Harbinger Research
Independent Investment Analysis

Updated Coverage Report

United States
E-cigarette and Vape Industry

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Kaival Brands Innovations Group, Inc. (KAVL – NasdaqCM)

Philip Morris royalties growing very rapidly, while the Company continues to expand its large-retailer footprint, adding 1,500 new Circle K locations just last quarter.

Strong Buy

Recent Price: US$0.37

Market Data (closing prices, October 6, 2023)	
Market Capitalization (mln)	21..6
Enterprise Value (mln)	25.7
Fully Diluted Shares (000s)	72,195
Avg. Volume (90 day, approx.)	155,160
Institutional Ownership (approx.)	1.8%*
Insider Ownership	77.5%*
Exchange	NasdaqCM

**Fully-diluted, as of July 30, 2023*

Balance Sheet Data (as of July 30, 2023, in $000s)	
Shareholders' Equity (000s)	16,010
Price/Book Value	1.35
Cash (000s)	1,003
Net Working Capital (000s)	2,360
Long-Term Debt (000s)	915
Total Debt to Equity Capital	0.32

Company Overview

Kaival Brands Innovations Group, Inc. is a pioneering company in the electronic cigarette and vaping industry, specializing in the development, marketing, and distribution of innovative products and technology solutions. With a focus on research and development, Kaival Brands offers a range of high-quality electronic nicotine delivery systems (ENDS), e-liquids, and accessories, serving a diverse customer base. The Company's mission is to provide safer, technologically advanced alternatives to traditional tobacco products.

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Summary and Investment Opportunity

- **After quarters of lackluster results, we expect sales growth to accelerate soon**

After having had $100 million in sales in CY2020, the Company hit hard times in 2021 and 2022, due to a rapid influx of illegal and inexpensive foreign imports, the COVID-19 pandemic and its lockdowns, and a rapidly deteriorating U.S. regulatory environment for flavored electronic nicotine delivery systems, known as ENDS. However, after winning a court battle with the FDA in Aug of '22 that allowed it to continue selling its Bidi Stick ENDS product, and with a renewed focus on larger, compliance-focused retailers rather than on smaller, non-compliant convenience stores, Kaival Brands has positioned itself for rapid growth. Initial indications of the coming ramp up include an expanding relationship with Circle K and recent large orders through distributors H.T. Hackney and Coremark.

- **Recent acquisition of GoFire intellectual property portfolio fuels innovation**

In June of '23 the Company acquired 12 patents and 46 patents pending in an equity-based transaction from GoFire, a private company focused on the development of various products for pharmaceutical and recreational use, including ENDS and cannabis/hemp devices. The Company believes that this IP portfolio will enable multiple licensing deals and near-term royalty revenues, in addition to enabling the creation of unique ENDS product technologies based on patented metered dosing and other technologies.

- **FDA gets more serious about enforcing prohibition of illicit ENDS sales**

The FDA has recently begun aggressive enforcement actions against vendors of illegal ENDS devices that should ultimately slow or prevent sales of the foreign products whose low prices originally caused Kaival's steep revenue declines that began in 2021. If and when real FDA enforcement occurs, Kaival could gain very significant pricing power.

- **Turnaround now in full swing as Kaival Brands lands major new customers**

The Company survived a very difficult business downturn in 2021 through early 2023 and is now poised for accelerating growth. We believe its recent announcements regarding adding 1,500 new Circle K locations cements our thesis of accelerating growth during CY 2024 and beyond. We expect additional announcements regarding new, larger customers shipments during the coming quarters. We also expect to see Kaival's royalty receipts reach seven figures next fiscal year. Based on our price-to-sales-to-growth analysis, **we believe fair value for KAVL shares is between $1.73 and $2.16. Therefore we maintain our Strong Buy rating and set our 12-month price target at $1.80 per share.**

P&L (000s)	FY'20A	FY'21A	FY'22A	FY'23E	FY'24E	FY'25E	FY'26E	FY'27E
Revenues	**64,314**	**58,776**	**12,761**	**13,149**	**23,141**	**41,003**	**61,466**	**88,301**
Rev CAGR	*N/A*	*-8.6%*	*-78.3%*	*3.0%*	*76.0%*	*77.2%*	*49.9%*	*43.7%*
Gr. Margin	*15.6%*	*20.3%*	*9.7%*	*25.3%*	*44.7%*	*50.4%*	*51.5%*	*50.6%*
Op. Income	5,360	(10,469)	(14,389)	(10,160)	(3,186)	4,070	11,796	20,450
Op. Margin	*8.3%*	*-17.8%*	*-112.8%*	*-77.3%*	*-13.8%*	*9.9%*	*19.2%*	*23.2%*
Net Income	**6,875**	**(9,033)**	**(14,370)**	**(10,833)**	**(3,725)**	**4,070**	**11,796**	**20,450**
Net Margin	10.7%	-15.4%	-112.6%	-82.4%	-16.1%	9.9%	19.2%	23.2%
Dil. EPS*	**0.013**	**(0.37)**	**(0.362)**	**(0.169)**	**(0.052)**	**0.056**	**0.163**	**0.283**
Dil. Shares*	516,214	24,000	39,710	64,182	72,195	72,195	72,195	72,195

** We compute fully diluted shares based on the full conversion of all equity-linked securities*

Please see analyst certification and disclosures on page 20 and 21 of this report.

Industry Background and Analysis

Industry Development and History

The e-cigarette / vaping industry has experienced significant growth since the introduction of the first e-cigarette, known in the industry as ENDS (electronic nicotine delivery systems) in the early 2000s. These devices were developed as a safer alternative to traditional cigarettes, offering a way for smokers to get their nicotine fix without the harmful effects of tar and other toxic chemicals produced by burning tobacco. Over the years, the industry has seen several key players emerge, major acquisitions by big tobacco companies, and a variety of product problems that have garnered the public's attention.

In the early stages of the ENDS industry, companies like Ruyan, a Chinese firm, and NJOY, an American company, were among the first to bring ENDS to market. Ruyan, established in 2004, was the first to produce and market ENDS, while NJOY entered the market in 2006. These early ENDS devices were relatively simple, mimicking the look of traditional cigarettes and providing a similar experience for users.

As the industry evolved, new players emerged, such as JUUL Labs, which was founded in 2015. JUUL quickly gained market share by introducing innovative and sleek ENDS devices that appealed to a younger demographic. The company's unique design and high-nicotine e-liquid "pods" propelled them to a dominant position in the market, with a market share of around 70% in the United States by 2018.

Recognizing the potential growth of the ENDS industry, major tobacco companies began to invest in and/or acquire ENDS businesses. In 2012, Lorillard Tobacco Company purchased Blu, an ENDS brand, for $135 million. Later, in 2014, Altria Group acquired Green Smoke, another ENDS company, for $110 million. However, the most notable acquisition occurred in 2018, when Altria Group invested $12.8 billion in JUUL Labs, acquiring a 35% stake in the company and valuing JUUL at approximately $38 billion.

Despite the rapid growth of the ENDS industry, several product problems have arisen over time. One of the most pressing issues has been the rising number of young people using ENDS, leading to concerns about a new generation becoming addicted to nicotine. The appealing design and flavors offered by companies like JUUL have been blamed for this trend, prompting regulatory action in various countries including the United States.

Additionally, the industry has faced concerns over the safety of ENDS, with reports of device malfunctions and explosions causing injuries. These incidents have led to lawsuits and calls for stricter regulations on the manufacturing and quality control of ENDS products.

In conclusion, the ENDS industry has grown exponentially since the first ENDS were introduced in the early 2000s, with key players like Ruyan, NJOY, and JUUL Labs shaping the market. Major tobacco companies have invested in and acquired ENDS businesses, anticipating the growth potential of the sector. However, the industry has also faced its share of challenges, including concerns about youth usage and product safety issues. As the industry continues to evolve, it will be critical for regulators and companies to address these concerns to ensure a safer and more responsible future for the ENDS industry.

U.S. Industry Regulation

In the last decade, the popularity of electronic cigarettes (ENDS) has risen exponentially, particularly among teenagers and young adults. As flavored ENDS have become more prevalent, they have drawn the attention of the Food and Drug Administration (FDA), which is responsible for regulating tobacco products in the United States. Due to the rapid growth of this product class, the regulatory and legislative landscape in the U.S. has been quite fluid over the last few years, with the FDA's regulatory focus and compliance requirements shifting fairly frequently.

