announced Mr. Neufeld will step down from his role as chief executive, but will continue to serve on the board. Neufeld has arguably the most storied resumé among any CEO of the large LPs, having run Jamieson Laboratories for over two decades prior to joining Aphria. The overlap between the two industries is compelling; both are focused on health and wellness, and a key part of each strategy is international expansion. The company is currently assessing its options for a new CEO.

Jakob Ripshtein, President. Mr. Ripshtein has not been at the company long (hired April 2018), but his presence has been growing. Originally hired as the Chief Commercial Officer, he was quickly promoted to President. His experience is in the beverage alcohol industry, as CFO of Diageo North America and President of Diageo Canada. Though the company has said it is looking externally for its new CEO, we would not be surprised to see Mr. Ripshtein chosen.

Carl Merton, CFO. With over 20 years of financial and business expertise, as well as over a decade combined at two big-4 accounting firms, Mr. Merton provides Aphria with suitable financial experience in M&A and raising capital. Mr. Merton was most recently the CFO of Reko International Group, a specialty manufacturing and design firm.

Cole Cacciavillani , Co-founder & current VP, Growing Operations. We would venture a guess that Mr. Cacciavillani's knowledge of greenhouse cultivation is second to none in this country, with 35 years of experience in the sector. He is also one of the company's largest shareholders, with ~7.2 million shares owned. Note that like Mr. Neufeld, Mr. Cacciavillani has chosen to step down in the near future.

John Cervini, Co-founder & VP Infrastructure. Similar to Mr. Cacciavillani, Mr. Cervini's expertise in agriculture spans multiple decades. The product of four generations of growers in southern Ontario, Mr. Cervini's established knowledge of hydroponic agriculture has enabled him to expand his previous operations to California and Mexico.

Hindenburg Research

In the past year, Hindenburg Research has published (in conjunction with Quintessential Capital Management) three separate reports that have culminated in the firm calling Aphria "a shell game". These are based on the Nuuvera transaction, the LATAM transaction, and the recent hostile takeover bid. We assess all three below.

Short-sellers' Report I: The Nuuvera Deal

There are **two major issues** that have been raised with regards to Aphria's purchase of Nuuvera in early 2018. The first relates to allegations of insider dealing, while the second involves the price paid for the assets.

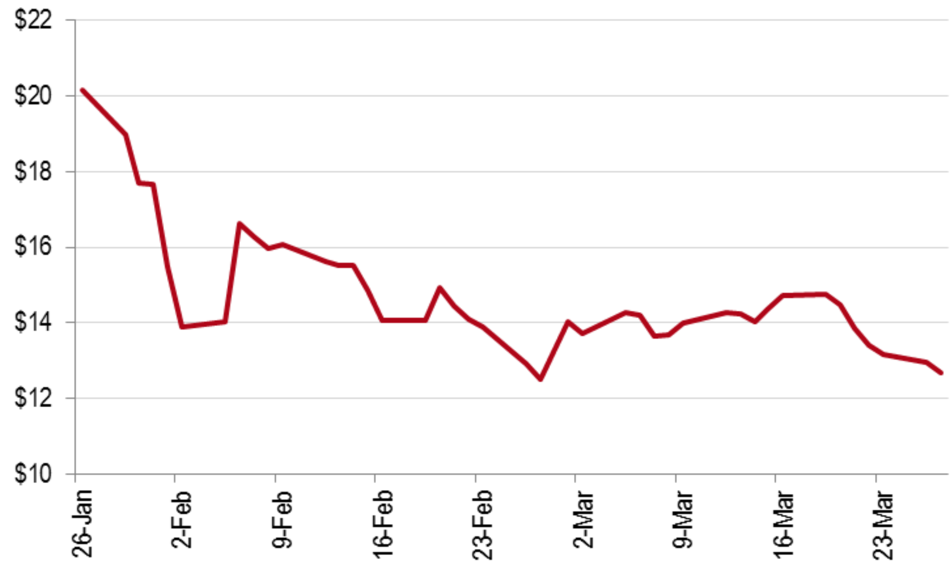
For background, the deal was advertised as giving Aphria access to key European markets and licenses, as well as adding Nuuvera's expertise in cannabis processing, extraction and testing expertise.

Issue 1: Disclosure And Fair Dealing

Specifically, several directors and executives of Aphria held personal stakes in Nuuvera, and did not disclose this prior to the announcement of Aphria's acquisition of Nuuvera. Disclosure was not explicitly required by law, as the threshold of "materiality" was at the discretion of management. The amounts in question (i.e., the Nuuvera stakes held by APHA insiders) were deemed immaterial to both companies and to the individuals involved. *The Globe & Mail* has reported that "Aphria's deal for Nuuvera turned the Aphria insiders' $900,000 investment into about $4.75 million in about seven months".

