MINING FOR GOLD: BDSA MARKET OUTLOOK, KEY INSIGHTS, AND WAYS TO WIN

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BDSA PROVIDES A COMPLETE VIEW OF THE GLOBAL CANNABIS MARKET OF TODAY AND TOMORROW

RETAIL SALES TRACKING

Know exactly what is selling where, when, and at what price point

MARKET FORECASTS

Gain a comprehensive understanding of market size and future opportunity

CONSUMER INSIGHTS

Understand consumer (and non-consumer) segments, sizing, behavior, consumption patterns, purchase habits, and more

STATE OF THE CANNABIS INDUSTRY

THE CANNABIS INDUSTRY IS AT A TURNING POINT

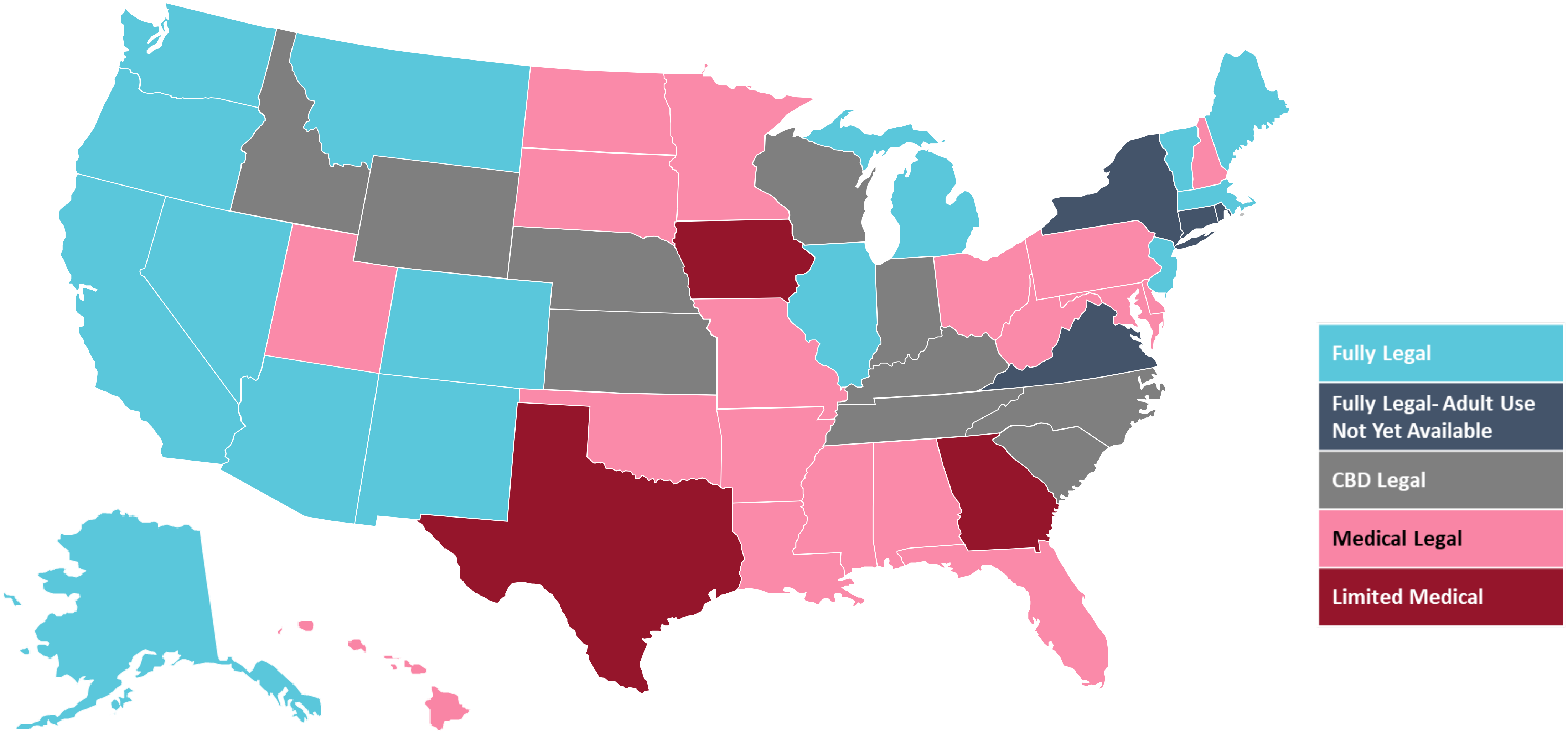
Economic Inflation

Price Compression

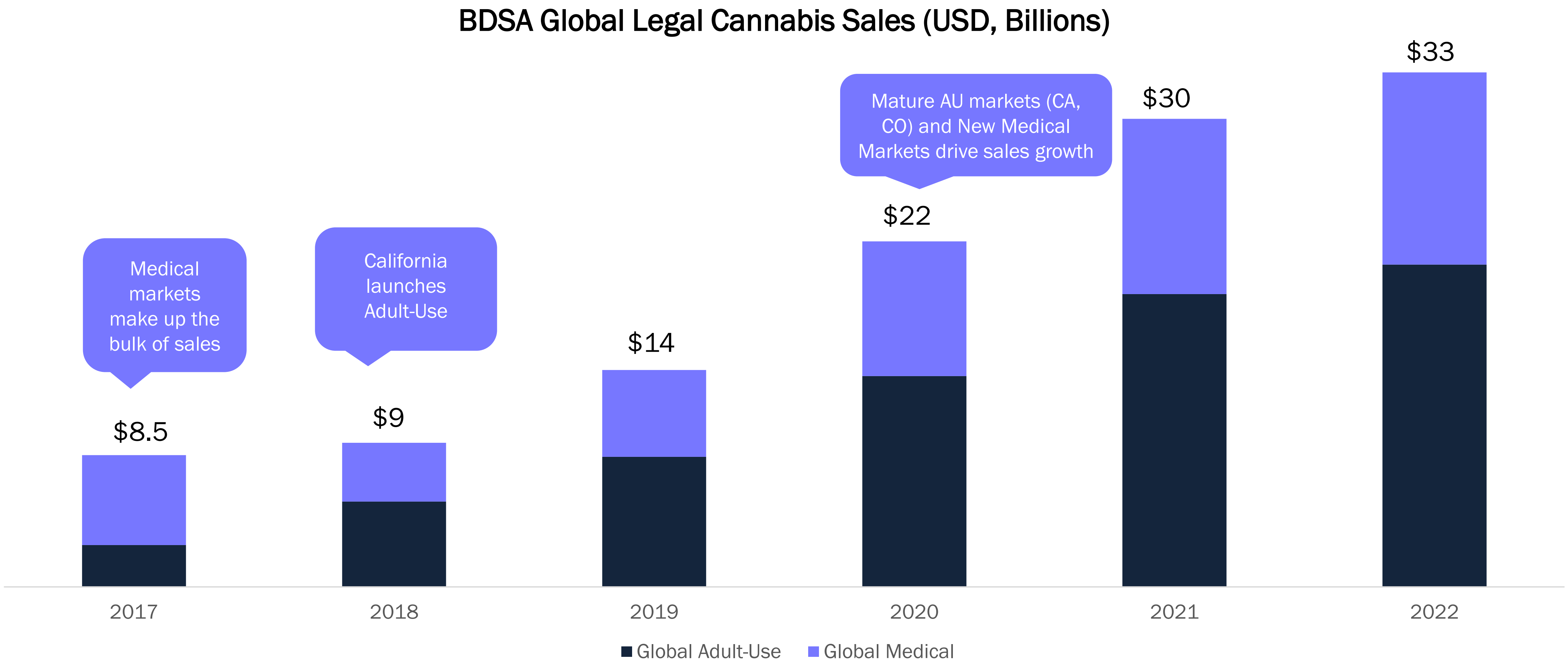
Regulatory Uncertainty

Reliance on Promotions

REGULATIONS LOOSENING ACROSS THE US (SEGMENTS AS OF SEPT 2022)



