IN THE SUPREME COURT OF THE STATE OF NEVADA

Electronically Filed
Mar 04 2020 05:39 p.m.
Elizabeth A. Brown
Clerk of Supreme Court

NUVEDA, LLC,

Appellant,

v.

JENNIFER GOLDSTEIN,

Respondent.

Supreme Court Case No.: 79806

District Court Case No.: A-15-728510-B

JOINT APPENDIX VOLUME II

JASON M. WILEY
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Attorneys for Appellant NuVeda, LLC

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NuVeda, LLC, et al. Case No. AAA No. A-15-728510-B prepared by Donald R. Parker			
Expert Witness Report *Shane Terry v NuVeda, LLC et al.* prepared by Anthem Forensics	11.29.2016	II	JA00376
Expert Witness Report *Shane Terry v. NuVeda, LLC, et al. PREPARED BY Anthem Forensics*	12.13.2018	III	JA00481
Final Award	3.19.2019	IV	JA00875
Findings of Fact and Conclusions of Law Denying Plaintiffs' Motion for Preliminary Injunction, Denying Defendants' Countermotion for Preliminary Injunction and Joinder, and Entering Provisional Remedy Pursuant to NRS 38.222	1.13.2016	I	JA100
Findings of Fact, Conclusions of Law and Order: (1) Granting Plaintiff Jennifer M. Goldstein's Motion to Continue Hearing on NuVeda, LLC's Motion to Vacate Arbitration Award and to Extend Briefing Deadlines; (2) Denying Defendant NuVeda, LLC's Motion to Vacate Arbitration Award; and (3) Confirming the Arbitration Award	9.9.2019	XI	JA02374
Interim Award of Arbitrator Regarding Value	2.7.2019	IV	JA00864
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Motion for Entry of Judgment	9.19.2019	XI	JA02389
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Notice of Posting Bond	10.9.2019	XI	JA02401
NuVeda, LLC's Motion to Strike the Supplemental Valuation and Expert Report Dated December 14, 2018	12.20.2018	III	JA00514
NuVeda LLC's Motion to Vacate Arbitration Award	6.17.2019	V	JA00880
NuVeda, LLC Operating Agreement	7.9.2014	I	JA00001

BUSINESS VALUATION REPORT

NuVeda, LLC

March 10, 2016

Prepared by

Donald R. Parker

Chartered Financial Analyst

Certified Valuation Analyst

Gryphon Valuation Consultants, Inc.

Las Vegas, Nevada

702.870.VALU (8258)

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CONFIDENTIAL

GRYPHON VALUATION CONSULTANTS, INC.

May 25, 2016

Shane Terry
Turnberry Towers
222 Karen Avenue, #3305
Las Vegas, NV 89109

CONFIDENTIAL

Dear Mr. Terry:

On behalf of Gryphon Valuation Consultants, Inc. ("Gryphon"), I have prepared and enclosed herewith, for the benefit of Mr. Shane Terry ("Client"), the valuation report for a **22.88% voting interest** ("The Interest") in **NuVeda, LLC** ("Company" and "NuVeda"), a Nevada limited liability company. Business valuation services were provided in connection with the Client's expulsion from the Company and performed in accordance with the Valuation Engagement Agreement dated March 17, 2016. The conclusion of value for The Interest was determined as of March 10, 2016 ("Expulsion Date" and "Valuation Date") on the basis of fair market value.

The term "fair market value," as applied herein, is defined as the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of the relevant facts.

The report is based on independent market research and, in part, on historical and prospective information provided by the Client. Had that information provided by the Client been audited or reviewed by the appropriate advisors, matters may have come to light that could have resulted in using amounts that differ from those provided. Accordingly, Gryphon takes no responsibility for that underlying data. Users of valuation reports should be aware that financial valuations may be based on future results and/or asset values that may or may not materialize. Therefore, the actual results achieved during any forward looking period will vary from the values used in the valuation report, and the variations may be material.

Based on careful study and the application of widely accepted analytical review procedures and valuation methodology, I have estimated the conclusion of value for The Interest to be **$8.7 Million** as of the Valuation Date. This estimation is subject to the Limiting Conditions found in Appendix C, the Valuation Analyst's Representation found in Appendix A and also any other assumptions and limiting conditions as noted in the valuation report.

Neither I nor Gryphon or any other agents thereof have any present or contemplated financial interest in the Company or any assets thereof. Gryphon's fee for the valuation work is based upon normal billing rates and is in no way contingent upon the results of the findings. Gryphon has no responsibility to update the valuation report for events and circumstances occurring after the Valuation Date.

This report has been prepared for the specific aforementioned purpose and is not to be used for any other purpose. This report is not to be copied or made available to any persons other than the related parties to whom the report is addressed, their appropriate advisors and the Internal Revenue Service without the express written consent of Gryphon Valuation Consultants, Inc.

Thank you for allowing us to serve your valuation needs in this matter. Please contact me with any questions.

Sincerely,

Donald R. Parker, CFA, CVA
Gryphon Valuation Consultants, Inc.

8000 Ryan's Reef Lane
Las Vegas, Nevada 89128
702.870.VALU (8258)
702.233.4643 Fax
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EXECUTIVE SUMMARY DATA SHEET

REPORT PARAMETERS	
Subject:	NuVeda, LLC
Client:	Shane Terry
Engaging Party:	Shane Terry
Valuation Date:	March 10, 2016
Type of Engagement:	Conclusion of Value
Purpose:	Business Planning Needs concerning the Subject Interest
Subject Interest:	22.88% Voting Interest
Standard of Value:	Fair Market Value
Premise of Value:	Going Concern
Marketability:	Private Company
Control:	Minority
ANALYSIS PERFORMED	
Company Analysis:	Summary
Industry Analysis:	Medical & Recreational Marijuana Growing Industry (NAICS)
Economic Analysis:	Regional (Southern Nevada & National (U.S.)
Financial Analysis:	Projected (Pro Forma)
VALUATION PROCESS	
Valuation Approaches:	
Considered & Rejected:	Asset (Liquidation Value, Historic & Adjusted Book Value) Market (Guideline Public Company & Comparable Transactions) Income (Capitalization of Earnings)
Considered & Applied:	Income (Discounted Multi-Stage Growth Model – Multiple Scenarios)
Discount Rate:	18% After-tax/26% Pre-tax
Long-term Growth	3%
Mid-year Conversion:	Applied
Type of DCF Analysis:	Multiple Scenario Multi-stage Growth Model with varying revenue growth rates and certain expense ratio assumptions.
CONCLUSION OF VALUE	
$8.7 Million	

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APPENDICES & EXHIBITS

INTRODUCTION

Purpose

Gryphon Valuation Consultants, Inc. ("Gryphon") was retained by Mr. Shane Terry ("Client") to provide a conclusion of value for a **22.88% voting interest** ("The Interest") in **NuVeda, LLC** ("Company" and "NuVeda"), a Nevada limited liability company. Business valuation services were provided in connection with the Client's expulsion from the Company and performed in accordance with the Valuation Engagement Agreement dated March 17, 2016. The conclusion of value for The Interest was determined as of March 10, 2016 ("Expulsion Date" and "Valuation Date") on the basis of fair market value.

In accordance with the Valuation Date, all analysis hereunder was performed as of March 10, 2016.

This valuation report has been prepared for the specific aforementioned purpose and is not to be used for any other purpose. The distribution of this report is restricted to the parties to whom the report is addressed and their appropriate advisors. Any other use of this report is unauthorized and the information included herein should not be relied upon.

Standard of Value

The term "fair market value," as applied herein, is defined as the price at which the property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or to sell and both having reasonable knowledge of the relevant facts.

Premise of Value

This report was prepared under the premise that the Company is a going concern. This means that it was presumed that the Company's assemblage of assets and resources used to produce revenue will continue in operation for the reasonably foreseeable future. As such, the Company is deemed to be a going concern business enterprise.

Control & Marketability Characteristics

The Interest, representing a 22.88% voting interest in the Company, was, in and of itself, deemed to be a minority interest and thereby non-controlling in respect to the Company's management of its operations and assets. Further, The Interest represented a voting interest in a privately-held company for which no organized market place existed. As such The Interest's marketability was considered to be impaired vis-à-vis securities that trade on organized and active public markets.

Sources of Information

The primary sources of information utilized herein involved research and analysis of the requisite economies and industry, research and analysis of the Company and related material factors and information, and a review and analysis of the relevant financial projections as provided by the Client. Please see Appendix D for a complete listing of sources for the information analyzed herein.

Assumptions

This report relies on several key assumptions and limiting conditions.

The relevant Limiting Conditions are provided in Appendix C and the Valuation Analyst's Representations included in Appendix A. In addition thereto, other limiting factors and assumptions are noted herein as applicable.

Scope Limitation

Gryphon was engaged to provide a conclusion of value for The Interest on the basis of fair market value. However, certain information was limited to that provided. Had an audit, forensic accounting or other more advanced analysis been performed, matters may have come to light that could have had a material impact on the opinions of value offered in this report.

This report is not intended to serve as a basis for expert testimony in a court of law or other governmental agency without further analysis and any resulting documentation. Such services require a separate *Litigation Consulting and Expert Services Agreement* and Gryphon is under no obligation to enter into such an agreement.

Further, this report is intended to be used by persons whom are or have, through their own prudent due diligence become, familiar with the operations of the Company. Thus, detailed discussion regarding the Company's proposed operations, target markets, products or services offered, competition, and other like factors have been largely omitted from the body of this report. As such, the brief overview of Company-specific information presented herein should *not* be interpreted as inclusive of all company-specific information fully considered and accorded the appropriate weight in the valuation analysis.

Hypothetical Conditions & Assumptions

Inherent within the valuation process is the necessary incorporation of certain hypothetical conditions and assumptions. The following represents these hypothetical conditions and assumptions:

- Anticipated economic conditions generally fall in line with the forecast as presented herein;
- The industry in which the Company has proposed to operate is not stable and assumptions regarding future industry conditions were material to the opinions of value offered herein;
- Notwithstanding any proposed sale or reorganization of the Company, or a material portion of the assets thereof, it was assumed that present managerial and operational personnel and other key personnel or like replacement(s) were willing and able to maintain their roles or fulfill similar roles as they pertain to the operations of the Company on the Valuation Date and into the reasonably foreseeable future in the same general capacity as they have represented their respective duties;
- The regulatory and legal environments concerning the Company's proposed operations are not stable and assumptions regarding these factors remaining the same in the future as anticipated on the Valuation Date were material to the opinions of value offered herein;
- All information, documents and representations made or presented by Client to Gryphon have been true and accurate and that no statement of fact has been offered so as to be intentionally misleading or otherwise cause erroneous assumptions to be made by Gryphon during the performance of its valuation analysis hereunder.

BUSINESS VALUATION APPROACHES

Value is dependent on perspective, and opinions of value should consider as many perspectives as are appropriate to the circumstances. There are several methods of valuation that are classified under one of three approaches promulgated by business valuation theory:

- Asset Approach
- Income Approach
- Market Approach

Determining which valuation approach(es) to utilize requires a study of the entity being valued, the circumstances involved and an understanding of how assets are employed in order to generate income. All three approaches were considered as part of this valuation engagement.

Asset Approach

One method of the Asset Approach considers that the value of a business is defined by its adjusted net asset value, or the company's assets minus its liabilities, both adjusted for fair value. This approach is most appropriate in instances where the assets either *are* the business or represent the essence of the business, such as with investment companies or other financial institutions. Other instances of applicability are in cases of capital intensive firms such as certain manufacturers or heavy equipment operators, or in cases of early stage operating entities where cash flow levels have not yet been established. This approach may also be applied in situations involving insolvency or liquidation where the company is presumed to be worth "more dead than alive."

Another method of the asset approach – the Cost or Replacement Method – is based on the premise that the value of a business is the cost of replacing all of the assets of that business, both tangible and intangible. It involves estimating the cost of reproducing or replacing all property in the business, less depreciation for physical deterioration and functional obsolescence. Under this method, however, it is difficult to measure the value of certain intangible assets that have been developed internally, especially intellectual property such as brand names, patents and certain technology as software code.

Income Approach

The Income Approach takes the view that the value of a business's adjusted net assets is *less* important than the benefit stream produced through the employment of those assets. In other words, the earnings that can be generated utilizing the company's assets are *more* important than the value of the assets themselves. This approach is most appropriate in the case of going concerns where goods and/or services are being offered for consumption and the company's assets serve to support that proposition.

The basic underlying premise of the Income Approach is that the value of a business equates to the present value of its future earnings capacity. This is often determined in one of two ways. The first method – known as direct capitalization – divides current or expected earnings by a Capitalization Rate that incorporates certain risk factors associated with the business while also considering the expected growth rate of the earnings. This method is referred to as the Capitalization of Earning (COE) model and is most useful when the level of earnings and their rate of growth are both expected to be stable over time.

The second method involves projecting cash flows out for a certain number of future periods, estimating a "terminal value" and then discounting these cash flows back to a present value using an appropriate Discount Rate that takes into consideration the time value of money and the risk inherent in operating the business. This is referred to as the Discounted Cash Flow (DCF) methodology. However, it must be realized that forecasting future cash flows involves uncertainty, and the farther the forecast goes into the future, the greater the uncertainty of the forecasted amounts. As such, any forecast and the underlying assumptions should be reviewed for reasonableness. Various measures of reliability, such as management's prior record of success and the track records of comparable companies as well as industry particulars need to be analyzed and considered.

For high growth or early-stage companies, it can be especially difficult to build long-term forecasts with any degree of accuracy. However, in such circumstances, the DCF method may result in the most appropriate indication of value. Additionally, in typical early stage enterprise valuations, using the DCF method, the terminal value (determined at that point in time when cash flows are expected to become steady and predictable) may constitute one hundred percent *or more* of the total value due to losses from operations during some or all of the reporting periods up to the terminal value date.

Market Approach

The Market Approach involves comparing the subject company to comparable "like" entities in which various valuation metrics such as price-to-sales or price-to-earnings ratios can be identified. The most applicable metric(s) are then applied to the subject company in order to estimate value. This approach requires either identifying comparable companies that trade in the public marketplace (Guideline Public Company Method) or analyzing actual transaction data (Comparable Transactions Method) from previous buy and sell activity (mergers and acquisitions) in the equity interests of companies similar to the subject company.

Guideline Public Company Method

This method involves identifying publicly-traded companies similar to the subject company. Valuation ratios such as multiples of revenue or earnings are calculated for the guideline companies and then applied to the subject company. However, it can often be difficult to find publicly-traded companies which are truly comparable to the subject business, especially in the case of mid-sized or smaller privately-held companies. Another difficulty, particularly in the case of early-stage enterprises, is that the subject business may not have a meaningful amount of revenue or earnings, or may even have negative earnings. In addition, the performance indicators from publicly-traded companies may be difficult to apply directly to closely-held enterprises because public companies are typically further along in their development cycle and are often more broadly diversified in terms of their lines of business and products/services offered.

Comparable Transactions Method

This method consists of identifying transactions involving companies similar to the subject business. Then, as with the Guideline Public Company Method, certain valuation ratios such as multiples of revenue or earnings are calculated from the transaction data and applied to the subject company. The issue in applying the Comparable Transactions Method is that it can be difficult to find transactions involving companies which are truly comparable to the subject company. Another difficulty is that both the subject company, as well as the companies contributing to the transaction data, may not have a meaningful amount of revenue or earnings. This is often the case with newer "leading edge" industries or technologies. However, for well-established business models operating in mature industries, the Comparable Transactions Method can provide a very good indication of market value.

THE COMPANY – A BRIEF OVERVIEW

The following information was obtained through material provided by, and interviews with the Client and other material and sources of information as noted herein.

History & Description

The Company was formed as a Nevada Limited Liability Company on April 14, 2014 as evidenced by the Nevada Secretary of State *Business Entity Information* records. The Company is governed by the NuVeda, LLC Operating Agreement dated July 9, 2014 ("Agreement"). The term of the Company according to Article 1.4 of the Agreement "shall be perpetual unless dissolved as provided in this Agreement." Article 8.1 allows that:

> "The Company shall be dissolved, its assets shall be disposed of, and its affairs wound up on the first to occur of: the entry of a decree of judicial dissolution pursuant to the Act; the majority approval of the Voting Members; or any other event causing a dissolution of a Limited Liability Company under the laws of the State of Nevada."

Article 6 defines the purpose of the Company as:

> "…to engage in all lawful activities, including, but not limited to the following activities:
>
> The research, design, creation, management, licensing, advising and consulting regarding the legal medical marijuana industry, as such matters shall be lawfully allowed under applicable state laws. Such purpose shall be broadly read to include providing management or other professional services to any individual, group or entity that is lawfully licensed, or seeking to become lawfully licensed, under any state statutory scheme providing for the legal cultivation, processing or dispensing of medical marijuana."

On November 3, 2014, the Company received from the State of Nevada, six Provisional Certifications, two for each of three subsidiaries, either wholly-owned or majority owned, indicating the state's intent to approve the Company's applications for the following medical marijuana establishments under each of the respective subsidiaries:

1. Clark NMSD, LLC dba NuVeda
   a. Dispensary establishment at 2113 N. Las Vegas Boulevard in the North Las Vegas
   b. Dispensary establishment at 1320 S 3rd Street in Las Vegas
2. Clark Natural Medicinal Solutions, LLC
   a. Cultivation establishment at 13655 Apex Star Court in North Las Vegas
   b. Production establishment at13655 Apex Star Court in North Las Vegas
3. Nye Natural Medicinal Solutions, LLC
   a. Cultivation establishment at 2801 E. Thousandaire Blvd. in NYE [Pahrump , NV]
   b. Production establishment at 2801 E. Thousandaire Blvd. in NYE [Pahrump , NV]

The six provisional certificate letters are presented in Appendix G. The relationship between the Company and its three subsidiaries is presented immediately below.

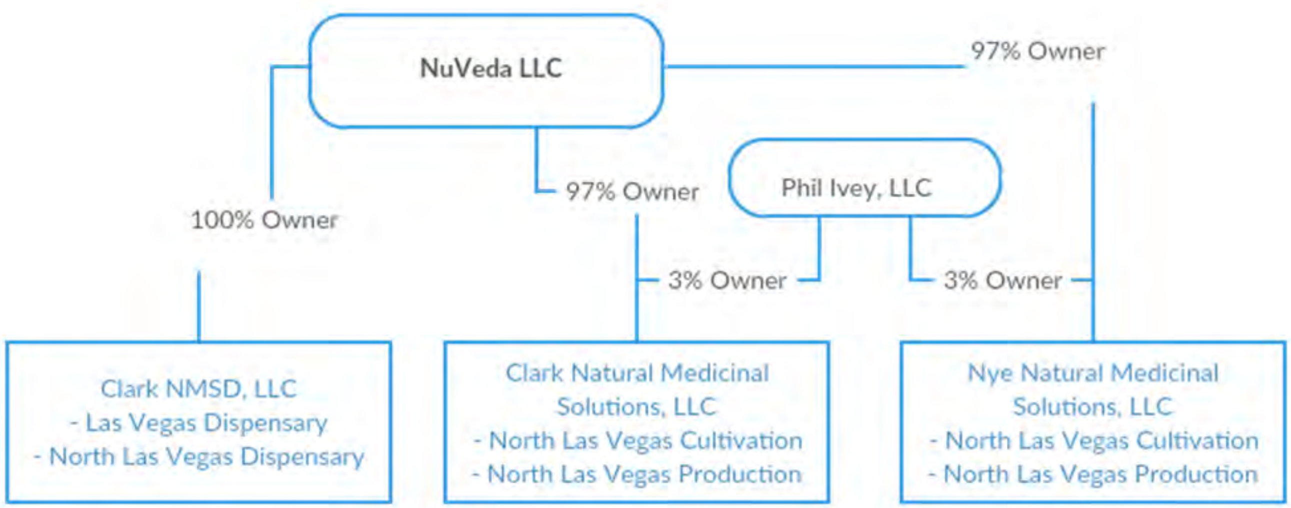
Organization and Ownership

In accordance with the Company's documents, the Company's primary operational and ownership structure was as follows:

MEMBER	OFFICER POSITION
Dr. Pejman Bady	President
Shane Terry	Chief Executive Officer
Dr. Pouya Mohajer	Chief Medical Officer
Jennifer Goldstein	General Counsel
Wells Littlefield	Director of Operations Deputy General Counsel

Highlighted member denotes the Client. Officer positions were sourced from the Company's October 2015 presentation material.

Ownership Structure	NuVeda	Clark NMSD	Clark Nat. Med. Sol.	Nye Nat. Med. Sol.
NuVeda, LLC	***N/A***	***100%***	***97%***	***97%***
Pejman Bady	45.86%	45.86%	44.48%	44.48%
Pouya Mohajer	19.76%	19.76%	19.17%	19.17%
Shane Terry	22.88%	22.88%	22.19%	22.19%
Jennifer Goldstein	7.00%	7.00%	6.79%	6.79%
Joe Kennedy	1.00%	1.00%	0.97%	0.97%
John Penders	1.75%	1.75%	1.70%	1.70%
Ryan Winmill	1.75%	1.75%	1.70%	1.70%
Non-NuVeda	***N/A***	***0.00%***	***3.00%***	***3.00%***
Phil Ivey, Jr	**0.00%**	**0.00%**	***3.00%***	***3.00%***
Totals	**100.00%**	**100.00%**	**100.00%**	**100.00%**



Services

The Company's six provisional certificates, upon final approval, will allow the Company to operate a fully functional, vertically-integrated medical marijuana operation from cultivation to production and finally, the sale of product to those seeking the medicinal benefits of cannabis. Such a structure will provide the Company with the ability to control the quality and quantity of the supply chain, the production process and the manner of distribution, shaping their own differentiating brand identity.

Opportunity

According to the Company's October 2015 presentation material, Nevada’s medical marijuana market is projected to grow 482% by the year 2019. The Department of Public Health estimates annual cannabis demand of 459,130 pounds - a potential wholesale market size of over $900 million.

The Company received two of the 32 total dispensary licenses with State and local approval in Clark County, including prime locations in downtown Las Vegas and North Las Vegas. Further, the Company claims to have been authorized for two of the only greenhouse facilities in Nevada for cultivation and production.

It is expected that, should national legalization occur, big pharma, tobacco and alcohol companies will enter the market with a vengeance providing for a flurry of mergers and acquisition activity that would allow for very lucrative exit strategies to those companies offering instant market share and perhaps even established brands.

Customer Base

The Nevada Department of Public and Behavioral Health (DPBH) has estimated that there are 68,922 registered local medical marijuana patients. Further, in the 2016 election cycle, it is expected that five states will see ballot initiatives calling for the recreational use of marijuana, including Nevada. Currently, 23 states allow medical marijuana with Alaska, Colorado, Washington and Washington D.C. having already passed recreational marijuana use laws.

Nevada boasts no less than 40 million visitors annually. With reciprocity towards other state-issued medical marijuana licenses, the Las Vegas area stands poised to benefit from tourism like no other medical marijuana jurisdiction.

Risk Assessment

Marijuana remains a Schedule 1 drug under DEA guidelines, meaning that, on a National level, it is illegal to grow, possess or use. This raises the possibility that the Federal government could still prosecute based on Federal law – even though state law provides otherwise.

The banking industry is subject to Federal regulations. As such cannabis is an entirely cash-based industry. Financial institutions have been reluctant to open accounts for marijuana businesses for fear of Federal regulators.

Black market competition will probably always exist. After all, it represents the legacy market for the growing, production and distribution of marijuana.

NuVeda

Expulsion

It has been represented by the Client that he was expulsed from the Company on the Valuation Date. The following language is from Article VI, Section 6.2 of the Agreement which addresses "Expulsion or Death of a Member:"

> "Upon the expulsion or death of a Member, the Member's successor-in-interest, estate or beneficiary or beneficiaries, as the case may be, shall be entitled to receive from the Company, in exchange for all of the former Member's Ownership Interest, the **fair market value** of that Member's Ownership Interest, adjusted for profits and losses to the date of the expulsion or death. **Fair market value** may be determined informally by a unanimous good-faith agreement of all of the Voting Members. In the absence of an informal agreement as to **fair market value**, the Voting Members shall hire an appraiser to determine **fair market value**. The cost of any appraisal shall be deducted from the **fair market value** to which the former Member or the former Member's successor-in-interest, estate or beneficiary or beneficiaries is or are entitled. The Voting Members may elect, by written notice that is provided to the expelled or deceased Member's successor-in-interest, estate or beneficiary or beneficiaries, within thirty (30) days after the Member's expulsion or death, to purchase the former Member's Ownership Interest over a one-year (1 year) period, in four (4) equal installments, with the first installment being due sixty (60) days after the Member's expulsion or date of death. Unless otherwise agreed unanimously by the Voting Members, prior to the completion of such purchase, the former Member's successor-in-interest, estate or beneficiary or beneficiaries, shall have no right to become a Member or to participate in the management of the business and affairs of the Company as a Member or Manager, and shall only have the rights of an Assignee and be entitled only to receive the share of profits and the return of capital to which the former Member would otherwise have been entitled." [Emphasis added to note the standard of value mandated by the Agreement]

While ultimately requiring a legal conclusion, it would appear that an expulsed member "shall be entitled to receive from the Company, in exchange for all of the former Member's Ownership Interest, the **fair market value** of that Member's Ownership Interest…"

As such, the Fair Market Value standard of value, as previously defined, was deemed to be the appropriate standard of value in respect to the valuation analysis performed hereunder.

SUMMARY INDUSTRY ANALYSIS

The following information was sourced from IBISWorld – a leading market, industry research and forecasting company that provides data on more than 700 industries utilizing economic, demographic and government data. IBISWorld research is a subscription service utilized by the world's leading economic, business consulting and valuation firms.

Below is a summary analysis of the industry in which the Company operates. While the Company serves a limited geographical area, its future is still closely tied to the outlook for the industry as a whole. The complete industry analysis is presented in Appendix E.

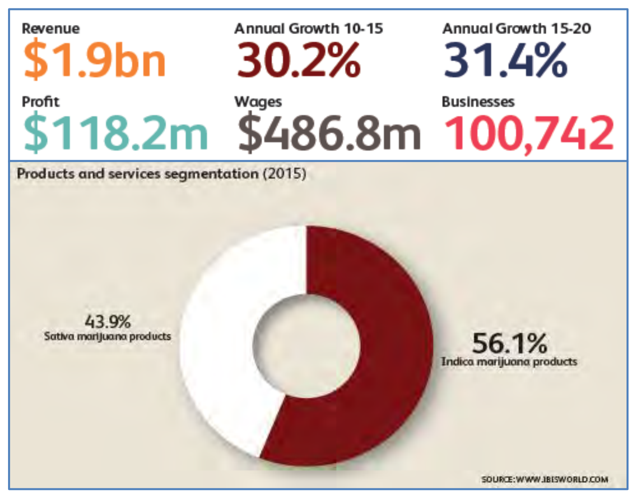
Medical & Recreational Marijuana Growing in the US

Overview

This industry's establishments grow marijuana for medical and recreational use. Most operators are nonprofit collectives that provide medical marijuana to other collective members. Transactions are typically conducted on a donation basis because the sale and distribution of marijuana is illegal in most states that permit medical marijuana. The industry also includes operators in Colorado and Washington, who grow medical and recreational marijuana on a for-profit basis.

<u>Industry Summary</u>

The Medical and Recreational Marijuana Growing industry, which includes establishments that grow marijuana for medical and recreational use, has flourished over the five years to 2015. For decades, all marijuana transactions in the United States were conducted under implicit or explicit prohibition. However, states have increasingly moved to legalize nonprofit marijuana for medical purposes, as well as to implement regulations for organizations that sell cannabis. The growing acceptance of medical marijuana is providing growers and investors with unprecedented opportunities. There has been no shortage of demand in recent years, as the industry has benefited from the increased acceptance and legitimacy of medical marijuana products.



More recently, the legalization of recreational marijuana in Colorado and Washington has spurred demand for the industry. In 2014, the licensing of commercial recreational marijuana growers in these states contributed to industry revenue growth of 54.7%. In addition to the favorable regulatory environment in these states, medical marijuana growers have continued to benefit the steadily aging population. Chronic illnesses have become more prevalent as the population continues to age, driving demand for medical marijuana.

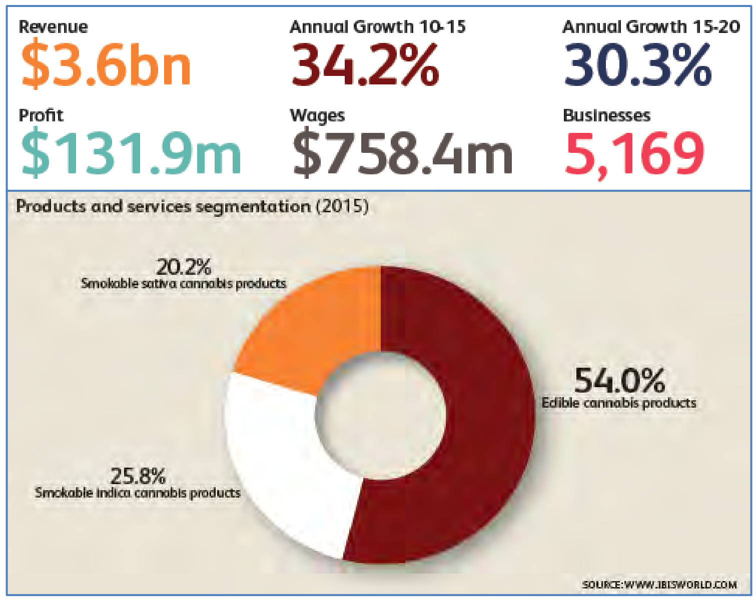
Industry revenue is estimated to increase at an annualized rate of 31.4% to $7.4 billion over the five years to 2020. The industry will remain at risk, however, until the federal government definitively changes its position on the legality of marijuana. Until then, a growing number of medical marijuana patients, as well as a burgeoning recreational cannabis legalization movement, will spur demand for the industry. Rising demand is also forecast to widen profit margins, as is the success of the for-profit recreational marijuana business in Colorado and Washington. In particular, the next five years are expected to see the growth of large commercial cultivators, who will benefit from strong recreational demand across a number of states including Alaska and Oregon as well as the District of Columbia.

Medical & Recreational Marijuana Stores in the US

Overview

This industry includes stores that retail medical marijuana (by prescription only) and recreational marijuana. However, the legal sale of recreational marijuana is currently limited to the states of Colorado and Washington.

Industry Summary



The Medical and Recreational Marijuana Stores industry, which includes stores that retail medical marijuana (by prescription only) and recreational marijuana, has flourished over the five years to 2015. For decades, all marijuana transactions in the United States were conducted under implicit or explicit prohibition. However, states have increasingly moved to legalize marijuana for medical purposes, as well as to implement regulations for organizations that sell cannabis. The growing acceptance of medical marijuana is unprecedented opportunities. There has been no shortage of demand in recent years, as the industry has benefited from the increased acceptance and legitimacy of medical marijuana products.

More recently, the legalization of recreational marijuana sales in Colorado and Washington has spurred demand for the industry. In 2014, the opening of the first recreational marijuana stores in these states contributed to industry revenue growth of 70.5%. Meanwhile, medical marijuana dispensaries have continued to benefit the steadily aging population. Chronic illnesses have become more prevalent as the population continues to age, driving demand for medical marijuana. Additionally, the development of edible cannabis products has helped attract consumers who are unfamiliar with marijuana products or averse to smoking. Indeed, edible products are projected to be a growth segment for the industry in the coming years.

Industry revenue is projected to increase at an annualized rate of 30.3% to $13.4 billion over the five years to 2020. The industry will remain at risk, however, until the federal government definitively changes its position on the legality of marijuana. Until then, a growing number of medical marijuana patients and a burgeoning recreational cannabis legalization movement will spur demand for the industry. Rising demand is also forecast to widen profit margins, as is the success of for-profit recreational marijuana businesses in Colorado and Washington. Consequently, IBISWorld forecasts that the number of companies operating in this industry will increase an average 18.6% annually to 12,128 in the five years to 2020.

SUMMARY ECONOMIC ANALYSIS

In any business valuation, the general economic outlook as of the Valuation Date should be considered. Anticipated economic performance is often the basis for how investors perceive alternative investment opportunities at any given time. The objective of this economic analysis is to highlight the most common economic indicators underlying the economy's relative long-run attractiveness.

The U.S. economic data presented herein was compiled for and distributed by the American Business Appraisers National Network. The Southern Nevada data presented herein was sourced from the *2016 Economic Outlook* published in December 2015 by the Center for Business and Economic Research (CBER) at the College of Business, University of Nevada, Las Vegas (UNLV).

The following is a summary analysis of the outlooks for both the U.S. and Southern Nevada economies. Appendix F contains the complete national and regional economic analyses.

Outlook – National Economy

While the economy has improved since the beginning of the great recession, it still isn't where anyone would want it to be, but it is definitely in a stronger place. The unemployment rate is steadily falling, the stock market is near record highs, consumer confidence and spending are up, business spending is gradually improving, and inflation remains low. However, the job market remains unsettled, there are too many part-time workers who want full time work and job turnover is unusually low. In addition, wages have yet to outpace inflation for most workers.

Continued moderate GDP growth, low inflation, and Federal easing underlie the economic projections of the Federal Reserve. For 2016, U.S. real GDP growth is forecast to be in the range of 2.3 to 2.5 percent. Unemployment is expected to decline to 4.6 to 4.8 percent as job growth is expected to improve slightly. Inflation will remain below the 2 percent target rate, with the PCE deflator at 1.5% to 1.7%. In 2017, real GDP growth is forecast to be in the range of 2.0 to 2.3 percent, with further slowing expected in 2018.[1]

Federal Reserve Projections -December 2015

Economic Projections of Federal Reserve Members and Federal Reserve Bank Presidents, June 2014

Advanced release of table 1 of the Summary of Economic Projections

Accessed February 5, 2016

Variable	Median1					Central tendency					Range				
	2015	2016	2017	2018	Longer run	2015	2016	2017	2018	Longer run	2015	2016	2017	2018	Longer run
Change in real GDP	2.1	2.4	2.2	2.0	2.0	2.1	2.3 - 2.5	2.0 - 2.3	1.8 - 2.2	1.8 - 2.2	2.0 - 2.2	2.0 - 2.7	1.8 - 2.5	1.7 - 2.4	1.8 - 2.3
September projection	2.1	2.3	2.2	2.0	2.0	2.0 - 2.3	2.2 - 2.6	2.0 - 2.4	1.8 - 2.2	1.8 - 2.2	1.9 - 2.5	2.1 - 2.8	1.9 - 2.6	1.6 - 2.4	1.8 - 2.7
Unemployment rate	5.0	4.7	4.7	4.7	4.9	5.0	4.6 - 4.8	4.6 - 4.8	4.6 - 5.0	4.8 - 5.0	5.0	4.3 - 4.9	4.5 - 5.0	4.5 - 5.3	4.7 - 5.8
September projection	5.0	4.8	4.8	4.8	4.9	5.0 - 5.1	4.7 - 4.9	4.7 - 4.9	4.7 - 5.0	4.9 - 5.2	4.9 - 5.2	4.5 - 5.0	4.5 - 5.0	4.6 - 5.3	4.7 - 5.8
PCE inflation	0.4	1.6	1.9	2.0	2.0	0.4	1.2 - 1.7	1.8 - 2.0	1.9 - 2.0	2.0	0.3 - 0.5	1.2 - 2.1	1.7 - 2.0	1.7 - 2.1	2.0
September projection	0.4	1.7	1.9	2.0	2.0	0.3 - 0.5	1.5 - 1.8	1.8 - 2.0	2.0	2.0	0.3 - 1.0	1.5 - 2.4	1.7 - 2.2	1.8 - 2.1	2.0
Core PCE inflation4	1.3	1.6	1.9	2.0		1.3	1.5 - 1.7	1.7 - 2.0	1.9 - 2.0		1.2 - 1.4	1.4 - 2.1	1.6 - 2.0	1.7 - 2.1	
September projection	1.4	1.7	1.9	2.0		1.3 - 1.4	1.5 - 1.8	1.8 - 2.0	1.9 - 2.0		1.2 - 1.7	1.5 - 2.4	1.7 - 2.2	1.8 - 2.1	
Memo: Projected appropriate policy path															
Federal funds rate	0.4	1.4	2.4	3.3	3.5	0.4	0.9 - 1.4	1.9 - 3.0	2.9 - 3.5	3.3 - 3.5	0.1 - 0.4	0.9 - 2.1	1.9 - 3.4	2.1 - 3.9	3.0 - 4.0
September projection	0.4	1.4	2.6	3.4	3.5	0.1 - 0.6	1.1 - 2.1	2.1 - 3.4	3.0 - 3.6	3.3 - 3.8	(1.0)	(3.0)	1.0 - 3.9	2.9 - 3.9	3.0 - 4.0

The January 2016 projections from the Congressional Budget Office[2] were generally consistent with Federal Reserve projections.

[1] Federal Reserve Projections. Accessed February 5, 2016. Available at http://www.federalreserve.gov/monetarypolic

[2] Congressional Budget Office. www.cbo.gov.

Regional Economic Outlook – Southern Nevada

The 2016 CBER report noted that the Southern Nevada economy continues to make a steady progress towards recovery from the financial crisis and Great Recession. As of October 2015, employment in Southern Nevada was 2.0 percent below its prerecession peak. Yet, recover is underway, and Nevada has been among the fastest-growing states in recent years. The good news is that the Southern Nevada economy is continuing to experience growth. Although the annualized growth rate for 2015 is down from the growth rates for 2014 for Las Vegas, Nevada employment growth in 2015 exceeds that for 2014. In addition to strong employment gains, financial conditions also are improving, and visitor volume is still rising after a strong 2014. The good news is that the growth is widespread across Southern Nevada's industries. Leisure and hospitality, construction and real estate are doing well. So are manufacturing; trade, transportation and utilities; financial activities; professional and business services; education and health services and other services. If one must find bad news, Southern Nevada still has a ways to go before it reaches its prerecession level of economic activity, but that gap is closing. As far as employment is concerned, that goal is within sight, the CBER expects Las Vegas to reach its prerecession levels of employment in early 2016. Based on the CBER's assessment of national and Nevada trends in 2016 and 2017, the CBER believes that the Southern Nevada economy will continue to see improvement in 2016 and 2017.

Areas of the local economy that influence the prospects for the Company are population, employment, personal income and tourism. CBER predicts that the Clark County population will grow by 2.1 percent in 2015 and 2016. The population growth rate declines in the medium term as the Clark County economy moves closer to maturity. By 2030, the population growth rate falls to 1.1 percent as the Clark County economy is expected to mature. Combined with reports of a tightening rental market, the upswing in redeemed driver's licenses is consistent with renewed population growth and suggests upward pressure on housing prices. The October data shows that in the first nine months of 2015, the Las Vegas metropolitan area saw an increase in employment of 18,800 jobs (2.5 percent annualized rate). As the result of these gains, the Nevada unemployment rate has fallen sharply. The seasonally adjusted Nevada unemployment rate is 6.8 percent, which is 3.0 percentage points below last year's December unemployment rate. This decline in the unemployment rate occurred even though the labor force increased by 25,900 persons over the same time period. Additionally, total personal income has been increasing in the retail trade and the accommodations and food services sectors since third quarter 2009. The real estate, rental and leasing sector is also in a recovery period.

In summary, CBER reported that the Southern Nevada economy is in its fifth year of a steady recovery. Because the Southern Nevada economy is heavily dependent on tourism, its outlook is tied to the growth of the U.S. and western states' economies. Southern Nevada is getting some help from real estate and construction. Wholesale and retail trade and health services are also growing. Diversification will pay dividends in the future.

Industry Implications

The analysis provided by CBER appeared to indicate a period of steady economic growth for Southern Nevada in the near term. Additionally, the outlook for the longer term also appears to be brighter. The U.S., Nevada and Southern Nevada indexes of leading economic indicators all have upward trends. These indexes show that Southern Nevada economic conditions can be expected to continue improving at a steady rate. The implication is that business for the medical and recreational marijuana industry will also be subject to positive near-term growth expectations. While the CBER report alludes to economic diversification, Las Vegas is still highly addicted to tourism as driven not just by raw numbers, but also visitors' willingness (and ability) to spend.

FINANCIAL ANALYSIS

The following presents the Company's financial information as provided by the Client (as CEO of the Company). The information was sourced from the Client's financial performance projections.

5-Year Balance Sheet Projections

	Start Up	Year 01 Month 12	Year 02 Month 12	Year 03 Month 12	Year 04 Month 12	Year 05 Month 12
Cash	(1,676,493)	(7,906,357)	(5,939,095)	11,165,210	41,668,658	92,738,089
Accounts Receivable	0	0	1,456,198	1,719,273	1,719,273	1,719,273
Land	0	0	0	0	0	0
Property & Equipment	0	3,426,492	4,361,492	11,731,492	19,926,492	19,926,492
Accum Depreciation	0	(17,143)	(40,000)	(62,857)	(85,714)	(108,571)
Deposits	0	0	0	0	0	0
Other Assets	0	0	0	0	0	0
Total Assets	**(1,676,493)**	**(4,497,008)**	**(161,405)**	**24,553,118**	**63,228,708**	**114,275,283**
Accounts Payable	0	375,538	2,292,936	2,656,500	2,698,835	2,755,131
Accrued Expenses	0	127,946	163,354	166,954	166,954	166,954
Bank L/C	0	0	0	0	0	0
Long Term Debt - Other	500,000	445,386	385,945	321,249	250,835	174,197
Long Term Debt - Startup	0	0	0	0	0	0
Total Liabilities	**500,000**	**948,870**	**2,842,235**	**3,144,704**	**3,116,624**	**3,096,282**
Equity/Paid In Capital	(450,000)	(450,000)	(450,000)	(450,000)	(450,000)	(450,000)
Retained Earnings	(1,726,493)	(4,995,878)	(2,553,640)	21,858,414	60,562,084	111,629,001
Total Equity	**(2,176,493)**	**(5,445,878)**	**(3,003,640)**	**21,408,414**	**60,112,084**	**111,179,001**
Total Liabilities & Equity	**(1,676,493)**	**(4,497,008)**	**(161,405)**	**24,553,118**	**63,228,708**	**114,275,283**

NOTE: The balance sheet projections presented above did not specifically identify the Company's Apex land that was valued at $2,000,000.[1] The appraisal cover letter for the Apex property is presented in Exhibit B.

[1] *Britton-Adamo Group/ROI Appraisal, File Number 16-040*

5-Year Profit & Loss Projections

	Year 01	Year 02	Year 03	Year 04	Year 05
Revenue					
Cultivation	0	10,639,066	54,269,285	78,400,999	116,446,291
Production	0	4,438,000	17,115,356	23,434,662	11,843,827
Dispensary, net of 4Front	955,500	12,401,116	14,309,466	16,511,957	19,033,458
Total Revenue	955,500	27,478,182	85,694,107	118,347,618	147,323,576
Cost of Revenue					
Cultivation	357,962	4,788,719	16,615,438	19,679,947	27,816,145
Production	53,000	2,201,543	6,798,562	9,159,874	5,148,875
Dispensary	334,689	4,278,796	4,913,970	5,670,320	6,536,222
Total Cost of Revenue	745,650	11,269,059	28,327,970	34,510,141	39,501,242
Gross Margin					
Cultivation	-357,962	5,850,347	37,653,847	58,721,052	88,630,146
Production	-53,000	2,236,457	10,316,794	14,274,788	6,694,952
Dispensary	620,811	8,122,320	9,395,496	10,841,637	12,497,236
Total Gross Margin	209,850	16,209,123	57,366,137	83,837,477	107,822,334
Gross Margin %	22.0%	59.0%	66.9%	70.8%	73.2%
Other Expenses					
Culitvation	1,250,398	4,715,550	10,102,936	13,540,559	18,987,128
Production	206,695	836,309	1,916,765	2,424,973	1,497,707
Dispensary	1,555,920	3,343,717	3,587,100	3,789,768	3,954,762
Management Company	2,164,499	3,501,521	4,155,680	4,500,215	4,789,975
	5,177,512	12,397,097	19,762,481	24,255,515	29,229,572
Earnings before Int. & Taxes	-4,967,662	3,812,026	37,603,656	59,581,962	78,592,763
Percent	*-520%*	*14%*	*44%*	*50%*	*53%*
Interest Expense	40,405	35,577	30,323	24,605	18,381
Income Tax Expense	-1,738,682	1,334,210	13,161,279	20,853,687	27,507,465
Net Income	-3,269,385	2,442,239	24,412,054	38,703,670	51,066,917
Net Income %	*-342%*	*9%*	*29%*	*33%*	*35%*

Summary Financial Analysis

The following shows the profit & loss projections presented above without the effect of income taxes and with common-sized percentage for each line item.

	Mar-21		Mar-20		Mar-19		Mar-18		Mar-17	
Ordinary Income	$	%	$	%	$	%	$	%	$	%
Cultivation	116,446,291	79.04%	78,400,999	66.25%	54,269,285	63.33%	10,639,066	38.72%	-	0.00%
Production	11,843,827	8.04%	23,434,662	19.80%	17,115,356	19.97%	4,438,000	16.15%	-	0.00%
Dispensary	19,033,458	12.92%	16,511,957	13.95%	14,309,466	16.70%	12,401,116	45.13%	955,500	100.00%
Total Ordinary Income	147,323,576	100%	118,347,618	100%	85,694,107	100%	27,478,182	100%	955,500	100%
Cost of Sales										
Cultivation	27,816,145	18.88%	19,679,947	16.63%	16,615,438	19.39%	4,788,719	17.43%	357,962	37.46%
Production	5,148,875	3.49%	9,159,874	7.74%	6,798,562	7.93%	2,201,543	8.01%	53,000	5.55%
Dispensary	6,536,222	4.44%	5,670,320	4.79%	4,913,970	5.73%	4,278,796	15.57%	334,689	35.03%
Total Cost of Sales	39,501,242	26.81%	34,510,141	29.16%	28,327,970	33.06%	11,269,059	41.01%	745,650	78.04%
Gross Profit	107,822,334	73.19%	83,837,477	70.84%	57,366,137	66.94%	16,209,123	58.99%	209,850	21.96%

	Mar-21		Mar-20		Mar-19		Mar-18		Mar-17	
Expenses	$	%	$	%	$	%	$	%	$	%
Operating Expenses										
Cultivation	18,987,128	12.89%	13,540,559	11.44%	10,102,936	11.79%	4,715,550	17.16%	1,250,398	130.86%
Production	1,497,707	1.02%	2,424,973	2.05%	1,916,765	2.24%	836,309	3.04%	206,695	21.63%
Dispensary	3,954,762	2.68%	3,789,768	3.20%	3,587,100	4.19%	3,343,717	12.17%	1,555,920	162.84%
Management Company	4,789,975	3.25%	4,500,215	3.80%	4,155,680	4.85%	3,501,521	12.74%	2,164,499	226.53%
Total Operating Expenses	29,229,572	19.84%	24,255,515	20.50%	19,762,481	23.06%	12,397,097	45.12%	5,177,512	541.86%
Net Operating Income (EBIT)	78,592,763	53.35%	59,581,962	50.35%	37,603,656	43.88%	3,812,026	13.87%	(4,967,662)	-519.90%

	Mar-21		Mar-20		Mar-19		Mar-18		Mar-17	
Other Income/Expenses	$	%	$	%	$	%	$	%	$	%
Interest Expense										
Interest Expense	(18,381)	-0.01%	(24,605)	-0.02%	(30,323)	-0.04%	(35,577)	-0.13%	(40,405)	-4.23%
Total Interest Expense	**(18,381)**	-0.01%	**(24,605)**	-0.02%	**(30,323)**	-0.04%	**(35,577)**	-0.13%	**(40,405)**	-4.23%
Total Other Income/Expense	-18,381	-0.01%	-24,605	-0.02%	-30,323	-0.04%	-35,577	-0.13%	-40,405	-4.23%
Net Income	78,574,382	53.35%	59,557,357	50.35%	37,573,333	43.88%	3,776,449	13.87%	(5,008,067)	-519.90%

The following table depicts the 3- and 5-year analysis for both the mean and median measures of central tendency.

	3-year Analysis				5-year Analysis			
Ordinary Income	Mean		Median		Mean		Median	
Cultivation	83,038,858	69.54%	78,400,999	66.25%	51,951,128	49.47%	54,269,285	63.33%
Production	17,464,615	15.94%	17,115,356	19.80%	11,366,369	12.79%	11,843,827	16.15%
Dispensary	16,618,294	14.52%	16,511,957	13.95%	12,642,299	37.74%	14,309,466	16.70%
Total Ordinary Income	117,121,767	100.00%	118,347,618	100.00%	75,959,797	100.00%	85,694,107	100.00%
Cost of Sales								
Cultivation	21,370,510	18.30%	19,679,947	18.88%	13,851,642	21.96%	16,615,438	18.88%
Production	7,035,770	6.39%	6,798,562	7.74%	4,672,371	6.55%	5,148,875	7.74%
Dispensary	5,706,837	4.99%	5,670,320	4.79%	4,346,799	13.11%	4,913,970	5.73%
Total Cost of Sales	34,113,118	29.68%	34,510,141	29.16%	22,870,812	41.62%	28,327,970	33.06%
Gross Profit	83,008,650	70.32%	83,837,477	70.84%	53,088,984	58.38%	57,366,137	66.94%

	3-year Analysis				5-year Analysis			
Expenses	Mean		Median		Mean		Median	
Operating Expenses								
Cultivation	14,210,208	12.04%	13,540,559	11.79%	9,719,314	36.83%	10,102,936	12.89%
Production	1,946,482	1.77%	1,916,765	2.05%	1,376,490	6.00%	1,497,707	2.24%
Dispensary	3,777,210	3.36%	3,789,768	3.20%	3,246,253	37.02%	3,587,100	4.19%
Management Company	4,481,957	3.97%	4,500,215	3.80%	3,822,378	50.24%	4,155,680	4.85%
Total Operating Expenses	24,415,856	21.13%	24,255,515	20.50%	18,164,435	130.08%	19,762,481	23.06%
Net Operating Income (EBIT)	58,592,794	49.19%	59,581,962	50.35%	34,924,549	-71.69%	37,603,656	43.88%

	3-year Analysis				5-year Analysis			
Other Income/Expenses	Mean		Median		Mean		Median	
Interest Expense								
Interest Expense	(24,436)	-0.02%	(24,605)	-0.02%	(29,858)	-0.89%	(30,323)	-0.04%
Total Interest Expense	(24,436)	-0.02%	(24,605)	-0.02%	(29,858)	-0.89%	(30,323)	-0.04%
Total Other Income/Expense	(24,436)	-0.02%	(24,605)	-0.02%	(29,858)	-0.89%	(30,323)	-0.04%
Net Income	58,568,357	49.19%	59,557,357	50.35%	34,894,691	-71.69%	37,573,333	43.88%

The following presents a summary of the income statement (profit & loss) projections along with various measures of growth. As noted, the growth rates in the earlier periods are quite astronomical.

Summary Projected Income Statements

NuVeda, LLC

Projection Period

Summary of Financial Results	Mar-17		Mar-18		Mar-19		Mar-20		Mar-21	
Revenue	$955,500		$27,478,182		$85,694,107		$118,347,618		$147,323,576	
Cost of Sales	$745,650	78.0%	$11,269,059	41.0%	$28,327,970	33.1%	$34,510,141	29.2%	$39,501,242	26.8%
Gross Profit	$209,850	22.0%	$16,209,123	59.0%	$57,366,137	66.9%	$83,837,477	70.8%	$107,822,334	73.2%
Operating Expenses	$5,177,512	542%	$12,397,097	45.1%	$19,762,481	23.1%	$24,255,515	20.5%	$29,229,572	19.8%
Net Ordinary Income	-$4,967,662	-520%	$3,812,026	13.9%	$37,603,656	43.9%	$59,581,962	50.3%	$78,592,763	53.3%
Other Income/Expenses	-$40,405	-4.2%	-$35,577	-0.1%	-$30,323	0.0%	-$24,605	0.0%	-$18,381	0.0%
Net Income	-$5,008,067	-524%	$3,776,449	13.7%	$37,573,333	43.8%	$59,557,357	50.3%	$78,574,382	53.3%
Plus Interest Expense	$40,405	4.2%	$35,577	0.1%	$30,323	0.0%	$24,605	0.0%	$18,381	0.0%
EBITDA	-$4,967,662	-520%	$3,812,026	13.9%	$37,603,656	43.9%	$59,581,962	50.3%	$78,592,763	53.3%
Year-over-year Growth										
Revenue			2775.79%		211.86%		38.10%		24.48%	
Cost of Sales			1411.31%		151.38%		21.82%		14.46%	
Gross Profit			7624.16%		253.91%		46.14%		28.61%	
Operating Expenses			139.44%		59.41%		22.74%		20.51%	
Net Ordinary Income			n/a		894.94%		58.51%		31.93%	
EBITDA			n/a		886.45%		58.45%		31.91%	
Compound Annual Growth Rate (CAGR)										
Revenue					847.02%		398.47%		252.38%	
Gross Profit					1553.38%		636.51%		376.10%	
Net Ordinary Income					n/a		n/a		n/a	
EBITDA					n/a		n/a		n/a	
Trailing 3-year CAGR										
Revenue									75.02%	
Gross Profit									88.07%	
Net Ordinary Income									175.04%	
EBITDA									174.21%	

VALUATION ANALYSIS

Valuation Methodologies Considered Not Applicable

While there are many methods that can be used to estimate the fair market value of a company, the fact pattern in the specific case of the Company dictated that while certain methodologies were applicable, others were not necessarily appropriate. The following discusses the valuation methods that were considered, but not applied.

Asset-based Approaches

Adjusted Net Assets

As a start-up venture, the Company, as noted in the *Financial Analysis* section, is projected to have negative net assets (Total Equity) through the start-up phase and up until sometime in year three. As such, the adjusted net asset approach could not provide any useful indication of value for either the Company or The Interest as of the Valuation Date.

Cost or Replacement

A review of the detailed Profit & Loss projections (see Appendix H) revealed that the Company did not expect to receive any income until month 12 of year 1. As such, it was determined that all expenditures from the start-up period through year 1 would be the best representative of the pre-operational cost of preparing the Company to "go live." The total of these expenses were deemed to be the replacement value under the asset-based approach.

Referring to the Company's projected Cash Flow Statement (Appendix I) and 5-year P & L projections presented in the *Financial Analysis* section, the expenses noted in the table below were identified as comprising the Company's replacement value.

Expense	Amount
Start up (from cash flow statement)	1,726,493
Cultivation	357,962
Production	53,000
Dispensary	334,689
Management Company	2,164,499
Interest	40,405
Total Start-up Costs	$4,677,048
Selected Replacement Cost	**$5,000,000**

The selected replacement value under the asset-based approach was determined to be $5 million. Noted was that this value is most likely *much lower* than the actual replacement value due to the assumption hereunder that the Company did not actually begin operations in March 2015 as the projections indicate, but rather one year later in March 2016. Further, the replacement value does not take into account that the provisional certifications awarded the Company represent privileged licenses and were severely limited in both number and the issuance time allotted. Additionally, future licensure was not even available as of the Valuation Date. As such, the only way to replace the Company's provisional certificates would be to purchase such equivalent assets in the secondary market, increasing replacement costs multiplicatively over and above $5 million.

In respect to the Replacement Cost methodology, under the going concern premise of value, the Company's intent was to utilize the collective ability of its acquired assets in order to generate an ongoing benefit stream (i.e., cash flow). This intent was deemed more significant in terms of the valuation analysis than the mere value of replacing or duplicating the efforts and expense of causing the Company to become operational. As such, the cost or replacement value asset-based approach was also deemed to not to yield a true and accurate reflection of the Company's fair market value on a going concern basis.

Market-based Approaches

Market-based approaches develop a value using the principle of substitution. This simply means that if one thing is similar to another and could be used (or in this case invested) in place of the other, then they must be equal. Furthermore, the price of two like and similar items should approximate the value of one another. For market-based approaches to be useful, however, there must be a sufficient number of identifiable comparable data points or, alternatively, the industry composition must be such that meaningful comparisons can be made.

Two market-based approaches were considered in the estimation of the conclusion of value of the Company. The merits of each are discussed below.

Guideline Public Company Method

This method involves identifying publicly-traded companies that are similar to the subject company. However, identifying such companies that are truly comparable to private companies is often very difficult due to size differences (capitalization), scope of operations, scalability issues, capital structure, and management acumen, among other factors. In respect to publicly-traded medical marijuana enterprises ("MME"), companies were identified that participate, at least in part, in this space; however, the levels of comparability were deemed not to be sufficient enough such that reasonable indications of value could be inferred.

Comparable Transactions Method

This method involves identifying private company transactions in which the target company can be considered a comparable substitute for the subject company. It must be noted, though, that perfect comparability is almost never possible. As such, the transparency of the available transaction data is an important factor in being able to identify various characteristics that define the overall level of comparability.

In regards to privately-held medical marijuana enterprises, there is very little reliable information available concerning private sales. Certainly, there have been cases in which individual licenses have exchanged hands for monetary and other consideration; however, the specifics of those transactions are not public knowledge. As the industry matures, and such transactions begin to take a more substantive form, such information will become increasing dependable and more widely available.

However, in the specific instance of the provisional certifications obtained by the Company through its subsidiaries, there was evidence provided by the Client that pertains directly to the market value of four of the six licenses.

In a fully executed Letter of Intent (LOI) dated November 17, 2015 by CW Nevada, LLC ("CW"), CW offers to purchase a 65% interest in the provisional certifications held by two subsidiaries of the Company: 1) Nye Natural Medicinal Solutions, LLC; and 2) Clark NMSD, LLC. The four provisional certifications referenced in the LOI included two for dispensaries, and one each for cultivation and production. The LOI called for NuVeda to retain a 35% interest in each of the four provisional certifications.

In the LOI, CW represents itself as "a vertically integrated Nevada medical marijuana business that possesses a dispensary license and multiple cultivation and production licenses. CW has an initial 30,000sf cultivation facility in Pahrump that is currently in perpetual harvest, and is also finishing the build out of similar indoor cultivation facility in Las Vegas that should produce its first harvest in the first quarter of 2016." There are also several other claims of CW's advantageous position within the MME industry in southern Nevada.

In the LOI, CW appears to make the claim that the aggregate consideration for a 65% interest in the four provisional certificates was $22 million.

CW's mention of the $22 million consideration is again referenced in the court testimony of CW's Chairman and CEO, Brian Padgett[1] on January 8, 2016. In his testimony, Mr. Padgett states, in reference to the aforementioned acquisition, that "the total value benefit of everything that CW brings to the table we valued at $22 million." Mr. Padgett references this amount not once, but twice, reiterating in further testimony that "So total value -- I mean, we came up with a total value for the deal…of approximately 22 million."

Extrapolating the $22 million value of the "deal," as referenced by Mr. Padgett for a 65% interest in four of the six provisional certificates owned by NuVeda, yields a value of approximately $33.85 million for said provisional certificates [$22MM ÷ 65% = $33,846,154]. Further, aside from the two provisional certificates *not* included in the CW acquisition, the noted value does not even consider the intrinsic value of what NuVeda had already established (e.g., land purchases, negotiated lease arrangements, etc.).

Using a value of $33.85MM, the value to The Interest (22.88%) for the four provisional certifications is $7,744,000 [$33.85MM × 22.88%]. Once again, that doesn't even begin to address the value of the two provisional certifications held by the Company's other subsidiary, Clark Natural Medicinal Solutions, LLC. However, using $33.85MM as the value of four of the Company's provisional certificates, it was reasonably concluded that the average fair market value of each certificate was approximately $8,462,500 [$33.85MM ÷ 4].

Extrapolating further, using the value of $8,462,500 for a single provisional certificate, the fair market value of the Company's six provisional certificates was reasoned to be $50,775,000 [$8,462,500 × 6].

[1] PRELIMINARY INJUNCTION HEARING in the matter of NUVEDA LLC, et al. (Plaintiffs) v. PEJMAN BADY, et al. (Defendants), CASE NO. A-728510, DEPT. NO. XI, DISTRICT COURT, CLARK COUNTY, NEVADA.

Valuation Methodologies Considered Applicable

Business valuation, it is often said, employs a combination of science and art; which weighs more on a particular valuation, depends on the fact set at hand. A strong fact set allows the analyst to rely more heavily on traditional measures based on solid empirical foundations, while a weaker fact set can require that the valuator depend on certain assumptions and hypothetical scenarios that can necessitate an alternative application of valuation theory, though still well within the bounds of accepted methodology. The fact set in the case of the Company was considered to be strong.

The following discusses the valuation methodologies that were considered to be most appropriate in the specific case of the Company.

Income-based Approaches

The application of income-based valuation approaches requires the identification of an ongoing benefit stream that can either be directly capitalized or projected into the future for a finite period of time and then discounted back to present value.

Two income-based approaches were considered in the estimation of the conclusion of value of NuVeda. The merits of each are discussed below.

Capitalization of Earnings Model

Capitalization of earnings requires the estimation of three factors:

1) Stable ongoing benefit stream;

2) Capitalization rate; and

3) Long-term growth rate.

The capitalization rate represents an investor's required rate of return on a particular investment *less* the expected long-term growth rate of the cash flow expected to be generated from the investment. The Capitalization of Earnings model effectively determines the present value of a Company's ongoing economic benefit stream growing *perpetually* at a *fixed rate of growth*. The present value of the ongoing benefit stream is capitalized using the capitalization rate and is meant to be representative of the price a willing buyer and a willing seller would exchange for an interest under the definition of fair market value as employed herein.

The Capitalization of Earnings model is most appropriate in situations where the benefit stream *and* rate of growth are expected to remain *stable* over both the short- and long-term.

Discounted Multi-Stage Growth Model

The Discounted Multi-Stage Growth model also focuses on the present value of a forecasted stream of future benefits. However, this model allows for a variation of growth rates over the short-term while still employing an estimated sustainable long-run rate of growth. As such, the model requires an explicit forecast of the future benefit streams over a reasonably foreseeable short-term period *and* an estimate of a benefit stream that is stable and sustainable over the longer term (the terminal benefit stream). An appropriate discount rate and an estimated long-term growth rate beyond the discrete forecast period allow present values to be calculated and summed for all periods' benefit streams, including the terminal benefit stream. The sum of all the present values of all benefit streams is meant to reflect the amount a willing buyer and a willing seller would exchange for an interest under the definition of fair market value as employed herein.

The Discounted Multi-Stage Growth model is most appropriate in situations where the growth rate of the benefit stream is expected to vary over the short-term thereby requiring the application of different short-term growth rates that are distinctive from the assumed longer term (perpetual) rate of growth.

Most Appropriate Earnings-based Approach

Because the Company's future growth scenario more likely than not will entail variable possibilities, the Discounted Multi-Stage Growth model was considered more appropriate for use in the determination of the Company's fair market value.

Application of the Discounted Multi-Stage Growth Model

The following application of the earnings-based approach is most applicable in cases where there exists wide variability concerning the circumstances from which a reasonable forecast can be prepared. Such pro forma forecasts require an estimation of future revenues, profit margins, and operating expense ratios – all premised on future events that may or may not occur.

The Discounted Multi-Stage Growth model requires the determination of four factors:

1) Initial benefit stream for the first forecast period;
2) Discrete number of short-term forecast periods *and* the growth rates applicable to each;
3) Discount rate that reflects an investor's required rate of return; and
4) Long-term growth rate applicable to the time beyond the discrete short-term forecast periods.

As noted, the first step under the Discounted Multi-Stage Growth model is to determine an *Initial Benefit Stream*. This benefit stream will provide the initial value to which discrete estimated growth rates will be applied over the short-term in order to develop the estimated *Forecast Period Benefit Streams*.

Estimation of the Initial Benefit Stream

Under the Discounted Multi-Stage Growth model, EBITDA Cash Flow was deemed to be the most appropriate measure of income for *each* discrete forecast period, including the Initial Benefit Stream.

NuVeda, LLC		
Summary of Financial Status	Mar-17	
Revenue	$955,500	
COGS	$745,650	78.0%
Gross Profit	$209,850	22.0%
Operating Expenses	$5,177,512	542%
Net Ordinary Income	-$4,967,662	-520%
Other Income/Expenses	-$40,405	-4.2%
Net Income	-$5,008,067	-524.1%
Plus Interest	$40,405	4.2%
EBITDA	-$4,967,662	519.9%

The table to the right presents the Company's March 2017 projected financial results. The Initial Benefit Stream is indicated by the **blue** circle. In the case of traditional analysis with an established entity, this initial benefit stream would represent the starting point from which to measure growth in cash flow over the discrete short-term forecast period. However, the Company is a start-up with only pro forma financial estimations. Furthermore, the EBITDA projected for the period ending March 2017 was deemed not very useful as a starting point from which to measure future anticipated growth as it was projected to be negative.

As such, the most appropriate metric to which growth rates were applied was the projected March 2017 Revenue (**red** circle). This projection was taken at face value for purposes of developing various scenarios showing what the potential revenue growth of the Company would look like under different growth rate assumptions, including the income statement projections as provided. These scenarios and the assumptions employed are presented further below.

Estimation of the Discrete Forecast Period Benefit Streams

The appropriate duration of the short-term forecast period was deemed to be five years (through March 2021) in order to match the number of years for which projections were provided.

Due to the Company's lack of historical data, no clear pattern of growth could be developed. As such, five scenarios were developed, each exploring different revenue growth rates. Except for the actual profit & loss projections provided, all other scenarios held variables (Gross and Operating Margins, etc.) constant in accordance with the industry research presented in Appendix E.

Key Assumptions – the Development of Various Scenarios

The following analysis describes the key assumptions employed in developing the five scenarios concerning the Company's five-year revenue growth, beginning with the profit and loss projections as provided and then moving increasingly toward revenue growth rates and operating margins in accordance with the industry forecasts as presented in Appendix E. The scenarios are represented by the following parameters:

Scenario 1 – Projections as Provided (Very Aggressive Growth)

Scenario 2 – Aggressive Growth with phase in of Industry Average Metrics beginning in 2021

Scenario 3 – Moderately Aggressive Growth with phase in of Industry Average Metrics in 2020

Scenario 4 – Tempered Aggressive Growth with phase in of Industry Average Metrics in 2020

Scenario 5 – Relatively Moderate Growth with phase in of Industry Average Metrics in 2020

The following presents the industry revenue growth rates and metrics used in the above scenarios. Because the Company is involved in cultivation, production and retail sale of medical marijuana products, the noted growth rates and metrics from the two industry analyses presented in Appendix E were averaged in order to more appropriately represent the Company's operational composition.

Medical Marijuana Enterprise	Projected Revenue Growth Rates*				
	2016	2017	2018	2019	2020
Dispensaries	21.0%	39.4%	39.1%	29.6%	23.3%
Cultivation	22.1%	40.7%	40.4%	30.8%	24.4%
Average	21.6%	40.1%	39.8%	30.2%	23.9%
* Source: IBISWorld - Appendix E					

	Medical Marijuana Enterprise		
Industry Metric*	Dispensaries	Cultivation	Average
Profit	3.7%	6.3%	5.0%
Purchases	56.3%	29.0%	42.7%
Wages	21.3%	26.0%	23.7%
Depreciation	1.0%	7.4%	4.2%
Marketing	0.1%	0.1%	0.1%
Rent & Utilities	4.5%	27.0%	15.8%
Other	13.1%	4.2%	8.7%
	COGS		42.7%
	Operating Expenses		52.4%
	Profit		5.0%
* Source: IBISWorld - Appendix E			

The following tables present the future benefit streams from March 2017 through March 2021 under each scenario as previously described.

With the exception of the first scenario, the revenue growth rate for each discrete forecast period is noted in **Bold Blue** in the *Year-over-year Growth* section of the tables. Scenario 1 adheres strictly to the financial projections as provided.

Also noted in **Bold Blue** are the COGS and Operating Expense ratios (as a percentage of Revenue) for scenarios 2 through 5.

Finally the Depreciation Expense (as a percentage of Revenue) as noted previously from the Industry Analysis presented in Appendix E is also noted in **Bold Blue**, once again, for scenarios 2 through 5.