Early Regulation

In 2013, the FDA proposed the "Deeming Rule," which would extend its regulatory authority to include e-cigarettes and other electronic nicotine delivery systems (ENDS). This rule was finalized in 2016, establishing a comprehensive regulatory framework for ENDS, including age restrictions, premarket review requirements, and product labeling requirements. The basic focus of this regulation was to include ENDS in the body of law that already existed for traditional tobacco products.

In 2017, the FDA announced a comprehensive plan for tobacco and nicotine regulation, which included efforts to reduce nicotine levels in cigarettes and encourage the development of less harmful alternatives, such as ENDS. However, in 2018, the FDA declared youth vaping an "epidemic" and began implementing measures to address the issue. The FDA conducted a nationwide crackdown on the sale of ENDS to minors and issued over 1,300 warning letters and fines to retailers. The agency also requested that the five major ENDS manufacturers submit plans on how they would address youth access and use of their products.

Flavored ENDS Policy

In response to the persistence of the youth vaping epidemic, the FDA announced a new policy in March 2019, prioritizing enforcement against flavored ENDS products that appeal to youth. This policy targeted ENDS products with flavors other than tobacco, mint, and menthol, and required retailers to sell these products in age-restricted areas only. Shortly thereafter, in September 2019 the FDA announced its intention to ban all non-tobacco flavored ENDS products from the market, although this ban was not immediately implemented.

In January 2020, the FDA issued a partial flavor ban, which prohibited the sale of flavored cartridge-based ENDS, with the exception of tobacco and menthol flavors. This ban did not apply to disposable ENDS, open-system devices, or e-liquids. The FDA also set a deadline for ENDS manufacturers to submit premarket tobacco product applications (PMTAs) by September 9, 2020, stating that any ENDS products without an approved PMTA would be subject to FDA enforcement actions. The PMTA review process was designed to evaluate the products' potential public health impact, including their appeal to youth and non-users.[1]

Just after the passing of the September 9, 2020 PMTA submission deadline, the FDA asked filers to also provide tobacco product perception and intention (TPPI) studies as part of their amended PMTA filings. Industry experts suggested that these studies would take six months or more to be completed, leading to an industry expectation that all original PMTA filings would need to be amended with data from the required TPPI studies. For Bidi Vapor, these additional studies required eight months to complete, at a cost of approximately $3.5 million.

Ruling on PMTA Processing Deadline

In June 2020, Judge Paul Grimm of the U.S. District Court for the District of Maryland issued a ruling that the FDA had a limited amount of time to review all on-time Premarket Tobacco Product Applications (PMTAs) filed by ENDS manufacturers. The court ordered the FDA to complete its review of the applications within one year, setting a deadline of September 9, 2021. This ruling was meant to accelerate the PMTA review process for all on-time PMTA filers. Unfortunately for the Company and the entire industry, this ruling proved to have the opposite effect, greatly harming the businesses of U.S. industry participants.

The FDA's response

The wheels of regulatory process in the highly bureaucratic FDA turn slowly, and having received on-time PMTA filings from 230 companies covering approximately 4.8 million products, the FDA could not possibly comply with the District Court's requirement to complete all PMTA reviews by September 9, 2021. So even though the FDA was compelled by law to comply with the court order, it instead began issuing thousands of

[1] Creating and filing a thorough PMTA covering all FDA requirements was an immense burden on all submitting companies. For example, Kaival Brands submitted a PMTA covering all 11 of its flavor varieties that was comprised of approximately 285,000 pages. Source: Kaival Brands.

marketing denial orders (MDOs) on well over one million flavored ENDS products, rather than complete PMTA reviews on them.

Subsequent Court Rulings

On August 23, 2022, the 11th Circuit Court ruled in favor of Bidi Vapor in its merit lawsuit against the FDA, allowing it to continue marketing all flavors of its products in the U.S. for the duration of the FDA's PMTA review process. Such rulings have also been issued by the court in favor of other ENDS products and companies, suggesting that the tide may be turning back in favor of the domestic U.S. ENDS industry. Notably, however, we are not aware of any other flavored ENDS that have received such a ruling. At least temporarily, this creates a quasi-monopoly situation for the Company as the only compliant provider of flavored ENDS in the U.S. market.

State of the Industry as of October 2023

In early 2022 the FDA gained the authority to regulate products based on artificial nicotine, completing its ability to regulate the entire vaping / ENDS space in the U.S. However, since the FDA issued its marketing denial orders (MDOs) to just about all flavored ENDS companies based in the U.S. in mid-2021, the market has seen a huge influx of illicit products flood the market. This glut of illicit products, while illegal, continue to remain widely sold in the U.S. Given that the FDA-compliant companies were required to pull their products off the shelves, this has created a very challenging and competitive market for U.S. producers.

FDA Enforcement

Until just recently, the FDA had shown a complete lack of enforcement activities, which resulted in rapidly declining sales for the Company in the face of less expensive, non-compliant ENDS products. But recent news suggests that the FDA is finally beginning to enforce its rules, having recently sent out several important enforcement letters. While the effects of this nascent FDA enforcement campaign will likely take several months or longer to have a significant impact on the market, it most certainly bodes well for the Company's future market share. This is especially true in regard to large regional and national retailers that tend to be far more focused on compliance than smaller "mom-and-pop" owned establishments.

Conclusion, Industry Background and Analysis

Some uncertainty still remains regarding companies' future ability to sell flavored ENDS in the United States, as their pre-market tobacco applications (PMTAs) are still under FDA review. However, we view certain companies such as Kaival Brands as being likely to eventually receive product approvals by the FDA, as their studies have shown that their ENDS offerings are safe and all but invisible to youthful consumers. Also, while smaller mom-and-pop retailers may continue to constitute a difficult market for the Company, larger, compliance-focused retailers should be highly motivated to stock ENDS brands such as Kaival's. These retailers do tend to have long product evaluation cycles, but once they approve products for sale, they tend to generate large sales volumes and remain committed to their product choices for extended periods of time.

Company Analysis

Company Overview

Kaival Brands Innovations Group, Inc. is an industry leader in the electronic cigarette and vaping market, with a focus on the development, marketing, and distribution of innovative products and technology solutions. Driven by a commitment to research and development, Kaival Brands offers a wide array of high-quality electronic nicotine delivery systems (ENDS), e-liquids, and accessories that cater to the needs of a diverse clientele, including casual users and vaping enthusiasts alike. Kaival Brands has an exclusive service contract QuikfillRx, LLC, (d/b/a Kaival Marketing Services), which employs tobacco industry marketing veterans responsible for the marketing of Kaival Brands' products.

Although public, Kaival Brands is majority owned by Kaival Holdings, LLC, which owns a 72% controlling interest in the Company. Kaival Brands is based in Grant-Valkaria, Florida and trades on the NasdaqCM market under the symbol KAVL.

Corporate History – The Rise, The Fall, and The Renaissance

The Rise

Although the Bidi Stick was introduced to the market in 2014, its rapid sales growth did not begin until 2020, when a successful reorganization of efforts finally hit the mark. This reorganization essentially carved out marketing, manufacturing, and distribution into three distinct entities, all of which are controlled by Kaival's Founder Nirajkumar "Raj" Patel and the Company's President and CEO Eric Mosser through Kaival Holdings, LLC. This allowed the marketing company to hire tobacco industry veterans that had vast experience and pervasive contacts in the industry with the sole purpose of marketing the Bidi Stick. Almost immediately, this approach and the maturation of the domestic ENDS market led to an extremely rapid ramp up in sales, **reaching an annual run-rate of over $100 million by the end of the Company's first quarter of 2021** (ending January 31).

The Fall

Due to the rapid and extreme success of the Bidi Stick in mom-and-pop retail outlets and some Circle K stores, within six to nine months a plethora of illegal lookalike products began flooding the market. Unfortunately for the Company, these copycat products were manufactured mostly in China, and despite being of inferior quality, their extremely low retail price point allowed them to quickly erode Bidi Stick's new market share. Due to lack of FDA enforcement at this time, these illegal products continued selling in competition with the Bidi Stick.