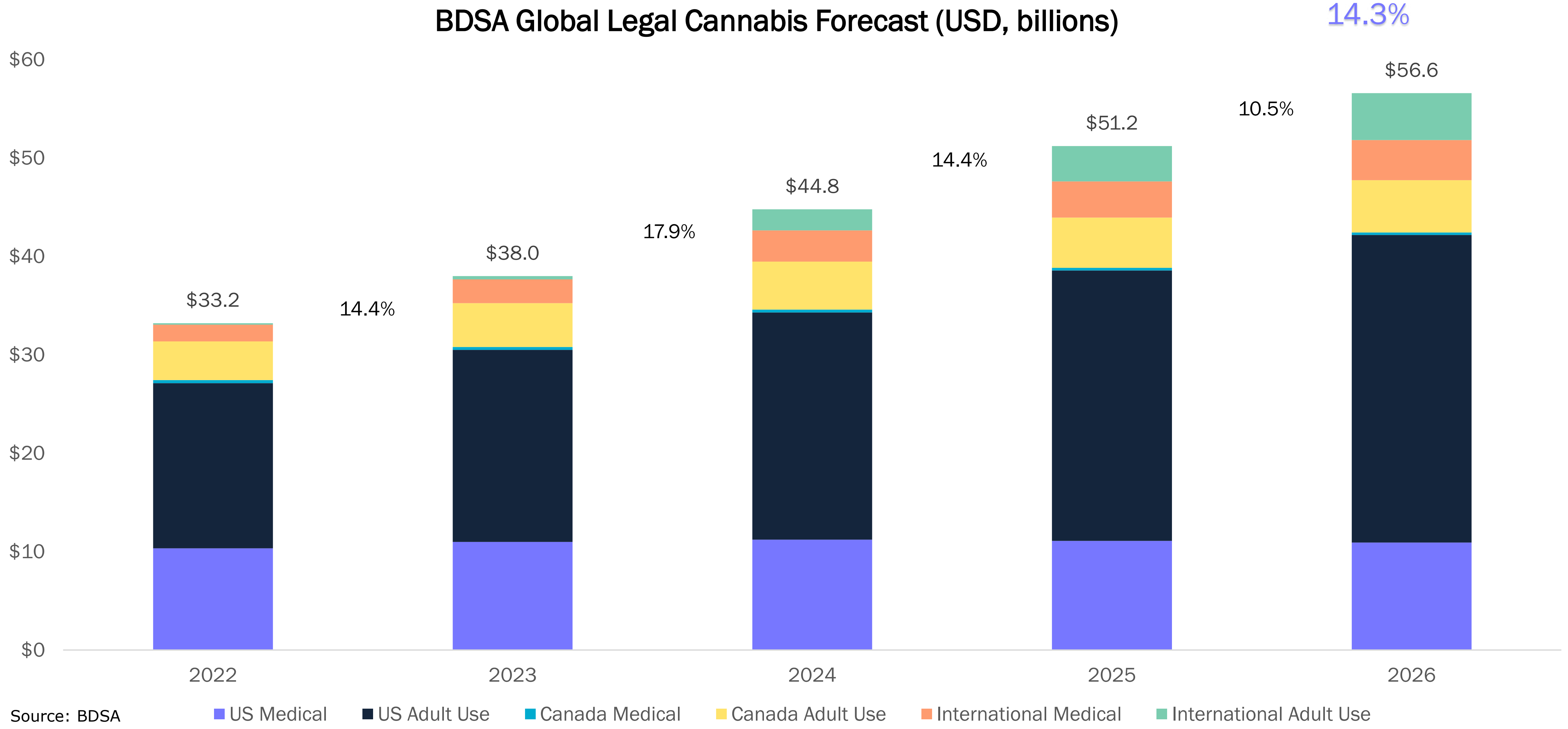
PAST GROWTH WAS DRIVEN INITIALLY BY US MEDICAL, THEN ADULT-USE MARKETS



Source: BDSA Forecast, Historical Global sales, updated September 2022

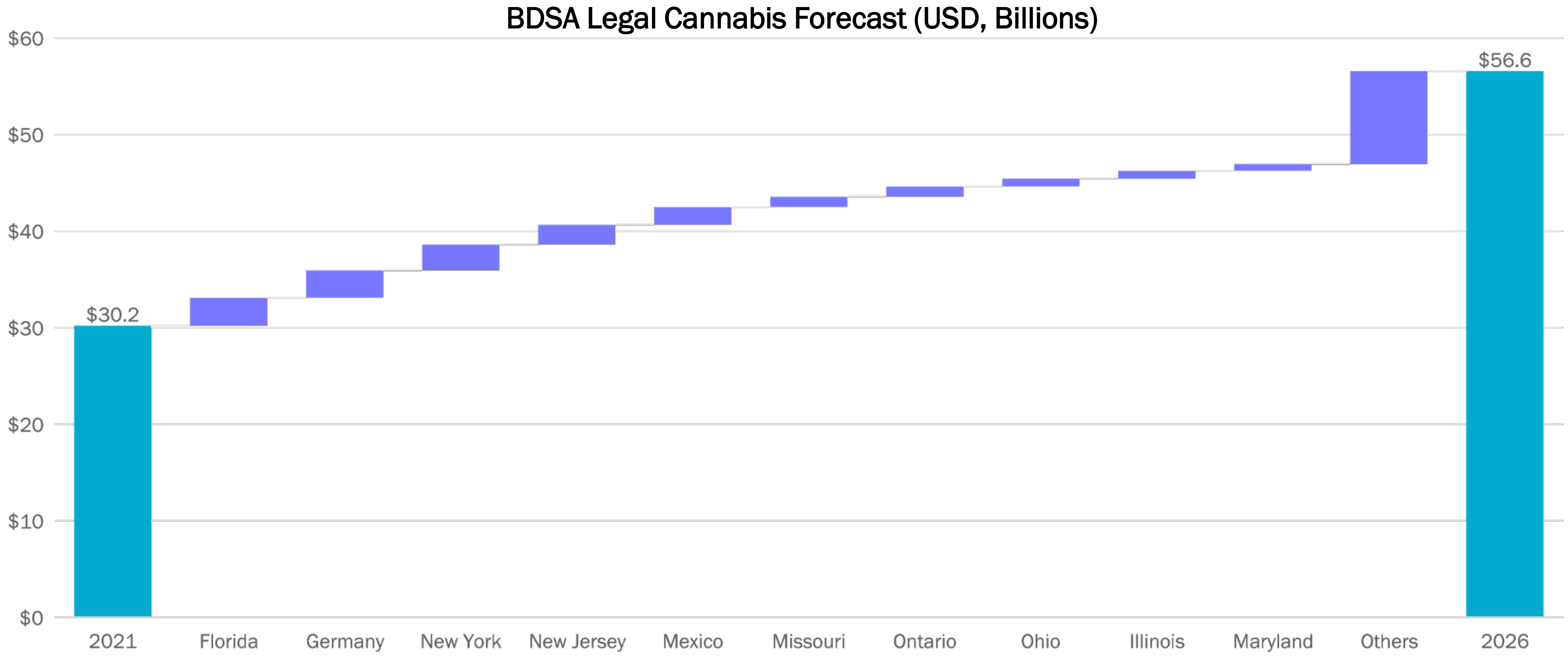
WORLDWIDE LEGAL SPENDING

'22-'26 CAGR
14.3%



Source: BDSA

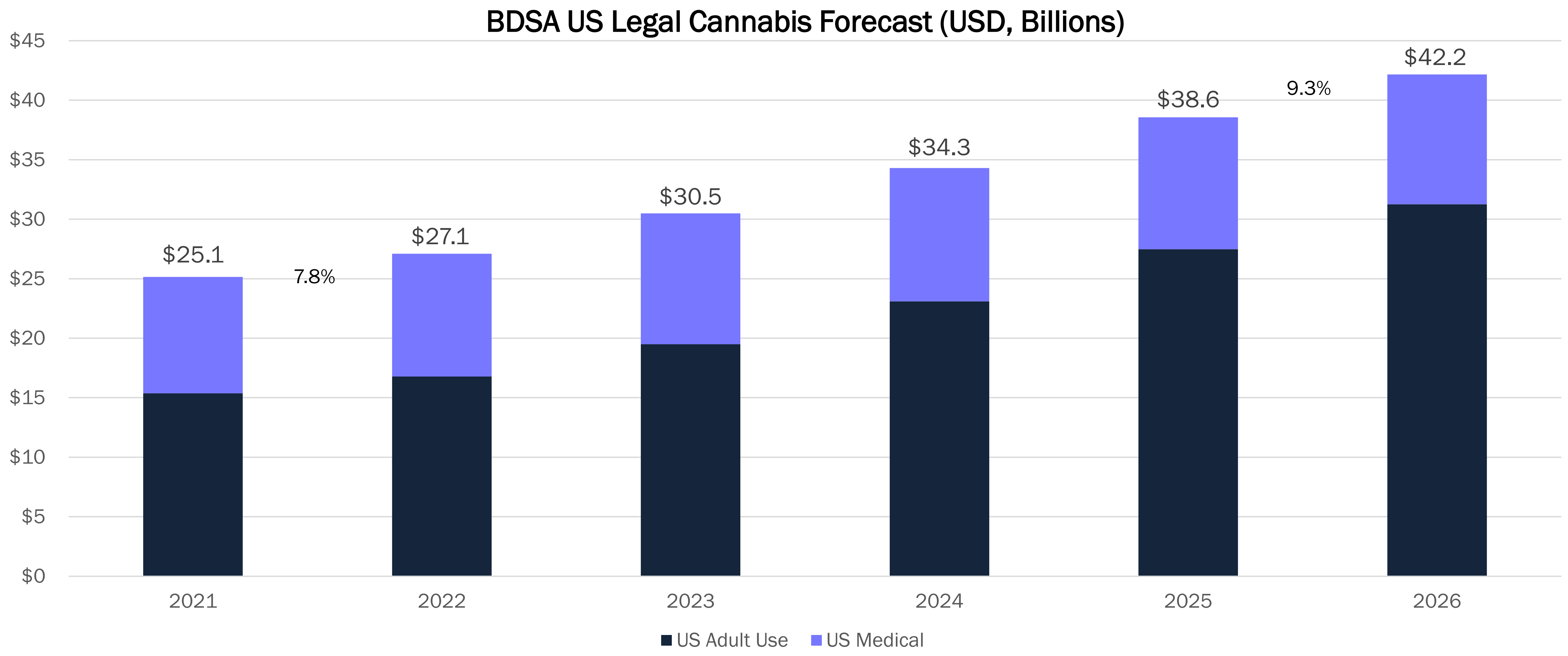
TOP TEN CONTRIBUTORS TO GROWTH



Source: BDSA

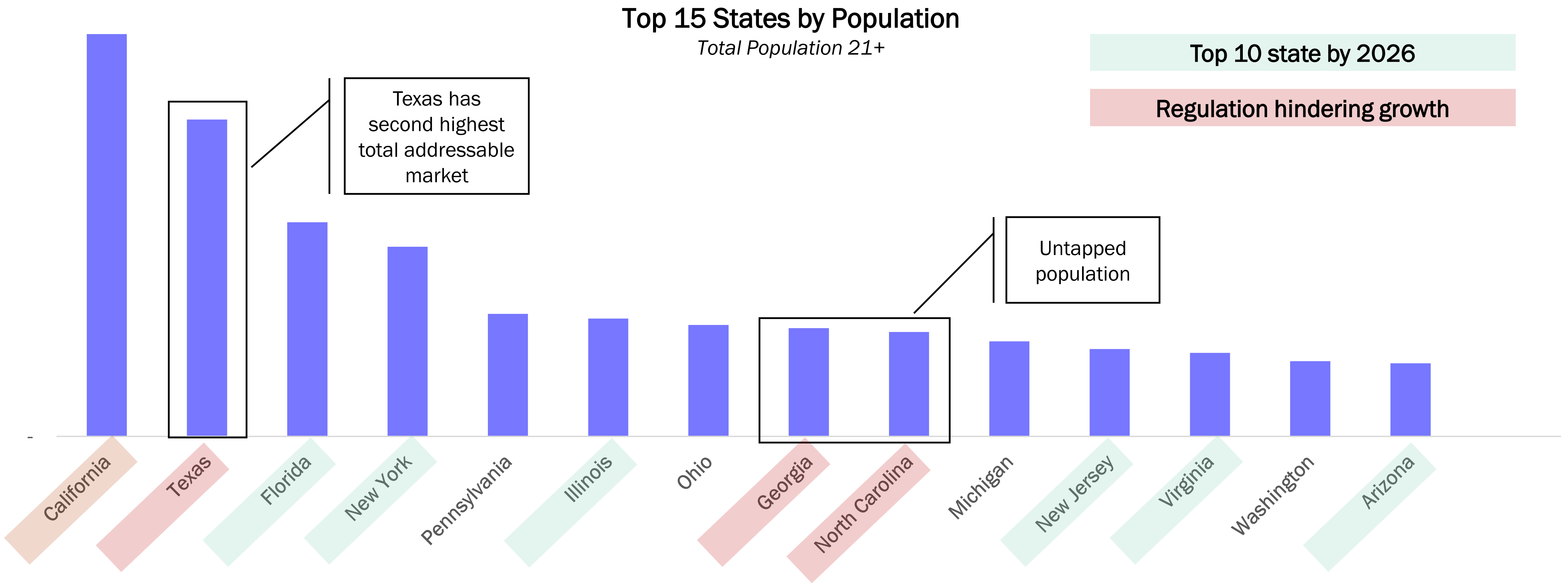
US LEGAL SPENDING

‘21-’26 CAGR
11%



Source: BDSA

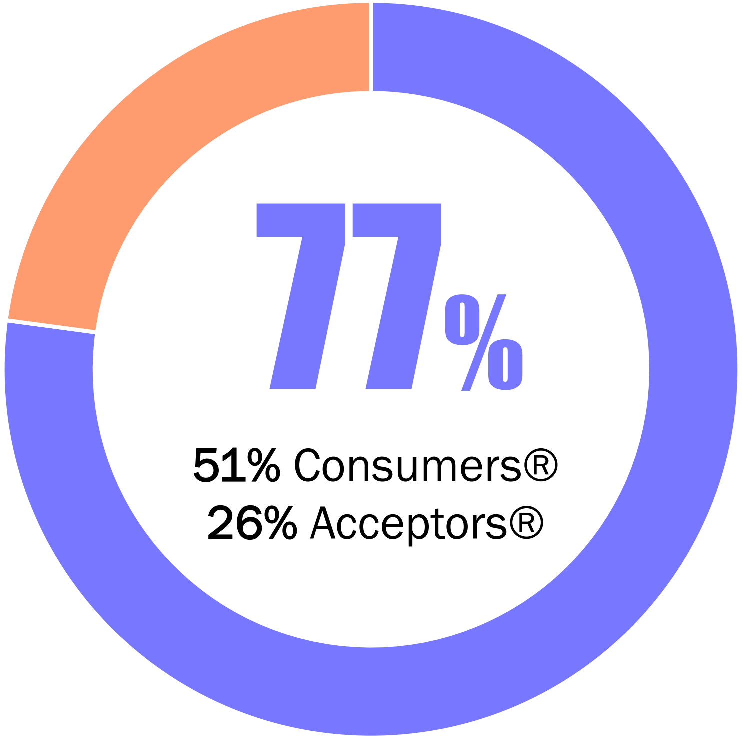
WHAT IF REGULATION WASN'T A FACTOR?



Source: BDSA Forecast, as of September 2022

IN FULLY LEGAL STATES, >75% OF ADULTS ARE "BOUGHT IN" TO CONSUMING

Agg. Adult Use States
(Level 1)

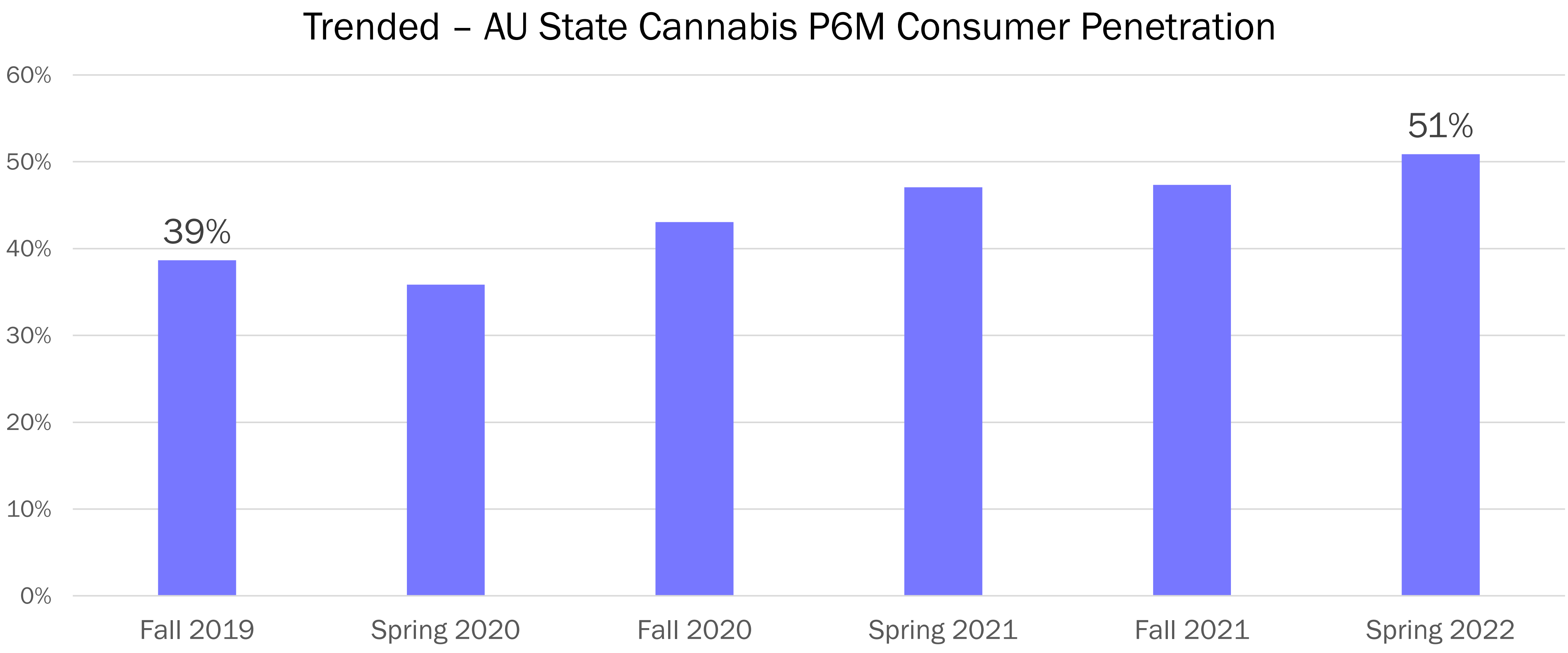


...of adults 21+ in fully legal U.S. states consumed cannabis in the past 6 months or are open to consuming cannabis