SCENARIO 1: Financial Projections as Provided – Very Aggressive Growth

Projected Financial Results through March 2021 — **SCENARIO 1**

NuVeda, LLC — **Projection Period**

Summary of Financial Status	Mar-17		Mar-18		Mar-19		Mar-20		Mar-21	
Revenue	$955,500		$27,478,182		$85,694,107		$118,347,618		$147,323,576	
COGS	$745,650	78.0%	$11,269,059	41.0%	$28,327,970	33.1%	$34,510,141	29.2%	$39,501,242	26.8%
Gross Profit	$209,850	22.0%	$16,209,123	59.0%	$57,366,137	66.9%	$83,837,477	70.8%	$107,822,334	73.2%
Operating Expenses	$5,177,512	542%	$12,397,097	45.1%	$19,762,481	23.1%	$24,255,515	20.5%	$29,229,572	19.8%
Net Ordinary Income	-$4,967,662	-520%	$3,812,026	13.9%	$37,603,656	43.9%	$59,581,962	50.3%	$78,592,763	53.3%
Other Income/Expenses	-$40,405	-4.2%	-$35,577	-0.1%	-$30,323	0.0%	-$24,605	0.0%	-$18,381	0.0%
Net Income	-$5,008,067	-524.1%	$3,776,449	13.7%	$37,573,333	43.8%	$59,557,357	50.3%	$78,574,382	53.3%
Plus Interest	$40,405	4.2%	$35,577	0.1%	$30,323	0.0%	$24,605	0.0%	$18,381	0.0%
EBITDA	-$4,967,662	-519.9%	$3,812,026	13.9%	$37,603,656	43.9%	$59,581,962	50.3%	$78,592,763	53.3%
Year-over-year Growth										
Revenue			2775.79%		211.86%		38.10%		24.48%	
COGS			1411.31%		151.38%		21.82%		14.46%	
Gross Profit			7624.16%		253.91%		46.14%		28.61%	
Operating Expenses			139.44%		59.41%		22.74%		20.51%	
Net Income			n/a		894.94%		58.51%		31.93%	
EBITDA			n/a		886.45%		58.45%		31.91%	
Compound Annual Growth Rate (CAGR)										
Revenue					847.02%		398.47%		252.38%	
Gross Profit					1553.38%		636.51%		376.10%	
Net Income					n/a		n/a		n/a	
EBITDA					n/a		n/a		n/a	
Trailing 3-year CAGR										
Revenue									75.02%	
Gross Profit									88.07%	
Net Income									175.04%	
EBITDA									174.21%	

SCENARIO 2: Aggressive Growth

	SCENARIO 2									
NuVeda, LLC	**Projection Period**									
Summary of Financial Status	Mar-17		Mar-18		Mar-19		Mar-20		Mar-21	
Revenue	$955,500		$24,843,000		$68,318,250		$92,229,638		$114,272,521	
COGS	$745,650	78.0%	$10,607,961	**42.7%**	$29,171,893	**42.7%**	$39,382,055	**42.7%**	$48,794,366	**42.7%**
Gross Profit	$209,850	22.0%	$14,235,039	57.3%	$39,146,357	57.3%	$52,847,582	57.3%	$65,478,154	57.3%
Operating Expenses	$2,388,750	**250.0%**	$13,017,732	**52.4%**	$30,743,213	**45.0%**	$36,891,855	**40.0%**	$39,995,382	**35.0%**
Net Ordinary Income	-$2,178,900	-228.0%	$1,217,307	4.9%	$8,403,145	12.3%	$15,955,727	17.3%	$25,482,772	22.3%
Other Income/Expenses	-$40,405	-4.2%	-$35,577	-0.1%	-$30,323	0.0%	-$24,605	0.0%	-$18,381	0.0%
Net Income	-$2,219,305	-232.3%	$1,181,730	4.8%	$8,372,821	12.3%	$15,931,122	17.3%	$25,464,391	22.3%
Plus Depreciation	$40,131	**4.2%**	$1,043,406	**4.2%**	$2,869,367	**4.2%**	$3,873,645	**4.2%**	$4,799,446	**4.2%**
Plus Interest	$40,405	4.2%	$35,577	0.1%	$30,323	0.0%	$24,605	0.0%	$18,381	0.0%
EBITDA	-$2,138,769	-223.8%	$2,260,713	9.1%	$11,272,511	16.5%	$19,829,372	21.5%	$30,282,218	26.5%
Year-over-year Growth										
Revenue			**2500.00%**		**175.00%**		**35.00%**		**23.90%**	
COGS			1322.65%		175.00%		35.00%		23.90%	
Gross Profit			6683.45%		175.00%		35.00%		23.90%	
Operating Expenses			444.96%		136.16%		20.00%		8.41%	
Net Income			n/a		608.52%		90.27%		59.84%	
EBITDA			n/a		398.63%		75.91%		52.71%	
Compound Annual Growth Rate (CAGR)										
Revenue					745.58%		358.72%		230.70%	
Gross Profit					1265.81%		531.50%		320.29%	
Net Income					n/a		n/a		n/a	
EBITDA					n/a		n/a		n/a	
Trailing 3-year CAGR										
Revenue									66.31%	
Gross Profit									66.31%	
Net Income									178.27%	
EBITDA									137.49%	

SCENARIO 3: Moderately Aggressive Growth

SCENARIO 3

NuVeda, LLC	Projection Period									
Summary of Financial Status	Mar-17		Mar-18		Mar-19		Mar-20		Mar-21	
Revenue	$955,500		$20,065,500		$50,163,750		$65,313,203		$80,923,058	
COGS	$745,650	78.0%	$8,567,969	42.7%	$21,419,921	42.7%	$27,888,737	42.7%	$34,554,146	42.7%
Gross Profit	$209,850	22.0%	$11,497,532	57.3%	$28,743,829	57.3%	$37,424,465	57.3%	$46,368,912	57.3%
Operating Expenses	$1,672,125	175.0%	$10,514,322	52.4%	$25,081,875	50.0%	$29,390,941	45.0%	$32,369,223	40.0%
Net Ordinary Income	-$1,462,275	-153.0%	$983,210	4.9%	$3,661,954	7.3%	$8,033,524	12.3%	$13,999,689	17.3%
Other Income/Expenses	-$40,405	-4.2%	-$35,577	-0.2%	-$30,323	-0.1%	-$24,605	0.0%	-$18,381	0.0%
Net Income	-$1,502,680	-157.3%	$947,632	4.7%	$3,631,630	7.2%	$8,008,919	12.3%	$13,981,308	17.3%
Plus Depreciation	$40,131	4.2%	$842,751	4.2%	$2,106,878	4.2%	$2,743,155	4.2%	$3,398,768	4.2%
Plus Interest	$40,405	4.2%	$35,577	0.2%	$30,323	0.1%	$24,605	0.0%	$18,381	0.0%
EBITDA	-$1,422,144	-148.8%	$1,825,961	9.1%	$5,768,831	11.5%	$10,776,678	16.5%	$17,398,457	21.5%
Year-over-year Growth										
Revenue			2000.00%		150.00%		30.20%		23.90%	
COGS			1049.06%		150.00%		30.20%		23.90%	
Gross Profit			5378.94%		150.00%		30.20%		23.90%	
Operating Expenses			528.80%		138.55%		17.18%		10.13%	
Net Income			n/a		283.23%		120.53%		74.57%	
EBITDA			n/a		215.93%		86.81%		61.45%	
Compound Annual Growth Rate (CAGR)										
Revenue					624.57%		308.87%		203.36%	
Gross Profit					1070.36%		462.88%		285.55%	
Net Income					n/a		n/a		n/a	
EBITDA					n/a		n/a		n/a	
Trailing 3-year CAGR										
Revenue									59.17%	
Gross Profit									59.17%	
Net Income									145.27%	
EBITDA									112.00%	

SCENARIO 4: Tempered Aggressive Growth

NuVeda, LLC	**SCENARIO 4** Projection Period									
Summary of Financial Status	Mar-17		Mar-18		Mar-19		Mar-20		Mar-21	
Revenue	$955,500		$15,288,000		$34,398,000		$44,786,196		$55,490,097	
COGS	$745,650	78.0%	$6,527,976	42.7%	$14,687,946	42.7%	$19,123,706	42.7%	$23,694,271	42.7%
Gross Profit	$209,850	22.0%	$8,760,024	57.3%	$19,710,054	57.3%	$25,662,490	57.3%	$31,795,825	57.3%
Operating Expenses	$955,500	100.0%	$8,010,912	52.4%	$18,024,552	52.4%	$23,467,967	52.4%	$29,076,811	52.4%
Net Ordinary Income	-$745,650	-78.0%	$749,112	4.9%	$1,685,502	4.9%	$2,194,524	4.9%	$2,719,015	4.9%
Other Income/Expenses	-$40,405	-4.2%	-$35,577	-0.2%	-$30,323	-0.1%	-$24,605	-0.1%	-$18,381	0.0%
Net Income	-$786,055	-82.3%	$713,535	4.7%	$1,655,179	4.8%	$2,169,919	4.8%	$2,700,634	4.9%
Plus Depreciation	$40,131	4.2%	$642,096	4.2%	$1,444,716	4.2%	$1,881,020	4.2%	$2,330,584	4.2%
Plus Interest	$40,405	4.2%	$35,577	0.2%	$30,323	0.1%	$24,605	0.1%	$18,381	0.0%
EBITDA	-$705,519	-73.8%	$1,391,208	9.1%	$3,130,218	9.1%	$4,075,544	9.1%	$5,049,599	9.1%
Year-over-year Growth										
Revenue			1500.00%		125.00%		30.20%		23.90%	
COGS			775.47%		125.00%		30.20%		23.90%	
Gross Profit			4074.43%		125.00%		30.20%		23.90%	
Operating Expenses			738.40%		125.00%		30.20%		23.90%	
Net Income			n/a		131.97%		31.10%		24.46%	
EBITDA			n/a		125.00%		30.20%		23.90%	
Compound Annual Growth Rate (CAGR)										
Revenue					500.00%		260.55%		176.06%	
Gross Profit					869.15%		396.36%		250.85%	
Net Income					n/a		n/a		n/a	
EBITDA					n/a		n/a		n/a	
Trailing 3-year CAGR										
Revenue									53.68%	
Gross Profit									53.68%	
Net Income									55.84%	
EBITDA									53.68%	

SCENARIO 5: Relatively Moderate Growth

SCENARIO 5

NuVeda, LLC — Projection Period

Summary of Financial Status	Mar-17		Mar-18		Mar-19		Mar-20		Mar-21	
Revenue	$955,500		$10,510,500		$21,021,000		$27,369,342		$33,910,615	
COGS	$745,650	78.0%	$4,487,984	42.7%	$8,975,967	42.7%	$11,686,709	42.7%	$14,479,832	42.7%
Gross Profit	$209,850	22.0%	$6,022,517	57.3%	$12,045,033	57.3%	$15,682,633	57.3%	$19,430,782	57.3%
Operating Expenses	$500,682	52.4%	$5,507,502	52.4%	$11,015,004	52.4%	$14,341,535	52.4%	$17,769,162	52.4%
Net Ordinary Income	-$290,832	-30.4%	$515,015	4.9%	$1,030,029	4.9%	$1,341,098	4.9%	$1,661,620	4.9%
Other Income/Expenses	-$40,405	-4.2%	-$35,577	-0.3%	-$30,323	-0.1%	-$24,605	-0.1%	-$18,381	-0.1%
Net Income	-$331,237	-34.7%	$479,437	4.6%	$999,706	4.8%	$1,316,493	4.8%	$1,643,239	4.8%
Plus Depreciation	$40,131	4.2%	$441,441	4.2%	$882,882	4.2%	$1,149,512	4.2%	$1,424,246	4.2%
Plus Interest	$40,405	4.2%	$35,577	0.3%	$30,323	0.1%	$24,605	0.1%	$18,381	0.1%
EBITDA	-$250,701	-26.2%	$956,456	9.1%	$1,912,911	9.1%	$2,490,610	9.1%	$3,085,866	9.1%
Year-over-year Growth										
Revenue			1000.00%		100.00%		30.20%		23.90%	
COGS			501.89%		100.00%		30.20%		23.90%	
Gross Profit			2769.92%		100.00%		30.20%		23.90%	
Operating Expenses			1000.00%		100.00%		30.20%		23.90%	
Net Income			n/a		108.52%		31.69%		24.82%	
EBITDA			n/a		100.00%		30.20%		23.90%	
Compound Annual Growth Rate (CAGR)										
Revenue					369.04%		205.97%		144.08%	
Gross Profit					657.62%		321.21%		210.20%	
Net Income					n/a		n/a		n/a	
EBITDA					n/a		n/a		n/a	
Trailing 3-year CAGR										
Revenue									47.76%	
Gross Profit									47.76%	
Net Income									50.77%	
EBITDA									47.76%	

Discount Rate

The *discount rate* represents the risk an investor is willing to accept for the potential reward that an investment in the subject interest is expected to return. The *capitalization rate* is calculated by subtracting the future rate of sustainable growth in the benefit stream from the discount rate. In other words, the capitalization rate is the discount rate *less* the expected long-term growth rate.

Different discount rates apply to different types of businesses. The inherent risk of an investment is determined based on factors that can be contrasted against all other investment alternatives available in a specific environment as of the valuation date.

The buildup method "layers" various measures of relative risk to "build up" an appropriate discount rate. The components of the buildup methodology are:

1) Risk-free Rate;
2) Equity Risk Premium (ERP);
3) Size Premium;
4) Industry Premium (Optional); and
5) Tax Adjustments.

Each of these buildup factors and the sources of risk premium data are discussed below.

Source of Risk Premium Data

Duff & Phelps – a widely recognized and accepted source of risk premium data within the field of business valuation – was referenced in order to determine a discount rate most appropriate for application to the economic benefit streams defined in each of the five financial performance scenarios. Duff & Phelps provides estimates of the Cost of Equity Capital as derived from empirical studies of public market data.

- This specific data sourced was from the *2016 Duff & Phelps Risk Premium Report* and the online *Duff & Phelps Risk Premium Calculator* as provided through Business Valuation Resources (BVR), a company that provides a wide variety of information and data to business valuation professionals.

The following discusses each of the buildup factors. In respect to the Risk-free Rate and Equity Risk Premium, the Duff & Phelps application of the buildup method recommends the utilization of "normalized" rates. A discussion of the reasoning behind the Duff & Phelps' recommendations is presented in Exhibit A.

Risk Free Rate

The risk free rate measures the rate of return an investor can earn without taking any additional risk. Examples of risk free rates of return are considered to be those issued by United States Treasury bonds. For purposes of analysis herein, the 20-year U.S. Treasury was referenced to determine the risk free rate of return in respect to the expected holding period of an investment in the Company. The associated yield, or "spot" rate, was 2.34% as of March 10, 2016.

However, Duff & Phelps recommends using a "normalized 20-year Treasury yield" of 4.0% in the application of the buildup method using their data. See Exhibit A for explanation of the Duff & Phelps methodology.

Equity Risk Premium

The equity risk premium represents the risk an investor accepts for investing in stock of large, well-capitalized publicly-traded companies.

On February 15, 2013 Duff & Phelps decreased its recommended U.S. Equity Risk Premium (ERP) estimate to 5.0% percent from 5.5%. As of January 2015, Duff & Phelps raised their recommended ERP to 5.5%. As such, a rate of 5.5% was used in the application of the Duff & Phelps data.

Size Risk Premium

Empirical evidence shows that the risk reward principle (the greater the risk the greater the reward) holds true in regard to the size, or capitalization, of a company. The size premium represents average annual returns for smaller capitalization stocks minus average annual returns for larger capitalization stocks over long time periods. The following describes the size risk premium applied for each of the sources of risk premium utilized under the buildup method.

Based on the analysis as provided by the *Duff & Phelps Risk Premium Calculator*, the small stock risk premium most applicable under the Duff & Phelps application of the buildup method was 7.9%. This premium included a size premium of 8.5% *less* an Equity Risk Premium Adjustment of 0.6% in accordance with the Duff & Phelps *Risk Premium over Risk-free Rate* methodology and using the *Regression Equations* approach. A detailed analysis of the Duff & Phelps size premium study and the regression equation analysis are presented in Exhibit A.

Specific Company Risk Premium

The Size Risk Premium was sourced from the smallest capitalized companies within the Duff & Phelps universe (or portfolios). The Company, though, is much smaller than even the smallest public companies comprising this data. However, the regression methodology employed by the D&P Risk Calculator accounts for the size differential between the subject company and the comparative D&P portfolio.

Industry Risk Premium

The Duff & Phelps adjusted industry risk premium was noted to be 1.6% and was not used in the buildup method depicted below in lieu of the Regression Equation Method.

Discount Rate – Buildup Method Conclusion

The following table notes the results of the buildup method using Duff & Phelps source of risk premium data in the determination of the discount rate most appropriate for application to the Company's benefit streams.

	Duff & Phelps
Risk Free Rate	4.0%
Equity Risk Premium	5.5%
Size Risk Premium	7.9%
Equity Risk Premium Adjustment	0.6%
Discount Rate Determination	18.0%*

After/Pre-Tax Conversion Adjustment

The Duff &Phelps data are based on corporate *after tax* benefit streams. As such, the discount rate determined through the use of the buildup methodology reflects an *after tax* discount rate. However, the benefit stream utilized in the case of the Company was Net Ordinary Income – a *pretax* measure of earnings. Therefore, an additional 8.08% was *added* to the summation of the buildup factors to account for the estimated tax difference. The determination of this adjustment is calculated below. The adjustment was based on the assumed *maximum corporate* tax rate of 35%. As a pass-through entity for tax purposes, the payment income tax falls to the owners of the company and the owner's will pay income tax on various different rate schedules depending upon individual circumstances.

After-tax to Pretax Conversion Adjustment			
After-tax DiscRate	LT Growth Rate	Assumed Tax Rate	Pretax Rate
18.00%	3.00%	35.00%	**26.08%**
((Discount Rate – Growth Rate) / (1 – Tax Rate)) + Growth Rate			8.08%

The pretax discount rate applicable to the Company's benefit streams was determined to be 26.08%.

Calculation of the Adjusted Discount Rate

The schedule below applies the After/Pre-tax Conversion Adjustment as discussed above. As noted, the adjusted discount rate was calculated to be 26.08%.

Adjusted Discount Rate Calculation	
Discount Rate	18.00%
After/Pre-tax Conversion Adjustment	8.08%
Selected Adjusted Discount Rate	**26.08%**

Sustainable Long-term Growth Rate (Terminal Growth Rate)

The Discounted Multi-Stage Growth Model uses a direct capitalization calculation to determine a *Terminal Value* that represents the value for the time period after the short-term projection period. The calculation involves the determination of a capitalization rate which requires the identification of a long-term growth rate.

The long-term economic rate of growth for the U.S. economy, as determined by the Real GDP data reported by the U.S. Bureau of Economic Analysis (Dept. of Commerce), was 2.9% on annual basis for the period 1945 through 2015. Using a long-term (i.e., perpetual) growth rate that is greater than the expected growth rate of the overall economy will result in unrealistic conclusions. As such, the selected long-term annual growth applied in the estimation of the *Terminal Benefit Stream* was 3.0% (rounded).

Terminal Benefit Stream and Terminal Value

One of the key elements to the Discounted Multi-Stage Growth model is the estimation of a *Terminal Benefit Stream* that is stable and sustainable over the long term. In the short-term, the benefit stream can vary due to circumstances in the fact pattern and growth rate assumptions. The variable annual growth patterns of short-term earnings is one the advantages of the Discounted Multi-Stage Growth model. However, at the end of the discrete short-term forecast periods, a *Terminal Benefit Stream* must be estimated using an assumed long-term growth rate that yields a perpetual on-going benefit.

In the following tables, the calculation of the present value of the *Terminal Benefit Stream* under each scenario is presented. The *Terminal Benefit Stream* is estimated by capitalizing the expected benefit stream at the end of the last discrete forecast period (2021). Under each of the scenarios, the *Terminal Benefit Stream* was derived from the discount rate *less* the long-term growth rate and then discounted to present value using the discount rate.

Indicated Values – Discounted Multi-Stage Growth Model

In the final step of the Discounted Multi-Stage Growth model, the present value of the Terminal Value is added to the present values of the discrete short-term benefit streams. The values for each of the short-term benefit streams are determined using the individual period estimated growth rates as previously discussed. The summation of all present values resulted in an estimated fair market value for the Company under each of the five scenarios. The values for each forecast period and their assumed growth rates along with their present values (discounted cash flows) are presented in each table that follows.

Indicated Value Calculations – Discounted Multi-Stage Growth Model

Scenario 1

Forecast Period	**Scenario 1** EBITDA	Growth Rate	PV Factor @ 26%	Discounted Cash Flow
3/31/2017	($4,967,662)	n/a	0.885116	($4,396,955)
3/31/2018	$3,812,026	n/a	0.698004	$2,660,809
3/31/2019	$37,603,656	886.45%	0.553999	$20,832,386
3/31/2020	$59,581,962	58.45%	0.439642	$26,194,751
3/31/2021	$78,592,763	31.91%	0.348936	$27,423,873
Term Value	$341,707,664	*3.00%*	0.348936	$119,234,229
Conclusion of Value				**$191,949,094**

Terminal Value Calculation		Scenario 1
Terminal Benefit Stream (Year 2021)		$78,592,763
Discount Rate	26.00%	
Long-term Growth Rate	3.00%	
Capitalization Rate		23.00%
Capitalized Terminal Value		$341,707,664
Present Value of Terminal Value		**$119,234,229**

Scenario 2

Forecast Period	**Scenario 2** EBITDA	Growth Rate	PV Factor @ 26%	Discounted Cash Flow
3/31/2017	($2,138,769)	n/a	0.885116	($1,893,058)
3/31/2018	$2,260,713	n/a	0.698004	$1,577,987
3/31/2019	$11,272,511	398.63%	0.553999	$6,244,959
3/31/2020	$19,829,372	75.91%	0.439642	$8,717,831
3/31/2021	$30,282,218	52.71%	0.348936	$10,566,567
Term Value	$131,661,818	*3.00%*	0.348936	$45,941,596
Conclusion of Value				**$71,155,882**

Terminal Value Calculation		Scenario 2
Terminal Benefit Stream (Year 2021)		$30,282,218
Discount Rate	26.00%	
Long-term Growth Rate	3.00%	
Capitalization Rate		23.00%
Capitalized Terminal Value		$131,661,818
Present Value of Terminal Value		**$45,941,596**

Indicated Value Calculations – Discounted Multi-Stage Growth Model (continued)

Scenario 3

Forecast Period	**Scenario 3** EBITDA	Growth Rate	PV Factor @ 26%	Discounted Cash Flow
3/31/2017	($1,422,144)	n/a	0.885116	($1,258,762)
3/31/2018	$1,825,961	n/a	0.698004	$1,274,528
3/31/2019	$5,768,831	215.93%	0.553999	$3,195,926
3/31/2020	$10,776,678	86.81%	0.439642	$4,737,884
3/31/2021	$17,398,457	61.45%	0.348936	$6,070,954
Term Value	$75,645,467	*3.00%*	0.348936	$26,395,454
Conclusion of Value				**$40,415,984**

Terminal Value Calculation		Scenario 3
Terminal Benefit Stream (Year 2021)		$17,398,457
Discount Rate	26.00%	
Long-term Growth Rate	3.00%	
Capitalization Rate		23.00%
Capitalized Terminal Value		$75,645,467
Present Value of Terminal Value		**$26,395,454**

Scenario 4

Forecast Period	**Scenario 4** EBITDA	Growth Rate	PV Factor @ 26%	Discounted Cash Flow
3/31/2017	($705,519)	n/a	0.885116	($624,466)
3/31/2018	$1,391,208	n/a	0.698004	$971,069
3/31/2019	$3,130,218	125.00%	0.553999	$1,734,138
3/31/2020	$4,075,544	30.20%	0.439642	$1,791,782
3/31/2021	$5,049,599	23.90%	0.348936	$1,761,989
Term Value	$21,954,777	*3.00%*	0.348936	$7,660,820
Conclusion of Value				**$13,295,330**

Terminal Value Calculation		Scenario 4
Terminal Benefit Stream (Year 2021)		$5,049,599
Discount Rate	26.00%	
Long-term Growth Rate	3.00%	
Capitalization Rate		23.00%
Capitalized Terminal Value		$21,954,777
Present Value of Terminal Value		**$7,660,820**

Indicated Value Calculations – Discounted Multi-Stage Growth Model (continued)

Scenario 5

Forecast Period	**Scenario 5** EBITDA	Growth Rate	PV Factor @ 26%	Discounted Cash Flow
3/31/2017	($250,701)	n/a	0.885116	($221,900)
3/31/2018	$956,456	n/a	0.698004	$667,610
3/31/2019	$1,912,911	100.00%	0.553999	$1,059,751
3/31/2020	$2,490,610	30.20%	0.439642	$1,094,978
3/31/2021	$3,085,866	23.90%	0.348936	$1,076,771
Term Value	$13,416,808	*3.00%*	0.348936	$4,681,612
Conclusion of Value				**$8,358,821**

Terminal Value Calculation		Scenario 5
Terminal Benefit Stream (Year 2021)		$3,085,866
Discount Rate	26.00%	
Long-term Growth Rate	3.00%	
Capitalization Rate		23.00%
Capitalized Terminal Value		$13,416,808
Present Value of Terminal Value		**$4,681,612**

RECONCILIATION OF VALUE INDICATIONS

In the schedule below, the values estimated under each scenario above were reconciled in order to determine a single estimated conclusion of value. Probabilities were assigned based on the realistic likelihood of the Company's prospective operations reaching each scenario's respective outcome at the end of the forecast period. The Average Weighted Limited Conclusion of Value represents the probability-weighted average of all five scenarios.

RECONCILIATION OF VALUE ESTIMATIONS Valuation Model/Scenario	Value	Weight	Total Weighted Value
Discounted Multi-Stage Growth			
SCENARIO 1	$191,949,094	10.0%	$19,194,909
SCENARIO 2	$71,155,882	25.0%	$17,788,970
SCENARIO 3	$40,415,984	30.0%	$12,124,795
SCENARIO 4	$13,295,330	25.0%	$3,323,833
SCENARIO 5	$8,358,821	10.0%	$835,882
Weighted Average Limited Conclusion of Value			$53,268,390
CONCLUSION OF VALUE (rounded)			**$53,000,000**

In the final estimation of value, the inclusion of the broadest view of all scenarios presented, each being subject to a probability of occurrence, was deemed to provide the best estimation of the conclusion of value for the Company as of the Valuation Date.

The conclusion of value for the Company was estimated to be $53 million.

SANITY CHECK

Any conclusion of value should be subject to a test of reasonableness in respect to observable data. Such "sanity checks" are helpful in ascertaining whether a particular conclusion of value is reasonable absent some explanation to the contrary. That is not to say that a conclusion of value falling outside some acceptable range of what the observable data might suggest is incorrect. However, such a case might give notice that further analysis is necessary in order to account for large variances.

As referenced in the in the *Valuation Analysis* section under *Market-based Approaches: Comparable Transactions Method*, in November 2015 the Company received a LOI from CW for the purchase of a 65% interest in four of the Company's six provisional certificates. The extrapolation of CW's consideration of $22 million for the noted stake in the four provisional certificates yielded a fair market value of approximately $35.85 million for a wholly-owned interest in said certificates.

Further analysis showed that, using a value of $33.85MM for four of the Company's provisional certificates, it was reasonable to conclude that each certificate represented a fair market value of approximately $8,462,500. It was further reasoned that the approximate fair market value of the Company's six provisional certificates was $50,775,000 [$8,462,500 × 6].

The difference between the Conclusion of Value of $53 million from the *Reconciliation of Value Indications* section and the extrapolated value for the Company's six provisional certificates of $50.775 million is $2.225 million, or just over 4% (of the Conclusion of Value).

The difference between the Conclusion of Value and the extrapolated value can be easily attributed to the synergies created by the addition of another cultivation and production facility. Other contributory factors include market consolidation and increased and redundant capacity.

In the final analysis, given consideration to the relevant facts and circumstances, the conclusion of value derived in the *Reconciliation of Value Indications* section was corroborated by the test of reasonableness applied above. As such, the reconciled conclusion of value was considered to be substantially supported by the LOI consideration data with a high degree of confidence.

APPLICABLE DISCOUNTS

As discussed in the *Introduction* section under *Control and Marketability Characteristics*, The Interest represented a 22.88% voting interest in the Company. As such, it was deemed to be a minority interest and thereby non-controlling in respect to the Company's management of its operations and assets. Further, The Interest represented a stake in a privately-held company for which no organized market place existed. As such The Interest's marketability was considered to be impaired vis-à-vis securities that trade on organized and active public markets.

Because The Interest represented a minority and a non-controlling interest in a privately-held entity, under the standard of fair market value, the appropriate adjustments to its pro rata measure of the Company's fair market value required certain adjustments in order to establish a fair market value that encompassed all relevant factors of risk associated with an investment in The Interest – namely lack of control and marketability.

The pro rata or "face" value of The Interest was calculated by determining that portion of the Company represented by The Interest. This amount was calculated to be $12,126,400 [$53,000,000 × 22.88%].

Appendix K presents the development of the appropriate discounts in respect to determining the fair market value of The Interest. The analysis performed in Appendix K resulted in the determination of the following appropriate levels of discounts:

Discount for Lack of Control	10.0%
Discount for Lack of Marketability	20.0%

The following table sequentially combines to two noted discounts to form a single discount amount:

Calculation of Combined Discount		
	Adjustment	% Remaining
DLOC From CEF Market Analysis	10.0%	90.00%
DLOM from Restricted Stock Studies	20.0%	80.00%
Total Percent Remaining		72.0000%
Discount = 1 - Total % Remaining	0.280000	
Combined Discount	28.00%	

The table below applies the combined discount to The Interest's pro rata value of the Company's fair market value of $53,000,000:

Conclusion of Value of The Interest	
FMV of the Company	$53,000,000
FMV Attributable to The Interest @ 22.88%	$12,126,400
Less Combined Adjustment of 28%	($3,395,392)
FMV of The Interest	$8,731,008
Conclusion of FMV of The Interest (rounded)	**$8,700,000**

CONCLUSION OF VALUE

This valuation report was prepared solely to provide an estimate of the fair market value of The Interest in connection with the Client's expulsion from the Company. The resulting estimation of fair market value should not be used for any other purpose or by any other parties other than those expressly identified herein. The estimate of fair market value that resulted from this valuation engagement is expressed as a Conclusion of Value.

Based on the analysis presented herein, the conclusion value for The Interest as of March 10, 2016 was estimated to be:

EIGHT MILLION SEVEN HUNDRED THOUSAND DOLLARS

$8.7 Million

The conclusion of value presented herein is subject to the statement of Limiting Conditions found in Appendix C, the Valuation Analyst's Representations found in Appendix A and also any other assumptions and limiting conditions as noted herein. The valuation analyst has no obligation to update this report or its conclusions of value in respect to information that comes to light after the Valuation Date.

Note: The financial and valuation analysis performed herein and the conclusions of value derived therefrom were based on my knowledge formed from the information provided as of the date of this report. Should additional information come to light, I reserve the right to amend my work hereunder to reflect the effects of such information.

Donald R. Parker, CFA, CVA
Gryphon Valuation Consultants, Inc.
May 25, 2016

APPENDIX A: VALUATION ANALYST'S REPRESENTATIONS

The analyses, opinions, and conclusions of value included in the valuation report are subject to the limiting conditions (see Appendix C), and they are the personal analyses, opinions, and conclusions of value of the valuation analyst.

The economic and industry data included in the valuation report have been obtained from various printed or electronic reference sources that the valuation analyst believes to be reliable. The valuation analyst has not performed any corroborating procedures to substantiate that data.

The valuation process was performed in accordance with the National Association of Certified Valuation Analysts' Statement on Standards for Valuation Services.

The parties for which the information and use of the valuation report is restricted are identified herein; the valuation report is not intended to be and should not be used by anyone other than such parties.

The analyst's compensation is fee-based and is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the estimate of value or the attainment of a stipulated result.

The valuation analyst did not use the work of any outside specialists to assist during the valuation engagement.

The valuation analyst has no obligation to update the report or the opinion of value for information that comes to his or her attention after the Valuation Date.

Signature of the Analyst:

Mr. Donald R. Parker, CFA, CVA
Gryphon Valuation Consultants, Inc.

APPENDIX B: QUALIFICATIONS OF APPRAISER

Donald R. Parker

Curriculum Vitae

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Certified Valuation Analyst

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Professional Designations	**Chartered Financial Analyst® (CFA®)** CFA Institute **Certified Valuation Analyst (CVA)** National Association of Certified Valuators and Analysts (NACVA)
Education	B.S., University of Central Florida, Orlando, Florida, Business Administration Minor Degree in Computer Science
Professional Experience	**Gryphon Valuation Consultants, Inc. – Las Vegas, NV** Founder, President, 2003 to present **Private Advisory Group, LLC – Las Vegas, NV** Co-founder, Partner, 2001 to 2003 **The Investment Counsel Company of the S.E. – Las Vegas, NV** Senior V.P., Portfolio Manager, Global Equity Strategist, 1998 to 2001 **Gryphon Capital Management Company – Las Vegas, NV** Co-Founder, President, 1992 to 2001 **National Investor Data Services – Southampton, NY** **EBS – Maitland, FL** Senior Programmer/Analyst, 1988 to 1992 **The Investment Counsel Company of the S.E. – Orlando, FL** Vice President, Director of Research, 1981 to 1988
Professional Memberships and Associations	**CFA Institute** Member, 1993 to Present **National Association of Certified Valuators and Analysts (NACVA)** Member, 2001 to present **Institute of Business Appraisers (IBA)** Member, 2011 to present **American Business Appraisers National Network (ABA)** Member, 2013 to present **CFA Society of Nevada** President (2006/2008), Charter Member (2003) **Southern Nevada Estate Planning Council** Member, 2001 to present **Clark County Bar Association** Associate Member, 2001 to present **Financial Planning Association of Nevada** Charter President, Member 1999 to 2001 **Las Vegas Chapter of the Turnaround Management Association** Charter Member, 2003
Community and Other Organizations	**Summerlin Rotary Club (Las Vegas)** President (2004/05), Charter Member (1997), Paul Harris Fellow

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Donald R. Parker

Curriculum Vitae

Publications

Contributor, ***An Employee's Guide to Stock Options***
(McGraw Hill), Beth V. Walker, 2003

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(Financial Forum Publishing), Drozdeck & Fisher, 2003

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The CEO-CFO Breakfast Group, March 2010

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Financial Planning Association of Nevada, April 2011

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On-going CLE Series, August 2012 to present

Nevada Restricted Entities – Incremental Discounts
Wealth Counsel, November 2012

Business Valuation – Beyond the Numbers
On-going CPE Series, February 2014 to present

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APPENDIX C: LIMITING CONDITIONS

1. The conclusions of value arrived at herein are valid only for the stated purpose(s) and only as of the Valuation Date.
2. Financial statements and other related information provided by the Company or its representatives in the course of this engagement have been accepted without any verification as fully and correctly reflecting the respective enterprise's conditions and operating results for the respective periods, except as specifically noted herein. Gryphon expresses no audit opinion or any other form of assurance about this information.
3. Public information and industry and statistical information have been obtained from sources Gryphon believes to be reliable. However, Gryphon makes no representation as to the accuracy or completeness of such information and has undertaken no efforts to corroborate the information.
4. Gryphon does not provide assurance on the achievability of any results forecasted or assumed to be achieved by the Company or any other entity because events and circumstances frequently do not occur as expected; differences between actual and expected results may be material; and achievement of the forecasted results is dependent on actions, plans, and assumptions outside the control of Gryphon Valuation Consultants, Inc.
5. The estimated limited conclusion of value is based on the assumption that the current level of management expertise and effectiveness would continue to be maintained, and that the character and integrity of the enterprise through any sale, reorganization, exchange, or diminution of the owners' participation would not be materially or significantly changed.
6. This report and the conclusions of value arrived at herein are for the exclusive use of noted parties for the sole and specific purposes as noted herein. They may not be used for any other purpose or by any other party for any purpose. Furthermore, the report and conclusions of value are not intended by Gryphon or the valuation analyst(s) and should not be construed by the reader to be investment advice in any manner whatsoever. The estimated limited conclusion(s) of value represent the considered opinion of Gryphon and the valuation analyst(s) based on information furnished by the Company and other sources as noted herein.
7. Neither all nor any part of the contents of this report (especially, but not limited to, the estimated limited conclusion(s) of value, the identity of any valuation analysts, or the firm with which such analysts are connected or any reference to any of their professional designations) should be disseminated to the public through advertising media, public relations, news media, sales media, mail, direct transmittal, or any other means of communication without the prior written consent and approval of Gryphon Valuation Consulting, Inc.
8. Future services regarding the subject matter of this report, including, but not limited to testimony or attendance before any court or governmental agency or regulatory body, shall not be required of Gryphon or any valuation analyst associated therewith, unless separate arrangements have been made in writing.

9. Gryphon is not an environmental consultant or auditor, and it takes no responsibility for any actual or potential environmental liabilities. Any person entitled to rely on this report, wishing to know whether such liabilities exist, or the scope and their effect on the value of the property, is encouraged to obtain a professional environmental assessment. Gryphon does not conduct or provide environmental assessments and has not performed one for any of the subject properties.
10. Gryphon has not determined independently whether the Company is subject to any present or future liability relating to environmental matters (including, but not limited to CERCLA/Superfund liability) or the scope of any such liabilities. The conclusions of value presented herein take no such liabilities into account, except as they have been specifically reported to Gryphon by the Company or by an environmental consultant working for the Company, and then only to the extent that the liability was reported to Gryphon in an actual or estimated dollar amount. Such matters, if any, are noted in the report. To the extent such information has been reported, Gryphon has relied on it without verification and offers no warranty or representation as to its accuracy or completeness.
11. Gryphon has not made a specific compliance survey or analysis of any of the subject properties to determine whether it is subject to, or in compliance with, the American Disabilities Act of 1990, and the conclusions of value presented herein do not consider the effect, if any, of noncompliance.
12. No change of any item in this appraisal report shall be made by anyone other than Gryphon, and Gryphon shall have no responsibility for any such unauthorized change.
13. Unless otherwise stated, no effort has been made to determine the possible effect, if any, on the subject business due to future Federal, state, or local legislation, including any environmental or ecological matters or interpretations thereof.
14. If prospective financial information approved by management has been used herein, Gryphon has not examined or compiled the prospective financial information and therefore, does not express an audit opinion or any other form of assurance on the prospective financial information or the related assumptions. Events and circumstances frequently do not occur as expected and there will usually be differences between prospective financial information and actual results, and those differences may be material.
15. Gryphon has made all reasonable efforts to obtain information from the Company's current management concerning the past, present, and prospective operating results of the company.
16. Except as noted, Gryphon has relied on the representations of the owners, management, and other third parties concerning the value and useful condition of all equipment, real estate, investments used in the business, and any other assets or liabilities, except as specifically stated to the contrary in this report. Gryphon has not attempted to confirm whether or not all assets of the business are free and clear of liens and encumbrances or that the Company has good title to all assets.
17. **Liability of Gryphon Valuation Consultants and its owners and employees for errors and omissions, if any, in this work will be limited to the amount of compensation received for the work performed in this assignment.**

APPENDIX D: SOURCES OF INFORMATION

The following are sources of information used in the analysis and conclusion of fair market value as presented herein.

-Review & Analysis of the following:

- Interview & various discussions with Mr. Shane Terry.
- Documents provided by Mr. Terry including:
  1. corporate documents
  2. financial projections
  3. court documents
  4. statements of assets and liabilities
  5. investor summaries
  6. executive summaries
  7. certain term sheets
  8. certain transaction documents
  9. settlement offerings
  10. certain due diligence assessments

-Research of the overall economic conditions

- American Business Appraisers National Network
- U.S. Department of Labor, Labor Statistics, U.S. Census Bureau;
- Other sources as noted within the report.

-Research of industry/products

- IBISWorld: OD4141 Medical & Recreational Marijuana Growing Industry Report
- IBISWorld: OD4142 Medical & Recreational Marijuana Stores Industry Report
- Other sources as noted within the report.

Information received from Client was accepted without further verification. Information and data obtained from other sources was deemed reliable and accurate, however, Gryphon makes no representation as to its reliability has not independently verified its accuracy. See Appendix C for a complete list of the limiting conditions to which this valuation report is subject.

APPENDIX E: INDUSTRY ANALYSIS & OUTLOOK

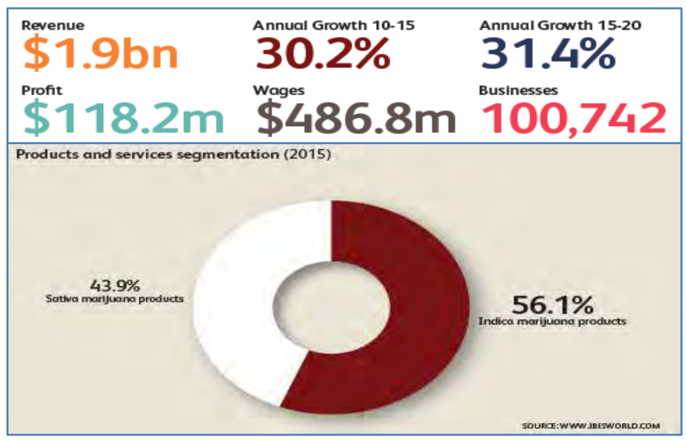
The following information was sourced from IBISWorld – a leading market, industry research and forecasting company that provides data on more than 700 industries utilizing economic, demographic and government data. IBISWorld research is a subscription service utilized by the world's leading economic, business consulting and valuation firms. Below is a summary of the industry in which the Company operates and through which its services are distributed. The Company's future is closely tied to the outlook for the industry discussed below.

Medical & Recreational Marijuana Growing in the US

Overview

This industry's establishments grow marijuana for medical and recreational use. Most operators are nonprofit collectives that provide medical marijuana to other collective members. Transactions are typically conducted on a donation basis because the sale and distribution of marijuana is illegal in most states that permit medical marijuana. The industry also includes operators in Colorado and Washington, who grow medical and recreational marijuana on a for-profit basis.

Industry Summary



The Medical and Recreational Marijuana Growing industry, which includes establishments that grow marijuana for medical and recreational use, has flourished over the five years to 2015. For decades, all marijuana transactions in the United States were conducted under implicit or explicit prohibition. However, states have increasingly moved to legalize nonprofit marijuana for medical purposes, as well as to implement regulations for organizations that sell cannabis. The growing acceptance of medical marijuana is providing growers and investors with unprecedented opportunities. There has been no shortage of demand in recent years, as the industry has benefited from the increased acceptance and legitimacy of medical marijuana products.

More recently, the legalization of recreational marijuana in Colorado and Washington has spurred demand for the industry. In 2014, the licensing of commercial recreational marijuana growers in these states contributed to industry revenue growth of 54.7%. In addition to the favorable regulatory environment in these states, medical marijuana growers have continued to benefit the steadily aging population. Chronic illnesses have become more prevalent as the population continues to age, driving demand for medical marijuana. Overall, the industry is expected to experience an annualized revenue growth of 30.2% to $1.9 billion in the five years to 2015, including growth of 25.1% in 2015.

Industry revenue is estimated to increase at an annualized rate of 31.4% to $7.4 billion over the five years to 2020. The industry will remain at risk, however, until the federal government definitively changes its position on the legality of marijuana. Until then, a growing number of medical marijuana patients, as well as a burgeoning recreational cannabis legalization movement, will spur demand for the industry. Rising demand is also forecast to widen profit margins, as is the success of the for-profit recreational marijuana business in Colorado and Washington. In particular, the next five years are expected to see the growth of large commercial cultivators, who will benefit from strong recreational demand across a number of states including Alaska and Oregon as well as the District of Columbia.

Key External Drivers

Regulation

The Medical and Recreational Marijuana Growing industry has been significantly restricted by an increasing amount of attempts to impose additional regulations on the industry. In particular, medical marijuana remains a Schedule I controlled substance under federal law, despite legalization at the state level for many states. While the level of regulation is expected to remain flat in 2015, it still poses a potential threat to the industry.

Per capita disposable income

The level of household income determines consumers' ability to purchase medical marijuana products. While prescription products can be essential for health and therefore less susceptible to changes in consumer expenditure, the unconventional nature of the industry's products make it subject to changes in disposable income. As a result, an increase in disposable income will boost demand for medical marijuana growers. Per capita disposable income is expected to increase over 2015, presenting an opportunity for the industry.

Number of adults aged 50 and older

Individuals aged 50 and older are more likely to require medical marijuana products that this industry provides since a number of health conditions that medical marijuana is prescribed for (e.g. Alzheimer's disease) are prevalent among members of this age group. As the population ages, demand for industry services will grow, resulting in revenue growth. The number of adults aged 50 and older is expected to increase during 2015.

External competition

Medical marijuana products struggle to compete against conventional healthcare services and products due to the alternative and unconventional nature of their treatment. External competition from traditional drugs and healthcare providers is expected to grow in 2015.

Current Performance

Growing industry has flourished over the five years to 2015, bolstered by increasing consumer acceptance of alternative treatment via marijuana products, as well as legalization of marijuana across nearly half of the United States. This industry's establishments grow marijuana for medical and recreational use. Most operators are nonprofit collectives that provide medical marijuana to other collective members. Transactions are typically conducted on a donation basis because the sale and distribution of marijuana is illegal in most states that permit medical marijuana. The industry also includes operators in Colorado, who grow medical and recreational marijuana on a for-profit basis, and Washington, who grow recreation marijuana on a for-profit basis.

Marijuana, which is a dry, shredded mix of flowers, seeds, stems and leaves of either the Cannabis sativa or Cannabis indica plant, can be used as a medical treatment. Since 1996, proponents of cannabis have pushed for individual states to recognize marijuana as a treatment or pain-reliever for a range of illnesses. New medical research and changing public opinion have advanced these efforts and have contributed to the growth of the industry over the past five years. More recently, the industry has benefited from the push to legalize recreational marijuana in the United States. In 2012, Colorado and Washington became the first two states to legalize recreational marijuana, along with enabling the growth of licensed, for-profit cultivators. As a result, industry revenue is expected to grow an estimated 30.2% to nearly $1.9 billion over the five years to 2015, including growth of 25.1% in 2015.

Medical marijuana spurs growth

Medical marijuana has led the industry's growth for much of the last decade. According to the US Government Accountability Office, under State Medical Marijuana Laws, symptoms and conditions that can be treated by cannabis include Alzheimer's disease, anorexia, AIDS, HIV, glaucoma, cancer, arthritis, epilepsy, nausea, pain, cachexia, Crohn's disease, migraines, multiple sclerosis, spasticity and wasting syndrome. Although for many decades all domestic marijuana transactions were conducted under implicit or explicit prohibition, states have recently moved to legalize marijuana for medical purposes.

In general, the use of medical marijuana is increasing, particularly among people with chronic illnesses and pain. At the same time, significant concerns continue to persist, questioning the legitimacy and efficiency of medical marijuana-based treatment. Organizations, such as the National Cannabis Industry Association, have worked toward increasing the legitimacy of medical marijuana use by working on creating industry standards. These efforts, in turn, have helped spur demand.

Proponents of medical marijuana have pushed individual states to recognize marijuana as a treatment for a range of diseases. Currently, 23 states and the District of Columbia have laws permitting the use of medical marijuana, although eight states where medicinal cannabis is legal do not have any dispensaries, while eight have five or fewer dispensaries. These laws have been adopted by public referendums as well as legislation. In late 2009, the US Justice Department instructed federal prosecutors in states with medical marijuana laws not to prioritize prosecuting individuals and businesses complying with state laws. In 2014, President Obama signed into law historic provisions for medical marijuana, prohibiting the Department of Justice from using federal funding to limit states from implementing their own laws that authorize the use, distribution, possession or cultivation of medical marijuana. Consequently, these conditions have facilitated industry performance.

Demographic boost for medical cannabis

Demographic factors have played a significant role in driving demand for medical marijuana. Currently, the median age of a medical marijuana patient is 41.5. However, older individuals are typically more likely to develop the chronic illnesses that require medical marijuana treatment. As a result, an aging population in recent years has driven demand for industry products. Over the five years to 2015, the number of adults aged 50 and older is expected to increase at an annualized rate of 2.2% to 111.1 million people.

The aging population is also associated with an increased number of physician visits. While the number of physician visits has declined slightly over the past five years to 2015, it has increased since 2014. Although doctors cannot prescribe marijuana to patients, they can assign a right to visit a company or cooperative that provides medical marijuana.

Recreational marijuana facilitates boom

The legalization of recreational marijuana has spurred the industry's more recent astronomical growth. Recreational marijuana users typically smoke to obtain a "high," which affects the part of the brain that influences pleasure, memory, thinking, concentration, sensory and time perception and coordinated movement. At the outset of 2014, legal recreational marijuana use became a reality in Colorado, stimulating demand for industry products as hundreds of retail stores opened throughout the year. While Washington lagged in its implementation of the voter-approved law legalizing recreational cannabis consumption, recreational marijuana sales began in July 2014. Quickly, Colorado and Washington have expanded into the second and third-largest markets for the industry.

To meet consumer demand for marijuana, both Colorado and Washington have issued licenses for the cultivation of recreational marijuana. In Colorado, recreational cultivation licenses vary on the size of growing facilities: type one operators, the smallest level, can grow up to 3,600 plants combined in their cultivation facilities; type two operators can grow 6,000 plants; and type three operators can grow up to 10,200 plants. However, the number of licenses has thus far been relatively limited with just 178 issued at the outset of 2014 and precious few granted since. In Washington, licensure has been even more limited, resulting in significant supply shortages. Nonetheless, the legalization of recreational marijuana cultivation contributed to the boom during the year, as revenue rose an astounding annualized 54.7%.

Changing attitudes and rising incomes spur new products and new entrants

The development of edible cannabis products (edibles) have also spurred greater consumer acceptance of medical and recreational marijuana, generating demand for marijuana cultivation. Edibles can take the form of food, extracts and oils, and range from marijuana-infused mints and candies to baked goods and beverages, among many other products. Edibles provide a more convenient and familiar product to consumers, thereby stimulating consumer demand for marijuana products.

The nature of medical marijuana treatment is rather unconventional. Although expenditures on products essential for health are less susceptible to fluctuations in consumer expenditure, medical marijuana's unique nature makes it subject to changes in disposable income. The same is largely true for recreational marijuana. Since industry revenue is paid out of pocket by consumers, growth in per capita disposable income boosts demand for industry products. Per capita disposable income is expected to grow an annualized 1.3% over the five years to 2015, as the economy recovers from the recession. Rising income levels have likely bolstered spending on medical and recreational marijuana over the five-year period.

Greater consumer acceptance of the industry's products and strong demand growth has caused more companies to enter this industry. In the five years to 2015, the number of operators is anticipated to increase at an annualized rate of 17.7% to 100,742, while the number of employees active in the cultivation of marijuana is also expected to increase an annualized 19.6% to 405,498 individuals.

Regulation weighs on the industry, although profit margins expand

Regulation from governments at all levels presents the greatest challenge to medical and recreational marijuana dispensaries, especially because state and federal governments have conflicting regulations at times. The Controlled Substances Act (CSA), passed as a part of the Comprehensive Drug Abuse Prevention and Control Act of 1970, classifies marijuana as a Schedule I controlled substance. Schedule I substances are deemed by the federal government to have a high potential for abuse; furthermore, prescriptions of them are illegal. Despite the adoption of laws permitting some forms of marijuana consumption or distribution for medical and recreational use over the past two decades, the possession and distribution of marijuana remains illegal under federal law. Consequently, many businesses operate with the risk of being shut down or experiencing a property seizure without notice. In addition, industry operators cannot make standard deductions for business expenses and have difficulty securing standard banking and financial services.

Currently, Colorado is the only state that allows for-profit medical marijuana as a business. In 2012, the state (along with Washington) further loosened marijuana restrictions by passing Amendment 64, which legalized marijuana for recreational use. Colorado's ability to generate profit has made it the fastest-growing producer of marijuana. In 2014, Colorado generated nearly $60.0 million in marijuana taxes, licenses and fees. Therefore, continued success in Colorado may provide an incentive for other states to legalize for-profit marijuana. The legalization of for-profit recreational marijuana in Colorado and Washington has already had a positive effect on industry profit margins. As a result of the growing number of large-scale cultivators, industry profitability is expected to rise to 6.3% of revenue in 2015.

Industry Outlook

The outlook for the Medical and Recreational Marijuana Growing industry is largely positive, with the industry expected to achieve new highs over the five years to 2020. Although the industry will continue to benefit from increasingly favorable attitudes toward medical marijuana-based treatments, building on a trend from the past five years, the industry will be led by the growth in demand for recreational marijuana. In addition to Colorado and Washington, the only two states where recreational marijuana cultivation is currently legal, cultivation is expected to explode in Alaska, Oregon and Washington, D.C., which legalized recreational marijuana during the 2014 elections. As a result of these trends, combined with a steadily aging population and rising disposable incomes, IBISWorld forecasts that revenue will skyrocket at an annualized rate of 31.4% to nearly $7.4 billion in the five years to 2020. In 2016 alone, industry revenue is projected to increase 22.1%.

An increase in per capita disposable income is projected to drive demand for industry products. Although prescription products are essential for health and therefore are less susceptible to fluctuations in consumer expenditure, the unconventional characteristics of the industry's products still make them subject to changes in disposable income. Nevertheless, because industry revenue is paid out of pocket by consumers, growth in disposable income will help boost demand.

Recreational marijuana fuels industry expansion

The Medical and Recreational Marijuana industry is subject to heavy regulation from all levels of government, with state and federal governments having conflicting regulations at times. The Department of Justice (DOJ), through the Drug Enforcement Agency (DEA), raids and prosecutes marijuana dispensaries and growers in the United States. In 2014, President Obama signed into law historic provisions for medical marijuana, prohibiting the Department of Justice from using federal funding to limit states from implementing their own laws that authorize the use, distribution, possession, or cultivation of medical marijuana. Although the industry has largely flourished under the Obama administration, its future remains hazy.

Nevertheless, the liberalization of regulation regarding recreational marijuana is expected to fuel the industry's growth. In addition to strong growth in recreational marijuana cultivation in Colorado and Washington, the industry is expected to benefit from the expected cultivation of recreational marijuana in Alaska, Oregon and Washington, D.C., which passed legislation during the 2014 elections. Alaska's measure is similar to Colorado's, and Oregon's is modeled on Washington state's. Similar to the previous five years, rising demand will cause more operators to enter the industry. In the five years to 2020, the number of operators is projected grow at an annualized rate of 12.2% to 178,918, while industry employment is forecast to increase at an annualized rate of 21.8% to nearly 1.1 million people.

The relative success of Colorado's marijuana legalization initiative (already totaling about $60.0 million in taxes, licenses and fees revenue in 2014) will potentially spur more states to legalize for-profit marijuana. Already, Nevada has secured a state recreational marijuana legalization ballot measure for the 2016 election, making it the first state to do so. In addition to Nevada, ballot measures are expected in Arizona, California, Maine and Massachusetts in 2016, and in Delaware, Hawaii, Maryland, New Hampshire, Rhode Island and Vermont, among others, over the next five years. With the sale of for-profit, recreational marijuana is expected to compose a larger share of industry revenue over the five years to 2020. Moreover, industry-wide profitability is projected to rise steadily.

Older population boosts demand for medical cannabis

A growing number of doctors and patients will turn to the unconventional treatment offered by medical marijuana for conditions such as arthritis, migraines and Alzheimer's disease. In particular, the rising number of US adults aged 50 and older is expected to bolster demand for medical marijuana products. In the five years to 2020, IBISWorld anticipates that this demographic will grow at an annualized rate of 1.6% to 120.1 million. In comparison, the total US population is forecast to grow at an annualized rate of 0.7% over the same period. This trend suggests that people aged 50 and older will constitute an increasingly significant proportion of the population. As the population ages, more healthcare services and products will be required. This trend will lead to a growing number of people with health conditions that can be treated with marijuana (e.g. cancer and glaucoma), which increase in incidence with age. Additionally, given that the median age of medical marijuana patient is currently 41.5, demand will likely increase as patients in their 40s enter their 50s. The number of physician visits in the United States is expected to rise in line with the senior population, increasing at an annualized rate of 1.1% to 1.0 billion. Chronic health ailments, such as obesity and diabetes, will augment healthcare use, as these patients will increasingly require checkups. The rising prevalence of these chronic diseases is also expected to boost demand for medical marijuana. Although doctors cannot legally prescribe marijuana to patients because the plant remains a Schedule I substance, they can assign a right to visit a company or a cooperative that provides medical marijuana to patients. Therefore, while medical marijuana treatment is not covered by insurance, as the number of physician visits increases, demand for medical marijuana will grow accordingly.

Industry Performance

Industry Life Cycle

The Medical and Recreational Marijuana Growing industry is in a growing life cycle stage. Over the 10 years to 2020, its industry value added, which measures the industry's contribution to the economy, is expected to grow at an annualized rate of 29.4%. This rate is faster than the 2.5% projected growth for US GDP, indicating the industry will make up a larger share of the economy in the years ahead. The industry is growing due to widening acceptance of its safety and legitimacy, which is causing more people to use its products. Although an increasing percentage of Americans have been using medical marijuana products to alleviate pain and to treat other health conditions during the past five years, a large share of the population still does not use them. This factor suggests that there is significant room for growth in the industry in the years ahead.

Organizations such as the National Cannabis Industry Association have worked toward increasing the legitimacy of medical marijuana use by working on creating industry standards. This, in turn, has helped spur demand. Over the five years to 2015, the number of industry operators has increased as a result of rising demand and favorable legislation. Additionally, a rising number of physician visits have also created opportunity for potential market entrants. These factors will likely contribute to further industry growth in the five years to 2020, when the number of operators is forecast to rise an average 12.2% annually to 1.1 million.

Moreover, the industry's growth has been spurred by the growing legalization of recreational marijuana. Beginning in 2014, recreational marijuana cultivators began opening in Colorado and Washington, making them the fastest growing markets in the United States. Moreover, the legalization of recreational marijuana in Alaska, Oregon and Washington, DC during the 2014 election is expected to generate substantial growth for the industry during the next five years as new operators set up shop in these states.

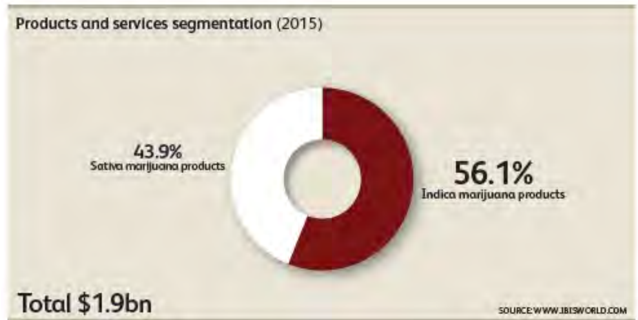
The aging US population will also promote demand for products offered by this industry. Chronic illnesses and disabilities are more frequent among the elderly, and medical marijuana products are increasingly being used to treat these ailments. This demographic group's expansion is forecast to boost demand. Still, a preference for conventional care offered with Medicare and other insurance providers could dampen this growth.

Products & Markets

Products and Services are segmented by the two strains of marijuana that are primarily used in the United States.

Cannabis indica

Indica marijuana can be used to treat anxiety, chronic pain, insomnia and muscle spasms. In general, indica provides more physical relaxation in comparison to the second strain, sativa. Common indica strains include White Berry, Blueberry and Northern Lights. Some patients also use indica as a sleep aid because it can cause sleepiness. Over the past five years, demand for indica was relatively stable because it treats a wide range of illnesses. In 2015, indica is expected to generate 56.1% of industry revenue.



Cannabis sativa

Sativa marijuana is used as a stimulant to improve appetite, relieve depression, migraines, pain and nausea. This is especially beneficial for patients suffering from eating disorders, cancers and other debilitating diseases that cause a loss of appetite. Sativa is also more popular for patients during the day because it can increase alertness. Popular strains include Haze and Trainwreck. Again, demand for sativa was relatively stable over the past five years because it treats a wide range of illnesses. In 2015, sativa is expected to generate 43.9% of industry revenue.

Demand Determinants

Government regulation

Demand for industry products is primarily determined by government regulation. The federal government regulates cannabis as a Schedule I controlled substance and considers all marijuana cultivation, sale and consumption illegal. In states that lack laws legalizing the medical or recreational use of cannabis, marijuana use is explicitly prohibited.

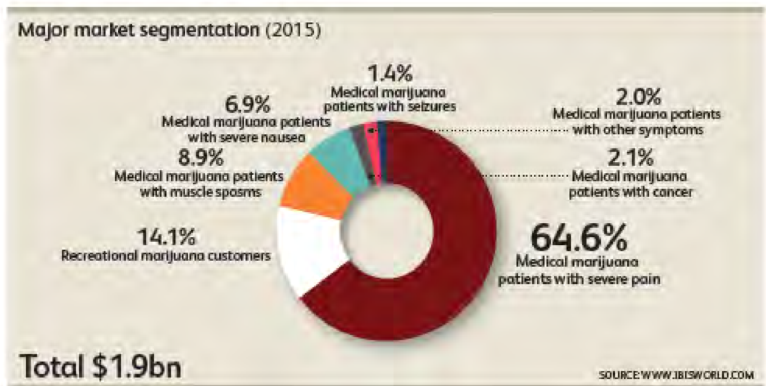
However, a total of 23 states across the United States and the District of Columbia have some level of legalization of medical marijuana. In addition, 2012 saw the legalization of recreational marijuana use in the states of Colorado and Washington. At the outset of 2014, legal recreational marijuana use became a reality in Colorado, stimulating demand for marijuana cultivation. While Washington lagged in its implementation of the voter-approved law legalizing recreational cannabis consumption, recreational marijuana growing began later in the year. Moreover, the 2014 elections saw Alaska, Oregon and Washington, D.C. pass legislation legalizing recreational marijuana. Nonetheless, federal policy continues to limit some consumer demand in states where medical marijuana is legal because of pervasive fears of violating federal law. President Obama's December 2014 passage of an omnibus spending bill included a directive preventing the Department of Justice from using federal funding to impeded states from implementing their own state laws that authorize the use, distribution, possession, or cultivation of medical marijuana. The next five years are likely to see the legalization of medical and recreational marijuana in a score of other states.

Income and demographics

Household income is a primary determinant of consumers' ability to acquire cannabis products. The legalization of medical marijuana, as well as recreational marijuana in some states, has created a market for high-quality cannabis, which can be expensive. Furthermore, because medical marijuana is typically not covered under health insurance plans, demand is largely dependent on patients' income levels.

Population demographics, particularly age, also dictate demand trends for medical marijuana. Although adults aged 50 and older are more likely to develop health conditions such as cancer, Alzheimer's, chronic pain, glaucoma and other diseases that can be treated with medical marijuana, obtaining a medical marijuana card is not difficult in many states. As a result, the average age of a medical marijuana patient is 41.5 years of age. Changing societal norms have made marijuana use much more acceptable today. According to a poll conducted by Gallup, 36.0% of Americans between the ages of 18 to 29 have tried marijuana in 2013, compared with just 8.0% in 1969.

Major Markets



The market for medical and recreational marijuana is heavily dependent on state regulation of cannabis. Currently, 23 states and the District of Columbia have some regulation that allowed for the use of medical marijuana. Medical marijuana is used to treat many ailments, but it is most commonly used to relieve pain. IBISWorld estimates that medical marijuana patients account for an estimated 85.9% of all industry revenue in 2015. By contrast, the sale of recreational cannabis is currently limited to Colorado and Washington. Although the sale of recreational marijuana in these states only began in 2014, it has grown to command 14.1% of the customer market for legal marijuana.

The industry's customer markets can be segmented across a variety of factors, including sex, age and ailments for which medical marijuana is prescribed. The median age of a medical marijuana customer is 41.5 years of age. 24.0% of customers are between the ages of 18-30; 26.0% of customers are between the ages of 31-40; 23.0% of customers are between the ages of 41-50; and 27.0% of customers are more than 50 years old. The customer market is heavily skewed toward males, who account for 66.0% of all medical marijuana sales, while females account for the remaining 34.0% of industry revenue.

Medical marijuana customers

Severe pain is the most commonly cited reason for medical marijuana use. Severe pain can result from a variety of chronic diseases and injuries. Medical marijuana can help alleviate severe pain and help patients relax and rest. IBISWorld estimates that in 2015, 64.6% of customers used medical marijuana because of severe pain. Over the past five years, this market has remained relatively stable, as many health problems can cause severe pain.

Muscle spasms can be caused by multiple sclerosis, Lou Gehrig's disease, cerebral palsy, quadriplegia, cranial and spinal nerve injuries and Tourette's syndrome, among others. Since medical marijuana is purported to help patients relax and sleep better, it is estimated that 8.9% of industry customers used medical marijuana because of muscle spasms in 2015. The wide variety of diseases that cause muscle spasms has kept demand stable from this market over the past five years.

A variety of diseases can cause nausea and migraines, including digestive disorders. Medical marijuana can provide relief and muscle relaxation, which helps alleviate nausea. IBISWorld estimates that in 2015, 6.9% of industry customers used medical marijuana because of severe nausea. This market has not significantly changed over the past five years.

Medical marijuana is used to help provide pain relief in a variety of more specific diseases and conditions, such as patients suffering from cancer and seizures. Cancer treatment can be painful, and medical marijuana can help patients relax and rest to accelerate the recovery process. Over the past five years, demand from other patients has remained stable, as the incidence of these diseases has not significantly changed.

Recreational marijuana customers

Recreational marijuana customers have quickly grown to account for 14.1% of the market for marijuana sales. Recreational marijuana users typically smoke in hand-rolled cigarettes (joints) or in pipes or water pipes (bongs). They also smoke marijuana in blunts, which are cigars that have been emptied of tobacco and refilled with a mixture of marijuana and tobacco. Recreational marijuana users typically smoke to obtain a "high," which affects the part of the brain that influences pleasure, memory, thinking, concentration, sensory and time perception, and coordinated movement. Currently, recreational marijuana users are limited to the states of Colorado and Washington. However, their share of the market is set to expand rapidly during the next five years as Alaska, Oregon and Washington, D.C. allow the purchase of cannabis for recreational use and other states pass legislation authorizing its sale.

Competitive Landscape

Market Share Concentration

The Medical and Recreational Marijuana Growing industry has a very low level of market share concentration. In 2015, the four largest operators are expected to account for less than 10.0% of revenue. By law, in the majority of states where medical marijuana is legal, industry operators must be a part of nonprofit marijuana collectives (also known as dispensaries) to grow marijuana. Industry operators are known as vendors and must also possess medical marijuana cards for the state where they operate. Additionally, because the sale of marijuana is still prohibited everywhere except Colorado and Washington, vendors in all other states only provide marijuana to the collective in exchange for donations. All vendors are independent and privately operated. All vendors hold marijuana ID cards, and most grow their allocated plant quota according to state law. In some states, however, patients may designate a grower to provide medical marijuana for them, resulting in some larger farms.

Key Success Factors

Development of effective marijuana strains

Growers that can develop the most potent and effective strains can potentially attract greater demand for their products.

Understanding government policies and their implications

Regulations are constantly changing. Growers must comply with the latest legislation or face fines and arrest, and they must be able to adjust to changing regulation quickly and smoothly.

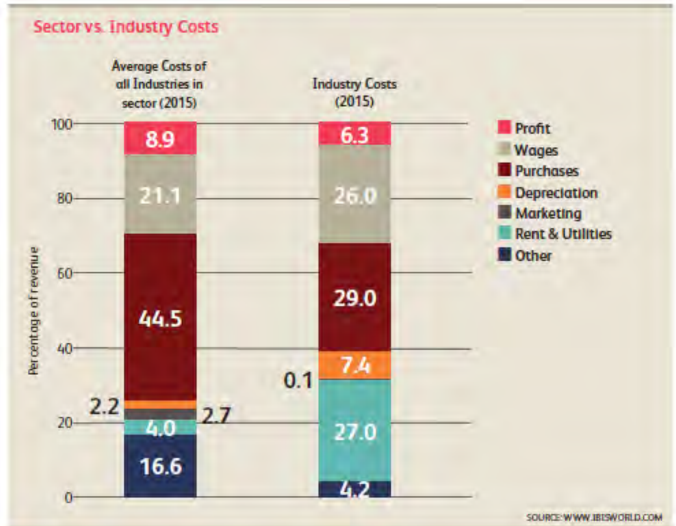
Ability to attract community support

Medical and recreational marijuana growers that lack community support may attract federal raids due to complaints from neighbors.

Cost Structure Benchmarks

Profit

Profit, measured as earnings before interest and taxes, varies greatly across the industry because of the myriad of laws governing medical and recreational marijuana from state to state. With the exception of Colorado, in the states where medical marijuana is legal, industry operators are required to be a part of nonprofit marijuana collectives (also known as dispensaries) to grow cannabis. Additionally, because the sale of marijuana is still prohibited, vendors typically provide marijuana to the collective in exchange for donations.