Compounding the negative effects of this new black-market competition was the COVID-19 pandemic, with pervasive lockdowns beginning in the summer of 2020, less than six months after sales had begun to ramp up. And to make matters worse, the Company had a short-coded[2] product shipment go out to major customers in 2021 that ultimately caused a large product return and a temporary loss of Circle K as a customer.

In combination, these factors caused Kaival's quarterly revenues to fall from a high of $37.4 million in the quarter ending Jan 2021 to just $3.2 million in Q3 '21 (ending on July 31), representing a drop of 91.5%. And to add insult to injury, two months after the end of Q3 '21 Kaival's manufacturing partner Bidi Vapor received a marketing denial order from the FDA regarding all of its flavored products (as did nearly all U.S. manufacturers of flavored ENDS.

The Renaissance

Following this perfect storm of events that nearly destroyed Kaival Brands' and Bidi Vapor's business, the Company began trying to restore its prospects and resume its growth. Since the Company could no longer distribute Bidi Vapor's flavored products for sale in the U.S., it began to explore international sales

[2] Kaival had originally placed expiration dates on their products unnecessarily, and then shipped products to a customer that were marked expired. Needless to say, this is not a mistake they are likely to repeat.

opportunities as Bidi Vapor filed a lawsuit against the FDA for not reviewing its PMTA on a timely basis. Its international sales aspirations gained traction in June of 2022 when the Company inked a royalty deal with Philip Morris International (PM - NYSE) to sell internationally a Philip Morris branded product based on the Bidi Stick's technology. And the Company had an even larger win on Aug 23, 2022, when the 11th Circuit Court ruled in favor of Bidi Vapor, suspending the FDA's marketing denial order (MDO) and restoring Bidi Vapor's right to legally sell flavored Bidi Sticks in the United States.

Since the legal victory over the FDA in August of 2022, the Company has been aggressively cultivating relationships with larger, more compliance-focused retailers as a way to both grow sales and insulate itself from illegal foreign competition. We view this as a highly rational choice and are pleased to see that it has finally begun to bear fruit. In June, the Company announced two significant distribution wins to distribute to 1,000 Circle K locations and over 900 Kwik Trip and Mapco locations; it has recently announced an expansion of the Circle K relationship to cover an additional 1,500 stores. It also recently shipped a large product order to H.T. Hackney, a major distributor of products to retail outlets in the eastern U.S. We believe these product wins are portents of many more and larger wins during the next few quarters.

The GoFire IP Acquisition

Also during the month of June 2023, the Company announced a highly significant acquisition of patented and patent-pending intellectual property consisting of 12 patents and 46 pending patents. These patents cover a wide range of innovations important not only to the Company's current product line, but also to many potential future products in CBD/THC delivery devices. The Company plans to license its newly acquired IP as soon as possible, hopefully by the end of this year, thus augmenting its small but growing royalty collection business. In the more distant future, we expect the Company to design and release its own new devices based on the GoFire IP. *See our subsequent section on the GoFire IP and deal terms for more information.*

Recent FDA Enforcement Actions

The FDA is under intense pressure from lawmakers, tobacco control groups, and tobacco company R.J. Reynolds to crack down on illicit sales of flavored ENDS and vape products that often attract underage users. Based on recent FDA enforcement actions, we believe the FDA is finally starting to make good on its enforcement promises. Note that the Company attributes most of its revenue contraction in 2021 to the influx of illicitly sold competitive products, which seem to be exactly what FDA enforcement is not targeting.

Of the millions of ENDS and vape products currently on the market, our research shows that only four companies and 23 products[3] have been granted an approval to their Pre-Marketing Tobacco Application, all of which are for non-flavored products. In addition, a handful of companies such as JUUL Labs and Bidi Vapor have won court cases or been granted temporary stays of the Marketing Denial Orders they received from the FDA, enabling them to legally continue selling flavored products while the FDA PMTA review processes grind on.

On May 25th, the FDA Center for Tobacco Products (CTP) issued warning letters to the manufacturers of Breeze and Esco Bar disposable vapes, ordering them to remove the products from the market. The companies were given 15 business days to dispute allegations in the letters or otherwise respond.

The following week, six Chinese exporters of Esco Bar products, including China-based manufacturer Innokin, were added to the FDA's "red list" of shippers whose Esco Bar shipments can be detained at ports of entry without inspection. The FDA has also included Elf Bar shipments on its "red list." These brands constitute major competition for the Company's products.

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[3] Our review of FDA PMTA "Granted" orders shows that the FDA granted 20 PMTAs during 2022 and so far, three in 2023; all of these orders were for non-flavored tobacco products. The following four companies received these PMTA approvals: Philip Morris, NJOY, R.J. Reynolds Vapor Co., and Logic Technology Development. Source: www.fda.gov.

On June 22, it issued warning letters to 189 retailers for illegally selling Elf Bar and Esco Bars products that appeal to youth. On Sept. 14th, it issued additional warning letters to 15 online retailers and three manufacturers and/or distributors for illegally selling or distributing illegal products branded Elf Bar, EB Design, Lava, Cali, Bang, and Kangertech. It identified these products through rapid surveillance and data-driven investigations.

Additionally, as part of its recent "enforcement blitz," the FDA issued warning letters to another 30 retailers and one distributor of Puff (Puff Bar) and Hyde brand disposable ENDS, the first and third most popular brands with underage consumers. The FDA generally sends such letters after an investigation has uncovered a violation of law, which can ultimately result in an import ban if the violations are not promptly corrected. In total, the FDA has sent 764 such warning letters since January of 2021. Source: www.fda.gov.

In a recent press release, the Director of the Center for Tobacco Products stated, "We will continue to use the full scope of tools in our regulatory toolbox to make sure that those who make, distribute, or sell illegal ENDS products are held accountable." Dr. Brian King went on to say "Firms receiving a warning letter have 15 days to respond to FDA outlining how they will address the violation. If a firm doesn't adequately address the violation, we have a bevy of enforcement actions at our disposal that potentially await them."

We believe that many more enforcement actions are likely to come during the coming weeks and months, a trend which strongly benefits Kaival Brands. Note that to date only 23 tobacco-flavored e-cigarette products and devices have been authorized by the FDA and may be legally sold in the U.S. with FDA approval.

Corporate History - Conclusion

Kaival Brands previously demonstrated the potential of its Bidi Stick product by generating nearly $102 million in sales in the 12 months ending in January of 2021. It has also demonstrated its ability to weather extreme business and regulatory adversity by surviving the very tough period beginning in early 2021 and persisting through July of 2023, and it now seems to have the wind once again at its back. Bidi Vapor's win over the FDA puts Kaival Brands in the enviable position of being the only company able to legally sell flavored e-cigarettes in the U.S., and its focus on and early wins in the larger retailer space should effectively immunize it from competition from non-compliant products and vendors.

We believe that Kaival is likely to continue its penetration of larger domestic retailers in the near term, and also to continue growing royalties from international sales and IP licensing from its partnership with Philip Morris International (PMI). Given the Company's focus on compliance and safety, we also believe that Bidi Vapor's PMTAs will ultimately be approved by the FDA, possibly by the end of this year or early 2024[4] for tobacco flavored devices, further cementing Kaival Brand's position as a leading long-term player in the domestic ENDS market.

[4] We believe that the FDA is likely to grant the Company's PMTA for non-flavored ENDS products well before it does so for flavored ENDS products.

Bidi Vapor, LLC – Products and Intellectual Property

Kaival Brands is the exclusive global distributor of Bidi Vapor, LLC products, which at this time consist solely of the Bidi Stick, which is available in several flavors and can be legally sold in the United States. Given the Company's focus "on growing and incubating innovative and profitable products into mature, dominant brands" we expect that Bidi Vapor will develop additional products in the future for Kaival Brands to distribute.

Bidi Stick Advertisement

Bidi 100-pack Wholesale Offering

Management believes that the BIDI Stick is a technologically superior device, based on the feedback on and control over the device that it gives users. The product also features a heating component and a unique mouthpiece that delivers vapor at a safe and consistent temperature, preventing the inhalation of condensation and providing users with a consistent experience. The technology of the BIDI Stick is covered by four U.S. patents.