The semantics of “materiality” aside, the market reaction to the deal suggested that the lack of disclosure (and subsequent discussion in the press) was something shareholders took issue with. **Aphria’s share price decline of 37% between the Nuuvera announcement and the close of the deal compares to a median price decline of 16% across six other medium/large Canadian LPs.**

Exhibit 47. Aphria Share Price Between Nuuvera Announcement (Jan. 29, 2018) And Close (Mar. 27, 2018)



Source: FactSet and CIBC World Markets Inc.

Our take: Legality aside, it’s better to err on the side of caution when it comes to disclosure, particularly as it relates to related party transactions, and especially in an industry that receives as much scrutiny as this one. But we believe management would concede this following the uproar this deal has caused. An argument can be made that the significant overlap of the two companies should have meant no deal was even contemplated, but we do not necessarily support this.

Issue 2: Price

The second concern relates to the price paid. While the actual price paid was significantly reduced (from $826 million to $430 million, mostly as a result of the decline of Aphria’s share price in the all-stock deal), the final tab is still no small sum, particularly when compared to a host of other cannabis deals in Europe, as shown in the table below.

Exhibit 48. Select European Cannabis M&A

Parent	Company	Country/Region	Effective Ownership	Price ($MM)	Date Announced	Assets
APHA	**Nuuvera**	**EMEA**	**100%**	**$425.0**	**Jan-18**	**Partnerships/licenses in Germany, Israel and Italy. Plans for a 5,000 kg capacity vault & R&D facility**
WRLD.U	International Business of Wayland Group	Argentina, Colombia, Australia, UK, Italy, Germany, Switzerland	50%	$348.0	Jan-19	49.9% of Wayland's international portfolio of assets
WEED	Storz & Bickel	Germany	100%	$225.0	Dec-18	Volcano and Mighty brand vaporizers
WAYL	Theros Pharma Ltd.	UK	51%	$47.0	Nov-18	Access to the UK market for sale and distribution
TGOD	HemPoland	Poland	100%	$36.0	Aug-18	Manufacturer and marketer of organic CBD oils under the Cannabigold brand
CRON	Cronos Israel	Israel	~80%	> $15.0	Sep-17	Phase One: 45,000-sq. ft. greenhouse expected to produce up to 5,000 KG annually
ACB	Agropro UAB and distributor Borela UAB	Europe	100%	$15.0	Sep-18	Hemp supply - 1,600 hectares under contract, potentially yielding >1M kg of organic hemp
WAYL	Haxxon AG	Switzerland	100%	$11.0	Apr-18	Operates a 60,000 sq. ft. cultivation facility
OGI	alpha-cannabis Pharma GmbH	Germany	25%	$4.0	Oct-18	Team of highly experienced and reputable specialists from the pharmaceutical industry
WAYL	CBD Italian Factory S.S.	Italy	50%	JV	Nov-18	Existing infrastructure in Piedmont, Italy, which includes agricultural expertise and biogas electricity

Source: Company reports and CIBC World Markets Inc.

This analysis requires a critical caveat. Candidly, we have found it challenging to compare these types of transactions. Complex regulatory regimes combined with licensure differences (i.e., licence to cultivate vs. produce vs. distribute vs. export) and a nascent industry with very volatile investor sentiment make cross-deal comparisons no simple matter.

The less-discussed part of the Nuuvera arrangement is that Aphria had previously signed an agreement to supply Nuuvera with cannabis to be shipped overseas. We believe that shortly after signing this agreement, Aphria realized the economics of the pact weren't ideal, and so part of the reason that Aphria agreed to the price it did was to essentially undo the prior deal.

Our take: At the time of the Nuuvera deal, competitors (Canopy, Cronos, and others) had already begun sourcing international deals, while Aphria had prioritized the U.S. market. We believe Aphria management viewed the Nuuvera deal as a way of instantly catching up with peers, and overpaid to do so. The countries targeted (Germany, Italy, etc.) are attractive in terms of population, but regulatory reform is moving somewhat slowly and it will likely be years before those assets generate a reasonable ROIC to justify the price paid.

It's certainly easier to say in hindsight, but it's our opinion that **this deal was not the best use of capital given the exposure to the region that other LPs have attained with much lower price tags**. We have seen nothing to suggest that the assets Aphria purchased are so much more valuable than other similar arrangements from others, though concede that it is possible (if implausible).