More recently, industry-wide margins have grown on account of the legalization of recreational marijuana in Colorado and Washington. Beginning in 2014, both legal cultivation and sale of for-profit recreational marijuana. In Colorado, for example, operators are able to apply for licenses to cultivate and sell cannabis wholesale to dispensaries. Consequently, industry profit margins are expected to total 6.3% of revenue in 2015, up substantially from 2010.

Wages

Wages are estimated to represent 26.0% of industry revenue in 2015. The high wage cost for this industry reflects the unique, largely nonprofit nature of this industry, where the majority of industry revenue is distributed in the form of wages to cover labor costs. Not all industry operators participate in growing cannabis on a full-time basis, thus bringing down the annual average wage. Furthermore, the cultivation of medical marijuana is largely donation based, meaning growers do not get paid for the cannabis that they grow. Wages as a share of revenue have slightly declined over the five years to 2015, aided by the increasing scale of some marijuana cultivation units. This trend is expected to continue as the scale of for-profit cultivators in Colorado and Washington, and later Alaska, Oregon and Washington, DC, increases.

Purchases

Purchases make up a significant expense for medical marijuana growers, representing an estimated 29.0% of total industry revenue in 2015. The primary goods purchased by this industry include soil, fertilizer and seeds. Purchases have increased as a share of revenue in the five years to 2015, due to increases in the prices of the raw materials necessary to grow medical and recreational marijuana.

Rent and utilities, depreciation

Depreciation, rent and utilities represent a large and essential cost for marijuana growing. In 2015, rent and utilities are expected to account for 27.0% of industry revenue, while depreciation is projected to account for an additional 7.4% of industry revenue. These costs are associated with investment into hydroponic techniques, temperature, lights, humidity controls and other facilities necessary to grow marijuana. The cultivation of medical and recreational marijuana in indoors, in particular, requires significant spending on facilities and electricity to power grow lights.

Other

Other costs include liability insurance and legal costs and are expected to reach a total 4.2% of industry revenue. Marketing costs are low because major advertisers are still hesitant to carry marijuana ads.

Basis of Competition

Due to the relatively small number of plants each individual is allowed to grow (which can range from four to 24, depending on the state), there is a large number of operators providing similar products in this industry. As a result, industry competition is very high. In Colorado and Washington state, however, the legalization of recreational marijuana sales in 2014 has led the licensing of larger recreational marijuana cultivators.

Internal competition

Industry vendors compete on product price and quality. Marijuana can have diverse properties and qualities, and only vendors that can consistently cultivate high-quality marijuana will attract demand from dispensaries. In addition, vendors must be able to provide competitive prices or donation requirements. Dispensaries can source marijuana from all members of their collective, making it easy to only acquire products from the lowest-priced vendors. Over the past five years, favorable state legislation paved the way for a large number of new entrants to this industry.

External competition

Industry operators face competition from pharmaceutical companies that manufacture drugs to treat chronic pain, cancer, HIV and other illnesses that medical marijuana helps relieve. Medical marijuana users, for example, typically only turn to marijuana after other treatment has failed, though, resulting in limited external competition from drug manufacturers.

Barriers to Entry

Medical marijuana growers

Barriers to Entry checklist

Competition	High
Concentration	Low
Life Cycle Stage	Growth
Capital Intensity	Medium
Technology Change	Low
Regulation & Policy	Heavy
Industry Assistance	High

SOURCE: WWW.IBISWORLD.COM

Prospective medical marijuana growers face minimal barriers to entry in terms of capital costs. However, the classification of marijuana as a Schedule I controlled substance and the possibility of federal prosecution contribute to medium barriers to entry. Over the past five years, a large number of operators entered this industry due to favorable policy stances from the Obama administration. However, in 2011, the Drug Enforcement Agency (DEA) stepped up raids on marijuana dispensaries, which made prospective operators more hesitant to enter this industry. More recently, the industry has benefited from favorable regulatory decisions at the federal level. In response to changing public sentiment, the United States House of Representatives voted in 2014 to restrict the DEA from using funds to target medical marijuana growers and dispensaries. Although this amendment to the DEA appropriations bill would need to be passed by the Senate to become binding, its confirmation would materially alter the outlook for industry operators. The omnibus-spending bill signed by President Obama in December of 2014 included the historic provisions for medical marijuana discussed above. The bill includes a rider to de-fund the DOJ's war on medical marijuana, preventing the agency from using funding to "prevent [medical marijuana states] from implementing their own State laws that authorize the use, distribution, possession, or cultivation of medical marijuana."

State regulations have mixed effects. In general, increased state regulation has benefited industry operators by legalizing medical marijuana or providing more concrete regulation on marijuana growing.

Over the past five years, barriers to entry have decreased because eight states and the District of Columbia passed legislation legalizing some level of medical marijuana growing. While states provide a legal avenue for growers to enter this industry, regulations are extensive and costly for prospective growers. For example, Colorado, the only for-profit medical marijuana market in the country, requires every marijuana plant to be registered with the state. Prospective growers are subject to background checks, deposits and licensing and application fees. Licensing and registration fees can total $500,000 or more. Additionally, all growing facilities are under constant video surveillance by law enforcement personnel from the state's Medical Marijuana Enforcement Division.

Additionally, because of the large number of small medical marijuana growers, competition in this industry is very high. Marijuana vendors must be able to grow high-quality plants while charging competitive prices, which may push away prospective entrants. Over the past five years, competition has increased, making it more difficult to succeed in this industry.

Recreational marijuana growers

More recently, the legalization of recreational marijuana in Colorado and Washington state has spurred the entry of larger scale, for-profit growers in each state. However, operators are required to obtain licensure from appropriate agencies in each state, competition for which is high. In Colorado, for example, recreational cultivation licenses are expensive and difficult to obtain because of the high number of applicants. Individual licenses vary on the size of growing facilities: type one stores, the smallest level, can grow up to 3,600 plants combined in their cultivation facilities; type two stores can grow 6,000 plants; and type three stores can grow up to 10,200 plants. Moreover, state officials have moved to limit the amount individual operators can grow to prevent marijuana grown in Colorado from entering states that ban the medical and recreational sales and possession of cannabis. In Washington, recreational cultivation licenses have been even more difficult to obtain as state officials have lagged in their implementation of the state's recreational marijuana mandate.

Major Companies

There are no Major Players in this industry.

Other Companies

This industry has no major players. Medical marijuana dispensaries are organized as nonprofit collectives where members can obtain marijuana in exchange for a donation. Industry vendors are members of marijuana collectives and individual vendors grow and supply marijuana to dispensaries. The majority of industry operators are independent, self-employed marijuana growers, resulting in a very low market share concentration. Depending on state law, however, industry operators may obtain the right to grow additional plants for other patients, resulting in larger marijuana farms.

The legalization of recreational marijuana in Colorado and Washington state in 2014 is expected to create opportunities for larger operators in these states. In Colorado, for example, recreational cultivation licenses are expensive and difficult to obtain because of the high number of applicants. Individual licenses vary on the size of growing facilities: type one stores, the smallest level, can grow up to 3,600 plants combined in their cultivation facilities; type two stores can grow 6,000 plants; and type three stores can grow up to 10,200 plants.

High Hopes Farm - Estimate market share: Less than 1.0%
High Hopes Farm is a cooperative medical marijuana grower in Oregon. The farm supplies medical marijuana to about 100 patients, growing marijuana according to a per-patient quota set by the Oregon Medical Marijuana Program (OMMP). The farm employs organic growing methods to provide natural medical marijuana products. The farm has 68 workers total, of which 20 are full-time workers, and all workers are medical marijuana patients in the OMMP. Since Oregon legislation only allows medical

marijuana growers to recoup utilities and supplies costs from patients to maintain their nonprofit status, the farm only compensates its workers in marijuana products instead of wages. The farm provides about 400 pounds of marijuana to its patients each year.

Operating Conditions

Capital Intensity

The Medical & Recreational Marijuana Growing industry has a medium level of capital intensity. For every $1.00 spent on labor, operators spend an average of $0.28 on capital expenditure, though the level of capital expenditures varies between outdoor and indoor growers. Outdoor growers follow standard cultivation techniques that other farmers use, which require low capital expenditure. By contrast, indoor growers require a slightly higher level of capital expenditures, which are typically spent on hydroponic techniques, lighting and humidity controls. The majority of industry revenue is allocated in the form of wages toward labor costs, as marijuana cultivation requires significant manual labor. Moreover, the nonprofit nature of medical marijuana growing in most states means that earnings are typically collected as wages, rather than profit.

Technology & Systems

Medical marijuana growing has a low level of technology change. Outdoor growers primary follow standard cultivation techniques used by other outdoor farmers. Indoor cannabis growers require containers, lighting and humidity control. Growers can also utilize hydroponic techniques, which have experienced more technology change over the past five years. Hydroponic techniques involve growing marijuana plants in water. Growers require water filters, pumps, growing trays and humidity control.

Some industry operators also cultivate new marijuana strains. This involves finding plants with desirable characteristics then artificially fertilizing plants. However, techniques used for developing new marijuana strains is similar to general crossing techniques used for flowers and plants. As are result, technology change is relatively low.

Revenue Volatility

Revenue volatility is medium for the Medical and Recreational Marijuana Growing industry, with an expected peak growth of 54.7% in 2014 and a trough of 19.8% growth in 2011. Regulatory changes in favor or against the industry are the primary determine of revenue fluctuations. In addition to the growing legalization movement for medical cannabis, the current-five year period has seen the legalization recreational cannabis in Colorado and Washington. Consequently, revenue spiked in 2014 as both states began issuing licenses for large-scale recreational growers.

Moreover, demand for medical marijuana growing is rapidly expanding due to the growing acceptance of medical marijuana in treating or alleviating symptoms in a variety of medical conditions, including cancer and the Alzheimer's Disease. Consumers who use medical marijuana do so due to medical needs; as a result, most use industry products regardless of the performance of the economy. In addition, the aging population has led to an increase in demand for a variety of medical services and treatments, because senior citizens consume a disproportionately large amount of pharmaceuticals relative to the rest of the population. The end result is a loyal and increasing customer base for medical marijuana, which leads to steadily increasing revenue.

Regulation & Policy

The Medical and Recreational Marijuana growing industry is subject to very heavy regulation from governments at all levels. However, there is a great degree of regulatory divergence at the state and federal levels.

Federal level

At the federal level, cannabis is classified as a Schedule I controlled substance under the Controlled Substances Act (CSA), passed as part of the Comprehensive Drug Abuse Prevention and Control Act of 1970. As defined by the CSA, Schedule I substances are those deemed to have a high potential for abuse, no currently accepted medical use in treatment and lack safe usage. Under federal law, Schedule I substances may not be manufactured, distributed or dispensed.

The scheduling of drugs is administered by the Department of Health and Human Services (DHHS). The DHHS operates the National Institute on Drug Abuse (NIDA), which conducts research on the efficacy of marijuana for medical uses. The DHHS has the final say on all drug scheduling.

The Department of Justice (DOJ), through the Drug Enforcement Agency (DEA), raids and prosecutes marijuana dispensaries and growers in the United States. During the past five years, regulation trends were initially promising for industry operators. During the presidential campaign of 2008, then Senator Obama promised to put an end to the practice of raiding dispensaries by the federal government. In 2009, Attorney General Eric Holder announced that the DOJ will comply with the President’s statements during the campaign. The “Ogden memo,” released by Deputy Attorney General David Ogden later that year, reiterated this position by instructing federal law enforcement organizations to refrain from using federal resources to prosecute cannabis dispensaries and growers that were in compliance with existing state laws providing for the medical use of marijuana.

However, beginning in 2011, the DEA and the DOJ once again ramped up their prosecution of cannabis growers and dispensaries. This introduced greater uncertainty for industry operators, resulting in higher operating costs from legal fees and risk mitigation. In response to changing public sentiment, however, the United States House of Representatives voted in 2014 to restrict the DEA from using funds to target medical marijuana growers and dispensaries. Although this amendment to the DEA appropriations bill would need to be passed by the Senate to become binding, its confirmation would materially alter the outlook for industry operators. The omnibus spending bill signed by President Obama in December of 2014 included the historic provisions for medical marijuana discussed above. The bill includes a rider to de-fund the DOJ’s war on medical marijuana, preventing the agency from using funding to “prevent [medical marijuana states] from implementing their own State laws that authorize the use, distribution, possession, or cultivation of medical marijuana.”

State regulation

Currently, 23 states and the District of Columbia have some regulation that allowed for the use of medical marijuana. Since 2014, both Colorado and Washington have allowed the legal sale of cannabis for recreational use. However, because federal law supersedes state law, the cultivation, sale and use of medical or recreational marijuana remain illegal in the United States. While Florida voters failed to pass an initiative that would have made the sale of medical marijuana legal in the state, voters in Alaska, Oregon and Washington, D.C. legalized the sale of recreational marijuana during the 2014 elections. Alaska’s measure is similar to Colorado’s, and Oregon’s is modeled on Washington state’s. Washington, DC’s initiative legalizes marijuana possession but does not establish a taxation system because voters are not allowed to directly implement taxes themselves. Alaska, Oregon and Washington, D.C. are expected to see a boom in the legal sale of marijuana for recreational use during the next five years.

California has the oldest and one of the most extensive regulatory frameworks governing medical marijuana. In 1996, the passage of the Compassionate Use Act (Proposition 215) legalized the use of medical marijuana and prohibited physicians from being punished for recommending medical marijuana to patients. California Senate Bill 420, passed in 2003, further clarified the state’s position on medical marijuana, legalizing organization of nonprofit marijuana collectives where members can cultivate and provide marijuana to each other.

In addition to California, the state of Colorado has some of the most extensive medical marijuana laws. The use of medical marijuana has been legal since the passage of Amendment 20 in 2000. In 2012, the state further loosened marijuana restrictions by passing Amendment 64, which legalized marijuana for recreational use. With the growth of the edible cannabis products segment, the state has moved to enact new regulations. Several high-profile incidents involving edible cannabis products have spurred new rules, signed into law in May 2014, concerning the packaging of edible marijuana products, including improved information regarding serving sizes.

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Key Statistics

Industry Data

	Revenue ($m)	Industry Value Added ($m)	Establish-ments	Enterprises	Employment	Exports	Imports	Wages ($m)	Domestic Demand	No. of adlt. aged 50 and older (Mil people)
2006	324.2	135.1	35,372	34,263	134,339	--	--	96.3	N/A	89.7
2007	352.2	147.3	37,208	36,164	141,352	--	--	105.3	N/A	92.1
2008	378.3	161.3	38,864	37,774	144,558	--	--	119.2	N/A	94.6
2009	415.9	178.1	41,180	39,847	147,832	--	--	130.2	N/A	97.0
2010	501.7	213.8	46,272	44,549	165,920	--	--	152.0	N/A	99.6
2011	601.1	254.9	51,779	49,580	183,926	--	--	171.3	N/A	102.0
2012	759.6	309.8	59,970	56,441	214,915	--	--	208.9	N/A	104.3
2013	969.8	398.7	69,927	64,765	252,271	--	--	269.6	N/A	106.6
2014	1,500.0	596.1	94,257	86,218	340,742	--	--	394.8	N/A	109.0
2015	1,875.8	743.2	111,774	100,742	405,498	--	--	486.8	N/A	110.9
2016	2,290.8	908.5	125,897	112,072	476,210	--	--	589.3	N/A	112.5
2017	3,222.3	1,240.6	142,832	125,377	587,078	--	--	781.2	N/A	114.2
2018	4,523.6	1,703.1	162,878	140,909	729,754	--	--	1,040.3	N/A	115.9
2019	5,915.3	2,227.7	186,026	158,657	894,014	--	--	1,332.3	N/A	117.5
2020	7,359.2	2,819.8	212,766	178,918	1,085,635	--	--	1,662.2	N/A	119.2

Annual Change

	Revenue (%)	Industry Value Added (%)	Establish-ments (%)	Enterprises (%)	Employment (%)	Exports (%)	Imports (%)	Wages (%)	Domestic Demand (%)	No. of adlt. aged 50 and older (%)
2007	8.6	9.0	5.2	5.5	5.2	N/A	N/A	9.3	N/A	2.7
2008	7.4	9.5	4.5	4.5	2.3	N/A	N/A	13.2	N/A	2.7
2009	9.9	10.4	6.0	5.5	2.3	N/A	N/A	9.2	N/A	2.6
2010	20.6	20.0	12.4	11.8	12.2	N/A	N/A	16.7	N/A	2.7
2011	19.8	19.2	11.9	11.3	10.9	N/A	N/A	12.7	N/A	2.4
2012	26.4	21.5	15.8	13.8	16.8	N/A	N/A	21.9	N/A	2.2
2013	27.7	28.7	16.6	14.7	17.4	N/A	N/A	29.1	N/A	2.2
2014	54.7	49.5	34.8	33.1	35.1	N/A	N/A	46.4	N/A	2.2
2015	25.1	24.7	18.6	16.8	19.0	N/A	N/A	23.3	N/A	1.8
2016	22.1	22.2	12.6	11.2	17.4	N/A	N/A	21.1	N/A	1.5
2017	40.7	36.6	13.5	11.9	23.3	N/A	N/A	32.6	N/A	1.5
2018	40.4	37.3	14.0	12.4	24.3	N/A	N/A	33.2	N/A	1.5
2019	30.8	30.8	14.2	12.6	22.5	N/A	N/A	28.1	N/A	1.5
2020	24.4	26.6	14.4	12.8	21.4	N/A	N/A	24.8	N/A	1.4

Key Ratios

	IVA/Revenue (%)	Imports/ Demand (%)	Exports/ Revenue (%)	Revenue per Employee ($'000)	Wages/Revenue (%)	Employees per Est.	Average Wage ($)	Share of the Economy (%)
2006	41.67	N/A	N/A	2.41	29.70	3.80	716.84	0.00
2007	41.82	N/A	N/A	2.49	29.90	3.80	744.95	0.00
2008	42.64	N/A	N/A	2.62	31.51	3.72	824.58	0.00
2009	42.82	N/A	N/A	2.81	31.31	3.59	880.73	0.00
2010	42.62	N/A	N/A	3.02	30.30	3.59	916.10	0.00
2011	42.41	N/A	N/A	3.27	28.50	3.55	931.35	0.00
2012	40.78	N/A	N/A	3.53	27.50	3.58	972.01	0.00
2013	41.11	N/A	N/A	3.84	27.80	3.61	1,068.69	0.00
2014	39.74	N/A	N/A	4.40	26.32	3.62	1,158.65	0.00
2015	39.62	N/A	N/A	4.63	25.95	3.63	1,200.50	0.00
2016	39.66	N/A	N/A	4.81	25.72	3.78	1,237.48	0.01
2017	38.50	N/A	N/A	5.49	24.24	4.11	1,330.66	0.01
2018	37.65	N/A	N/A	6.20	23.00	4.48	1,425.55	0.01
2019	37.66	N/A	N/A	6.62	22.52	4.81	1,490.25	0.01
2020	38.32	N/A	N/A	6.78	22.59	5.10	1,531.09	0.01

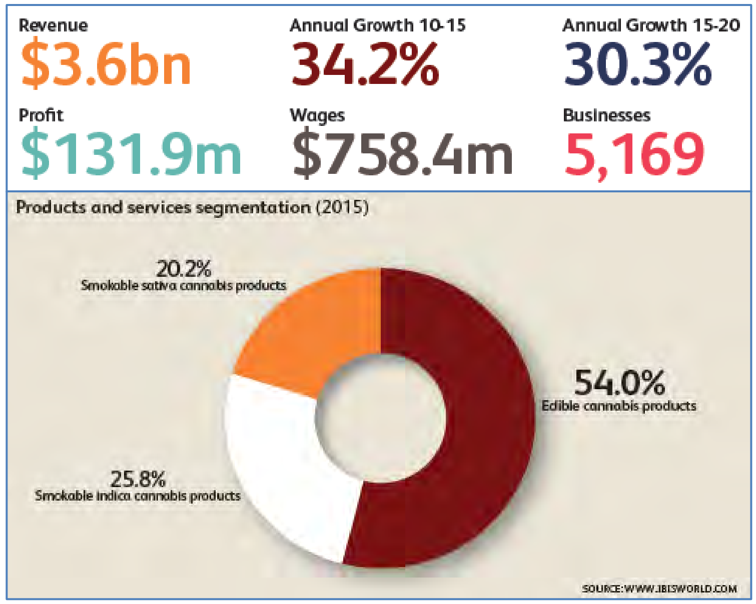
Medical & Recreational Marijuana Stores in the US

Overview

This industry includes stores that retail medical marijuana (by prescription only) and recreational marijuana. However, the legal sale of recreational marijuana is currently limited to the states of Colorado and Washington.

Industry Summary

The Medical and Recreational Marijuana Stores industry, which includes stores that retail medical marijuana (by prescription only) and recreational marijuana, has flourished over the five years to 2015. For decades, all marijuana transactions in the United States were conducted under implicit or explicit prohibition. However, states have increasingly moved to legalize marijuana for medical purposes, as well as to implement regulations for organizations that sell cannabis. The growing acceptance of medical marijuana is unprecedented opportunities. There has been no shortage of demand in recent years, as the industry has benefited from the increased acceptance and legitimacy of medical marijuana products.



More recently, the legalization of recreational marijuana sales in Colorado and Washington has spurred demand for the industry. In 2014, the opening of the first recreational marijuana stores in these states contributed to industry revenue growth of 70.5%. Meanwhile, medical marijuana dispensaries have continued to benefit the steadily aging population. Chronic illnesses have become more prevalent as the population continues to age, driving demand for medical marijuana. Additionally, the development of edible cannabis products has helped attract consumers who are unfamiliar with marijuana products or averse to smoking. Indeed, edible products are projected to be a growth segment for the industry in the coming years. Overall, the industry is expected to experience annualized revenue growth of 34.2% to $3.6 billion in the five years to 2015, including growth of 28.1% in 2015.

Industry revenue is projected to increase at an annualized rate of 30.3% to $13.4 billion over the five years to 2020. The industry will remain at risk, however, until the federal government definitively changes its position on the legality of marijuana. Until then, a growing number of medical marijuana patients and a burgeoning recreational cannabis legalization movement will spur demand for the industry. Rising demand is also forecast to widen profit margins, as is the success of for-profit recreational marijuana businesses in Colorado and Washington. Consequently, IBISWorld forecasts that the number of companies operating in this industry will increase an average 18.6% annually to 12,128 in the five years to 2020.

Key External Drivers

Regulation

Medical and recreational marijuana has been significantly restricted by increased attempts to impose additional regulations on the industry. In particular, medical marijuana remains a Schedule I controlled substance under federal law, despite legalization by many states. While the level of federal regulation is expected to remain flat in 2015, it still poses a potential threat to the industry.

Per capita disposable income

The level of household income determines consumers' ability to purchase medical marijuana products. While prescription products can be essential for health and therefore less susceptible to changes in consumer expenditure, the unconventional nature of the industry's products make it subject to changes in disposable income. As a result, an increase in disposable income will boost demand for medical marijuana growers. Per capita disposable income is expected to increase over 2015, presenting an opportunity for the industry.

External competition

Marijuana products, especially medical marijuana, struggle to compete against conventional healthcare services and products due to the alternative and unconventional nature of their treatment. Marijuana products also compete against black market alternatives, as the majority of marijuana in the United States continues to be sold illegally. External competition from traditional drugs and healthcare providers, as well as from black market sources, is expected to grow in 2015.

Number of adults aged 50 and older

Individuals aged 50 and older are more likely to require medical marijuana products because a number of health conditions for which medical marijuana is prescribed (e.g. Alzheimer's Disease) are prevalent among members of this age group. As the population ages, demand for industry services will grow, resulting in revenue growth. The number of adults aged 50 and older is expected to increase during 2015.

Current Performance

The Medical and Recreational Marijuana Stores industry has flourished over the five years to 2015, bolstered by increasing consumer acceptance of alternative treatment via marijuana products, as well as legalization of medical marijuana across nearly half of the United States. The industry includes stores that retail medical marijuana (by prescription only) and recreational marijuana, although the legal sale of recreational marijuana is currently limited to the states of Colorado and Washington. IBISWorld estimates that medical marijuana accounts for 85.9% of all industry revenue, while the legal sale of recreational cannabis accounts for the remaining 14.1%.

Marijuana, which is a dry, shredded mix of flowers, seeds, stems and leaves of either the Cannabis sativa or Cannabis indica plant, can be used as a medical treatment. Since 1996, proponents of cannabis have pushed individual states to recognize marijuana as a legitimate treatment or pain reliever for a range of illnesses. New medical research and changing public opinion have advanced these efforts and have contributed to the growth of the industry during the past five years. More recently, the industry has benefited from the push to legalize recreational marijuana in the United States. In 2012, Colorado and Washington became the first two states to legalize the sale of recreational marijuana, with the first stores opening in 2014. As a result, industry revenue is expected to grow an annualized 34.2% to nearly $3.6 billion during the five years to 2015, including growth of 28.1% during 2015.

Medical marijuana at the forefront

Medical marijuana has led the industry's growth for much of the last decade. According to the US Government Accountability Office, under state medical marijuana laws, symptoms and conditions that may be treated by cannabis include Alzheimer's disease, anorexia, HIV/AIDS, glaucoma, cancer, arthritis, epilepsy, nausea, pain, cachexia, Crohn's disease, migraines, multiple sclerosis and spasticity. Although for many decades all domestic marijuana transactions were conducted under implicit or explicit prohibition, many states have recently moved to legalize marijuana for medical purposes.

In general, the use of medical marijuana is increasing, particularly among people with chronic illnesses and pain. At the same time, significant concerns persist regarding the legitimacy and efficiency of medical marijuana treatment. Organizations such as the National Cannabis Industry Association have worked toward increasing the legitimacy of medical marijuana use by creating industry standards. These efforts have helped spur demand.

Proponents of medical marijuana have pushed individual states to recognize marijuana as a treatment for a range of diseases. Currently, 23 states and the District of Columbia have laws permitting the use of medical marijuana, although eight of these states do not have any dispensaries and another eight have five or fewer. Medical marijuana laws have been adopted by public referendum as well as by legislation. In late 2009, the US Justice Department instructed federal prosecutors in states with medical marijuana laws not to prioritize prosecuting individuals and businesses complying with state laws. In 2014, President Obama signed into law historic provisions for medical marijuana, prohibiting the Department of Justice from using federal funding to limit states from implementing their own laws that authorize the use, distribution, possession, or cultivation of medical marijuana. These conditions have facilitated industry growth.

Demographic boost for medical cannabis

Demographic factors have played a significant role in driving demand for medical marijuana. Currently, the median age of medical marijuana patients is 41.5 years. However, older individuals are more likely to develop the chronic illnesses for which medical marijuana is prescribed. As a result, an aging population in recent years has driven demand for industry products. Over the five years to 2015, the number of adults aged 50 and older is expected to increase at an average annual rate of 2.2% to 110.9 million people.

The aging population is also associated with an increased number of physician visits. In the five years to 2015, the number of physician visits is anticipated to increase at an annualized rate of 3.3% to 1.2 billion. Although doctors cannot prescribe marijuana to patients, they can authorize a patient to visit a company or cooperative that provides medical marijuana.

Recreational marijuana facilitates boom

The legal sale of recreational marijuana has spurred the industry's more recent astronomical growth. Recreational marijuana users typically smoke to obtain a "high," which affects the part of the brain that influences pleasure, memory, sensory and time perception, concentration and coordination. At the outset of 2014, legal recreational marijuana use became a reality in Colorado, stimulating demand for industry products as hundreds of retail stores opened throughout the year. While Washington lagged in its implementation of the voter-approved law legalizing recreational cannabis consumption, recreational marijuana sales began in July 2014. Colorado and Washington have quickly expanded into the industry's second- and third-largest markets, respectively. In 2014, operators in these states combined to generate nearly $400.0 million from the sale of recreational marijuana. This development contributed to the industry's boom during the year, as revenue rose an astounding 70.5%.

Changing attitudes and rising incomes spur new products and new entrants

The development of edible cannabis products (edibles) has also spurred greater consumer acceptance of medical and recreational marijuana. Edibles can take the form of food, extracts and oils, and range from marijuana-infused mints and candies to baked goods and beverages, among many other products. Edibles provide a more convenient and familiar product to consumers, thereby stimulating consumer demand for marijuana products.

The nature of medical marijuana treatment is rather unconventional. Although expenditure on products essential for health is less susceptible to fluctuations in consumer spending, medical marijuana's unique nature makes it subject to changes in disposable income. The same is largely true for recreational marijuana.

Because consumers pay for recreational marijuana out of pocket, growth in per capita disposable income boosts demand for industry products. Per capita disposable income is expected to grow 1.5% per year on average over the five years to 2015, as the economy recovers from the recession. Rising incomes have likely bolstered spending on medical and recreational marijuana products over the period.

Greater consumer acceptance of the industry's products and strong demand growth has caused more companies to enter this industry. In the five years to 2015, the number of industry enterprises is anticipated to increase an average 18.8% per year to 5, 169, while employment is also expected to increase an average 19.0% per year to 74,222 workers.

Regulation weighs on the industry

Regulation from all levels of government presents the greatest challenge to medical and recreational marijuana dispensaries, especially because state and federal governments often have conflicting regulations. The Controlled Substances Act (CSA), passed as a part of the Comprehensive Drug Abuse Prevention and Control Act of 1970, classifies marijuana as a Schedule I controlled substance. Schedule I substances are deemed by the federal government to have a high potential for abuse; furthermore, prescriptions of them are illegal. Despite the adoption of some state laws over the past two decades permitting the consumption and distribution of marijuana for medical and recreational use, the possession and distribution of marijuana remains illegal under federal law. Consequently, many businesses operate with the risk of being shut down or experiencing a property seizure without notice. In addition, industry operators cannot make standard tax deductions for business expenses and have difficulty securing standard banking and financial services.

Currently, Colorado is the only state that allows the sale of medical marijuana by for-profit companies, resulting in some large marijuana businesses. In 2012, the state (along with Washington) further loosened marijuana restrictions by passing Amendment 64, which legalized marijuana for recreational use. The ability of the state's medical marijuana dispensaries to generate profit has made Colorado the fastest-growing producer of marijuana. In 2014, Colorado generated nearly $60.0 million from marijuana taxes, licenses and fees. Therefore, continued success in Colorado may provide an incentive for other states to legalize for-profit marijuana distribution. The legalization of for-profit recreational marijuana in Colorado and Washington has already had a positive effect on industry profit margins, which are projected to rise to 3.7% of revenue in 2015.

Industry Outlook

The outlook for the Medical and Recreational Marijuana Stores industry is largely positive, with the industry expected to achieve new highs over the five years to 2020. Although the industry will continue to benefit from increasingly favorable attitudes toward medical marijuana treatments, building on a trend from the past five years, the industry will be led by the growth of legal recreational marijuana sales. In addition to Colorado and Washington, the only two states where the sale of recreational marijuana is currently legal, sales are expected to explode in Alaska, Oregon and Washington, D.C., which legalized recreational marijuana during the 2014 elections. As a result of these trends, combined with a steadily aging population and rising disposable incomes, IBISWorld forecasts that revenue will skyrocket at an annualized rate of 30.3% to nearly $13. 4 billion in the five years to 2020. In 2016, industry revenue is projected to increase 21.0%.

An increase in per capita disposable income is projected to drive demand for industry products. Although prescription products are essential for health and therefore less susceptible to fluctuations in consumer expenditure, the unconventional characteristics of the industry's products still make them subject to changes in disposable income. Nevertheless, because consumers pay for industry products out of pocket, growth in disposable income will help boost demand. Additionally, medical and recreational marijuana stores will likely further expand their offerings of edible marijuana products, which will be a major growth segment for industry operators going forward.

Recreational marijuana fuels industry expansion

The Medical and Recreational Marijuana Stores industry is subject to heavy regulation from all levels of government, with state and federal governments at times having conflicting policies. The Department of Justice, through the Drug Enforcement Administration, raids and prosecutes marijuana dispensaries and growers in the United States. In 2014, President Obama signed into law historic provisions for medical marijuana, prohibiting the Department of Justice from using federal funding to limit states from implementing their own laws that authorize the use, distribution, possession, or cultivation of medical marijuana. Although the industry has largely flourished under the Obama administration, its future remains hazy.

Nevertheless, the liberalization of regulation regarding the sale of recreational marijuana is expected to fuel the industry's growth. In 2014 (the only year for which data is thus far available), operators in Colorado and Washington generated nearly $400.0 million in revenue from the legal sale of recreational marijuana. In addition to strong growth in recreational marijuana sales in Colorado and Washington, the industry is expected to benefit from the commencement of recreational marijuana sales in Alaska, Oregon and Washington, D.C., which was legalized during the 2014 elections. Alaska's measure is similar to Colorado's, and Oregon's is modeled on Washington state's. Similar to the previous five years, rising demand will cause more companies to enter the industry. In the five years to 2020, the number of enterprises is projected to grow at an annualized rate of 18.6% to 12,128, while industry employment is forecast to increase at an average annual rate of 23.4% to 212,091 workers.

The relative success of Colorado's marijuana legalization initiative, which generated the state about $60.0 million in taxes, licenses and fees revenue in 2014, will potentially spur more states to legalize for-profit marijuana sales. Already, Nevada has planned a state recreational marijuana legalization ballot measure for the 2016 election. In addition to Nevada, ballot measures are expected in Arizona, California, Maine and Massachusetts in 2016, and in Delaware, Hawaii, Maryland, New Hampshire, Rhode Island, Vermont and others during the next five years. With the for-profit sale of recreational marijuana expected to comprise a larger share of industry revenue during the five years to 2020, industry-wide profitability is projected to rise steadily.

Medical cannabis demand grows with aging population

A growing number of doctors and patients will turn to the unconventional treatment offered by medical marijuana for conditions such as arthritis, migraines and Alzheimer's disease. In particular, the rising number of US adults aged 50 and older is expected to bolster demand for medical marijuana products. In the five years to 2 020, IBISWorld anticipates that this demographic will grow at an annualized rate of 1.5% to 119.2 million. In comparison, the total US population is forecast to grow at an average annual rate of 0.7% over the same period, meaning that people aged 50 and older will constitute a growing proportion of the population. This trend will lead to a growing number of people with health conditions that can be treated with marijuana (e.g. cancer and glaucoma), which increase in incidence with age. Additionally, given that the median age of medical marijuana patients is currently 41.5, demand will likely increase as patients in their 40s enter their 50s.

The number of physician visits in the United States is expected to rise in line with the senior population, increasing at an average annual rate of 1.9% to 1.3 billion. Chronic health ailments, such as obesity and diabetes, will augment healthcare use, as these patients will increasingly require checkups. The rising prevalence of these chronic diseases is also expected to boost demand for medical marijuana. Although doctors cannot legally prescribe marijuana to patients because the plant remains a Schedule I substance, they can authorize a patient to visit a company or a cooperative that provides medical marijuana. Therefore, while medical marijuana treatment is not covered by insurance, as the number of physician visits increases, demand for medical marijuana will grow accordingly.

Conventional healthcare threatens the industry

Growing acceptance of medical and recreational marijuana will produce numerous business opportunities in the coming years. Development of value-added, high-quality marijuana products will also drive industry growth. At the same time, medical marijuana dispensaries face significant risks and hurdles. In the next five years, conventional healthcare providers will continue challenging alternative care presented by medical marijuana products. Despite growing acceptance of marijuana-based treatment, traditional healthcare providers will continue to pose a threat to the industry due to the substantial skepticism regarding the legitimacy and effectiveness of marijuana. Consequently, medical marijuana growers will continue to suffer from inadequate capital investments.

Industry Performance

Industry Life Cycle

The Medical and Recreational Marijuana Stores industry is in the growth stage of its life cycle. Over the 10 years to 2020, its industry value added, which measures the industry's contribution to the economy, is expected to grow at an annualized rate of 31.8%. This rate is markedly faster than the 2.5% projected growth for US GDP, indicating the industry will make up a larger share of the economy in the years ahead. The industry is growing due to widening acceptance of its safety and legitimacy, which is causing more people to use its products. Although an increasing percentage of Americans have been using medical marijuana products to alleviate pain and to treat other health conditions during the past five years, a large share of the population still does not use them. This factor suggests that there is significant room for industry growth in the years ahead.

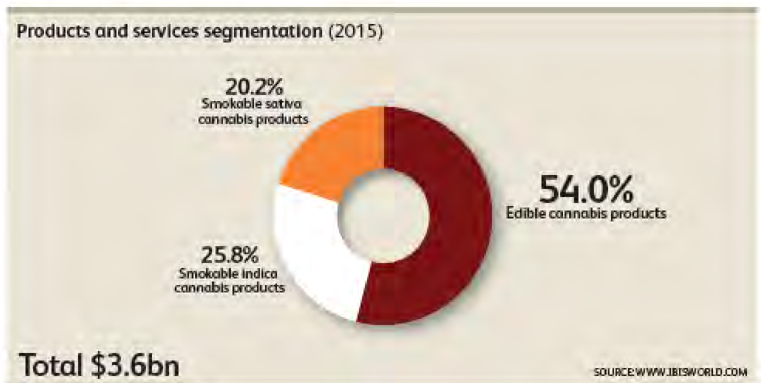
Organizations such as the National Cannabis Industry Association have worked toward increasing the legitimacy of medical marijuana use by creating industry standards, helping spur demand. The aging US population will also promote demand for products offered by this industry. Chronic illnesses and disabilities are more frequent among the elderly, and medical marijuana products are increasingly being used to treat these ailments. As such, this demographic group's expansion is forecast to boost demand.

Moreover, the industry's growth has been spurred by the growing legalization of recreational marijuana sales. Beginning in 2014, recreational marijuana stores began opening in Colorado and Washington, making them the fastest-growing markets in the United States. Moreover, the legalization of recreational marijuana in Alaska, Oregon and Washington, D.C., during the 2014 election is expected to generate substantial growth for the industry as stores begin to open during the next five years stores. Oregon, for example, will begin accepting licensing applications for the retail sale of recreational marijuana in January 2016.

Over the five years to 2015, the number of industry operators has increased as a result of rising demand and favorable legislation. Additionally, a rising number of physician visits has also created opportunity for potential market entrants. These factors will likely contribute to further industry growth in the five years to 2020, when the number of operators is forecast to rise at an average annual rate of 18.6% to 12,128.

Products & Markets

Industry products and services are segmented by edible and smokable marijuana products. Smokable marijuana products are segmented by indica and sativa cannabis strains, the two primary types of cannabis plants used in the United States.



Edible cannabis products

Edible marijuana products (edibles), or marijuana-infused products, are goods that contain cannabis that can be consumed orally. Edibles can take the form of food, extracts and oils, and range from marijuana-infused mints and candies to baked goods and beverages, along with many other products. During the past five years, edible marijuana products have grown rapidly as a share of industry revenue. IBISWorld estimates that in 2010, edible marijuana products comprised just 12.0% of industry revenue, and only 38.0% of revenue in 2012. However, the growing popularity of edibles, which can be consumed in areas that prohibit smoking, has pushed this product segment to an estimated 54.0% of industry revenue in 2015. Edible cannabis products are expected to continue to grow as a share of industry revenue during the five years to 2020.

Smokable indica cannabis products

IBISWorld estimates that in 2015, smokable indica marijuana products will comprise 25.8% of industry revenue. Indica products can be used to treat anxiety, chronic pain, insomnia and muscle spasms. In general, indica provides more physical relaxation than the sativa strain, and many consumers use indica as a sleep aid. Common indica strains include White Berry, Blueberry and Northern Lights. Although revenue from smokable indica cannabis products has grown during the past five years, it has declined as a share of revenue because of the growing popularity of edible cannabis products. IBISWorld anticipates that this trend will continue during the next five years.

Smokable sativa cannabis products

Smokable sativa cannabis products are used as a stimulant to improve appetite, relieve depression, migraines pain and nausea. This is especially beneficial for patients suffering from eating disorders, cancers and other debilitating diseases that cause a loss of appetite. Sativa is also more popular for patients during the day because it can increase alertness. Popular strains include Haze and Trainwreck. IBISWorld estimates that in 2015, smokable sativa marijuana products account for 20.2% of industry revenue. Although revenue from smokable sativa cannabis products has risen during the five years to 2015, it has declined as a share of industry revenue because of the growing popularity of edible cannabis products. This trend is expected to hold during the five years to 2020.

Demand Determinants

Government regulation

Demand for industry products is primarily determined by government regulation. The federal government regulates cannabis as a Schedule I controlled substance and considers all marijuana cultivation, sale and consumption illegal. In states that lack laws legalizing the medical or recreational use of cannabis, marijuana use is explicitly prohibited.

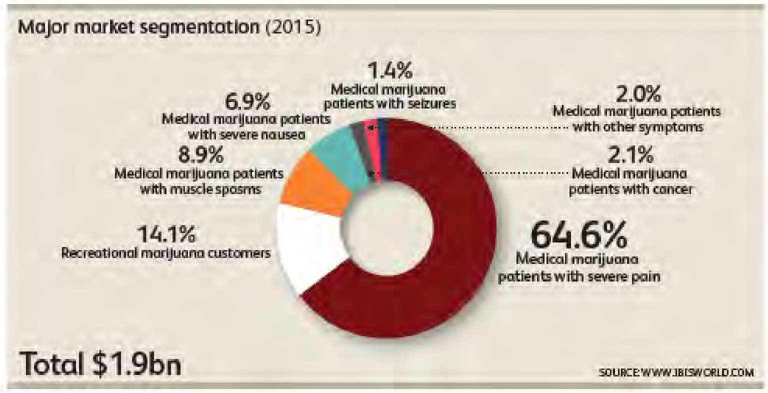
However, a total of 23 states and the District of Columbia have some level of legalization of medical marijuana. In addition, 2012 saw the legalization of recreational marijuana use in the states of Colorado and Washington. At the outset of 2014, legal recreational marijuana use became a reality in Colorado, stimulating demand for industry products. While Washington lagged in its implementation of the voter-approved law legalizing recreational cannabis consumption, recreational marijuana sales began in July of 2014. Moreover, the 2014 elections saw Alaska, Oregon and Washington, D.C., pass legislation legalizing the sale of recreational marijuana. Nonetheless, federal policy continues to limit consumer demand in states where medical marijuana is legal because of pervasive fears of violating federal law. President Obama's December 2014 signing of an omnibus spending bill included a directive preventing the Department of Justice from using federal funding to impede states from implementing their own laws authorizing the use, distribution, possession, or cultivation of medical marijuana. The next five years are likely to see the legalization of medical and recreational marijuana in a score of other states.

Income and demographics

Household income is a primary determinant of consumers' ability to acquire cannabis products. The legalization of medical marijuana, as well as recreational marijuana in some states, has created a market for high-quality cannabis, which can be expensive. Furthermore, because medical marijuana is typically not covered under health insurance plans, demand is largely dependent on patients' income levels.

Population demographics, particularly age, also dictate demand trends for medical marijuana. Although adults aged 50 and older are more likely to develop health conditions such as cancer, Alzheimer's, chronic pain, glaucoma and other diseases that can be treated with medical marijuana, obtaining a medical marijuana card is not difficult in many states. As a result, the average age of a medical marijuana patient is 41.5 years of age. Changing societal norms have made marijuana use much more acceptable today. According to a poll conducted by Gallup, 36.0% of Americans between the ages of 18 to 29 have tried marijuana in 2013, compared with just 8.0% in 1969.

Major Markets



The market for medical and recreational marijuana is heavily dependent on state regulation of cannabis. Currently, 23 states and the District of Columbia have some regulation that allowed for the use of medical marijuana. Medical marijuana is used to treat many ailments, but it is most commonly used to relieve pain. IBISWorld estimates that medical marijuana patients account for an estimated 85.9% of all industry revenue in 2015. By contrast, the sale of recreational cannabis is currently limited to Colorado and Washington. Although the sale of recreational marijuana in these states only began in 2014, it has grown to command 14.1% of the customer market for legal marijuana.

The industry's customer markets can be segmented across a variety of factors, including sex, age and ailments for which medical marijuana is prescribed. The median age of a medical marijuana customer is 41.5 years of age. 24.0% of customers are between the ages of 18-30; 26.0% of customers are between the ages of 31-40; 23.0% of customers are between the ages of 41-50; and 27.0% of customers are more than 50 years old. The customer market is heavily skewed toward males, who account for 66.0% of all medical marijuana sales, while females account for the remaining 34.0% of industry revenue.

Medical marijuana customers

Severe pain is the most commonly cited reason for medical marijuana use. Severe pain can result from a variety of chronic diseases and injuries. Medical marijuana can help alleviate severe pain and help patients relax and rest. IBISWorld estimates that in 2015, 64.6% of customers used medical marijuana because of severe pain. Over the past five years, this market has remained relatively stable, as many health problems can cause severe pain.

Muscle spasms can be caused by multiple sclerosis, Lou Gehrig's disease, cerebral palsy, quadriplegia, cranial and spinal nerve injuries and Tourette's syndrome, among others. Since medical marijuana is purported to help patients relax and sleep better, it is estimated that 8.9% of industry customers used medical marijuana because of muscle spasms in 2015. The wide variety of diseases that cause muscle spasms has kept demand stable from this market over the past five years.

A variety of diseases can cause nausea and migraines, including digestive disorders. Medical marijuana can provide relief and muscle relaxation, which helps alleviate nausea. IBISWorld estimates that in 2015, 6.9% of industry customers used medical marijuana because of severe nausea. This market has not significantly changed over the past five years.

Medical marijuana is used to help provide pain relief in a variety of more specific diseases and conditions, such as patients suffering from cancer and seizures. Cancer treatment can be painful, and medical marijuana can help patients relax and rest to accelerate the recovery process. Over the past five years, demand from other patients has remained stable, as the incidence of these diseases has not significantly changed.

Recreational marijuana customers

Recreational marijuana customers have quickly grown to account for 14.1% of the market for marijuana sales. Recreational marijuana users typically smoke in hand-rolled cigarettes (joints) or in pipes or water pipes (bongs). They also smoke marijuana in blunts, which are cigars that have been emptied of tobacco and refilled with a mixture of marijuana and tobacco. Recreational marijuana users typically smoke to obtain a "high," which affects the part of the brain that influences pleasure, memory, thinking, concentration, sensory and time perception, and coordinated movement. Currently, recreational marijuana users are limited to the states of Colorado and Washington. However, their share of the market is set to expand rapidly during the next five years as Alaska, Oregon and Washington, D.C. allow the purchase of cannabis for recreational use and other states pass legislation authorizing its sale.

Competitive Landscape

Market Share Concentration

The Medical and Recreational Marijuana Stores industry has a low level of market share concentration. IBISWorld estimates that in 2015, the four largest firms are expected to account for less than 10.0% of industry revenue. By law, in the majority of states where medical marijuana is legal, industry operators must be a part of nonprofit marijuana collectives (also known as dispensaries) to sell marijuana. Additionally, because the sale of marijuana for recreational use is still prohibited in all states except Colorado and Washington, the ability of individual operators to expand on a for-profit basis is limited.

IBISWorld anticipates that industry concentration will remain low during the next five years, although this outlook would materially change should the federal government reevaluate its classification of cannabis as a Schedule I substance. Nonetheless, the legalization of marijuana for recreational use in Alaska, Oregon and Washington, D.C., during the 2014 elections is expected to increase operators' opportunities to expand on a for-profit basis.

Key Success Factors

Ability to attract community support

Medical and recreational marijuana stores that lack community support may attract federal raids due to complaints from neighbors.

Understanding government policies and their implications

Marijuana legislation is complicated at all levels of the government. Successful operators must be able to navigate the regulatory landscape at both the state and federal lev el.

Fast adjustments to changing regulations

Regulations are constantly changing. Growers must comply with the latest legislation or face fines and arrest, and they must be able to adjust to changing regulation quickly and smoothly.

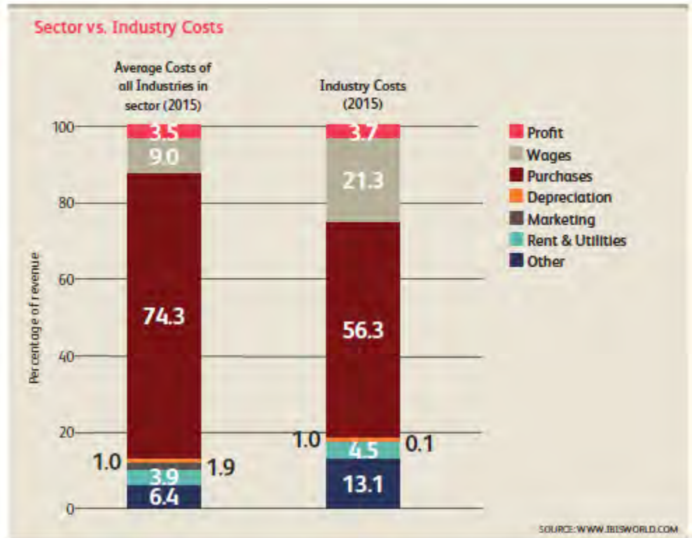
Marketing of differentiated products

Dispensaries must properly promote their products given the differentiated nature of edible cannabis products. Promotional efforts are essential to attracting new customers.

Cost Structure Benchmarks

Profit

Profit, measured as earnings before interest and taxes, varies greatly across the industry because of the myriad laws governing medical and recreational marijuana from state to state. With the exception of Colorado, in the states where medical marijuana is legal, industry operators are required to be a part of nonprofit marijuana collective (also known as a dispensary) to grow cannabis. Additionally, because the sale of marijuana is still prohibited, vendors typically provide marijuana to the collective in exchange for donations.



More recently, industry-wide margins have grown on account of the legalization of recreational marijuana in Colorado and Washington. Beginning in 2014, both states began allowing the for-profit sale of recreational marijuana, with total sales of medical and recreational marijuana in Colorado alone accounting for about 30.0% of industry revenue. Consequently, industry profit margins are expected to total 3.7% of revenue in 2015, up substantially from 1.9% in 2010.

Purchases

Similar to the retail sector, purchases make up a significant expense for medical and recreational marijuana stores. However, because marijuana cannot be legally sold and purchased (aside from Colorado and Washington state), purchases are primarily comprised of storage equipment, medical marijuana accessories and other products that do not contain marijuana. In particular, medical marijuana stores need to purchase specialty lighting, airtight containers and cases, air conditioning and other equipment needed to store marijuana. Additionally, stores retail pipes, vaporizers, lighters and other products used to consume medical marijuana. Lastly, industry operators may purchase and retail edible products that do not contain marijuana.

Over the past five years, purchase costs have risen with the legalization of recreational marijuana in Colorado and Washington, which have expanded into the second- and third-largest industry markets, respectively. Because stores that retail recreational marijuana typically purchase products from state-licensed growers, the slow issuance of these licenses (especially in Washington state) constrained the supply of marijuana, especially in 2014. As a result of the supply shortage, among others in states with medical marijuana, purchase costs have risen over the past five years. In 2015, purchases are anticipated to account for 56.3% of industry revenue.

Wages

Wages are estimated to represent 21.3% of industry revenue in 2015. Although the industry is largely donation based, meaning stores do not get paid for the marijuana they provide, marijuana stores are allowed to receive donations to cover labor and material costs. Consequently, industry operators utilize labor heavily for day-to-day operations. Additionally, most marijuana stores are small local retail businesses that depend on employees for services, resulting in high labor costs as a share of revenue. Wages as a share of revenue have declined over the five years to 2015 as the industry scaled up and medical and recreational marijuana sales boomed. This has been especially evident in Colorado, which has an extensive landscape of for-profit medical and recreational marijuana stores.

Other costs

Depreciation, rent and utilities represent small but essential costs for medical marijuana growing, together accounting for 5.5% of industry revenue in 2015. These costs are associated with investments in storefronts, warehouses and other capital expenses. Some medical and recreational marijuana stores may purchase and develop onsite edible product manufacturing capabilities, which contribute to higher depreciation costs. Other costs include liability insurance and legal costs, which are expected to reach a total 13.1% of industry revenue in 2015. Marketing costs are low because major advertisers are still hesitant to carry marijuana ads.

Basis of Competition

Because most operators in Medical and Recreational Marijuana Stores industry operate as nonprofit collectives, there are a large number of operators that provide similar products. However, the legalization of recreational cannabis in Colorado and Washington, coupled with the high potential for differentiation in the edible cannabis products segment, creates opportunities for larger operators to come into existence. In the absence of legislation at the federal level governing the sale of medical and recreational marijuana, the nature of competition is heavily dependent on the nature of state law. As a result, operators face substantially different conditions from state to state.

Internal competition

Industry competition is largely waged on products' price and quality. Marijuana can have diverse properties and qualities, and only dispensaries that can consistently provide high-quality marijuana will attract demand from consumers. Additionally, dispensaries must be able to provide competitive prices. Customers can purchase marijuana from a wide range of dispensaries, marking it easy to only acquire products from the lowest-priced dispensaries. As a result, it is important that dispensaries use promotional efforts to attract new customers.

Although smokable indica cannabis products and smokable sativa cannabis products lack significant differentiation, there is a great degree of differentiation in the edible cannabis products segment. Edibles can take the form of food, extracts and oils, and range from marijuana-infused mints, candies, baked goods and beverages, among many other products. In fact, a whole field of cannabis-infused culinary cooking has emerged in recent years with the legalization of medical marijuana. It is important that industry operators have access to the newest products and are able to source popular items at competitive prices.

External completion

Industry operators face competition from pharmaceutical companies that manufacture drugs to treat chronic pain, cancer, HIV and other illnesses that medical marijuana helps relieve. Medical marijuana users typically only turn to marijuana after other treatment has failed, though, resulting in limited external competition from drug manufacturers.

Barriers to Entry

Federal regulation

Barriers to Entry checklist	Level
Competition	High
Concentration	Low
Life Cycle Stage	Growth
Capital Intensity	Low
Technology Change	High
Regulation & Policy	Heavy
Industry Assistance	High

SOURCE: WWW.IBISWORLD.COM

Prospective medical marijuana store operators, and recreation marijuana store operators in Colorado and Washington, must navigate a variety of legal issues before beginning operation. The classification of marijuana as a Schedule I controlled substance and the possibility of federal prosecution poses a significant barrier to entry, as the Drug Enforcement Administration has the requisite power to close dispensaries and seize their cannabis products. Recent favorable policy stances from the federal government on this matter caused a large number of firms to enter the industry over the current period. The omnibus spending bill signed by President Obama in December of 2014 included historic provisions for medical marijuana. The bill included a rider to defund Department of Justice operations against medical marijuana, prohibiting federal agencies from using funding to "prevent [medical marijuana states] from implementing their own State laws that authorize the use, distribution, possession, or cultivation of medical marijuana."

State regulation

State regulations have mixed effects. In general, the passage of new legislation has largely benefited industry operators by legalizing medical marijuana. During the five years to 2015, barriers to entry have decreased as nine states and the District of Columbia have passed legislation legalizing some level of medical marijuana sales, while Colorado and Washington have legalized the recreational use of cannabis. In 2014, Alaska, Oregon and Washington, D.C., also legalized the sale of recreational marijuana. While the ability of recreational marijuana stores to operate in Washington, D.C., remains in doubt, both Alaska and Oregon are expected to see recreational marijuana stores open during the next five years. Oregon, for example, will begin accepting licensing applications for the retail sale of recreational marijuana in January 2016. While states provide a legal avenue for operators to open dispensaries, regulations are extensive and costly for prospective operators. Although regulation varies by state, operators must obtain the required licenses and permits.

Capital requirements

Although marijuana stores face limited capital costs because of the low-tech nature of the industry, operators are impeded by their relative inability to obtain financing from traditional sources. In order to open a dispensary, operators must acquire a location, hire employees, purchase inventory, and buy advertising, among other things. However, because the cultivation, distribution and use of cannabis remain illegal at the federal level, traditional financial institutions have been hesitant to provide financing to new entrants. As a result, new operators have been forced to rely on personal savings and loans from family members and friends to enter the industry, limiting entry. However, in 2014, the Obama administration effectively gave the green light to financial institutions to provide access to capital for industry operators in states where medical and recreational cannabis are legal. Consequently, obtaining access to capital is anticipated to become somewhat easier for potential operators over the next five years.

Major Companies

There are no Major Players in this industry.

Other Companies

The Medical and Recreational Marijuana Stores industry does not have any major players. Everywhere except Colorado, medical marijuana dispensaries are organized as nonprofit collectives where members can obtain marijuana in exchange for a donation. The majority of industry operators are independent, self-employed medical marijuana stores, resulting in very low market share concentration. Because the cultivation, distribution and sale of cannabis remains illegal at the federal level, establishments in states that allow medical marijuana are governed by a patchwork of laws, impeding any one operator from effectively operating across states.

However, the legalization of marijuana for recreational use in Colorado and Washington, and more recently in Alaska, Oregon and Washington, D.C., has the potential to alter the industry landscape in the future. Stores catering to the market for recreational marijuana operate as for-profit organizations and may be able to capture a larger share of the market during the next five years. However, the ability of individual companies to gain a substantial share of the industry will ultimately remain dependent on the legal status of marijuana at the federal level.

Operating Conditions

Capital Intensity

The Medical and Recreational Marijuana Stores industry has a low level of capital intensity. IBISWorld estimates that for every $1.00 spent on labor in 2015, industry operators allocated just $0.4 toward the purchase of capital. This figure has remained relatively unchanged during the five years to 2015, a trend that is expected to hold moving forward.

The provision of industry services is relatively low-tech. Because industry operators are involved in the retail business, they must invest in typical equipment such as computers and software, as well as registers, in order to sell cannabis. More specific to industry services, operators must invest in temperature and humidity control systems to ensure that they are able to maintain the quality of their stock. Perhaps most importantly, industry operators must invest heavily in security equipment, such as video cameras and alarm systems. Because marijuana dispensaries have been plagued by robberies, it is necessary that industry operators invest in equipment to ensure the safety of their products. Nonetheless, labor remains the primary input into the provision of industry services. IBISWorld estimates that in 2015, wages will account 21.3% of industry revenue.

Technology & Systems

While the Medical and Recreational Marijuana Stores industry relies only minimally on capital equipment, cannabis products have changed dramatically in recent decades. Since the legalization of medicinal cannabis, the industry’s fast-growing edible cannabis products segment has seen a significant amount of innovation.

Cannabis quality

During the past 30 years, cannabis quality has improved as a result of better cultivation practices. Improvement in quality is measured by the level of tetrahydrocannabinol (THC), which is the principal psychoactive constituent in cannabis plants. Improved cultivation techniques range from the use of more nutrient rich soils to more efficient drying techniques, which have allowed growers to harvest both larger and stronger yields. According to the latest available data provided by the University of Mississippi’s Potency Monitoring Project, marijuana that was analyzed in 2007 had a THC level of 9.6%, the highest level since analysts began tracking this data in 1976.

Cannabis products

The legalization of medical marijuana across numerous states, as well as the legalization of recreational marijuana in Colorado and Washington State, has also spurred changes in the kind of cannabis products available for sale, fueling demand for industry goods in turn. Edible cannabis products, the industry’s fastest growing segment, comprises marijuana-infused mints, candies, baked goods and beverages, among numerous other products. With countless new edible marijuana products coming onto the market, the nature of industry products is changing rapidly.

Revenue Volatility

The Medical and Recreational Marijuana Stores industry has a high level of revenue volatility. However, industry revenue has continually risen and is expected to grow consecutively in the five years to 2015. IBISWorld expects that in 2015 alone, industry revenue will grow 28.1%. Demand for industry products is rapidly expanding due to the growing acceptance of medical marijuana in treating or alleviating symptoms in a variety of medical conditions, including cancer and the Alzheimer’s Disease.

However, changes in the regulatory landscape serve as the most important driver of revenue fluctuations. The legalization of medical marijuana use in some form across numerous states has caused industry revenue to jump in individual years. In 2014, for example, revenue rose astronomically on account of the legalization of cannabis sales for recreational use in Colorado and Washington, in addition to the wider use of medical marijuana across other states. IBISWorld expects that revenue volatility will remain high during the five years to 2020 as other states across the United States legalize the sale of medical and recreational marijuana in some form. For example, voters in Alaska, Oregon and Washington, D.C. legalized the sale of recreational marijuana during the 2014 elections.

Regulation & Policy

The Medical and Recreational Marijuana Stores industry is subject to very heavy regulation from governments at all levels. However, there is a great degree of regulatory divergence at the state and federal levels.

Federal level

At the federal level, cannabis is classified as a Schedule I controlled substance under the Controlled Substances Act (CSA), passed as part of the Comprehensive Drug Abuse Prevention and Control Act of 1970. As defined by the CSA, Schedule I substances are those deemed to have a high potential for abuse, no currently accepted medical use in treatment and lack safe usage. Under federal law, Schedule I substances may not be manufactured, distributed or dispensed.

The scheduling of drugs is administered by the Department of Health and Human Services (DHHS). The DHHS operates the National Institute on Drug Abuse (NIDA), which conducts research on the efficacy of marijuana for medical uses. The DHHS has the final say on all drug scheduling.

The Department of Justice (DOJ), through the Drug Enforcement Administration (DEA), raids and prosecutes marijuana dispensaries and growers in the United States. During the past five years, regulation trends were initially promising for industry operators. During the presidential campaign of 2008, then Senator Obama promised to put an end to the practice of raiding dispensaries by the federal government. In 2009, Attorney General Eric Holder announced that the DOJ will comply with the President's statements during the campaign. The "Ogden memo," released by Deputy Attorney General David Ogden later that year, reiterated this position by instructing federal law enforcement organizations to refrain from using federal resources to prosecute cannabis dispensaries and growers that were in compliance with existing state laws providing for the medical use of marijuana.

However, beginning in 2011, the DEA and the DOJ once again ramped up their prosecution of cannabis growers and dispensaries. This introduced greater uncertainty for industry operators, resulting in higher operating costs from legal fees and risk mitigation. In response to changing public sentiment, however, the United States House of Representatives voted in 2014 to restrict the DEA from using funds to target medical marijuana growers and dispensaries. Although this amendment to the DEA appropriations bill would need to be passed by the Senate to become binding, its confirmation would materially alter the outlook for industry operators. The omnibus spending bill signed by President Obama in December of 2014 included a rider to defund DOJ operations against medical marijuana, prohibiting federal agencies from using funding to "prevent [medical marijuana states] from implementing their own State laws that authorize the use, distribution, possession, or cultivation of medical marijuana."

State regulation

Currently, 23 states and the District of Columbia have some regulation that allowed for the use of medical marijuana. Since 2014, both Colorado and Washington have allowed the legal sale of cannabis for recreational use. However, because federal law supersedes state law, the cultivation, sale and use of medical or recreational marijuana remain illegal in the United States. While Florida voters failed to pass an initiative that would have made the sale of medical marijuana legal in the state, voters in Alaska, Oregon and Washington, D.C., legalized the sale of recreational marijuana during the 2014 elections. Alaska's measure is similar to Colorado's, and Oregon's is modeled on Washington state's. Washington, D.C.'s initiative legalizes marijuana possession but does not establish a taxation system because voters are not allowed to directly implement taxes themselves. Alaska, Oregon and Washington, D.C., are expected to see a boom in the legal sale of marijuana for recreational use during the next five years.

California has the oldest and one of the most extensive regulatory frameworks governing medical marijuana. In 1996, the passage of the Compassionate Use Act (Proposition 215) legalized the use of medical marijuana and prohibited physicians from being punished for recommending medical marijuana to patients. California Senate Bill 420, passed in 2003, further clarified the state's position on medical marijuana, legalizing organization of nonprofit marijuana collectives where members can cultivate and provide marijuana to each other.

In addition to California, the state of Colorado has some of the most extensive medical marijuana laws. The use of medical marijuana has been legal since the passage of Amendment 20 in 2000. In 2012, the state further loosened marijuana restrictions by passing Amendment 64, which legalized marijuana for recreational use. With the growth of the edible cannabis products segment, the state has moved to enact new regulations. Several high-profile incidents involving edible cannabis products have spurred new rules, signed into law in May 2014, concerning the packaging of edible marijuana products, including improved information regarding serving sizes.

Government regulation

Although the existence of the Medical and Recreational Marijuana Stores industry is considered illegal at the federal level, the passage of regulation concerning the medical and recreational use of marijuana across 23 states and the District of Columbia has allowed for the existence and expansion of the industry. While the industry does not benefit from any government subsidies, the expected continuation of new laws legalizing the medical and recreational use of marijuana will continue to benefit the industry.

Industry associations

This industry benefits from relatively widespread support from industry associations. The National Cannabis Industry Association is a trade association representing industry operators. The organization lobbies lawmakers in Washington, DC for more favorable marijuana legislation. These include legislation on banking that allows marijuana businesses to work with financial institutions. Currently, banks are hesitant to provide services to marijuana businesses due to the illegality of marijuana at the federal level.

The National Organization for the Reform of Marijuana Laws (NORML) works to repeal marijuana prohibition at the federal level. The organization supports the right of adults to use marijuana responsibly, and champions state and federal reforms that are favorable to marijuana users. NORML primarily lobbies Congress and state legislatures to enact marijuana reforms.

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Key Statistics

Industry Data

	Revenue ($m)	Industry Value Added ($m)	Establish-ments	Enterprises	Employment	Exports	Imports	Wages ($m)	Domestic Demand	Number of adults aged 50 and older (Mil people)
2006	515.5	150.6	1,570	1,439	20,224	–	–	133.1	N/A	89.7
2007	557.3	167.8	1,651	1,517	21,894	–	–	151.6	N/A	92.1
2008	600.4	169.5	1,740	1,596	22,223	–	–	150.9	N/A	94.6
2009	670.3	186.7	1,906	1,744	24,756	–	–	167.3	N/A	97.0
2010	819.0	227.6	2,384	2,180	31,150	–	–	203.9	N/A	99.6
2011	987.0	263.7	2,696	2,465	34,994	–	–	243.9	N/A	102.0
2012	1,259.1	369.6	3,122	2,853	40,368	–	–	314.2	N/A	104.3
2013	1,631.7	479.3	3,767	3,444	49,357	–	–	415.7	N/A	106.6
2014	2,781.8	735.3	4,867	4,453	63,414	–	–	615.7	N/A	109.0
2015	3,564.0	926.7	5,717	5,169	74,222	–	–	758.4	N/A	110.9
2016	4,312.4	1,140.0	6,614	5,943	87,871	–	–	919.8	N/A	112.5
2017	6,010.7	1,549.4	8,056	7,101	109,800	–	–	1,225.3	N/A	114.2
2018	8,361.9	2,128.5	9,874	8,545	138,412	–	–	1,640.6	N/A	115.9
2019	10,837.1	2,802.0	11,912	10,194	171,763	–	–	2,111.5	N/A	117.5
2020	13,363.2	3,593.4	14,252	12,128	212,091	–	–	2,655.4	N/A	119.2

Annual Change

	Revenue (%)	Industry Value Added (%)	Establish-ments (%)	Enterprises (%)	Employment (%)	Exports (%)	Imports (%)	Wages (%)	Domestic Demand (%)	Number of adults aged 50 and older (%)
2007	8.1	11.4	5.2	5.4	8.3	N/A	N/A	13.9	N/A	2.7
2008	7.7	1.0	5.4	5.2	1.5	N/A	N/A	-0.5	N/A	2.7
2009	11.6	10.1	9.5	9.3	11.4	N/A	N/A	10.9	N/A	2.5
2010	22.2	21.9	25.1	25.0	25.8	N/A	N/A	21.9	N/A	2.7
2011	20.5	15.9	13.1	13.1	12.3	N/A	N/A	19.6	N/A	2.4
2012	27.6	40.2	15.8	15.7	15.4	N/A	N/A	28.8	N/A	2.3
2013	29.6	29.7	20.7	20.7	22.3	N/A	N/A	32.3	N/A	2.2
2014	70.5	53.4	29.2	29.3	28.5	N/A	N/A	48.1	N/A	2.3
2015	28.1	26.0	17.5	16.1	17.0	N/A	N/A	23.2	N/A	1.7
2016	21.0	23.0	15.7	15.0	18.4	N/A	N/A	21.3	N/A	1.4
2017	39.4	35.9	21.8	19.5	25.0	N/A	N/A	33.2	N/A	1.5
2018	39.1	37.4	22.6	20.3	26.1	N/A	N/A	33.9	N/A	1.5
2019	29.6	31.6	20.6	19.3	24.1	N/A	N/A	28.7	N/A	1.4
2020	23.3	28.2	19.6	19.0	23.5	N/A	N/A	25.8	N/A	1.4

Key Ratios

	IVA/Revenue (%)	Imports/ Demand (%)	Exports/ Revenue (%)	Revenue per Employee ($'000)	Wages/Revenue (%)	Employees per Est.	Average Wage ($)	Share of the Economy (%)
2006	29.21	N/A	N/A	25.49	25.82	12.88	6,581.29	0.00
2007	30.11	N/A	N/A	25.45	27.20	13.26	6,924.27	0.00
2008	28.23	N/A	N/A	27.02	25.13	12.77	6,790.26	0.00
2009	27.85	N/A	N/A	27.08	24.96	12.99	6,757.96	0.00
2010	27.79	N/A	N/A	26.29	24.90	13.07	6,545.75	0.00
2011	26.72	N/A	N/A	28.20	24.71	12.98	6,969.77	0.00
2012	29.35	N/A	N/A	31.19	24.95	12.93	7,783.39	0.00
2013	29.37	N/A	N/A	33.06	25.48	13.10	8,422.31	0.00
2014	26.43	N/A	N/A	43.87	22.13	13.03	9,709.21	0.00
2015	26.00	N/A	N/A	48.02	21.28	12.98	10,217.99	0.01
2016	26.44	N/A	N/A	49.08	21.33	13.29	10,467.62	0.01
2017	25.78	N/A	N/A	54.74	20.39	13.63	11,159.38	0.01
2018	25.45	N/A	N/A	60.41	19.62	14.02	11,853.02	0.01
2019	25.86	N/A	N/A	63.09	19.48	14.42	12,293.10	0.02
2020	26.89	N/A	N/A	63.01	19.87	14.88	12,520.10	0.02

APPENDIX F: ANALYSIS OF ECONOMIC CONDITIONS

Fourth Quarter 2015 National Economic Report

In any business valuation, the general economic outlook as of the Valuation Date should be considered, since the economic outlook is often the basis of how investors perceive alternative investment opportunities at any given time.