Because of how the Company markets this product, studies show that it is not only safe but that it is basically "invisible" to underage purchasers, making it an unlikely target for FDA enforcement actions[5] and a strong candidate for PMTA approval from the FDA. It is intended to provide a potentially healthier alternative to adult cigarette smokers. The device is disposable and recyclable, and is equipped with a high-power battery that lasts long enough to fully consume the 5% nicotine infused fluid it contains.

Currently, the Company's only product is the Bidi Stick, a compliant and disposable premium product catering to the needs of adult smokers seeking an alternative to cigarettes.

The key attributes of the Bidi Stick are its simplicity and ease of use, compact and sleek design, premium quality e-liquid, and that it is both disposable and recyclable. The Bidi Stick comes in a wide variety of flavors and is to our knowledge currently the only disposable flavored ENDS product legally sold in the U.S. at this time.

GoFire Intellectual Property Acquisition

On June 9, 2023, the Company announced that on May 30, 2023, it had acquired 12 patents and 46 pending patents from GoFire, a private company. Included in the acquired technologies are patented systems and methods that are designed to overcome common issues regarding reliability and consistent dispensing over the entire life of a cartridge or reservoir, as well as improvements to the vaporizing chamber to ensure complete vaporization with minimum residue.

[5] The Company is currently legally allowed to market the Bidi Stick after its August 3, 2022, favorable ruling in its case against the FDA, wherein the court obviated the FDA Marketing Denial Order and confirmed Kaival's right to continue marketing the Bidi Stick pending the FDA's eventual PMTA reviews and rulings.

Note that the IP acquired in this acquisition is solely owned by Kaival Brands, unlike Bidi Stick's IP that is owned by Bidi Vapor.

IP Descriptions and Analysis

Controlled Delivery
Patented Twist-to-Dose™ technology utilizes a micro-threaded piston that provides consistent and precise delivery of consumables. This IP will be especially valuable in the near future, for both tobacco and cannabis related products, as there is an increasing regulatory focus on precise dosing and consumer awareness thereof.

Bluetooth Child Safety App and Mechanical Cartridge Protection
A dual lockout system including a child safety lockout via Bluetooth app and child safety measures built mechanically into the cartridge design to prevent accidental consumption by minors. Given the FDA's maniacal focus on preventing underage smoking and vaping, this is an extremely important piece of IP that will give devices employing it a distinct competitive advantage.

Flavor Delivery and Experience to Last Puff
This patented technology eliminates the bad taste that is associated with oil and e-liquid degradation. The RefreshFlavor™ technology is designed in a novel way to keep the vaporized solution safely away from the heating chamber until the moment it is consumed. While less important than the Dosing and Child Protection patents, this is nevertheless something that could give products a slight competitive advantage.

Dry Puff Protection
Certain elements of the acquired technologies design mitigate "dry puffs" which can occur when the consumable reservoir in a vaping/inhalation device is depleted, allowing the coil or wick to burn dry and emit potentially harmful toxins. We believe this will be fairly important in product differentiation, as most ENDS and vape users have experienced an unpleasant dry puff from disposable devices near the end of their useful life.

Leak Proof Design and Removal of Cutting Agents
Patented sealed reservoir prevents leaks from occurring and decreases carbonyl and analyte formation via the Twist-to-Dose™ technology with a micro-threaded piston system. This amounts to a fairly significant reduction in a health-related issue.

Additional IP
The acquired IP also includes technology pertaining to anti-counterfeit protection, product remaining indicator technology, and technology enabling compliance with UK MHRA regulatory requirements.

In summary, the 12 patents and 46 pending patents Kaival Brands acquired from GoFire represent a highly significant portfolio of IP that has the potential to drive competitive advantage in the products that incorporate it.

The Company is currently exploring licensing opportunities based on this IP and hopes to have inked one or more licensing agreements as soon as later this year. These licensing agreements will potentially pertain to tobacco, cannabis, nutraceutical, or pharmaceutical products that will benefit from these technologies. Longer term, the Company plans to develop its own products using these technologies.

Terms of the Acquisition

In return for the complete ownership of the intellectual property the Company acquired from GoFire, the Company issued a combination of equity securities, convertible preferred securities, and warrants, and entered into a royalty agreement payable in cash.

Common Equity
The Company issued 2,000,000 unregistered shares of its common stock under a 180-day lockup agreement to GoFire upon closing of the IP acquisition. 10% of these shares will be held in escrow to secure GoFire's indemnification obligations to the Company. Under the terms of the agreement, the Company shall use commercially reasonable efforts to register these shares with the SEC by November 27, 2023 (180 days from closing).

Convertible Preferred Shares
The Company issued 900,000 shares of Series B Convertible Preferred shares ("Series B shares"), 10% of which will be held in escrow to secure GoFire's indemnification obligations to the Company. Each share of preferred is convertible into 8.3333 shares of common stock, or a total of 7,500,000 common shares. The preferred shares carry a $15 per share value in a voluntary or involuntary liquidation of the Company, and are redeemable for $15 per share or less, depending on certain conditions.

If the shares of the Series B are still outstanding 19 months after the closing date (December 1, 2024), then the Company shall use commercially reasonable efforts to register these shares with the SEC for resale or distribution to GoFire shareholders. If the Company fails to redeem or register the Series B by December 1, 2024, it shall then issue another 90,000 shares of the Series B to GoFire. The preferred allows GoFire to elect one Director to the Company's Board as long as any shares of Series B shares are outstanding.

The Series B shares' redemption value will be payable in cash by the Company, in arrears, if not redeemed by the Company on or before December 1, 2024. The Series B can be converted to common shares by GoFire in 180,000 share blocks on the 18th, 24th, 36th, 48th, and 60th anniversary of the closing date of May 31, 2023.

The $15 per share redemption value of the Series B shares will be reduced if the average price of the common stock for any ten consecutive trading days exceeds certain prices, as indicated in the following table.

Reduction in Series B Convertible Preferred Redemption Price Calculation Table	
Common Stock 10-day Average Trading Price	Reduced Redemption Price
$3.50	$10 per Series B share
$5.50	$8.00 per Series B share
$7.50	$6.00 per Series B share

Warrant
The Warrant issued to GoFire is exercisable for an aggregate of 2,000,000 shares of common stock, and is valid until May 31, 2027, which is four years from the transaction's closing date. For the purposes of exercise price, the warrant is divided into four tranches of 500,000 shares, with per-share exercise prices of $3.00, $4.00, $5.00, and $6.00, respectively. Under the terms of the agreement, the Company shall use commercially reasonable efforts to register the shares underlying the warrant with the SEC by November 27, 2023 (180 days from closing).

The Warrant is exercisable for cash only, unless at the time of exercise the underlying shares have not yet been registered with the SEC. In this case, the warrant may be exercised on a cashless basis.

Contingent Cash Payment Obligation
Until January 1, 2027, the Company will owe GoFire a contingent cash payment on any cannabis-related[6] royalties received by the Company. The basic terms of this contingent cash payment are that the Company shall pay to GoFire 50% of earned cannabis royalties up to $15,000,000 in total earned cannabis royalties, and 10%

[6] In this context, "Cannabis" refers to cannabis, hemp, or cannabinoids.

on any additional earned cannabis royalties up to a cap of $30,000,000 earned cannabis royalties. The agreement becomes null and void on January 1, 2027.