As for the idea that the transaction allowed Aphria to undo its previous suboptimal supply deal with Nuuvera, if it does have merit, it underscores questions about management's original supply deal.

Untimely or suboptimal capital allocation is a matter of debate, and reasonable people can—and frequently do—have differing opinions on all M&A opportunities. But the Nuuvera deal is the largest we've seen in Europe, and by a fairly wide margin. **It's also necessary to consider the fact that Aphria was willing to pay nearly two times the final amount given the share price at the time of announcement**. We believe investors are right to ask the questions of who Aphria was bidding against at such a price, and also when will those operations in those countries generate the EBITDA necessary to justify this purchase. They may have significant value in the future, but these assets are at very early stages right now.

It's worth emphasizing that the price paid for this deal—which is our main point of contention—does not indicate anything untoward from management, and that in hindsight, companies frequently overpay for acquisitions.

Short-sellers' Report II: The LATAM Deal

The second report from Hindenburg Research centred on Aphria's summer 2018 acquisition of LATAM Holdings, a collection of assets in Colombia, Argentina and Jamaica. Importantly, it was acquired from Scythian Biosciences, where Mr. Neufeld was a board member. For time's sake, we will not address every accusation in this report, nor will we list every fact, but once again, the allegations can be separated into two broad categories: insider dealing and the price paid for the assets.

Issue 1: Insider Dealing

We summarize a number of facts below:

- The counterparty in this transaction was Scythian Biosciences (recently renamed Sol Global Investments), whose chairman was previously Mr. Neufeld. Mr. Neufeld joined Scythian's board on January 15, 2018, was promoted to Chairman on March 12, 2018, and stepped down as Chairman on April 25, 2018.
- Aphria had, at the time of the deal, invested ~$10 million in Scythian.
- Scythian had purchased the Latin American assets from a firm controlled by Andy DeFrancesco. Mr. DeFrancesco has held no formal role at Aphria, but has worked with the company in a fundraising capacity in the past.
- The value of the assets purchased increased significantly from the time Mr. DeFrancesco's firm purchased the assets to when Aphria purchased those same assets. According to Scythian's MD&A, these assets were purchased for $95 million at various points between April and September 2018, and sold for $297 million in late September 2018.
- It is worth noting that the actual deal value approximates $297 million, since Aphria's share price increased significantly between the LATAM announcement date and the eventual payment of those shares. **Using the 20-day VWAP as at the announcement date, the transaction value was said to be $193MM**. Similar to the Nuuvera announcement, we believe it is relevant to look at what the company was willing to pay (i.e., using the share price at the time of the deal signing) rather than solely the final price tag based on APHA's price at the date of closing.
- Aphria's announcement to buy these assets was made on July 17, 2018. None of the three key assets—in Colombia, Argentina and Jamaica—were actually owned by Scythian at that date, as those deals had not closed.
- The names of the companies that Mr. DeFrancesco's firm sold to Scythian had their names changed immediately prior to the sale of those businesses.

Our take. It might be reasonable to expect that Aphria's management team, having just months earlier undergone allegations of insider dealing following a major acquisition, would ensure that all future transactions did not deal with related parties. This is not the course of action Aphria took.

In our opinion, the work from Hindenburg can be considered somewhat sensationalist at times, but it **does ask some meaningful, relevant questions** of Aphria's corporate governance, and the company's ability to understand lessons from previous allegations of insider dealing.

We are also **surprised at the amount of time management has taken to issue a formal, comprehensive response**. We understand the explanation that every single allegation must be formally addressed, and that this takes time and much legal review to ensure completeness and accuracy. But given the impact this report has had on the stock, and given the enthusiasm with which management has discussed its Latin American assets, we would have expected a more fulsome response at this point. According to a December 8 interview of Mr. Neufeld in the *Windsor Star*, it was expected that Aphria's formal response would be issued by December 12. At this point, the company has announced a special committee to review the LATAM transaction, as well as the executive resignations. To be clear, we do not believe anything illegal occurred. But the mere perception of this, and the lack of sound corporate governance practices, is reason enough to scare off investors in any industry, especially this one.

Issue 2: Price

As mentioned in the Nuuvera section, the valuation of international assets across any cannabis company is highly subjective, in our opinion. But we compare Aphria's LATAM deal with other arrangements in the region (Exhibit 49). **Once again the deal comes with a higher price tag than nearly all others, and the only deal with a higher value is Aurora's deal for ICC labs**. The key point here is that ICC operates in Uruguay, the only other country in the world in which recreational cannabis use is already fully legal.

One can make the claim that Pharmacielo, a Colombian-domiciled company, was reportedly valued at $300 million in April, and that this was a relevant comparable. But once again, the price Aphria paid for Latin American assets is at or near the top of the M&A table.