The U.S. economic data presented herein was compiled for and distributed by the American Business Appraisers National Network. The objective of this economic analysis is to highlight the most common economic indicators underlying the level of the national economy's long-run attractiveness.

While the economy has improved since the beginning of the great recession, it still isn't where anyone would want it to be, but it is definitely in a stronger place. The unemployment rate is steadily falling, the stock market is near record highs, consumer confidence and spending are up, business spending is gradually improving, and inflation remains low. However, the job market remains unsettled, there are too many part-time workers who want full time work and job turnover is unusually low. In addition, wages have yet to outpace inflation for most workers.

Gross Domestic Product ("GDP")

GDP is a comprehensive measure of the economic health of the nation. It represents the total value of the country's production and consists of purchases of domestically-produced goods and services by individuals, businesses, foreigners, and the government. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory. It is the broadest of the nation's economic measures. It is generally considered from two viewpoints: a) Real - excluding the effects of inflation or deflation, and b) Nominal - in terms of the country's currency including changes in the currency's effective purchasing power.

In 2008 and 2009, U.S. Real Gross Domestic Product contracted for four consecutive (and five out of six) quarters. A recession is generally defined as the occurrence of two consecutive quarters of GDP decline. Beginning in the third quarter of 2009 the economy began growing, and there has been no recessionary period in the intervening 5+ years. The following table shows quarterly changes in nominal and real GDP for the last decade with periods of real GDP contraction bold-faced. Note that the first quarter of 2014 showed a contraction, which was generally attributed to severe weather. After revisions, that quarter was the last quarterly contraction. However, real growth was described as anemic, with the latest quarterly release, preliminary results for the last quarter of 2015, showed quarterly real growth of only 0.172%, an annualized rate of slightly less than 7/10 of 1%. The U.S. Census Bureau estimated that the U.S. population grew by 0.77% in calendar 2015[1] suggesting that real GDP per capita in the country declined during the last year.

In announcing the preliminary estimate of Q4 GDP, the U.S. Bureau of Economic Analysis said: "The increase in real GDP in the fourth quarter primarily reflected positive contributions from personal consumption expenditures (PCE), residential fixed investment, and federal government spending that was partly offset by negative contributions from private inventory investment, exports, and nonresidential fixed investment. Imports, which are a subtraction in the calculation of GDP, increased.

[1] U.S. Census Bureau. Population Clock. Accessed February 6, 2016. Available from http://www.census.gov/popclock/

The deceleration in real GDP in the fourth quarter primarily reflected a deceleration in PCE and downturns in nonresidential fixed investment, in exports, and in state and local government spending that were partly offset by a smaller decrease in private inventory investment, a deceleration in imports, and acceleration in federal government spending."[2]

An additional drag came from the strength of the U.S. Dollar, which held back exports as well as weaker reported sales and profits from the foreign subsidiaries of U.S. companies. At the end of 2015, the trade-weighted U.S. Dollar Index stood at 122.8; a year earlier, the figure stood at 111.2. At the end of the recession, measured at the beginning of the third quarter of 2009, the figure stood at 105.2.[3] Not surprisingly, an appreciation of the Dollar by roughly 17% over a 6.5-year period has put pressure on U.S. exporters. It has also led to pressure on the reported profits of multi-national businesses using the Dollar as their functional currency.

As described later in this analysis, the U.S. Federal Reserve began to tighten monetary policy at its December 2015 meeting, raising the target range for the Federal Funds rate to 25-50 basis points as part of an announced plan of slow increase to normalize rates over a relatively protracted period. While this announcement appears to have had no effect of anything but the shortest money market maturities and the announced Prime Rate, the announced pattern runs completely counter to the negative interest rate posture of the European Central Bank and, more recently, the Bank of Japan. Even nominal increases in U.S. rates in this international climate are likely to continue to bolster the Dollar's strength and further depress exports and reported profits.

On the positive side, the relative dollar strength has made imports to the United States less expensive. Particularly in the case of petroleum, which is denominated in Dollars internationally, the strength of the Dollar should drive down consumer prices as well as the prices of downstream petroleum-based industrial products. Additionally, the decline in commodity prices leads to both first-level and derivative declines reported declines in reported nominal Gross Domestic Product. To the extent that the inflation adjustments fail to reflect the downward-biased volatility in commodity prices, the early reports of inflation adjusted (real) Gross Domestic Product will lag.

GDP measures reflect the entire population of the U.S. The population of the country[4] was estimated to have grown from 317.9 million at the end of 2013 to 320.2 at the end of 2014, an increase of 0.7%. If overall GDP is considered on a per capita basis, the 2.4% expansion in 2014 is reduced to approximately 1.7%. Furthermore, assuming that population growth maintained its 2014 pace in the first half, per capita real GDP would have fallen during that period.

[2] U.S. Bureau of Economic Analysis. Advance GDP Estimate for Fourth Quarter of 2015, January 29, 2016. Available from http://www.bea.gov/newsreleases/national/gdp/gdpnewsrelease.htm.

[3] Federal Reserve Bank of St. Louis. Accessed February 6, 2016. Available from https://research.stlouisfed.org/fred2/data/TWEXB.txt

[4] U.S. Census Bureau. Includes U.S. military stationed overseas. http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk

Consumer spending is the largest component of GDP. A measure of consumer spending called Personal Consumption Expenditures ("PCE"), defined as the actual and imputed expenditures of households; the measure includes data pertaining to durables, non-durables and services.[5] Nominal PCE in December 2015 had increased only 2.7% from its level a year earlier, and real PCE had increased by only 2.6%,[6] suggesting that inflation for the year was only nominally above the Federal Reserve's 2.0% target, supporting the December decision to make a nominal 25 basis point increase in short-term interest rates.

Consumer Price Index ("CPI")

CPI is a measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. While somewhat more volatile than the inflation indication applied to PCE, CPI is the most commonly used measure of changes in individuals' cost of living and provides a gauge of the inflation rate related to purchasing those goods and services. U.S. inflation on all items, as measured by the CPI, showed an increase over the full year 2014 of 1.6%.[7] The 2015 indication was significantly more subdued, with a December to December increase of 0.7%.

The effect of the decline in commodity prices was significant; when the CPI is calculated after eliminating changes in energy and food prices, the year-over-year inflation figure rises to 2.1%[8]

Producer Price Index ("PPI")

PPI is a family of indexes that measures the average change, over time, in the selling prices received by domestic producers of goods and services. PPI for finished goods and services declined sequentially in January and February 2015, dropping a total of 1.3%, before a 0.2% increase in March. Producer prices for the second quarter showed the same inconsistent pattern, falling by 0.4% in April before showing sequential increases of 0.5% and 0.4% in May and June respectively.[9] Suggesting a weakness in demand, producer prices in the third quarter showed a 0.2% increase in July and zero change in August before declining by 0.5% in September, the largest negative monthly movement in over five years if the weather-induced 0.7% drop in January 2015 is excluded.

For the year 2015 as a whole, preliminary PPI indication suggest a historically unique pattern with every month showing a decline from the comparable period a year earlier. Logically, producer prices should lead consumer prices. The question that remains to be answered is whether the decline in producer prices will lead to a stimulus for personal consumption expenditures or whether it is also a leading indicator of a drop in industrial demand and a precursor of a reversal in the positive trends in employment that the U.S. has experienced over the last several years.

Unemployment Rate

The unemployment rate is the percentage of the total labor force that is unemployed but actively seeking employment and willing to work and is the most commonly used measure of employment. The national unemployment rate declined from 10 percent in October 2009 to 7.8 percent in December 2012 and to 6.7 percent in 2013. By December 2014, the rate had declined further to 5.6%, only slightly higher than the 5.5% level which prevailed three months later.[10] In 2015, unemployment has continued its slow decline, reaching 5.1% in September and 5.0% in October, where it stabilized for the entire fourth quarter. While this rate (described as U-3) has reached the Federal Reserve Open Market Committee estimate of a normal unemployment rate of 5.0% to

[5] Definition from Investopedia

[6] Bureau of Economic Analysis, http://www.bea.gov/iTable/iTable.cfm?reqid=12&step=1&acrdn=2#reqid=12&step=3&isuri=1&1204=2013&1203=2015&1206=m&1205=2015&1210=x&1211=0

[7] Bureau of Labor Statistics. www.bls.gov

[8] Ibid.

[9] Ibid.

[10] Bureau of Labor Statistics, Employment Situation Summary, February 5, 2016

5.5%, the expansion of part-time jobs as a percentage of total jobs in the economy has left a broader measure of unemployment, including under-employment (described as U-6), much higher at 11.2% at year-end; by the end of the third quarter, U-6 had dropped to 10.0%. In October 2015, the rate fell further to 9.8, before rising to 9.9% (seasonally adjusted) for the last two months of the year, and holding at that level in January 2018.[11]

The number of long-term unemployed (those unemployed for 27 weeks or more) was 2.085 million at the end of December, almost 25% lower than the level recorded a year earlier. The level was more than double the pre-recession lows reached in 2006-2007[12]

Current Employment Statistics ("CES")

A key element leading to positive consumer sentiment is job growth. Consumers generally feel more at ease when the job market is expanding, but when the job growth contracts, the economy may be headed for a slowdown if the decline in job growth is accompanied by an increase in the U-3 unemployment rate. Demographic research is suggesting that the level of job growth in the U.S. economy necessary to keep unemployment from increasing may be declining. In a 2013 paper, economists Dan Aaronson and Scott Brave from the Federal Reserve Bank of Chicago estimated that monthly job growth of around 80,000 would be sufficient to continue to keep the unemployment rate steady given the rate of population growth and the declining percentage of the population in the workforce.[13] Rex Nutting, an economic columnist for Market Watch recently suggesting that the changing population could lead to the job growth necessary to stabilize unemployment falling to 33,000 per month.[14]

The current Natural Rate of Unemployment, defined as the lowest rate that the economy can sustain in the long run without the risk of an unacceptable level of inflation, is currently believed to be around 4.8%, a level not expected to be reached until the third quarter of 2016.[15]

According to the Bureau of Labor Statistics, from February 2008 through the first quarter of 2010 the economy lost jobs. After a relatively anemic 144,000 new jobs were added in January 2014, employment expansion increased, with only one month showing an increase of fewer than 200,000 new jobs. The monthly average increase in 2014 was 251,000.[16] 2015 showed an additional year of solid increases with an average monthly gain of 228,000 jobs. However, the monthly volatility continued, with a range of 84,000 to 295,000. The initial announcements (those which make the headline numbers on the business news networks) are often revised at least twice. Therefore, those indications less than a quarter old may not be completely reliable.

The current level of unemployment of 5.0% provided support for the Federal Reserve decision to begin the normalization of short term rates, which remain negative in real terms. However, a material rate increase (or series of small increases) would seem to be contra-indicated by both a) the gap between the base unemployment rate and the U-6 level, which suggests a continuing high rate of under-employment, and b) the continuing strength of the U.S. dollar against virtually all major currencies, the likely effect of a U.S. rate increase on that relationship, and the resultant adverse effect on the trade balance.

[11] Bureau of Labor Statistics, Alternative measures of Labor Utilization.
[12] Bureau of Labor Statistics, http://data.bls.gov/timeseries/LNS13008636
[13] *Wall Street Journal*, June 6, 2013, "How Many Jobs to Bring Down Unemployment?" Accessed August 14, 2015. http://blogs.wsj.com/economics/2013/06/06/how-many-jobs-does-it-take-to-bring-down-unemployment/
[14] http://www.marketwatch.com/story/for-job-growth-33000-not-150000-is-the-new-normal-2015-08-06
[15] Federal Reserve Bank of St. Louis. Accessed February 7, 2016. https://research.stlouisfed.org/fred2/series/NROU
[16] U.S. Bureau of Labor Statistics, February 5, 2016

Labor Productivity

Unit labor costs are calculated by dividing total labor compensation by real output or—equivalently—by dividing hourly compensation by productivity. That is, unit labor costs = total labor compensation / real output; or equivalently, unit labor cost = hourly compensation / productivity = [total labor compensation / hours] / [output / hours]. Thus, increases in productivity lower unit labor costs while increases in hourly compensation raise them. If both series move equally, unit labor costs will be unchanged.[17]

In the first full year of the Great Recession (2008), labor productivity fell by 0.35% after a five-year period in which productivity grew at an average annual rate of 1.67%. After the initial recessionary shock, growth grew even faster during the 2009-2013 period, at an average annual rate of almost 2.0%. However, 2014 productivity is estimated to have increased at a nominal 0.05% rate.

This was followed by data showing almost flat productivity in the first half of 2015, with the first quarter declining at a 1.1% rate followed by a gain of 1.3% in the second quarter. The economy showed a significant adverse move in productivity in the 4th quarter of 2015, with wages rising at a faster rate than output per labor hour and producing a 3.0% decline in labor productivity; [18] this indication if not revised and if it persists, could become inflationary over the long term.

Manufacturing and Trade Inventories and Sales

This monthly report, by the U.S. Census Bureau, provides the values of trade and business sales, product inventory values for manufacturers, retailers and wholesalers, and the inventories-to-sales ratio. The ratio is a guide to how long existing inventories will last if the current rate of sales continues. Inventory rates often provide clues about the growth or contraction of the economy. Over the longer term, however, this ratio has dropped significantly as management has increased efficiencies. From 1990 to 2000, there was a relatively progressive decline from 1.6 to roughly 1.4. Prior to the recession, rapid spending pushing inventories as low as 1.15. For the last two years (through 2014).

While the December 2015 indications are not yet available, indications for the first 11 months of 2015 suggest a continuation of the slow accumulation of inventory relative to sales which has been ongoing since 2011, with inventory to sales ratio reaching 1.38 for the 11-month period, the highest since the same level was reached in 2009.

Sales for Retail and Food Service

The Advance Monthly Retail Sales survey provides an early indication of sales by retail and food service companies. The survey covers retail and food services companies with one or more establishments that sell merchandise and associated services to final consumers. The survey provides the earliest available monthly estimates of broad based trade and food services activity.

On average, retail and food services sales for 2014 were 3.9% higher than those for 2013, exceeding the rate of inflation plus population growth. Indications for 2015 show growth of approximately 2.1% from 2014. Dependent upon the measure of inflation used, this suggests that, including population growth, retail activity may have declined on a per capita basis. [19]

A corollary to the apparent slowdown in retail expenditures can found in the personal savings rate which increased from 4.8% in 2014 to 5.19% in 2015.[20]

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[17] U.S. Bureau of Labor Statistics. February 5, 2016. http://www.bls.gov/lpc/faqs.htm#P01
[18] U.S. Bureau of Labor Statistics, February 5, 2016 http://data.bls.gov/timeseries/PRS85006092
[19] U.S. Census Bureau. Accessed February 5, 2016. Available from http://www.census.gov/retail/marts/www/adv44x72.txt
[20] Federal Reserve Bank of St. Louis. Accessed February 7, 2016. Available from https://research.stlouisfed.org/fred2/data/PSAVERT.txt

Purchasing Managers Index

The Institute of Supply Management ("ISM") computes a measure called the Purchasing Managers Index ("PMI") based on survey responses from purchasing managers with regard to manufacturing. PMI is a measurement of whether the manufacturing economy is contracting or expanding. A PMI in excess of 50, over a period of time, generally indicates an expansion of the overall economy; below 50 indicates that it is generally contracting.

ISM reported its PMI for December 2014 was 55.1, slightly below an annual average of 55.8. During the year, the index ranged from 51.3 (January) to 59 (October). For 2015, as in 2014, the year began with a weak expansion, with a quarterly average of 52.6 vs. 52.7 for the same period in 2014. More ominously, however, the trend for 2014 through September was up, with an increase in the index from 51.3 to 56.6. Since October 2014, when the index peaked at 59, it fell to 50.2 in September 2015 and declined further to an average of 48.1 in the last two months of 2015, signifying economic contraction. In comparison, the recession years of 2008-09 averaged around 46, but during those years individual months fell into the low- to mid-30s.

Consumer Confidence Survey

The Index of Consumer Sentiment, developed by the University of Michigan, was at its highest level of the year, 93.6, by December 2014, and the average for the year as a whole, 84.1, was the highest annual average in the last five years, handily ahead of the 79.2 registered for 2013. The index reached a post-recession peak in January 2015, but, on average, retreated in the third quarter of 2015. The last quarter of 2015 showed a slight rebound, preserving the yearly average of 92.9 and the continuous advance from 2011.

	2010	2011	2012	2013	2014	2015
January	74.4	74.2	75.0	73.8	81.2	98.1
February	73.6	77.5	75.3	77.6	81.6	95.4
March	73.6	67.5	76.2	78.6	80.0	93.0
April	72.2	69.8	76.4	76.4	84.1	95.9
May	73.6	74.3	79.3	84.5	81.9	90.7
June	76.0	71.5	73.2	84.1	82.5	96.1
July	67.8	63.7	72.3	85.1	81.8	93.1
August	68.9	55.8	74.3	82.1	82.5	91.9
September	68.2	59.5	78.3	77.5	84.6	87.2
October	67.7	60.8	82.6	73.2	86.9	90.0
November	71.6	63.7	82.7	75.1	88.8	91.3
December	74.5	69.9	72.9	82.5	93.6	92.6
Average	71.8	67.4	76.5	79.2	84.1	92.9

Housing Starts

Housing starts represent an approximation of the number of housing units on which some construction was performed during the month. Housing starts are highly sensitive to changes in mortgage rates, which are affected by changes in interest rates. Typically, however, the mortgage rate moves with longer maturities corresponding with the expected duration of the loan itself rather than with short term rates. Therefore, the strongest correlation of mortgage interest rates is with 5- to 10-year Treasury security rates rather than the Federal Funds. Therefore, even if the Federal Reserve raises short term rates, if other factors push down longer-term bond rates, mortgages should remain very affordable. For the year 2015, total housing starts of approximately 1.1 million were up about 10% from 2014. Growth, much of which has been attributed in the press to apartment construction,[21] has been consistently strong on a comparative basis throughout the year.[22] The current level, however, is still around 18% below the 1.34 million level reached in 2007 before the housing collapse.

The National Association of Homebuilders is predicting continued strength in housing starts, with the total rising to approximately 1.26 million in 2016 and 1.52 million 2017. Single-family units are expected to be approximately 72% of that total, up from a level of about 65% in 2014.[23]

Another indication of the strength of the housing market is National Association of Home Builders/Wells Fargo Housing Market Index ("HMI"). The HMI index decreased slightly to 57 in December 2014 from 59 in September 2014, and, at year end 2014, was at the same level as year-end 2013. Despite the slowdown in housing starts in February and March 2015, the HMI index reached averaged 59 for the year, up from the 1914 average of 52. By the fourth quarter of 2015, the index averaged approximately 62. Readings below 50 indicate negative sentiment about the housing market.

S&P 500 Stock Index

The Standard & Poor's 500 is a market-value-weighted index of 500 publicly owned stocks that are combined into one equity basket. During the period January 1, 2008 to December 31, 2011 the S&P 500 index was very volatile. However, beginning in 2012 the economy gradually strengthened. The index ended the fourth quarter of 2014 at 2,058.9, which was up from the same period last year by 11.1%.[24] By the end of 2015, the index had declined 0.7% from its year-earlier level.

Like most market indices, the S&P is weighted, with the largest capitalization stocks having the largest impact on its overall level. A significant element of the stability of the index during 2015 was the seemingly unstoppable increase in the value of certain fashionable technology stocks exemplified by the "FANGs" (Facebook, Amazon, Netflix, and Google). The divergent trend of these stocks, and a few others like them contrasted with the performance of sectors not in favor as shown in the following table.

The FANGs had an average Price/Earnings ratio of 229 at year-end based upon their 2015 earnings releases. Excluding the more rationally valued GOOG at a 31 P/E, the ratio was 295.

[21] *U.S. News and World Report.* July 17, 2015. "US homebuilding jumps 9.8% in June; all of the gains come from apartment construction" Accessed August 14, 2015. Available from http://www.usnews.com/news/business/articles/2015/07/17/apartment-construction-drives-us-homebuilding-surge-in-june

[22] Economic Research Federal Reserve Bank of St. Louis, http://research.stlouisfed.org/fred2/series/HOUST/.

[23] National Association of Homebuilders. Accessed February 5, 2016. Available at www.nahb.org

[24] Yahoo Finance, http://finance.yahoo.com/q/hp?s=%5EGSPC+Historical+Prices.

FANGS		1/2/2015		1/4/2016	Gain (%)
Facebook	$	75.91	$	112.21	48%
Amazon	$	354.53	$	587.00	66%
Netflix	$	63.11	$	91.84	46%
Google	$	526.40	$	742.95	41%
Drug Index (DRG)		541.05		510.11	-6%
Fidelity Energy (FENY)	$	21.16	$	16.47	-22%
Fidelity Materials (FMAT)	$	26.25	$	21.77	-17%
Fidelity Industrials (FIDU)	$	27.08	$	25.51	-6%

Prime Interest Rate

The prime interest rate is the rate at which banks will lend money to their most-favored customers. The prime interest rate is important because banks use it to set rates on consumer loan products. Since 2009, the Federal Reserve had maintained an effective zero rate environment, and the announced prime interest rate was maintained by the banks at 3.25 percent, but the 25 basis point in the announced target Fed Funds range in December 2015 led to an instant lockstep increase by the banks in the prime rate to 3.5%.

10-Year Treasury Yield

The 10-year Treasury yield is a key benchmark for longer-term borrowing costs in the United States.[25] The yield on the 10-year note was 2.17% in December 2014, down from 2.52% September and 3.04% at the end of 2013.[26] There was a nominal decline during the first quarter, with the rate at 2.04% at the end of March. Weak economic growth in 2014 and the first quarter of 2015 led to some degree of confidence that a short-maturity tightening by the Federal Reserve would not occur before September 2015, and ultimately no rate action occurred at that time. At the end of the third quarter of 2015, the rate stood at 2.06%, only nominally above the 2.04% indication at the end of Q1-2015. Continued political instability associated with Russia's annexation of the Crimea and support of a separatist faction in Ukraine, the Syrian civil war and its attendant mass out-migration to Europe, and deteriorating conditions in Iraq and Afghanistan led to a continuation of the migration of funds to the U.S. dollar as a safe haven.

Notwithstanding the expectation that the increase in the Fed Funds rate in December would have the effect of increasing the 10-year benchmark rate, the rate at year-end was virtually identical to that at the time of the Federal Reserve decision on short-term rates.

30-Year Conventional Mortgage Rates

Mortgage rates spiked in late December 2013 (4.46 percent) due to the Federal Reserve's decision to scale back its bond purchases. However, by year-end 2014, the rate had declined to 3.71%.[27] That rate should, on a historical basis, be sufficiently low to maintain strong activity in the mortgage and housing market. For the year 2014, the average 30-year mortgage rate was 4.15%, far lower than the 6.34% prevailing in 2007 when housing starts were nearly 1.34 million at an average rate. Followers of the mortgage markets believe that tight credit standards rather that interest rates continue to create a drag on the market. The average rate for 2015 was 3.85, consistent with the average rates which have prevailed since 2012.

[25] Short term domestic and international rates tend to be tied to either the Prime rate or, for larger borrowers to the London Interbank Offered Rate (LIBOR), both of which tend to track the Federal Funds Rate target.

[26] U.S. Department of the Treasury, http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2012.

[27] Economic Research Federal Reserve Bank of St. Louis, http://research.stlouisfed.org/fred2/data/MORTG.txt.

A restrictive factor on the housing activity has been tightness in the mortgage market cause by the imposition of strict credit standards on borrowers. Between early 2012 and mid-2015, average FICO (Fair Isaac) scores on approved loan dropped from 750 to around 725-30.[28] However, by the first quarter of 2014, Fannie Mae was underwriting occasional fixed rate loans for refinancing borrowers with minimum scores of 620. Nevertheless, 62.8% of new home acquisition financings went to borrowers with FICO scores in excess of 740 in the first three quarters of 2015. This is an increase in the concentration of loan acquisitions in those with high credit scores from the 58.6% level over the same period 2014.[29]

Economic Outlook

Continued moderate GDP growth, low inflation, and Federal easing underlie the economic projections of the Federal Reserve. For 2016, U.S. real GDP growth is forecast to be in the range of 2.3 to 2.5 percent. Unemployment is expected to decline to 4.6 to 4.8 percent as job growth is expected to improve slightly. Inflation will remain below the 2 percent target rate, with the PCE deflator at 1.5% to 1.7%. In 2017, real GDP growth is forecast to be in the range of 2.0 to 2.3 percent, with further slowing expected in 2018.[30]

Federal Reserve Projections -December 2015

Economic Projections of Federal Reserve Members and Federal Reserve Bank Presidents, June 2014
Advanced release of table 1 of the Summary of Economic Projections

Accessed February 5, 2016

Variable	Median1					Central tendency					Range				
	2015	2016	2017	2018	Longer run	2015	2016	2017	2018	Longer run	2015	2016	2017	2018	Longer run
Change in real GDP	2.1	2.4	2.2	2.0	2.0	2.1	2.3 - 2.5	2.0 - 2.3	1.8 - 2.2	1.8 - 2.2	2.0 - 2.2	2.0 - 2.7	1.8 - 2.5	1.7 - 2.4	1.8 - 2.3
September projection	2.1	2.3	2.2	2.0	2.0	2.0 - 2.3	2.2 - 2.6	2.0 - 2.4	1.8 - 2.2	1.8 - 2.2	1.9 - 2.5	2.1 - 2.8	1.9 - 2.6	1.6 - 2.4	1.8 - 2.7
Unemployment rate	5.0	4.7	4.7	4.7	4.9	5.0	4.6 - 4.8	4.6 - 4.8	4.6 - 5.0	4.8 - 5.0	5.0	4.3 - 4.9	4.5 - 5.0	4.5 - 5.3	4.7 - 5.8
September projection	5.0	4.8	4.8	4.8	4.9	5.0 - 5.1	4.7 - 4.9	4.7 - 4.9	4.7 - 5.0	4.9 - 5.2	4.9 - 5.2	4.5 - 5.0	4.5 - 5.0	4.6 - 5.3	4.7 - 5.8
PCE inflation	0.4	1.6	1.9	2.0	2.0	0.4	1.2 - 1.7	1.8 - 2.0	1.9 - 2.0	2.0	0.3 - 0.5	1.2 - 2.1	1.7 - 2.0	1.7 - 2.1	2.0
September projection	0.4	1.7	1.9	2.0	2.0	0.3 - 0.5	1.5 - 1.8	1.8 - 2.0	2.0	2.0	0.3 - 1.0	1.5 - 2.4	1.7 - 2.2	1.8 - 2.1	2.0
Core PCE inflation4	1.3	1.6	1.9	2.0		1.3	1.5 - 1.7	1.7 - 2.0	1.9 - 2.0		1.2 - 1.4	1.4 - 2.1	1.6 - 2.0	1.7 - 2.1	
September projection	1.4	1.7	1.9	2.0		1.3 - 1.4	1.5 - 1.8	1.8 - 2.0	1.9 - 2.0		1.2 - 1.7	1.5 - 2.4	1.7 - 2.2	1.8 - 2.1	
Memo: Projected appropriate policy path															
Federal funds rate	0.4	1.4	2.4	3.3	3.5	0.4	0.9 - 1.4	1.9 - 3.0	2.9 - 3.5	3.3 - 3.5	0.1 - 0.4	0.9 - 2.1	1.9 - 3.4	2.1 - 3.9	3.0 - 4.0
September projection	0.4	1.4	2.6	3.4	3.5	0.1 - 0.6	1.1 - 2.1	2.1 - 3.4	3.0 - 3.6	3.3 - 3.8	(1.0)	(3.0)	1.0 - 3.9	2.9 - 3.9	3.0 - 4.0

The January 2016 projections from the Congressional Budget Office[31] were generally consistent with Federal Reserve projections.

[28] The Mortgage Reports http://themortgagereports.com/16562/fha-mortgage-rate-fico-score

[29] FannieMae. Accessed August 14, 2015. Available from http://www.fanniemae.com/resources/file/ir/pdf/quarterly-annual-results/2015/q32015_credit_summary.pdf.

[30] Federal Reserve Projections. Accessed February 5, 2016. Available at http://www.federalreserve.gov/monetarypolic

[31] Congressional Budget Office. www.cbo.gov.

Regional Economic Report – Southern Nevada

The following was sourced from the *2016 Economic Outlook* published in December 2015 by the Center for Business and Economic Research (CBER), Lee Business School at the University of Nevada, Las Vegas (UNLV). The objective of this economic analysis is to highlight the most common economic indicators underlying the economy's long-run attractiveness (or lack thereof).

1. New Indices Track Nevada Economy

As discussed in the section on the Nevada outlook, this economic outlook premiers several new indexes that track the Nevada and Southern Nevada economies. In this section, we report information from new coincident and leading indexes of the Southern Nevada economy.

The CBER Southern Nevada Coincident Index uses the Department of Commerce index construction method to combine information on Southern Nevada taxable sales, Southern Nevada gross gaming revenue, and Southern Nevada nonfarm employment, as done for the Nevada Coincident Index. The CBER Southern Nevada Leading Index combines information on Nevada initial claims for unemployment insurance (inverted), the Moody's real Baa interest rate (inverted), the Standard & Poor's stock market index, Southern Nevada housing permits, Southern Nevada commercial permits, and Southern Nevada airport passengers (McCarran). The CBER Southern Nevada Coincident Index measures the ups and downs of the Southern Nevada economy. The CBER Southern Nevada Leading Index also measures the ups and downs of the Southern Nevada economy, providing a signal about the future direction of the coincident index. The coincident index provides the benchmark series that defines the business cycle or reference cycle in Southern Nevada. The leading index then tracks the economy relative to that reference cycle. A good leading index will provide signals about the future path of the reference cycle.[1]

The coincident index includes three full recessions and the bulk of a fourth recession in the early 1980s (Figure 1). The financial crisis and Great Recession generated the longest and deepest of these four recession episodes. The index peaked in February 2007 and then fell dramatically through June 2010, an almost three and one-half year period of decline. These dates match exactly the peak to trough in the Great Recession in the CBER Nevada Coincident Index. Currently, the index has recovered almost 99 percent of its decline during the Great Recession. It took just over five years to achieve this level of recovery.

Prior to the Great Recession identified by the benchmark Southern Nevada coincident index, the Southern Nevada leading index peaked in September 2005, 16 months before the Nevada coincident index peaked (Figure 2). Then the Nevada leading index troughed in May 2009, 13 months before the Southern Nevada coincident indexed troughed. Unlike the CBER Nevada Leading Index, the two earlier recessions in the early 1990s and early 2000s, the leading index did turn before the coincident index at both the peaks and troughs of the cycle. Finally, for the first cycle in the early 1980s, the leading index peaked in January 1980, 19 months before the Nevada coincident indexed peaked in August 1981. Then the leading indexed troughed in April 1982, seven months before the Southern Nevada coincident index troughed in November 1982. The leading index still looks like it follows an upward trajectory, although, the upward movement moderated beginning in July 2014.

1. All series are initially not seasonally adjusted and then seasonally adjusted using Census X12.

The Southern Nevada economy is continuing to experience growth (Figure 3). Although the annualized growth rate for 2015 is down from the growth rates for 2014 for Las Vegas, Nevada employment growth in 2015 exceeds that for 2014. These annualized numbers still have a couple of months of additional data and they may be revised upward next March, as it has been the norm over the last few years. In addition to strong employment gains, financial conditions also are improving, and visitor volume is still rising after a strong 2014.

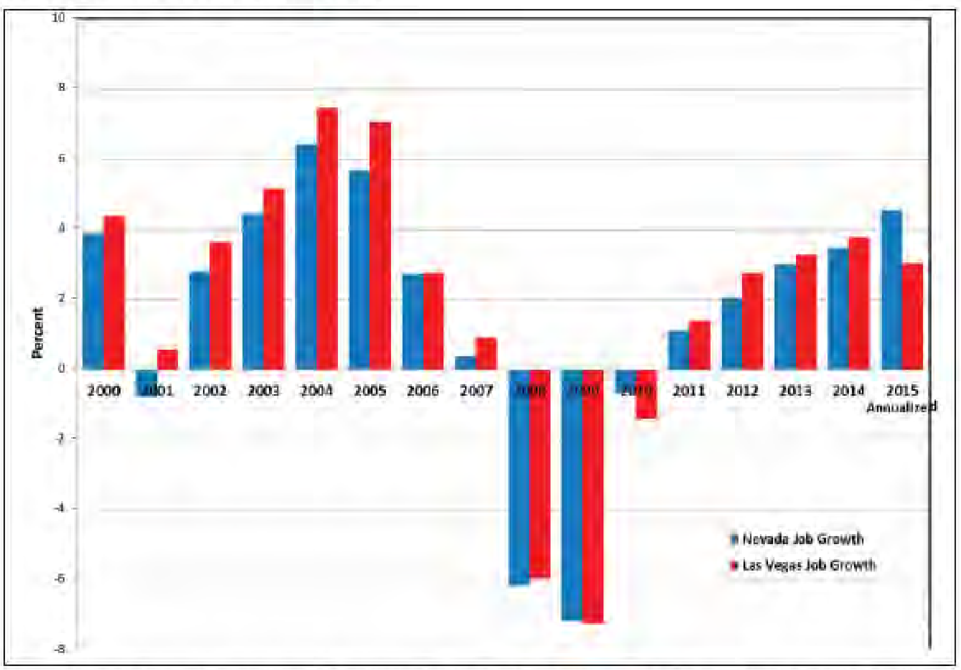
Las Vegas still has a ways to go before it reaches its prerecession level of economic activity, but that gap is closing. As far as employment is concerned, that goal is within sight; we can expect Las Vegas to reach its prerecession levels of employment in early 2016.

2. Southern Nevada Economic Conditions Improving

In 2014, the Las Vegas metropolitan area saw an increase in employment of 32,600 jobs (3.9 percent) over the previous year (Figure 4). In the first nine months of 2015, the Las Vegas metropolitan area saw another increase in employment of 18,800 jobs (at a 2.5 percent annual rate). Overall, the Las Vegas and Nevada employment trends tend to move in synchronization.

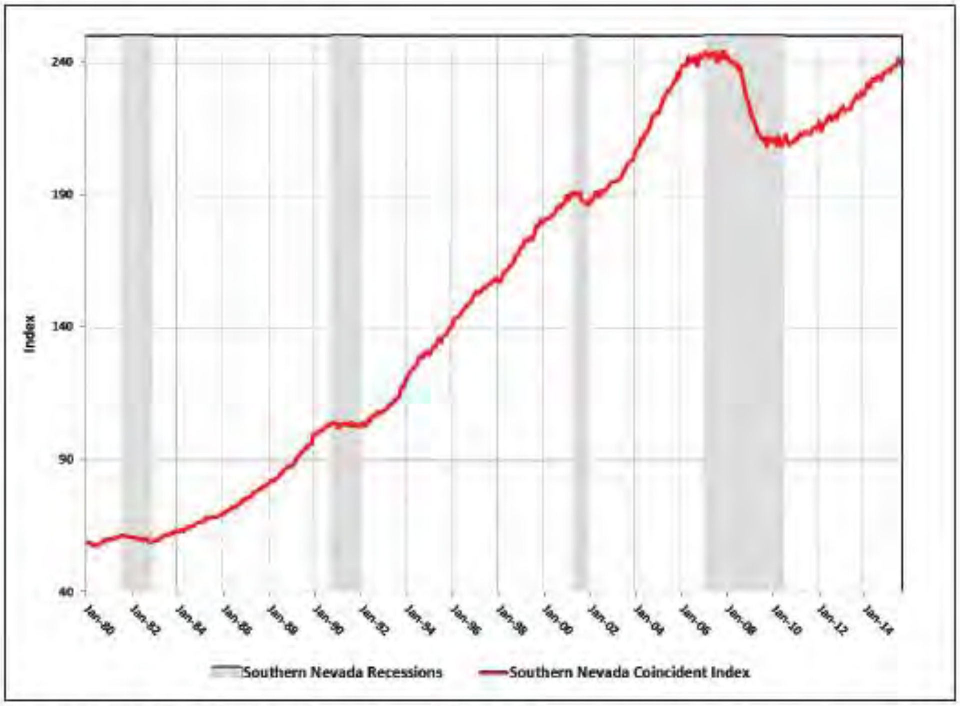
Taxable sales continue to be strong (Figure 5). Clark County taxable sales were 8.0 percent higher year-over-year in July 2015. Increased visitor spending and rising personal income in Las Vegas are two factors contributing to the strong gains in taxable sales. The most recent trend of 6.2 percent annual growth rate in taxable sales falls a bit below the trend in the 1980s of 10.3 percent, the 1990s of 10.0 percent, and the 2000s before the Great Recession of 9.2 percent.

Figure 3. Nevada and Las Vegas Job Growth



Sources: Nevada Department of Employment, Training and Rehabilitation; U.S. Bureau of Labor Statistics; Center for Business and Economic Research, UNLV

Figure 1. CBER Southern Nevada Coincident Index

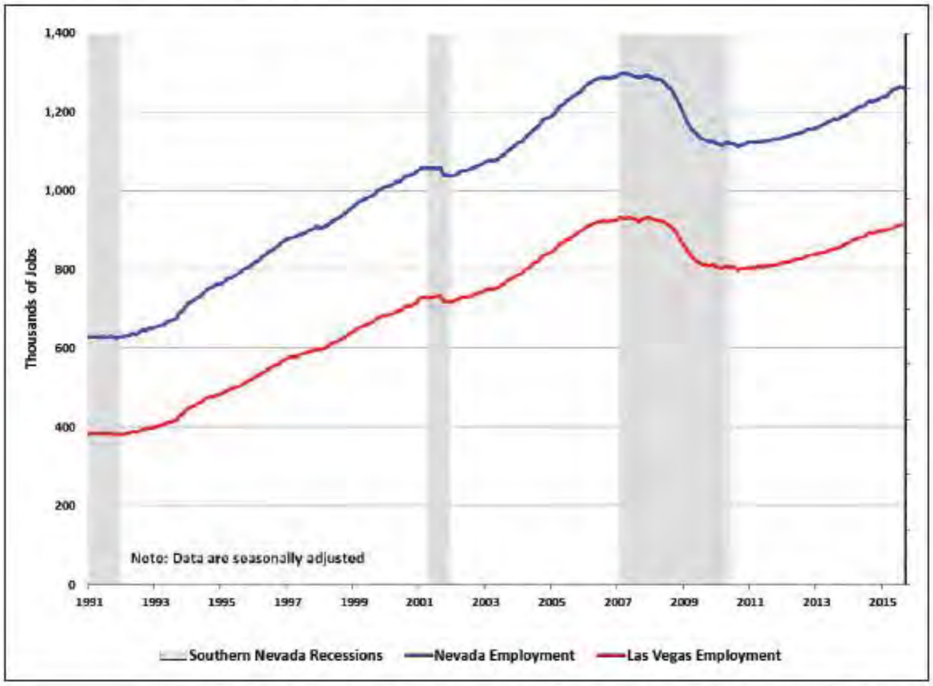


Sources: Nevada Gaming Control Board; Nevada Department of Taxation; Nevada Department of Employment, Training and Rehabilitation; U.S. Bureau of Labor Statistics; Center for Business and Economic Research, UNLV

Figure 2. CBER Southern Nevada Leading Index

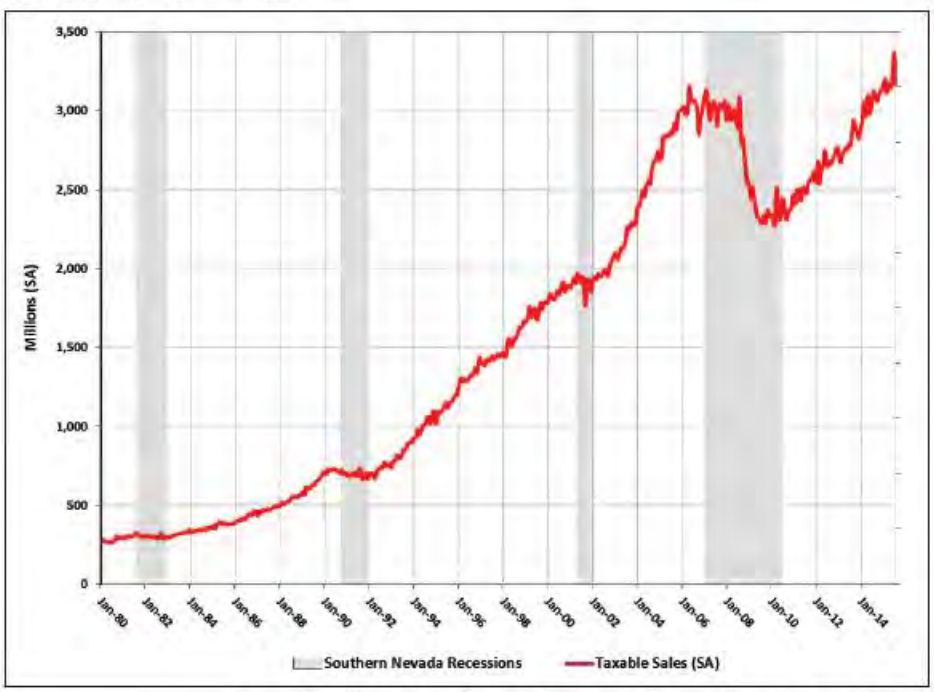
Sources: McCarran International Airport; Various Permitting Agencies; Nevada Department of Employment, Training and Rehabilitation; U.S. Bureau of Labor Statistics; Yahoo Finance; Federal Reserve Bank of St. Louis; Center for Business and Economic Research, UNLV

Figure 4. Nevada and Las Vegas Employment



Sources: Nevada Department of Employment, Training and Rehabilitation; U.S. Bureau of Labor Statistics

Figure 5: Clark County Taxable Sales



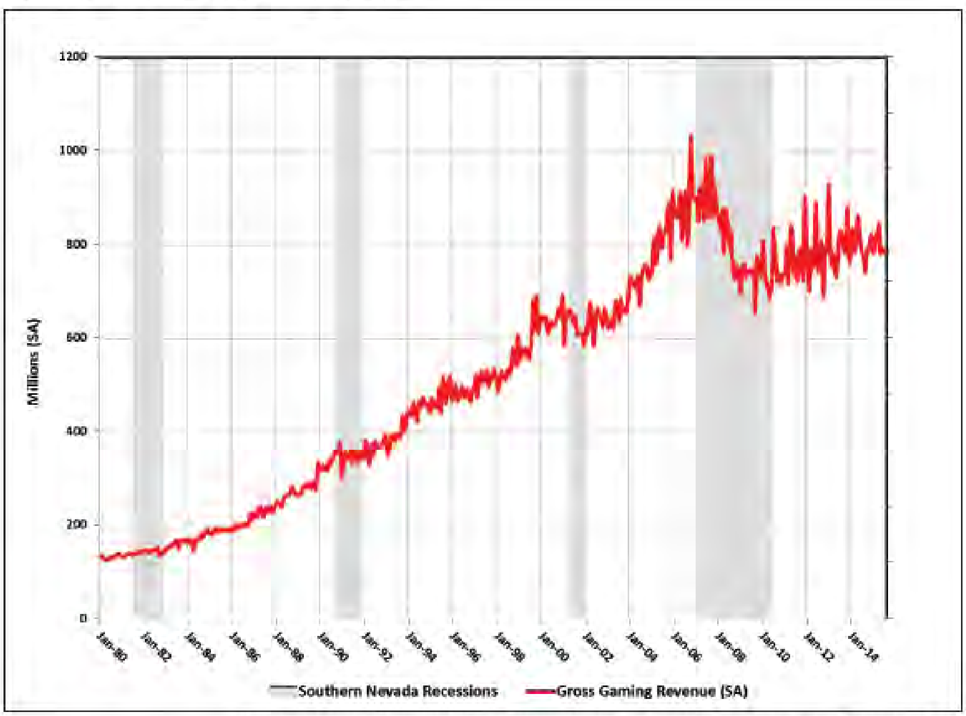
Sources: Nevada Department of Taxation; Center for Business and Economic Research, UNLV

Gross gaming revenue always shows volatility, but the volatility increases sharply after the Great Recession (Figure 6). Note that the gross gaming revenue is seasonally adjusted, but still experiences high volatility. In addition, the drop in gross gaming revenue during the Great Recession dwarfs the prior recessions in the chart. For the first nine months of 2015, Clark County gaming revenue fell by 2.2 percent on a year-over-year basis.

As we also saw for the Nevada economy, most sectors track the growth rate of total employment rather closely with some notable exceptions (Figure 7). Construction and information follow a more volatile path than total employment. Construction and professional and business services are growing the most rapidly in 2015 with annualized rates of 13.2 and 5.9 percent, respectively. Financial activities and trade, transportation, and utilities are shedding jobs at rates of -0.5 and -6.1 percent, respectively.

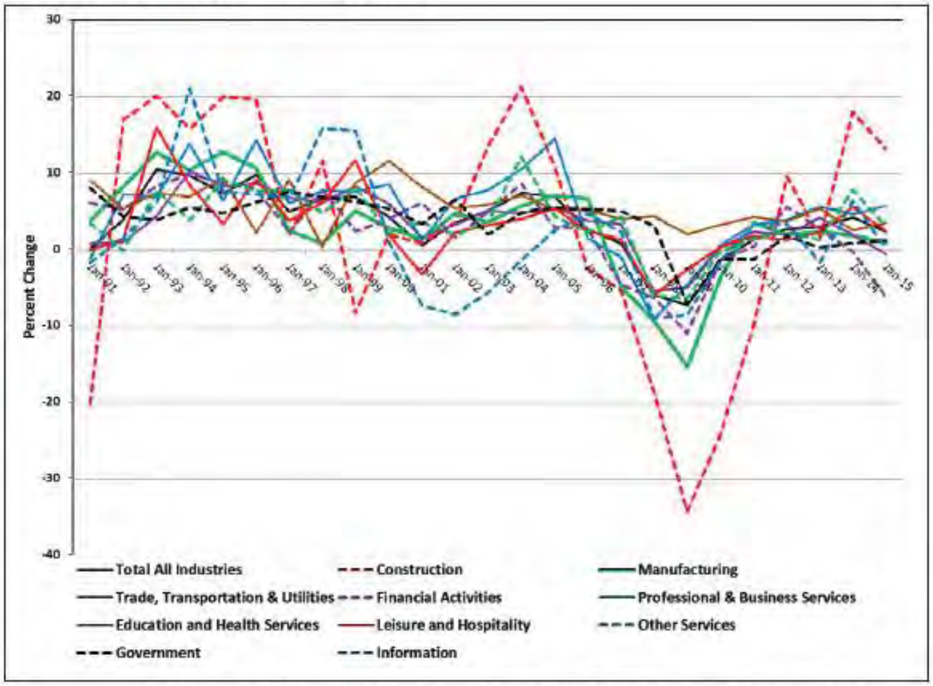
The share of employment by sector provides a different way to examine sectoral employment data (Figure 8). We see that leisure and hospitality employment fell from about 35 percent to just over 30 percent of total employment. The trade, transportation, and utilities sector keeps a steady share of total employment of around 17 to 18 percent. This represents about a 5 percent larger share of total employment in Southern Nevada as compared to the whole state. Education and health services rose in Las Vegas from around 5 to 10 percent, matching a similar movement at the state level. We do not include natural resources and mining as its share of total employment is negligible in Southern Nevada. We also notice some increase in professional and business services as a fraction of total employment in Las Vegas.

Figure 6: Clark County Gross Gaming Revenue



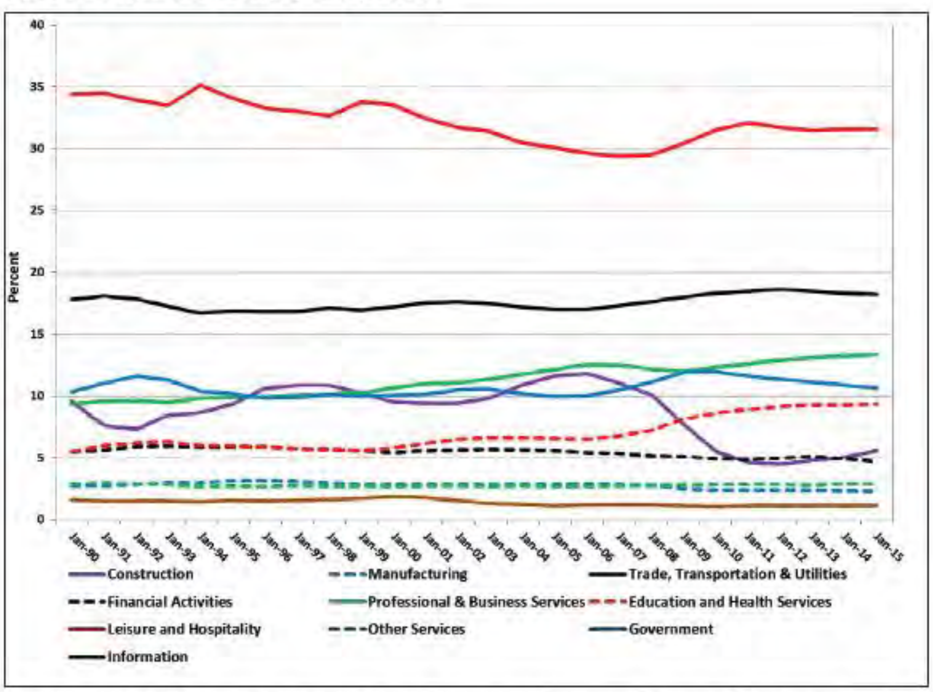
Sources: Nevada Gaming Control Board; Center for Business and Economic Research, UNLV

Figure 7. Las Vegas Employment Growth by Industry



Sources: Nevada Department of Employment, Training and Rehabilitation; U.S. Bureau of Labor Statistics; Center for Business and Economic Research, UNLV

Figure 8. Las Vegas Share of Employment by Industry



Sources: U.S. Bureau of Labor Statistics; Nevada Department of Employment, Training and Rehabilitation; Center for Business and Economic Research, UNLV; Federal Reserve Bank of St. Louis

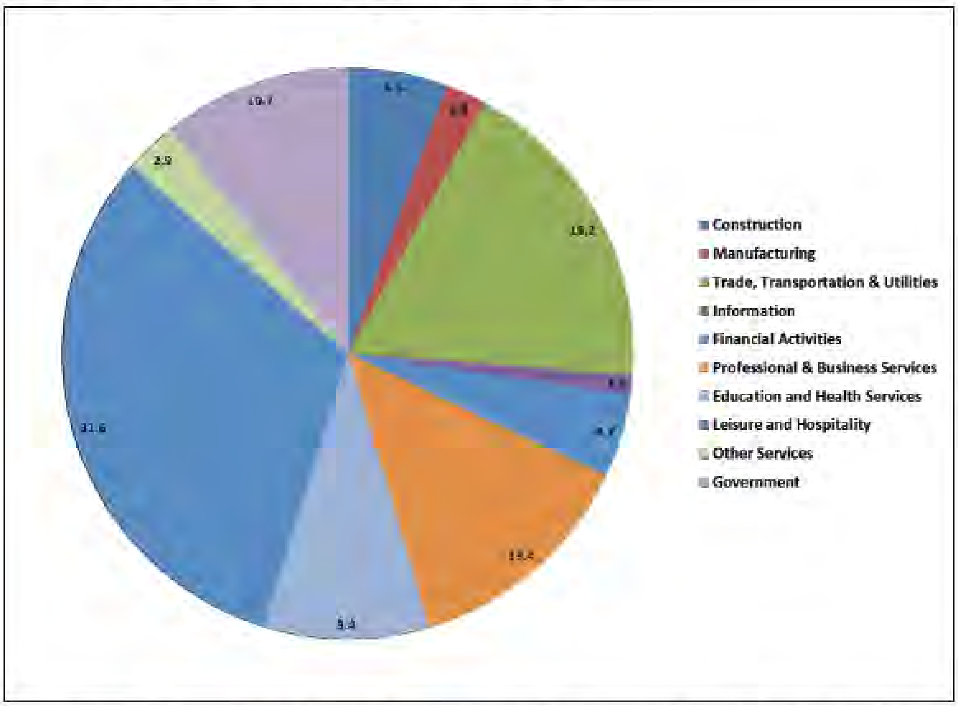
Figure 9 reports the distribution of jobs by sector in September 2015. To read this chart, the top item in the list on the right hand side, construction, enters the pie chart at the 12:00 to 1:00 time slot on the clock face. Then, as you read down from the list on the right-hand side, you move around the clock face clockwise.

As the result of these gains, the Las Vegas unemployment rate has fallen sharply. The seasonally adjusted Las Vegas unemployment rate is 6.8 percent (Figure 10), which is 0.3 percentage points below last year's December unemployment rate. This decline in the unemployment rate occurred even though the labor force increased by 25,900 persons over the same time period.

3. Tourism and Gaming

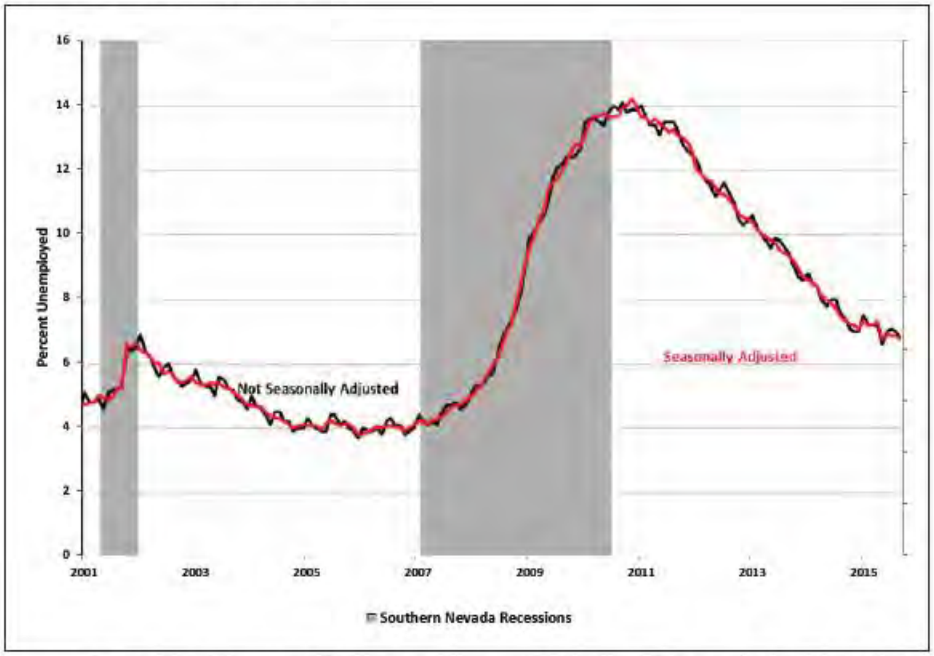
Activity in the tourism sector, as measured by CBER's Clark County Tourism Index, shows a slight upward trend for 2015 thus far (Figure 11). The index is composed of three components—Clark County gross gaming revenues, the Las Vegas hotel/motel occupancy rate, and total passengers enplaned/deplaned at McCarran International Airport. We employ the Department of Commerce method to construct this and the other indexes that follow in this section. The recessions correspond to the benchmark series for Las Vegas, the Southern Nevada Coincident Index. Compared to the other recessions in Las Vegas, with the exception of 9/11 drop, the Great Recession caused a sharp drop in the Clark County Tourism Index. The recovery from the bottom of the Great Recession has been slow but steady. The index has yet to pass its previous peak, although that should occur in the not too distant future.

Figure 9. Las Vegas Share of Employment by Industry: September 2015



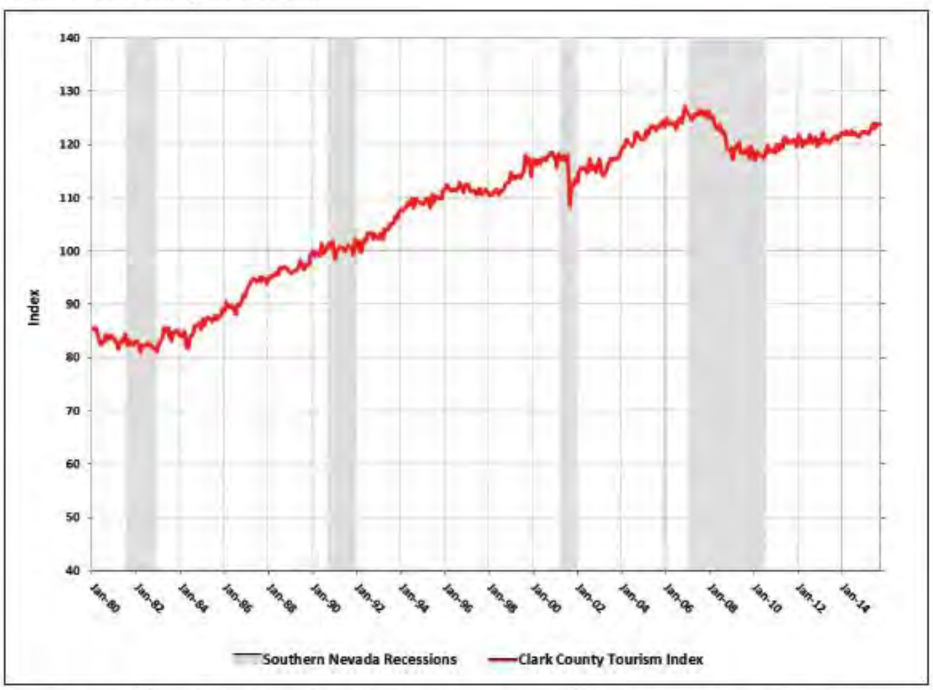
Sources: U.S. Bureau of Labor Statistics; Nevada Department of Employment, Training and Rehabilitation; Center for Business and Economic Research, UNLV

Figure 10. Las Vegas Unemployment Rate



Sources: Nevada Department of Employment, Training and Rehabilitation; U.S. Bureau of Labor Statistics; Federal Reserve Bank of St. Louis

Figure 11. Clark County Tourism Index



Sources: Nevada Gaming Control Board; Las Vegas Convention and Visitors Authority; McCarran International Airport; Center for Business and Economic Research, UNLV

McCarran passenger volume has recently begun to grow at a brisk pace (Figure 12), generating a 16.2 percent increase year over year in August 2015. The growth rate of McCarran passengers equaled -0.8, 4.1, and 1.9 percent in 2012, 2013, and 2014, respectively. Thus, the recent movements in the number of passengers going through McCarran Airport represent a much needed boost in airport traffic.

As shown in Figure 13, Clark County hotel occupancy rates have risen since the end of the Great Recession. They now run at between 85 and 90 percent, which nearly returns Las Vegas to its normal range, since the early 1990s.

4. Construction Activity

Activity in the construction sector, as measured by CBER's Clark County Construction Index, shows a significant upward trend since January 2012 (Figure 14). The index is composed of three components–Clark County construction employment, Clark County residential permits, and Clark County commercial permits. The recessions, once again, correspond to the benchmark series for Las Vegas, the Southern Nevada Coincident Index. Compared to the other recessions in Las Vegas, the Great Recession caused a dramatic drop in the Clark County Construction Index. The recovery from the bottom of the Great Recession was delayed for some time, but has taken off since January 2013. Of course, we do not see a return to the heights of the index during the boom in construction activity, leading up to the financial crisis and Great Recession.

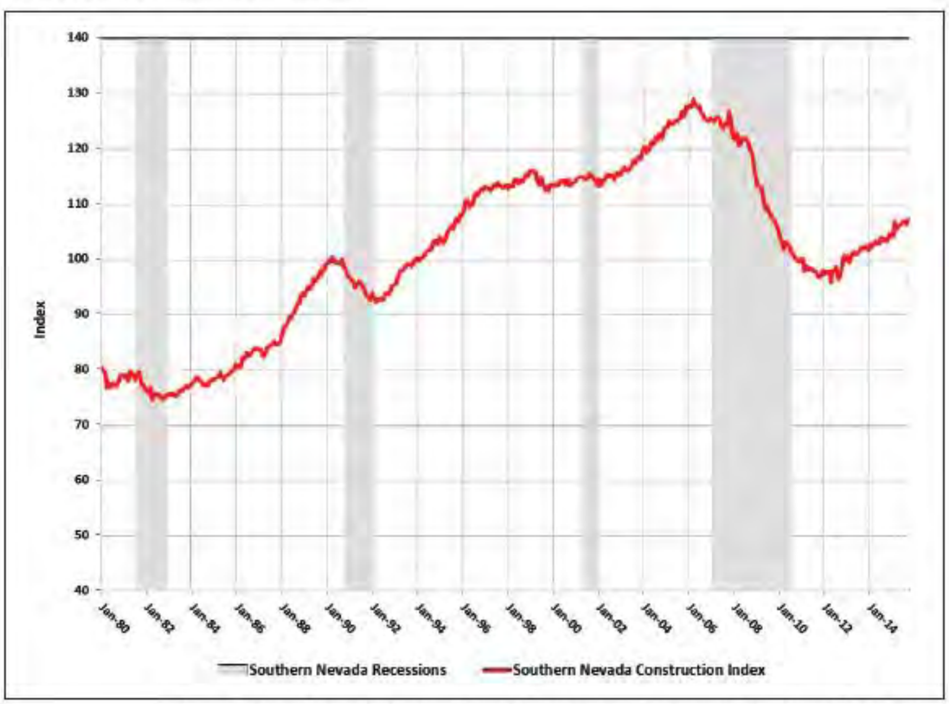
Figure 12. McCarran Passengers

Sources: McCarran International Airport; Center for Business and Economic Research, UNLV

Figure 13. Clark County Hotel Occupancy

Sources: Las Vegas Convention and Visitors Authority; Center for Business and Economic Research, UNLV

Figure 14. Clark County Construction Index



Sources: Various Permitting Agencies; Nevada Department of Employment, Training and Rehabilitation; U.S. Bureau of Labor; Center for Business and Economic Research, UNLV

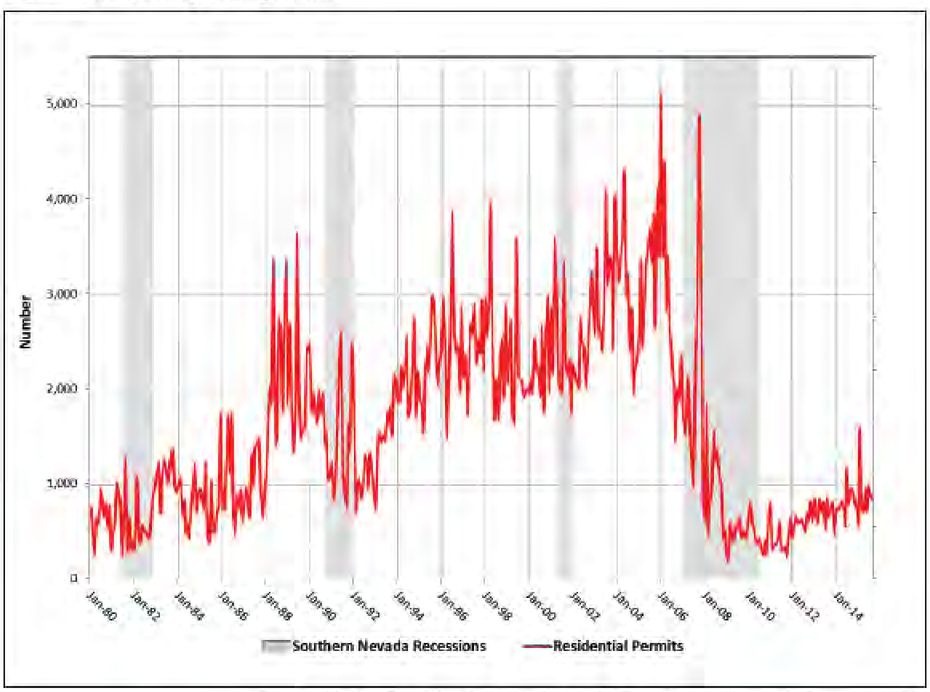
Clark County housing permits took a deep dive during the financial crisis and Great Recession (Figure 15), falling to levels not seen since the early 1980s. The drop went from around 4,000 permits per month to about 500 permits per month. Since the end of the Great Recession, housing permits have rebounded at a pace similar to the early 1980s, now standing at nearly 1,000 permits per month.

Clark County commercial permits also took a deep dive during the financial crisis and Great Recession (Figure 16), falling to levels even lower than the early 1980s. The drop went from around 125 permits per month to about 25 permits per month. Since the end of the Great Recession, commercial permits in Clark County have risen ever so slightly.

Clark County construction employment also took a big dive during the financial crisis and Great Recession (Figure 17), falling from around 125,000 workers to under 40,000 workers in early 2012. Unlike housing and commercial permits, the fall did not take construction employment back to levels in the early 1980s but rather back to levels in the early 1990s. Since then, construction employment has recovered to just over 50,000 workers.

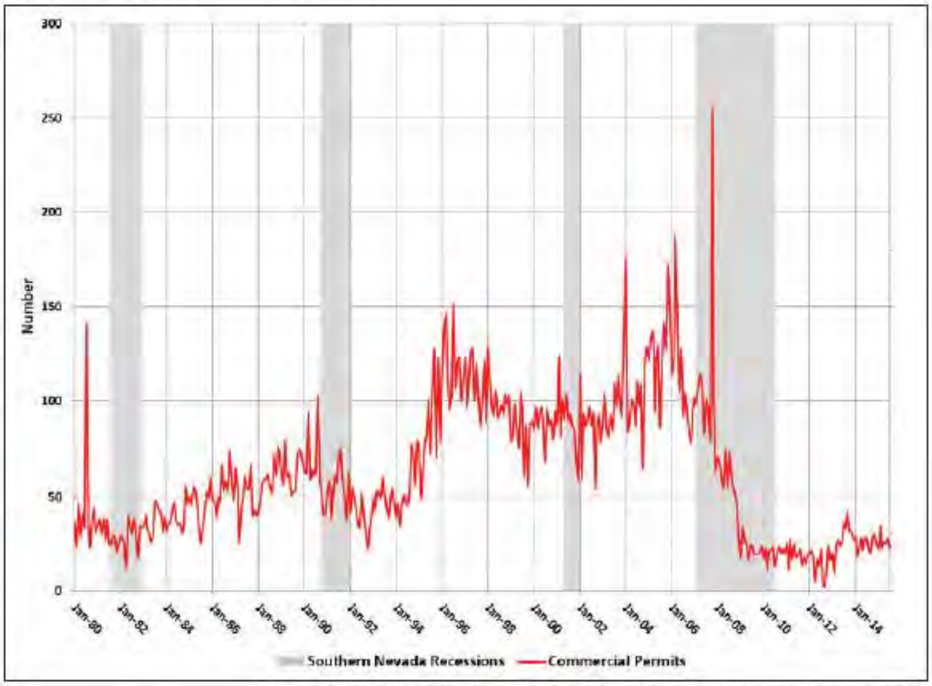
The bursting of the housing bubble, which began in late 2006, led to the Great Recession. The declining home prices after the bursting of the bubble made homes more affordable. The housing opportunity index measures the affordability of homes. The index captures the percent of homes sold that are affordable at the median income. If the housing market is balanced in terms of affordability, then the median income household should be able to purchase the median-priced home in the market. Thus, the index would equal 50 percent.