Dividends

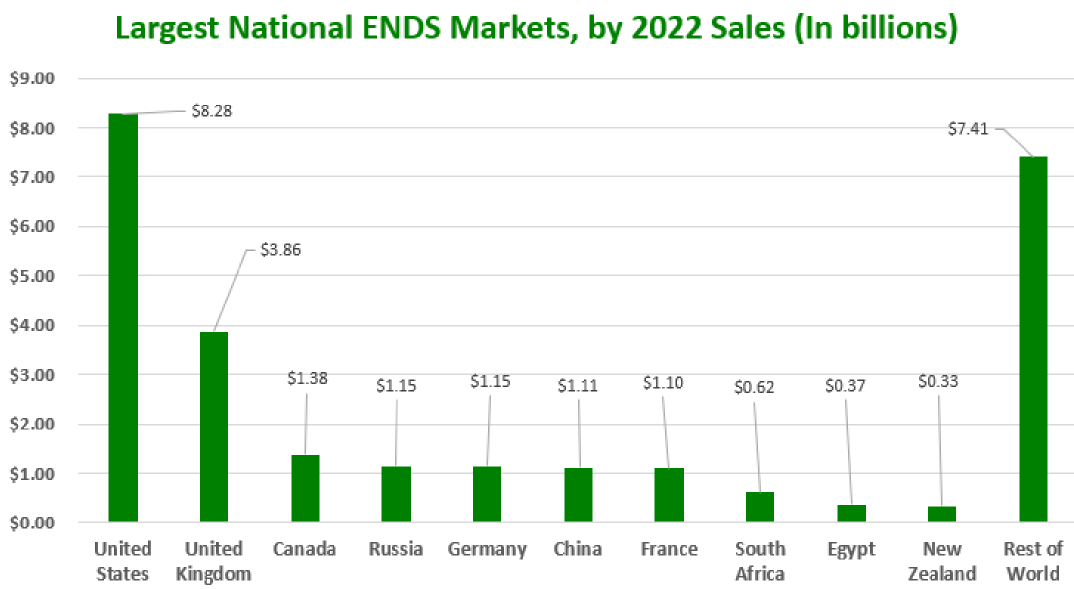
The Series B Convertible Preferred pays a 2% daily dividend on the liquidation preference. These 2% dividends are accrued daily and compound semi-annually but are only payable (in arrears) on unredeemed Series B shares that are still outstanding on December 1, 2024.

Conclusion, GoFire IP Acquisition

Despite its rather complicated deal structure and price in shares and/or cash compensation, we view this transaction as favorable to the Company and its shareholders. If all instruments are converted to common shares, then the total dilution associated with this transaction will be 11.5 million shares of common stock.

Target Market Size and Analysis

The global market in which the Company operates[7] is truly gigantic, with a total size of $26.8 billion according to Statistica. Estimates pertaining to its future compound annual growth rate (CAGR) between now and 2028 vary widely: between a CAGR of 13.4% to a CAGR of 30.6%. We believe a CAGR of 15% to 17% is most likely.



As it pertains to the U.S. market and its 2022 size of $8.28 billion, a 16% CAGR from 2022 to 2028 equates to a total U.S. market in 2028 of $20.17 billion. According to Grand View Research, the 2022 disposable e-cigarette market is forecast to grow by an 11.2% CAGR through 2028, from a value of approximately $2.9 billion in 2023. We believe that this lower CAGR is appropriate for e-cigarettes while a higher CAGR is appropriate for vaping.

Although the Company currently markets only disposable e-cigarettes but plans to soon market a Bidi Vapor's vape pod as well, we have applied a blended CAGR of 13% to the growth of the Company's total available market in the U.S., beginning with an e-cigarette 2023 market size of $2.9 billion. This results in our relevant

[7] The Philip Morris International royalty agreement is for international licensing of products based in part on the Bidi Vapor technologies, of which the Company is the sole distributor.

total available market for the Company's products in 2028 of $5.53 billion. While this estimate could be viewed as overly conservative, it nevertheless illustrates the very large and growing market that the Company serves.

E-cigarette and Vape Product Distribution Industry Overview

In the U.S., the e-cigarette and vape distribution industry constitutes an oligopolistic system where several of the largest distributors hold a large part of the market share. The rest of the market is comprised of large tobacco companies' distribution of their own products, and much smaller distributors of various vape and e-cigarette products. The largest distributors relevant to the Company's sales and marketing initiatives include:

McLane Company, Inc. (Owned by Berkshire Hathaway, BRK.A - NYSE) A leading supply chain services company, McLane delivers grocery, foodservice, and non-food products such as tobacco, e-cigarette, and vape products to convenience stores and mass market retailers across the U.S. They are considered to be a major player due to their broad customer base and extensive distribution network. Kaival management estimates that McLane has an approximate market share of 10% of ENDS sales in their domestic market.

Core-Mark International, Inc. Core-Mark International, Inc. is one of the largest distributors in North America, supplying a wide variety of ENDS and other products to its 40,000+ customer locations across the U.S. and Canada.

Eby-Brown Company, LLC Eby-Brown is the largest privately owned tobacco, candy, and convenience distributor in the U.S., providing ENDS to both independent convenience stores and large multi-unit chains.

H.T. Hackney Co. H.T. Hackney has a solid reputation as one of the largest wholesale distributors in the United States. Their product offerings span across numerous categories, including tobacco and ENDS products.

Imperial Trading Co. Imperial Trading is a national distributor of convenience store goods, including e-cigarette and vape products.

Other significant players in domestic ENDS distribution that primarily self-distribute their own products include Reynolds Consumer Products (REYN – NasdaqGS), Japan Tobacco (JAPAY ADR – OTC Pink), Nu Mark (owned by Altria, MO - NYSE), Republic Tobacco (Pvt.), and Greenlane Holdings (GNLN – NasdaqGM).

Sales & Marketing

The Company executes its marketing strategy with the help of Kaival Marketing Services, a related, contracted entity. In combination, the combined entities conduct both bottom-up and top-down marketing initiatives. Direct customer (bottom-up) marketing is especially important as it creates "pull" with the major product distributors in Kaival's product class. When enough customers begin asking their distributors to stock the product it can cascade upwards to the corporate level, where Kaival's top-down sales and marketing attempts to secure customer-wide distribution.

Management states that while the Company is not abandoning smaller mom-and-pop retailers, it is likely to have far more meaningful future success in marketing to the larger U.S. distributors such as Coremark, H.T. Hackney, and even McLaine - and to the regional and national retailers they represent.

Strategic Partnerships

On July 25, 2022, through the Company's wholly owned subsidiary Kaival Brands International, the Company secured an international licensing agreement with Philip Morris Products S.A. (PIMSA, owned by Philip Morris International, PM - NYSE) for the development and distribution of electronic nicotine delivery system (ENDS) products outside the U.S., based on certain portions of IP owned by Bidi Vapor and used in its Bidi Stick device. Since signing, PIMSA has developed the VEEBA ENDS product and is currently marketing it in Canada, the U.K., and other markets, recently rebranded as VEEV NOW.

The Company has recently re-negotiated this agreement with Philip Morris, which originally allowed it to deduct its development costs from royalties due to the Company, due to much higher than expected development costs. The new agreement bases royalty payments to the Company solely on actual sales and the volume of e-liquid in each device, beginning at $0.08 to $0.10 per device, and increasing to $0.10 to $0.20 per device based on reaching certain sales milestones.

As part of the renegotiation, PIMSA made a single reconciliation payment for sales from July '22 through June '23 of $135,000, and another payment for sales made in July '23 of approximately $120.000. Going forward PIMSA will make payments to Kaival Brands on a quarterly basis, and they expect another $300,000 or so to be paid to KAVL before the end of the year. Note that after deducting insurance costs from these Royalties, KAVL splits the collected royalties 50/50 with Bidi, LLC, a related entity that manufactures the Bidi Stick.

Based on Philip Morris' history of developing products and then ramping up these products' sales via large investments in sales and marketing, the Company expects gross royalties "in the millions of dollars" in CY 2024 and beyond.

The Team

Eric Mosser, ***President & Chief Executive Officer, and Director***

Mr. Mosser studied business management at Arizona State University before graduating from Rio Salado College with an Associate Degree in applied science in computer technology. With extensive previous corporate work history in information technology, Mr. Mosser worked from 2012 to 2014 as Director of Information Technology at Timbercon Inc., a fiber-optic design company and ITAR manufacturing facility in Oregon. In 2014, Mr. Mosser created Lasermycig LLC, a specialized custom laser-engraving service for electronic cigarettes and vaporizers and served as its Chief Executive Officer until 2020. Upon meeting Mr. Nirajkumar Patel in 2015, Mr. Mosser founded and acted as CEO of Chillcorp Ltd., a full-service corporation managing all operations of four companies: Just Chill Products LLC, Relax Lab Inc., RLX Lab LLC, and KC Innovations Lab Inc.

Nirajkumar "Raj" Patel, ***Founder, Chief Science & Regulatory Officer, and Director***

Mr. Patel attended AISSMS College of Pharmacy in Pune, India and received a Bachelor of Science Degree in pharmacy in 2004, after moving to the United States in 2005. Mr. Patel has a Master of Science Degree in chemistry from Florida Institute of Technology and holds a Six Sigma Black Belt Certification.