23% are **Rejecters®**
(would not consider in the future)

Source: BDSA Consumer Research: Spring 2022 Wave 10 – Aggregate L1 Adults +21

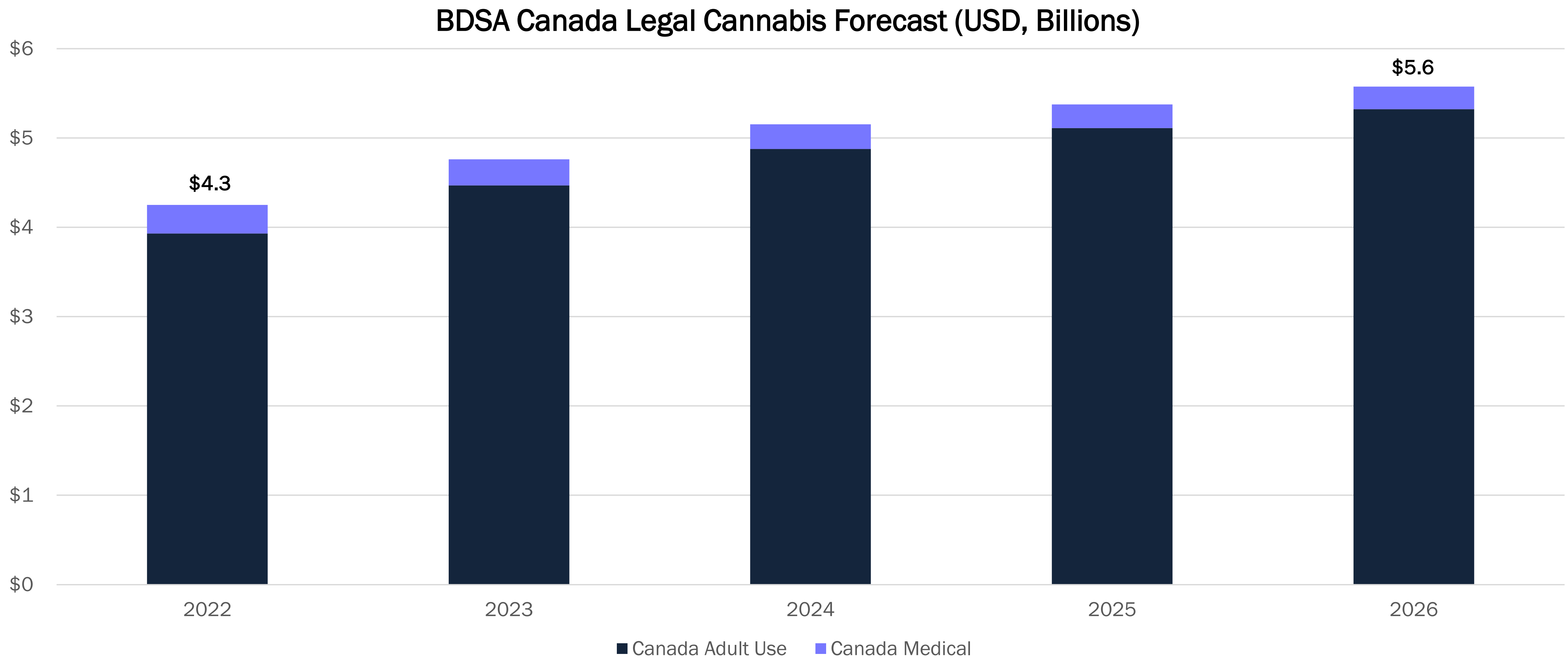
MORE THAN HALF OF ADULTS IN ADULT-USE STATES HAVE CONSUMED CANNABIS IN THE PAST 6 MONTHS.



Source: BDSA Consumer Research: 1H 2018- 2H 2021 U.S. Adults 21+ in Legal Level 1 States

CANADA LEGAL SPENDING

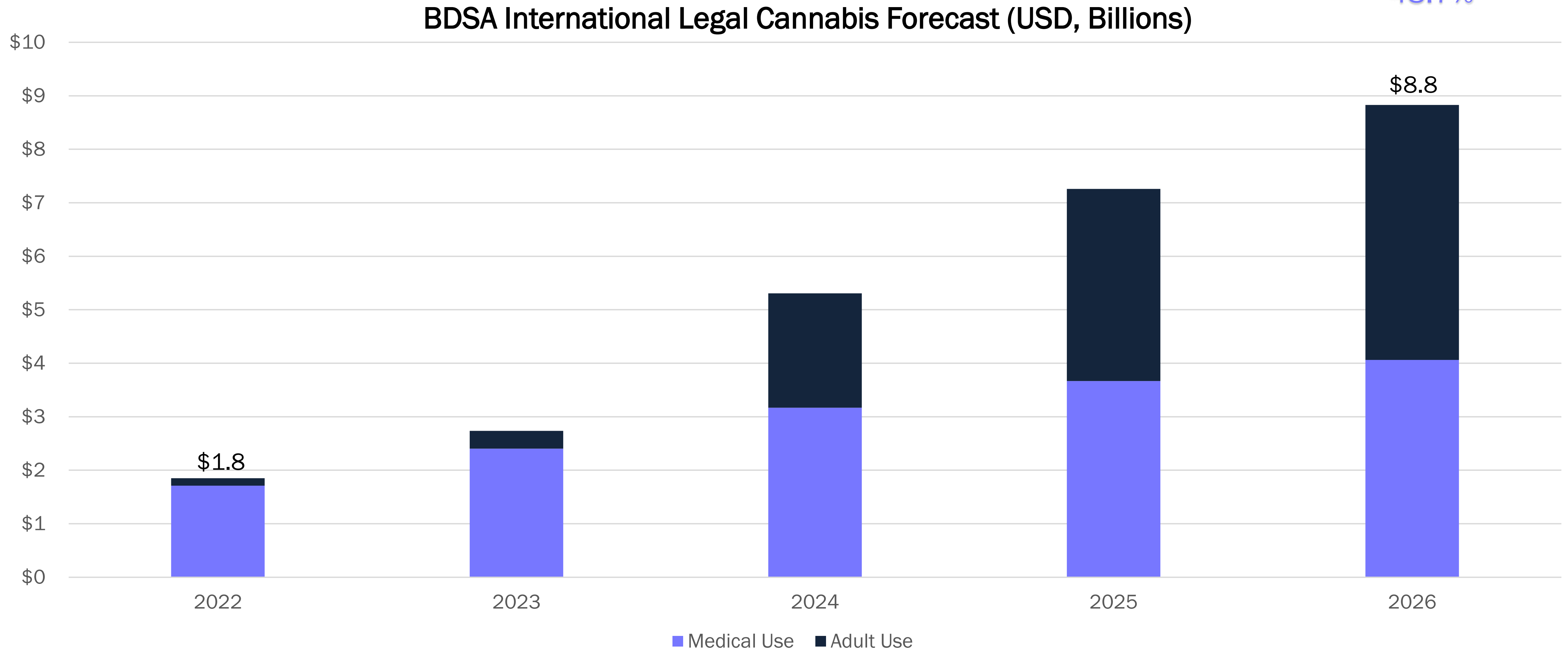
'22-'26 CAGR
7%



Source: BDSA

INTERNATIONAL LEGAL SPENDING (EXCLUDING US AND CANADA)

‘22-’26 CAGR
48.7%

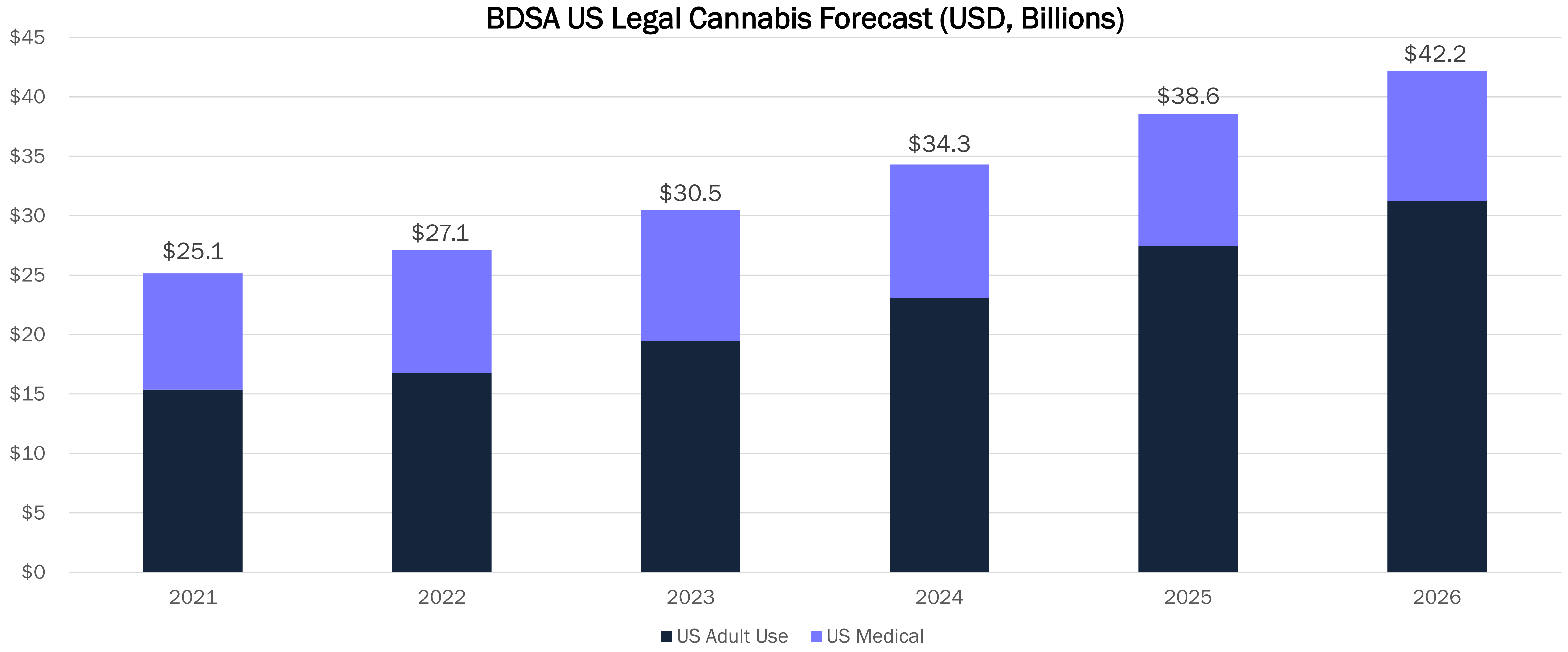


Source: BDSA

Note: International excludes US and Canada

US OUTLOOK: EMERGING MARKETS DRIVING GROWTH

US LEGAL SPENDING



Source: BDSA

WHAT DEFINES A MATURE, NEW AND EMERGING CANNABIS MARKET?