Figure 15. Clark County Housing Permits



Sources: Various Permitting Agencies; Center for Business and Economic Research, UNLV

Figure 16. Clark County Commercial Permits



Sources: Various Permitting Agencies; Center for Business and Economic Research, UNLV

Figure 17. Clark County Construction Employment

Sources: Nevada Department of Employment, Training and Rehabilitation; U.S. Bureau of Labor Statistics; Center for Business and Economic Research, UNLV

The housing opportunity index (Figure 18) shows that the Las Vegas and Phoenix housing markets have tracked solely to the U.S. index since late 2012. In 2015 Q3, these two indices popped above the U.S. index. The California market, as represented by Los Angeles and Riverside, is trending downward more quickly than the U.S. index. Los Angeles and Riverside stand at opportunity indices of 14.7 and 41.0, respectively, in 2015 Q3, much below the U.S. index of 62.2. During the end of the bubble in 2006, Los Angeles and Riverside averaged 1.9 and 7.3 percent, respectively, on the opportunity index. Las Vegas and Phoenix averaged 15.6 and 28.8, respectively, in 2006. The U.S. average was 41.0.

In sum, the Las Vegas housing market remains relatively affordable, as does the Phoenix market.

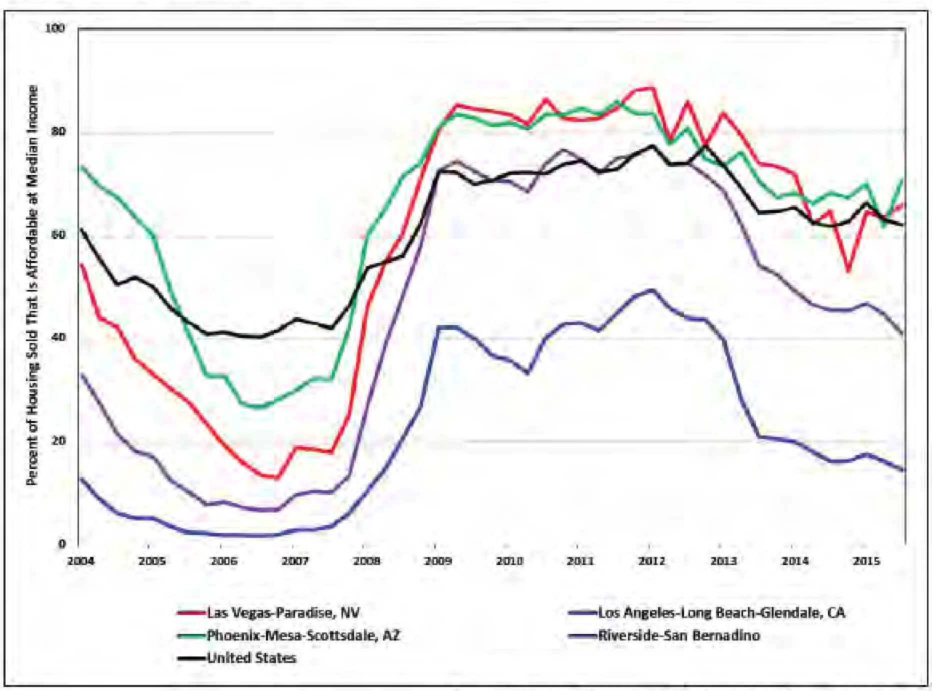
5. Annie E. Casey Foundation and Nevada KIDS COUNT

This section extends the discussion of Nevada KIDS COUNT begun in the section on the Nevada outlook. Here, we consider the same two measures of children's wellbeing, but for the various counties in Nevada.

Figure 19 shows the percentage of children in poverty by county in Nevada in 2013. We see that the highest rates appear in Southern Nevada in Mineral and Nye counties with child poverty rates of 30.2 and 31.6 percent, respectively. Clark County ranks 13th with a rate of 23.7 percent. The child poverty rate for Nevada is 22.7 percent.

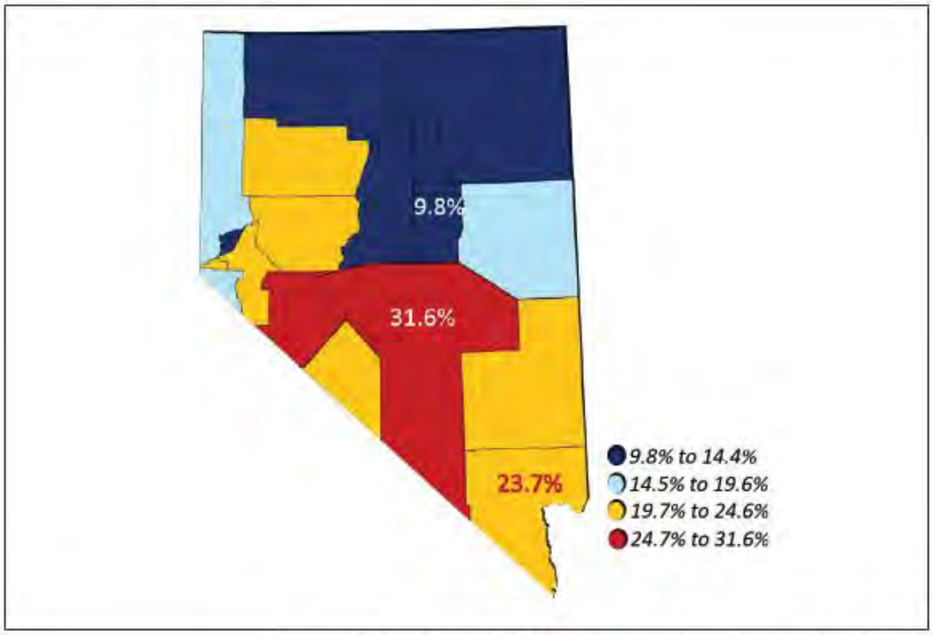
Figure 20 reports the teen birth rate per 1,000 females in the age range 15 to 19 over the 2011-2013 time period. The highest rates appear in Northern Nevada in Lander, Pershing, and Humboldt counties with teen birth rates of 37.7, 38.5, and 45.5 per 1,000 teenage females, respectively. Clark County ranked 7th with a rate of 32.1. Nevada's rate is 31.5 per 1,000 teenage females. Note that because of fewer than 10 births over the three-year period, Lincoln, Eureka, and Storey counties are not reported separately.

Figure 18. Housing Opportunity Index



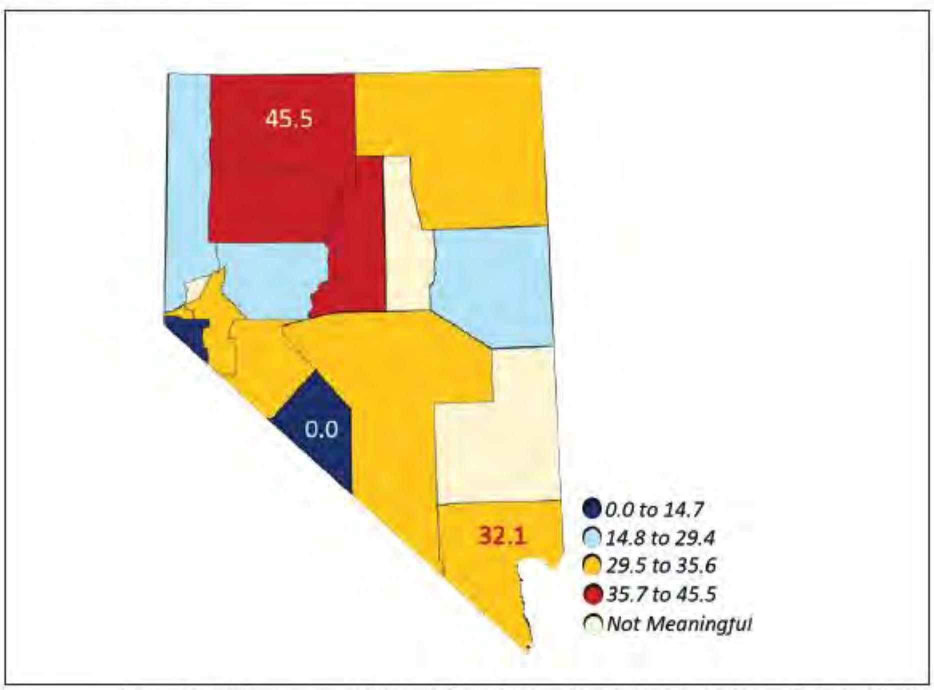
Sources: National Association of Home Builders and Wells Fargo

Figure 19. Children in Poverty



Source: U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE) Program

Figure 20. Teen Birth Rates



Source: Nevada Department of Health and Human Services, Nevada Division of Public and Behavioral Health, Office of Public Health Informatics and Epidemiology

6. Southern Nevada Business Confidence Index

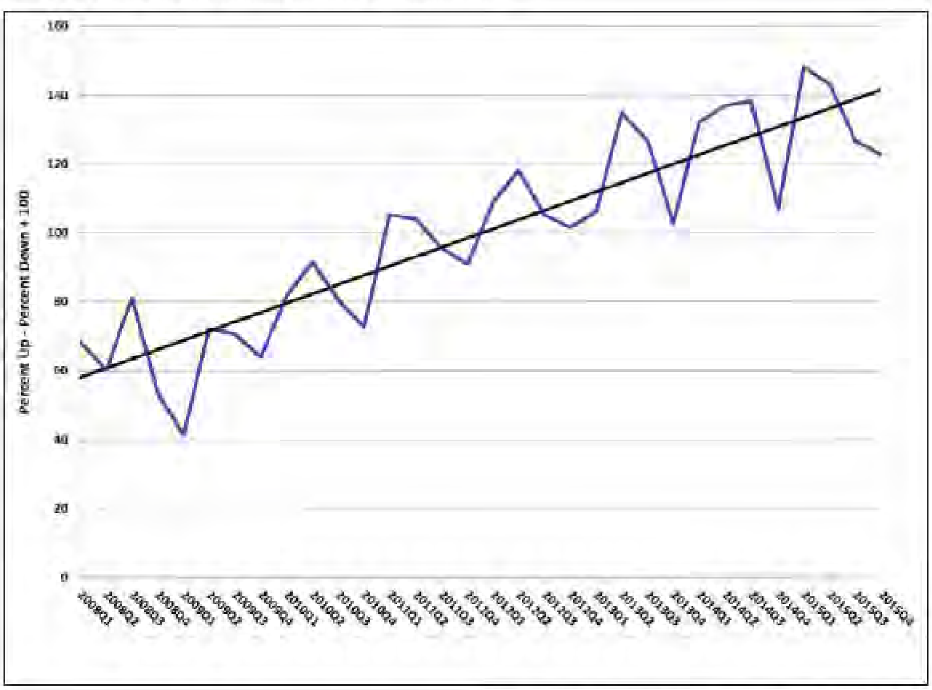
CBER's Southern Nevada Business Confidence Index also provides a favorable picture (Figure 21). Although some seasonality appears to exist in the index, the index reached a post-recession high of 148.1 in the first quarter of 2015. Since then, the index fell for three consecutive quarters, finishing in the fourth quarter of 2015 at 122.6. Any value above 100 means that more respondents are optimistic about the outlook for business conditions than are pessimistic. Thus, we still lie well above the dividing line between optimism and pessimism.

The index consists of five components–business expectations for sales, profits, hiring, capital investment, and overall economic conditions–all of which are measured by a survey of Southern Nevada business leaders. For fourth quarter of 2015, all five components were above 100.

The distribution of responses by number of employees shows a large component of small businesses (Figure 22). The largest firms with more than 250 employees only constitute 22.5 percent of our overall sample of firms.

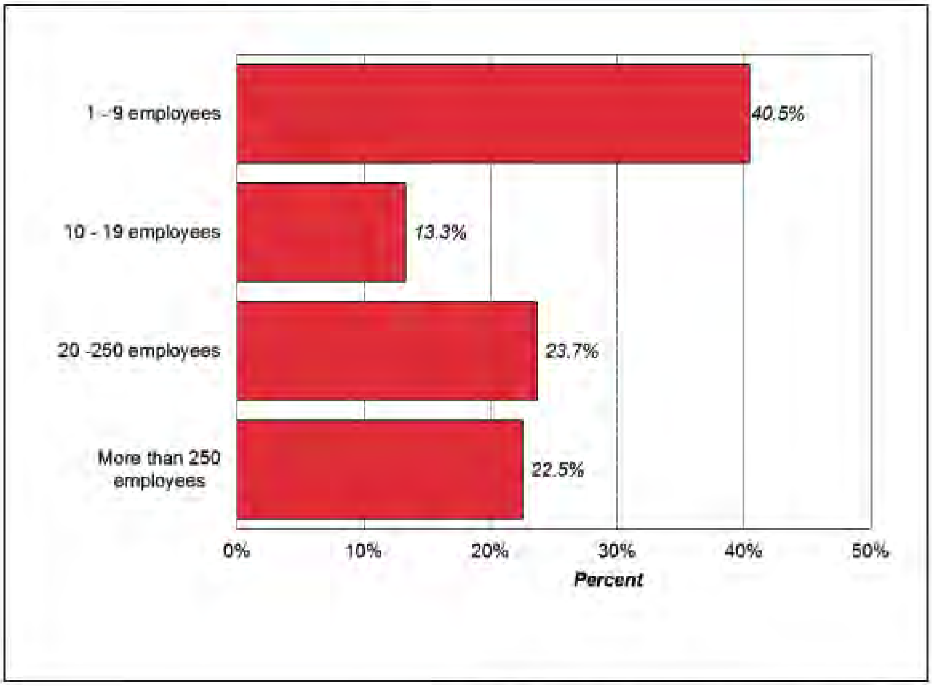
When asked about the most important problem faced by the firm as a result of the financial crisis, the respondents gave a number of different responses (Figure 23). The most responses, mentioned by 46.1 percent of the respondents, chose the unpredictability of business conditions. The role of uncertainty probably plays an important part in the unwillingness of firms to make new investment and to hire new workers, fearing that a bad turn of events that is unexpected could jeopardize the viability of the firm. Next, respondents listed the slowness or loss of sales as an important problem.

Figure 21. CBER Southern Nevada Business Confidence Index



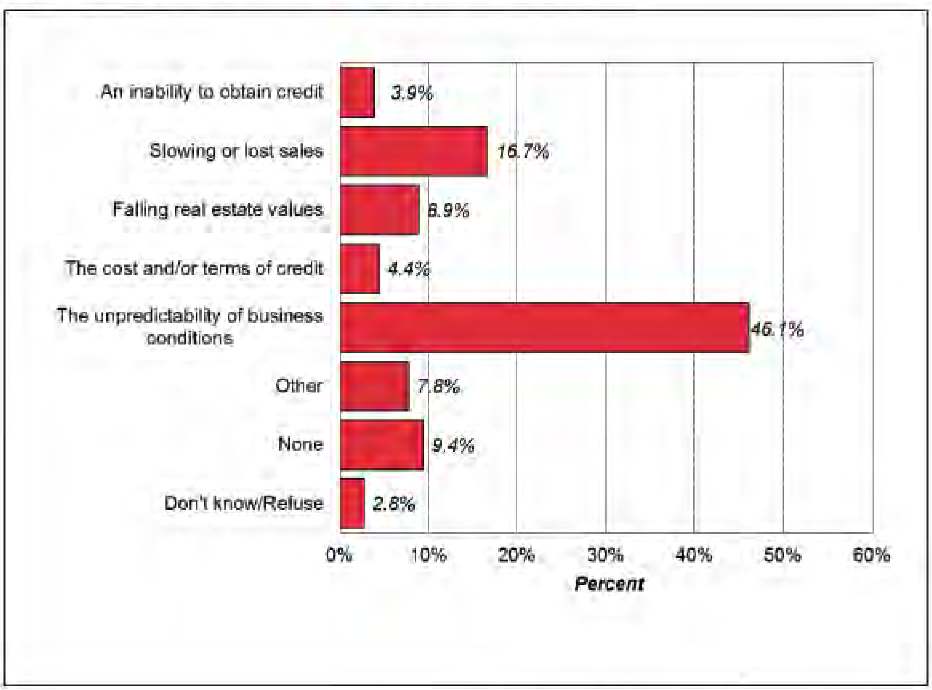
Source: Center for Business and Economic Research, UNLV

Figure 22. Respondents by Number of Employees



Source: Center for Business and Economic Research, UNLV

Figure 23. Most Important Problem Faced because of the Financial Crisis



Source: Center for Business and Economic Research, UNLV

When asked about the most serious long-term problem emanating from the financial crisis, 38.3 percent of the respondents chose the long period of no or slow economic growth (Figure 24). This long-term problem connects to the previous question in that no or slow growth is a probable outcome of unpredictable business conditions that contributed to an unwillingness to invest in and hire new workers.

7. Southern Nevada Economic Outlook for 2016 and 2017

Based on our assessment of national and Nevada trends in 2016 and 2017, we believe that the Southern Nevada economy will continue to see improvement in 2016 and 2017 (Figure 25).

7.1 Nevada Economic Outlook for 2016-2017

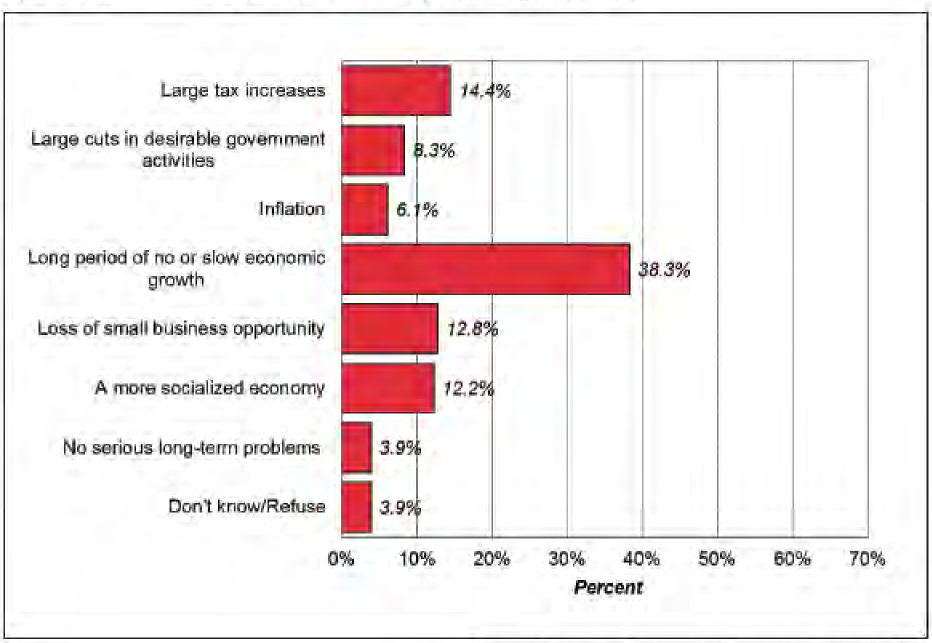
We believe that the Southern Nevada economy will continue to see improvement in 2016 and 2017. The gains should be stronger or weaker across the various variables based on our forecasts. Of course, each of the forecasts comes with some degree of uncertainty.

To summarize, because the Southern Nevada economy is heavily dependent on tourism, its outlook is tied to the growth of the U.S. and western states' economies. Southern Nevada continues to get help from real estate and construction. A wide range of industries are also growing.

7.2 Risks to the Southern Nevada Economic Outlook

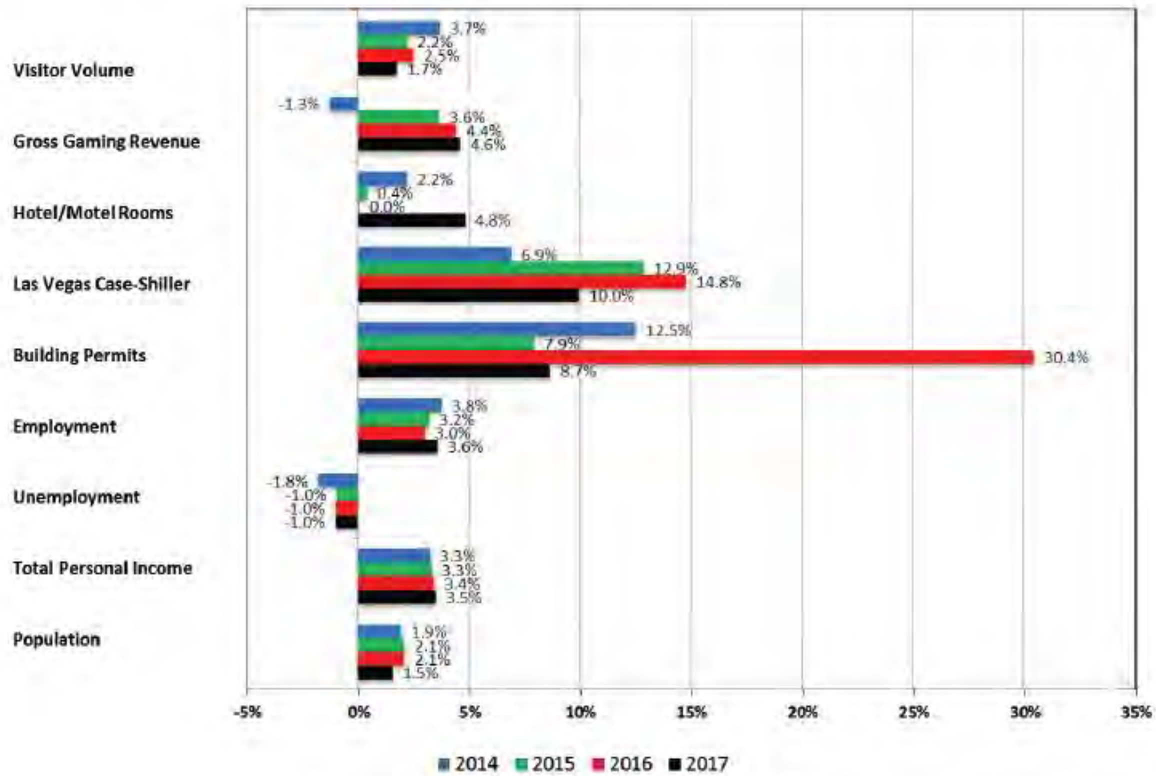
The Southern Nevada outlook depends on our forecast of slowing economic growth in 2016 at the national level. This national slowdown also depends on economic activity in Asia, especially China, in emerging market economies, and in European countries. Nevertheless, the outlook suggests that the small slowdown at the national level will not affect the Southern Nevada economy by any large amount. The risk to the U.S. outlook provides the background on U.S. economic activity. The Nevada economy could see faster improvement in economic conditions if the U.S. economy proves stronger than we have forecast.

Figure 24. Most Serious Long-Term Problem Coming Out of the Financial Crisis



Source: Center for Business and Economic Research, UNLV

Figure 25. Southern Nevada Economic Outlook



Sources: Las Vegas Convention and Visitors Authority; Nevada Gaming Control Board; Standard & Poor's; Various Permitting Agencies; Nevada Department of Employment, Training and Rehabilitation; U.S. Bureau of Labor

CBER's Long-Term Forecast for the Southern Nevada Population

Each year, the Regional Transportation Commission (RTC), the Southern Nevada Water Authority (SNWA), the Southern Nevada Regional Planning Coalition (SNRPC), the Center for Business and Economic Research (CBER) at the University of Nevada, Las Vegas, and a group of community demographers and analysts work together to provide a long-term forecast of economic and demographic variables influencing Clark County. The primary goal is to develop a long-term forecast of the Clark County population that is consistent with the structural economic characteristics of the county. Toward this end, we employ a general-equilibrium demographic and economic model developed by Regional Economic Models, Inc. (REMI), specifically for Clark County.

1. The REMI Model

The REMI model is a state-of-the-art econometric forecasting model that accounts for dynamic feedbacks between economic and demographic variables. Special features allow the user to update the model to include the most current economic information. CBER calibrates the model using information on recent local employment levels, the most recent national Gross Domestic Product (GDP) forecast, spending on local capital projects, and adjustments for amenities related to local population growth.

The model employed divides Nevada into five regions: Clark County, Nye County, Lincoln County, Washoe County, and the remaining counties, which are combined to form a fifth region. These regions are modeled using the U.S. economy as a backdrop. The model contains over 100 economic and demographic relationships that are carefully constructed to concisely represent the Clark County economy. The model includes equations to account for migration and trade between Nevada counties and other states and counties in the country.

1.1 Recalibrating the Model

The economic data for the most recent version of the model (REMI PI+ v1.6) are consistent with the North American Industry Classification System (NAICS). The most recent data for REMI PI+ v1.6 are from 2012 because the Bureau of Labor Statistics (BLS) personal-income data are reported with a two-year lag. Over the years, the availability of the income data has been the key in setting the last year of history in the model. To guarantee that the most current data are used in the forecast, we make a series of adjustments to the model. In this way, we ensure that the forecast model includes the best available information at the time the forecast is made.

1.1.1 Adjustment of the national GDP forecast

The REMI model relies on a baseline national GDP forecast from the University of Michigan's Research Seminar in Quantitative Economics (RSQE). The current REMI model, PI+ v1.6, utilizes the March 2014 GDP forecast from RSQE. We adjust the model's national GDP forecast using the March 2015 national GDP forecast from RSQE. Overall, we adjusted the national GDP components downward by about $105 billion in 2015 and $137 billion in 2016. The adjusted national forecast is used to generate a new baseline forecast for Clark County. The baseline forecast is then used for the subsequent adjustments.

1.1.2 Employment adjustment

One of the most noteworthy updates we make to the REMI model is the employment adjustment. The industry-level employment data used by REMI are the sum of the BLS wage and salary estimates for Clark County and REMI's BLS-based estimate of the number of proprietors. The most recent historical year in the model data is 2012. However, more recent wage and salary employment data are available from the Nevada DETR for 2013 and 2014. Thus, we update the model to account for the more recent information.

1.1.3 Transportation and infrastructure improvements

Clark County has continued to invest in transportation infrastructure such as roads, highways, and mass transit. The model assumes that public-infrastructure investment will continue at a pace consistent with the model history. Thus, some local spending on public infrastructure, such as road building and additional services, is built into the model. However, one-time monies tend to come from outside the region (for example, federal transportation funding). These large, special projects need to be accounted for in the forecast.

1.1.4 Rebasing the population forecast

We rebase the population forecasts using the population update feature in the REMI model. We update the population in 2014 based on the most recent information available for use from the SNRPC. The SNRPC consensus population estimate for Clark County in 2014 is 2.1 million. In addition, we update the population levels in 2015 and 2016 to reflect the population growth-rate forecast from CBER's 2015 Economic Outlook, which was published in December 2014. The latter adjustment is intended to incorporate the views of local economic experts at CBER in the short-term population forecasts. CBER predicts that the Clark County population will grow by 2.1 percent in 2015 and 2016. These population growth-rate forecasts translate to a forecasted population of 2.15 million in 2015 and 2.19 million in 2016. We use these forecasted population levels to update the population in the REMI model.

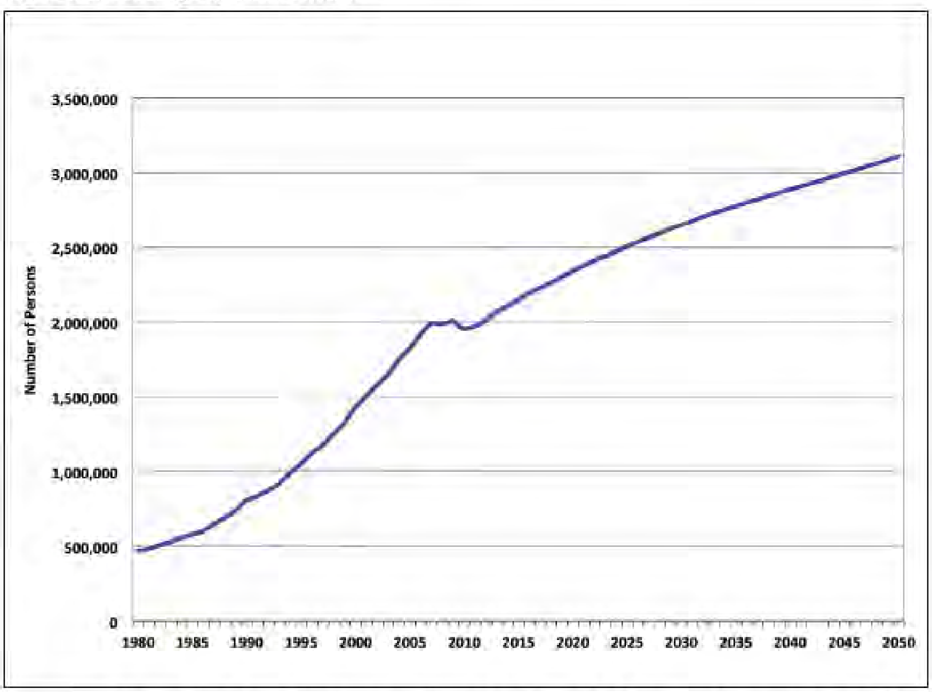
2. Analysis of the Population Forecast

In the short term, the current forecast predicts moderate rates of population growth in Southern Nevada. The population in Clark County is predicted to grow at a rate of 2.1 percent in 2015 and 2016. The population growth rate declines in the medium term as the Clark County economy moves closer to maturity. By 2030, the population growth rate falls to 1.1 percent as the Clark County economy is expected to mature; and it reaches 0.7 percent, slightly above the projected[1] long-term national population growth rate of 0.5 percent, by 2050. This pattern of long-term growth is expected as our economy matures and is very similar to previous forecasts.

Clark County is forecasted to add roughly 44,000 new residents in 2015. CBER's 2015 Southern Nevada Economic Outlook predicts that population growth will strengthen with employment in the near term, and it will not be a driver of economic growth as it was throughout much of Las Vegas' history. Rather, economic growth will drive population in the next few years.

1. Source: http://www.census.gov/population/projections/data/national/2014.html

Figure 1. Clark County Population Forecast



Sources: Clark County Comprehensive Planning and Center for Business and Economic Research, UNLV

The population forecast predicts that the Clark County population will be roughly 3.11 million by 2050.

3. Risks to the Forecasts

Our Southern Nevada population forecasts rest on economic and demographic models set in the context of a structured framework. This structure keeps our long-term forecasts consistent with our objectives. We have separated the long-term trend from the noise that one finds in time-series data. These noise factors include the business cycle and seasonal and irregular events.

The main risks to the population forecasts arise from short-term fluctuations in both U.S. and Southern Nevada economic conditions. Based on our assessment of the national and regional trends, we believe that the Southern Nevada economy will continue to see improvements in 2015 and 2016. This outlook for the Southern Nevada economy is based on the idea that improving economic conditions in the United States, particularly in the West, will benefit the Southern Nevada economy. As the growth of the U.S. economy accelerates, the Southern Nevada economy will further strengthen. This would result in higher population growth rates than those we are seeing in the current forecast. The Southern Nevada economy could see slower growth if the U.S. economy proves weaker than we have predicted. This would result in lower population growth rates than those we are seeing in the current forecast.

Therefore, although we feel the population forecasts are sound, there are significant risks to the forecasts that could lead to either over- or underestimated growth. We say again, however, that these risks tend to arise from short-term uncertainty; whereas, our forecasts are primarily meant to be long-term planning tools.

APPENDIX G: PROVISIONAL LICENSES

STATE OF NEVADA

BRIAN SANDOVAL
Governor

ROMAINE GILLILAND
Director

RICHARD WHITLEY, MS
Administrator

TRACEY D. GREEN, MD
Chief Medical Officer

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC AND BEHAVIORAL HEALTH

November 3, 2014

Shane Terry
Clark NMSD, LLC DBA NuVeda
4575 Dean Martin Drive #1401
Las Vegas, NV 89103

Application Identifier: D187
Ref. #: 94090342955467020377

Dear Clark NMSD, LLC DBA NuVeda,

The State of Nevada, Division of Public and Behavioral Health has completed the application evaluation process for medical marijuana establishment registration certificates. This letter is to inform you of the intent to approve your application for Clark NMSD, LLC DBA NuVeda, a Dispensary establishment at 2113 N. Las Vegas Boulevard in the NORTH LAS VEGAS local jurisdiction. Please note this letter only applies to this establishment. If you submitted multiple applications, you will receive a separate notification letter for each one. Final approval will occur when the applicant has:

1. Provided documentation to the Division issued by the local jurisdiction to the establishment authorizing occupancy of the building as a medical marijuana establishment such as a certificate of occupancy, a special use permit or a conditional use permit.
2. Provided documentation to the Division regarding successful inspections issued from fire, building, health and air quality.
3. Provided documentation to the Division of successful pre-opening inspection findings done by the Division.
4. Provided complete and verified agent card information to the Division for all owners, officers, board members and employees of the medical marijuana establishment.
5. Paid the applicable fees for the issuance of a medical marijuana registration certificate
6. Provided confirmation that a state business license has been acquired.
7. Provided confirmation that local business licensing and zoning permits have been acquired.

Per NRS 453A.326, certificates are considered provisional until the establishment is in compliance with all applicable local governmental requirements, and has received a state business license to operate the establishment. NAC 453A.324 allows the Division to revoke the provisional certificate if a medical marijuana establishment is not fully operational within 18 months of receiving it.

Shane Terry will be contacted soon to discuss the details of the provisional certification. When the approvals to operate listed above are fulfilled, Clark NMSD, LLC DBA NuVeda will receive a certificate to operate as a medical marijuana establishment.

Note: Provisional certification resulting from this notification shall not become effective until approved by the Division of Public & Behavioral Health.

Please do not hesitate to e-mail the Division with any questions or concerns you may have at medicalmarijuana@health.nv.gov. Thank you.

Sincerely,

Richard Whitley

Richard Whitley MS, Administrator
Division of Public & Behavioral Health
Medical Marijuana Establishment Program

STATE OF NEVADA

BRIAN SANDOVAL
Governor

ROMAINE GILLILAND
Director

RICHARD WHITLEY, MS
Administrator

TRACEY D. GREEN, MD
Chief Medical Officer

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC AND BEHAVIORAL HEALTH

November 3, 2014

Shane Terry
Clark NMSD, LLC DBA NuVeda
4575 Dean Martin Drive #1401
Las Vegas, NV 89103

Application Identifier: D186
Ref. #: 25025985357868237824

Dear Clark NMSD, LLC DBA NuVeda,

The State of Nevada, Division of Public and Behavioral Health has completed the application evaluation process for medical marijuana establishment registration certificates. This letter is to inform you of the intent to approve your application for Clark NMSD, LLC DBA NuVeda, a Dispensary establishment at 1320 S 3rd Street in the LAS VEGAS local jurisdiction. Please note this letter only applies to this establishment. If you submitted multiple applications, you will receive a separate notification letter for each one. Final approval will occur when the applicant has:

1. Provided documentation to the Division issued by the local jurisdiction to the establishment authorizing occupancy of the building as a medical marijuana establishment such as a certificate of occupancy, a special use permit or a conditional use permit.
2. Provided documentation to the Division regarding successful inspections issued from fire, building, health and air quality.
3. Provided documentation to the Division of successful pre-opening inspection findings done by the Division.
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5. Paid the applicable fees for the issuance of a medical marijuana registration certificate
6. Provided confirmation that a state business license has been acquired.
7. Provided confirmation that local business licensing and zoning permits have been acquired.

Per NRS 453A.326, certificates are considered provisional until the establishment is in compliance with all applicable local governmental requirements, and has received a state business license to operate the establishment. NAC 453A.324 allows the Division to revoke the provisional certificate if a medical marijuana establishment is not fully operational within 18 months of receiving it.

Shane Terry will be contacted soon to discuss the details of the provisional certification. When the approvals to operate listed above are fulfilled, Clark NMSD, LLC DBA NuVeda will receive a certificate to operate as a medical marijuana establishment.

Note: Provisional certification resulting from this notification shall not become effective until approved by the Division of Public & Behavioral Health.

Please do not hesitate to e-mail the Division with any questions or concerns you may have at medicalmarijuana@health.nv.gov. Thank you.

Sincerely,

Richard Whitley MS, Administrator
Division of Public & Behavioral Health
Medical Marijuana Establishment Program

BRIAN SANDOVAL
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ROMAINE GILLILAND
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STATE OF NEVADA

RICHARD WHITLEY, MS
Administrator

TRACEY D. GREEN, MD
Chief Medical Officer

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC AND BEHAVIORAL HEALTH

November 3, 2014

Shane Terry
Clark Natural Medicinal Solutions, LLC
4575 Dean Martin Drive #1401
Las Vegas, NV 89103

Application Identifier: C165
Ref. #: 6499579775567012923

Dear Clark Natural Medicinal Solutions, LLC,

The State of Nevada, Division of Public and Behavioral Health has completed the application evaluation process for medical marijuana establishment registration certificates. This letter is to inform you of the intent to approve your application for Clark Natural Medicinal Solutions, LLC, a Cultivation establishment at 13655 Apex Star Court in the NORTH LAS VEGAS local jurisdiction. Please note this letter only applies to this establishment. If you submitted multiple applications, you will receive a separate notification letter for each one. Final approval will occur when the applicant has:

1. Provided documentation to the Division issued by the local jurisdiction to the establishment authorizing occupancy of the building as a medical marijuana establishment such as a certificate of occupancy, a special use permit or a conditional use permit.
2. Provided documentation to the Division regarding successful inspections issued from fire, building, health and air quality.
3. Provided documentation to the Division of successful pre-opening inspection findings done by the Division.
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Shane Terry will be contacted soon to discuss the details of the provisional certification. When the approvals to operate listed above are fulfilled, Clark Natural Medicinal Solutions, LLC will receive a certificate to operate as a medical marijuana establishment.

Note: Provisional certification resulting from this notification shall not become effective until approved by the Division of Public & Behavioral Health.

Please do not hesitate to e-mail the Division with any questions or concerns you may have at medicalmarijuana@health.nv.gov. Thank you.

Sincerely,

Rnd Whitley

Richard Whitley MS, Administrator
Division of Public & Behavioral Health
Medical Marijuana Establishment Program

STATE OF NEVADA

BRIAN SANDOVAL
Governor

ROMAINE GILLILAND
Director

RICHARD WHITLEY, MS
Administrator

TRACEY D. GREEN, MD
Chief Medical Officer

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC AND BEHAVIORAL HEALTH

November 3, 2014

Shane Terry
Clark Natural Medicinal Solutions, LLC dba NuVeda
4575 Dean Martin Drive #1401
Las Vegas, NV 89103

Application Identifier: P108
Ref. #: 54477437937479297460

Dear Clark Natural Medicinal Solutions, LLC dba NuVeda,

The State of Nevada, Division of Public and Behavioral Health has completed the application evaluation process for medical marijuana establishment registration certificates. This letter is to inform you of the intent to approve your application for Clark Natural Medicinal Solutions, LLC dba NuVeda, a Production establishment at 13655 Apex Star Court in the NORTH LAS VEGAS local jurisdiction. Please note this letter only applies to this establishment. If you submitted multiple applications, you will receive a separate notification letter for each one. Final approval will occur when the applicant has:

1. Provided documentation to the Division issued by the local jurisdiction to the establishment authorizing occupancy of the building as a medical marijuana establishment such as a certificate of occupancy, a special use permit or a conditional use permit.
2. Provided documentation to the Division regarding successful inspections issued from fire, building, health and air quality.
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5. Paid the applicable fees for the issuance of a medical marijuana registration certificate
6. Provided confirmation that a state business license has been acquired.
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Per NRS 453A.326, certificates are considered provisional until the establishment is in compliance with all applicable local governmental requirements, and has received a state business license to operate the establishment. NAC 453A.324 allows the Division to revoke the provisional certificate if a medical marijuana establishment is not fully operational within 18 months of receiving it.

Shane Terry will be contacted soon to discuss the details of the provisional certification. When the approvals to operate listed above are fulfilled, Clark Natural Medicinal Solutions, LLC dba NuVeda will receive a certificate to operate as a medical marijuana establishment.

Note: Provisional certification resulting from this notification shall not become effective until approved by the Division of Public & Behavioral Health.

Please do not hesitate to e-mail the Division with any questions or concerns you may have at medicalmarijuana@health.nv.gov. Thank you.

Sincerely,

Richard Whitley MS, Administrator
Division of Public & Behavioral Health
Medical Marijuana Establishment Program

BRIAN SANDOVAL
Governor

ROMAINE GILLILAND
Director

STATE OF NEVADA

RICHARD WHITLEY, MS
Administrator

TRACEY D. GREEN, MD
Chief Medical Officer

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC AND BEHAVIORAL HEALTH

November 3, 2014

Shane Terry
Nye Natural Medicinal Solutions, LLC
4575 Dean Martin Drive #1401
Las Vegas, NV 89103

Application Identifier: C166
Ref. #: 40733091629454751109

Dear Nye Natural Medicinal Solutions, LLC,

The State of Nevada, Division of Public and Behavioral Health has completed the application evaluation process for medical marijuana establishment registration certificates. This letter is to inform you of the intent to approve your application for Nye Natural Medicinal Solutions, LLC, a Cultivation establishment at 2801 E. Thousandaire Blvd. in the NYE local jurisdiction. Please note this letter only applies to this establishment. If you submitted multiple applications, you will receive a separate notification letter for each one. Final approval will occur when the applicant has:

1. Provided documentation to the Division issued by the local jurisdiction to the establishment authorizing occupancy of the building as a medical marijuana establishment such as a certificate of occupancy, a special use permit or a conditional use permit.
2. Provided documentation to the Division regarding successful inspections issued from fire, building, health and air quality.
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Shane Terry will be contacted soon to discuss the details of the provisional certification. When the approvals to operate listed above are fulfilled, Nye Natural Medicinal Solutions, LLC will receive a certificate to operate as a medical marijuana establishment.

Note: Provisional certification resulting from this notification shall not become effective until approved by the Division of Public & Behavioral Health.

Please do not hesitate to e-mail the Division with any questions or concerns you may have at medicalmarijuana@health.nv.gov. Thank you.

Sincerely,

Rd Whitley

Richard Whitley MS, Administrator
Division of Public & Behavioral Health
Medical Marijuana Establishment Program

BRIAN SANDOVAL
Governor

ROMAINE GILLILAND
Director

STATE OF NEVADA

RICHARD WHITLEY, MS
Administrator

TRACEY D. GREEN, MD
Chief Medical Officer

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC AND BEHAVIORAL HEALTH

November 3, 2014

Shane Terry
Nye Natural Medicinal Solutions, LLC dba NuVeda
4575 Dean Martin Drive #1401
Las Vegas, NV 89103

Application Identifier: P107
Ref. #: 9160469391616650 7699

Dear Nye Natural Medicinal Solutions, LLC dba NuVeda,

The State of Nevada, Division of Public and Behavioral Health has completed the application evaluation process for medical marijuana establishment registration certificates. This letter is to inform you of the intent to approve your application for Nye Natural Medicinal Solutions, LLC dba NuVeda, a Production establishment at 2801 E. Thousandaire Blvd. in the NYE local jurisdiction. Please note this letter only applies to this establishment. If you submitted multiple applications, you will receive a separate notification letter for each one. Final approval will occur when the applicant has:

1. Provided documentation to the Division issued by the local jurisdiction to the establishment authorizing occupancy of the building as a medical marijuana establishment such as a certificate of occupancy, a special use permit or a conditional use permit.
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Shane Terry will be contacted soon to discuss the details of the provisional certification. When the approvals to operate listed above are fulfilled, Nye Natural Medicinal Solutions, LLC dba NuVeda will receive a certificate to operate as a medical marijuana establishment.

Note: Provisional certification resulting from this notification shall not become effective until approved by the Division of Public & Behavioral Health.

Please do not hesitate to e-mail the Division with any questions or concerns you may have at medicalmarijuana@health.nv.gov. Thank you.

Sincerely,

Rd Whitley

Richard Whitley MS, Administrator
Division of Public & Behavioral Health
Medical Marijuana Establishment Program

APPENDIX H: DETAILED P & L PROJECTIONS

The following presents the monthly projections for years 1 through 5. Note that the original projections anticipated that year 1 would begin in March 2015. For purposes of analysis hereunder, year 1 is assumed to begin as of March 2016 in order to align the projection with the Valuation Date and more closely reflect that actual facts.

YEAR 1

	Year 01 Month 01	Year 01 Month 02	Year 01 Month 03	Year 01 Month 04	Year 01 Month 05	Year 01 Month 06	Year 01 Month 07	Year 01 Month 08	Year 01 Month 09	Year 01 Month 10	Year 01 Month 11	Year 01 Month 12
	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16
Revenue												
Cultivation	0	0	0	0	0	0	0	0	0	0	0	0
Production	0	0	0	0	0	0	0	0	0	0	0	0
Dispensary, net of 4Front	0	0	0	0	0	0	0	0	0	0	0	955,500
Total Revenue	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**955,500**
Cost of Revenue												
Cultivation	23,000	1	2	3	4	5	6	39,570	51,091	51,092	99,093	94,094
Production	0	0	0	0	0	0	0	0	0	0	26,500	26,500
Dispensary	0	0	0	0	0	0	0	0	0	0	0	334,689
Total Cost of Revenue	**23,000**	**1**	**2**	**3**	**4**	**5**	**6**	**39,570**	**51,091**	**51,092**	**125,593**	**455,283**
Gross Margin												
Cultivation	-23,000	-1	-2	-3	-4	-5	-6	-39,570	-51,091	-51,092	-99,093	-94,094
Production	0	0	0	0	0	0	0	0	0	0	-26,500	-26,500
Dispensary	0	0	0	0	0	0	0	0	0	0	0	620,811
Total Gross Margin	**-23,000**	**-1**	**-2**	**-3**	**-4**	**-5**	**-6**	**-39,570**	**-51,091**	**-51,092**	**-125,593**	**500,217**
Gross Margin %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**52.4%**
Other Expenses												
Culitvation	409,000	17,000	17,000	17,000	17,000	37,595	38,348	93,498	111,031	118,781	195,073	179,073
Production	0	0	0	0	0	20,595	21,348	21,348	35,851	35,851	35,851	35,851
Dispensary	306,000	71,000	71,000	74,512	88,187	156,699	153,862	93,212	94,712	94,712	94,712	257,312
Management Company	559,833	121,667	85,167	90,100	110,375	131,366	153,545	158,245	174,995	174,495	197,828	206,883
	1,274,833	**209,667**	**173,167**	**181,612**	**215,562**	**346,256**	**367,103**	**366,303**	**416,589**	**423,839**	**523,464**	**679,119**
Earnings before Int. & Taxes	**-1,297,833**	**-209,668**	**-173,169**	**-181,615**	**-215,566**	**-346,261**	**-367,109**	**-405,872**	**-467,680**	**-474,931**	**-649,057**	**-178,902**
Percent	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**-18.7%**
Interest Expense	3,542	3,511	3,479	3,448	3,416	3,384	3,352	3,320	3,287	3,255	3,222	3,188
Income Tax Expense	-454,242	-73,384	-60,609	-63,565	-75,448	-121,191	-128,488	-142,055	-163,688	-166,226	-227,170	-62,616
Net Income	**-847,133**	**-139,794**	**-116,039**	**-121,498**	**-143,534**	**-228,454**	**-241,973**	**-267,137**	**-307,280**	**-311,960**	**-425,109**	**-119,474**
Net Income %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**-12.5%**

YEAR 2

	Year 02 Month 01	Year 02 Month 02	Year 02 Month 03	Year 02 Month 04	Year 02 Month 05	Year 02 Month 06	Year 02 Month 07	Year 02 Month 08	Year 02 Month 09	Year 02 Month 10	Year 02 Month 11	Year 02 Month 12
	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17
Revenue												
Cultivation	0	0	318,785	425,563	530,793	637,570	742,800	849,578	1,463,935	1,685,228	1,908,068	2,076,746
Production	66,500	116,500	0	185,000	210,000	135,000	1,050,000	135,000	635,000	635,000	635,000	635,000
Dispensary, net of 4Front	967,017	978,534	990,357	1,002,179	1,014,206	1,026,436	1,038,667	1,051,203	1,063,841	1,076,581	1,089,525	1,102,571
Total Revenue	**1,033,517**	**1,095,034**	**1,309,142**	**1,612,742**	**1,754,999**	**1,799,006**	**2,831,467**	**2,035,781**	**3,162,776**	**3,396,809**	**3,632,593**	**3,814,317**
Cost of Revenue												
Cultivation	94,095	199,098	233,956	253,672	273,101	292,817	312,246	499,162	611,042	642,109	673,176	704,244
Production	66,630	97,500	26,500	126,295	133,261	98,765	369,543	98,765	302,478	298,207	293,935	289,664
Dispensary	338,722	342,757	346,898	344,156	348,286	352,486	356,686	360,990	365,330	369,706	374,150	378,630
Total Cost of Revenue	**499,447**	**639,355**	**607,354**	**724,122**	**754,649**	**744,068**	**1,038,475**	**958,918**	**1,278,850**	**1,310,022**	**1,341,262**	**1,372,538**
Gross Margin												
Cultivation	-94,095	-199,098	84,829	171,891	257,692	344,753	430,554	350,416	852,893	1,043,119	1,234,892	1,372,502
Production	-130	19,000	-26,500	58,705	76,739	36,235	680,457	36,235	332,522	336,793	341,065	345,336
Dispensary	628,295	635,777	643,459	658,023	665,920	673,950	681,981	690,213	698,511	706,875	715,375	723,941
Total Gross Margin	**534,070**	**455,679**	**701,787**	**888,620**	**1,000,350**	**1,054,939**	**1,792,991**	**1,076,863**	**1,883,926**	**2,086,787**	**2,291,331**	**2,441,779**
Gross Margin %	**51.7%**	**41.6%**	**53.6%**	**55.1%**	**57.0%**	**58.6%**	**63.3%**	**52.9%**	**59.6%**	**61.4%**	**63.1%**	**64.0%**
Other Expenses												
Culitvation	179,073	346,011	362,053	367,426	372,721	378,095	383,390	383,162	442,688	463,386	535,260	502,286
Production	41,171	45,171	37,705	53,126	55,738	50,359	124,171	51,592	93,365	94,049	94,742	95,120
Dispensary	410,159	263,004	263,719	264,432	265,160	265,900	266,639	267,398	268,161	268,931	269,712	270,500
Management Company	278,730	278,845	281,486	284,022	285,945	285,885	296,710	288,253	302,273	304,113	306,971	308,288
	909,133	**933,032**	**944,964**	**969,007**	**979,565**	**980,238**	**1,070,909**	**990,404**	**1,106,487**	**1,130,479**	**1,206,685**	**1,176,194**
Earnings before Int. & Taxes	**-375,063**	**-477,353**	**-243,176**	**-80,387**	**20,785**	**74,701**	**722,082**	**86,459**	**777,440**	**956,308**	**1,084,646**	**1,265,585**
Percent	**-36.3%**	**-43.6%**	**-18.6%**	**-5.0%**	**1.2%**	**4.2%**	**25.5%**	**4.2%**	**24.6%**	**28.2%**	**29.9%**	**33.2%**
Interest Expense	3,155	3,121	3,087	3,053	3,018	2,984	2,949	2,914	2,878	2,842	2,806	2,770
Income Tax Expense	-131,272	-167,074	-85,112	-28,135	7,275	26,145	252,729	30,261	272,104	334,708	379,626	442,955
Net Income	**-246,946**	**-313,400**	**-161,151**	**-55,305**	**10,492**	**45,572**	**466,404**	**53,285**	**502,458**	**618,758**	**702,213**	**819,859**
Net Income %	**-23.9%**	**-28.6%**	**-12.3%**	**-3.4%**	**0.6%**	**2.5%**	**16.5%**	**2.6%**	**15.9%**	**18.2%**	**19.3%**	**21.5%**

YEAR 3

	Year 03 Month 01 Mar-17	Year 03 Month 02 Apr-17	Year 03 Month 03 May-17	Year 03 Month 04 Jun-17	Year 03 Month 05 Jul-17	Year 03 Month 06 Aug-17	Year 03 Month 07 Sep-17	Year 03 Month 08 Oct-17	Year 03 Month 09 Nov-17	Year 03 Month 10 Dec-17	Year 03 Month 11 Jan-18	Year 03 Month 12 Feb-18
Revenue												
Cultivation	2,245,423	2,414,100	2,584,326	3,758,878	4,207,653	4,571,316	4,934,978	5,298,641	5,629,805	6,025,966	6,208,571	6,389,628
Production	635,000	635,000	635,000	635,000	648,681	675,119	701,556	2,510,000	2,510,000	2,510,000	2,510,000	2,510,000
Dispensary, net of 4Front	1,115,820	1,129,172	1,142,727	1,156,384	1,170,347	1,184,310	1,198,579	1,212,950	1,227,524	1,242,201	1,257,183	1,272,267
Total Revenue	**3,996,243**	**4,178,272**	**4,362,053**	**5,550,262**	**6,026,681**	**6,430,745**	**6,835,113**	**9,021,591**	**9,367,329**	**9,778,167**	**9,975,754**	**10,171,895**
Cost of Revenue												
Cultivation	1,140,969	1,152,893	1,164,818	1,296,155	1,344,028	1,385,850	1,427,672	1,469,495	1,511,317	1,553,139	1,574,140	1,594,962
Production	285,457	281,185	276,914	229,867	227,768	241,868	255,968	1,025,382	1,010,401	995,419	987,897	980,438
Dispensary	383,180	387,766	392,420	397,110	401,906	406,700	411,600	416,536	421,540	426,580	431,726	436,906
Total Cost of Revenue	**1,809,606**	**1,821,845**	**1,834,152**	**1,923,132**	**1,973,702**	**2,034,418**	**2,095,240**	**2,911,412**	**2,943,257**	**2,975,138**	**2,993,762**	**3,012,306**
Gross Margin												
Cultivation	1,104,454	1,261,207	1,419,508	2,462,723	2,863,625	3,185,466	3,507,306	3,829,146	4,118,488	4,472,827	4,634,431	4,794,666
Production	349,543	353,815	358,086	405,133	420,914	433,252	445,589	1,484,618	1,499,599	1,514,581	1,522,103	1,529,562
Dispensary	732,640	741,406	750,307	759,274	768,441	777,610	786,979	796,414	805,984	815,621	825,457	835,361
Total Gross Margin	**2,186,638**	**2,356,427**	**2,527,901**	**3,627,130**	**4,052,980**	**4,396,328**	**4,739,873**	**6,110,179**	**6,424,072**	**6,803,029**	**6,981,992**	**7,159,589**
Gross Margin %	**54.7%**	**56.4%**	**58.0%**	**65.4%**	**67.3%**	**68.4%**	**69.3%**	**67.7%**	**68.6%**	**69.6%**	**70.0%**	**70.4%**
Other Expenses												
Culitvation	524,221	542,405	560,666	726,966	788,610	841,050	893,490	945,930	996,754	1,050,811	1,128,783	1,103,251
Production	95,507	95,885	96,272	96,461	97,745	99,860	101,975	246,650	246,461	246,650	246,650	246,650
Dispensary	421,553	273,058	273,877	274,704	289,946	290,791	291,654	292,522	293,403	294,291	295,196	296,106
Management Company	315,107	316,428	318,765	330,148	335,412	338,952	343,496	364,861	368,818	372,427	374,902	376,364
	1,356,388	**1,227,775**	**1,249,580**	**1,428,278**	**1,511,712**	**1,570,653**	**1,630,614**	**1,849,964**	**1,905,436**	**1,964,178**	**2,045,531**	**2,022,371**
Earnings before Int. & Taxes	**830,250**	**1,128,652**	**1,278,321**	**2,198,852**	**2,541,267**	**2,825,675**	**3,109,259**	**4,260,215**	**4,518,637**	**4,838,850**	**4,936,460**	**5,137,218**
Percent	**20.8%**	**27.0%**	**29.3%**	**39.6%**	**42.2%**	**43.9%**	**45.5%**	**47.2%**	**48.2%**	**49.5%**	**49.5%**	**50.5%**
Interest Expense	2,734	2,697	2,660	2,623	2,585	2,548	2,509	2,471	2,433	2,394	2,355	2,315
Income Tax Expense	290,587	395,028	447,412	769,598	889,444	988,986	1,088,241	1,491,075	1,581,523	1,693,598	1,727,761	1,798,026
Net Income	**536,929**	**730,927**	**828,249**	**1,426,631**	**1,649,238**	**1,834,141**	**2,018,509**	**2,766,669**	**2,934,681**	**3,142,859**	**3,206,345**	**3,336,877**
Net Income %	**13.4%**	**17.5%**	**19.0%**	**25.7%**	**27.4%**	**28.5%**	**29.5%**	**30.7%**	**31.3%**	**32.1%**	**32.1%**	**32.8%**

YEAR 4

	Year 04 Month 01	Year 04 Month 02	Year 04 Month 03	Year 04 Month 04	Year 04 Month 05	Year 04 Month 06	Year 04 Month 07	Year 04 Month 08	Year 04 Month 09	Year 04 Month 10	Year 04 Month 11	Year 04 Month 12
	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19
Revenue												
Cultivation	6,389,628	6,389,628	6,389,628	6,389,628	6,389,628	6,389,628	6,389,628	6,389,628	6,389,628	6,389,628	6,389,628	8,115,091
Production	2,510,000	2,510,000	2,510,000	2,510,000	2,510,000	2,510,000	2,510,000	2,510,000	807,306	807,306	807,306	932,744
Dispensary, net of 4Front	1,287,453	1,302,945	1,318,641	1,334,439	1,350,440	1,366,645	1,383,054	1,399,667	1,416,484	1,433,505	1,450,627	1,468,056
Total Revenue	**10,187,081**	**10,202,573**	**10,218,269**	**10,234,067**	**10,250,068**	**10,266,273**	**10,282,682**	**10,299,295**	**8,613,418**	**8,630,439**	**8,647,561**	**10,515,891**
Cost of Revenue												
Cultivation	1,594,963	1,594,964	1,594,965	1,594,966	1,594,967	1,594,968	1,594,969	1,594,970	1,594,971	1,594,972	1,594,973	2,135,297
Production	980,438	980,438	980,438	980,438	980,438	980,438	980,438	980,438	312,368	312,368	312,368	379,268
Dispensary	442,120	447,440	452,830	458,256	463,750	469,316	474,950	480,656	486,430	492,276	498,156	504,140
Total Cost of Revenue	**3,017,521**	**3,022,842**	**3,028,233**	**3,033,660**	**3,039,155**	**3,044,722**	**3,050,357**	**3,056,064**	**2,393,769**	**2,399,616**	**2,405,497**	**3,018,705**
Gross Margin												
Cultivation	4,794,665	4,794,664	4,794,663	4,794,662	4,794,661	4,794,660	4,794,659	4,794,658	4,794,657	4,794,656	4,794,655	5,979,794
Production	1,529,562	1,529,562	1,529,562	1,529,562	1,529,562	1,529,562	1,529,562	1,529,562	494,939	494,939	494,939	553,477
Dispensary	845,333	855,505	865,811	876,183	886,690	897,329	908,104	919,011	930,054	941,229	952,471	963,916
Total Gross Margin	**7,169,560**	**7,179,731**	**7,190,036**	**7,200,406**	**7,210,913**	**7,221,551**	**7,232,325**	**7,243,231**	**6,219,650**	**6,230,823**	**6,242,065**	**7,497,186**
Gross Margin %	**70.4%**	**70.4%**	**70.4%**	**70.4%**	**70.3%**	**70.3%**	**70.3%**	**70.3%**	**72.2%**	**72.2%**	**72.2%**	**71.3%**
Other Expenses												
Culitvation	1,103,251	1,103,251	1,103,251	1,103,251	1,103,251	1,103,251	1,103,251	1,103,251	1,103,251	1,103,251	1,154,892	1,353,161
Production	246,650	246,650	246,650	246,650	246,650	246,650	246,650	246,650	110,435	110,435	110,435	120,470
Dispensary	447,276	298,961	299,911	300,864	301,832	302,811	303,803	304,806	305,825	306,852	307,886	308,940
Management Company	378,516	378,171	378,828	378,486	379,146	378,808	379,472	379,138	362,779	362,449	363,121	381,304
	2,175,692	**2,027,032**	**2,028,639**	**2,029,250**	**2,030,878**	**2,031,519**	**2,033,176**	**2,033,845**	**1,882,289**	**1,882,987**	**1,936,333**	**2,163,874**
Earnings before Int. & Taxes	**4,993,868**	**5,152,699**	**5,161,396**	**5,171,156**	**5,180,035**	**5,190,032**	**5,199,150**	**5,209,386**	**4,337,360**	**4,347,836**	**4,305,731**	**5,333,312**
Percent	**49.0%**	**50.5%**	**50.5%**	**50.5%**	**50.5%**	**50.6%**	**50.6%**	**50.6%**	**50.4%**	**50.4%**	**49.8%**	**50.7%**
Interest Expense	2,276	2,236	2,195	2,155	2,114	2,073	2,031	1,990	1,948	1,905	1,863	1,820
Income Tax Expense	1,747,854	1,803,445	1,806,489	1,809,905	1,813,012	1,816,511	1,819,702	1,823,285	1,518,076	1,521,743	1,507,006	1,866,659
Net Income	**3,243,739**	**3,347,018**	**3,352,712**	**3,359,096**	**3,364,909**	**3,371,448**	**3,377,416**	**3,384,112**	**2,817,337**	**2,824,188**	**2,796,863**	**3,464,833**
Net Income %	**31.8%**	**32.8%**	**32.8%**	**32.8%**	**32.8%**	**32.8%**	**32.8%**	**32.9%**	**32.7%**	**32.7%**	**32.3%**	**32.9%**

YEAR 5

	Year 05 Month 01	Year 05 Month 02	Year 05 Month 03	Year 05 Month 04	Year 05 Month 05	Year 05 Month 06	Year 05 Month 07	Year 05 Month 08	Year 05 Month 09	Year 05 Month 10	Year 05 Month 11	Year 05 Month 12
	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20
Revenue												
Cultivation	8,692,308	9,271,073	9,848,291	9,848,291	9,848,291	9,848,291	9,848,291	9,848,291	9,848,291	9,848,291	9,848,291	9,848,291
Production	974,706	1,016,781	1,058,744	1,058,744	1,058,744	1,058,744	1,058,744	1,058,744	1,058,744	1,058,744	691,194	691,194
Dispensary, net of 4Front	1,485,688	1,503,524	1,521,564	1,539,807	1,558,357	1,577,008	1,595,965	1,615,126	1,634,491	1,654,060	1,673,934	1,673,934
Total Revenue	**11,152,702**	**11,791,378**	**12,428,599**	**12,446,842**	**12,465,392**	**12,484,043**	**12,503,000**	**12,522,161**	**12,541,526**	**12,561,095**	**12,213,419**	**12,213,419**
Cost of Revenue												
Cultivation	2,201,678	2,268,237	2,334,618	2,334,619	2,334,620	2,334,621	2,334,622	2,334,623	2,334,624	2,334,625	2,334,626	2,334,627
Production	401,648	424,088	446,468	446,468	446,468	446,468	446,468	446,468	446,468	446,468	375,700	375,700
Dispensary	510,196	516,320	522,516	528,780	535,150	541,556	548,066	554,646	561,296	568,016	574,840	574,840
Total Cost of Revenue	**3,113,522**	**3,208,645**	**3,303,602**	**3,309,867**	**3,316,238**	**3,322,645**	**3,329,156**	**3,335,737**	**3,342,388**	**3,349,109**	**3,285,166**	**3,285,167**
Gross Margin												
Cultivation	6,490,630	7,002,836	7,513,673	7,513,672	7,513,671	7,513,670	7,513,669	7,513,668	7,513,667	7,513,666	7,513,665	7,513,664
Production	573,059	592,694	612,277	612,277	612,277	612,277	612,277	612,277	612,277	612,277	315,494	315,494
Dispensary	975,492	987,204	999,048	1,011,027	1,023,207	1,035,452	1,047,899	1,060,480	1,073,195	1,086,044	1,099,094	1,099,094
Total Gross Margin	**8,039,180**	**8,582,733**	**9,124,997**	**9,136,975**	**9,149,154**	**9,161,398**	**9,173,844**	**9,186,424**	**9,199,138**	**9,211,986**	**8,928,253**	**8,928,252**
Gross Margin %	**72.1%**	**72.8%**	**73.4%**	**73.4%**	**73.4%**	**73.4%**	**73.4%**	**73.4%**	**73.3%**	**73.3%**	**73.1%**	**73.1%**
Other Expenses												
Culitvation	1,436,395	1,519,853	1,603,088	1,603,088	1,603,088	1,603,088	1,603,088	1,603,088	1,603,088	1,603,088	1,603,088	1,603,088
Production	123,827	127,193	130,550	130,550	130,550	130,550	130,550	130,550	130,550	130,550	101,146	101,146
Dispensary	460,305	312,133	313,224	314,326	315,448	316,577	317,721	318,880	320,049	321,232	322,433	322,433
Management Company	388,172	394,059	400,931	400,613	401,299	400,985	401,675	401,367	402,060	401,756	398,779	398,279
	2,408,699	**2,353,237**	**2,447,793**	**2,448,577**	**2,450,385**	**2,451,200**	**2,453,033**	**2,453,884**	**2,455,746**	**2,456,626**	**2,425,446**	**2,424,946**
Earnings before Int. & Taxes	**5,630,481**	**6,229,496**	**6,677,204**	**6,688,398**	**6,698,769**	**6,710,199**	**6,720,811**	**6,732,540**	**6,743,392**	**6,755,360**	**6,502,807**	**6,503,306**
Percent	**50.5%**	**52.8%**	**53.7%**	**53.7%**	**53.7%**	**53.8%**	**53.8%**	**53.8%**	**53.8%**	**53.8%**	**53.2%**	**53.2%**
Interest Expense	1,777	1,733	1,689	1,645	1,601	1,556	1,511	1,466	1,420	1,374	1,328	1,281
Income Tax Expense	1,970,668	2,180,323	2,337,021	2,340,939	2,344,569	2,348,570	2,352,284	2,356,389	2,360,187	2,364,376	2,275,982	2,276,157
Net Income	**3,658,037**	**4,047,439**	**4,338,494**	**4,345,814**	**4,352,599**	**4,360,072**	**4,367,016**	**4,374,685**	**4,381,785**	**4,389,610**	**4,225,497**	**4,225,868**
Net Income %	**32.8%**	**34.3%**	**34.9%**	**34.9%**	**34.9%**	**34.9%**	**34.9%**	**34.9%**	**34.9%**	**34.9%**	**34.6%**	**34.6%**

APPENDIX I: CASH FLOW PROJECTIONS

	Start Up	Year 01	Year 02	Year 03	Year 04	Year 05
Cash flows from operating activities:						
Net Income (Loss)	(1,726,493)	(3,269,385)	1,502,905	21,895,036	38,575,714	50,305,882
Non Cash Items Included in Net Income:						
Depreciation Expense		17,143	22,857	22,857	22,857	22,857
Changes In Operating Assets And Liabilities:						
Change in Accounts Receivable		-	(1,391,203)	(328,070)	-	-
Change in Deposits						
Change in Other Assets			-	-	-	-
Change in Accounts Payable		375,538	2,061,369	428,026	25,165	78,307
Change in Other Liabilities		127,946	69,996	3,600	-	-
Cash flows from Investing Activities:						
Acquisition of Land	-					
Acquisition of Fixed Assets	-	(3,426,492)	(935,000)	(7,370,000)	-	(8,195,000)
Cash flows from Financing Activities:						
Proceeds from Notes Payable - Startup Debt	-	-	-	-	-	-
Proceeds from Notes Payable - Other	500,000					
Proceeds from Bank L/C	-					
Principal Payment of Notes Payable - Startup Debt	-	-	-	-	-	-
Principal Payment of Notes Payable - Other	-	(54,614)	(59,023)	(64,240)	(69,919)	(76,099)
Principal Payment of Bank L/C	-	-	-	-	-	-
Issuance of Equity - Investors	-					
Issuance of Equity - Founders	(450,000)	-	-	-	-	-
Net Change in Cash	**(1,676,493)**	**(6,229,864)**	**1,271,901**	**14,587,209**	**38,553,817**	**42,135,947**