Note that Mr. Patel owns and controls Bidi Vapor, making it a "related party" under SEC and GAAP rules.

Thomas Metzler, *Chief Financial Officer*

Mr. Metzler brings over 20 years of finance and operational experience in the vaping and consumer products sector to the Company. Since June 2019, he has worked as an accounting and operational consultant. From April 2013 to June 2019, Mr. Metzler served as Managing Director of a Division of Turning Point Brands (NYSE: TPB), a manufacturer, marketer and distributor of branded alternative smoking accessories and consumables with active ingredients. At Turning Point Brands, Mr. Metzler led a team to transform the process of financial management efficiencies, which improved cost controls, managed inventory turn, developed strategic product promotions to accelerate product distribution, and built strategic alliances with suppliers. Mr. Metzler also developed & monitored key performance indicators ("KPIs") which generated record growth with retail and wholesale distributors. He also provided post-acquisition assistance to integrate newly acquired entities into Turning Point Brands and advocated for the vapor industry by meeting with the White House's OMB/OIRA office, and various congressional and senatorial offices. Mr. Metzler was a significant contributor as a Standard Technical Panel member in developing UL 8139- Electrical Systems of Electronic Cigarettes and Vaping

Devices, a safety standard that evaluates the electrical and battery systems of vaping devices and electronic cigarettes

Mr. Metzler was a licensed CPA for over 20 years, during which time he provided accounting and related consulting services to many companies. He began his career working with public and private companies in the assurance practice at PricewaterhouseCoopers LLP in Boston. Mr. Metzler earned a B.S. in Accounting from Canisius College.

Stephen Sheriff, *Chief Operating Officer*
Mr. Sheriff brings over a decade of finance and entrepreneurial leadership to his role as Chief Operating Officer at the Company. Since August 2022, he has served as the Company's Director of Administration & Communications. In this role, he managed the Company's investor, public relations and human resource programs in addition to overall responsibility for the development and implementation of key programs and initiatives, including customer and vendor relations. Since January 2022, he has also served as co-founder and Managing Partner of Riverhill Group, a management consulting firm focused on assisting early-stage companies in the areas of funding, scaling and expanding operations. Since 2012, he has also been a Managing Partner at Riverhill Ventures, a socially conscious, strategic investment and consulting firm primarily focused on quick service restaurants, natural foods and consumer brands. Through his Riverhill-related experiences, Mr. Sheriff has been an investor in and advisor to several early-stage companies. From September 2018 to September 2020, he also was an Associate at Solebury Trout (now Solebury Strategic Communications), a leading life sciences-focused investor relations firm based in New York City. Mr. Sheriff received his Bachelor of Arts in Counseling Psychology from Delaware Valley University.

Key Board Members

Barry Hopkins, *Chairman of the Board*
Barry Hopkins has decades of senior executive experience within the traditional tobacco, vape, and CBD spaces. Mr. Hopkins spent most of his decades-long career primarily in senior sales and marketing roles for Turning Point Brands and Altria. Most recently, before retiring, Mr. Hopkins served as Senior Vice President of Executive Organizational Development of Turning Point Brands, where he led that company's senior management team in building the infrastructure for an enhanced performance management system and development of a new strategic planning process with a focus on mission critical initiatives to achieve a sustainable competitive advantage. These initiatives contributed to eight record-setting quarters in terms of revenue growth.

Mr. Hopkins earned an undergraduate degree in Business Administration, Management and Operations from his studies at Staten Island College and Bernard Baruch University. Mr. Hopkins serves as Chairman of the Board of Directors and as Chairman of the Governance and Nominating Committee of the board.

George Chuang, *Director*
After graduating from the University of Chicago, Mr. Chuang spent time at Chase Manhattan Bank as an Assistant Treasurer for their Credit Risk Department. Mr. Chuang received a Master of Business Administration degree at Yale University after which he spent quite a few years as a management consultant at Pricewaterhouse Management Consulting, followed by a stint as the Chief Administrative Officer for several equity product sales groups at Lehman Brothers. In addition to these positions, Mr. Chuang spent eight years as a Principal at Pacific Partnership Advisors LLC, a consulting firm with offices in New York and Beijing, which facilitated cross-border transactions between the US and China in consumer products, education, eCommerce, and agricultural sectors. Four years ago, Mr. Chuang founded and is currently the Chief Executive Officer of, Lucy Labs, Inc. an asset management firm focused on cryptocurrency algorithmic trading. Mr. Chuang is fluent in Mandarin Chinese.

Roger Brooks, *Director*
Mr. Brooks is currently the Chairman, Treasurer, and Co-founder of Abierto Networks, positions he has held since 2005. Prior to his roles at Abierto Networks, from 1998 to 2008, Mr. Brooks was the lead independent director and member of the compensation and audit committees for Moldflow Corporation, a Nasdaq-listed software company that was sold to Autodesk, Inc. in 2008. From 2017 to 2019, Mr. Brooks served as an independent director of Lytron, Incorporated, a closely held international industrial solutions company. From 1998 to 2002, Mr. Brooks served as President, Chief Executive Officer, and member of the board for Intelligent Controls, Inc., a publicly traded software and instrumentation company, which was sold to Franklin Electric Co. Inc. Mr. Brooks was President, Chief Executive Officer, and a board member of Dynisco, Inc. from 1987 to 1996 where he grew the company from $10 million of sales to an international company with over $100 million of sales. Roger holds a Bachelor of Arts degree from the University of Connecticut and a Master of Business Administration degree from New York University, Stern Graduate Business School. He is also a graduate of the Stanford University Executive Management Program.

David Worner, *Director*
David Worner is currently the CEO & Founder of GrowthPath Partners, a transactional accounting & advisory firm. Prior to founding GrowthPath Partners, David was a Partner at NOW CFO, a national finance & accounting consulting firm, for nine years. Prior to NOW CFO, David worked in management roles in both a Public Company and a Private Equity backed company. He started his career in public accounting. With 18 years of accounting and finance experience, David brings a wealth of knowledge in mergers & acquisitions, debt & equity raises, technical accounting and various types of public offerings.

James P. Cassidy, *Director* (GoFire Board Representative)
Mr. Cassidy is Kaival's most recently appointed independent Director, who is also the founder and CEO of Preposterous Holdings, a family-run private equity firm established in 2013 based in Ashville, NC. Mr. Cassidy has over 25 years of extensive experience and expertise as a private equity investor and advisor across several industries, including the key areas of tobacco, healthcare, consumer packaged goods and technology. Prior to his current roles, from 2000 to 2007, Mr. Cassidy was partner in the Strata Group, a wealth management advisory group at Smith Barney. He started his career in 1983 at UST, a tobacco business holding company, working in various roles in the government relations department and as Director of Corporate Services.

Competition
The market for e-cigarettes and vapes is highly competitive, with literally millions of products existing in the global and U.S. markets. This makes a complete analysis of the competitive landscape all but impossible. That being said, we have listed the Company's largest competitors in the U.S. market as of this writing. However, it is important to note that the FDA has begun sending out enforcement letters recently to some of the largest players in the ENDS market – many of which have very significant market share despite being in violation of FDA rules – and this could eventually result in a sea change in the competitive landscape faced by the Company[8]. In our opinion, such a sea change would likely favor the Company to a great degree, given the Company's focus on preventing the sale of its products to underage buyers, and its current status as a fully compliant domestic provider of non-flavored and flavored ENDS[9] devices.

[8] On May 31, 2023, as part of its recent "enforcement blitz," the FDA issued warning letters to 30 retailers and one distributor of Puff and Hyde brand disposable ENDS, the first and third most popular brands with underage consumers. The FDA generally sends such letters after an investigation has uncovered a violation of law, which can ultimately result in an import ban if the violations are not promptly corrected. In total, the FDA has sent 600 such warning letters since January of 2021, filed civil financial penalty complaints against 26, and sought DOJ injunctions against six. Source: www.fda.gov.

[9] Our review of FDA PMTA "Granted" orders shows that the FDA granted 20 PMTAs during 2022 and so far, just three in 2023; all of these orders were for non-flavored tobacco products. The following four companies received these PMTA approvals: Philip Morris, NJOY, R.J. Reynolds Vapor Co., and Logic Technology Development. Source: www.fda.gov.