Exhibit 49. LATAM Deals

Parent	Company	Country/Region	Effective Ownership	Price ($MM)	Date Announced	Assets
APHA	**Colcanna**	**Colombia**	**90%**	**$193.0**	**Jul-18**	**34 acres of land; planned production of 30,000 kg/year**
	Marigold	**Jamaica**	**95%**		**Jul-18**	**15 acres of land (5 approved for cultivation)**
	ABP	**Argentina**	**90%**		**Jul-18**	**Pharma import and distribution (retail pharmacy)**
WRLD.U	International Business of Wayland Group	Argentina, Colombia, Australia, UK, Italy, Germany, Switzerland	50%	$348.0	Jan-19	49.9% of Wayland's international portfolio of assets
ACB	ICC Labs	Uruguay	100%	$290.0	Sep-18	70% market share in Uruguay; 92,000 sq. ft of greenhouses and 800 acres of land (590 in Uruguay, 210 in Colombia). Plans to expand production to over 450,000 kg per annum
WEED	Spectrum	Colombia	100%	$205.0	Jul-18	300 hectares of land (100 licensed for production)
PharmaCielo (private)	Sub Receipt Financing	Colombia	12%	$39.0	Apr-18	15 million sq ft comprised of: 1.3 million sq ft nursery & propagation center (Company-owned); 0.4 million sq ft of open air greenhouses owned by the Company with indigenous growers; and 13.3 million sq ft of open-air greenhouse capacity accessed through contract growers
WAYL	Colma Pharmaceutical SAS	Colombia	100%	$22.0	Nov-18	Plans call for 415,000 sq. ft. of processing and clone and vegetation greenhouse facilities to support outdoor cannabis flower production of 300 hectares
KHRN	ILANS	Colombia	100%	$12.0	Aug-18	$10.5 million of revenue and $1.8 million of EBITDA from neurological clinics, including pain and epilepsy treatments, in Colombia
WAYL	Agricultural land	Argentina	100%	$11.0	Dec-18	2,000 acres of land
YOLO	R&D Pharma	Jamaica	100%	$10.0	Nov-18	Tier-3 cultivation license. Has 98 acres, 60 acres of which are usable for cultivation. Requites $11 million in capital to build out planned facilities ($2.4 million has been advanced on a secured loan basis)
LEAF	MED Colombia	Colombia	100%	$4.0	Jul-18	Licences in Colombia to cultivate cannabis and produce cannabis oil extracts, along with a library of cannabis genetics
LG	Global Canna Labs Limited	Jamaica	30%	$3.0	Jan-18	Tier-3 cultivation license. Combination of greenhouse (31,000 sq ft) and outdoor (189,000 sq ft). GCL plans to expand its greenhouse portion to 58,000 sq ft by the end of 2018
CRON	NatuEra S.à r.l.	Colombia	50%	TBD - JV	Aug-18	Plans to develop its initial cultivation and manufacturing operations with a custom-built facility on 207 acres
OGO	Medicannabis S.A.S.	Colombia	100%	Not disclosed	Nov-18	Late stage applicant for licenses to enable it to cultivate and process cannabis in Colombia
ACB	Farmacias Magistrales	Mexico	100%	Not disclosed	Dec-18	12,000 sq. ft. facility in Mexico City for the production of pharmaceuticals
na	Khiron Life Sciences Corp.	MX/PR/CO/CH	100%	$135.0 (current mkt. cap. shown)		Line of medical cannabis products; treatment clinics; CBD cosmeceuticals

Source: Company reports and CIBC World Markets Inc.

Our take. Our conversations with Aphria management indicate that the management team did visit each site in question multiple times. Also, management describes the negotiations between Aphria and Scythian as not only arms-length, **but at times challenging**. Furthermore, there have been numerous times in this industry when asset values have been considerably volatile (both to the upside and downside) in very little time. But that does not create a requirement for Aphria to buy assets priced higher than most others.

It is challenging to say with any conviction what these assets are worth. There is a great deal of uncertainty around the regulatory progress needed to ensure these assets have a path to future revenue generation. But we can certainly conclude that the transaction value for these assets is among the highest for international cannabis deals we've come across, and that this is Aphria's second instance of this (after Nuuvera).

Short-sellers' Report III: Hostile Takeover Bid

If the two contentious overseas transactions were not enough excitement for Aphria's stock, then a potential hostile takeover bid should certainly do the trick. Green Growth Brands (GGB), a holding company with U.S. assets, reportedly submitted a bid directly to Aphria's board with a price of $11/share or $2.9 billion in total. Our thoughts:

- Aphria shareholders would receive ~1.57 shares of GGB for each APHA share.
- This offer seems dubious. It is dependent on GGB raising $300 million at a price of $7/share when it is currently trading below $6/share.