APPENDIX J: PROJECTION ASSUMPTIONS

START-UP

			Start Up
	Global		Month #
Facility Size			
Nye County:	**CAPEX / SqFt**	**Cultivation %**	
Building Cost - Owned - New Build	$ 0.00	45%	-
Building Cost- 1st Expansion	$ 55.00	100%	-
Building Cost- 2nd Expansion		70%	-
Clark County:	**CAPEX / SqFt**		
Building #2 - Owned - New Build	$ 0.00	30%	0
Building #2 - 1st Expansion	$ 55.00	100%	0
Building #2 - 2nd Expansion	$ 55.00	60%	0
Total Square Footage:			
Cultivation Sq Feet (% of Total Sq Ft)			
Space Dedicated to Production:			
Nye County:			
			0%
Clark County:			
			0%
Land Cost			
Land to Building Square Footage Ratio	3		
Land Cost per Square Foot	2.22		
Total Land Square Footage			675,180

Cost of Revenue - Warehouse	
Seeds (Fixed Amount) - Nye County	
Seeds (Fixed Amount) - Apex	
Monthly Utilities (Per Light)	60.00
Horiculture Supplies (Per Pound)	57.00
Depreciable Life - Building (Months)	180
Depreciable Life - Other (Months)	84
Lab fees as a % of cultivation sales	11.50%
Compensation	
Incentive payments per pound	$ -
COLA - annual percentage	5.0%

YEAR 1

	Global		Year 01 Month 01	Year 01 Month 02	Year 01 Month 03	Year 01 Month 04	Year 01 Month 08	Year 01 Month 09	Year 01 Month 10	Year 01 Month 11	Year 01 Month 12
			1	2	3	4	8	9	10	11	12
			Mar-15	Apr-15	May-15	Jun-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16
Space Dedicated to Production:											
Nye County:							-	-	-	-	-
			0%	0%	0%	0%	0%	0%	0%	0%	0%
Clark County:								5,000	5,000	5,000	5,000
			0%	0%	0%	0%	0%				
Apex Dried Flower			-	-	-	-	-	-	-	-	-
Total Production of Dried Flower			-	-	-	-	-	-	-	-	-
NLV Disp1			-	-	-	-	-	-	-	-	94
CLV Disp2			-	-	-	-	-	-	-	-	94
Total Dispensary Sales			-	-	-	-	-	-	-	-	188
Cultivation vs Disp Sale = Outside Purchase			0	0	0	0	0	0	0	0	(188)
Wholesale purchases expense plus broker fees	2%		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 334,688
Las Vegas Dispensary #1 Assumptions											
Dispensary #1 (1 = Open)	1										
Square Feet per Location	2797										
Cost per Square Foot	120.00	COGS									
Dispensary Sales - Year 1 Start Month	12	when the first clients start									
Clients per Day - 1st Month	350		0	0	0	0	0	0	0	0	350
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%										
Sales Days per Month	30										
Pounds per Month			0	0	0	0	0	0	0	0	94
Gross Revenue Fee as a % of Sales	6.0%	COGS									
4Front Commission as a % of Sales	3.0%	COGS									
North Las Vegas Dispensary #2 Assumptions											
Dispensary #2 (1 = Open)	1										
Square Feet per Location	6500										
Cost per Square Foot	100.00	COGS									
Dispensary Sales - Year 1 Start Month	12										
Clients per Day - 1st Month	350		0	0	0	0	0	0	0	0	350
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%										
Sales Days per Month	30										
Pounds per Month per Location			0	0	0	0	0	0	0	0	94
Gross Revenue Fee as a % of Sales	6.0%	COGS									
Investment Royalty (%)	0.00%										
4Front Commission as a % of Sales	3.0%	COGS									
Cost of Revenue - Warehouse											
Seeds (Fixed Amount) - Nye County		COGS	5,000	5,000	5,000	5,000	0	0	0	0	0
Seeds (Fixed Amount) - Apex		COGS					5,000	5,000	5,000	5,000	

YEAR 2

	Global		Year 02 Month 01	Year 02 Month 02	Year 02 Month 03	Year 02 Month 04	Year 02 Month 05	Year 02 Month 06	Year 02 Month 07	Year 02 Month 08	Year 02 Month 09	Year 02 Month 10	Year 02 Month 11	Year 02 Month 12
			13	14	15	16	17	18	19	20	21	22	23	24
			Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17
Space Dedicated to Production:														
Nye County:			-	-	-	-	-	-	-	-	-	-	-	-
			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Clark County:			5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
										6%	6%	6%	6%	6%
Land Cost														
Land to Building Square Footage Ratio	3													
Land Cost per Square Foot	2.22													
Total Land Square Footage			0	0	0	0	0	0	0	318,000	0	0	0	0
Maximum Cultivation - Nye County														
Investor Cap Rate (%)	10.00%													
Cultivation Sq Foot per Light	25.00													
# of Lights			**-**	**1,098**	**1,098**	**1,098**	**1,098**	**1,098**	**1,098**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**
Pounds per Light per Harvest Cycle	**1.50**													
Annual Harvest Cycles	5													
Maximum Cultivation (Pounds)			**0**	**686**	**686**	**686**	**686**	**686**	**686**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**
Actual Cultivation (Pounds) - Nye County														
% of Maximum Cultivation - Phase I			0%	0%	30%	40%	50%	60%	70%	80%	90%	95%	100%	100%
% of Maximum Cultivation - 1st Expansion			0%	0%	0%	0%	0%	0%	0%	0%	30%	40%	50%	60%
% of Maximum Cultivation - 2nd Expansion														
Actual Cultivation (Pounds) - Phase I			0	0	206	275	343	412	480	549	618	652	686	686
Actual Cultivation (Pounds) - 1st Expansion			0	0	0	0	0	0	0	0	128	170	213	255
Actual Cultivation (Pounds) - 2nd Expansion			0	0	0	0	0	0	0	0	0	0	0	0
Total Cultivation (Pounds) - Nye County			-	-	206	275	343	412	480	549	746	822	899	941
Dried Flower from Cultivation:	85%		0	0	175	234	292	350	408	467	634	699	764	800
Derivative Extract for B2C	1.50%		-	-	3.09	4.13	5.15	6.18	7.20	8.24	11.19	12.33	13.49	14.12

Maximum Cultivation - Apex														
Investment Royalty (%)	0.00%													
Investor Cap Rate (%)	10.00%													
Cultivation Sq Foot per Light	25.00													
# of Lights			-	-	-	-	-	-	-	1,068	1,068	1,068	1,068	1,068
Pounds per Light per Harvest Cycle	1.50													
Annual Harvest Cycles	5													
Maximum Cultivation (Pounds)			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**668**	**668**	**668**	**668**	**668**
Actual Cultivation (Pounds) - Apex														
% of Maximum Cultivation - Phase I			0%	0%	0%	0%	0%	0%	0%	0%	30%	40%	50%	60%
% of Maximum Cultivation - 1st Expansion														
% of Maximum Cultivation - 2nd Expansion														
Actual Cultivation (Pounds) - Phase I			0	0	0	0	0	0	0	0	200	267	334	401
Actual Cultivation (Pounds) - 1st Expansion			0	0	0	0	0	0	0	0	0	0	0	0
Actual Cultivation (Pounds) - 2nd Expansion			0	0	0	0	0	0	0	0	0	0	0	0
Total Cultivation (Pounds) - Apex			-	-	-	-	-	-	-	-	200	267	334	401
Dried Flower from Cultivation:	85%	Linked to above	0	0	0	0	0	0	0	0	170	227	284	341
Derivative Extract for B2C	1.50%	Linked to above	-	-	-	-	-	-	-	-	3.00	4.01	5.01	6.02
Total Warehouse Production vs. Disp Sales														
Nye Dried Flower			-	-	175	234	292	350	408	467	634	699	764	800
Apex Dried Flower			-	-	-	-	-	-	-	-	170	227	284	341
Total Production of Dried Flower			-	-	175	234	292	350	408	467	804	926	1,048	1,141
NLV Disp1			95	96	97	98	100	101	102	103	104	106	107	108
CLV Disp2			95	96	97	98	100	101	102	103	104	106	107	108
Total Dispensary Sales			190	192	194	197	199	201	204	206	209	211	214	216
Cultivation vs Disp Sale = Outside Purchase			**(190)**	**(192)**	**(19)**	**37**	**93**	**149**	**204**	**260**	**595**	**714**	**834**	**924**
Wholesale purchases expense plus broker fees	2%		$ 338,722	$ 342,756	$ 34,343	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wholesale Pricing (Per lb)														
Wholesale - Flower	$1,750	updated 2/19/15												
Wholesale - Extraction Oil	$7,500	$16.45												
Production Lines														
Trim (Pounds - not including flower, stalk, fan leaves)			-	-	7	9	11	14	16	18	25	27	30	31
Cost per pound of extraction oil	$4,000													
Wholesale - Extraction Oil	$7,500	10%												
Investor Royalty Fee (%)	0.00%													

Apex Production Pens														
B2B Pen Sales			2500	4500	0	7000	8000	5000	10000	5000	25000	25000	25000	25000
B2C Pen Sales			100	100	0	250	250	250	20000	250	250	250	250	250
Total Pens			2600	4600	0	7250	8250	5250	30000	5250	25250	25250	25250	25250
Extract required for Pens (pounds)			2.30	4.06	-	6.40	7.28	4.64	26.49	4.64	22.30	22.30	22.30	22.30
External Sourcing of extract required for Pens			2.30	4.06	-	6.40	7.28	4.64	26.49	4.64	19.30	18.29	17.29	16.28
Pen Cartriges per pound	**1,133**	0.40												
Hardware Cost at	5000	**$ 8.15**												
Hardware Cost at	7500	**$ 6.48**												
Hardware Cost at	10000	**$ 5.66**												
Hardware Cost at	25000	**$ 4.15**												
B2B Price	**$25**													
B2C Price	**$40**													
Retail Dispensary														
Price per Pound	**$5,600**	$350 per Ounce blended price												
Price per Gram	12.5													
Avg Sale (Grams including extract)	4													
Average Sale	$ 50.00													
Price Per Pound for Oil based products	**$15,000**													
Las Vegas Dispensary #1 Assumptions														
Dispensary #1 (1 = Open)	1													
Square Feet per Location	2797													
Cost per Square Foot	120.00	**COGS**												
Dispensary Sales - Year 1 Start Month	12	when the first clients start												
Clients per Day - 1st Month	350		354	358	363	367	372	376	380	385	390	394	399	404
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%													
Sales Days per Month	30													
Pounds per Month			95	96	97	98	100	101	102	103	104	106	107	108
Gross Revenue Fee as a % of Sales	6.0%	**COGS**												
4Front Commission as a % of Sales	3.0%	**COGS**												
North Las Vegas Dispensary #2 Assumptions														
Dispensary #2 (1 = Open)	1													
Square Feet per Location	6500													
Cost per Square Foot	100.00	**COGS**												
Dispensary Sales - Year 1 Start Month	12													
Clients per Day - 1st Month	350		354	358	363	367	372	376	380	385	390	394	399	404
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%													
Sales Days per Month	30													
Pounds per Month per Location			95	96	97	98	100	101	102	103	104	106	107	108
Gross Revenue Fee as a % of Sales	6.0%	**COGS**												
Investment Royalty (%)	0.00%													
4Front Commission as a % of Sales	3.0%	**COGS**												

YEAR 3

	Global		Year 03 Month 01	Year 03 Month 02	Year 03 Month 03	Year 03 Month 04	Year 03 Month 05	Year 03 Month 06	Year 03 Month 07	Year 03 Month 08	Year 03 Month 09	Year 03 Month 10	Year 03 Month 11	Year 03 Month 12	Year 04 Month 01
			25	26	27	28	29	30	31	32	33	34	35	36	37
			Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18
Space Dedicated to Production:															
Nye County:			-	-	-	-	-	-	-	-	-	-	-	-	-
			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Clark County:			5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
			2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Land Cost															
Land to Building Square Footage Ratio	3														
Land Cost per Square Foot	2.22														
Total Land Square Footage			0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum Cultivation - Nye County															
Investor Cap Rate (%)	10.00%														
Cultivation Sq Foot per Light	25.00														
# of Lights			**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**
Pounds per Light per Harvest Cycle	**1.50**														
Annual Harvest Cycles	5														
Maximum Cultivation (Pounds)			**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**
Actual Cultivation (Pounds) - Nye County															
% of Maximum Cultivation - Phase I			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 1st Expansion			70%	80%	90%	95%	100%	100%	100%	100%	95%	100%	100%	100%	100%
% of Maximum Cultivation - 2nd Expansion															
Actual Cultivation (Pounds) - Phase I			686	686	686	686	686	686	686	686	686	686	686	686	686
Actual Cultivation (Pounds) - 1st Expansion			298	340	383	404	425	425	425	425	404	425	425	425	425
Actual Cultivation (Pounds) - 2nd Expansion			0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cultivation (Pounds) - Nye County			984	1,026	1,069	1,090	1,111	1,111	1,111	1,111	1,090	1,111	1,111	1,111	1,111
Dried Flower from Cultivation:	85%		836	872	909	927	944	944	944	944	927	944	944	944	944
Derivative Extract for B2C	1.50%		14.76	15.39	16.04	16.35	16.67	16.67	16.67	16.67	16.35	16.67	16.67	16.67	16.67

Maximum Cultivation - Apex														
Investment Royalty (%)	0.00%													
Investor Cap Rate (%)	10.00%													
Cultivation Sq Foot per Light	25.00													
# of Lights			**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**
Pounds per Light per Harvest Cycle	1.50													
Annual Harvest Cycles	5													
Maximum Cultivation (Pounds)			**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**
Actual Cultivation (Pounds) - Apex														
% of Maximum Cultivation - Phase I			70%	80%	90%	95%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 1st Expansion			0%	0%	0%	30%	40%	50%	60%	70%	80%	90%	95%	100%
% of Maximum Cultivation - 2nd Expansion			0%	0%	0%	30%	40%	50%	60%	70%	80%	90%	95%	100%
Actual Cultivation (Pounds) - Phase I			467	534	601	634	668	668	668	668	668	668	668	668
Actual Cultivation (Pounds) - 1st Expansion			0	0	0	255	340	425	510	595	680	765	808	850
Actual Cultivation (Pounds) - 2nd Expansion			0	0	0	450	600	750	900	1050	1200	1350	1425	1500
Total Cultivation (Pounds) - Apex			467	534	601	1,339	1,608	1,843	2,078	2,313	2,548	2,783	2,901	3,018
Dried Flower from Cultivation:	85%	Linked to above	397	454	511	1138	1367	1567	1766	1966	2166	2366	2466	2565
Derivative Extract for B2C	1.50%	Linked to above	7.01	8.01	9.02	20.09	24.12	27.65	31.17	34.70	38.22	41.75	43.52	45.27
Total Warehouse Production vs. Disp Sales														
Nye Dried Flower			836	872	909	927	944	944	944	944	927	944	944	944
Apex Dried Flower			397	454	511	1,138	1,367	1,567	1,766	1,966	2,166	2,366	2,466	2,565
Total Production of Dried Flower			1,233	1,326	1,420	2,065	2,311	2,511	2,711	2,910	3,092	3,310	3,410	3,510
NLV Disp1			109	111	112	113	115	116	118	119	120	122	123	125
CLV Disp2			109	111	112	113	115	116	118	119	120	122	123	125
Total Dispensary Sales			219	222	224	227	230	232	235	238	241	244	247	250
Cultivation vs Disp Sale = Outside Purchase			**1,014**	**1,104**	**1,195**	**1,838**	**2,081**	**2,279**	**2,475**	**2,672**	**2,851**	**3,066**	**3,164**	**3,260**
Wholesale purchases expense plus broker fees	2%		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wholesale Pricing (Per lb)														
Wholesale - Flower	$1,750	updated 2/19/15												
Wholesale - Extraction Oil	$7,500	$16.45												
Production Lines														
Trim (Pounds - not including flower, stalk, fan leaves)			33	34	36	36	37	37	37	37	36	37	37	37
Cost per pound of extraction oil	$4,000													
Wholesale - Extraction Oil	$7,500	10%												
Investor Royalty Fee (%)	0.00%													

Apex Production Pens														
B2B Pen Sales			25000	25000	25000	25000	25000	25000	25000	100000	100000	100000	100000	100000
B2C Pen Sales			250	250	250	250	250	250	250	250	250	250	250	250
Total Pens			25250	25250	25250	25250	25250	25250	25250	100250	100250	100250	100250	100250
Extract required for Pens (pounds)			22.30	22.30	22.30	22.30	22.30	22.30	22.30	88.52	88.52	88.52	88.52	88.52
External Sourcing of extract required for Pens			15.29	14.29	13.28	2.21	-	-	-	53.83	50.30	46.78	45.01	43.25
Pen Cartriges per pound	1,133	0.40												
Hardware Cost at	5000	$ 8.15												
Hardware Cost at	7500	$ 6.48												
Hardware Cost at	10000	$ 5.66												
Hardware Cost at	25000	$ 4.15												
B2B Price	$25													
B2C Price	$40													
Retail Dispensary														
Price per Pound	$5,600	$350 per Ounce blended price												
Price per Gram	12.5													
Avg Sale (Grams including extract)	4													
Average Sale	$ 50.00													
Price Per Pound for Oil based products	$15,000													
Las Vegas Dispensary #1 Assumptions														
Dispensary #1 (1 = Open)	1													
Square Feet per Location	2797													
Cost per Square Foot	120.00	COGS												
Dispensary Sales - Year 1 Start Month	12	when the first clients start												
Clients per Day - 1st Month	350		409	414	419	424	429	434	439	444	450	455	460	466
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%													
Sales Days per Month	30													
Pounds per Month			109	111	112	113	115	116	118	119	120	122	123	125
Gross Revenue Fee as a % of Sales	6.0%	COGS												
4Front Commission as a % of Sales	3.0%	COGS												
North Las Vegas Dispensary #2 Assumptions														
Dispensary #2 (1 = Open)	1													
Square Feet per Location	6500													
Cost per Square Foot	100.00	COGS												
Dispensary Sales - Year 1 Start Month	12													
Clients per Day - 1st Month	350		409	414	419	424	429	434	439	444	450	455	460	466
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%													
Sales Days per Month	30													
Pounds per Month per Location			109	111	112	113	115	116	118	119	120	122	123	125
Gross Revenue Fee as a % of Sales	6.0%	COGS												
Investment Royalty (%)	0.00%													
4Front Commission as a % of Sales	3.0%	COGS												

YEAR 4

	Global		Year 04 Month 01	Year 04 Month 02	Year 04 Month 03	Year 04 Month 04	Year 04 Month 05	Year 04 Month 06	Year 04 Month 07	Year 04 Month 08	Year 04 Month 09	Year 04 Month 10	Year 04 Month 11	Year 04 Month 12
			37	38	39	40	41	42	43	44	45	46	47	48
			Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19
Space Dedicated to Production:														
Nye County:			-	-	-	-	-	-	-	-	-	-	-	-
			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Clark County:			5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
			2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%
Land Cost														
Land to Building Square Footage Ratio	3													
Land Cost per Square Foot	2.22													
Total Land Square Footage			0	0	0	0	0	0	0	0	0	0	0	0
Maximum Cultivation - Nye County														
Investor Cap Rate (%)	10.00%													
Cultivation Sq Foot per Light	25.00													
# of Lights			**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**
Pounds per Light per Harvest Cycle	**1.50**													
Annual Harvest Cycles	5													
Maximum Cultivation (Pounds)			**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**
Actual Cultivation (Pounds) - Nye County														
% of Maximum Cultivation - Phase I			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 1st Expansion			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 2nd Expansion														
Actual Cultivation (Pounds) - Phase I			686	686	686	686	686	686	686	686	686	686	686	686
Actual Cultivation (Pounds) - 1st Expansion			425	425	425	425	425	425	425	425	425	425	425	425
Actual Cultivation (Pounds) - 2nd Expansion			0	0	0	0	0	0	0	0	0	0	0	0
Total Cultivation (Pounds) - Nye County			1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111
Dried Flower from Cultivation:	85%		944	944	944	944	944	944	944	944	944	944	944	944
Derivative Extract for B2C	1.50%		16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67

Maximum Cultivation - Apex														
Investment Royalty (%)	0.00%													
Investor Cap Rate (%)	10.00%													
Cultivation Sq Foot per Light	25.00													
# of Lights			**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**4,828**	**8,404**
Pounds per Light per Harvest Cycle	**1.50**													
Annual Harvest Cycles	5													
Maximum Cultivation (Pounds)			**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**3,018**	**5,253**
Actual Cultivation (Pounds) - Apex														
% of Maximum Cultivation - Phase I			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 1st Expansion			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 2nd Expansion			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	70%
Actual Cultivation (Pounds) - Phase I			668	668	668	668	668	668	668	668	668	668	668	668
Actual Cultivation (Pounds) - 1st Expansion			850	850	850	850	850	850	850	850	850	850	850	850
Actual Cultivation (Pounds) - 2nd Expansion			1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	2615
Total Cultivation (Pounds) - Apex			3,018	3,018	3,018	3,018	3,018	3,018	3,018	3,018	3,018	3,018	3,018	4,133
Dried Flower from Cultivation:	85%	Linked to above	2565	2565	2565	2565	2565	2565	2565	2565	2565	2565	2565	3513
Derivative Extract for B2C	1.50%	Linked to above	45.27	45.27	45.27	45.27	45.27	45.27	45.27	45.27	45.27	45.27	45.27	62.00
Total Warehouse Production vs. Disp Sales														
Nye Dried Flower			944	944	944	944	944	944	944	944	944	944	944	944
Apex Dried Flower			2,565	2,565	2,565	2,565	2,565	2,565	2,565	2,565	2,565	2,565	2,565	3,513
Total Production of Dried Flower			3,510	3,510	3,510	3,510	3,510	3,510	3,510	3,510	3,510	3,510	3,510	4,457
NLV Disp1			126	128	129	131	133	134	136	137	139	141	142	144
CLV Disp2			126	128	129	131	133	134	136	137	139	141	142	144
Total Dispensary Sales			253	256	259	262	265	268	271	275	278	281	285	288
Cultivation vs Disp Sale = Outside Purchase			**3,257**	**3,254**	**3,251**	**3,248**	**3,245**	**3,241**	**3,238**	**3,235**	**3,232**	**3,228**	**3,225**	**4,169**
Wholesale purchases expense plus broker fees	2%		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wholesale Pricing (Per lb)														
Wholesale - Flower	**$1,750**	updated 2/19/15												
Wholesale - Extraction Oil	**$7,500**	$16.45												
Production Lines														
Trim (Pounds - not including flower, stalk, fan leaves)			37	37	37	37	37	37	37	37	37	37	37	37
Cost per pound of extraction oil	**$4,000**													
Wholesale - Extraction Oil	**$7,500**	10%												
Investor Royalty Fee (%)	0.00%													

Apex Production Pens														
B2B Pen Sales			100000	100000	100000	100000	100000	100000	100000	100000	25000	25000	25000	25000
B2C Pen Sales			250	250	250	250	250	250	250	250	250	250	250	250
Total Pens			100250	100250	100250	100250	100250	100250	100250	100250	25250	25250	25250	25250
Extract required for Pens (pounds)			88.52	88.52	88.52	88.52	88.52	88.52	88.52	88.52	22.30	22.30	22.30	22.30
External Sourcing of extract required for Pens			43.25	43.25	43.25	43.25	43.25	43.25	43.25	43.25	-	-	-	-
Pen Cartriges per pound	**1,133**	0.40												
Hardware Cost at	5000	**$ 8.15**												
Hardware Cost at	7500	**$ 6.48**												
Hardware Cost at	10000	**$ 5.66**												
Hardware Cost at	25000	**$ 4.15**												
B2B Price	**$25**													
B2C Price	**$40**													
Retail Dispensary														
Price per Pound	**$5,600**	$350 per Ounce blended price												
Price per Gram	12.5													
Avg Sale (Grams including extract)	4													
Average Sale	$ 50.00													
Price Per Pound for Oil based products	**$15,000**													
Las Vegas Dispensary #1 Assumptions														
Dispensary #1 (1 = Open)	1													
Square Feet per Location	2797													
Cost per Square Foot	120.00	**COGS**												
Dispensary Sales - Year 1 Start Month	12	when the first clients start												
Clients per Day - 1st Month	350		472	477	483	489	495	501	507	513	519	525	531	538
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%													
Sales Days per Month	30													
Pounds per Month			126	128	129	131	133	134	136	137	139	141	142	144
Gross Revenue Fee as a % of Sales	6.0%	**COGS**												
4Front Commission as a % of Sales	3.0%	**COGS**												
North Las Vegas Dispensary #2 Assumptions														
Dispensary #2 (1 = Open)	1													
Square Feet per Location	6500													
Cost per Square Foot	100.00	**COGS**												
Dispensary Sales - Year 1 Start Month	12													
Clients per Day - 1st Month	350		472	477	483	489	495	501	507	513	519	525	531	538
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%													
Sales Days per Month	30													
Pounds per Month per Location			126	128	129	131	133	134	136	137	139	141	142	144
Gross Revenue Fee as a % of Sales	6.0%	**COGS**												
Investment Royalty (%)	0.00%													
4Front Commission as a % of Sales	3.0%	**COGS**												

YEAR 5

	Global		Year 05 Month 01	Year 05 Month 02	Year 05 Month 03	Year 05 Month 04	Year 05 Month 05	Year 05 Month 06	Year 05 Month 07	Year 05 Month 08	Year 05 Month 09	Year 05 Month 10	Year 05 Month 11	Year 05 Month 12
			49	50	51	52	53	54	55	56	57	58	59	60
			Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Dec-19	Jan-20	Feb-20	Mar-20
Space Dedicated to Production:														
Nye County:			-	-	-	-	-	-	-	-	-	-	-	-
			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Clark County:			5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
			1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Land Cost														
Land to Building Square Footage Ratio	3													
Land Cost per Square Foot	2.22													
Total Land Square Footage			0	0	0	0	0	0	0	0	0	0	0	0
Maximum Cultivation - Nye County														
Investor Cap Rate (%)	10.00%													
Cultivation Sq Foot per Light	25.00													
# of Lights			**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**	**1,778**
Pounds per Light per Harvest Cycle	**1.50**													
Annual Harvest Cycles	5													
Maximum Cultivation (Pounds)			**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**	**1,111**
Actual Cultivation (Pounds) - Nye County														
% of Maximum Cultivation - Phase I			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 1st Expansion			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 2nd Expansion														
Actual Cultivation (Pounds) - Phase I			686	686	686	686	686	686	686	686	686	686	686	686
Actual Cultivation (Pounds) - 1st Expansion			425	425	425	425	425	425	425	425	425	425	425	425
Actual Cultivation (Pounds) - 2nd Expansion			0	0	0	0	0	0	0	0	0	0	0	0
Total Cultivation (Pounds) - Nye County			1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111	1,111
Dried Flower from Cultivation:	85%		944	944	944	944	944	944	944	944	944	944	944	944
Derivative Extract for B2C	1.50%		16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67	16.67
Maximum Cultivation - Apex														
Investment Royalty (%)	0.00%													
Investor Cap Rate (%)	10.00%													
Cultivation Sq Foot per Light	25.00													
# of Lights			**8,404**	**8,404**	**8,404**	**8,404**	**8,404**	**8,404**	**8,404**	**8,404**	**8,404**	**8,404**	**8,404**	**8,404**
Pounds per Light per Harvest Cycle	**1.50**													
Annual Harvest Cycles	5													
Maximum Cultivation (Pounds)			**5,253**	**5,253**	**5,253**	**5,253**	**5,253**	**5,253**	**5,253**	**5,253**	**5,253**	**5,253**	**5,253**	**5,253**

Actual Cultivation (Pounds) - Apex														
% of Maximum Cultivation - Phase I			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 1st Expansion			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
% of Maximum Cultivation - 2nd Expansion			80%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Actual Cultivation (Pounds) - Phase I			668	668	668	668	668	668	668	668	668	668	668	668
Actual Cultivation (Pounds) - 1st Expansion			850	850	850	850	850	850	850	850	850	850	850	850
Actual Cultivation (Pounds) - 2nd Expansion			2988	3362	3735	3735	3735	3735	3735	3735	3735	3735	3735	3735
Total Cultivation (Pounds) - Apex			4,506	4,880	5,253	5,253	5,253	5,253	5,253	5,253	5,253	5,253	5,253	5,253
Dried Flower from Cultivation:	85%	Linked to above	3830	4148	4465	4465	4465	4465	4465	4465	4465	4465	4465	4465
Derivative Extract for B2C	1.50%	Linked to above	67.59	73.20	78.80	78.80	78.80	78.80	78.80	78.80	78.80	78.80	78.80	78.80
Total Warehouse Production vs. Disp Sales														
Nye Dried Flower			944	944	944	944	944	944	944	944	944	944	944	944
Apex Dried Flower			3,830	4,148	4,465	4,465	4,465	4,465	4,465	4,465	4,465	4,465	4,465	4,465
Total Production of Dried Flower			4,774	5,092	5,409	5,409	5,409	5,409	5,409	5,409	5,409	5,409	5,409	5,409
NLV Disp1			146	148	149	151	153	155	157	158	160	162	164	164
CLV Disp2			146	148	149	151	153	155	157	158	160	162	164	164
Total Dispensary Sales			292	295	299	302	306	309	313	317	321	325	328	328
Cultivation vs Disp Sale = Outside Purchase			**4,483**	**4,797**	**5,111**	**5,107**	**5,104**	**5,100**	**5,096**	**5,092**	**5,089**	**5,085**	**5,081**	**5,081**
Wholesale purchases expense plus broker fees	2%		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Wholesale Pricing (Per lb)														
Wholesale - Flower	$1,750	updated 2/19/15												
Wholesale - Extraction Oil	$7,500	$16.45												
Production Lines														
Trim (Pounds - not including flower, stalk, fan leaves)			37	37	37	37	37	37	37	37	37	37	37	37
Cost per pound of extraction oil	$4,000													
Wholesale - Extraction Oil	$7,500	10%												
Investor Royalty Fee (%)	0.00%													

Apex Production Pens														
B2B Pen Sales			25000	25000	25000	25000	25000	25000	25000	25000	25000	25000	5000	5000
B2C Pen Sales			250	250	250	250	250	250	250	250	250	250	250	250
Total Pens			25250	25250	25250	25250	25250	25250	25250	25250	25250	25250	5250	5250
Extract required for Pens (pounds)			22.30	22.30	22.30	22.30	22.30	22.30	22.30	22.30	22.30	22.30	4.64	4.64
External Sourcing of extract required for Pens			-	-	-	-	-	-	-	-	-	-	-	-
Pen Cartriges per pound	1,133	0.40												
Hardware Cost at	5000	$ 8.15												
Hardware Cost at	7500	$ 6.48												
Hardware Cost at	10000	$ 5.66												
Hardware Cost at	25000	$ 4.15												
B2B Price	$25													
B2C Price	$40													
Retail Dispensary														
Price per Pound	$5,600	$350 per Ounce blended price												
Price per Gram	12.5													
Avg Sale (Grams including extract)	4													
Average Sale	$ 50.00													
Price Per Pound for Oil based products	$15,000													
Las Vegas Dispensary #1 Assumptions														
Dispensary #1 (1 = Open)	1													
Square Feet per Location	2797													
Cost per Square Foot	120.00	COGS												
Dispensary Sales - Year 1 Start Month	12	when the first clients start												
Clients per Day - 1st Month	350		544	551	557	564	571	578	585	592	599	606	613	613
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%													
Sales Days per Month	30													
Pounds per Month			146	148	149	151	153	155	157	158	160	162	164	164
Gross Revenue Fee as a % of Sales	6.0%	COGS												
4Front Commission as a % of Sales	3.0%	COGS												
North Las Vegas Dispensary #2 Assumptions														
Dispensary #2 (1 = Open)	1													
Square Feet per Location	6500													
Cost per Square Foot	100.00	COGS												
Dispensary Sales - Year 1 Start Month	12													
Clients per Day - 1st Month	350		544	551	557	564	571	578	585	592	599	606	613	613
Monthly Customer Traffic Increase (Thru Yr 4)	1.2%													
Sales Days per Month	30													
Pounds per Month per Location			146	148	149	151	153	155	157	158	160	162	164	164
Gross Revenue Fee as a % of Sales	6.0%	COGS												
Investment Royalty (%)	0.00%													
4Front Commission as a % of Sales	3.0%	COGS												

APPENDIX K: DISCOUNTS – CONTROL & MARKETABILITY

The transactional value of an interest can be more or less than the value calculated by a particular method. Depending on the valuation method and transaction data utilized and whether a majority/controlling or minority/non-controlling interest is being valued, discounts or premiums from calculated values may be appropriate for reasons of marketability and/or control.

Levels of Value

The four generally accepted key levels of value for an interest in a company are:

- **Controlling interest value** (greater than 50% interest);
- **Marketable minority interest value** (Public Company Stock Equivalent Value);
- **Restricted minority/non-controlling interest value** (Public Company Restricted Stock Equivalent Value);
- **Private non-marketable/non-controlling interest value** (Private Company Stock Equivalent Value).

The "levels of value" concept establishes the basic framework for the process of valuing non-controlling interests in closely-held entities. Controlling ownership establishes the highest level of value. In measuring lower levels of value, minority/non-controlling and marketability discounts are generally applicable.

The controlling interest value is representative of the value of the enterprise as a whole (or at least that pro rata portion of the whole represented by the controlling interest). The controlling interest encompasses the rights, risks, and rewards of having controlling power over the assets and/or operations, cash flow and distributions/dividends of a business. There can be many specific features of control, but in a general sense, control is the unilateral ability to determine and influence operational, financial, and policy decisions.

Interests with absolute, unilateral control are generally considered to be marketable and therefore a marketability discount is usually not applicable. The subject interest is neither marketable nor controlling and can therefore be viewed as the applicable level of value *after* the appropriate adjustments for lack of control and marketability *and* for the fact that it represents an interest in a privately-held entity.

Minority Interest (Non-controlling) Discount

The minority (non-controlling) interest discount is a succinct way of saying that investors expect higher rates of return when they cannot control the use of corporate resources, the risk at which assets are placed and the amount or timing of distributions. Typically, an ownership interest not greater than 50.0% of the voting interests, or an interest in which control is restricted by agreement, is considered non-controlling and therefore cannot unilaterally demand its share of the underlying net asset value or any cash flows and has little, if any, discrete decision-making powers. Unless dividends or other distributions are declared, non-controlling interest benefits are indirect and linked almost entirely to the appreciation of assets and distributions under the stewardship of others.

One means of measuring the minority interest discount is to look to public market valuations of companies with operations centered on the management of various types of assets, including the investment in shares of publicly-traded operating companies. There are numerous publicly-traded investment vehicles that regularly report the value of the underlying assets or investments separate and apart from their per share price as set in the marketplace. However, the shares of these entities do not necessarily transact at the aggregated value of their underlying assets, or Net Asset Value (NAV). As such, this Price-to-NAV relationship can provide an indicator of market-driven minority (non-controlling) investor sentiment toward investing in various asset classes or types of securities. This is important as a point of comparison for similar minority or non-controlling interests in privately-held entities.

Such publicly-traded securities are not necessarily “directly comparable" to most closely-held entities; there are always fundamental differences in terms of size, asset diversification, operating objectives, and management acumen. However, the guideline public company method has, nevertheless, been noted as a reasonable comparative standard in legal precedent-setting cases. The reason for their relevance, despite the noted fundamental differences, is that the observed discounts (or premiums) to NAV are interpreted as the consensus view of the marketplace toward minority/non-controlling investments in the underlying pool of assets. As such, Price-to-NAV ratios can be illustrative of the market's valuing of fractional and non-controlling ownership interests. Furthermore, discounts and premiums in respect to NAVs are not static across time; instead they fluctuate with changes in asset composition, respective market conditions, investors’ appetite (or lack thereof) for specific asset classes and the vagaries of securities markets in general. The prices at which these securities transact in the marketplace allows for real-time inferences of investor sentiment given their lack of control in regard to the management of these investment vehicles.

The direct market valuation approach considers certain publicly-traded securities in respect to the asset composite of the Company and their aggregate similarity with the characteristics of The Interest. In this regard, Revenue Ruling 59-60 states:

> *“…in valuing unlisted securities, the value of stock or securities of corporations engaged in the same or similar line of business which are listed on an exchange should be taken into consideration along with all other factors.”*

A minority interest in a publicly-traded security is comparable to a non-controlling privately-held interest for several reasons. Amongst the relevant factors, an owner of either such interest:

1) Cannot control the distribution of earnings;
2) Cannot control the reinvestment of earnings;
3) Cannot sell the underlying assets;
4) Cannot control or manage the activities of the entity.

This following analysis identifies Closed-end Funds (CEFs) that invest in U.S. Equities (Stocks). This particular asset class was chosen as a proxy for investors’ attitudes toward the market for U.S. Equities in respect to how investors price lack of control into certain types of securities.

Closed-end funds are one of four types of registered investment companies, along with mutual (or open-end) funds, exchange-traded funds (ETFs), and unit investment trusts (UITs). Closed-end funds generally issue a fixed number of shares that are listed on a public stock exchange or traded in the over-the-counter market. The assets of a closed-end fund are professionally managed in accordance with the fund’s investment objectives and policies, and may be invested in stocks, bonds, and other securities. The market price of closed-end fund shares fluctuates like that of other publicly traded securities and is determined by supply and demand in the marketplace.

The relationship between a fund’s share price and its NAV is referred to as the Price-to-NAV ratio. Funds with proven management and established track records sometimes trade at premiums to their underlying NAV. Conversely, funds that have poor performance records or are not well known can trade at a discount. However, price-to-NAV ratios do not remain static over time. In addition to fund-specific factors, market prices are also influenced by investors’ preferences for various asset classes and the attractiveness (or lack thereof) of certain markets and sectors across time.

The specific closed-end funds chosen for analysis were in respect to the Company's anticipated operation as a going concern. The CEFs under analysis were sourced from all available CEFs currently trading as of February 2016 as reported by CEFConnect.com and the Closed-end Fund Association (CEFA.com). All data used in the analysis represented month-end data and was provided by Morningstar®. The specific funds included in the analysis are noted below.

U.S. Equity (Stocks) – Closed-end Funds

All market price and NAV values used in the following analysis represent month-end data. Forty-five (45) CEFs were identified from the following categories and asset classes: 1) Dividend Equity; 2) Equity Taxed Advantaged; 3) General Equity; and 4) Growth & Income Equity. These CEFs were further screened on the basis of asset diversification, country allocation, asset allocation and source of distributions. CEFs were eliminated from consideration due to large international equity exposure, large fixed-income (bond) positions, concentrated sector focus, and cases where distributions included a return of investor capital. From the forty-five (45) CEFs originally identified, fifteen (15) survived the noted screening process. The U.S. Equity Closed-end Funds presented below own largely, if not entirely, U.S. equity-oriented securities such as individual common and preferred stock and stock-oriented mutual funds or other securities related to or dependent on U.S. equity markets such options or convertible securities.

The values presented in the table below represent the average of month-end Price-to-NAV ratios for each year depicted except where full year data was not available for a particular fund's initial year. The February 2016 values represent the trailing twelve month average of month-end Price-to-NAV ratios.

U.S. Equity - Closed-end Funds							Entire
Fund Name	**Dec-11**	**Dec-12**	**Dec-13**	**Dec-14**	**Dec-15**	**Feb-16**	Period
Adams Express:ADX	0.855	0.860	0.864	0.857	0.858	0.855	0.855
AGIC Equity & Convertible Inc:NIE	0.905	0.898	0.882	0.879	0.872	0.866	0.890
Boulder Growth & Income:BIF	0.822	0.785	0.783	0.806	0.797	0.786	0.823
Central Securities Corporation:CET	0.842	0.822	0.815	0.836	0.824	0.816	0.826
Eagle Capital Growth:GRF	0.859	0.879	0.898	0.902	0.874	0.880	0.873
First Trust Active Div Income:FAV	0.988	0.902	0.895	0.894	0.879	0.885	0.952
General American Investors:GAM	0.853	0.854	0.860	0.857	0.847	0.840	0.852
Guggenheim Enhanced Eq. Strtgy:GGE	0.891	0.892	0.947	0.951	0.900	0.894	0.913
Guggenheim EW Enhanced Equity:GEQ	0.938	0.970	0.913	0.925	0.931	0.916	0.932
Liberty All-Star Growth:ASG	0.923	0.910	0.909	0.945	0.903	0.903	0.899
Liberty All-Star Equity:USA	0.880	0.886	0.901	0.935	0.864	0.859	0.873
Nuveen Core Equity Alpha:JCE	0.936	0.926	0.937	0.968	0.954	0.947	0.925
Source Capital Inc:SOR	0.891	0.888	0.909	0.896	0.909	0.912	0.893
Tri-Continental Corporation:TY	0.858	0.856	0.864	0.858	0.852	0.850	0.862
Zweig Fund:ZF	0.892	0.884	0.876	0.885	0.879	0.878	0.878
Average	0.889	0.881	0.884	0.893	0.876	0.873	0.883
First Quartile	0.857	0.858	0.864	0.858	0.855	0.852	0.858
Median	0.891	0.886	0.895	0.894	0.874	0.878	0.878
Third Quartile	0.914	0.900	0.909	0.930	0.901	0.899	0.906

Source: Morningstar, Closed-end Fund Association, CEF-Connect.com

As noted in the previous table, the first quartile of average Price-to-NAV ratios over the time period analyzed ranged from .813 to .916, representing a high discount of 18.7% and a low discount of 8.4%, respectively. The average Price-to-NAV ratios represented by the third quartile ranged from 0.859 to 0.995, denoting a high discount of 14.1% and a low discount of 0.5%, respectively.

The average Price-to-NAV ratio for the February 2016 12-month trailing period was .873, yielding a discount of 12.7%. The median Price-to-NAV for the same period was .878, also denoting a discount of 12.2%. The first quartile Price-to-NAV ratio for the February 2016 12-month trailing period was .852 yielding a discount of 14.8%. The third quartile Price-to-NAV ratio for the same period was .899 yielding a discount of 10.1%.

For purposes of the application of a discount for lack of control (DLOC) in respect to The Interest, the third quartile Price-to-NAV ratio for the February 2016 12-month trailing period was deemed to be most appropriate. Therefore, a DLOC of 10% (rounded) was applied to that portion of the Company's value represented by The Interest.

Discount for Lack of Marketability

Another consideration in determining the fair market value of the subject interest is that there is no public market for The Interest and its transferability is restricted by the Company's governing documents and securities regulations. Unlike holders of registered securities in which a marketplace exists, an owner of an interest in the Company has limited market access. Consequently, a discount for lack of marketability needs to be considered in addition to the discount for lack of control. Furthermore, The Interest cannot force registration of the security to create marketability. Without market access, an investor's ability to control the timing of potential gains, avoid losses, and minimize the opportunity cost associated with alternative investments is severely impaired.

The marketability discount is a way of saying that investors with limited market access expect even higher rates of return when an investment cannot be resold within a reasonable amount of time and without incurring extraordinary expense association with such disposition. In the case of restricted stock in publicly-traded securities, the market price of non-marketable shares are discounted relative to the price of its otherwise identical, yet freely-trading counterpart. As for shares of closely-held entities that do not pay regular dividends, have low expected rates of return, extended terms of cash disposition, and/or impart smaller levels of control, they may be entitled to discounts over and above those observed in the restricted shares of publicly-traded companies.

The discount for lack marketability of an investment is generally determined by the following four basic factors: 1) perceived holding period; 2) level of risk; 3) potential for capital appreciation; and 4) expected cash distributions. The marketability discount should be more when the expected holding period increases, there is little or no expectation of cash distributions, or when there is uncertainty about capital appreciation. Conversely, the marketability discount should be lower when there are unique prospects for capital appreciation, when there are expected cash distributions, or when there is a clear near-term view to a liquidating event.

Valuators have historically referenced four main sources of evidence when determining appropriate levels of marketability discounts: 1) Restricted Stock Studies; 2) Pre-IPO Studies; 3) Cost of Flotation Studies; and 4) Tax Court cases. The first three sources are directly observable in the marketplace. Restricted Stock Studies and Pre-IPO studies examine transactions in the shares of publicly-held companies to measure the effect of the absence of immediate marketability. Because the cost of flotation illustrates only a portion of the costs of illiquidity, these studies have been largely disregarded as an indicator of estimating the entire applicable marketability discount. The accuracy of IPO Studies has also been called into question.

While Tax Court decisions regarding valuation discounts are *indirect evidence* relating to marketability, they do provide *direct evidence* of the informational and methodological views of the court. Courts have consistently urged the use of analytical inference applied to the specific facts and circumstances of the subject interest to assess the level of marketability discount rather than the use of the discounts accorded by individual court decisions themselves. Inferring any particular indication of discounts from Tax Court cases necessarily ignores the specific facts and circumstances of the individual case rulings. As such, extrapolating any particular decision(s) can lead to erroneous conclusions when applied to other sets of circumstances.

Restricted Stock Studies

Restricted stock describes shares of publicly-traded companies that are subject to limitations (restrictions) regarding transfer and/or trading of the shares. A restricted stock discount measures the percentage difference in the market price of a freely-traded public security and the price at which restricted shares of the same company were purchased. This observable difference is unique because it specifically isolates the value of marketability from all other factors. Restricted stock is identical in all respects to the freely-traded stock of a public company except that it is restricted from trading on the open market and/or it may be limited as to the number of shares that can be traded within a specific period of time.

The study of restricted stock transactions became a viable research tool in the late 1960s and early 1970s when a number of publicly-traded closed-end mutual funds were established. These funds made investments in the restricted shares of other publicly-traded companies. Applicable public disclosure required that these funds report the prices at which they had purchased restricted shares as well as the present market price of each investment's unrestricted shares. This provided the basic transactional data found in the published studies.

The following table summarizes well known previously published restricted stock studies that have been undertaken in an effort to aid business appraisers in better understanding the effects that marketability restrictions have on equity shares in public companies. The general theory is that in better understanding the valuation implications in respect to public company share prices, the valuator can gain helpful insight as to the applicability of the studies to non-marketable interests in privately-held concerns.

Summary of Restricted Stock Studies

Study	Publication Year	Years Covered	Sample Size	Average Marketability Discount
SEC Institutional Investor (All)	1971	1966 – 1969	398	25.8%
SEC Non-reporting OTC Companies	1971	1966 – 1969	112	32.6%
Gelman	1972	1968 – 1970	89	33.0%
Moroney	1973	1969 – 1972	146	35.6%
Maher	1976	1969 – 1973	34	35.4%
Trout	1977	1968 – 1972	60	33.5%
Standard Research Consultants (SRC)	1983	1978 – 1982	28	45.0%*
Willamette Management Associates	1985	1981 – 1984	33	31.2%
Silber	1991	1981 – 1989	69	33.8%
Hertzel/Smith (Private Equity Placement)	1993	1980 – 1987	106	20.0%
FMV Opinions, Inc. (FMV)	1994	1979 – 1992	>100	23.0%
FMV Restricted Stock Study	1998	1980 – 1997	230	22.3%
Bruce A. Johnson	1999	1991 – 1995	72	20.0%
Management Planning Inc. (MPI)	2000	1980 – 1996	53	27.1%
Average of all above studies Average Marketability Discounts				**28.7%**
Exhibit C-2	*Median: not included in above average of averages.			

In the determination of the appropriate marketability discount for The Interest, the results of applicable Restricted Stock Studies were investigated to determine a base from which to derive minority ownership level values. The table below summarizes source opinions of the appropriate percentage discount to apply in instances where a lack of marketability discount is appropriate. Subjective weightings have been applied to the suggested discount levels compiled from the various sources. Adjustments have been made for the investment characteristics of The Interest and appropriate discounts for lack of marketability have been determined.

Discount for Lack of Marketability Weighted Average			
Source Evidence	Suggested Discount	Weight	Weighted Avg. DLOM
SEC Institutional	26%	50%	13.0%
Management Planning Inc. (MPI)	27%	50%	13.5%
Weighted Avg. Discount for Lack of Marketability		100%	26.5%
Weighted Average Discount for Lack of Marketability (DLOM)			**26.5%**

In the above determination of the appropriate DLOM, the two noted restricted stock studies were deemed most applicable to The Interest for purpose of this valuation exercise for the following reasons:

1. These studies represent the earliest (and most comprehensive) and the most recent published studies before the reduction of the Rule 144 restriction period from two years to one year; in fact, the SEC study was conducted before Rule 144 was even promulgated;
2. Many of the other studies were either extensions of or an attempt to dissect the SEC study, but with used limited universes of transactions;
3. Later studies (including MPI) have attempted to separate the true liquidity discount from the "cost of information" discount, but have found that the two added together results in marketability discounts very similar to those observed in the original SEC study;
4. Trout & Silber studies relied on formulamatic approaches in direct conflict with the Revenue Ruling 77-287 statement that "no automatic formulas could be used to determine discounts for lack of marketability."
5. Still other studies violate the "hypothetical buy and seller" standard necessitated by Revenue Ruling 59-60.
6. The Johnson study covered a period of time that became known as "irrational exuberance" as noted by then Federal Reserve Chairman, Alan Greenspan, remarking that asset prices (stocks) were reaching an unsustainable level of value. As such, the demand for equities was so great that discounts for even restricted stock was being compressed in hopes that it would soon be tradable;
7. The Standard Research study by Stryker and Pittock utilized a universe in which 60% of the companies had deficit earnings. In contrast, the SEC study screened out deals which involved such companies.

In respect to The Interest, the Company has a contractually-mandated obligation to purchase The Interest from an expulsed member. Therefore, the lack of marketability factor is somewhat mitigated by the language of the Agreement. As such the DLOM applied to The Interest should be less than the 26.5% determined through the analysis of the restricted stock studies. As a result, it was reasoned that a DLOM of 20% more appropriately reflected the impaired marketability characteristics of The Interest.

EXHIBITS

EXHIBIT A – DUFF & PHELPS RISK PREMIUM DATA

In the application of the buildup method for the determination of the Cost of Equity Premium, Duff & Phelps recommends the use of certain "normalized" risk premiums as opposed to the risk premiums directly observable in the market. The following excerpts from the 2015 & 2016 Duff & Phelps Risk Premium Reports provide a discussion of the various risk premium components used in the buildup method, including the reasoning behind the use of *normalized* risk premium data.

Adjusting Risk Premium Report Data to Changing Economic Conditions

When estimating cost of equity capital (COE) using the *Duff & Phelps Risk Premium Report*, a *Report* user typically starts by making a few basic choices: an equity risk premium (ERP), a risk-free rate (*Rf*), and a risk premium over the risk-free rate (*RPm+s*) or risk premium over CAPM (i.e., "size premium") (*RPs*). In addition, the ERP Adjustment must be properly applied to account for the difference between the forward-looking ERP as of the valuation date that the *Report* user has selected to use in his or her COE calculations, and the historical (1963–present) ERP that was used as a *convention* in the calculations performed to create the Report. These choices are briefly defined as follows:

- Equity risk premium (ERP): The equity risk premium (ERP) is a forward-looking concept which represents the extra return that investors demand to compensate them for investing in a diversified portfolio of common stocks rather than investing in risk-free securities (typically Treasury bonds). There is no single universally accepted methodology for estimating the equity risk premium (ERP); consequently there is wide diversity in practice among academics and financial advisors with regards to recommended ERP estimates. For this reason, Duff & Phelps employs a two-dimensional process that takes into account a broad range of economic information and multiple ERP estimation methodologies to arrive at our recommendation.

- Risk-free rate (*Rf*): A risk-free rate is the return available on a security that the market generally regards as free of the risk of default. Generally, the maturity of the risk-free security should match the expected life of the investment being valued (20-year Constant- Maturity U.S. Treasury bonds are commonly used as a proxy, in the context of business valuations). The Financial Crisis of 2008 was followed by periods of significant economic and financial distress, during which yields on U.S. government bonds might be considered artificially low due to a "flight to quality", or other factors. During these periods, Duff & Phelps employs a "normalized" risk-free rate.

- Risk premium over the risk-free rate (*RPm+s*): These premia reflect risk in terms of the combined effect of market risk and size risk in excess of the risk-free rate. These premia can be added to a risk-free rate (*Rf*) to estimate cost of equity capital (COE) in a "buildup" method. Risk premia over the risk-free rate (*RPm+s*) always require application of the ERP Adjustment.

- ERP Adjustment: The ERP Adjustment accounts for the difference between the forward-looking ERP as of the valuation date that the *Report* user has selected to use in his or her COE calculations, and the historical (1963–present) ERP that was used as a *convention* in the calculations performed to create the *Report*. Size premia over the risk-free rate (*RPm+s*) always require application of the ERP Adjustment.

The "Great Recession" and the accompanying economic instability which began in 2007 have necessitated a reconsideration of the methods of analysis traditionally used to estimate cost of equity capital (i.e., COE). In this section, the difficulty in pricing risk during these uncertain economic times is first discussed as related to two key inputs in COE estimates, the equity risk premium (ERP) and the risk-free rate (*Rf*), followed by a discussion of the proper application of the "ERP Adjustment".

The Duff & Phelps Recommended ERP

The equity risk premium (ERP), sometimes referred to as the "market" risk premium, is defined as the return investors expect as compensation for assuming the additional risk associated with an investment in a diversified portfolio of common stocks in excess of the return they would expect from an investment in risk-free securities.

The equity risk premium (ERP) is a key input used in most methods for estimating the cost of equity capital, including both of the methods used in the *Risk Premium Report* (the buildup method and the CAPM). The ERP (often interchangeably referred to as the market risk premium) is defined as the extra return over the expected yield on risk-free securities that investors expect to receive from an investment in a diversified portfolio of common stocks.

The Duff & Phelps Recommended Equity Risk Premium Methodology is a Two-Dimensional Process

There is no single universally accepted methodology for estimating the equity risk premium; consequently there is wide diversity in practice among academics and financial advisors with regards to recommended ERP estimates. For this reason, Duff & Phelps employs a two-dimensional process that takes into account a broad range of economic information and multiple ERP estimation methodologies to arrive at our recommendation.

Long-term research indicates that the ERP is cyclical. We use the term *normal*, or *unconditional* ERP to mean the long-term average ERP without regard to current market conditions. This concept differs from the *conditional* ERP, which reflects current economic conditions. The "unconditional" ERP range versus a "conditional" ERP is further distinguished as follows:

"What is the range?"

- Unconditional ERP Range – The objective is to establish a reasonable range for a normal or unconditional ERP that can be expected over an entire business cycle. Based on the analysis of academic and financial literature and various empirical studies, "historical" (i.e. "ex-ante") ERP models, and so-called "forward-looking" (i.e., "ex-post") ERP models based upon analysts' estimates of future performance, we have concluded that a reasonable long-term estimate of the normal or unconditional ERP for the U.S. is in the range of 3.5% to 6.0%.

"Where are we in the range?"

- Conditional (i.e., "Recommended") ERP – The objective is to determine where within the unconditional ERP range the conditional ERP should be, based on current economic conditions. Research has shown that ERP is cyclical during the business cycle. When the economy is near (or in) a recession, the conditional ERP is at the higher end of the normal, or unconditional ERP range; conversely, when the economy improves, the conditional ERP reverts back toward the middle of the range. At the peak of an economic expansion, the conditional ERP migrates closer to the lower end of the range.

Duff & Phelps ERP Recommendation is Currently Estimated in Conjunction with a Normalized Risk-Free Rate

All ERP estimates are, by definition, computed relative to a risk-free rate. In other words, the ERP is defined as the return investors expect as compensation for assuming the additional risk associated with an investment in a diversified portfolio of common stocks in excess of the return they would expect from an investment in risk-free securities. A risk-free rate is the return available on a security that the market generally regards as free of the risk of default.229

In developing our current U.S. ERP, Duff & Phelps matched this ERP with a "normalized" 20-year yield on U.S. government bonds of 4.0% as a proxy for the risk-free rate (*Rf*). Because investors expect that the returns from an investment in equities will be *at least as much* as the returns that they would receive from an investment in a risk-free asset, most of the widely used methods for estimating the cost of equity capital (e.g., build-up method, capital asset pricing model, and Fama-French three-factor model) *begin* with the yield-to-maturity on U.S. government securities (as of the valuation date), and then *build* upon that.

Risk-Free Rate Normalization

The yield of a risk-free security (i.e., the risk-free rate, *Rf*) is one of the basic building blocks used to develop COE estimates. A risk-free rate is the return available on a security that the market generally regards as free of the risk of default. The risk-free rate reflects three components:

- Real rate of interest: A real return for lending the funds over the investment period, thus forgoing consumption for which the funds otherwise could be used.
- Expected Inflation: The expected rate of inflation over the term of the risk-free investment.
- Maturity risk or investment rate risk: The risk that the investment's principal market value will rise or fall during the period to maturity as a function of changes in interest rates (longer-term bonds are more sensitive to changes in interest rates than shorter-term bonds).

The real rate of interest represents the "rental rate" for use of the funds. The expected inflation represents the consensus estimate of the (geometric) average of expected inflation during the period in which the risk-free instrument is outstanding (e.g., 20-years for 20-year U.S. government bonds). Maturity risk (embodied in what is commonly referred to as the "maturity premium" or "horizon premium") may be described simply as the extra return that investors demand for holding longer-term government securities rather than holding shorter-term government securities.

Many analysts select the 20-year (constant-maturity) U.S. government bond yield as of the valuation date as a reasonable proxy for the risk-free rate. However, during times of extreme economic distress, yields on U.S. government bonds may be artificially low due to a "flight to quality", or other factors. For example, rapid shifts of investments may cause Treasury bond yields to be driven down and be less than the theoretical construct of a risk-free rate (i.e., real rate of interest + expected inflation + horizon premium). Other factors might include governmental intervention, such as the period 1942 through 1951 when the U.S. government placed a de-facto ceiling on Treasury bond rates. The result was that long-term yields averaged 2.3 percent over this period, while inflation averaged 5.7 percent. More recent examples might include a low federal funds "target" rate (at the shorter end of the yield curve), or the practice of so-called "quantitative easing", by which the central bank directly injects money into the economy by buying financial assets. Since prices are inversely related to yields, by buying fixed income securities in massive quantities the central bank pushes their prices up, which in turn causes yields to decline. By buyer longer-term securities, this has the effect of lowering yields in the longer term end of the yield curve.

During periods in which risk-free rates appear to be abnormally low due to flight to quality issues (or other factors), one might consider either normalizing the risk-free rate or adjusting the equity risk premium (ERP). Normalizing the risk-free rate is likely a more direct (and more easily implemented) analysis than adjusting the "conditional" equity risk premium (ERP) due to a *temporary* reduction in the yields on risk-free securities. To be clear, one would *ideally* the spot Treasury yield as of the valuation date. However, during times of flight to quality (or other factors), a lower risk-free rate implies a lower cost of capital – the opposite of what one would expect in times of relative distress, and so an adjustment may be appropriate.

As of December 31, 2011, the Duff & Phelps Recommended ERP was 6.0 percent. On January 15, 2012, the U.S. ERP estimate was decreased to 5.5 percent.

Based on information available after January 1, 2013, as of February 28, 2013, Duff & Phelps lowered its ERP recommendation to 5.0%, coupled with a normalized 4.0% risk-free rate (implying a 9.0% base U.S. cost of equity capital).

TO BE CLEAR: the ERP that is recommended for use with valuations from February 28, 2013 through December 31, 2015 was 5.0%, coupled with a normalized risk-free rate of 4.0%.

DUFF & PHELPS – COST OF EQUITY CAPITAL
RISK PREMIUM CALCULATOR – ANALYSIS RESULTS

Subject Company

NuVeda, LLC

Valuation Date

March 10, 2016

Report Date

May 26, 2016

Summary of User of Inputs – Size Study and Risk Studies

GENERAL INPUTS: Values as of the March 10, 2016 valuation date.				
Subject Company:	Valuation date:	Equity Risk Premium:[1]	Beta:[2]	Industry Risk Premium:[3]
NuVeda	March 10, 2016	5.5%	2.00	2.0%
SIZE STUDY INPUTS: Values for the most recent year relative to the March 10, 2016 valuation date.				
Market Value of Common Equity (in $millions)	Book Value of Equity (in $millions)	5-Year Average Net Income (in $millions)	Market Value of Invested Capital (in $millions)	Source of risk premia information in this report:
$35.00	$24.00	$35.00	$40.00	2016 Duff & Phelps Risk Premium Report
Total Assets (in $millions)	5-Year Average EBITDA (in $millions)	Net Sales (in $millions)	Number of Employees	
$25.00	$35.00	$86.00	10	

Key Inputs

Yields and Beta

Risk Free Rate (R_f) *Long-term (20-year) U.S. Treasury Bond Yield (constant maturity).*	4.0%	**Beta (β)** *A statistical measure of systematic risk of a stock; the sensitivity of a stock's price relative to movements of a specific market benchmark or index.*	2.0

Premia

Equity Risk Premium (ERP) *Long-horizon expected return of large stocks over risk free securities.*	5.5%	**Median Premium Over Risk Free Rate (RP_{m+s})** *The long-horizon expected return of stocks over risk free securities in terms of the combined effect of market risk and size risk.*	13.4%
Median Premium Over CAPM (RP_s) *The return on small company stocks in excess of that predicted by CAPM (also known as "beta-adjusted size premium").*	6.2%		

Adjustments

ERP Adjustment *An adjustment made to reconcile a historically-derived ERP with a forward-looking ERP as of the valuation date.*	0.6%	**Adjusted Industry Risk Premium (IRP_{adj})** *An IRP adjusted for the difference between the historical ERP used as an input to compute the IRP, and the forward-looking ERP chosen as of the valuation date.*	1.6%

Cost of Equity Capital (COE), All Models

Size Study

Buildup 1

$COE_{Buildup\ 1}$	=	R_f	+	RP_{m+s}	+	*ERP Adjustment*
18.0%	=	4.0%	+	13.4%	+	0.6%

Buildup 2

$COE_{Buildup\ 2}$	=	R_f	+	ERP	+	RP_s	+	IRP_{adj}
17.3%	=	4.0%	+	5.5%	+	6.2%	+	1.6%

Capital asset pricing model (CAPM)

COE_{CAPM}	=	R_f	+	$(\beta \times ERP)$	+	RP_s
21.2%	=	4.0%	+	$(2.0 \times 5.5\%)$	+	6.2%

Concluded Cost of Equity Capital (COE)

These methods resulted in a range of cost of equity capital estimates for NuVeda, LLC of 17.3% to 21.2%.

Cost of Equity Capital Estimates – Summary of all Size Study models

Subject Company:	Valuation date:	Beta: a beta (β) of 2.00 has been entered by the USER to use in Capital Asset Pricing Model (CAPM) calculations of COE estimates.		Source of risk premia information in this report:
NuVeda	March 10, 2016	2.0		2016 Duff & Phelps Risk Premium Report
Equity Risk Premium (ERP) entered by USER and used in all calculations:	Historical Equity Risk Premium (ERP) 1963–2015:	ERP adjustment: an ERP adjustment of 0.6% is added to Buildup 1, Risk Study (Buildup 3), and Unlevered Risk premia to adjust for the difference in the historical ERP (1963–2015) and the ERP entered by the USER, as calculated below:	Long-term risk free rate as of March 10, 2016 (used in all calculations):	Adjusted Industry Risk Premium (IRP): an adjusted IRP of 1.6% is used in the 'Buildup 2' cost of equity estimate. The adjusted IRP is calculated by: (IRP entered by the USER) x (the ERP entered by the USER) / (historical ERP (1926–2015)), as shown below:
5.5%	4.9%	5.5% - 4.9% = 0.6%	4.0%	2.0% x (5.5% / 6.9%) = 1.6%

Summary of Cost of Equity (COE) Estimates

Buildup 1 COE Estimates	*COE = (Risk Free Rate) + (Smoothed Risk Premium Over Risk Free Rate) + (Equity Risk Premium Adjustment)*		**CAPM COE Estimates**	*COE = (Risk Free Rate) + (Beta x Equity Risk Premium) + (Smoothed Risk Premium Over CAPM)*	
	Mean	Median		Mean	Median
Guideline Portfolio Method	16.3%	16.5%	Guideline Portfolio Method	20.2%	20.4%
Regression Equation Method	17.7%	18.0%	Regression Equation Method	21.2%	21.2%
Buildup 2 COE Estimates	*COE = (Risk Free Rate) + (Equity Risk Premium) + (Smoothed Risk Premium Over CAPM) + (Adjusted Industry Risk Premium)*		**Unlevered COE Estimates**	*Unlevered COE = (Risk Free Rate) + (Smoothed Unlevered Risk Premium Over Risk Free Rate) + (Equity Risk Premium Adjustment)*	
	Mean	Median		Mean	Median
Guideline Portfolio Method	16.3%	16.5%	Guideline Portfolio Method	14.9%	15.1%
Regression Equation Method	17.3%	17.3%	Regression Equation Method	16.2%	16.5%

EXHIBIT B – APEX LAND APPRAISAL COVER LETTER

BRITTON-ADAMO GROUP
REAL ESTATE APPRAISERS & CONSULTANTS

April 8, 2016

Mr. Shane Terry
AHC Group
222 Karen Ave., #3305
Las Vegas, NV 89109

RE: 15.57 Gross Acres of Vacant Land Located in the Mountain View Industrial Park in Apex, North Las Vegas, Nevada 89124

APN: 103-15-010-018
Owner: NuVeda, LLC

Dear Mr. Terry:

At your request, I have completed an appraisal of the above referenced property. The subject property consists of one parcel of vacant land totaling 15.57 gross acres located in Apex, approximately 20 miles northeast of downtown Las Vegas, Nevada. The land is zoned M-2, General Industrial and is within an industrial park containing over 3,000 acres. Conditional use permits to allow a Medical Marijuana Facility (Production & Cultivation) were approved in 2014. The subject is within the development plans of the proposed Faraday Future electric automobile manufacturing plant that encompasses about 900 acres in Apex. The property is legally and otherwise described in the attached report containing data and discussions from which the value estimate was formed.

The purpose of this appraisal is to estimate the retrospective market value of the subject property as of March 10, 2016. We were contracted to complete the appraisal after this date and therefore, did not inspect the subject on March 10, 2016. Therefore, certain assumptions regarding the subject have been made for this valuation. The subject's physical characteristics are assumed to be similar to those observed at the property on the date of inspection, April 4, 2016.

The client and intended user of this appraisal is Shane Terry. The appraisal has been prepared for the sole and exclusive use of the stated client/intended user and is not to be relied upon by any third parties for any purpose. The intended use of the appraisal is to assist the client in the determining the value of an ownership interest in the property. The conclusions and opinions in the appraisal are not intended for any other purpose other than the above stated intended use. The appraiser and the appraisal firm assume no responsibility or liability resulting from the use of all or part of the appraisal for any other use other than the stated above.

Per the scope of this assignment, the appraisal is presented in a Restricted report format, as defined by the Uniform Standards of Professional Appraisal Practice ("USPAP"). This Restricted Appraisal Report sets forth a brief synopsis of the subject property, and the market value estimates concluded. A Restricted Appraisal Report is intended to comply with the minimum reporting requirements, set forth under Standards Rule 2-2(b) of USPAP. As such, this report includes the minimum level of information regarding the subject property, market data, and the reasoning and analysis used in the appraisal process to develop the appraiser's opinions of value. Therefore, it may not be understood without additional information supporting documentation, market data, and the reasoning and analysis, retained within the appraiser's work files. The depth of discussion contained in this report is specific to the needs of the stated client and only for the intended use stated within this report.

Overall, it is my opinion that the retrospective market value of the fee simple interest in the subject property, as of March 10, 2016, is as follows:

TWO MILLION DOLLARS
$2,000,000

The above value conclusion is subject to the assumptions and limiting conditions contained in the attachments to this report. The estimated exposure time on March 10, 2016 would have been 12 months. Based on the market activity, and recognizing the location characteristics of the subject and the projected in demand, the marketing time is concluded at 6 months or less. With the anticipated development in the area, particularly the Faraday Future automobile manufacturing plant which was announced in December of 2015 with the development plans made public in February of 2016, the demand for land in the market area has increased and is expected to be strong in the foreseeable future.

Thank you for the opportunity to assist you in this important matter. If you have any questions regarding this report or the contents herein, we may be contacted at 702-558-2144.

Respectfully,

Kendal J. Britton
Certified General Appraiser #01993
State of Nevada

55 South Gibson Road • Suite 104 • Henderson, NV 89012
Phone 702.558.2144 • Fax 702.558.9933

EXPERT REBUTTAL REPORT

SHANE TERRY, et al.
vs.
NUVEDA, LLC, et al.