According to Statistica, JUUL Labs held a 37.2% market share in the U.S. in 2022, followed closely by R.J. Reynolds Vapor Co. (Vuse) at 30.2%. Other contenders were NJOY at 3.2%, blu at 2.3%, and the rest of the market combined at 26.9%. As these data clearly show, the U.S. market is currently dominated by JUUL and R.J. Reynolds Vapor.

Kaival's Top Competitors in the U.S. ENDS Market

- JUUL Labs – Altria bought a 35% stake in 2018
- R.J. Reynolds Vapor Co. (Vuse)
- NJOY, LLC
- Logic Technology Development, LLC
- Imperial Brands (Blu)
- Shenzhen IVPS Technology Co. (SMOK)
- Shenzhen Shenxingkang Technology Co. (Suorin)
- Cool Clouds Distribution Inc. (Puff Bar)

We expect this industry to remain very competitive for the foreseeable future, particularly in the black market for ENDS devices, which the Company believes constitutes one-half of the current market in the United States[10]. However, if we define the U.S. market in terms of only the legal and compliant devices, then we expect the market to become oligopolistic to an even greater extent that it already is, as we believe only a few more PMTAs will be granted over the next one to two years. By that time, we expect the legal providers of ENDS devices will have become firmly entrenched in all large and medium-sized retailers, making it very difficult for new entrants to gain significant market share.

Furthermore, it is worth noting that to our knowledge, Kaival Brands' Bidi stick is the only disposable flavored product that can be legally sold in the U.S. at this time. If this situation persists for the next several quarters, it is entirely possible that the Company will end up with double-digit market share in the legal U.S. market for disposable flavored ENDS devices.

Other Risks

In addition to the competitive risks inherent in this industry, the Company does face several other significant types of risk.

<u>Regulatory Risk</u>

This is in our view the most serious risk that the Company faces over the next one to two years. Kaival Brands' manufacturing partner Bidi Vapor received a marketing denial order (MDO) from the FDA in 2021, as did basically all other manufacturers of ENDS products, both flavored and non-flavored. In the Company's case, that order was overturned by the courts last August in Bidi Vapor's merit lawsuit against the FDA, thereby allowing them to continue marketing their products legally in the U.S. Legally, that is, until the FDA makes its final approval/denial decision on the Bidi Vapor's non-flavored and flavored ENDS products covered in its pre-marketing tobacco application (PMTA).

While there are very positive indications that Bidi Vapor's PMTA will eventually be granted by the FDA, and may be granted for tobacco flavored devices by year's end, based on the results of its excellent safety and youth use prevention studies, there is certainly no guarantee that it will be approved. And even if it is approved, it may take much longer than hoped, as the FDA remains swamped with a large number of unprocessed applications. Note that the Company expects FDA approval on its tobacco and menthol flavored products to come sooner than that of its flavored products, and to be at a significantly lower risk of ultimate denial.

A denial of the entire PMTA by the FDA would, in our view, be relatively catastrophic for the Company's business, as it would at least temporarily suspend its ability to legally sell its ENDS products in the U.S. While

[10] Since this market is illicit and retailer participants typically pay no sales taxes on sales of these devices, the market share that it actually accounts for is undocumented in market share studies.

the law does provide for an FDA hearing and subsequent legal action in the courts to see the FDA's PMTA denial overturned, such a process could take years to play out, and the court's ultimate ruling would require that the plaintiff submit significant evidence to warrant a court ordered reversal of the FDA's denial decision. Since the Company is now focused on larger, compliance-focused retailers, it is almost certain that they would stop sales of the Company's denied products during any such appeal process.

A long-delayed but ultimately granted PMTA (especially for its flavored products, which won't likely be ruled on for as much as two more years) would also have negative consequences for the Company, albeit not catastrophic ones. Based on our conversations with Kaival Brands' management team, we believe that the Company will have some difficulty making inroads with larger retailers while the uncertainty of their products' ultimate long-term availability still exists. So, a PMTA not granted for a year or two (or more) would significantly hamper the Company's ability to grow sales via large retailer relationships.

That being said, we are relatively confident that Bidi Vapor's PMTA applications will be granted by the FDA, first for non-flavored products and then for flavored products, based on the degree to which Bidi Vapor fulfilled the FDA's approval requirements in its 285,000-page PMTA filings. We cannot, however, have as much confidence in the timing of such an approval, as we have no visibility into the FDA's thinking or internal processes that will ultimately determine when and if Bidi Vapor's PMTAs will be approved. **Note that management believes that its tobacco-flavored products could be approved as soon as the end of this calendar year.**

<u>Financial Risk</u>

As of the Company's last 10-Q filing for Q3 'FY2023 ending on July 31st, the Company had approximately $1.00 million in cash and inventories of $3.59 million. In this filing, the Company provided a Consolidated Statement of Cash Flows for only the nine-month period since the close of its FY2022 on Oct 31st. During this period the Company had operating cash flows of approximately -$2.85 million. During the most recently reported quarter, the Company showed a revenue increase of 18.7% to $3.58 million, an increase of over $564 thousand vs. Q2 sales, with greatly improved gross margins on product sales of 28.6%. Despite this, the Company has resorted to very expensive debt financing in the past quarter, some of which is convertible if they default on the relatively short payback deadline of February 8, 2024. This gives us some concern about a cash crunch, which we believe that the Company will ultimately work through, but possibly suffering some dilution along the way.

What concerns us more is the Company's ability to finance the inventory it will need to rapidly ramp up sales as it hopes to do during CY '23 Q4 and early CY '24. Its recent announcement of several new customers over the last three months confirms the likelihood of a revenue ramp up – which is great news for the Company – but also confirms the need for additional capital with which it can pay for new inventory. Furthermore, the Company may soon announce additional large-customer wins, which would only intensify its need for inventory financing in the short term. We view this as a high-class problem to have, but one that the Company will nevertheless need to solve. If they cannot solve it on a timely basis, the risk event is potential losses of customers due its inability to completely fill new customer orders on a timely basis.

That being said, we have high confidence in the Company's newly-expanded leadership team, and believe they will be able to find the capital that they need within the timeframe they have to find it, thus enabling the sales ramp we expect to begin soon.

<u>Customer Concentration Risk</u>

The Company is currently dependent on just a few customers for all of its sales, and the concentration of customer revenues could further increase as the Company moves towards large retailer distribution. This is something of which investors should be aware, but in our view, not something that poses a serious threat to the

Company. This risk event could occur in a situation in which the Company would lose a large customer relationship that could (at least temporarily) cause a decline in revenues.

Capitalization Risk
According to management, Kaival is extremely reluctant to go to the capital markets for additional funding for a at least the next few months, or until its share price is several multiples above current levels. This significantly minimizes future dilution risk. However, if all convertibles and warrants issued under the GoFire IP acquisition are ultimately converted and exercised, the total dilution from this acquisition would total 11.5 million shares, representing 20.5% of the Company's common stock at the time of the IP acquisition. If the acquired IP generates additional revenues commensurate with this purchase price, it may well prove to be accretive to per-share revenues and earnings. This, however, remains to be seen. In addition, the Company has recently had to authorize an additional 2,620,968 shares of its common stock as part of a recent financing, which it will be required to transfer to the lender if it does not make complete repayment of the loan and interest by February 8, 2024. While we believe that the Company will make full repayment of the loan on time, this is not a certainty.

Delisting Risk
The Company is currently listed on the NasdaqCM market under its second six-month extension, which was granted to allow it to get back in compliance with Nasdaq's minimum share price rule of $1.00. The Company has until January 29, 2024 to post at least ten consecutive trading days with its share price at $1.00 or above or it will be delisted from Nasdaq. If this were to happen, we believe it would be very negative for the Company and its investors, especially in the short-term. Note that the Company could in theory do a reverse stock split to meet this requirement, but according to management they want to avoid this at all costs.

Valuation Analysis
For our valuation analysis we chose to look at the Company's PSG ratio vs. that of Turning Point Brands (TBP – NYSE), its most comparable direct competitor. The PSG ratio is computed by taking a traditional price to sales ratio (P/S) and dividing it by the forecast five-year growth rate of the company. The lower the PSG value, the lower the relative valuation of the company. Note that in our calculation we used a four-year growth rate since our modeling time horizon extends only through 2027.