MATURE cannabis markets were early movers in legal cannabis, had long established medical programs, and grew through 2021	NEW Adult-Use and Medical markets that are more recent entries and have established industries and are developing at an ever-increasing rate	EMERGING cannabis markets have recently legalized, and are expected to yield major contributions to BDSA's forecasted market growth out to 2026
Colorado	Illinois	New York
California	Massachusetts	Connecticut
Oregon	Michigan	Maryland
Washington	New Jersey	Virginia

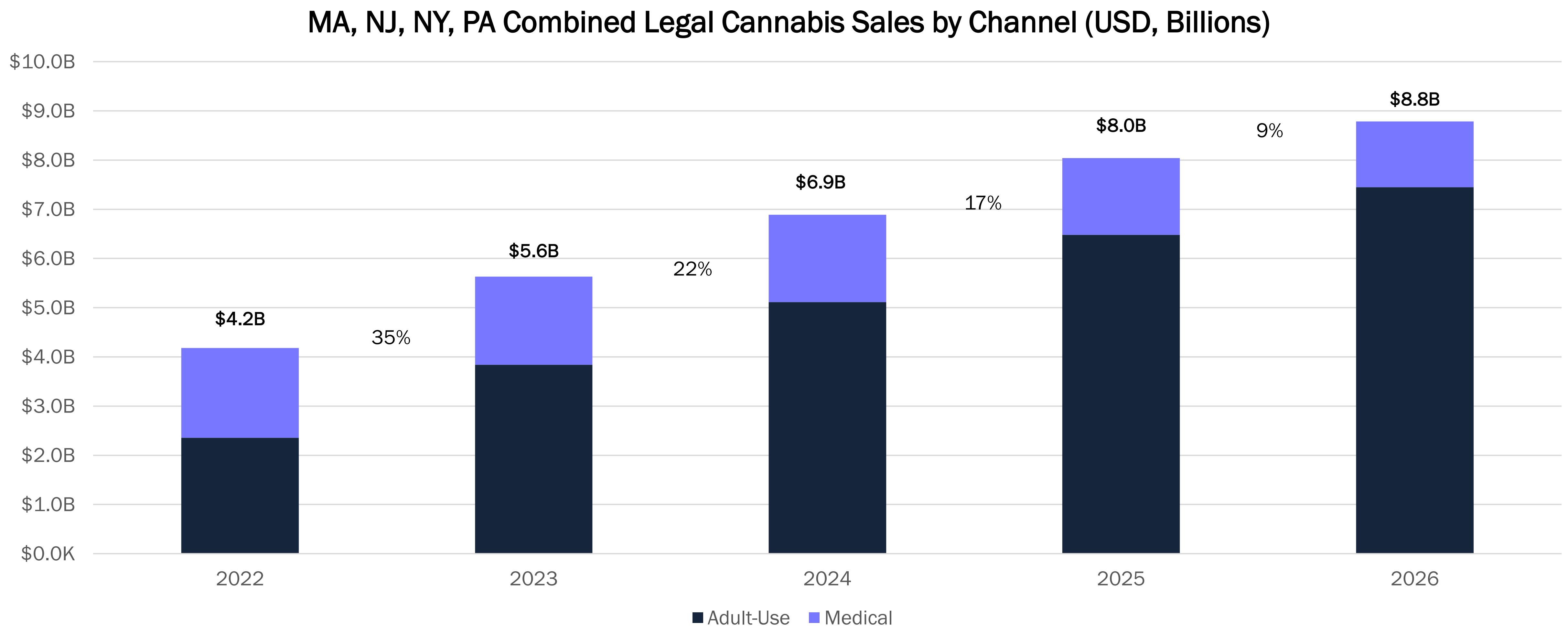
BDSA

FORECAST MARKET LAUNCH DATES (RETAIL SALES)

	MEDICAL	ADULT-USE
2022	Georgia, Mississippi, South Dakota, D.C. *	Guam, Montana, **New Jersey**, New Mexico, **New York**, Vermont
2023	Alabama, Kentucky, North Carolina, South Carolina,	Connecticut, Delaware, Missouri, Rhode Island
2024	Idaho, Kansas, Nebraska	Maryland, North Dakota, South Dakota, Virginia
2025		**Florida, Ohio,** Pennsylvania
2026	Wyoming	

*DC hybrid medical-adult use legal sales to begin in medical channel

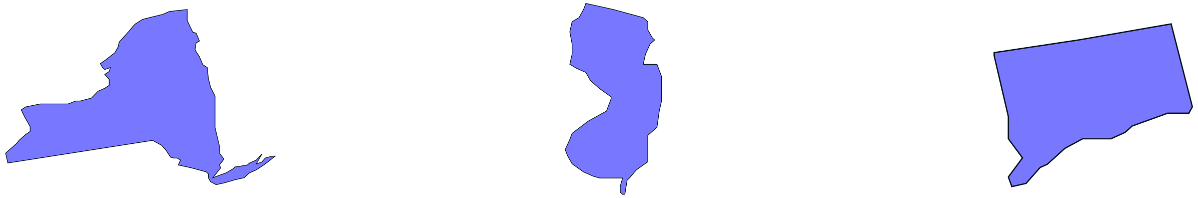
CANNABIS EXPANSION IN EASTERN US



Source: BDSA Market Forecast

REGIONAL REGULATION & IMPLICATIONS

- Markets will struggle with supply during ~6-12 months of roll-out
- High prices are expected as limited structural access and competition from illicit markets challenge sales
- Markets will require indoor cultivation contributing to higher prices than outdoor-viable markets
- Tighter regulations and limited access may blunt initial sales until states expand retail footprints

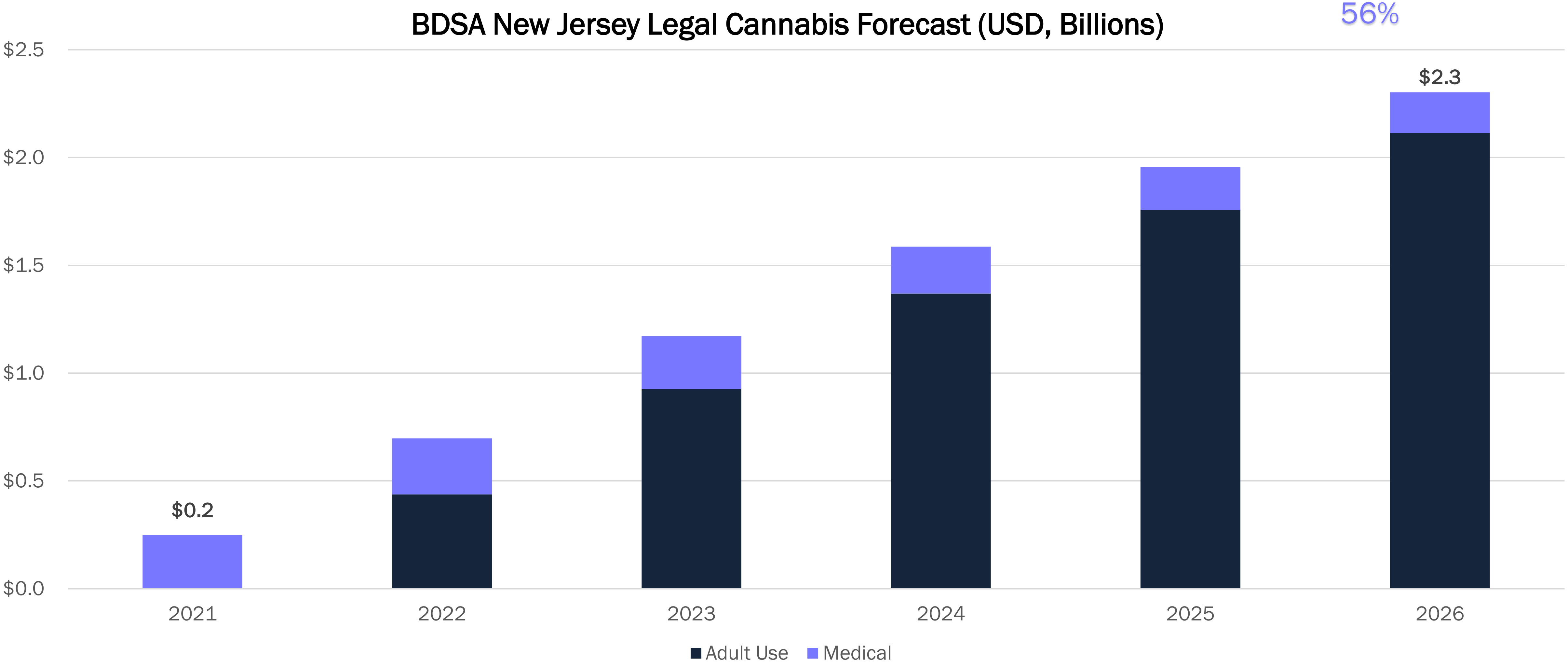


	New York	New Jersey	Connecticut
Retail Opens	Late 2022	April 22	Early 2023
Home Cultivation	6 plants	None	7/1/23 - 6 plants / person; 12 plants / household
Weight Limits	3 oz flower, 24 grams concentrate	1 oz	up 6.5 oz cannabis or equivalent amount concentrates
Consumer Sales Tax	9% state, 4% local	7%	~20% (6.35% state, 3% municipal, ~10 - 15% of sale / THC content)
License Prioritization	Minority / women-owned businesses, applicants from communities disproportionately impacted by cannabis enforcement, distressed farmers, service-disable Vets	Minority / women-owned businesses, businesses located in "economically distressed areas"	Reserve 50% of applications for eligible license types for "social equity applicants"
Cultivator License Caps	None - but individuals can't hold retail license or distribution license	37 (expires 02/23)	None - but applicants can only get approval for one license type