AMERICAN ARBITRATION ASSOCIATION

Case No. AAA No. A-15-728510-B

November 28, 2016

Prepared by
Donald R. Parker, CFA, CVA

Gryphon Valuation Consultants, Inc.

Las Vegas, Nevada
702.870.VALU (8258)

www.BizVals.com

CONFIDENTIAL

Mr. Shane Terry November 29, 2016

c/o Garman Turner Gordon, LLP
650 White Drive Suite 100
Las Vegas, Nevada 89119

ATTN: Erika Pike Turner Esq.
Dylan Ciciliano, Esq.

RE: SHANE TERRY, et al. CLAIMANTS vs. NUVEDA, LLC, A NEVADA LIMITED LIABILITY COMPANY. et al. DEFENDANTS, AMERICAN ARBITRATION ASSOCIATION, CASE NO.A-15-728510-B and RELATED CASES.

Dear Mr. Terry:

It has been requested by your legal counsel that I provide an expert rebuttal report in respect to the *REPORT ON THE FAIR MARKET VALUE OF NUVEDA, LLC AS OF MARCH 10, 2016* produced by Terrence M. Clauretie, Ph.D. dated October 31, 016 [sic] ("Clauretie Report") in reference to the above-noted matter ("The Case").

The Clauretie Report contains certain analyses of the Business Valuation Report dated May 5, 2016 prepared by Gryphon Valuation Consultants, Inc. ("Gryphon") under a separate Valuation Engagement Agreement dated March 17, 2016 ("Gryphon Report"). Gryphon was retained by the Client to provide a conclusion of value for a 22.88% voting interest ("The Interest") in NuVeda, LLC ("Company"), a Nevada limited liability company, resulting in the production of the Gryphon Report. The Gryphon Report is referred to as the "Parker report" in the Clauretie Report. To avoid confusion, the Gryphon Report will hereinafter be referred to as the "Parker Report."

It should be noted that the Parker Report contains the following language:

"**This report is not intended to serve as a basis for expert testimony in a court of law or other governmental agency without further analysis and any resulting documentation.**"

As such, Gryphon, through my direction, reserves the right to modify, supplement, amend or otherwise update the Parker Report prior to its introduction as an "expert report" for purposes of litigation in a court of law or other governmental agency.

Summary Analyses and Opinions

Upon review and analysis of the Clauretie Report, I offer the following summary analyses and opinions:

- The Clauretie Report mischaracterizes and draws incorrect conclusions regarding "reasonable certainty" as it pertains to the valuation methodologies employed and conclusions drawn in the Parker Report.
- The Clauretie Report incorrectly implies that the lack of existing operations precludes the reasonable estimation of fair market value of the Company under the going concern premise of value and is therefore problematic in respect to the reasonable certainty requirement.

- The assertion that because as of the Valuation Date the Company had not yet engaged in operations, the applicable standard of value was liquidation value is patently false.
- The implication that the Company failed "to engage in operations as a direct result of the litigation in this matter" is an incorrect attribution of causation.
- The allegation that the "litigation in this matter precludes a reasonable expectation that investors would advance funds to the enterprise to meet its operations prior to realizing any profits" ignores actual events and the fact set at hand.

<u>Qualifications</u>

In offering my analyses and expert rebuttal opinions, I have relied on my skill, experience, training and specialized knowledge in the areas of financial analysis and business valuation. My qualifications and a list of cases in which I have been designated an expert can be found in Appendix A. Materials I have relied upon are listed in Appendix B.

I do not have any present or contemplated financial interest in any of the companies or operations discussed herein nor do I have any relationship with any parties to The Case that would interfere with my ability to provide independent and objective judgment. Compensation for my work in this matter is based upon normal billing rates and is in no way contingent upon any opinion or outcome concerning The Case.

Respectfully Submitted,

Donald R. Parker, CFA, CVA
Gryphon Valuation Consultants, Inc.

The New Business Rule & Reasonable Certainty

The New Business Rule vs. the Modern Rule

The Clauretie Report did not explicitly refer to the New Business Rule, but rather implies that because the Company was not operational as of the Valuation Date, that "the reasonable certainty requirement becomes very problematic." The following provides a definition of the New Business Rule and a subsequent explanation as to why most states have abandoned the rule.[1]

> **The "New Business Rule"**
> In its strongest form, this rule prohibits a plaintiff from recovering any lost profits for a newly established enterprise: "[A] new business, or an existing business with a new product, cannot recover lost profits because the future profits of a new business cannot be ascertained with any degree of certainty."[2] The justification for the new business rule traditionally has been that the concerns regarding the speculativeness of lost-profits claims are even stronger in the context of an enterprise with no history of revenue and profits. The point at which a business ceases to be "new" appears to be an individualized, fact-specific question, but some cases make clear that an enterprise is not necessarily immunized from the new business rule merely by making its first sale.[3]
>
> **Rule not applicable in most states**
> Most states either have never followed the new business rule or have abandoned that rule,[4] and others that once followed it may be in the process of abandoning that rule.[5] In part, **this rejection of the new business rule has been fueled by courts' view that the rule operates unfairly by punishing business owners for their failure to point to a track record of profits where the lack of such a track record is itself the result of the defendant's conduct.**[6] [Emphasis added]

The following legal cases are noted only for reference; I am not drawing, nor am I qualified to draw, any legal inference from any of these cases in respect to The Case or any other instance.

These cases reject the new-business rule and hold that lost profits of an unestablished business may be recovered if proven with reasonable certainty[7]:

- Federal:
  - *Energy Capital Corp. v. United States,* 302 F.3d 1314 (Fed. Cir. 2002).
  - *Humetrix, Inc. v. Gemplus S.C.A.,* 268 F.3d 910 (9th Cir. 2001) (California law).
  - *MindGames, Inc. v. Western Publishing Co.,* 218 F.3d 652 (7th Cir. 2000).
- California: *Kids' Universe v. In2Labs,* 95 Cal. App. 4th 870, 116 Cal. Rptr. 2d 158 (2002).
- Texas: *Aboud v. Schlichtemeier, 6* S.W.3d 742 (Tex. App. 1999) (plaintiff physician can recover damages for the value of lost business opportunity to develop cancer treatment center

[1] Business Torts Journal • FALL 200,7ABA Section Of Litigation, Proving and Defending Lost-Profits Claims, Joseph Wylie and Christopher Fahy
[2] Kinesoft Dev. Corp. v. Softbank Holdings, Inc., 139 F. Supp. 2d 869, 908 (N.D. Ill. 2001) (applying Illinois law).
[3] . See, e.g., Clark v. Scott, 258 Va. 296, 520 S.E.2d 366 (1999) (eight months of operations insufficient to take dental practice outside scope of new business rule); 676 R.S.D. Inc. v. Scandia Realty, 600 N.Y.S.2d 678, 195 A.2d 387 (N.Y. App. Div. 1993) (three months of operations insufficient to justify claim for lost profits).
[4] . See, e.g., Kids' Universe v. In2Labs, 95 Cal. App. 4th 870, 116 Cal. Rptr. 2d 158 (Cal. 2002); Beverly Hills Concepts, Inc. v. Schatz & Schatz, Ribicoff & Kotkin, 247 Conn. 48, 717 A.2d 724 (Conn. 1998); W.W. Gay Mech. Contractor, Inc. v. Wharfside Two, Ltd., 545 So. 2d 1348 (Fla. 1989); Neb. Nutrients, Inc. v. Shepherd, 261 Neb. 723, 626 N.W.2d 472 (Neb. 2001); Iron Steamer, Ltd. v. Trinity Rest., Inc., 110 N.C. App. 843, 431 S.E.2d 767 (N.C. 1993); AGF, Inc. v. Great Lakes Heat Treating Co., 51 Ohio St. 3d 177, 555 N.E.2d 634 (Ohio 1990); Given v. Field, 199 W.Va. 394, 484 S.E.2d 647 (W.Va. 1997).
[5] See, e.g., RSB Lab. Serv., Inc. v. BSI, Corp., 368 N.J. Super. 540, 847 A.2d 599 (App. Div. 2004) (observing that a plurality of the New Jersey Supreme Court has ruled in favor of abandoning the new business rule)
[6] See, e.g., TK-7 Corp. v. Estate of Barbouti, 993 F.2d 722, 726 (10th Cir. 1993); Beverly Hills Concepts, 717 A.2d at 733.
[7] Recovery of Damages for Lost Profits, Fifth Edition, March 2004 Supplement, Robert L. Dunn, LawPress, p. 133-134

even though center was not in existence; a new business is not prohibited from recovering damages for that reason alone).

- Rhode Island: *UST Corp. v. General Road Trucking Corp.,* 783 A.2d 931, 942 (R.I. 2001) (discussed in §7.14) ("'The new-business rule' is too draconian to be applied in all new business situations.").

These cases allow recovery of lost profits damages to a business with no record of prior successful experience[8]:

- Federal: *BBSerCo, Inc. v. Metrix* Co., 324 F.3d 955 (8th Cir. 2003)
- Colorado: *Logixx Automation, Inc. v. Lawrence Michels Family Trust,* 56 P.3d 1224 (Colo. App. 2002).
- Florida: *North Dade Community Development Corp. v. Dinner's Place, Inc.,* 827 So. 2d 352 (Fla. App. 2002).
- Missouri: *Harvey v. Timber Resources, Inc.,* 37 S.W.3d 814 (Mo. App. 2001).
- Texas: *Helena Chemical Co. v. Wilkins,* 47 S.W.3d 486 (Tex. 2001).

Appendix C presents excerpts from *The Comprehensive Guide to Economic Damages*, Fourth Edition, Fannon, Dunitz, 2016, Business Valuation Resources, LLC – Chapter 13: Calculating Damages for Early-Stage Companies by Neil J. Beaton, CPA/ABV/CFF, CFA, ASA and Tyler L. Farmer, Esq. These excerpts provide further authoritative text regarding damages for unestablished businesses.

Two of the more salient excerpts presented in Appendix C are:

> Jurisdictions have essentially abandoned the new business rule altogether.[9] The erosion of a *per se* rule against recovery arose in part from the unfairness of permitting a defendant to avoid liability for the damages it caused merely because the aggrieved party is a nascent enterprise. In addition, the traditional benefits of the rule—predictability and judicial efficiency—no longer weigh in favor of its enforcement: Courts now have sufficient experience and precedent to efficiently evaluate alleged lost profits for new businesses, especially when credible expert evidence supports these claims.[10]
>
> The question for new businesses is whether damages are made reasonably certain by proof of facts that enable a rational estimate of their amount. Typically, courts have tended to sustain lost-profits awards "as long as the approach is rational and the trier of fact is given a basis upon which to assess the evidence."[11]

[8] Ibid., p. 138
[9] See, e.g., Shade Foods, Inc. v. Innovative Products Sales & Marketing, Inc., 78 Cal. App. 4th 847 (2000); Kids' Universe v. In2Labs, 96 Cal. App. 4th 870 (2002); Mindgames, Inc. v. Western Publ'g. Co., Inc., 218 F.3d 652 (7th Cir. Wis. 2000) (expressing great doubt about Arkansas's application of the new business rule).
[10] See, e.g., *Mindgames, Inc.*, 218 F.3d at 658.
[11] Robert L. Dunn, *Recovery of Damages for Lost Profits*, page 391, 5th edition (1998).

Reasonable Certainty

The Clauretie Report spends a good deal of time criticizing the Parker Report for its alleged failure to meet the standard of reasonable certainty. The specific criticisms are addressed within the *Rebuttal Analyses and Opinions* section below.

Exact Calculation Not Required

The following is from Frantz v. Johnson, 999 P.2d 351 (Nev. 2000) - Nevada Supreme Court:

> "With respect to proof of damages, we have held that a party seeking damages has the burden of providing the court with an evidentiary basis upon which it may properly determine the amount of damages. *See Mort Wallin v. Commercial Cabinet,* 105 Nev. 855, 857, 784 P.2d 954, 955 (1989). Further, **we have noted that damages need not be proven with mathematical exactitude, and that the mere fact that some uncertainty exists as to the actual amount of damages sustained will not preclude recovery.** *See Mort Wallin,* 105 Nev. at 857, 784 P.2d at 955." [Emphasis added]

The following legal cases are noted only for reference; again, I am not drawing, nor am I qualified to draw, any legal inference from any of these cases in respect to The Case or any other instance.

These following are representative of cases in which exact calculation of the amount of damages was not required.[12]

- Federal: *Inter Medical Supplies, Ltd. v. EBI Medical Systems, Inc.,* 181 F.3d 446 (3d Cir. 1999)
- *Orthofix S.R.L. u. EBI Medical Systems, Inc.,* 528 U.S. 1076 (2000).
- District of Columbia: *Tri County Industries, Inc. v. District of Columbia,* 200 F.3d 836 (D.C. Cir. 2000), *amended,* I 208 F.3d 1066 (D.C. Cir. 2000).
- Texas: *Helena Chemical Co. v. Wilkins,* 47 S.W.3d 486 (Tex. 2001).

Plaintiff was entitled to recover damages having presented the best available evidence:

- Colorado: *Logixx Automation, Inc. u. Lawrence Michels Family Trust,* 56 P.3d 1224 (Colo. App. 2002).
- Iowa: *Olson v. Nieman's, Inc.,* 579 N.W.2d 299 (Iowa 1998).
- Mississippi: *Parker Tractor & Implement Co. u. Johnson,* 819 So. 2d 1234 (Miss. 2002)
- Missouri: *Wisch & Vaughan Construction Co. v. Melrose Properties Corp.,* 21 S.W.3d 36 (Mo. App. 2000).
- South Dakota: *McKie v. Huntley,* 620 N.W.2d 599, 604 (S.D. 2000).

These cases state the "reasonable basis" or "rational standard" principle.

- Federal:
  - *Hill v. Republic of Iraq,* 328 F.3d 680 (D.C. Cir. 2003) ("some reasonable basis");
  - *C & F Packing Co. v. IBP, Inc.,* 224 F.3d 1296 (Fed. Cir. 2000) (Illinois law) ("a reasonable basis").
- Arizona: *Pasco Industries, Inc. v. Talco Recycling, Inc.,* 195 Ariz. 50, 985 P.2d 535 (Ariz. App. 1998) ("a reasonable basis" or "some rational standard").
- Colorado: *Logixx Automation, Inc. v. Lawrence Michels Family Trust,* 56 P.3d 1224 (Colo. App. 2002) ("a reasonable basis").

[12] Recovery of Damages for Lost Profits, Fifth Edition, March 2004 Supplement, Robert L. Dunn, LawPress, p. 142

- Illinois:
  - *Prairie Eye Center v. Butler,* 329 Ill. App. 3d 293, 768 N.E.2d 414 (2002), *appeal denied,* 202 Ill. 2d 661, 787 N.E.2d 169 (2002) ("a reasonable basis");
  - *Royal's Reconditioning Corp. v. Royal,* 293 Ill. App. 3d 1019, 689 N.E.2d 237 (1997) ("a reasonable basis for the computation of damages").
- Iowa: *Olson u. Nieman's, Inc.,* 579 N.W.2d 299 (Iowa 1998) ("a reasonable basis").

For further reference, Appendix D presents a sampling of state definitions of "Reasonable Certainty".as originally presented in the Business Torts Journal • FALL 2007, ABA Section of Litigation, Proving and Defending Lost-Profits Claims, Joseph Wylie and Christopher Fahy.

Rebuttal Analyses & Opinions

The following reflect my analyses and opinions in respect to the Clauretie Report.

A. Reasonable Certainty in Respect to the Parker Report

1. The Discounted Cash Flow methodology ("DCF") was not necessary to the determination of the Fair Market Value ("FMV) of the Company or The Interest and was not the primary driver in determining said value. This will be further explained below.
2. Even if the DCF methodology was the primary driver behind determining FMV, the wide range of values resulting from the different variables used in each of the five scenarios are not, in and of themselves, evidence that the approach employed was not well-reasoned. The conclusions reached in each of the scenarios could have easily been "tightened up" to produce a closer grouping of values without affecting the final weighted-average conclusion.
3. The final conclusion should be, and was, the subject of a test of reasonableness, not so much the disparity in the rage values reached by the individual scenarios.

B. Financial Projections

1. The Parker Report was never intended to be submitted as an "Expert Report." Thus the disclaimer language on page two, **in bold**. However, this fact does not materially affect the FMV conclusions derived therein.
2. The Clauretie Report incorrectly assumes that there was not any independent analysis performed in respect to the Company's forecast of revenues and expenses. This is not true. I spent an extensive amount of time discussing the assumptions with the Client and pouring over the many spreadsheets and formulas used in developing those spreadsheets. The Client has extensive and intimate knowledge of the cannabis industry. Mr. Terry is a well sought-after consultant to the cannabis industry, has held executive positions in industry organizations and has been a welcomed guest speaker at industry event. The Client's complete resume is presented in Appendix E for review.
3. At the end of the day, given Mr. Terry's very impressive command of the factors involved in all aspects of the industry, along with his ability to explain in detail various assumptions, I was satisfied with the projections as provided in light of the purpose for which the DCF model was constructed.

C. Projected Growth Rates

1. The Clauretie Report is correct in respect to the source of estimated growth rates. It is also correct in observing that the growth rates used are reflective of the overall expected growth rates of the industry, which is exactly what the data in the Parker Report was meaning to capture. It was not an oversight or a failure in consideration and therefore was intentional, not a mistake.
2. There were no assumptions that the Company's footprint would remain static; quite to the contrary, it was assumed that the Company's operations would expand at a rapid pace to meet what was anticipated to be an exponential rise in demand, especially with recreational marijuana in Nevada all but assured to be approved in the November general election (it was). Whether the Company's expansion was organic or through acquisition or otherwise was immaterial to the development of the DCF model and various scenarios, given the purpose for which they were being constructed.
3. Appendix F provides a graphical representation of the astronomical growth rates experienced in the number of Medical Marijuana Card Holders in Nevada from January 2016 through Sept 2016. Also provided are monthly and compound annual growths rates for both Clark county and statewide. As can be observed, the growth rate in card holders has far exceeded the expected growth rates used in the Parker Report.
4. The Clauretie Report's reduction of estimated growth rates per enterprise has no bearing on the purpose for which the DCF methodology was developed. Table 1 in said report is not legible and could not therefore be analyzed, though as previously stated, the information therein most likely bore no relevance in the Parker Report's overall analysis in respect to expected or projected growth rates.

D. Risk of Litigation and the Discount Rate

1. The Clauretie Report argues that the buildup method by which the discount rate was developed in the Parker Report should have allowed for additional risk associated with the current litigation. This is a fallacy.
2. Allowing for the introduction of an additional risk premium due to the litigation at hand (thereby lowering the Company's FMV), would unfairly allow the defendants to mitigate their damages liability as a result of their own alleged conduct.
3. Any risks to the Company associated with the litigation would not be considered in a "but for" approach to damages. But for the Defendants' own alleged acts, it is very easily reasoned that the Company would not be engaged in said litigation. To consider otherwise is to cause further harm to the Plaintiffs.

E. Raising Capital

1. The Clauretie Report argues that given the Company's certain cash flow constraints as borne out in the DCF analysis of the Parker Report, the Company would need to raise capital within the first year of operation; this is correct. Thus the arrangement with CWNevada ("CWNV").[13]
2. In the investor material produced by CWNV (see Appendix G), CWNV proposes to raise $8 million dollars by May 13, 2016 well within the time frame of the Company's first year of operation. Again, the Clauretie Report commits a fallacy by suggesting that "raising [capital] is problematic for a firm engaged in litigation." See points D.2 and D.3 above.

[13] The Parker Report explains the relationship between the Company and CWNV as well as the proposed transaction between the two companies.

3. It is further argued by the Clauretie Report that the Parker Report does not address how the Company would be able to raise the requisite cash if the Plaintiffs were victorious in the litigation at hand. First, the Company is not the only Defendant; second, that is a "but for" issue and not part of the analysis that would be included in a damages estimate. The Clauretie Report appears to be arguing that only defendants that can pay damages should be sued.

F. Sanity Check

1. Page 41 of the Parker Report provides a "Sanity Check" or test of reasonableness in respect to the conclusion of value reached through the use of the DCF methodology. The same (or virtually like) analysis also appears on pages 21 – 22 of the Parker Report.
2. The Clauretie Report argues that different amounts (much lower) should have been used in respect to CWNV's purchase of four of the six provisional certificates owned by the Company. Said report fails, however, to consider certain undisputable facts regarding CWNV's Letter of Intent as testified to by CWNV's Chairman and CEO, Brian Padgett on January 8, 2016[14] in which Mr. Padgett clearly states:
    a. "the total value benefit of everything that CW brings to the table we valued at $22 million." Mr. Padgett references this amount not once, but twice, reiterating in further testimony that "So total value -- I mean, we came up with a total value for the deal…of approximately 22 million."
3. Appendix H presents CWNV's list of "Deal Points" that again support the value of the "deal" at $22 million.
4. The extrapolation of the $22 million deal performed in the Parker Report resulted in a FMV for the Company's six provisional certificates of $50,775,000 or $12,126,400 for The Interest, which was then reduced by discounts for The Interest's lack control and lack of marketability to a FMV of $8.7 million.
5. The Clauretie Report once again commits a fallacy in referencing a "but for" argument in that "as of the date of valuation the promised payment by CWNV had not been received. The payment was suspended pending the results of the litigation." Again, the Plaintiffs cannot be further harmed by the Defendants' own alleged bad acts.
6. Mr. Clauretie would have no way of knowing this, but the extrapolation of the $22 million NuVeda/CWNV deal was actually the starting point in the development of the DCF analysis performed in the Parker Report. The DCF analysis was actually developed for the purpose of exploring and analyzing the effect on the Company's valuation of using various assumptions regarding specific factors and variables.
7. Again, the Parker Report was never intended as an "expert report." It was formatted and presented as a business valuation report. Though the conclusion of the FMV for the Company and The Interest would not have been materially affected, the report would have been constructed differently for use as an expert damages report in this matter.

[14] PRELIMINARY INJUNCTION HEARING in the matter of NUVEDA LLC, et al. (Plaintiffs) v. PEJMAN BADY, et al. (Defendants), CASE NO. A-728510, DEPT. NO. XI, DISTRICT COURT, CLARK COUNTY, NEVADA.

G. Clauretie Report's Conclusion of Value

1. The Clauretie Report states that "In my opinion the value of NuVeda on March 10, 2016 cannot be made on a "going concern" basis. This is so **because, in large part to the ongoing litigation** in this case." [Emphasis Added].

   Again, the Clauretie Report is ignoring the argument that but for the Defendants' alleged actions or acts, it is well within reason that the Company would not be embroiled in litigation.

2. The Clauretie Report states that "In order for NuVeda to be considered as an ongoing concern the firm would require a large influx of a cash investment. The cash investment would be necessary to cover the first year's large cash deficit and a possible pay out to the plaintiff from the ongoing litigation."

   Once again, the Clauretie Report embarks on an argument involving circular reasoning.

3. The Clauretie Report uses its circular reasoning fallacy to support a liquidation value as opposed to a FMV based on the going concern premise of value. The use of liquidation value defies the principal of "highest and best use."

Conclusion

I reject the Clauretie Report's approach to the FMV of the Company; the Clauretie Report did not provide an opinion of FMV for The Interest. I reaffirm the approach to FMV of the Company and The Interest as employed in the Parker Report. I clarify the FMV of the Company and The Interest as concluded in the Parker Report resulted from the extrapolation of the terms of the NuVeda/CWNV Letter of Intent in respect to the valuation analysis of the provision certificates.

My expert rebuttal opinions are based upon my knowledge and understanding of The Case as it has been presented to me by the Client, Client's legal counsel and through the Clauretie Report and Parker Report and also my review of certain court documents and other documents provided and any independent research performed to date. I reserve the right to modify, supplement or update this report as necessary should additional information or documents become available.

My hourly fee schedule and fees received and invoiced to date are as follows:

Three Hundred Twenty-Five Dollars ($325.00) per hour for all time expended other than that allocated to deposition or trial.

Three Hundred Seventy-Five Dollars ($375.00) per hour for deposition and trial.

Retainer due: Five Thousand Dollars ($5,000.00).

Faithfully Submitted,

Donald R. Parker, CFA, CVA
November 29, 2016

APPENDIX A – EXPERT'S CREDENTIALS & LIST OF LITIGATION CONSULTING ENGAGEMENTS

Donald R. Parker

Curriculum Vitae

Chartered Financial Analyst®
Certified Valuation Analyst

Voice 702.870.8258
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dParker@BizVals.com
www.BizVals.com

Certified Valuation Analyst

Professional Designations	**Chartered Financial Analyst® (CFA®)** CFA Institute **Certified Valuation Analyst (CVA)** National Association of Certified Valuators and Analysts (NACVA)
Education	B.S., University of Central Florida, Orlando, Florida, Business Administration Minor Degree in Computer Science
Professional Experience	**Gryphon Valuation Consultants, Inc. – Las Vegas, NV** Founder, President, 2003 to present **Private Advisory Group, LLC – Las Vegas, NV** Co-founder, Partner, 2001 to 2003 **The Investment Counsel Company of the S.E. – Las Vegas, NV** Senior V.P., Portfolio Manager, Global Equity Strategist, 1998 to 2001 **Gryphon Capital Management Company – Las Vegas, NV** Co-Founder, President, 1992 to 2001 **National Investor Data Services – Southampton, NY** **EBS – Maitland, FL** Senior Programmer/Analyst, 1988 to 1992 **The Investment Counsel Company of the S.E. – Orlando, FL** Vice President, Director of Research, 1981 to 1988
Professional Memberships and Associations	**CFA Institute** Member, 1993 to Present **National Association of Certified Valuators and Analysts (NACVA)** Member, 2001 to present **Institute of Business Appraisers (IBA)** Member, 2011 to present **CFA Society of Nevada** President (2006/2008), Charter Member (2003) **Southern Nevada Estate Planning Council** Member, 2001 to present **Clark County Bar Association** Associate Member, 2001 to present **Financial Planning Association of Nevada** Charter President, Member 1999 to 2001 **Las Vegas Chapter of the Turnaround Management Association** Charter Member, 2003
Community and Other Organizations	**Summerlin Rotary Club (Las Vegas)** President (2004/05), Charter Member (1997), Paul Harris Fellow

Page 1 of 2

Donald R. Parker — Curriculum Vitae

Publications	Contributor, ***An Employee's Guide to Stock Options*** (McGraw Hill), Beth V. Walker, 2003 Featured Contributor, ***The Trust Equation*** (Financial Forum Publishing), Drozdeck & Fisher, 2003 Personal Interview, ***Advisors Group Starts Local Chapter –*** *The Southern Nevada Society of Financial Analysts* (Las Vegas Review Journal), John G. Edwards, July 5, 2003 Featured Spotlight, ***Star Gazers – Review/Journal Stock Picking Contest*** (Las Vegas Review Journal), John G. Edwards, January 4, 2004 Ongoing source for financial opinion and expert commentary (Las Vegas Review-Journal)
Published Articles	***Corporate Alchemy:*** *Creating Something from Nothing* The CEO-CFO Group Newsletter, December 2003 ***Alphabet Soup:*** *Integrity and Professional Designations* The CEO-CFO Group Newsletter, April 2004 ***The Business of Business Valuations:*** *No Longer a Part-time Job* The CEO-CFO Group Newsletter, March 2004 ***Physician Practice Valuation:*** *Today's Chaotic World of Healthcare* Vegas, Inc. Healthcare Quarterly, February 2014
Speaking Engagements	***Building Value in Your Company for a Planned Exit*** The CEO-CFO Group, October 2005 ***The Business of Business Valuations:*** *No Longer a Part-time Job* Nevada Society of Certified Public Accountants -- Management of an Accounting Practice Committee, August, 2004; Financial Planning Association of Nevada, September, 2004; Merrill Lynch – CPE Seminar Series for CPAs, November 2008 ***The Evolution of the Business of Business Valuations*** Regis University, May, August, 2004 ***Intangible Asset Management:*** *The CFO's New Frontier* The CEO-CFO Group, December 2003 ***Asset Management:*** *An Evolution in Process* Southwestern Financial Forum, November, 2002 ***Estate Planning:*** *Yes, I've Got Everything Done…* Morgan Stanley Estate Planning Series, 2001 through 2003 ***Client Service and Costs:*** *An Inverse Relationship* Financial Planning Association of Nevada, April, 2002 ***Wall Street Rolls Craps,*** *Tumbling Dice for Vegas?* The CEO-CFO Group, September 2008 ***Financial Institutions in Crisis,*** *Fair Value or Mark-to-Market Reporting* Turnaround Management Association of Nevada, July 2009 ***Are We OK?,*** *The Economic Impact on Las Vegas* The CEO-CFO Breakfast Group, March 2010 ***Investing for Retirement and Estate Planning*** Financial Planning Association of Nevada, April 2011 ***Business Valuation – Critiquing the Expert*** On-going CLE Series, August 2012 to present ***Nevada Restricted Entities – Incremental Discounts*** Wealth Counsel, November 2012 ***Business Valuation – Beyond the Numbers*** On-going CPE Series, February 2014 to present

Page 2 of 2

Donald R. Parker

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Certified Valuation Analyst

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Litigation Consulting Engagements

1. Gramly Construction, Inc. v. Rebeil, et al., Case No. A418651 Dept. III District Court, Clark County, Nevada. Restricted Securities Valuation Report. Deposition on behalf of plaintiff, April 2003.
2. Sobie v. Las Vegas Hilton, et al., Case No. 00-A-424083 Dept. II District Court, Clark County, Nevada. Damages Report on behalf of plaintiff, June 2004. Supplemental Report, October 2005. Deposition, December 2005.
3. Butler v. Butler, Case No. D308059 Dept. H District Court, Family Division, Clark County, Nevada. Business Valuation Report and Trial Testimony as neutral party. October 2004.
4. Pifer-Radovich v. Radovich, Case No. D317809 Dept. H District Court, Family Division, Clark County, Nevada. Damages Report and Trial Testimony on behalf of plaintiff, April 2005.
5. JM Landscape Company v. First Nevada Business Brokers, Case No. A481-341, Clark County District Court, Dept. 7. Business Valuation Report and Mediation Testimony on behalf of plaintiff, June 2005.
6. Tae Yi v. Desert Chrysler-Plymouth, Inc., et al., Case No. A452911 District Court, Clark County Nevada. Damages Report on behalf of plaintiff, August 2005.
7. Coinmach Corporation v. Wynn Sunrise LLC, Case No. CV-S-04-1468-PMP (RJJ), United States District Court, District of Nevada. Damages Report on behalf of plaintiff, June 2005. Deposition, July 2005.
8. First Advisory, LCC v. American Water Star, Inc., et al., Case No. CV-S-04-1557 ECR (RJJ), United States District Court, District of Nevada. Securities Analysis Report on behalf of plaintiff. September-October 2005.
9. Case v. Case, Case No. D324156 Dept. H District Court, Family Division, Clark County, Nevada Business Valuation Report on behalf of defendant. Deposition and Trial Testimony, January 2006.
10. Bell v. Bell, Case No. 336179, Dept. I District Court, Family Division, Clark County, Nevada Business Valuation Report as neutral party, December 2005. Trail Testimony, March 2006.
11. Dadson Washer Service v. Coinmach Corporation, et al., Case No. CV-S-05-0778-KJD (PAL), United States District Court, District of Nevada. Damages Report, January 2006.
12. Markley Enterprises, Inc. v. Bret DelChambre, et. al., Case No. A507196, Clark County District Court, District of Nevada. Rebuttal Expert Report–Business Valuation, June 2006 and Trial Testimony, June 2007.
13. Fabig v. Fabig, Case No. 07-D-382719, Dept. J District Court, Family Division, Clark County, Nevada Business Valuation Report as neutral party, December 2007. Business Valuation on behalf of plaintiff, September 2008.
14. Sellouk v. Sellouk, Case No. D-08-402330-D, Dept. E District Court, Family Division, Clark County, Nevada. Business Valuation Report for plaintiff, February 2009. Trial Testimony, September 2009.
15. Beeman, et al. v. D'Alessio, et al., Case No. A561146, Dept. No. XIII, Clark County District Court, District of Nevada. Rebuttal Expert Report–Business Valuation for defendant, May 2010.

16. Corrigan Management, Inc., et al. v. Golden Tavern Group, LLC, et al., Case No. 09-A599655, Dept. No. XXV, Clark County District Court, District of Nevada. Business Valuation/Damages Report for plaintiff, June 2010; Rebuttal Expert Report–Business Valuation, August 2010. Deposition, February 2012. Settled.
17. McCormick v. McCormick, Case No. D-08-396104-D, Dept. Q. District Court, Family Division, Clark County, Nevada. Damages/Interest Calculation Report for plaintiff, July & September 2012; Trial Testimony, September 2012.
18. Lubawy & Associates, Inc. v. Anthony Perkins, et al., Case No. A-11-651500-C, Dept. No. VIII, Clark County District Court, District of Nevada. Business Valuation/Damages Report for plaintiff, February 2013. Settled.
19. Robert J. Futoran, M.D. v. Women's Cancer Center of Nevada, et al., Case No. A-11-651098-B, Dept. No. XXVIII, Clark County District Court, District of Nevada. Medical Practice Valuation for plaintiff, March 2013 to June 2015. Trial Testimony, September 2014. Supplemental Exports Reports April 2015.
20. Alexander R. Sardarian v. Natalia Vasilevica, Case No. BD 570633, Superior Court of California, County of Los Angeles, Central District. Business Valuation Consultant as neutral party. March 2013.
21. John Arthur Gilbert v. Coffee & Rader, CPA's; Steve M. Coffey; John R. Rader, Case No. A-13-688369-C, Dept. No. II, District Court, Clark County, Nevada. Business Valuation for plaintiff, April 2014. Settled.
22. Gordon D. Brooks, Case No. 14-01006-MKN, Honorable Mike K. Nakagawa, United States Bankruptcy Court, District of Nevada. Appropriateness of Investment Security Selection for defendant, May 2014 to Present. Deposition November 2014. Trial Testimony. April 2015.
23. Matter of Guardianship, Robert Marquez Covarrubias, An Adult Ward, Case No,: G-11-035-974-A, Dept. No.: E, Appraisal of the inventory of the Estate of the above-named Ward.
24. America Clinical Solutions, LLC v. Robert Wooding, Eighth Judicial District Court, Clark County Nevada, Case No. A-14-701103-B, Dept. XXX [Business Court]. Expert Report for plaintiff. June 2015.
25. Sprague v. Sprague, Dissolution of Marriage, Expert Opinion: Valuation of Architectural & Building Cos. July 2015.
26. Estate of William G. Couper, Deceased. Case No: P-15-083991-E, Dept. No. PC-1, Eighth Judicial District Court, Clark County, Nevada. Stock Option Valuation Expert Report. September 2015.
27. Ardyss International, LLC v. Various Creditors, Potential Bankruptcy, Expert Business Valuation Report, September 2015 – January 2016.
28. Gary Thorne, et al. v. Michael Manion, et al. and Draft Bars LLC; Turbo Tap LLC; 22 Bar Pods LLC; and Lots of Cabbage LLC, Case No.: A-14-701235-B, Dept. No. : XIII, District Court, Clark County, Nevada. Expert reports provided on behalf of defendant. Trial Testimony. May 2015 – March 2016.
29. Duffy v. Duffy, Marital Dissolution, District Court, Family Division, Clark County Nevada, Case No. D-14-506296-D, Dept. No. Q. Expert Report for plaintiff. June 2015 – Ongoing.
30. Hall v. Hall, Marital Dissolution, District Court, Family Division, Clark County Nevada, Case No. D-15-516046-D, Dept. No. Q. Expert Report for defendant. January 2016 – Ongoing.
31. Marquis Aurbach Coffing, P.C., v. Terry Dorfman, T Dorfman Inc, Breach of Contract, United States District Court, District of Nevada, Case No. 2:15-CV-0070 1-JCM-NJK, Expert Report for plaintiff. January 2016, Deposition May 2016.
32. Premier Exhibitions, Inc. v. James Beckman and Image Quest Worldwide, et al., Breach of Contract, District Court, Clark County, Nevada, Case No. A-14-711290-C, Dept. No. XXX, Expert Rebuttal Report for defendant. April 2016–Ongoing.

33. Sporting Supplies International, Inc. v. Molot-Oruzhie, Ltd., Breach of Contract, International Centre for Dispute Resolution, American Arbitration Association, Case No. 01-16-0001-0146. Expert Damages Report for Respondent/Counterclaimant. July 2016–Ongoing.
34. Shani Investments, Inc. v. GO Investments, Inc., GOI Texas, Inc., 4Tutis, Inc., Ohad Sagiv, et al., Breach of Contract /Fiduciary Duty, District Court, Clark County, Nevada, Case No. A-14-698891-C, Dept. No. XXX, Expert Damages Report for plaintiff. June 2016–Ongoing.

APPENDIX B – MATERIAL RELIED UPON

Gryphon/Parker Report

Clauretie Report (2016-10-31 Mohajer Initial NRCP 16-1 Disclsoures.pds - NuVeda000374-422)

The Comprehensive Guide to Economic Damages, Fourth Edition, Fannon, Dunitz, 2016, Business Valuation Resources, LLC

Shane Terry's Current C.V.

CWNevada April 2016 Investor Presentation

Recovery of Damages for Lost Profits, Fifth Edition, March 2004 Supplement, Robert L. Dunn, LawPress

Other Material and Sources as noted in the body of the report and the Appendices.

APPENDIX C – Damages in the Case of New or Unestablished Businesses

The following are excerpts from *The Comprehensive Guide to Economic Damages*, Fourth Edition, Fannon, Dunitz, 2016, Business Valuation Resources, LLC – Chapter 13: Calculating Damages for Early-Stage Companies by Neil J. Beaton, CPA/ABV/CFF, CFA, ASA, and Tyler L. Farmer, Esq., p 309-310, 312, 314, 327-328:

The case of *Sargon Enterprises, Inc. (Sargon) v. University of Southern California*2 set forth its recitation of the evidentiary standard for an unestablished business:

Where the operation of an unestablished business is prevented or interrupted, damages for prospective profits that might otherwise have been made from its operation are not recoverable for the reason that their occurrence is uncertain, contingent and speculative.… But although generally objectionable for the reason that their estimation is conjectural and speculative, **anticipated profits dependent upon future events are allowed where their nature and occurrence can be shown by evidence of reasonable reliability…** [Emphasis added]

Where the fact of damages is certain, the amount of damages need not be calculated with absolute certainty. The law requires only that some reasonable basis of computation of damages be used, and the damages may be computed even if the result reached is an approximation. The lost profit inquiry is always speculative to some degree. Inevitably, there will always be an element of uncertainty. **Courts must not be too quick to exclude expert evidence as speculative merely because the expert cannot say with absolute certainty what the profits would have been. Courts must not eviscerate the possibility of recovering lost profits by too broadly defining what is too speculative.** A reasonable certainty only is required, not absolute certainty. [Emphasis added]

For established businesses, plaintiffs more frequently assert damages claims on the basis of lost profits than on the value of the entire business. **New business damages, on the other hand, frequently involve a claim for the value of the entire business because the defendant's act allegedly caused the business to stop operating and/ or shut down.** [Emphasis added]

New business damages can be categorized as "whole" or "partial." **Whole damages occur when the entire business allegedly ceases to exist after the defendant's actions.** [Emphasis added]

Jurisdictions have essentially abandoned the new business rule altogether.[15] The erosion of a *per se* rule against recovery arose in part from the unfairness of permitting a defendant to avoid liability for the damages it caused merely because the aggrieved party is a nascent enterprise. In addition, the traditional benefits of the rule—predictability and judicial efficiency—no longer weigh in favor of its enforcement: Courts now have sufficient experience and precedent to efficiently evaluate alleged lost profits for new businesses, especially when credible expert evidence supports these claims.[16]

The question for new businesses is whether damages are made reasonably certain by proof of facts that enable a rational estimate of their amount. Typically, courts have tended to sustain lost-profits awards "as long as the approach is rational and the trier of fact is given a basis upon which to assess the evidence."[17]

Whole damages involving the loss of a new or early-stage business often requires its valuation, usually (and advisedly) by a qualified financial expert.

The prevailing legal standard for ascertaining and awarding damages, reasonable certainty, is somewhat nebulous and thus will necessarily depend on the facts and circumstances of each case.

[15] See, e.g., Shade Foods, Inc. v. Innovative Products Sales & Marketing, Inc., 78 Cal. App. 4th 847 (2000); Kids' Universe v. In2Labs, 96 Cal. App. 4th 870 (2002); Mindgames, Inc. v. Western Publ'g. Co., Inc., 218 F.3d 652 (7th Cir. Wis. 2000) (expressing great doubt about Arkansas's application of the new business rule).
[16] See, e.g., *Mindgames, Inc.*, 218 F.3d at 658.
[17] Robert L. Dunn, *Recovery of Damages for Lost Profits*, page 391, 5th edition (1998).

APPENDIX D – Various Interpretations of "Reasonable Certainty" by State

A Sampling of State Definitions of "Reasonable Certainty"[18]

Alaska
"The evidence must afford sufficient data from which the court or jury may properly estimate the amount of damages, which data shall be established by facts rather than by mere conclusions of witnesses" (City of Whittier v. Whittier Fuel & Marine Corp., 577 P.2d 216, 223 (Alaska 1978)).

Connecticut
"In order to recover lost profits . . . the plaintiff must present sufficiently accurate and complete evidence for the trier of fact to be able to estimate those profits with reasonable certainty" (Beverly Hills Concepts, Inc. v. Schatz & Schatz, Ribicoff & Kotkin, 247 Conn. 48, 717 A.2d 724 (Conn. 1998)).

Florida
In order to recover lost profits, claimant must prove that "1) the defendant's action caused the damage and 2) there is some standard by which the amount of damages may be adequately determined" (W.W. Gay Mech. Contractor, Inc. v. Wharfside Two, Ltd., 545 So. 2d 1348, 1350–51 (Fla. 1989)).

Illinois
Evidence supporting lost-profits claims "must with a fair degree of probability tend to establish a basis for the assessment of damages for lost profits" (Tri-G, Inc. v. Burke, Bosselman & Weaver, 222 Ill. 2d 218, 248, 856 N.E.2d 389, 407 (Ill. 2006)).

Minnesota
"[T]he plaintiff must prove the reasonable certainty of future damages by a fair preponderance of the evidence" (Pietrzak v. Eggen, 295 N.W.2d 504, 507 (Minn. 1980)).

Missouri
Lost profits may be recovered only when they can be "made reasonably certain by proof of actual facts, with present data for a rational estimate of their amount" (Indep. Bus. Forms, Inc. v. A-M Graphics, Inc., 127 F.3d 698, 703 (8th Cir. 1997)).

New York
Lost profits may be recovered only when they are "capable of measurement based upon known reliable factors without undue speculation" (Schonfeld v. Hilliard, 218 F.3d 164, 172 (2d Cir. 2000) (N.Y.)).

Ohio
In lost-profits analysis, a "fact is 'reasonably certain' if it is probable or more likely than not" (Bobb Forest Prod., Inc. v. Morbark Indus., Inc., 151 Ohio App. 3d 63, 88, 783 N.E.2d 560, 579 (Ohio App. Ct. 2002)).

Pennsylvania
"Although the law does not command mathematical precision from evidence in finding damages, sufficient facts must be introduced so that the court can arrive at an intelligent estimate without conjecture" (Delahanty v. First Pa. Bank, N.A., 318 Pa. Super. 90, 119, 464 A.2d 1243, 1257–58 (Pa. Super. Ct. 1983)).

South Carolina
Proof of lost profits "must consist of actual facts from which a reasonably accurate conclusion regarding the cause and the amount of the loss can be logically and rationally drawn" (Drews Co. v. Ledwith-Wolfe Assoc., 296 S.C. 207, 210, 371 S.E.2d 532, 534 (1988)).

Texas
"Profits are not required to be exactly calculated; it is sufficient that there be data from which they may be ascertained with a reasonable degree of certainty and exactness" (Ramco Oil & Gas Ltd. v. AngloDutch (Tenge) LLC, 207 S.W.3d 801, 808 (Tex. App. Ct. 2006) (citing Tex. Instruments, Inc. v. Teletron Energy Mgm't, Inc., 877 S.W.2d 276, 279 (Tex. 1994))).

Utah
Reasonable certainty means "sufficient certainty that reasonable minds might believe from a preponderance of the evidence that the damages were actually suffered" (Cook Assoc., Inc. v. Warnick, 664 P.2d 1161, 1165 (Utah 1983)).

[18] Business Torts Journal • FALL 200,7ABA Section Of Litigation, Proving and Defending Lost-Profits Claims, Joseph Wylie and Christopher Fahy

APPENDIX E – Curriculum Vitae: Shane M. Terry

SHANE M. TERRY

222 Karen Ave #3305 · Las Vegas, NV 89109 · 702-858-2465 · ShaneTerryLV@Gmail.com
LinkedIn - http://www.linkedin.com/in/sterryglobal/en

State Legal Cannabis Experience. *Dedicated to bringing integrity, professionalism and strategic leadership to the emerging cannabis industry.*

***CEO/Founder* — TapRoot Holdings, Inc** Las Vegas, NV 2016-Current

- Successfully raised $2M to create brand and product development company focusing on the cultivation and manufacturing of legal cannabis and hemp.
- Established international operational presence while working with government and regulatory officials in emerging cannabis markets. Negotiated strategic local partnerships to establish licensed operations in Spain, Germany, Colombia, Jamaica, and Pakistan.
- Conducted all due diligence and investment advisory for Spanish private equity group seeking deployment of multi-million dollar international investment fund.

***President/CEO/Founder* — TapRoot Consulting Group** Las Vegas, NV 2016-Current

- Leveraged opportunities in the cannabis ancillary market to include cannabis consulting, business development throughout four state-legal markets, and commercial real estate acquisition.
- Advised clients in Nevada, California, Colorado, Oregon, and Pennsylvania through strategic business development resulting in three operational startups achieving profitability in less than 12 months and securing over $18M in investment capital.
- Provided industry leadership through multiple speaking engagements including events by the National Cannabis Industry Association, TechWeek, and Marijuana Business Conference & Expo.
- Requested by State of Pennsylvania to establish working group to create regulations for emerging legal medical cannabis market. Worked directly with PA Senator Daylin Leach's office to establishment MMJ regulations and a selective licensing process. Specific areas of advisory include market assessment, compliance, grower/processor operations, financial projections, and market assessments.

***Board Member* — GB Sciences, Inc (OTC:GBLX)** Las Vegas, NV 2016-Current

- Recruited to Board of Directors of publicly traded medical cannabis bioscience company acquiring licenses for dispensing, cultivation, and production of medical grade cannabis.
- Since joining the board GB Sciences has filed patents for unique drug discovery process leading to a stock increase of over 100% in less than 6 months.
- Member of Finance Committee working directly with Wall Street investment bank (Network One) to secure funding, establish operational budget, and deploy capital in support of company initiatives.

***CEO/Co-Founder* — NuVeda,** Las Vegas, NV 2014-2016

- Navigated highly competitive privileged license process leading to the award of six medical marijuana licenses in the State of Nevada to include two of the 56 dispensary permits issued statewide.
- Responsible for the strategic planning, business development, fundraising, and execution of four geographically separated facilities and a team of 12 personnel.
- Nominated by Cannabis Economy's 2015 Southwest CannAwards as "Most Game-Changing Company"

Experience with Non-Profit Organizations. *Passionately pursuing community engagement and civic leadership through socially responsible business practices.*

***President/Founder* — Cultivate Community, 501(c)3,** Las Vegas, NV 2016-Current

- Created community arts program to inspire social responsibility, community engagement and civic leadership by the Nevada cannabis industry.
- Responsible for strategic planning, business development and coordination of community leaders and local government to influence positive economic and social change.
- Sourced funding from Philadelphia mural arts foundation resulting in the successful completion of public art within the City of Las Vegas.

President (elect) **— Nevada Dispensary Association, 501(c)6,** Las Vegas, NV 2015-2016

- Responsible for the oversight of Nevada's largest dispensary trade association comprising of over 16 companies and 50 members.
- Focused efforts to establish industry standards and influence regulatory policy, to include strategic support of the upcoming adult-use ballot initiative.

Board Member (elect) **— Las Vegas Arts District,** Las Vegas, NV 2015-Current

- While serving on the 18b Neighborhood Association board, chaired working group with City of Las Vegas officials to develop the Art District's community master plan and zoning requirements in accordance with the City's long range planning objectives.

Former United States Air Force Officer and F-16 Fighter Pilot. *Combat Veteran with more than 50 missions over Iraq and Afghanistan. Proven leader and unparalleled technical expert earning 17 separate lifetime awards ranking #1 out of over 4000 peers. Awarded two Air Medals for combat action while leading team to three Air Force Outstanding Unit awards.*

Flight Commander/Instructor**—US Air Force Weapons School,** Las Vegas, NV 2010-2014

- Handpicked to teach at elite USAF Weapons School, a PhD-level training program for top 1% of USAF warfighters
- Nominated as #1 Flight Commander nationwide, communicating cutting edge strategic, tactical, and leadership instruction for over 200 specialists in 18 fields spanning over 1,500 individual training events
- Supervisor of Flying solely responsible for the oversight and daily operations of the Air Force's largest flying program. Supervised 28 weapons systems through 100+ daily missions, $5B in assets, and 1000+ personnel
- Optimized OSHA safety compliance and accident prevention as Chief of Flight Safety for over 7,850 flight missions in Nevada – the United State's largest and most diverse flying safety program
- Developed innovative debrief and problem solving processes; introduced key methods to reveal root cause of errors and identify lasting solutions. Dissertation published and adopted by instructors across the Air Force

Chief of Weapons and Tactics**—422 Test and Evaluation Squadron**, Las Vegas, NV 2009-2010

- Ranked #1 Instructor of the Year by over 100 peers while evaluating new technology and developing innovative operation procedures for over 4000 pilots worldwide while identifying rapidly evolving future requirements
- Supervised operational management of $1.76B in assets and integrated a workforce of 150+ personnel
- Project Lead for $33M Joint Exercise of over 50 aircraft, and 400 personnel from 10 different government and civilian agencies. Integration of quality control objectives solved capability gaps across a wide spectrum of digital communication requirements. Applauded by Executive Leadership for increasing operational efficiency by 50%

Chief of Standards and Evaluations**—510th Fighter Squadron**, Aviano, Italy 2010-2011

- Led 50 pilots & intelligence troops into combat in Iraq; responsible for tactical and strategic operations. Supervised execution of 2,200+ combat flights. Ranked #1 of 28 pilots by squadron commander
- Spearheaded the first modern nuclear weapons program in the F-16, the AF Chief of Staff 's #1 priority. Implementation of a $4.1M Nuclear Weapons Evaluation Program increased operational efficiency by 25%
- Created high performance team through realistic, decision-making training, emphasizing responsible use of force. Resulted in 7 months of combat weapons employment with zero civilian casualties or collateral damage

Assistant Chief of Weapons and Tactics**—35th Fighter Squadron**, Kunsan, South Korea 2007-2009

- Supervised evaluation of pilots' combat readiness directly leading to an "Outstanding" HQ inspection rating
- Awarded #1 of 86 Future Air Force Leaders while integrating multi-national military operations in SE Asia

EDUCATION

WHARTON SCHOOL OF BUSINESS, UNIVERSITY OF PENNSYLVANIA (Online Certificates)

Operations Management and Strategy	2014
Introduction to Marketing	2015
Introduction to Financial Accounting	2015
Corporate Finance	2015

IE BUSINESS SCHOOL, MADRID (Online Certificates)

Brand and Product Management	2016
Product Pricing Strategy	Current

FLIGHT TRAINING PROGRAMS & SCHOOLS, Various Locations

#1 Graduate (1/11), F-16 Weapons Instructor Course—USAF Weapons School	2009

#1 Academic Graduate (1/12)—F-16 Fighter Training Unit	2005
#1 Air-to-Ground Top Gun (1/15), —Introduction to Fighter Fundamentals Course	2004
#1 Leadership Award (1/24)—Undergraduate Pilot Training	2004

UNITED STATES AIR FORCE ACADEMY, Colorado Springs, CA — 2001
Bachelor of Science, Social Sciences
Leadership Award and Athletic Award for Division 1 Baseball and Boxing Teams

MEDIA COVERAGE / PUBLICATIONS

PRESS

Cannabis Economy, Premier Interview — Sep 2015
http://www.stitcher.com/podcast/audio-archives/e/episode-79-shane-terry-nuveda-40639148
Downtown Podcast, Premier Interview https://www.youtube.com/watch?v=v2CSftgylxl — Aug 2015
Downtown Zen Magazine, Feature Article http://www.dtzen.com/#!medical-cannabis/c949 — Apr 2014

SPEAKER ENGAGEMENTS

TechWeek, Los Angeles, CA — Nov 2015
“The Emerging Cannabis Market”
Cannabis Economy Business Summit, Las Vegas, NV — Oct 2015
“Government Relations and Interactions”
National Cannabis Industry Association Business Conference, New York, NY — Sep 2015
“How to Finance Your Cannabis Business”
“Organizational Structure Best Practices”

VOLUNTEER WORK

Big Brothers, Big Sisters of Southern Nevada
One-on-one mentorship program for challenged high school youth in southern Nevada — Oct 2015-Current

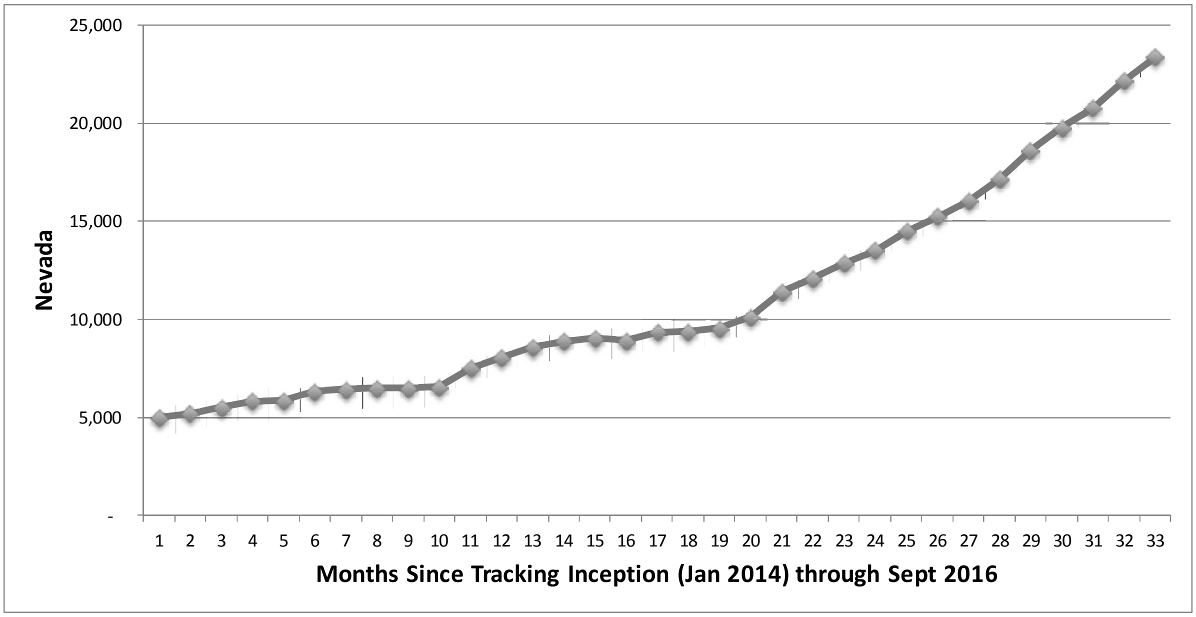
ADDITIONAL: Published four Air Force theses on innovative technologies and operations management. Actively involved in Las Vegas’ Downtown Project, and social coordinator for community arts and music event. Avid traveller, exploring over 50 countries.

REFERENCES

Letters of recommendation available on request.

APPENDIX F – Medical Marijuana Card Holders (Nevada)

The following chart shows the number of Medical Marijuana Card Holders in Nevada from January 2014 through September 2016 and various associated growth rates.[19]



Average Monthly Growth Rate - State	Apr-16	4.74%
Average Monthly Growth Rate - Clark	Apr-16	4.36%
Compound Annual Growth Rate - State	Jun-16	58.36%
Compound Annual Growth Rate - Clark	Jul-16	52.68%
Compound Annual Growth Rate - State since Dispensary Opening (Aug 2015)		83.15%
Compound Annual Growth Rate - Clark since Dispensary Opening (Aug 2015)		81.68%

Compound Annual Growth Rates since opening of dispensaries are through July 2016.

[19] http://dpbh.nv.gov/Reg/MM-Patient-Cardholder-Registry/dta/Monthly_Reports/Medical_Marijuana_Patient_Cardholder_Registry_-_Monthly_Reports/

APPENDIX G – CWNevada Investor Material dated April 2016

The following chart shows the Executive Summary from CWNevada investor material.

CWNEVADA

April 2016

Executive Summary

- CWNevada, LLC ("CWNevada") is a Nevada-based and incorporated cannabis company formed in March 2014. The Company currently controls the largest number of licenses in Nevada with 4 cultivation, 4 production and 3 dispensary licenses.
  - Operates the only greenhouse cultivation facility in the state.
  - Plans to open the states only licensed 24 hour dispensary and the largest Co-Op production facility in the state in the second quarter.
- CWNevada, LLC's experienced management team is complemented by partnerships with industry leaders.
  - 4Front and MJardin - industry leading dispensary and cultivation experts.
  - Tikun Olam and Stanley Brothers - industry leading cultivators with unique strains and historical research.
  - Wana, Incredibles, Caviar Gold and other leading consumer brands.
- CWNevada is well positioned to capitalize on the emerging and unique Las Vegas market.
  - Limited license market.
  - 2.5 million Southern Nevada residents.
  - Visitor reciprocity -- Southern Nevada tourism reached a record 42 million visitors in 2015.
  - 85% voter support for legalization - for the Recreation Marijuana Ballot Initiative passage in November 2016.
- CWNevada is focused on three primary value drivers:
  - Growing the highest quality, lowest cost cannabis at its greenhouse facility.
  - Producing an unrivaled selection of quality, brand name marijuana infused products ("MIPS") at its Co-Op production facility.
  - Distributing its products to its three dispensaries and the majority of dispensaries throughout the state.
- CWNevada is seeking to raise up to **$8 Million** by May 13, 2016 (Series B Preferred Units Shares) to take advantage of current market opportunities and accelerate the construction of its facilities.

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APPENDIX H – NuVeda/CWNevada Deal Point Advantages

CWNEVADA

NuVeda/CWNevada

Deal Point Advantages

DISPENSARY:

- **Tenant Improvements**: CW will fund 100% of all build out costs -- *$2+ mm value*
- **Operating Capital**: CW will fund all start-up capital -- *$250k value*
- **Management Fees**: CW will manage the dispensary as part of the deal at a reduced percentage management fee -- *$500k value*
- **Inventory:** CW will fully stock dispensaries at opening on extended terms -- *$1.5mm value*
- **Marketing:** CW will integrate new dispensaries into its marketing plan -- *$500k value*
- **Wholesale Pricing:** CW will have flower and quality MIP's available at opening at preferred pricing and selection to wholesale market -- *$500k value*
- **Vertical Integration:** CW is already vertically integrated, which will provide for significant tax advantages for NuVeda -- *$2.5mm value*

Total Estimated Value Year One: $7.75mm

CULTIVATION:

- **Existing Greenhouse**: CW has a site and frame for two 25,000/sf greenhouses already built for cultivation, which will allow for cost savings and a quicker build -- *$2.5mm value*
- **Mother Plant & Clone Availability**: CW will provide mother plants and clones, which will allow for an accelerated first harvest -- *$1.5mm value*

Total Estimated Value Year One: $4.0mm

PRODUCTION:

- **Existing Site**: CW has a site already developed which will shorten build time and lower costs -- *$500k value*
- **Brand Production Partners**: CW will bring in our branded production partners who will provide multiple points of sale for expanded revenue and net profit-- *$10mm value*

Total Estimated Value Year One: $10.5mm

TOTAL COMBINED ONE YEAR VALUE: $22MM

Anthem Forensics

EXPERT WITNESS REPORT

REPORT DATE: NOVEMBER 29, 2016

<u>SHANE TERRY</u>

<u>v.</u>

<u>NUVEDA, LLC, ET AL.</u>

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November 29, 2016

John M. Naylor, Esq.
MAUPIN NAYLOR BRASTER
1050 Indigo Drive, Suite 112
Las Vegas, Nevada 89145

Re: Shane Terry v. NuVeda, LLC, et al.

Dear Mr. Naylor:

Anthem Forensics ("Anthem") was engaged in the above-captioned matter by Maupin Naylor Braster. Relative to this engagement, we were asked to review and analyze the business valuation analysis presented in the Gryphon Valuation Consultants, Inc.'s report issued on May 25, 2016.

This report outlines the results of our review and presents the opinions and conclusions reached therefrom. Please note that if information becomes available to us that we deem relevant to the scope of this engagement, we reserve the right to supplement our report accordingly. This report is not to be used for any other purpose than as explicitly stated herein.

Sincerely,

Joseph L. Leauanae, CPA, CITP, CFF, CFE, ABV, ASA
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1. INTRODUCTION

Pursuant to the foregoing, Anthem has been engaged as an expert witness in this matter. The compensation to be paid for Joseph Leauanae's study and for testifying as to Anthem's findings is $300 per hour. Please note that Mr. Leauanae's curriculum vitae, which includes his testifying experience and a list of authored publications, has been attached to this report.

We received discovery disclosures during the preparation of this report that contained information and documentation that was ultimately used to form the conclusions and opinions presented herein. A list of the documents we received during the preparation of this report is presented in Appendix 1.

Our results, conclusions, and opinions are based upon the information we have received and reviewed through the date of this report. They are also based upon pertinent accounting and financial standards, our current understanding of the facts relative to this matter, and our years of professional experience providing forensic accounting, economic damage calculation, and business valuation services.

If information is made available to us subsequent to the issuance of this report, and if that information causes us to revise our conclusions or reassess cogent facts, we reserve the right to modify our opinions and supplement our report accordingly.

2. BACKGROUND

The following narrative provides a summary of the events that culminated in the issuance of this report. We are not proposing this background information as a factual statement nor do we intend to testify as to its veracity. Rather, this background information allows us to put our opinions and conclusions in context with the events and circumstances upon which they are based. Please note that the background information presented herein has been summarized to reflect pertinent information relative to our analyses and is not intended to provide a comprehensive timeline of all information bearing on this matter.

On or about April 14, 2014, NuVeda, LLC ("NuVeda" or "Company") was incorporated in Nevada.[1]

On or about July 9, 2014 the Operating Agreement for NuVeda, LLC ("Operating Agreement") was made effective.[2] Pursuant to the Operating Agreement, NuVeda's purpose encompassed "research, design, creation, management, licensing, advising and consulting regarding the legal

[1] Nevada Secretary of State.
[2] While the effective date stated in the Operating Agreement is July 9, 2014, the document was signed on July 16, 2014.

medical marijuana industry, as such matters shall be lawfully allowed under applicable state laws. Such purpose shall be broadly read to include providing management or other professional services to any individual, group or entity that is lawfully licensed, or seeking to become lawfully licensed, under any state statutory scheme providing for the legal cultivation, processing or dispensing of medical marijuana."[3]

Pursuant to the Operating Agreement, as of July 16, 2014 the member interests in NuVeda were as follows[4]:

Pejman Bady	46.5 percent
Pouya Mohajer	21.0 percent
Shane Terry	21.0 percent
Jennifer Goldstein	7.0 percent
John Penders	1.75 percent
Ryan Winmill	1.75 percent
Joe Kennedy	1.0 percent

On or about November 3, 2014, NuVeda received notice from the State of Nevada of the State's intent to approve the following applications:

1. Clark NMSD, LLC dba NuVeda, a Dispensary establishment at 2113 N. Las Vegas Boulevard in the NORTH LAS VEGAS local jurisdiction.

2. Clark NMSD, LLC dba NuVeda, a Dispensary establishment at 1320 S. 3rd Street in the LAS VEGAS local jurisdiction.

3. Clark Natural Medicinal Solutions, LLC, a Cultivation establishment at 13655 Apex Star Court in the NORTH LAS VEGAS local jurisdiction.

4. Clark Natural Medicinal Solutions, LLC dba NuVeda, a Production establishment at 13655 Apex Star Court in the NORTH LAS VEGAS local jurisdiction.

5. Nye Natural Medicinal Solutions, LLC, a Cultivation establishment at 2801 E. Thousandaire Blvd. in the NYE local jurisdiction.

6. Nye Natural Medicinal Solutions, LLC dba NuVeda, a Production establishment at 2801 E. Thousandaire Blvd. in the NYE local jurisdiction.

[3] Operating Agreement for NuVeda, LLC, p. 2.
[4] Operating Agreement for NuVeda, LLC, p. 23.

On or about March 10, 2016, it is our understanding that Shane Terry was expulsed from equity membership in NuVeda.

On or about April 9, 2016, Michael Webster of Webster Business Group issued a Certified Business Appraisal of NuVeda LLC, to which an addendum was added on July 16, 2016 (collectively, "Webster report").

On or about May 25, 2016, Donald Parker of Gryphon Valuation Consultants, Inc. issued a business valuation report ("Parker report").

On or about June 3, 2016, Shane Terry filed an Amended Demand for Arbitration.

On or about June 17, 2016, NuVeda, LLC, Pouya Mohajer, and Pejman Bady filed a Response to the Arbitration Demand and the Amended Demand for Arbitration and Counterclaim.

On or about October 31, 2016, Terrence M. Clauretie issued a report on the fair market value of NuVeda as of March 10, 2016 ("Clauretie report"). This report was subsequently updated on November 29, 2016.

In or about November 2016 Anthem was retained to review and analyze the business valuation analysis presented in the Parker report.

3. ANALYSIS CONSIDERATIONS

Our analysis is necessarily based upon certain considerations and assumptions regarding potentially disputed facts and legal arguments. These considerations and assumptions may impact our analysis, conclusions, and opinions, but may not be part of our testimony at this time as they may be outside our area of expertise or the current scope of our engagement. As a predicate to the opinions presented in this report, please note the following considerations and assumptions:

1. We have seen various combinations of parties in this matter referenced as "claimants", "respondents", "plaintiffs", and "defendants". To simplify references within this report, and with no intention of either providing legal characterization or limiting the parties to this action, we have referred to Shane Terry either by name or as "plaintiff" and we have collectively referred to NuVeda, LLC, Pejman Bady, Pouya Mohajer, DOE Individuals I-X, and ROE Entities I-X as "defendants".

2. We have assumed that the Parker report reflects the entirety of plaintiff's support for his business valuation assertions, since we have not received any other purported analyses. As such, this report addresses the Parker report.

3. As of the date of this report we have not received the entirety of Parker's work file. As such, we reserve the right to update our analysis upon receipt of that information.

4. While this report directly addresses the assessments, assumptions, and calculations in the Parker report, it is our understanding that counsel for defendants may retain experts to address other aspects/issues related to the captioned litigation. As such, our report should not be construed as encapsulating all of the expert opinions that defendants may wish to present, nor should this report be construed as a recitation of all claims by defendants relative to the captioned matter.

5. If information becomes available to us that we deem relevant to the scope of this engagement, we reserve the right to modify our opinions and report accordingly. This report is not to be used for any other purpose than as explicitly stated herein.

4. GENERAL CONSIDERATIONS WHEN VALUING A STARTUP

When appraising a business, the primary assessment of value for an operating company that has substantive income over and above the value of its assets is generally the income approach. When dealing with a company that is intended to be an operating business but is still pre-revenue, such as NuVeda as of the valuation date, the appropriate valuation approach assessments become more ambiguous since, until a company can reasonably demonstrate that it has the ability to generate non-speculative profits, its value may be better represented by its net assets (assets minus liabilities). The pertinent issues when valuing a startup company that has not yet generated revenue include the following:

1. What are the projected returns (income) for the business into the future?

2. What is the risk (discount rate) to the relevant party under the applicable standard of value that such projected business returns (the income determined in bullet #1) will be achieved?

3. Does the present value of the projected income stream exceed the value of the net assets?

4. Once business value has been determined at the entity level, what discounts from that value will be applicable to the holder of a specific equity interest?

We have reviewed Parker's report with these issues in mind. In addition to other pertinent observations made during our review, our analysis focused on the projected returns (the "benefit stream" or "income") presented in Parker's report as well as Parker's assessment of the risk inherent in achieving those returns (the "discount rate" and "capitalization rate").