- The reason that Hindenburg believes this offer to be invalid is that Green Growth Brand's second-largest investor is GA Opportunities Fund, a fund belonging to Green Acre Capital, a private investment fund in the cannabis industry. Vic Neufeld, Aphria's CEO and former Chairman, has in the past acted as an advisor to Green Acre Capital. Another current Aphria board member, Shawn Dym, is on the Advisory Board for Green Acre.
- In Aphria's most recent MD&A, it states that the company has invested $2 million into Green Acre, has agreed to invest another $15 million, and has also transferred assets worth ~$31 million into GA Opportunities.
- The company disclosed in its response to the offer that "as previously disclosed, Aphria holds a passive investment in Green Acre Capital Fund II, which we understand has invested in numerous emerging cannabis companies, including GGB". Aphria has established a committee to assess the proposal, and no committee members overlap with GGB.

Our take. The cannabis industry has a number of early investors, and several of these investors have become business associates in one capacity or another. There is nothing wrong with entrepreneurs working together, and we understand the importance of working with known individuals who have demonstrated trustworthiness in the past.

In our view, the hostile takeover attempt is likely an effort from GGB to capitalize on the recent significant price decrease of Aphria (down ~30% since December, before Hindenburg's second report emerged). The level of overlap between companies does exist, but we don't believe there is any insider dealing with regards to this transaction, and believe it is merely GGB looking to capitalize on APHA's quality domestic assets following a significant price decline.

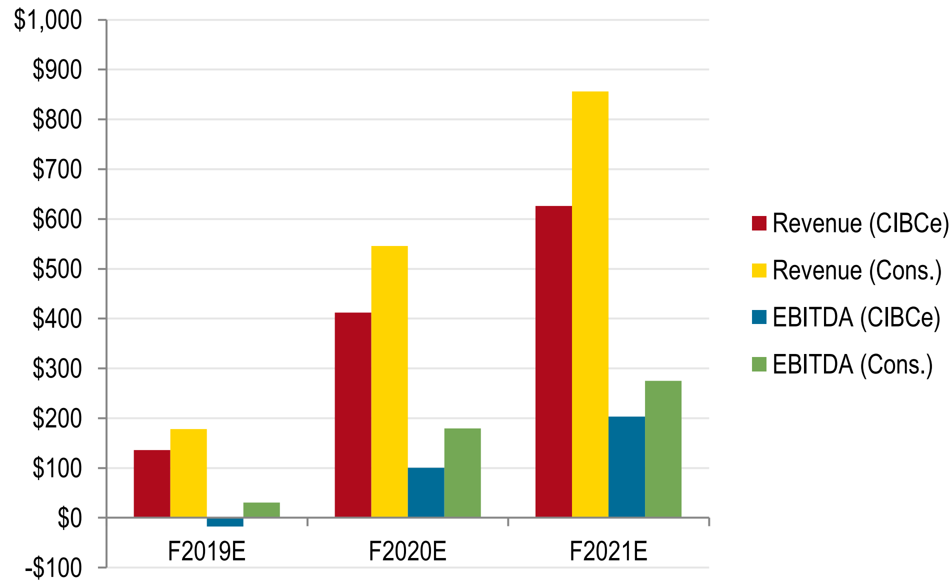
Other Considerations

- If the Nuuvera, LATAM, and hostile takeover controversies weren't enough, in late 2016, *Vice News* reported that the Canadian federal government began noticing that reimbursements for cannabis purchases from Canadian veterans began to soar, increasing 5,000% from 2013 to 2016. The article reports that Aphria was among the companies that refused to offer lower-priced products to veterans, knowing that the final bill would be reimbursed by Health Canada. To be fair, several Canadian LPs were listed in the *Vice* article, including MedReleaf, and Marijuana For Trauma.
- Lost in all the headlines over the past year is the **quality of Aphria's domestic facilities**. The level of automation and sophisticated equipment is remarkably apparent upon entry to the company's operations, and we have few doubts that the company's low-cost cultivation in the domestic market has material value.

Key Financial Metrics

The figure below illustrates our forecasts relative to median consensus estimates.

Exhibit 50. Consensus Vs. CIBC Estimates ($ mlns.)



Source: FactSet and CIBC World Markets Inc.