Source: BDSA

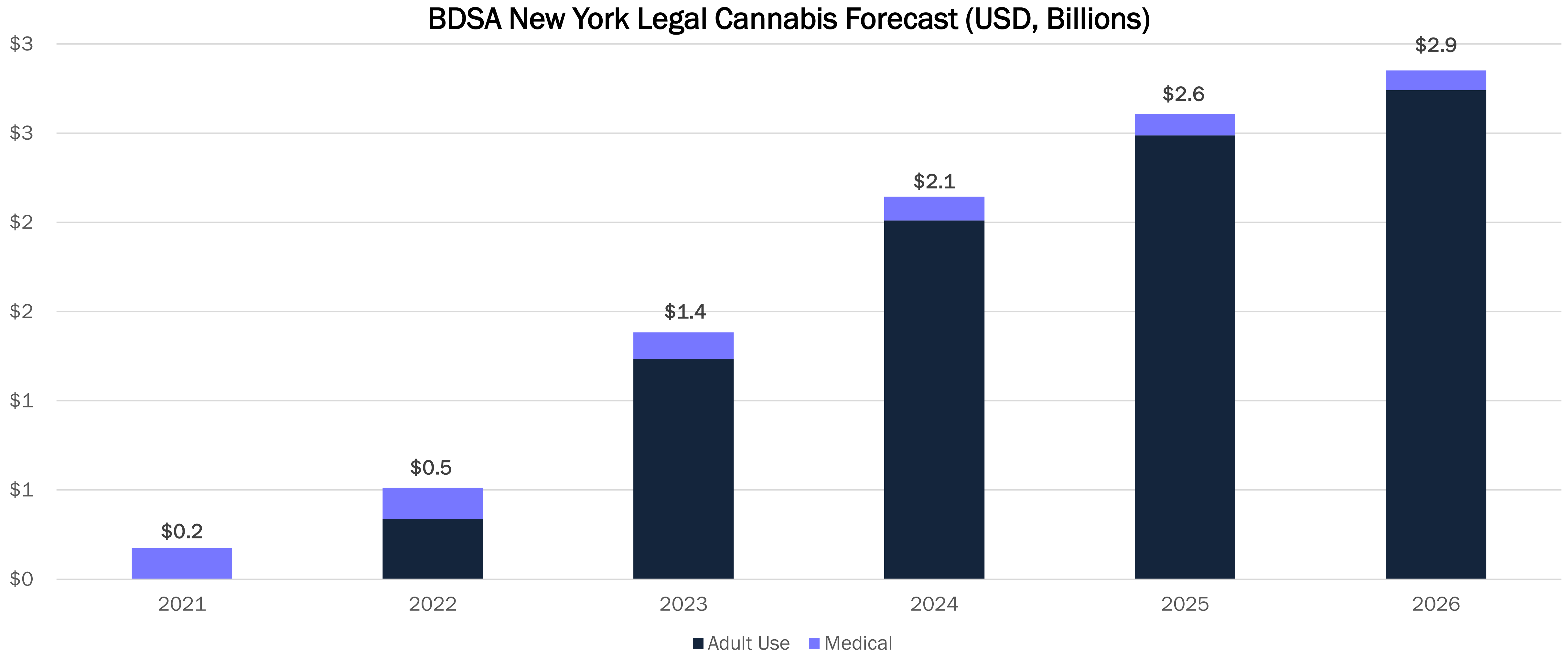
US LEGAL SPENDING: NEW JERSEY

‘21-’26 CAGR
56%



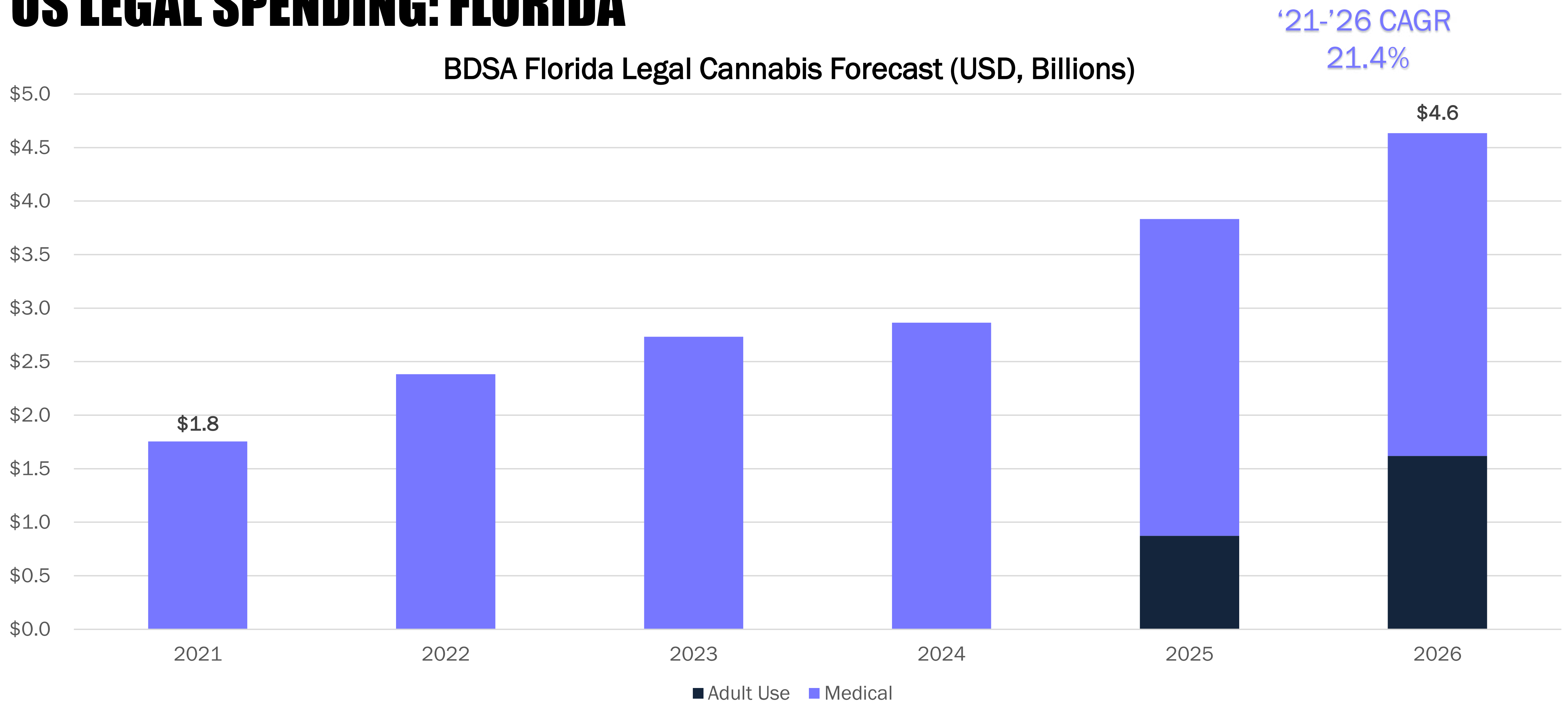
Source: BDSA

US LEGAL SPENDING: NEW YORK



Source: BDSA

US LEGAL SPENDING: FLORIDA

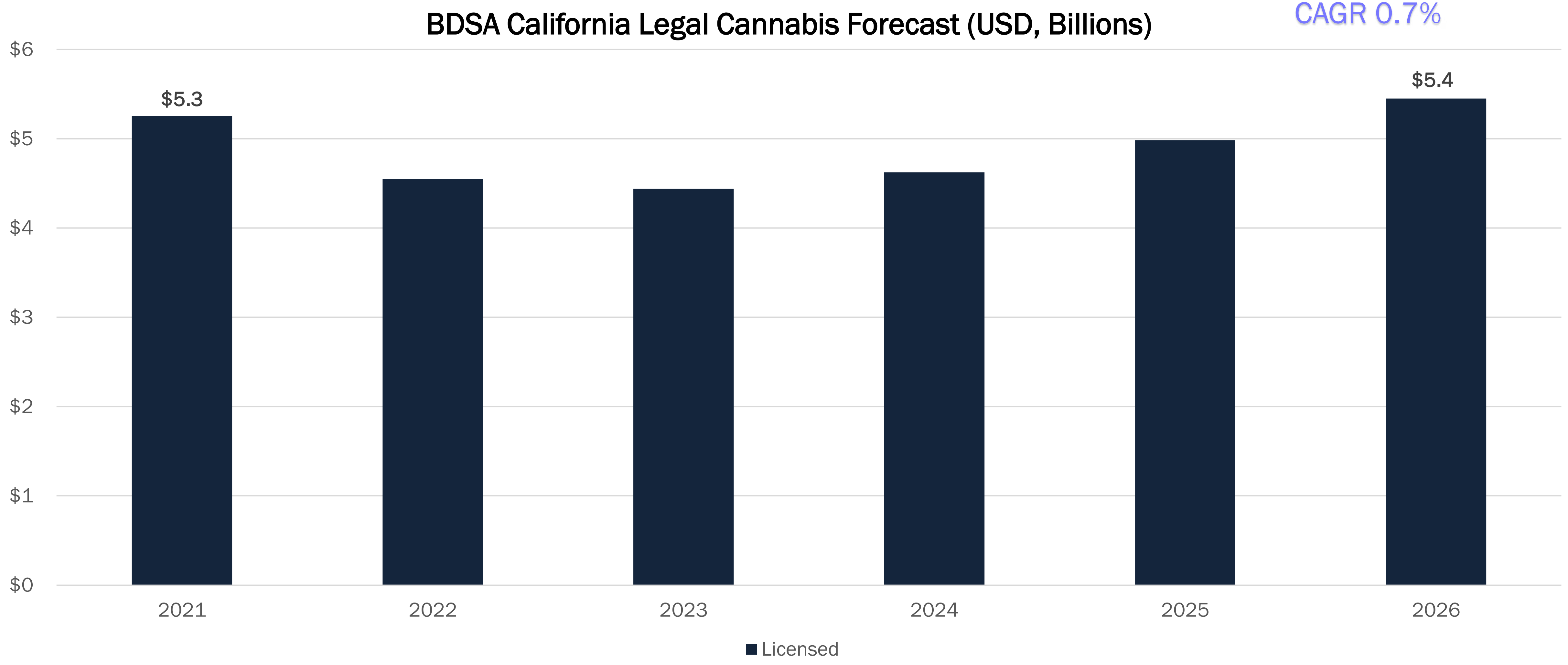


Source: BDSA

US OUTLOOK: MATURE MARKET CHALLENGES

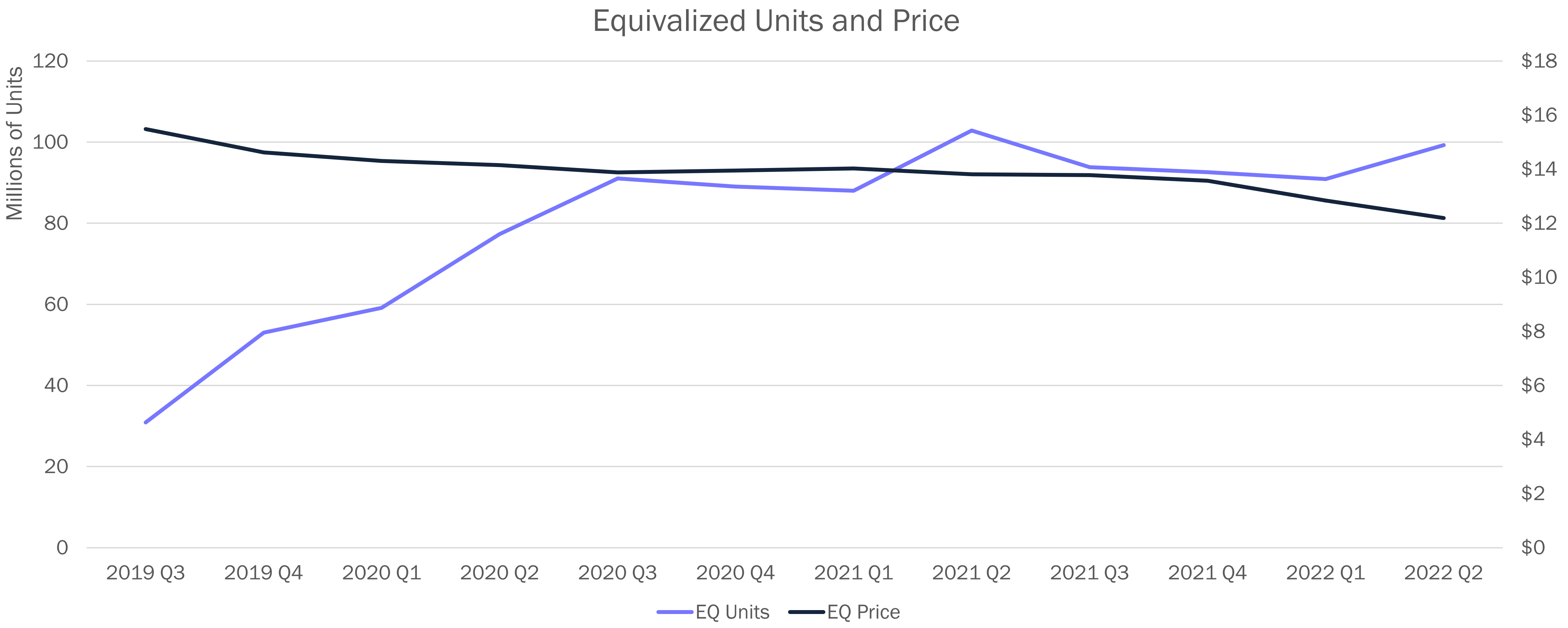
US LEGAL SPENDING: CALIFORNIA

‘21-’26
CAGR 0.7%



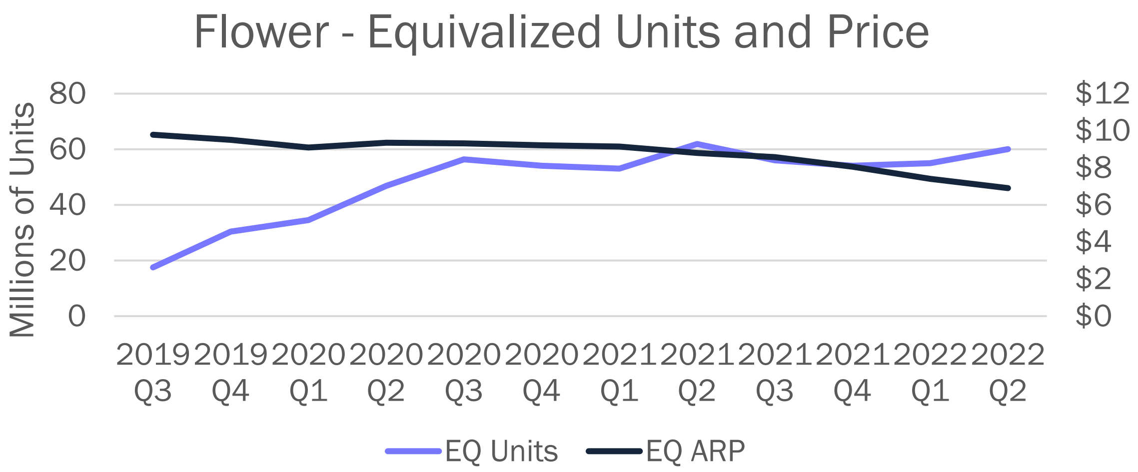
Source: BDSA

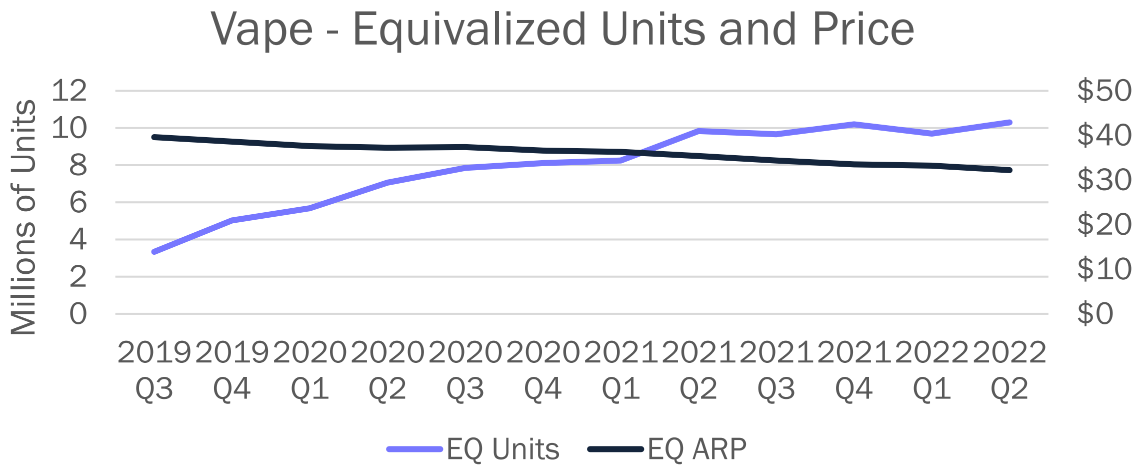
CALIFORNIA - AGGREGATE VOLUME AND PRICING