5. OUR REVIEW OF THE PARKER REPORT

This report will focus on our analysis of Parker's estimation of NuVeda business value, particularly relative to the following:

1. Parker's valuation approaches.
2. Parker's assessment of projected income.
3. Parker's assessment of discount rates.
4. Parker's assumptions and limiting conditions.

As previously stated, since we have not received Parker's work file as of the issuance of this report, we reserve the right to update our analyses upon receipt of that information.

6. OUR ANALYSIS OF PARKER'S KEY CONSIDERATIONS

The pertinent considerations in the Parker report are identified, reviewed, and analyzed in this section. Please note that if additional information is provided to us subsequent to the issuance of this report, we reserve the right to update our findings and report accordingly.

CONSIDERATION 1: PARKER'S VALUATION APPROACHES

Parker ultimately only relied upon the income approach in assessing NuVeda's business value.

Our Analysis of this Consideration

Parker stated that he considered the asset approach (liquidation value, historic and adjusted book value), the market approach (guideline public company and comparable transactions), and the income approach (capitalization of earnings and discounted multi-stage growth model[5]) before rejecting all but the discounted multi-stage growth model under the income approach.

However, although Parker disregarded the market approach and asset approach, he made the following comments that bear noting:

1. When discussing the asset approach, Parker stated that "[o]ther instances of applicability are in cases of early stage operating entities where cash flow levels have not yet been established."[6]

[5] Parker later also refers to the discounted multi-stage growth model as the discounted cash flow method.
[6] Parker report, p. 3.

   a. Since this description exactly matches NuVeda as of the valuation date, we do not understand why Parker ultimately determined that the asset approach would not provide a meaningful indication of the Company's business value.

2. When discussing the asset approach, Parker stated that "[a]s a start-up venture, the Company…is projected to have negative net assets (Total Equity) through the start-up phase and up until sometime in year three. As such, the adjusted net asset approach could not provide any useful indication of value for either the Company or The Interest as of the Valuation Date."[7]

   a. When viewing a projection that presents at least two initial years of negative assets, we believe that the pertinent assessments to take from that observation should be cautionary (such as questioning why net assets are negative, how the Company would float the anticipated deficiencies, and whether the correlating projections of income are realistic) rather than preclusionary (such as ignoring net asset indications and basing value on income projections).

3. When discussing the market approach, Parker referenced a Letter of Intent ("LOI") dated November 17, 2015 by CW Nevada, LLC ("CW"). Parker stated that "[i]n the LOI, CW appears to make the claim that the aggregate consideration for a 65 percent interest in the four provisional certificates was $22 million."[8]

   a. It bears noting that the LOI received by our office does not reference a $22 million purchase price or $22 million in consideration for CW's 65 percent interest.

4. When discussing the market approach, Parker makes various assumptions in ultimately "extrapolating" what he refers to as the fair market value of the Company's six provisional certificates. However, Parker does not acknowledge that CW is providing significant synergies to the deal memorialized in the LOI and that those synergies cause any value extrapolated from the LOI to depart from the fair market value concept of a willing buyer and willing seller in a hypothetical transaction. Indeed, we believe that any value extrapolated from the LOI is a reflection of investment value, which represents value to a specific party (in this case, to CW) based upon unique synergies. As such, any value indications derived from the LOI will include synergies that should not be included in fair market value.

[7] Parker report, p. 20.
[8] Parker report, p. 22.

The following bear noting regarding Parker's use of the income approach:

1. Parker stated that the income approach "is most appropriate in the case of going concerns where goods and/or services are being offered for consumption and the company's assets serve to support that proposition."[9]

    a. While we agree with this statement, it bears noting that as of the valuation date, NuVeda was not a going concern[10] nor was it offering goods or services for consumption. As such, and in conjunction with our other observations herein, the usefulness of the income approach significantly hinged on the quality of projected operations (since there were no historical operations) and the assessed risk of achieving those projected operations.

2. When discussing the discounted cash flow ("DCF") method under the income approach, Parker described it as "projecting cash flows out for a certain number of future periods, estimating a 'terminal value' and then discounting these cash flows back to a present value using an appropriate Discount Rate that takes into consideration the time value of money and the risk inherent in operating the business….However, it must be realized that forecasting future cash flows involves uncertainty, and the farther the forecast goes into the future, the greater the uncertainty of the forecasted amounts. As such, any forecast and the underlying assumptions should be reviewed for reasonableness. Various measures of reliability, such as management's prior record of success and the track records of comparable companies as well as industry particulars need to be analyzed and considered." Parker continued, by stating that "[f]or high growth or early-stage companies, it can be especially difficult to build long-term forecasts with any degree of accuracy. However, in such circumstances, the DCF method may result in the most appropriate indication of value. Additionally, in typical early stage enterprise valuations, using the DCF method, the terminal value (determined at that point in time when cash flows are expected to become steady and predictable) may constitute one hundred percent or more of the total value due to losses from operations during some or all of the reporting periods up to the terminal value date."[11]

    a. There are several qualifications contained in the extracts above that require examination. First, the issue of "uncertainty" in the projected cash flows is pertinent in this valuation analysis because as of the valuation date there had been no operations. As such, the reasonableness of the underlying assumptions

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[9] Parker report, p. 3.

[10] The term "going concern" can be used to describe "a company that has the resources needed to continue to operate indefinitely until a company provides evidence to the contrary, and this term also refers to a company's ability to make enough money to stay afloat or avoid bankruptcy." (http://www.investopedia.com/terms/g/goingconcern.asp)

[11] Parker report, pp. 3-4.

bear particular consideration. Second, the possibility that applying the DCF method in the valuation of early stage companies could evidence multiple projected periods of losses should cause the reader to question how said company would avoid succumbing to those periods of losses, particularly during a company's formative years in an industry that is illegal under Federal law, where traditional financing is generally unavailable, and where the Internal Revenue Service disallows a significant amount of claimed business expenses. These issues are explored in detail later in this report.

The pertinent variables and assumptions used in Parker's application of the income approach are discussed in greater detail in the following sections of this report. Please note that our assessment of Parker's income approach should not lead the reader to assume that we believe his application of the income approach yields a meaningful indication of value in the captioned litigation.

CONSIDERATION 2: PARKER'S ASSESSMENT OF PROJECTED INCOME

Parker used projections provided to him by Shane Terry and then applied growth rates to the revenues in those projections to create five projection scenarios. In addition to the substantive growth inherent in the projections provided to Parker, Parker also presented alternative projections that used revenue growth based upon industry indicators that he selected.

Our Analysis of this Consideration

While various sections of Parker's report disclaimed his use of the projections and outlined limitations on the due diligence he performed relative to their derivation and application in his valuation, the fact remains that Parker used the Shane Terry-provided projections to derive an estimate of NuVeda's value that is now being proposed by plaintiff as probative in this matter. As such, we have examined Parker's assessment of projected income and have the following observations, which are not all-inclusive:

1. The fundamental assessments under the income approach to business valuation are the extent to which the company will generate returns in the future and the risk associated with achieving those returns. In Parker's application of the income approach he used aggressive projections of pre-tax income, but then applied a discount rate to these projected income levels that did not capture the risks associated with his pre-tax income projections.

2. Even if NuVeda were to achieve the dollar amount of projected revenues presented in Parker's report, Parker has not demonstrated how NuVeda would be able to support such

extreme revenue growth without corresponding increases in expenses or infusions of capital. Indeed, based upon the 2015 industry data contained in his report, profit as a percentage of revenues ranged from 3.7 percent (for medical and recreational marijuana stores in the U.S.)[12] to 6.3 percent (for medical and recreational marijuana growing in the U.S.)[13], which is in stark contrast to the after-tax profit percentages reflected in Parker's projections of 9 percent, 29 percent, 33 percent, and 35 percent during the DCF discrete projection periods from Year 2 through Year 5.[14]

3. It bears noting that Internal Revenue Code Section 280E disallows deductions for any amount paid or incurred in carrying on any trade or business if such trade or business consists of trafficking in controlled substances that are prohibited by Federal law. This generally results in "tax rates imposed on marijuana companies – from 40 percent to 70 percent to as high as 90 percent – all of which are higher than the 35 percent corporate tax rate paid by most other businesses in the United States."[15] Parker only used a 35 percent tax rate in his projections.

4. Parker stated that a "review of the detailed Profit & Loss projections (see Appendix H) revealed that the Company did not expect to receive any income until month 12 of year 1."[16] This observation is made more pertinent by Parker's clarification that "the original projections anticipated that year 1 would begin in March 2015. For purposes of analysis hereunder, year 1 is assumed to begin as of March 2016 in order to align the projection with the Valuation Date and more closely reflect [the] actual facts."[17]

    a. We have significant concerns regarding Parker's assumption that he could take projections that were originally intended to be pertinent as of March 2015 and then recharacterize them as pertinent starting one year later without any adjustment. If the projections had anticipated activity starting March 2015, then as of the March 10, 2016 valuation date Parker would have had one year's worth of actual activity to compare to the "original" projections. Had he performed this comparison, it is reasonable to assume that the differences between projected and actual performance could have warranted reconsideration of the usefulness of the "original" projections or, at the very least, the potential application of tempering adjustments to the variables and assumptions used therein. If projected and actual results significantly differ, as would have been observed here, then taking those projections and applying them to a different, future, period will not magically make them more likely to reflect actual performance.

[12] Parker report, p. 76.
[13] Parker report, p. 59.
[14] Parker report, p. 15.
[15] http://www.cannalawblog.com/the-trouble-with-section-280e-and-marijuana-businesses/
[16] Parker report, p. 20.
[17] Parker report, p. 119.

b. Further, Parker's statement in the extract above that moving the projections forward one year more closely reflects actual facts is problematic because he provides no support for this statement.

5. Parker took the projections that he received from Shane Terry "at face value for purposes of developing various scenarios showing what the potential revenue growth of the Company would look like under different growth rate assumptions, including the income statement projections as provided."[18] However, Parker stated that "[d]ue to the Company's lack of historical data, no clear pattern of growth could be developed. As such, five scenarios were developed, each exploring different revenue growth rates. Except for the actual profit & loss projections provided, all other scenarios held variables (Gross and Operating Margins, etc.) constant in accordance with the industry research presented in Appendix E." [19]

   a. We have various concerns regarding both Parker's attempt to reign in the aggressiveness of the projections provided to him by Shane Terry as well as his application of industry revenue growth rates in creating NuVeda projection scenarios.

   b. By attempting to create scenarios based upon different revenue growth rates, Parker attempts to narrow the scope of what might be wrong with the projections. By so doing, he ignores all of the problems that are unrelated to projected revenue growth, including but not limited to the starting revenue assessments, problematic relationships in the projection model between revenues and expenses, the failure of the projection model to adequately consider the sizeable tax implications of Internal Revenue Code Section 280E, and the optimism in the projection model regarding the Company's ability to obtain operational financing.

   c. By only focusing on industry revenue growth rates, he ignores the growth in expenses, which is exacerbated in the case of fixed expenses. Further, since the industry is regulated differently in the various States where medical marijuana production and dispensing is legal, applying an "industry" standard derived from operations outside of Nevada may have limited applicability to a Nevada-based company such as NuVeda.

Given the foregoing, Parker made assumptions that inflated his projected income, ignored specific risk factors that may impact NuVeda (including the Company's ability to acquire capital and revenue streams in the future), and applied a generic industry growth rate that was not correlated to the Company's historical income growth or the risks associated with future growth.

[18] Parker report, p. 25.
[19] Parker report, p. 25.

As such, it appears that Parker assessed representative pre-tax income, and created projections from that income, without sufficient analysis or substantive due diligence.

CONSIDERATION 3: PARKER'S ASSESSMENT OF DISCOUNT RATES

While Parker presented five different projection scenarios that were differentiated by the assumed revenue growth rates, he applied the same discount rate to the projected benefit streams in each of the five growth scenarios.

In assessing the discount rate to use, he started by determining an after-tax discount rate as follows:

PARKER'S BUILD-UP METHOD DISCOUNT RATE (SOURCE: DUFF & PHELPS)	
Risk Free Rate	4.0%
Equity Risk Premium	5.5%
Size Premium	7.9%
Equity Risk Premium Adjustment	0.6%
Discount Rate Determination	18.0%

Parker then proposed the assessment of a pre-tax discount rate of 26.08 percent, using an assumed long-term growth rate of 3 percent and an assumed tax rate of 35 percent. In his assessment of present values he then applied a rounded 26 percent discount rate to his assessment of EBITDA.

Our Analysis of this Consideration

The discount rate is the expected total rate of return required to attract capital to a particular investment, considering the risks and special characteristics of the investment. The discount rate for an investment in the ownership of a closely held business is derived from market evidence and is the sum of the following components:

1. The rate of return available in the market on investments that are essentially risk free, which is represented by long-term government bonds.

2. The premium for risk, which is the sum of the following:

a. An equity risk premium, which is the expected premium over the risk free rate that investors would expect to realize by investing in a broad index of the common stock market (such as the Standard & Poors' 500 stock composite average.);

b. An additional premium for the extra risk associated with the small size of the company, compared with the size of the publicly traded companies included in the equity risk premium mentioned above;

c. An additional company-specific risk premium to reflect the risk of the company and the industry.

A discount rate converts all of the expected future returns on an investment to an indicated present value. It bears noting that because of the symbiotic relationship between the projected income stream and the assessed level of risk that the companies will achieve the projected income stream, there will be commonality between our criticisms of Parker's projected income stream and our criticisms of Parker's assessed risk (demonstrated through the discount rate) of achieving those projections.

At this time we have the following concerns regarding Parker's discount rate assessments, including the assumptions he used:

1. As stated in Parker's report, "Marijuana remains a Schedule 1 drug under DEA guidelines, meaning that, on a National level, it is illegal to grow, possess or use. This raises the possibility that the Federal government could still prosecute based on Federal law - even though state law provides otherwise. The banking industry is subject to Federal regulations. As such cannabis is an entirely cash-based industry. Financial institutions have been reluctant to open accounts for marijuana businesses for fear of Federal regulators. Black market competition will probably always exist. After all, it represents the legacy market for the growing, production and distribution of marijuana."[20]

    a. It bears noting that none of these risk assessments appear to have been incorporated into Parker's discount rate.

2. The fundamental assessments under the income approach to business valuation are the extent to which the company will generate returns in the future and the risk associated with achieving those returns. In Parker's application of the income approach he used aggressive projections of pre-tax income, but then applied a discount rate to these projected income levels that did not capture the risks associated with his pre-tax income projections. When matching risk and return there is a symbiotic relationship between these two variables. For a business like NuVeda, as the projected returns become more

[20] Parker report, p. 7.

aggressive, the risk that the company will achieve those returns increases. This underscores the importance of analyzing the extent to which the company will be able to generate cash flows. By contrast, Parker has calculated projected pre-tax income and his discount rate as if they were two mutually exclusive variables that exist independently of each other. As such, he sought to both provide aggressive projections of income without mitigating that future income by the appropriate level of risk attributable to its attainment.

3. In Parker's projections[21] he estimates growth in net income at 899.6 percent from Year 2 to Year 3, 58.5 percent from Year 3 to Year 4, and 31.9 percent from Year 4 to Year 5. He then assumes, without any apparent support, that the growth in net income from Year 5 into perpetuity will only be 3 percent. The dissonance between the growth rates in the discrete projection period of the DCF and the terminal growth rate have not been reconciled in Parker's report.

4. Parker stated that a pre-tax discount rate should be applicable in his analysis and "an additional 8.08 percent was added to the summation of the buildup factors to account for the estimated tax difference…The adjustment was based on the assumed maximum corporate tax rate of 35 percent. As a pass-through entity for tax purposes, the payment [of] income tax falls to the owners of the company and the owner's will pay income tax on various different rate schedules depending upon individual circumstances."[22]

    a. It bears noting that Parker appears to have completely ignored the impact of Internal Revenue Code Section 280E when estimating the marginal tax rate to use in his projections. As previously stated, Internal Revenue Code Section 280E disallows deductions for any amount paid or incurred in carrying on any trade or business if such trade or business consists of trafficking in controlled substances that are prohibited by Federal law. This generally results in "tax rates imposed on marijuana companies - from 40 percent to 70 percent to as high as 90 percent - all of which are higher than the 35 percent corporate tax rate paid by most other businesses in the United States."[23]

    b. We believe that the discount rate applicable to after-tax cashflows for a marijuana business with historical operations may range from 30 percent to 45 percent, which would imply a pre-tax discount rate that was substantially higher than these amounts due to the high marginal tax rate that applies to marijuana companies. Further, since NuVeda had no historical operations as of the valuation date, an even higher discount rate may be justified depending upon the reasonableness of

[21] Parker report, p. 15.
[22] Parker report, p. 35.
[23] http://www.cannalawblog.com/the-trouble-with-section-280e-and-marijuana-businesses/

the projections. By contrast, Parker used an after-tax discount rate of only 18 percent and a pre-tax discount rate of only 26 percent.

5. As previously discussed, Parker assumed that projections that were anticipated to be effective as of March 2015 could be made effective as of March 2016, a year later, without adjustment. This issue was not addressed in his discount rate, although we propose that taking a projection that did not ultimately match reality and changing its effective start date will not automatically make it relevant. Rather, we believe that recharacterizing an old projection in this manner may call for an increase in any discount rate applied against the recharacterized projection.

Parker has seemingly calculated a projection of pre-tax income and then, separately, calculated discount and capitalization rates that do not appear correlated to his projected income.

Given the foregoing, Parker made assumptions that inflated his projected income, ignored specific risk factors that may impact NuVeda (including the Company's ability to acquire capital and revenue streams in the future), and applied a generic industry growth rate that was not correlated to the Company's historical income growth or the risks associated with future growth.

Based upon the foregoing, it appears that Parker assessed representative pre-tax income, and created projections from that income, without sufficient analysis or substantive due diligence.

CONSIDERATION 4: PARKER'S ASSUMPTIONS AND LIMITING CONDITIONS

Parker provided various assumptions and limiting conditions that undermine his analysis and the usefulness of his conclusions.

Our Analysis of this Consideration

Parker made the following comments that sought to limit the reader's interpretation of his findings:

1. "The report is based on independent market research and, in part, on historical and prospective information provided by the Client. Had that information provided by the Client been audited or reviewed by the appropriate advisors, matters may have come to light that could have resulted in using amounts that differ from those provided. Accordingly, Gryphon takes no responsibility for that underlying data."[24]

[24] Parker report, Executive Summary Letter.

2. "This estimation is subject to the Limiting Conditions found in Appendix C, the Valuation Analyst's Representation found in Appendix A and also any other assumptions and limiting conditions as noted in the valuation report."[25]

3. Scope limitation: "This report is not intended to serve as a basis for expert testimony in a court of law or other governmental agency without further analysis and any resulting documentation. Such services require a separate Litigation Consulting and Expert Services Agreement and Gryphon is under no obligation to enter into such an agreement."[26]

4. "Hypothetical conditions & assumptions:[27]

    a. Anticipated economic conditions generally fall in line with the forecast as presented herein.

    b. The industry in which the Company has proposed to operate is not stable and assumptions regarding future industry conditions were material to the opinions of value offered herein.

    c. The regulatory and legal environments concerning the Company's proposed operations are not stable and assumptions regarding these factors remaining the same in the future as anticipated on the valuation date were material to the opinions of value offered herein.

    d. All information, documents and representations made or presented by Client to Gryphon have been true and accurate and that no statement of fact has been offered so as to be intentionally misleading or otherwise cause erroneous assumptions to be made by Gryphon during the performance of its valuation analysis hereunder."

5. "Business valuation, it is often said, employs a combination of science and art; which weighs more on a particular valuation, depends on the fact set at hand. A strong fact set allows the analyst to rely more heavily on traditional measures based on solid empirical foundations, while a weaker fact set can require that the valuator depend on certain assumptions and hypothetical scenarios that can necessitate an alternative application of valuation theory, though still well within the bounds of accepted methodology. **The fact set in the case of the Company was considered to be strong.**"(emphasis added)[28]

[25] Parker report, Executive Summary Letter.
[26] Parker report, p. 2.
[27] Parker report, p. 2.
[28] Parker report, p. 23.

In contrast to the various assumptions and limiting conditions presented in his report, Parker appears to surmise that he believes the assumptions and limiting conditions do not detract from a "strong" fact set. We disagree.

7. ADDITIONAL CONSIDERATIONS

In addition to our review and commentary regarding Parker's valuation assumptions, as previously presented in this report, we have additional observations that bear consideration but that may not directly relate to Parker's assessments of projected income and discount rates. These additional considerations are as follows:

1. Parker refers to a 22.88 percent subject interest even though NuVeda's operating agreement refers to a 21 percent interest for Shane Terry. We assume that the trier of fact will resolve this inconsistency.

2. In "reconciling" the value indications from his five projection scenarios, Parker focused on how much weight should be accorded to each and did not address the reasonable possibility that none of the five projection scenarios should be used.

3. Parker assesses a combined lack of control and lack of marketability discount equal to 28 percent. From his derivation we cannot ascertain the extent to which his discounts consider relevant limitations in the operating agreement and factors relating to industry-specific limitations on residency requirements.

4. It is our understanding that NuVeda purchased the collective 0.50 percent interest equity interests of Ryan Winmill and John Penders for $1,000 effective May 17, 2016. However, since this transaction occurred subsequent to the March 10, 2016 valuation date, it was rightfully excluded from Parker's valuation analysis to the extent that the terms of the settlement or value implications were not known or knowable as of March 10, 2016.

8. OPINIONS

Pursuant to the foregoing analysis, we have reached the following conclusions and opinions.

OPINION 1: THERE ARE SUBSTANTIVE ISSUES WITH PARKER'S USE OF PROJECTIONS TO DERIVE NUVEDA'S BUSINESS VALUE

Parker presented pre-tax income projections that were not sufficiently analyzed and that were created without any substantive due diligence. He then exacerbated the attendant issues by applying pre-tax discount/capitalization rates that did not consider the inherent risks in the Company's ability to achieve each of the five projection scenarios.

In "reconciling" the value indications from his five projection scenarios, Parker focused on how much weight should be accorded to each and did not address the reasonable possibility that none of the five projection scenarios should be used. In seeking to support his findings under the income approach, he mischaracterized terms in a letter of intent.

Based upon the foregoing, it is our opinion that Parker's application of the income approach has used unreasonable metrics and assumptions that ignore historical realities and presumptively assume a speculatively optimistic future.

OPINION 2: NUVEDA'S NET ASSET VALUE MAY HAVE REASONABLY REPRESENTED ITS BUSINESS VALUE AS OF MARCH 10, 2016

When appraising a business, the primary assessment of value for an operating company that has substantive income over and above the value of its assets is generally the income approach. When dealing with a company that is intended to be an operating business but is still pre-revenue, such as NuVeda as of the valuation date, the appropriate valuation approach assessments become more ambiguous since, until a company can reasonably demonstrate that it has the ability to generate non-speculative profits, its value may be better represented by its net assets (assets minus liabilities).

For the reasons detailed within this report, it is our opinion that Parker has neither provided nor supported a reasonable assessment of why NuVeda's business value exceeded its net asset value as of the valuation date. As such, it is reasonable to assume that NuVeda's business value as of March 10, 2016 may have been better represented by either its net asset value or by a more reasonable and supportable application of the income approach.

APPENDIX 1: DOCUMENTS RECEIVED

1. 2015 Form 1065 Partnership Tax Return for NuVeda LLC
2. 2 PRIME, LLC Unsecured Promissory Note dated October 15, 2015
3. 2 PRIME, LLC Unsecured Promissory Note dated February 29, 2016
4. Amended Demand for Arbitration filed June 3, 2016.
    a. Included a copy of the Operating Agreement for NuVeda, LLC
5. Amplification of NuVeda Valuation dated March 10, 2016
6. Business Valuation Report prepared by Donald Parker, dated May 25, 2016
7. Buyer/Borrower Statement (Final) dated April 3, 2015 relative to 15.57 Acre Portion of Lot M9 @ Kapox, North Las Vegas, NV
8. Claimant Shane M. Terry's Initial Disclosures Pursuant to NRCP 16.1(a)(1) dated August 16, 2016
    a. TERRY000001 – TERRY005771
9. Claimant Shane M. Terry's First Supplemental Disclosures Pursuant to NRCP 16.1(a)(1) dated August 16, 2016
    a. TERRY005772 – TERRY005804
10. Letter from DIV Holdings regarding $5 million purchase price of the Certificate
11. NuVeda balance sheet as of March 10, 2016, including component analysis of balance sheet
12. NuVeda Executive Summary (October 2015)
13. NuVeda Financials II MS Excel workbook
14. NuVeda Forecast 20150731 v 48 Baseline w_Nye MS Excel Workbook
15. NuVeda Investment Summary Powerpoint presentation slides (October 21, 2015)

16. NuVeda, LLC and CWNevada, LLC Letter of Intent dated November 17, 2015

17. NuVeda, LLC, Pouya Mohajer, and Pejman Bady's Response to the Arbitration Demand and the Amended Demand For Arbitration and Counterclaim
    a. Report on The Fair Market Value of NuVeda, LLC as of March 10, 2016 by Terrence M. Clauretie (dated October 31, 2016) – NUVEDA000374 – NUVEDA000422

18. Project LV Preliminary Indicative Terms and Conditions (November 2015) relative to Project Dispensary and 4Front Capital

19. Promissory Note between NuVeda, LLC and Dr. Gregory Daniel dated May 15, 2015

20. Realcap Funding LLC loan document dated March 25, 2015

21. Seed Round October 15, 2015 documents

22. Seller's Estimated Settlement Statement (close of escrow April 5, 2016) relative to 15.57 Acre Portion of Lot M9 @ Apex, North Las Vegas, NV

23. Settlement Agreement between The Winmill Group, LLC, NuVeda, LLC, and Ryan Winmill and John Penders

24. Settlement and Mutual Release Agreement between 2113 Investors, LLC and NuVeda, LLC dated March 7, 2016
    a. Promissory Note between NuVeda, LLC and 2113 Investors, LLC dated March 7, 2016

25. Transcript of Preliminary Injunction Hearing – Day 4 (January 8, 2016)

26. Unexecuted copy of Purchase Agreement between Daniel Caravette and (Buyer line is blank) and Greenway Health Community, LLC

27. Updated Report on The Fair Market Value of NuVeda, LLC as of March 10, 2016 by Terrence M. Clauretie

28. Webster Business Group correspondence regarding the value of NuVeda, dated April 9, 2016

29. Webster Business Group correspondence labeled "Addendum", dated July 16, 2016

Anthem Forensics

Joseph L. Leauanae

CPA, CITP, CFF, CFE, ABV, ASA

Joseph L. Leauanae provides litigation support and financial valuation services. His engagements in these areas involve the application of forensic or investigative accounting techniques, the valuation of businesses and intangible assets, and the quantification of economic damages.

The following is a summary of Mr. Leauanae's forensic accounting, business valuation, and economic damage calculation experience.

Forensic/Investigative Accounting

Mr. Leauanae's forensic accounting experience includes the investigation and/or reconstruction of accounting records in cases relating to marital dissolution, embezzlement, fraud detection and documentation, theft, intellectual property, contract disputes, shareholder disputes, wrongful termination/death, personal injury, and business interruption. Sample experience includes the following:

- Performing investigative accounting relative to the valuation and tracing of marital/community assets in divorce cases.
- Performing investigative accounting in commercial litigation matters.
- Reconstructing accounting records as a result of theft, floods, fire, and other natural disasters.
- Performing investigative accounting analyses relative to criminal fraud trials and claims.

Financial Valuation

Mr. Leauanae's financial valuation experience includes valuing businesses and intellectual property in a number of diverse industries and in both cooperative and contentious appraisal environments. Sample experience includes the following:

- Performing valuations for matters involving marital dissolution, including assessing separate vs. community property allocations.
- Consulting on synergy considerations in business combination transactions.
- Performing valuations for shareholder disputes and buy-outs.
- Performing valuations to assist with gift and estate tax planning.

Economic Damage Calculation

Mr. Leauanae's economic damage calculation experience includes the analysis and preparation of economic damage calculations for matters involving contract disputes, business interruption, and intellectual property infringement. He has also analyzed and quantified economic losses in personal injury, wrongful death, and wrongful termination matters. Sample experience includes the following:

- Analyzing plaintiff/defendant claims for lost profits, and the diminution of business value, in commercial litigation matters.
- Computing economic damages relative to intellectual property infringement.

Educational Qualifications

Mr. Leauanae earned a Bachelor of Science degree in Accounting and a Master of Business Administration degree, with an emphasis in Management of Technology, from the University of Utah.

Professional Certifications

- Licensed as a Certified Public Accountant in Nevada and Utah
- Member of the American Institute of Certified Public Accountants (AICPA)
- Member of the Nevada Society of Certified Public Accountants (NSCPA)
- Certified Information Technology Professional by the AICPA
- Certified in Financial Forensics by the AICPA
- Certified Fraud Examiner by the Association of Certified Fraud Examiners
- Accredited in Business Valuation by the AICPA
- Accredited Senior Appraiser by the American Society of Appraisers

Professional Affiliations/Activities

- Chair, Utah Association of Certified Public Accountants (UACPA) Business Valuation Committee, 2003 – 2004
- Chair, UACPA Business Valuation - Litigation Services Committee, 2005 - 2006
- Member, NSCPA Business Valuation Committee, 2004 – 2005, 2008
- Member, NSCPA Litigation Consulting Services Committee, 2007
- Member, AICPA Business Valuation and Forensic & Litigation Services' Editorial Advisory Board, 2004 – 2007
- Member, AICPA ABV Credential Committee, 2008 – 2010
- Member, ACFE Las Vegas Chapter Board, 2009 – 2011
- Mentor, AICPA ABV Mentor program, 2008 – 2011
- Member, AICPA ABV Champions Task Force, 2010 – 2012
- Director, NSCPA Las Vegas Chapter Board, 2013 – 2014

Publications

- "The Science and Art of Business Valuation", THE JOURNAL ENTRY (November 2001)
- "Enron Demonstrates Weaknesses in the Attestation Process", THE CPA JOURNAL (September 2002)
- "Truth or Dare: Assessing the Reliability of Financial Statements in a Post-Enron World", UTAH BAR JOURNAL (October 2002)
- "Expert Witness Qualifications and Selection", JOURNAL OF FINANCIAL CRIME (December 2004)
- "A Unified Approach to Calculating Economic Damages", TEXAS PARALEGAL JOURNAL (Summer 2005)
- "Rebutting Your Client: How Much Involvement is Too Much? (From An Expert's Point of View)", TEXAS PARALEGAL JOURNAL (Fall 2005)
- "Valuation Discounts for Holding Companies", THE JOURNAL ENTRY (October 2005)
- "Personal Injury: How Much for How Long?", THE JOURNAL ENTRY (November 2005)
- "Developing a Business Valuation Practice", AICPA FVS CONSULTING DIGEST (March 2011)
- "Forensic Accounting: Those 'Other' Accountants", THE SILVER STATE CPA (July 2012)

Select Speaking Engagements

- “Valuation of Intangible Assets”, Utah State Bar, 2002 Mid-Year Convention (March 2002)
- “Applying Forensic Accounting Skills in the Business Valuation Process”, Utah Association of Certified Public Accountants, Business Valuation Symposium (September 2002)
- “Introduction to Forensic Accounting and Business Valuation”, Beta Alpha Psi, University of Utah Chapter (November 2002)
- “Trademark Dilution and Damages”, The Bar Association of San Francisco, Barristers Club (June 2003)
- “What Tax Practitioners Need To Know About Business Valuation”, Utah Association of Certified Public Accountants, 31st Annual Tax Symposium (November 2005)
- “Forensic Accounting Cases”, Association of Certified Fraud Examiners, Salt Lake Chapter (April 2007)
- “When Auditing Isn’t Enough: A Forensic Accountant’s Perspective”, Northern Utah Association of Government Auditors, Professional Development Conference (May 2007)
- “Forensic Accounting – A Primer for Management Accountants”, Institute of Management Accountants, Salt Lake Chapter (September 2007)
- “Business Valuation”, Idaho Society of CPAs, Idaho State Tax Update (November 2007)
- “Payroll Fraud and A/P Fraud”, Northern Utah Association of Government Auditors, Professional Development Conference (May 2008)
- “An Introduction to Forensic Accounting”, Beta Alpha Psi / CFE, UNLV Chapter (November 2008)
- “How To Use Forensic Accountants in a Divorce Case”, Advanced Family Law Strategies Seminar, Las Vegas (December 2008)
- “Overview of Forensic Accounting: Financial Investigations to Business Valuations”, Clark County Bar Association CLE Seminar, Las Vegas (June 2009)
- “Litigating Business Valuations in Divorce Cases”, Advanced Family Law Financial Strategies Seminar, Las Vegas (December 2009)
- “The Role of Forensic Accounting in Turnarounds: How to Find and Follow the Money”, Turnaround Management Association of Nevada, Las Vegas (May 2010)
- “Forensic Accounting: A Continuous Study of Ethical Quandaries”, Institute of Internal Auditors, Las Vegas Chapter (November 2011)
- “CPA 2.0: Specialization for Career Enhancement”, AICPA Practitioners Symposium TECH+ Conference (June 2012)
- “Business Valuation – A Primer for Management Accountants”, Institute of Management Accountants, Las Vegas Chapter (August 2013)

Summary of Expert Witness Testimony

The following list only identifies cases in which Mr. Leauanae has provided expert witness testimony in a deposition or court setting. It does not include cases wherein he was designated an expert witness or issued an expert report if he did not ultimately provide testimony in deposition or court.

Ref	Case Name	Retention	Jurisdiction
1	*Perez v. Perez*	*Radford J. Smith, Chtd.* Counsel for Husband	Eighth Judicial District Court, Clark County
2	*Swanson v. Swanson*	*Radford J. Smith, Chtd.* Counsel for Wife	Eighth Judicial District Court, Clark County
3	*Mello, et al. v. Jess Arndell Construction Co., et al.*	*Koeller, Nebeker, Carlson & Haluck LLP* Counsel for Jess Arndell Construction Co.	Second Judicial District Court, Washoe County
4	*CRND v. SeeLevel*	*Wood Crapo, LLC* Counsel for CRND	Fourth Judicial District Court, Utah County
5	*Bianchi v. Bank of America*	*Holland & Hart LLP* Counsel for Bank of America	Eighth Judicial District Court, Clark County
6	*Rasmuson v. Rasmuson*	*Radford J. Smith, Chtd.* Counsel for Wife	Eighth Judicial District Court, Clark County
7	*Madonia v. Madonia*	*Bruce I. Shapiro, Ltd.* Counsel for Husband	Eighth Judicial District Court, Clark County
8	*Two Rivers Manufacturing, LLC, et al. v. Ecko Products, Inc., et al.*	*Lewis and Roca LLP* Counsel for Two Rivers Manufacturing, LLC	Eighth Judicial District Court, Clark County
9	*Bacon v. Soiberg*	*Throne & Hauser* *Kelleher & Kelleher* Joint Retention	Eighth Judicial District Court, Clark County
10	*Ferguson v. Ferguson*	*Rhonda L. Mushkin Chartered* *Law Offices of James S. Kent, Ltd.* Joint Retention	Eighth Judicial District Court, Clark County
11	*Alvin J. Watson, et al. v. Eaton Electrical Inc., et al.*	*Lewis and Roca LLP* Counsel for Alvin J. Watson	U.S. District Court

Ref	Case Name	Retention	Jurisdiction
12	*Gastager v. Gastager*	*The Law Office of Michael R. Balabon* *The Law Office of M. Lani Esteban-Trinidad, P.C.* Joint Retention	Eighth Judicial District Court, Clark County
13	*Jones v. Jones*	*Kelleher & Kelleher* Counsel for Husband	Eighth Judicial District Court, Clark County
14	*Meyer v. Meyer*	*Kunin & Carman* Counsel for Wife	Eighth Judicial District Court, Clark County
15	*Nelson v. Nelson*	*The Dickerson Law Group* Counsel for Wife	Eighth Judicial District Court, Clark County
16	*Lindsey v. Lindsey*	*Pecos Law Group* Counsel for Wife	Eighth Judicial District Court, Clark County
17	*Petculescu v. Petculescu*	*Lee, Hernandez, Brooks, Garofalo & Blake* *Dempsey, Roberts & Smith, Ltd.* Joint Retention	Eighth Judicial District Court, Clark County
18	*Murphy v. Murphy*	*Rebecca L. Burton, P.C.* Counsel for Wife	Eighth Judicial District Court, Clark County
19	*Ophthalmic Associates, LLP, et al. v. Triple Net Properties, LLC, et al.*	*Santoro, Driggs, Walch, Kearney, Holley & Thompson* Counsel for Triple Net Properties, LLC	Eighth Judicial District Court, Clark County
20	*Lori A. Seright Pompei v. Premier Properties of Mesquite, Inc., et al. (2011)*	*Bingham & Snow, LLP* Counsel for Lori A. Seright Pompei	Eighth Judicial District Court, Clark County
21	*Ferrando v. Ferrando*	*Kelleher & Kelleher* Counsel for Wife	Eighth Judicial District Court, Clark County
22	*Que v. Que*	*The Abrams Law Firm* Counsel for Wife	Eighth Judicial District Court, Clark County
23	*Ketchum v. Ketchum*	*The Abrams Law Firm* Counsel for Wife	Eighth Judicial District Court, Clark County
24	*David B. Gam, et al. v. Brandon Gerson, et al.*	*The Harris Firm PC* Counsel for Brandon Gerson	Eighth Judicial District Court, Clark County

Ref	Case Name	Retention	Jurisdiction
25	*Terry Lamuraglia v. Clark County*	*Law Office of Daniel Marks* Counsel for Terry Lamuraglia	Eighth Judicial District Court, Clark County
26	*Tiedemann v. Tiedemann*	*The Abrams Law Firm* *Naimi & Dilbeck, Chtd.* Joint Retention	Eighth Judicial District Court, Clark County
27	*Acosta v. D'Acosta*	*Willick Law Group* Counsel for Wife	Eighth Judicial District Court, Clark County
28	*In the Matter of the Estate of Martin J. Blanchard*	*Trent, Tyrell & Associates* *James M. Davis Law Office* Joint Retention	Eighth Judicial District Court, Clark County
29	*Castillo v. Castillo*	*The Abrams Law Firm* *R. Nathan Gibbs LTD* Joint Retention	Eighth Judicial District Court, Clark County
30	*Shwentarsky v. Shwentarsky*	*The Fine Law Group* Counsel for Wife	Eighth Judicial District Court, Clark County
31	*Faught v. Faught*	*The Abrams Law Firm* Counsel for Wife	Eighth Judicial District Court, Clark County
32	*Lori A. Seright Pompei v. Premier Properties of Mesquite, Inc., et al. (2012)*	*Bingham & Snow, LLP* Counsel for Lori A. Seright Pompei	Eighth Judicial District Court, Clark County
33	*Tuscano, LLC v. Colorado Belle Gaming, LLC*	*Aldrich Law Firm, Ltd.* Counsel for Tuscano, LLC	Eighth Judicial District Court, Clark County
34	*Templeton v. Templeton*	*Law Office of Daniel Marks* Counsel for Wife	Eighth Judicial District Court, Clark County
35	*Kaula v. Keam*	*Kelleher & Kelleher* Counsel for Wife	Eighth Judicial District Court, Clark County
36	*Eason v. Eason*	*Kelleher & Kelleher* Counsel for Wife	Eighth Judicial District Court, Clark County
37	*Michael Carlson v. Charles E. Cleveland II*	*Court Appointment*	Eighth Judicial District Court, Clark County
38	*Virgin Valley Water District v. Michael E. Johnson, et al.*	*Bingham Snow & Caldwell, LLC* Counsel for Virgin Valley Water District	Eighth Judicial District Court, Clark County

Ref	Case Name	Retention	Jurisdiction
39	*The Guardianship of Anthony D. Critelli v. Gemma Ganci, et al.*	*The Harris Firm, PC* *Rob Graham & Associates* Counsel for The Guardianship of Anthony D. Critelli	Eighth Judicial District Court, Clark County
40	*Schulte v. Schulte*	*Court Appointment*	Eighth Judicial District Court, Clark County
41	*Martella v. Martella*	*Kelleher & Kelleher* Counsel for Wife	Eighth Judicial District Court, Clark County
42	*In the Matter of the Testamentary Trust of George A. Steiner*	Russell Steiner c/o *Solomon Dwiggins & Freer, Ltd.*	Eighth Judicial District Court, Clark County
43	*Advantage Services, LLC v. Resort Stays Marketing, LLC, et al.*	*Cotton, Driggs, Walch, Holley, Woloson & Thompson* Counsel for Advantage Services, LLC	Eighth Judicial District Court, Clark County
44	*Screws v. Screws*	*Kelleher & Kelleher* Counsel for Husband	Eighth Judicial District Court, Clark County
45	*Alabaster Holdings, LLC, et al. v. Eagle Mortgage Company, Inc., et al.*	Alabaster Holdings, LLC c/o *Wolf, Rifkin, Shapiro, Schulman & Rabkin, LLP*	Eighth Judicial District Court, Clark County
46	*Ambulance Management Group, LLC v. Dr. Richard Henderson*	*The Reid Firm* Counsel for Ambulance Management Group, LLC	Eighth Judicial District Court, Clark County
47	*Rebel Communications, LLC v. Virgin Valley Water District, et al.*	*Pitegoff Law Office* Counsel for Virgin Valley Water District	U.S. District Court
48	*Brightwell v. Helfrich*	*The Dickerson Law Group* *James M. Davis Law Office* Joint Retention	Eighth Judicial District Court, Clark County
49	*D.W. "Doc" Wiener v. Klipper Chemtrol Corporation*	*Lovato Law Firm, P.C.* Counsel for D.W. "Doc" Wiener/Trustee	Eighth Judicial District Court, Clark County

Ref	Case Name	Retention	Jurisdiction
50	*Hickman v. Hickman*	*Kainen Law Group, PLLC* Counsel for Husband	Eighth Judicial District Court, Clark County
51	*Larsen v. Larsen*	*Kainen Law Group, PLLC* Counsel for Husband	Eighth Judicial District Court, Clark County
52	*In the Matter of the Estate of Edward DeWayne Mulick*	*Edwards & Chambers, LLP* Counsel for Carrie Kovach, Stephanie Mulick, and Edward Mulick	Eighth Judicial District Court, Clark County
53	*Beasley v. Beasley*	*Kelleher & Kelleher* Counsel for Wife	Eighth Judicial District Court, Clark County
54	*Chew v. Hazell*	*Kelleher & Kelleher* Counsel for Wife	Eighth Judicial District Court, Clark County
55	*Ellerbe v. Ellerbe*	*Kainen Law Group, PLLC* Counsel for Husband	Eighth Judicial District Court, Clark County
56	*Grasso v. Grasso*	*Court Appointment*	Eighth Judicial District Court, Clark County
57	*Shah Virani v. Arif B. Virani, et al.*	*Flader & Hirji, LLP* Counsel for Shah Virani	Eighth Judicial District Court, Clark County
58	*Cioffi-Kogod v. Kogod*	*Radford J. Smith, Chtd.* Counsel for Wife	Eighth Judicial District Court, Clark County
59	*Boutos v. Tallow*	*Court Appointment*	Eighth Judicial District Court, Clark County
60	*David J. Winterton, et al. v. Henry E. Lichtenberger, et al.*	*Lipson, Neilson, Cole, Seltzer & Garin, P.C.* Counsel for Henry E. Lichtenberger	Eighth Judicial District Court, Clark County

SPECIAL MEETING OF THE MEMBERS NuVEDA LLC,
a Nevada limited liability company

Taken at Law Offices of
Alan J. Buttell, Esq.
611 South Sixth Street
Las Vegas, Nevada 89101

On Tuesday, August 8, 2017
At 8:17 a.m.

Reported by: Cheryl Gardner, CCR 230
RPR, RMR

APPEARANCES:

PEJMAN BADY, M.D.
POUYA MOHAJER, M.D.
JOE KENNEDY, Chief Financial Officer
JENNIFER GOLDSTEIN, ESQ.
ALAN J. BUTTELL, ESQ.

DR. BADY: All right. Mr. Secretary, I'm going to start the meeting. Call to order. It's 8:18 a.m., 8/8/17. Call to order. Roll call. I think all the members are here. We have established a quorum. We have the majority here. And approval of the prior minutes.

Did everybody have a chance to look at the prior minutes? You all have them, right?

MS. GOLDSTEIN: I don't know that I received them.

MR. KENNEDY: I don't know either.

DR. MOHAJER: It's been while since the last meeting.

DR. BADY: It was tendered at that time, right? All right. So I just want to take a vote on approval of the prior minutes.

DR. MOHAJER: Yes.

DR. BADY: Approved. Jennifer.

MS. GOLDSTEIN: I don't recall. I'll abstain.

DR. BADY: Abstain. Joe.

MR. KENNEDY: Yes.

DR. BADY: All right.

MR. KENNEDY: Since you established a quorum, you should say who else is here, that Alan is here, Alan and the court reporter.

DR. MOHAJER: You said yes, right?

DR. BADY: Yes, I did.

All right. So we also have our general counsel and our --

DR. MOHAJER: Alan Buttell.

MR. BUTTELL: Yes, you do.

DR. BADY: And our beloved court reporter.

MR. BUTTELL: Cheryl Gardner.

DR. BADY: Gardner is your last name?

(Remarks off the record.)

DR. BADY: So for 4Front litigation, Alan, can you give us a quick update about 4Front back and forth.

MR. BUTTELL: Yes. The 4Front litigation commenced mid-May with CW Nevada and NuVeda filing a

Complaint in district court in the eighth judicial district court Nevada, then the reaction by 4Front advisers was to commence arbitration in Arizona I believe.

They filed a responsive pleading to our Complaint that was essentially a motion to dismiss the Complaint and to force CW Nevada, NuVeda, to arbitrate the issues raised in the Complaint filed in the district court.

Their principle basis was the arbitration clause contained in the 4Front/NuVeda contract and the 4Front/CW Nevada contract as well as a forum selection clause that was contained in each of the contracts.

The Forum selection clause basically stated that 4Front had the sole choice of whether to arbitrate and/or

litigate wherever they wanted to. Essentially that's what it came down to as long as it was in Arizona, in Maricopa County or in any county in Nevada. It was basically their choice, and then the arbitration clause was, you know, pretty simple. It was that any matter would be arbitrated either in Nevada or in Arizona at 4Front's direction or their choice. Again, you know, their choice.

So we filed an opposition to that motion and the

Court found it to be a very legitimate opposition. The question was not well settled. It was recently a matter of first impression. That is the question of, you know, the necessity of enforcing the forum selection clause was a matter of first impression recently in 2015. So he ultimately ruled in our favor on the forum selection clause but felt that the federal law, the Federal Arbitration Act preempted our statutory authority which we used to oppose the necessary arbitration.

He felt that the FAA and the federal authority preempted our state law which required specific and documented intention of the parties to actually arbitrate. We had an arbitration clause. It was contained I think in paragraph 8 subsection F of the contract, and it stated that, you know, we had to arbitrate the case if it came up, and the 4Front litigation position was to assert that they had interstate commerce afoot, that because of the

interstate commerce that was going back and forth in the case between Arizona and Nevada, that that caused the FAA to be in force and to preempt our statutory authority which required the specific authorization to arbitrate which was not in existence in the contract.

So the Court said, well, you know, you've got an arbitration clause that mentions both Nevada and Arizona. You've got an Arizona corporation that is registered as a foreign corporation here in Nevada. It does business here, however it appears and, you know, a lot of it was based upon their representations on the interstate commerce.

He said it appears that the federal authority is invoked and it does preempt the Nevada law so the arbitration clause is going to be enforced and that was the ruling. Whether or not we agree with the ruling and where, you know, it stands in the long-term is going to be a matter of discussion, but that's where we are.

So the procedural point that we're at right now is awaiting the order to be done by Snell & Wilmer who represent 4Front then get back into the arbitration proceedings and engage that for as long as we have to where we might end up doing. We may end up arbitrating the case in Nevada instead of Arizona. Who knows? We may end up in an appeal. We may end up seeking to stay the arbitration.

You know, there's a lot of things that we have to decide at

this point what we're going to do, but that's essentially where we are.

DR. BADY: So didn't you just say that we got selection of where we want to have the arbitration?

MR. BUTTELL: Well, the forum selection clause was determined to be what they call permissive and so, you know, that was not going to require that the case be handled in Arizona but the arbitration clause was in force so it does mean we have to arbitrate the case.

DR. BADY: But do we have selection of the forum?

MR. KENNEDY: The problem is they already filed for arbitration.

MR. BUTTELL: They've already commenced the arbitration in Arizona, and I think we have to, you know, we have to discuss it, but I think that the forum for this arbitration being in Arizona is certainly inconvenient given everything that takes place as a result of the contract takes place here.

As we pointed out to the Court, the contract was negotiated here. It was executed here. It was -- the point and purpose of the whole -- all the transactions associated with the contract are here. The parties are here. Certainly 4Front is here so, you know, I think we have reason to assert even in the arbitration that the arbitration should take place in Nevada, not Arizona where

it presently is being handled.

It's -- the administration of the arbitration has been overtaken by Lance Tanaka who as you know has been the person who is overseeing the arbitration in the matter involving Shane Terry and Jennifer Goldstein, yourself, and Pouya.

DR. BADY: Right.

MR. BUTTELL: So it looks like for right now anyway both the arbitration cases are being overseen by Tanaka and we are in a position right now where Cory Braddock representing 4Front is -- he's preparing the order and we're trying to get our schedules together so we can get back into the groove with the arbitration.

Everything has just kind of been on hold since the hearing in front of Judge Bare and now we're just trying to get back on track. We are getting back on track with the arbitration. We're going to set up a telephone conference and we will have to decide the forum, pay the required deposit on the fees, that sort of thing.

DR. BADY: Our position is still tortious interference with --

MR. BUTTELL: Yes. None of the causes of actions or claims for relief that were filed in the district court are changed, lost, or otherwise disposed of. I mean all of that will be brought to bear in the arbitration if that's

indeed where we wind up.

Like I said, I think, you know, the decision has to be made, you know, at what point, maybe today, tomorrow, or the next day what we're going to do with the district court's ruling, but the order hasn't even been prepared yet.

If there's any other questions, I mean I could rattle on about it for --

DR. BADY: No, no, no.

MR. KENNEDY: I have a couple.

MR. BUTTELL: Sure.

MR. KENNEDY: This interstate commerce --

MR. BUTTELL: Yeah.

MR. KENNEDY: You know, Judge Bare said just on the face of it because they are based in Nevada and we are based -- they're based in Arizona and we're based in Nevada, there is interstate commerce, but the definition of interstate commerce requires a physical exchange.

They did say that they sent out plans and other things from Arizona, and I didn't miss that when they were saying that, but I don't think that that's, that they sent them to CW or NuVeda. They sent them to their own entity here, and the fact that everything that we did with them was through their qualification in Nevada, it might be worth challenging.

MR. BUTTELL: That's an interesting point.

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Intra-company distribution of materials doesn't necessarily qualify as interstate commerce.

DR. MOHAJER: And it was electronic.

DR. BADY: Nothing electronic is considered interstate commerce.

MS. GOLDSTEIN: It doesn't have to be a tangible exchange. It just has to be an exchange of value.

MR. BUTTELL: I think the judge also, Pej, as you recall, correct me if I'm wrong, on the fact that the contract actually designated both Arizona and Nevada.

MR. KENNEDY: That's right.

MR. BUTTELL: I think that's probably a more difficult thing to deal with. 'Cause it -- I mean because it expressly states either/or and between. I don't know if either/or means between. You know, I think it's hard to say but he focused on that too.

MR. KENNEDY: Okay. So I think, though, that they'll be able to convince the Court that there is interstate commerce, that's where I was headed, no matter what we do because if they traveled from Phoenix to here and handed something to one of our members or one of the members of CW of interstate commerce, you know. It doesn't require a truck driving --

MR. BUTTELL: There's a lot of things that could have happened behind the scenes that we're not aware of that could constitute interstate commerce. I simply don't know.

MR. KENNEDY: All I can tell you is I'm disappointed. If we're going to have to do it in Phoenix, it's going to be expensive and we're not going to have an arbitrator who is going to be sympathetic with us as we might be able to do here.

MR. BUTTELL: I agree.

MR. KENNEDY: Yeah. I know.

DR. BADY: So that wasn't a question. That was a comment.

MR. KENNEDY: The last one was a comment. The other one was a question. Should we even consider challenging the interstate commerce?

MR. BUTTELL: I think we're going to consider it. I think it's worth considering. Certainly if we can find a foothold that's legitimate, straight based, and not frivolous I think we should, you know, consider challenging it but if we can't, then so be it.

MR. KENNEDY: Jennifer, what he left out, what you didn't hear --

MS. GOLDSTEIN: I don't even know the nature of the allegations. I don't have a sense of any of it.

MR. KENNEDY: So the argument was whether it had to go to arbitration or district court. That for the moment -- but the judge did say that if there wasn't

interstate commerce, it would go to the district court not arbitration but since there was the Federal Arbitration Act, you know, trumped the Nevada law.

MS. GOLDSTEIN: Yeah. I can think of two facts that may be relevant, one in our favor and one against us. One is that we actually traveled to Arizona as sort of the introductory. The four of us I think drove there so that may weigh against us.

MR. KENNEDY: Uh-huh.

MS. GOLDSTEIN: On the other hand, I do know that I had submitted written changes to the contract. I wasn't party. I wasn't there. I submitted the --

MR. BUTTELL: So the negotiations were actually in part in Arizona. Is that --

DR. BADY: No.

MR. BUTTELL: No?

MS. GOLDSTEIN: I know that we went to Arizona.

MR. BUTTELL: "We" was you --

MS. GOLDSTEIN: And Pej and Pouya and Shane.

MR. BUTTELL: Okay.

DR. MOHAJER: I didn't go. I wasn't there.

DR. BADY: No, no, no. We -- Shane went to Arizona.

MS. GOLDSTEIN: Oh, no, we went to Dream Steam. Yeah, yeah, that's right.

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DR. BADY: That was another group. Shane went to Arizona without -- I don't remember if it was actually with our knowledge or without our knowledge, but that's when he started working on the deal with them and that's why we have the whole tortious interference that they came in against the majority rule and all that. That was the meeting between our CEO at the time --

MR. KENNEDY: That's not good.

DR. BADY: And then when he drove to Arizona to discuss the deal with them and the financial deal.

MR. BUTTELL: Yeah, I don't think that weighs in our favor there, you know.

MS. GOLDSTEIN: The other event that may though is --

MR. BUTTELL: I mean on the issue of the --

MS. GOLDSTEIN: Jurisdictionally we may have availed ourselves of the Arizona jurisdiction, but as I recall -- and you would know better. I think it was you and Shane that were actually with 4Front. I hope I'm remembering this right. You guys were in Pahrump. They were taking you to a property or vice versa or you were taking them to a property.

We had -- I had submitted my proposed changes to them. In my understanding as it was related to me they, CW, I'm sorry, not CW, 4Front said to Pej and Pouya, "If you

don't sign this, we're not walking in with you," or something like that.

I understood that you were forced to actually sign the unrevised version on the hood of the car. Now, that may have been how it was translated to me because I tend to be more demanding than most, but if that were true, there would be some perhaps bad faith or, you know --

MR. BUTTELL: And where did this take place?

DR. BADY: We were in Pahrump looking at our location that we had chosen for our production -- for the dispensary that we were trying to put in that location at the time, not our production facility, and they said that you either sign that today or they can't work with us and continue working with us and we have to sign on the car, the contract on the hood of the car and give them a check for $60,000. We did that.

MR. BUTTELL: Was there some sort of looming hearing or appearance or something that they were threatening not to attend?

DR. BADY: From what I recall they're threatening that there's not enough time to get all the licenses, applications in time and if you don't do it, it was on a Friday I believe and if we don't do it today at that point, they're not going to be able to help us.

DR. MOHAJER: They had a gun and a holster too

but --

MS. GOLDSTEIN: It's Pahrump.

MR. BUTTELL: Yeah, it was Pahrump. Of course, yeah.
MR. KENNEDY: Were you there, Pouya?
DR. MOHAJER: No.
MR. BUTTELL: And who was it from 4Front that did that?
DR. BADY: It was Nick Russo and --
DR. MOHAJER: Chris Crane.
MR. BUTTELL: Chris Crane.
MS. GOLDSTEIN: Is Chris Crane still with 4Front?
DR. BADY: Yes. But they changed their name. I don't know if you know that or not.
MS. GOLDSTEIN: They changed 4Front's name?
DR. BADY: 4Front financial secretary into Linchpin after they realized what's happening in our court case. In the middle of the whole thing, they changed their name and they called me in during the hearing about how they're not picking sides and blah, blah, blah.
MR. KENNEDY: That's not quite relevant to this, but I'm just curious. Does it make any, you know -- I can't -- you know, I'm thinking about whether or not there's any relevance to the fact that it wasn't really under duress. It was an unreasonable amount of pressure we could

say when Pej signed it but I think they would --

DR. BADY: Shane signed it.

MR. KENNEDY: Shane signed it? I thought you signed it.

DR. BADY: Shane did.

MR. KENNEDY: Oh, so it was Shane who signed it. But that was the circumstances.

DR. BADY: Yeah.

MR. BUTTELL: On the hood of the car.

MR. KENNEDY: On the hood of the car.

MR. BUTTELL: Okay. Well, it's, you know, I don't know.

MR. KENNEDY: I wonder if Tim Schmidt was signing --

MR. BUTTELL: If you don't sign, this is what we're not going to do is basically what it came down to.

MR. KENNEDY: Yeah.

MR. BUTTELL: And they are asserting they didn't have time.

DR. BADY: I don't recall the exact --

MR. BUTTELL: And who was present, you, Shane, Russo, Crane?

DR. BADY: And Chris Crane, yes.
MR. BUTTELL: But you weren't there.
MS. GOLDSTEIN: I was not there.

MR. BUTTELL: Oh, okay.
MS. GOLDSTEIN: And did not find out about it until afterwards. With 4Front there was very clearly articulated periods of time and if you didn't, if you weren't prepared or available during that time, they would go to their next client. You know, it was a schedule.
So I wasn't there. So I wasn't privy to that conversation, but I do know that I was frequently objecting to what I felt to be unreasonable expectations of time. I mean that's how they operated. You have until, you know, 9:00 a.m. to noon and then we're going to our other client from 1:00 p.m. to 5:00 p.m.
MR. BUTTELL: It sounds like waiting for a washing machine or something.
MS. GOLDSTEIN: Seriously. That's pretty much we were their fungible commodity. That's true.
DR. BADY: Thank you.
MR. BUTTELL: Sure.

DR. BADY: The NuVeda arbitration, so I think -- so obviously we're in litigation now so I don't know how much of it we can discuss or not discuss, but obviously the arbitration is moving on.

MR. BUTTELL: Yes. Procedurally we're going to have to reach out to and I've already served the process reaching out to William Turner. I think we'll have a

discussion about the timing of things given the fact that I substituted in for John. That's about all I probably would say that's going on right now. Discovery that was discussed between Erika Turner and myself was delivered I believe yesterday, and we have a number of things that are on the radar screen with that but mostly it's just to get back in front of William Turner and talk about the timing and things like that.

MS. GOLDSTEIN: I'd be happy --

MR. BUTTELL: My schedule's a little -- I'm sorry, Jennifer.

MS. GOLDSTEIN: I'd be happy to cosign on any extension if you're thinking about pushing the dates back.

MR. BUTTELL: Well, thank you. I appreciate that.

DR. BADY: These meetings are becoming more difficult to have because of the fact that we are in litigation with our own members, and I believe at this point I would like to take a vote on the expulsion of Jennifer Goldstein.

DR. MOHAJER: I second that.

DR. BADY: And before you second that, I want to read something here so we can have it for the record. Jennifer Goldstein has acted in a manner that is contrary to the interest of the company, contrary to the majority, contrary to the terms of the offering agreement and

otherwise acting in a manner that contrary to the purpose of the company including but not limited to initiating and continuing to pursue frivolous claims and arbitration, pursuing her former clients in frivolous arbitration, delaying to act in a reasonable and timely manner with regard to licensing issues thereby placing the company at risk and costing the company attorney fees when such action is unreasonable and unnecessary.

So that's a belief that I have, and I would like to take a vote on that expulsion. Obviously, Jennifer, you can't vote because you're the interested party here and so I'm going to ask for a vote on this matter.

DR. MOHAJER: I second that and I say yes.

MR. KENNEDY: I abstain.

DR. BADY: I vote yes. So we have a better than 60 percent pass and the vote passes. All right. Recreational license --

DR. MOHAJER: She can't stay here anymore, right?

MR. BUTTELL: I think any further business would be conducted with Jennifer's absence.

(Whereupon Ms. Goldstein exited the proceedings at 8:46 a.m.)

DR. BADY: All right. Let's -- as we know we are, we've gotten all of our licenses -- not all of them.

MR. KENNEDY: No.

DR. BADY: Four of the six that are in the early start program. Two of these licenses are up in the air, and we have no idea if we can get into the recreational market or not. Okay? So I don't know what the value of those licenses are going to be, but the other four licenses we have to go through the application process in January which is going to be --

MR. KENNEDY: Hold on. I thought that the Nye production and cultivation are both included in the rec market now --

DR. BADY: They are in a way that they're all in the early start program.

MR. KENNEDY: Oh, all in the early start program.

DR. BADY: All the licensees that are in the early start program need to submit an application.

MR. KENNEDY: For the permanent.

DR. BADY: On or before January of 2018 to be approved for the actual vote that the people took. So the four licenses that we do have are going to require us to make a decision on how we're going to get them approved.

There's a licensing process. There's a costly process. We have to do an entire application process like we did before, and I don't know what the exact requirements are going to be from the local jurisdiction and the state for that matter. So period.

The likelihood of the other two licenses being approved for the recreational licenses is questionable at this point.

MR. KENNEDY: Have you heard something from the state that makes that -- just because they haven't become permanent licenses now.

DR. BADY: Because of the fact that I believe most of the licenses -- most of the, there's going to be preferential treatment for people that are current licensees in the early start program and they are not.

MR. KENNEDY: Okay.

DR. BADY: So I don't know if that's going to fall under anyone else trying to get new licenses or not.

MR. KENNEDY: I actually heard a discussion on this where they said that they're not sure that they have enough licenses especially for retail outlets and subsequently the supply side is going to have the same problem.

There may be insufficient supply for the rec market if they don't at least have the number of licenses approved that were approved for the medical marijuana market. I mean I can't -- provided we get our licenses made permanent before January for the North Las Vegas, the cultivation and production licenses, I would think it's just, it's pretty much guaranteed that we're going to get

the rec licenses.

DR. BADY: We don't know at this point so there's no reason for us to speculate here, but I can tell you that they're at a disadvantage relative to the other four licenses. That's all I can tell you.

MR. KENNEDY: That I agree with. That's a fair statement.

DR. BADY: So I just wanted to make sure that we discussed that quickly about what we need to do. It's going to be again a costly process for the licensing and on that note I would like to adjourn the meeting at 8:49.

DR. MOHAJER: Second.

MR. KENNEDY: I agree.

DR. BADY: All in favor.

MR. KENNEDY: Okay.

DR. BADY: Meeting adjourned.

(Whereupon the proceedings

adjourned at 8:49 a.m.)

REPORTER'S CERTIFICATE

STATE OF NEVADA)
) ss
COUNTY OF CLARK)

I, Cheryl Gardner, CCR 230, RMR, do hereby certify that I took down in Stenotype all of the proceedings had in the before-entitled matter at the time and place indicated and that thereafter said shorthand notes were transcribed into typewriting by me and that the foregoing transcript constitutes a full, true and accurate record of the proceedings had.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my signature in the County of Clark, State of

Nevada, this 14th day of August, 2017.

Cheryl Gardner, CCR 230, RMR

WEBSTER BUSINESS GROUP

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August 19, 2017

Sent Via Federal Express
(310) 753-5770

Mr. Joseph Kennedy
11115 Kilkerran Ct,
Las Vegas, NV 89141

Re: Certified Business Appraisal of Nuveda LLC
(Fair Market Value)

Dear Mr. Kennedy:

On August 13, 2017 this Certified Business Appraiser was retained by Nuveda LLC, Manager Joseph Kennedy to complete a Certified Business Appraisal of Nuveda LLC, a domestic limited-liability Company in Nevada, filed April 14, 2004, which is a Holding Company for various Marijuana Businesses.

According to Mr. Kennedy, the purpose of the Appraisal was to establish the value of Nuveda LLC in accordance with procedure in the removal of its Manager Jennifer Goldstein who's total compensation is seven percent (7%).

On August 13, 2017, this Appraiser met with Mr. Joseph Kennedy who provided me with a Nuveda LLC balance sheet dated August 08, 2017 which stated the following:

ASSETS	AMOUNT
Cash on Hand	$ 105,000
35% of CWNV LLC	$3,500.000
Clark Natural Medicinal Solutions LLC	$ 350,000

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TOTAL ASSETS	$3,955,000
LIABILITIES	
Judgment to 2113 Investors	**$1,373,610**
Attorney Fees for Litigation	**$ 510,513**
4 Front Litigation	**$ 85,000**
Debt to 2 Prime	**$ 210,600**
Debt to Winmill Group	**$ 80,000**
TOTAL LIABILITIES	$2,259,723
TOTAL	$1,695,277

#1. Liabilities not Stated are:
Shane Terry Litigation Future Attorney Fees and Award to Terry

#2. 4 Front Litigation future Attorney Fees and Award to 4 Front

Based on Nuveda LLC assets and liabilities, it is the Apppraisers opinion that Nuveda LLC is worth the following:

One Million Six Hundred and Ninety Five Thousand Two Hundred and Seventy Seven Dollars

$1,695,277
"Fair Market Value"

The above information was provided to this Appraiser by Nuveda LLC Manager Joseph Kennedy.

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This Appraiser does not warrant the accuracy of the information contained herein.

Please feel free to contact me directly with any questions you may have.

You may reach me from 6:00/am-6:00/pm at 870-2199, or cell 595-2129.

Sincerely,

Michael R. Webster
Certified Business Appraiser/Broker

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From: **Alan Buttell** alanbuttell@me.com
Subject: NuVeda
Date: August 29, 2017 at 11:53 AM
To: Jennifer Goldstein jennifer@XanthusSports.com
Cc: ALAN BUTTELL alanbuttell@me.com

Jennifer, please give me a call when feasible to discuss the payment for your interest in NuVeda.

Alan J. Buttell, Esq.
Buttell Law Office
611 S. 6th Street, Ste. 220
Las Vegas, Nevada 89101
(702) 519-7800 office
(702 519-7802 fax
(702) 596-1849 mobile
(866) 385-5627 toll free
AlanButtell@me.com

From: **Alan Buttell** alanbuttell@me.com
Subject: Re: Your $ interest in NuVeda
Date: September 5, 2017 at 5:03 PM
To: jennifer mulligan goldstein jennifer@XanthusSports.com
Cc: ALAN BUTTELL alanbuttell@me.com

I'll get with you this week. Sound good?

Alan J. Buttell, Esq.
BUTTELL LAW OFFICE
611 South Sixth Street, Ste. 220
Las Vegas, Nevada 89101

702 319-7800 Office
702 319-7802 Fax
702 596-1849 Mobile
ALANBUTTELL@ME.COM
BUTTELLLAWOFFICE@AIM.COM

On Sep 5, 2017, at 15:42, jennifer mulligan goldstein <jennifer@XanthusSports.com> wrote:

> thanks, alan. if you will provide the underlying documentation supporting these numbers, that might save all sides some time and resources.
>
> also, please let me know when i can expect the roughly $60k i incurred in expenses reimbursed.
>
> Jennifer Mulligan Goldstein
> Principal and General Counsel
> XANTHUS SPORTS, LLC
> 200 Hoover Street
> Suite 1113
> Las Vegas, NV 89101
> [phone] 415.517.6464
> [fax] 866.303.3067
> jennifer@XanthusSports.com
> www.XanthusSports.com
>
>> -------- Original Message --------
>> Subject: Your $ interest in NuVeda
>> From: Alan Buttell <alanbuttell@me.com>
>> Date: Sat, September 02, 2017 1:08 pm
>> To: jennifer mulligan goldstein <jennifer@XanthusSports.com>
>> Cc: ALAN BUTTELL <alanbuttell@me.com>
>>
>> Reach out when you're able. Payment will be in lump sum.
>>
>> ---
>>
>> Alan J. Buttell, Esq.
>> BUTTELL LAW OFFICE
>> 611 South Sixth Street, Ste. 220
>> Las Vegas, Nevada 89101

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