Conclusion

We believe that the insider dealing concerns that have followed Aphria for the past year will subside. We also believe Aphria's corporate governance procedures will likely be re-assessed and changed for the better moving forward, likely with far greater independence in board composition. Furthermore, it would likely also be prudent to limit dealing with related parties.

That said, this does not change our assessment of the two largest allocations of capital the company has made in terms of M&A. While the acquired assets may prove attractive, the prices paid for these assets are among the highest we have witnessed in this sector. We believe Aphria's domestic assets are valuable, and we believe the founders of this company have built a business with substance, but Aphria's M&A history somewhat detracts from this value, in our opinion.

- **Summary**: A cultivation and processing expert, with costs among the lowest in the industry, and a long track record of greenhouse operations. Cross-country distribution, as well as one of the better contract manufacturing deals (Emblem), makes Aphria's domestic assets attractive. Access to Europe and LATAM is attractive, even if prices paid were excessive. But in a world with a large and growing array of opportunities in the cannabis sector, we believe investors may avoid one with ongoing scrutiny as it relates to corporate governance and potentially undisciplined capital allocation.

- **Upside scenario**: Company makes changes to corporate governance practices, and participates in no other activities that garner scrutiny. Working with Southern Glazer's gives the company a lead on capturing mindshare among consumers, and a combination of distribution and production leads to the company being an industry leader in 2019. Expertise in processing and formulation preserves Aphria's early-mover advantage in medical and derivative adult-use products.

- **Downside scenario**: Scrutiny over insider-dealing allegations continues with further allegations levied, and current lawsuits cause material settlement payments. International assets take far longer to play out than expected, while the company underperforms at home. EBITDA estimates are slashed, and the stock is valued at more modest levels associated with smaller LPs.

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Price Target Calculation

Our approach to valuing Aphria is much simpler than our assessments of Canopy Growth and Cronos. This is mostly because of relative strength of those companies' balance sheets and management teams: we believe it is more likely that they have the ability to become industry titans.

However, we believe Aphria's domestic operations do have real value**. We apply 15x and 14x EV/EBITDA multiples to our F2020 and F2021 estimates, respectively, which is the basis for our $10 price target, and, effective January 17, Aphria is rated Neutral.** Our EV/EBITDA multiple is a modest premium to known players in the tobacco and alcohol industries, which trade between 11x and 14x F2019E EBITDA.

Exhibit 51. Valuation Methods

Method	Valuation Approach	Price Scenario	Assumptions
Method 1	Traditional EV/EBITDA (average of F2020E & F2021E)	$10	15x multiple applied to F2020E & 14x multiple applied to F2021E EBITDA
Method 2	Displaced Markets	$21	APHA captures 0.5% of US CBD market, 1% of worldwide medical cannabis market and 0.1% of adjacent markets (animal health, pain relief,
Method 3	Increased Legalization	$13	20% of world population has legal access to cannabis by 2025, with 20% of addressable market using cannabis, with a $300 per person annual spend. Assume APHA captures 0.5% worldwide market share.
Method 4	DCF	$17	Revenue growth rate of 52% in year 1 declining to +10% in Year 3 and +5% in year 6; long-term cash flow growth rate of 5%; WACC 9.3%

Source: CIBC World Markets Inc.

Exhibit 52. Method 1: Traditional EV/EBITDA ($ mlns. except per share and where noted otherwise)

	F2020E	F2021E	F2022E	F2023E
EBITDA	100.4	203.4	233.9	268.9
			15%	15%
EV/EBITDA multiple	15.0x	14.0x	13.0x	12.0x
	1,507	2,847	3,040	3,227
Minority-stake investments	181	181	181	181
Net cash	131	265	383	522
Equity value	1,819	3,294	3,605	3,930
FD share count	251	251	251	251
$ per share	**$7.26**	**$13.15**	**$14.39**	**$15.69**

Source: CIBC World Markets Inc.

Exhibit 53. Method 2: Displaced Markets ($ mlns. except per share and where noted otherwise)

CANADA	Canadian EBITDA, F2021	$203.4
US CBD	CBD market estimate, 2021	$20,000
	Market share estimate	0.5%
	Aphria pro forma US CBD sales	$100
	EBITDA margin	25%
	Est. EBITDA	$25.0
WORLD	Worldwide population in curently legal medical markets (mln)	650
	Annual spending per person, Colorado's medical market	$60
	Pro forma worldwide medical sales	$39,000.0
	Market share estimate	1.0%
	Worldwide Aphria medical sales	$390
	EBITDA margin	25%
	Est. EBITDA	$97.5
ADJACENT	Animal health, pain relief, sleep aid	$240,000
MARKETS	Market share	0.1%
	Pro forma sales	$240
	EBITDA margin	25%
	Est. EBITDA	$60.0
	Total pro forma EBITDA	$385.9
	EV/EBITDA multiple	15.0x
	Enterprise value	$5,787.8
	Plus: net cash, F2021	$265
	Less: cash deployed to build worldwide market share	-$1,000.0
	Plus: minority-stake investments	$181
	Equity value	$5,234.5
	Share count (excluding warrants)	251
	Equity value per share	**$20.89**

Source: CIBC World Markets Inc.