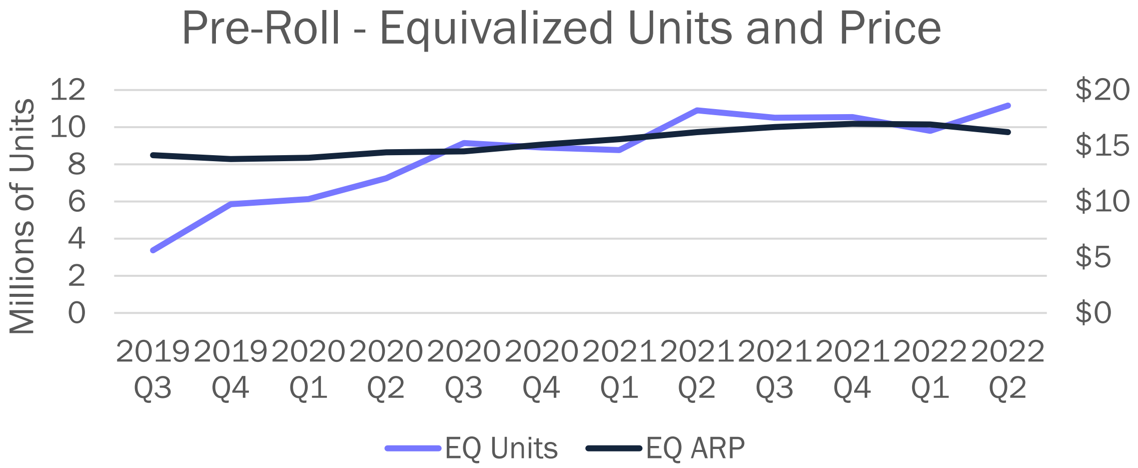


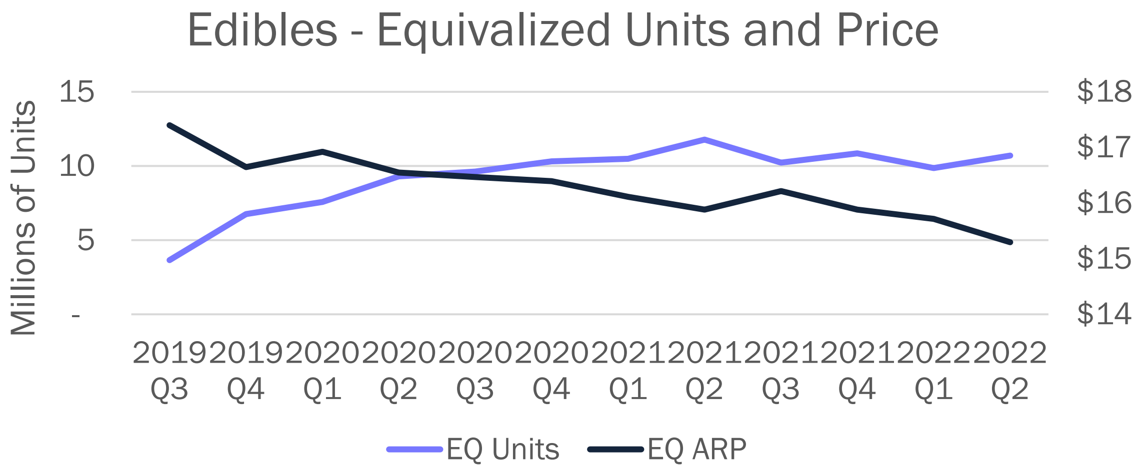
Source: BDSA

CALIFORNIA – KEY CATEGORY VOLUME AND PRICING







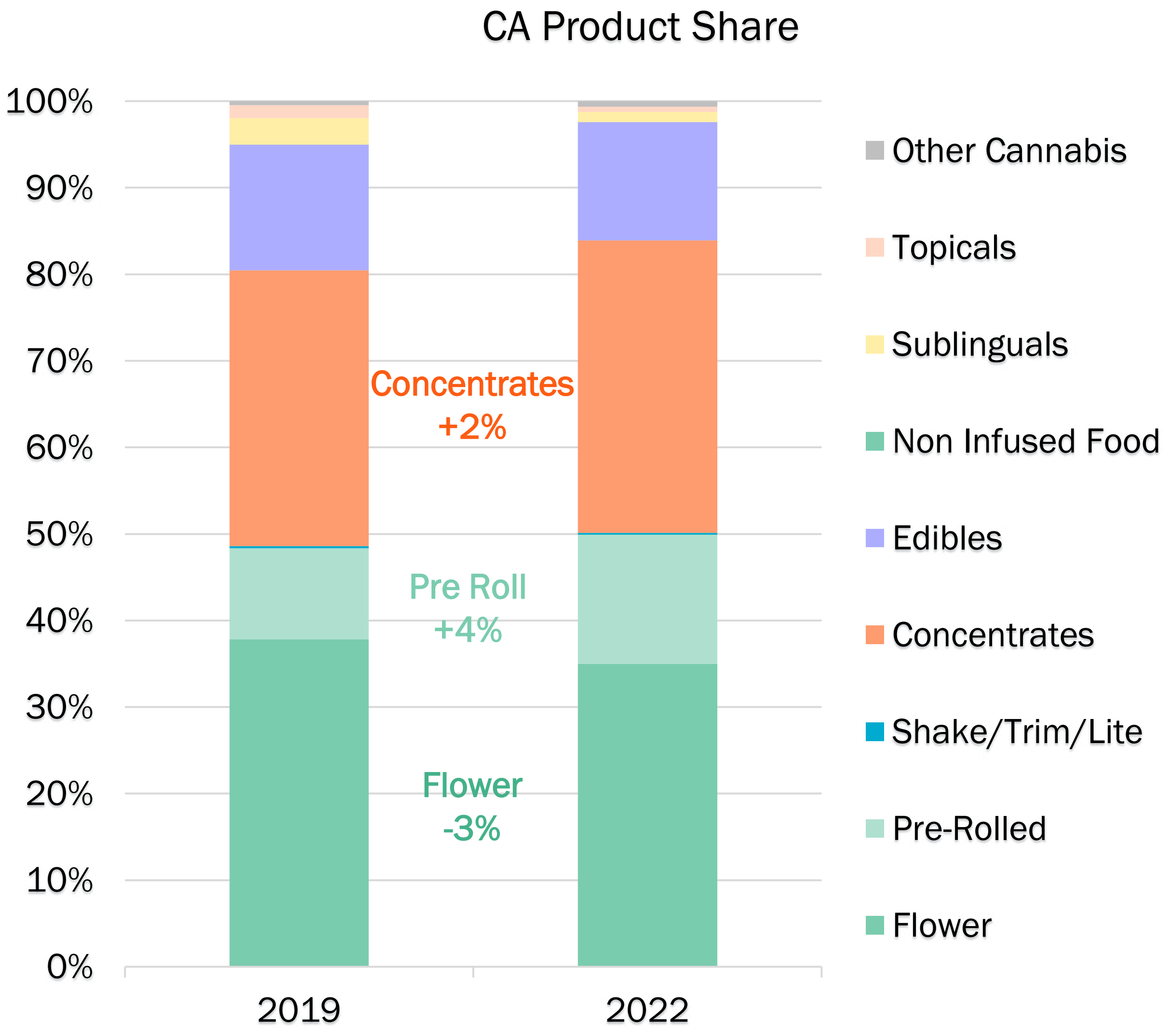


Source: BDSA

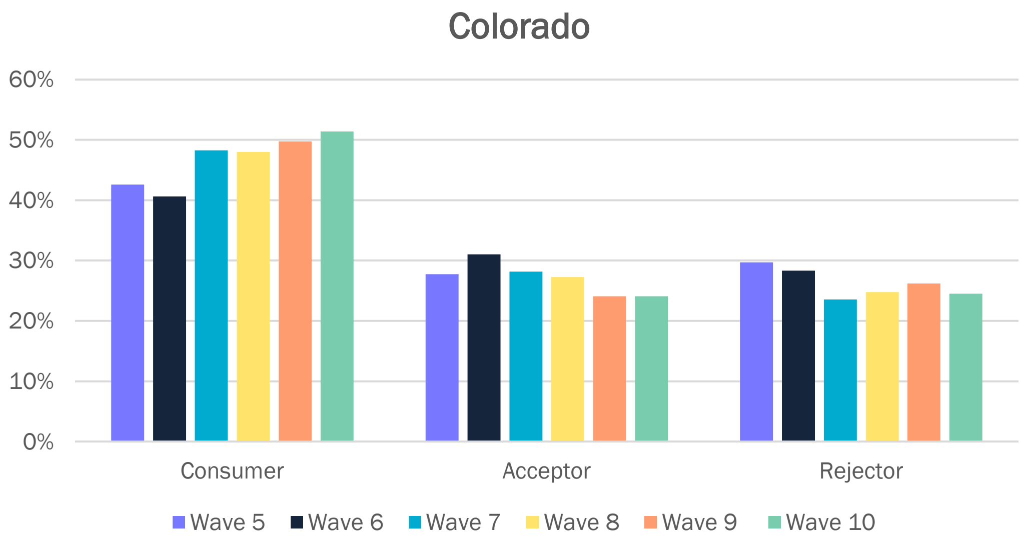
MATURING CONSUMER PREFERENCES IMPACT PRODUCT MIX

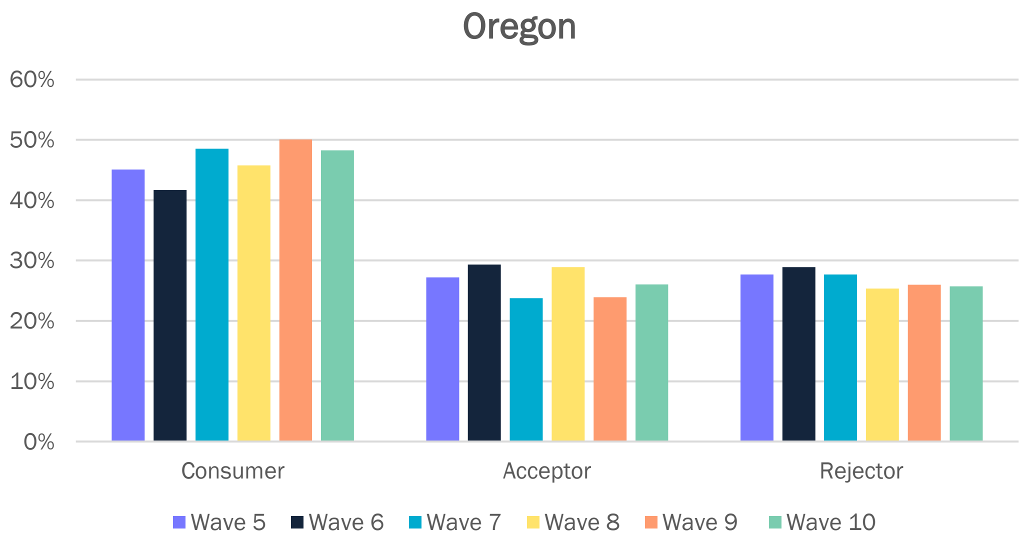
Flower share continues to decline as ease of use and discretion become more valued by the larger consumer set

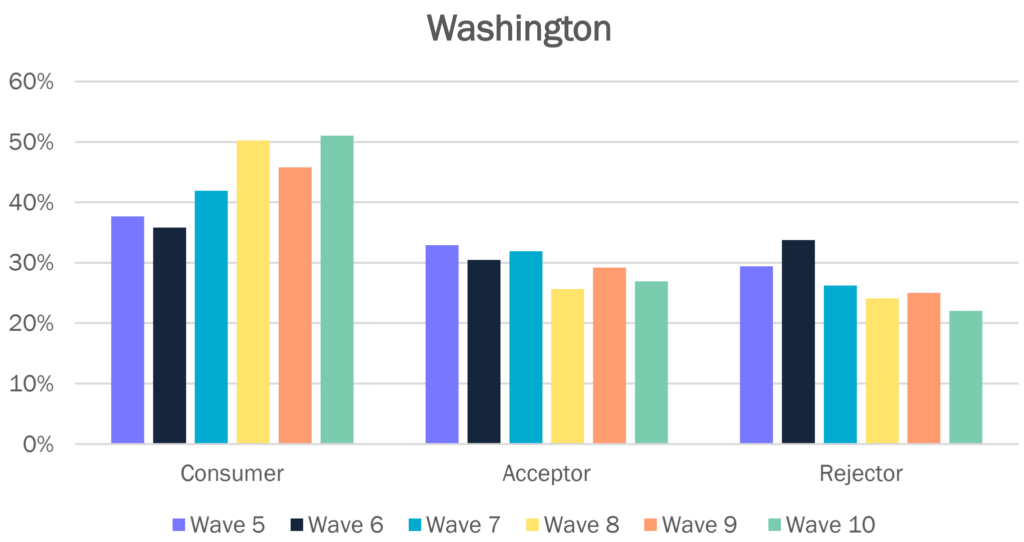
Price pressure has led to higher quality products in processed categories such as Concentrates and Pre-Rolls