We believe this is a more appropriate metric to use than price to sales (which does not take future growth into account), given that TBP is likely to have a 5-year CAGR of approximately 5% or less, whereas the Company is likely to have a CAGR well over 40% during this same time period.

At current share price levels[11] and using a long-term CAGR of 5%, Turning Point Brands' PSG score is 19.4; computing the same value over the same time period with the Company's long-term CAGR at 40% yields a PSG score of just 4.1, and at 50% yields a PSG score of 2.17. Given that we believe that the Company's actual CAGR through 2027 is likely to approach 55%, we believe that KAVL shares should carry at least the same PSG score as do TPB's shares. When computed, this suggests a current fair value range for KAVL shares to be between $1.73 and $2.16.

Conclusion
After great initial success, Kaival Brands has managed to survive an incredibly difficult market for its products and is now, finally, poised for accelerating growth during the next few calendar quarters. While regulatory and competitive uncertainties remain, we believe that Kaival's newly successful focus on larger retailers, some of which have domestic outlets numbering in the tens of thousands, will soon establish it as a major U.S. player in the market for tobacco/menthol ENDS devices and possibly as the only player in disposable flavored ENDS devices[12]. Furthermore, the Company is focused on growing royalties from its Philip Morris International

[11] *Market data as of market close, 10/6/2023; Per-share data for KAVL computed from basic common shares outstanding.

[12] In our view it is unlikely that the FDA will grant PMTAs for any flavored ENDS devices within the next two years, and due to the Company's recent court victory vs. the FDA, it is the only U.S. distributor of disposable flavored ENDS devices that isn't breaking the law by so doing.

relationship into the millions during CY 2024 and is also likely to soon begin generating significant royalties from the GoFire IP it acquired this past May.

Based on our valuation analysis, the current fair value of Kaival shares is in the range of $1.73 to $2.16, with additional upside potential if we see an FDA approval for the Company's tobacco flavored products or much more powerful FDA enforcement actions in the near future. **Therefore, we are updating our coverage of Kaival Brands Innovations Group by maintaining a rating of *Strong Buy*, and slightly reducing our 12-month price target to $1.80 per share.** We also believe that there is significant upside to our price target if the Company's penetration into large and medium-sized retailers continues to gain traction, and/or if there is positive news from the FDA regarding an approval for the Company's tobacco-flavored products, which the Company expects as soon as this calendar year.

Kaival Brands Profit and Loss Forecast Model

Fiscal year ending October 31, (In $000s, except per-share data)	FY 2020A	FY 2021A	FY 2022A	Jan '23A	Apr '23A	Jul '23A	Oct '23E	FY 2023	Jan '24E	Apr '24E	Jul '24E	Oct '24E	FY 2024	FY 2025	FY 2026	FY 2027
Total revenues	**64,314**	**58,776**	**12,761**	**2,526**	**3,020**	**3,584**	**3,890**	**13,149**	**4,361**	**5,231**	**6,195**	**7,353**	**23,141**	**41,003**	**61,466**	**88,301**
Seq. growth rate, total revenues		*-8.6%*	*-78.3%*	*-16.1%*	*19.6%*	*18.7%*	*8.5%*	*3.0%*	*12.1%*	*19.9%*	*18.4%*	*18.7%*	*76.0%*	*77.2%*	*49.9%*	*43.7%*
Total cost of revenue	54,255	46,843	11,520	1,986	3,146	2,283	2,406	9,820	2,562	2,946	3,388	3,896	12,792	20,342	29,783	43,605
Gross profit (loss), total	10,059	11,934	1,241	540	(125)	1,301	1,484	3,200	1,800	2,285	2,807	3,457	10,349	20,661	31,683	44,697
Gross margin, all revenues	*15.6%*	*20.3%*	*9.72%*	*21.4%*	*-4.2%*	*36.3%*	*38.2%*	*25.3%*	*41.3%*	*43.7%*	*45.3%*	*47.0%*	*44.7%*	*50.4%*	*51.5%*	*50.6%*
Operating expenses																
Advertising and promotions	2,344	3,196	2,679	589	660	578	610	2,437	622	673	726	835	2,856	4,359	6,382	9,344
General & administrative	2,356	19,207	12,950	2,958	3,177	2,376	2,412	10,922	2,485	2,609	2,729	2,856	10,679	12,232	13,505	14,903
Total operating expenses	**4,700**	**22,403**	**15,630**	**3,547**	**3,837**	**2,954**	**3,022**	**13,359**	**3,107**	**3,282**	**3,455**	**3,691**	**13,535**	**16,591**	**19,887**	**24,247**
Operating profit (loss)	**5,360**	**(10,469)**	**(14,389)**	**(3,007)**	**(3,962)**	**(1,653)**	**(1,538)**	**(10,160)**	**(1,307)**	**(997)**	**(648)**	**(234)**	**(3,186)**	**4,070**	**11,796**	**20,450**
Operating margins	*8.3%*	*-17.8%*	*-112.8%*	*-119.0%*	*-131.2%*	*-46.1%*	*-39.5%*	*-77.3%*	*-30.0%*	*-19.1%*	*-10.5%*	*-3.2%*	*-13.8%*	*9.9%*	*19.2%*	*23.2%*
Total other income (loss)	1	0	0	12	0	(147)	(539)	(674)	(539)	0	0	0	(539)	0	0	0
Income (loss) before taxes	5,361	(10,469)	(14,389)	(2,995)	(3,962)	(1,800)	(2,076)	(10,833)	(1,846)	(997)	(648)	(234)	(3,725)	4,070	11,796	20,450
NOLs		*10,469*	*24,857*	*27,852*	*31,814*	*33,614*	*35,691*	*35,691*	*37,536*	*38,533*	*39,181*	*39,415*	*39,415*	*35,345*	*23,549*	*3,099*
Provision for income taxes	(1,515)	(1,435)	(18)	0	0	0	0	0	0	0	0	0	0	0	0	0
Net income (loss)	**6,875**	**(9,033)**	**(14,370)**	**(2,995)**	**(3,962)**	**(1,845)**	**(2,076)**	**(10,833)**	**(1,846)**	**(997)**	**(648)**	**(234)**	**(3,725)**	**4,070**	**11,796**	**20,450**
Net margins	*10.7%*	*-15.4%*	*-112.6%*	*-118.6%*	*-131.2%*	*-51.5%*	*-53.4%*	*-82.4%*	*-42.3%*	*-19.1%*	*-10.5%*	*-3.2%*	*-16.1%*	*9.9%*	*19.2%*	*23.2%*
Net income (loss) per share, basic and diluted	0.013	(0.376)	(0.362)	(0.053)	(0.071)	(0.032)	(0.036)	(0.189)	(0.032)	(0.017)	(0.011)	(0.004)	(0.064)	0.070	0.202	0.351
Net income (loss) per share, fully diluted*	0.013	(0.376)	(0.362)	(0.053)	(0.071)	(0.026)	(0.029)	(0.169)	(0.026)	(0.014)	(0.009)	(0.003)	(0.052)	0.056	0.163	0.283
Weighted average common shrs., basic	516,213	24,000	39,710	56,169	56,169	58,261	58,261	57,215	58,261	58,261	58,261	58,261	58,261	58,261	58,261	58,261
Weighted average common shares, fully diluted*	516,214	24,000	39,710	56,169	56,169	72,195	72,195	64,182	72,195	72,195	72,195	72,195	72,195	72,195	72,195	72,195

** Assumes full conversion of all equity-linked instruments (most conservative and non-GAAP method)*

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Analyst Highlight

Brian R. Connell, CFA **Senior Research Analyst**

Mr. Connell has over 25 years' experience in the securities industry, as an equity analyst and portfolio manager, and as the Founder and CEO of StreetFusion (acquired by CCBN/StreetEvents), a software company serving the institutional investment community. On the sellside, Mr. Connell served as the technology analyst for Neovest, an Atlanta-based boutique, and as a Senior Analyst - Internet for Preferred Capital Markets, an investment bank based in San Francisco. Mr. Connell has also held the position of Executive Director of Marquis Capital Management, a technology-focused hedge fund.

Mr. Connell holds degrees in Economics and Psychology from Duke University, and is a CFA Charterholder.