Exhibit 54. Method 3: Increased Legalization ($ mlns. except per share and where noted otherwise)

World population (mln)	7,700
Est. legal use by 2025	20%
Potential population in legal countries	1,540
Est. users	20%
Population of users (mln)	308
$ spend per person, annual	$300
Total worldwide sales	$92,400
Market share	0.5%
Pro forma Aphria sales	$462
EBITDA margin	25%
Pro forma global EBITDA, ex-Canada	$116
F2025 Canadian EBITDA (F2021e + 15%/yr)	$356
Pro forma Aphria EBITDA, F2025	$471
EV/EBITDA multiple	12.0x
	$5,654.0
Discounted to F2021 (@10%)	$3,861.8
Plus: net cash, F2021E	$265.3
Less: cash deployed to build worldwide market share	-$1,000.0
Plus: minority-stake investments	$181
Equity value	$3,308.5
share count	251
Equity value per share	**$13.20**

Source: CIBC World Markets Inc.

Exhibit 55. Method 4: 10-year DCF ($ mlns. except per share and where noted otherwise)

	1 2021E	2 2022E	3 2023E	4 2024E	5 2025E	6 2026E	7 2027E	8 2028E	9 2029E	10 2030E
Revenue	626.0	813.2	894.5	984.0	1,082.4	1,136.5	1,193.3	1,253.0	1,315.7	1,381.5
Revenue Growth	52.0%	29.9%	10.0%	10.0%	10.0%	5.0%	5.0%	5.0%	5.0%	5.0%
EBITDA	203.4	290.0	295.1	327.0	362.5	383.4	405.6	429.0	453.7	479.9
EBITDA margin %	32.49%	32.74%	32.99%	33.24%	33.49%	33.74%	33.99%	34.24%	34.49%	34.74%
D&A	23.8	25.4	26.7	28.0	29.4	30.9	32.4	34.0	35.7	37.5
EBIT	179.6	264.6	268.4	299.1	333.1	352.6	373.2	395.0	418.0	442.4
Interest Paid (Received)	(4.4)	(7.6)	(2.6)	2.4	7.4	12.4	17.4	22.4	27.4	32.4
Less: Cash Taxes	47.6	74.5	67.8	74.2	81.4	85.0	88.9	93.1	97.7	102.5
Less: Capex	60.0	60.0	66.0	72.6	79.9	87.8	96.6	106.3	116.9	128.6
Less: Change in WC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
After-tax Unlevered Free Cash Flow	**95.8**	**155.5**	**161.3**	**180.3**	**201.2**	**210.5**	**220.0**	**229.6**	**239.2**	**248.8**
% Change		62.4%	3.7%	11.8%	11.6%	4.6%	4.5%	4.3%	4.2%	4.0%
PV of after-tax unlevered free cash flow	**87.7**	**130.3**	**123.7**	**126.5**	**129.2**	**123.8**	**118.4**	**113.0**	**107.8**	**102.6**
Cumulative PV of FCF	87.7	217.9	341.6	468.1	597.4	721.1	839.5	952.5	1,060.3	1,163.0

	10-year
PV of cash flows	$1,163
Terminal value	$2,531
Enterprise Value	$3,694
Less: Net debt (cash)	(482.1)
Equity Value	$4,176
Shares outstanding	250.5
Equity value per share	**$16.67**

ASSUMPTIONS	
Revenue growth rate	10.0%
Revenue growth rate (years 6-10)	5.0%
Capex growth	10.0%
EBITDA margin growth rate	0.25%
D&A growth rate	5%
Annual reduction in interest expense ($MM)	-5
Future tax rate	25.0%
Shares outstanding	250.5
Net debt (cash), F2022E	(482.1)
Long-term cash flow growth	**5.0%**

WACC	
Cost of equity	9.9%
Equity risk premium	4.0%
Risk-free rate	2.7%
Beta	1.80
Debt as a % of capital	10.0%
Cost of Debt	5.0%
Normalized Tax Rate	25.0%
WACC	**9.3%**

Source: CIBC World Markets Inc.