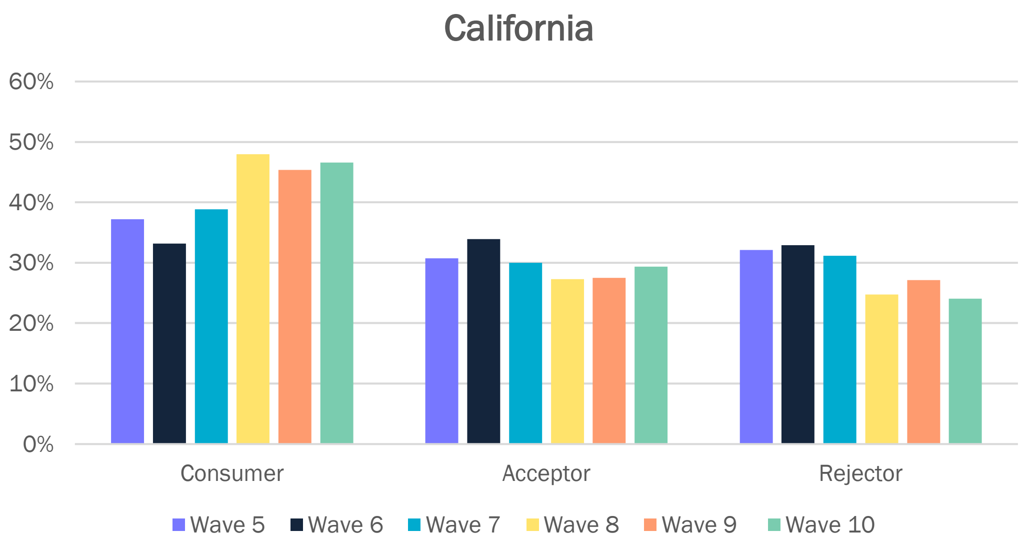


CONSUMER RATES REMAINS STRONG IN MATURE MARKETS





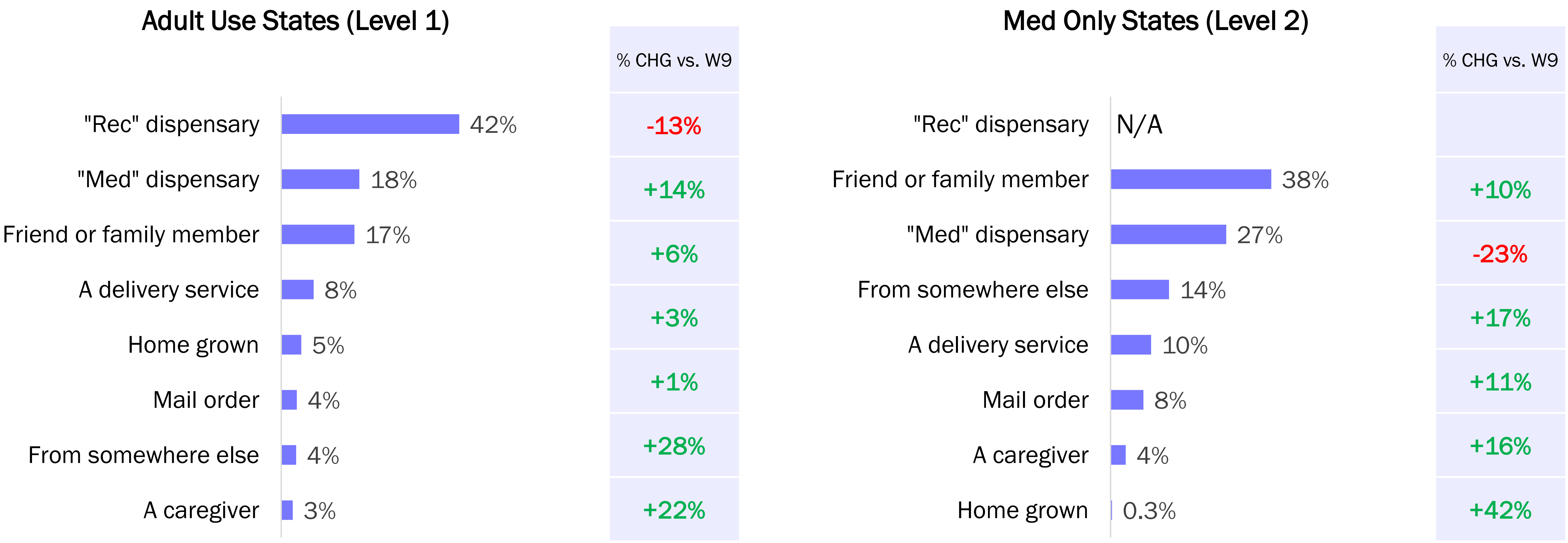




Source: BDSA Consumer Insights Wave 5 through Wave 10

CONSUMERS ACQUIRE CANNABIS FROM MULTIPLE SOURCES

Consumer Sourcing - % Most Frequent Source

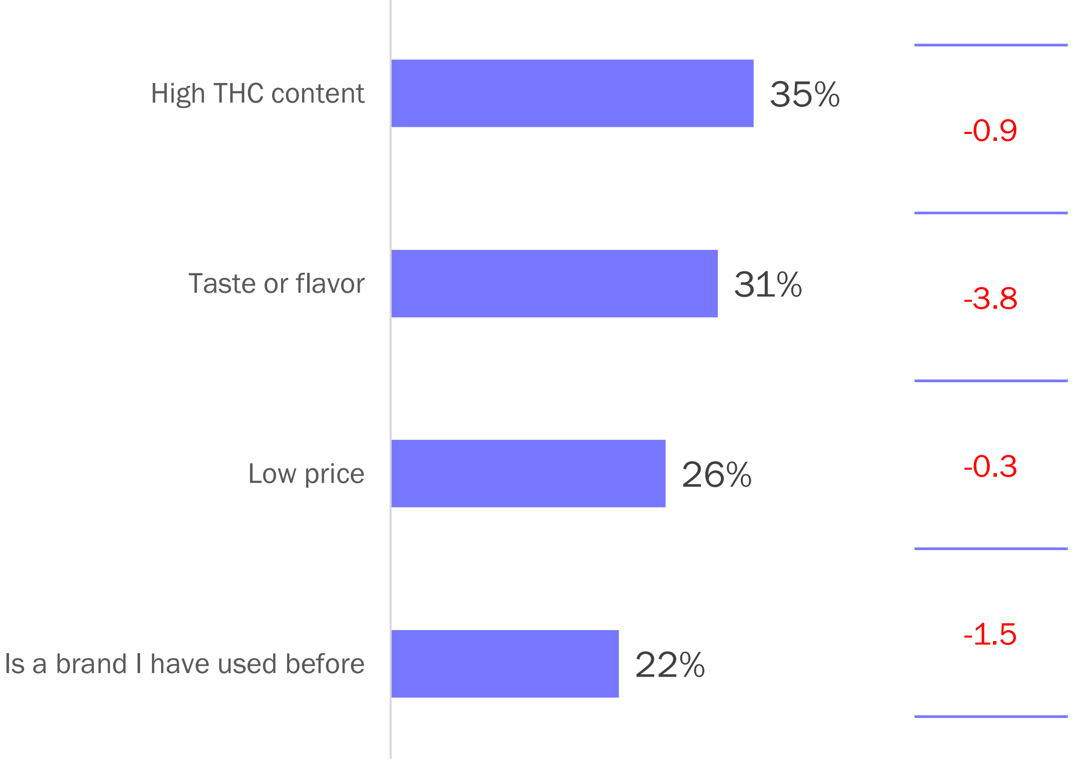


Source: BDSA Consumer Insights, Spring 2022. US Adult Use & Med-Only States. Consumers 21+
Note: "Consumers" includes adults who've consumed cannabis in the past 6 months

THC CONTENT STILL THE TOP PRODUCT DRIVER

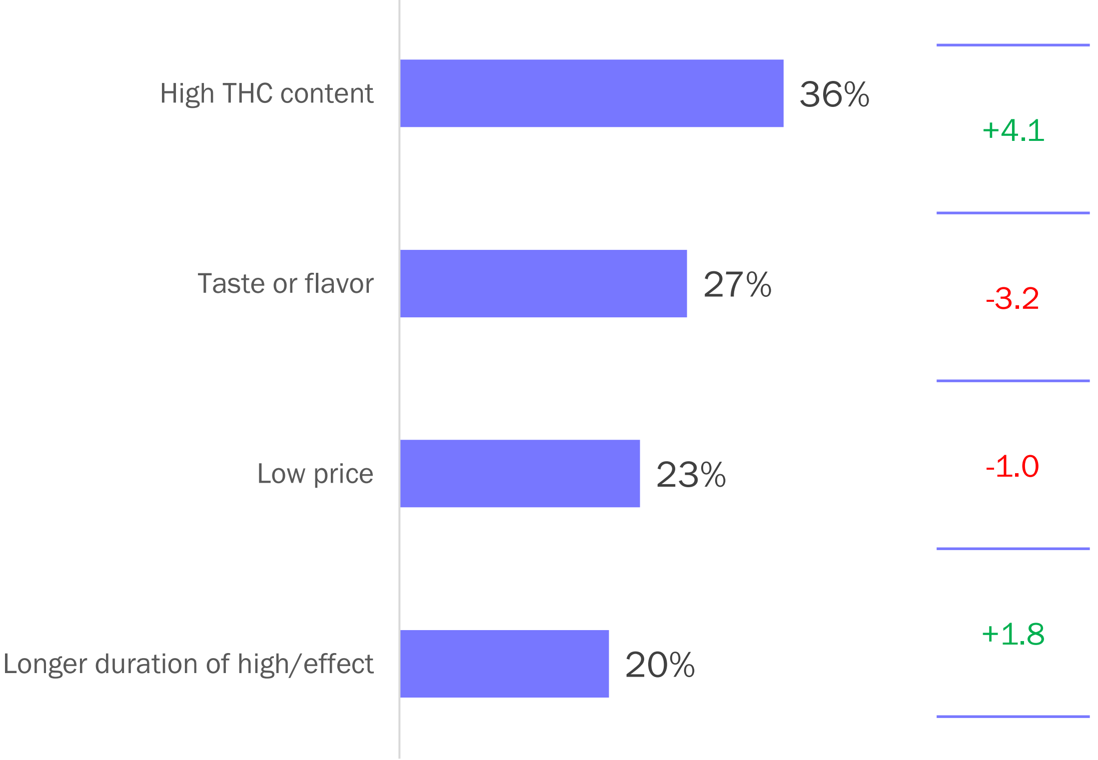
Top 5 Product Choice Drivers, Adult-Use Legal States

Point Changes vs. Q4 2021



Top 5 Product Choice Drivers, Medical Legal States

Point Changes vs. Q4 2021



Source: BDSA Consumer Insights, Spring 2022. US Adult Use & Med-Only States. Consumers 21+
Note: "Consumers" includes adults who've consumed cannabis in the past 6 months

US OUTLOOK: CONSOLIDATION AND MULTI-STATE BRANDS

HOW BIG IS THE INFLUENCE OF MULTI-STATE OPERATORS IN CANNABIS?

WHAT THEY ARE

- MSOs are cannabis companies that span across multiple legal cannabis states. The ones you hear about are powerhouses in brands and retail

HOW THEY ARE CHANGING THE CANNABIS LANDSCAPE

- They are large organizations established to expand geographical footprint of brands, products, and retail
- 9 of the top 10 leading cannabis brands tracked by BDSA are owned by MSOs. They are dominating top brands in new markets such as Arizona and New Jersey maintain strong market share in mature markets like California
- More and more they are becoming the first entrants into up-and-coming states, either through expansion or M&A

Source: BDSA US Retail Sales Tracking

THE LARGEST FIRMS CONTINUE TO MAKE UP THE MAJORITY OF SALES

And with inter-industry M&A consolidation and attrition of smaller, independent brands likely to continue (and accelerate), even fewer in the future will control majority share of US

TOP 25 PARENT COMPANIES BY BDSA TRACKED RETAIL SALES (YTD 2022)

243 BRAND HOUSES

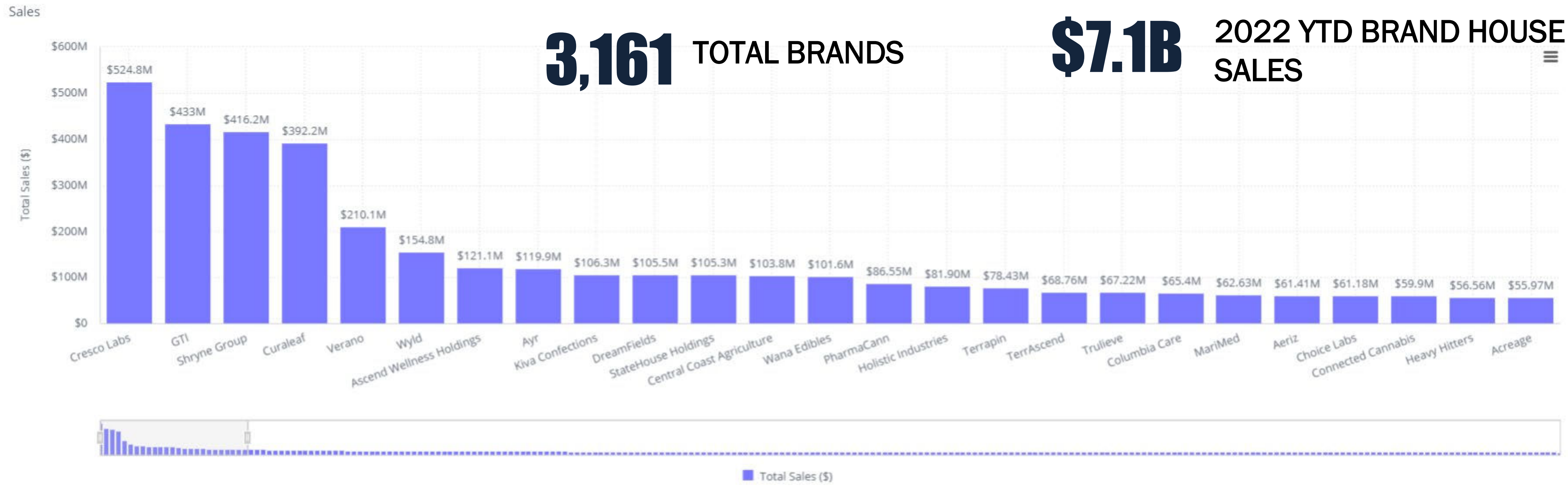
465 BRAND HOUSE BRANDS

out of

3,161 TOTAL BRANDS

78% 2022 YTD SHARE OF SALES (+2% vs. Prev. Period)

