ARCVIEW MARKET RESEARCH & BDS ANALYTICS

The State of Legal Marijuana Markets

5TH EDITION | MID-YEAR UPDATE

Executive Summary



The State of Legal Marijuana Markets: Mid-Year Update

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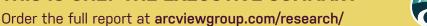
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The legal cannabis market in North America is on track to grow by one-third, to \$9.7 billion in 2017

Letter From the Editor

Dear Colleagues:

This has been a year of expanding horizons and growing confidence for the legal cannabis industry. The year started with the industry focused narrowly on the implications of the appointment of a dedicated drug warrior to head up the Justice Department.

But as the months ticked by, the industry in concluding that continued federal prohibition under a Trump Administration is something to plan around, rather than a mortal threat. There seems to be little reason a politician would deny the medicine of choice to 2.3 million card-carrying patients, or work to deny legal access to the 1.8 million adult consumers in legal states, or further alienate all 44 million North American adults who consume cannabis.

Eight states liberalized their cannabis laws via ballot initiative in the November 2016 election, and Pennsylvania, Ohio, and West Virginia subsequently did so via legislative action. That will accelerate the decline of the illicit market, grow state tax revenues and local economies, and create hundreds of thousands of jobs, as we'll detail in our next Cannabis Intelligence Briefing on the economic impact of the legal cannabis market.

But first, in this Mid-Year Update to The State of Legal Marijuana Markets, 5th Edition, we'll be looking at how the intransigence of Washington is paradoxically creating substantial challenges by limiting profitability and economies of scale while simultaneously creating substantial opportunities for cannabis businesses by blocking major players from the broader economy from entering the business, at least in the United States.

Couple that with a rapidly growing number of overseas countries expanding their medical programs, and it's clear that the Canadian licensed producers (LPs) have a chance to grab first-mover advantage in a worldwide market that US agriculture and pharmaceutical companies could otherwise have been expected to dominate.

That's how far Germany's decision to legalize medical cannabis in April has expanded the horizons of the legal cannabis business: to the whole world. Hence, in addition to an update on regulatory and market developments in the legal US states, we provide in this Mid-Year Update a look at some of the most interesting overseas market developments.

It's a big world out there, and the investors and companies in what will be nearly a \$10-billion North American market this year are gearing up with growing confidence to go after it.



Tom Adams Editor in Chief – Arcview Market Research Managing Director – BDS Analytics

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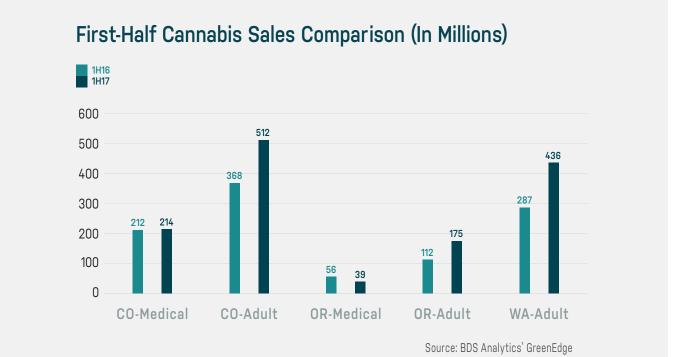
2017, a Transition Year

2017 has been a transitional year for the legal cannabis business as investors poured money into the industry in anticipation of some of the largest medical markets moving to adult-use programs by 2018. All signs point to how much of a game-changer that will be:

• Six-month revenue in the first three states to implement adult-use legalization—Colorado, Washington, and Oregon—ran 33% ahead of 2016 through June, according to BDS Analytics' GreenEdge point-of-sale tracking.

• Nevada retailers were allowed to open sales to all adults earlier than expected and generated more than \$27 million the first month of adult-use sales, according to the Nevada Department of Taxation. • BDS Analytics debuted its GreenEdge tracking of California's existing medical dispensaries and delivery services in August and found that California's medical market is already as big as the total markets in Colorado, Washington, and Oregon combined.