Key Risks To Price Target

- Valuations within the cannabis industry have proven incredibly volatile in its brief history, and this pattern of rapidly changing sentiment among investors could continue.
- Inability to capture a meaningful proportion of the Canadian adult-use market, due to either onerous regulations, failure of internal branding strategy, or other reasons.
- Adverse outcomes resulting from shareholder lawsuits related to the LATAM deal.
- Distrust from capital markets leading to investors disregarding the stock.
- Increased competition from American (or other) cannabis producers.
- International restrictions on exportation, or regulatory constraints that hinder distribution of medical products that the company seeks to develop.
- Owing to the lack of operating history, significant execution risk exists across all companies in the cannabis space.
- The loss of key management.

Pharmaceuticals, Biotechnology & Life Sciences Industry Earnings Outlook

Pharmaceuticals - EBITDA ($mln)

		12-18 Month Price Target		Rating			Annual EBITDA ($mln)					
							2019		2020		2021	
Ticker	Price	Prior	Current	Prior	Curr	FYE	Prior	Current	Prior	Current	Prior	Current
APHA (2g)	8.90	None	10.00	None	NT	May	--	-17.4E	--	100.4E	--	203.4E
CRON (2g)	17.33	None	22.00	None	OP	Dec	--	19.5E	--	69.3E	--	102.5E
WEED (2g)	54.90	None	65.00	None	OP	Mar	--	-112.5E	--	109.4E	--	273.1E

Source: Company notes and CIBC World Markets Corp./Inc.

All figures in Canadian dollars, unless otherwise stated.

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Stock Prices as of 01/17/2019:
Aphria Inc (2g) (APHA-TSX, $8.90)
Canopy Growth Corporation (2g) (WEED-TSX, $54.90)
Canopy Rivers Inc. (2a, 2e, 2g, 12) (RIV-TSX, $5.70)
Cronos Group Inc (2g) (CRON-TSX, $17.33)

Any companies mentioned in the report but not listed are not covered by fundamental research at CIBC.

Important disclosure footnotes that correspond to the footnotes in this table may be found in the "Key to Important Disclosure Footnotes" section of this report.

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Stock Ratings		
OP	Outperformer	Stock is expected to outperform similar stocks in the coverage universe during the next 12-18 months.
NT	Neutral	Stock is expected to perform in line with similar stocks in the coverage universe during the next 12-18 months.
UN	Underperformer	Stock is expected to underperform similar stocks in the coverage universe during the next 12-18 months.
NR	Not Rated	CIBC World Markets does not maintain an investment recommendation on the stock.
R	Restricted	CIBC World Markets is restricted (due to potential conflict of interest) from rating the stock.
Stock Ratings Prior To December 09, 2016		
SO	Sector Outperformer	Stock is expected to outperform the sector during the next 12-18 months.
SP	Sector Performer	Stock is expected to perform in line with the sector during the next 12-18 months.
SU	Sector Underperformer	Stock is expected to underperform the sector during the next 12-18 months.
NR	Not Rated	CIBC World Markets does not maintain an investment recommendation on the stock.
R	Restricted	CIBC World Markets is restricted (due to potential conflict of interest) from rating the stock.
Sector Ratings (note: Broader market averages refer to S&P 500 in the U.S. and S&P/TSX Composite in Canada.)		
O	Overweight	Sector is expected to outperform the broader market averages.
M	Marketweight	Sector is expected to equal the performance of the broader market averages.
U	Underweight	Sector is expected to underperform the broader market averages.
NA	None	Sector rating is not applicable.

"Speculative" indicates that an investment in this security involves a high amount of risk due to volatility and/or liquidity issues.

Ratings Distribution*: CIBC World Markets Corp./Inc. Coverage Universe

(as of 17 Jan 2019)	Count	Percent	Inv. Banking Relationships	Count	Percent
Outperformer (Buy)	158	47.7%	Outperformer (Buy)	140	88.6%
Neutral (Hold/Neutral)	149	45.0%	Neutral (Hold/Neutral)	129	86.6%
Underperformer (Sell)	18	5.4%	Underperformer (Sell)	15	83.3%
Restricted	4	1.2%	Restricted	4	100.0%

Ratings Distribution: Health Care Coverage Universe

(as of 17 Jan 2019)	Count	Percent	Inv. Banking Relationships	Count	Percent
Outperformer (Buy)	3	50.0%	Outperformer (Buy)	3	100.0%
Neutral (Hold/Neutral)	3	50.0%	Neutral (Hold/Neutral)	3	100.0%
Underperformer (Sell)	0	0.0%	Underperformer (Sell)	0	0.0%
Restricted	0	0.0%	Restricted	0	0.0%

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