$7.1B 2022 YTD BRAND HOUSE SALES



Source: BDSA – Retail Sales Tracking – Brand House January 2022 – July 2022 AZ, CA, CO, IL, MA, MD, MI, MO, NJ, NV, OR, PA

VERTICAL/RETAILER DOMINANCE

Store brands (unbranded) <u>OR</u> brands associated with a vertically-integrated retailer or MSO have dominance – especially in less-mature markets

Market	Retailers per capita (100K)	Total # of Brands YTD 2022	% Sales Branded YTD 2022	% Sales Unbranded (Store Brand, Not Wholesaled)	OF BRANDED: # of Top 5 that are MSO/Vertical Brands
AZ	5	299	89%	11%	5
CA	4.3	1,140	92%	8%	4
IL	1.7	138	95%	5%	5
MD	1.6	130	98%	2%	3
MA	4.1	296	90%	10%	2
NV	6.6	298	80%	20%	5
NJ	0.4	65	86%	14%	5
OR	23.6	825	89%	11%	3
CO	23.8	502	66%	34%	4

Source: BDSA US Retail Sales Tracking

Younger markets show denser brand concentration given MSO and Vertical presence, while Western (and more mature) markets are more fragmented

BDSA TOP MSOS & BRANDS IN ACTIVE NORTHEAST MARKETS

Brands

	Massachusetts	Pennsylvania	New Jersey
Brands	Rythm	Cresco	Verano
	Cultivate (MA)	Rythm	Curaleaf
	Happy Valley	Grassroots Cannabis	Kind Tree
	Insa	Organic Remedies	Select
	Fernway	High Supply	Rythm

MSOs

MSOs	GTI	Cresco Labs	Curaleaf
	Cresco Labs	GTI	Verano
	Ayr	Curaleaf	TerrAscend
	MariMed	Terrapin	GTI
	Insa	Organic Remedies	Acreage

*Source: BDSA Rapid Retail Sales Tracking - Massachusetts (Adult-Use + Medical); Pennsylvania (Medical), New Jersey (Adult-Use + Medical) 2022 YTD

WHAT'S WINNING IN CANNABIS

PREMIUMIZATION WITH POTENCY VIA INFUSED PRE-ROLLS

Infused pre-rolls provide consumers additional potency at a premium, but help brands differentiate and premium-ize their offerings in an increasingly crowded pre-roll category as brands look to repurpose oversupply of flower and recoup diminishing margins on flower

30%

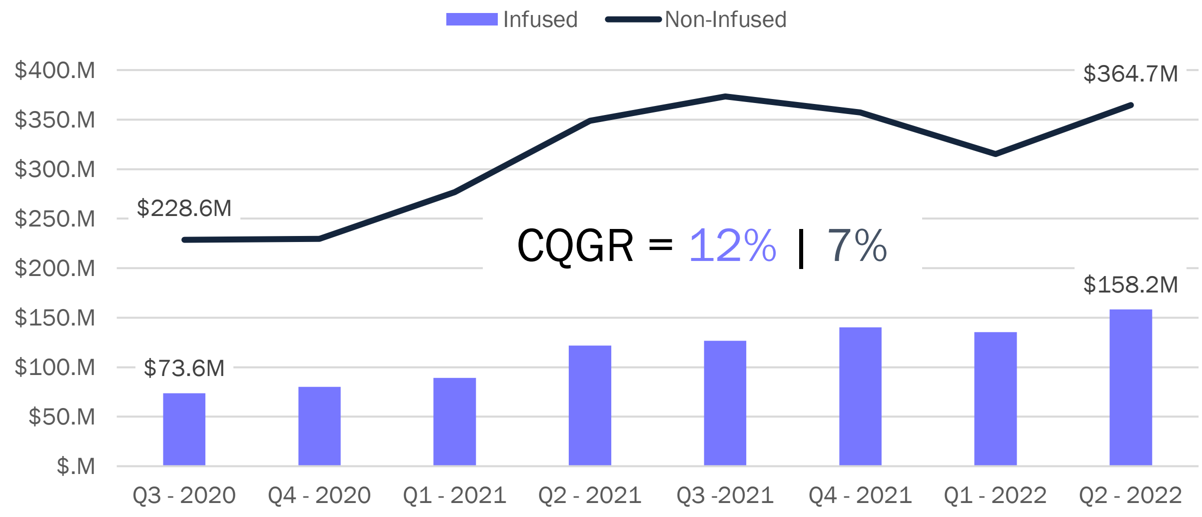
(+6 PTs vs. Q3 '20)
Q2 '22 - Infused Share of Pre-Roll Sales

>3%

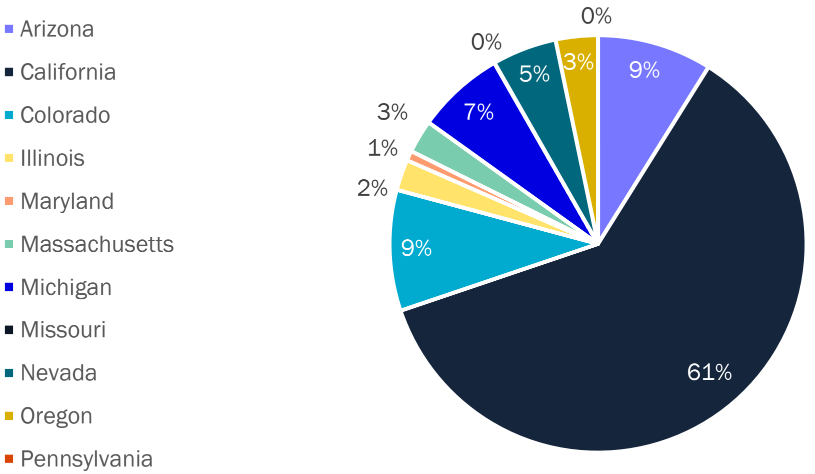
(+1 PTs vs. Q3 '20)
Q2 '22 - Infused Share of Total Cannabis Sales

Top 5 - Infused Pre-Roll Brands YTD 2022
Jeeter
Kingpen
Sublime Canna
Presidential Rx
Kaviar

Trended Pre-Roll Sales - Infused vs. Non-Infused



Infused Pre-Roll $ Share by Market - 2022 YTD



ROSIN UPSELLING IN VAPES

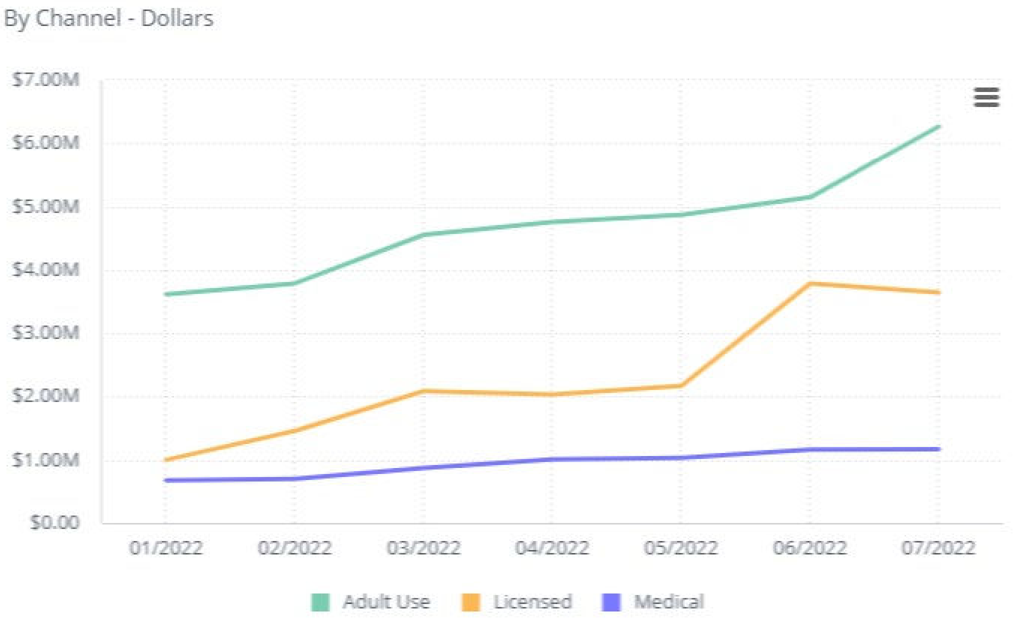
Pricing pressure in Flower has not been contained to solely that format; however, some processed categories have been able to retain price through premiumization of offerings. Rosin is now attainable and understood by a larger consumer set than ever at current prices and there is evidence consumers see added value

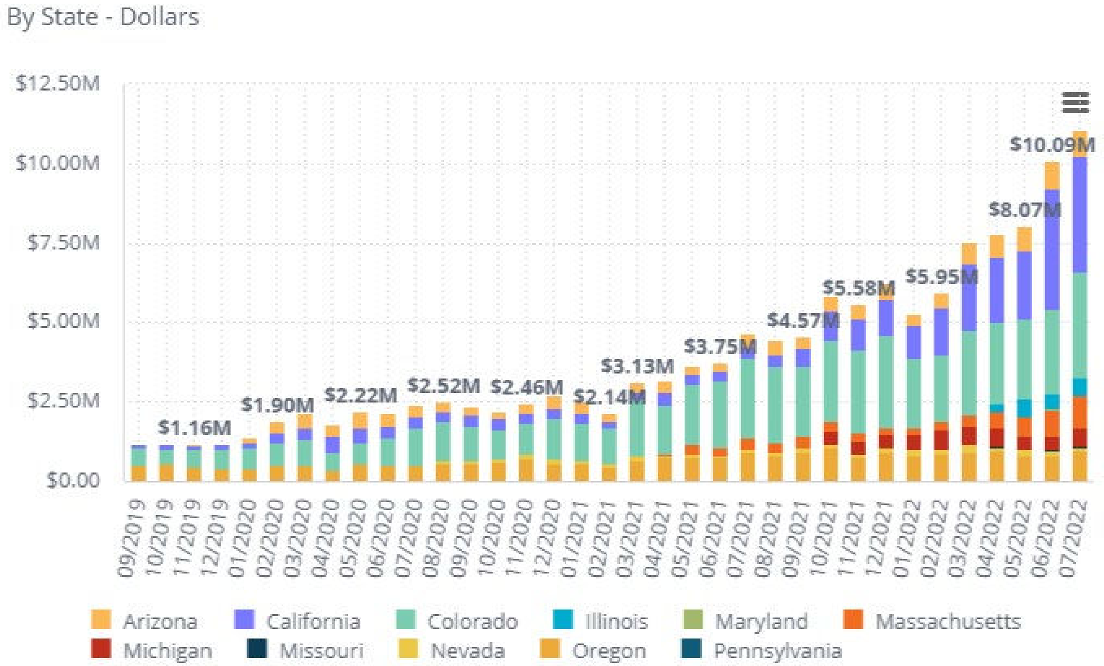
109%
(Jan 22 vs. July 22)
Rosin Vape Sales

20%
(Jan 22 vs July 22)
All Other Vape Sales

-4%
(Jan 22 vs. July 22)
Rosin Vape EQ ARP

-12%
(Jan 22 vs. July 22)
All Other Vape EQ ARP





MINOR CANNABINOIDS

In BDSA's Retail Sales Tracking in California, the top gummy edible products YTD 2022 for KIVA, WYLD and KANHA each contained either CBN or CBD minor cannabinoids

64%

Of CBD Users believe in medical benefits

(BDSA: Spring 2022)

16%

Of CBD Users have knowledge of CBN

(BDSA: Spring 2022)

PORTFOLIO PRICE TIERING ACROSS BRANDS AND CATEGORY ASSORTMENT

Top brands are starting to see the true benefit of this earlier implemented strategy as prices compress and consumers continue to mature and look for more “premium” attributes in mainstream products.

	VALUE		MAINSTREAM		PREMIUM
CRESCO LABS™	HIGH SUPPLY™		CRESCO CANNABIS™		FLORACAL™
STIIIZY™ (SHRYNE GROUP™)	BOTANICAL-DERIVED TERPS	CANNABIS-DERIVED TERPS		LIQUID LIVE RESIN	SOLVENTLESS LIVE ROSIN
OZONE™ (ASCEND HEALTH WELLNESS HOLDINGS™)	OZONE™		OZONE BALANCE™		OZONE RESERVE™
WANA™	CLASSIC	QUICK		OPTIMALS	FULL SPECTRUM (LIVE ROSIN)

WHAT'S NEXT

Cannabis Market Predictions

BDSA CANNABIS MARKET PREDICTIONS

1. The road to growth and a mature market will face some near-term headwinds in the form of supply, pricing, and regulatory challenges, but long-term outlook remains strong.

2. Short Term growth will primarily come from New and Emerging markets both in the US and Globally.

3. Prices will continue to face stiff pressure in mature markets: Western states will experience pressure while emerging markets in New Jersey, New Mexico and New York will continue to open with high price per gram.

4. Consolidation, attrition of smaller brands and M&A activity will accelerate in 2023

5. “Illicit” market competition will remain strong for the foreseeable future – Markets in California, New York and Illinois face strong illicit markets

6. Premiumization, portfolio price tiering, highly differentiated offerings and functional ingredients fuel product growth

IT'S A NEW GAME.

DATA. DEEPER.

INFO@BDSA.COM