Those and other research findings outlined in this Mid-Year Update prompted several revisions to Arcview Market Research's projection of consumer spending on legal cannabis products in North America since the publication of The State of Legal Marijuana Markets in March. The model now estimates spending on legal cannabis in North America was \$7.3 billion in 2016 and will post 33% growth in 2017 to \$9.7 billion, then grow at a 28% compound annual growth rate (CAGR) to \$24.5 billion in 2021.



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That growth does not assume a host of new state legalizations in the next four years (see Chapter 3 for an update on regulatory and market issues in each of the states), but it assumes that the government in Washington does not act to enforce the continuing federal prohibition on cannabis as a Schedule 1 drug under the Controlled Substances Act. Despite continued saber-rattling by new Attorney General Jeff Sessions, forbearance appears to have become accepted as the only reasonable approach in Washington, while the DEA's new and more liberal rules on testing cannabis for health applications goes into effect.

Congress finally did extend through December 17 the longstanding budget amendment (now dubbed "Rohrabacher-Blumenauer") that bars the Justice Department from spending money on prohibition enforcement in medically legal states. Chapter 1 of this report details several reasons Sessions is unlikely to act even if that protection were to lapse, including the growing consensus at the state level that allowing medical-use cannabis sales through legal channels helps a wide range of sympathetic groups from young children with genetic conditions causing seizures, to military veterans with Post Traumatic Stress Disorder.

Perhaps most importantly for prohibition-backing politicians is the simple fact that approval of even adult-use legalization jumped four percentage points to 64% in this year's edition of the Gallup Organization's polling on the subject that date back to 1969 when it was 12%.

The investment climate for cannabis companies was mixed through September for companies in the Production, Retail, Consumer Products, Business Services, Therapeutics, and Vertically Integrated sectors analyzed in The State of Legal Marijuana Markets, 5th Edition. On the one hand, the basket of public stocks we track has given back most of the enormous gains they ran up in the second half of 2016 as the chances of an historic sweep of legalization gains. But the ability of both private and public companies to raise new capital is in evidence in the Viridian Capital Advisors Deal Tracker showing 150% growth in the amount of

The model now estimates that spending on legal cannabis in North America in 2016 was \$7.3 billion and will post 33% growth in 2017 to \$9.7 billion

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debt and equity money raised in 2017 measured against the same period of 2016.

In addition, the Canadian licensed producers generally maintained market caps that are huge double-digit multiples of their current run-rate revenue on the strength of two fundamentals:

1) Their strong positioning for the adult-use legalization coming to Canada in July 2018, with some provinces limiting retail availability to government-run stores or banning retail completely.

2) Their ability to legally ship cannabis to emerging worldwide medical markets while US suppliers have their hands tied by federal prohibition.

But not all cannabis companies have the compelling story of the LPs, and it remains something of a buyer's market for investors. Some of the early and biggest fund sources placed their bets in 2015 and 2016 and were generally quiet through early 2017 when it came to new investments. That left many if not most of the many hundreds of start-ups created in recent years undercapitalized despite the growing number of investors looking at cannabis as a legitimate market opportunity.

Perhaps the most dramatic trend of 2017 has been the expansion of scope for the legal cannabis industry to the entire world with the launch of Germany's medical program in March. What started in the early 2010s as cottage medical operations in a few states began taking on the trappings of a normal industry with adult-use legalization in Colorado in 2014. Investor interest in all North America has increased as a result of Justin Trudeau's Liberal Party election, unseating 10 years of Conservative Party rule, in 2015 as well as California and three other states opening to adult-use.

Now much of the rest of the world is in play. Few countries are likely to follow Uruguay and Canada's example of defying the US-led prohibition by legalizing adult use any time soon. But all they need to do is put real medical-use regimes in place as Germany, with its 82-million population, is doing, to make legal cannabis the world's fastest growing product category (Chapter 4 outlines the status of some of the most advanced international cannabis markets).

Most of the industrial nations, after all, have national health services who either pay for or heavily subsidize their citizen's health needs. Germany's has already agreed to do the same for patients with certain conditions for which only anecdotal evidence of efficacy is strong. That is a signal moment in the development of what is now clearly going to be a worldwide legal cannabis business.

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