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FAIR VALUE

Reprinted from Volume XXI, Number 1

Spring/Summer 2016

The Income Valuation Approach In Action: Doofusgram and the Craft Beer Company

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Introduction. Two new clients have found their way to your family law practice, each with a very different type of company. The respective business appraisers



for the opposing attorneys valued the companies using the income valuation approach, with one appraiser using the discounted future income method and the other using the capitalization method. The only problem- you missed your law school seminar on business valuation and don't have a clue regarding what the income approach even is, much less how to interpret it.

George Hawkins

Plus, the depositions of these experts are coming up shortly and you need to prepare. The capitalization method? Greek. The discounted future income method? It might as well be Sanskrit. Fear not...

Valuing the Selfie Sensation and the Craft Beer Manufacturer. Here is a snapshot of the two clients, each with a very different type of company:

> **Family Law Client A- Doofusgram-The Hopeful Millennial's Selfie Sensation.** Client A founded (in Starbucks, of course) Doofusgram, the new social networking, selfie posting sensation. While young, it is quickly catching on and is expected to grow rapidly in the next few years. Both Client A and his former wife know well

the plan- sell Doofusgram to Google for billions of dollars in the near future. Every time Client A sees fifty teens taking selfies at the mall food court he mentally adds a few more zeroes to his personal net worth (and so does his exwife).

Family Law Client B- Stinging Nettles, Inc.- The Craft Beer

Manufacturer. Client B owns Stinging Nettles, Inc., a craft beer manufacturer. The leading regional brand, it is beloved because it is brewed using stinging nettles, bringing ocean-like purity and resulting in a gluten free, stinging, but exhilarating taste. Although she manages the business day-to-day, Client B explains that the company almost runs itself. While it grew rapidly in its early years as consumers flocked to try the brand, growth in the business is now at a slower, more mature rate, with the company producing a reliable stream of shareholder distributions. This situation is expected to continue for the foreseeable future. Client B's ex-husband, clearly tapping the keg, believes Stinging Nettles is worth millions of dollars.

These are perfect test cases for explaining the income valuation approach and the several methods within it

that are tailor-made for each of these situations. The discounted future income method is well-suited for capturing the valuation effects of the rapidly growing, online selfie sharing sensation, while the capitalization method is equally appropriate for the boring, sedate, and mature craft beer business.

This article delves into each example and shows (1) how the methods are applied in each situation to estimate value, and (2) why each method is uniquely suited for each company's specific characteristics. This will enable readers to identify which method might be used in specific situation as well as to understand and articulate when and how these methods are misused. But first, some groundwork is needed to explain the income approach in general and how it captures value. Once accomplished, this article will apply these methods to value Doofusgram and Stinging Nettles.

Business Value- The Present Worth, in Today's Dollars, of Expected Future Benefits. In determining the value for Doofusgram, Stinging Nettles (or any company or investment), a buyer looks to the expected *future* financial returns he or she will receive on his or her investment- in this case, what is paid for the business. That return might come in the form of annual dividends/distributions, growth in the value of the business over time (as eventually realized by a sale at some future point), or a combination of the two. It is just that simple.

However, buying a business and this expectation of future returns involves the elements of (1) risk and (2) the time value of money:

• **Risk:** The buyer might not receive the expected future benefits, either not as much or not when expected, or both. In other words, risk is uncertainty.

• **Time value of money:** A dollar received today is worth more than a dollar received in the future. Having the money today means it can be spent or reinvested into something else that might itself grow in value over time. Those factors make a dollar received now worth more than a dollar received in the future.

Combining the elements of return for risk and for the time value of money results in the total annual rate of return demanded by a prospective buyer. That annual rate of return is called a discount rate, which is, in effect, just like an interest rate. However, the buyer is not making a loan to the business to earn "interest," but is instead purchasing the company's stock that confers equity ownership. Therefore, to avoid confusion in a business valuation, this annual rate of return is called a discount rate ("d") and simply reflects the "cost of equity" expected by the buyer as an annual return to compensate for the risk and time value of money associated with the expected future income or cash flow to be realized from owing the company's shares.

Death and Taxes Are Not the Only Sure Things in

Life...This leads to a convenient, simple mathematical truth (Al Gore is not the only one with convenient truths) about the discount rate that is essential in understanding the income valuation approach:

For a given expected future stream of earnings or cash flows from a business:

• **Higher discount rate** = lower present value of the expected future earnings/cash flows

• Lower discount rate = higher present value of the expected future earnings/cash flows

A buyer who demands a higher discount rate (annual rate of return) for a particular business will pay less to purchase its stock than would a buyer who demands a lower discount rate. A simple illustration of the concept of present value in **Table A** demonstrates why.

Table A depicts two companies, both having identical expected annual future income streams in years 1 through 5, and both collectively totaling \$10 million. Because Company A is perceived as riskier in its ability to realize its projections, the buyer demands a higher annual rate of return (d) for risk and the time value of money (in this example a 40% discount rate, i.e., a 40% annual rate of return). Therefore, in this simplistic example where both companies have a life of five years, the present value of the common stock of Company A is about \$3.4 million. Stated another way, a buyer who demands a 40% annual rate of return to be compensated for the risk of Company A should be willing to pay about \$3.4 million to purchase the Company. In return, the buyer expects to receive the forecasted returns totaling \$10 million as shown over the five year period. The forecasted results, if achieved by Company A, would result in a 40% annual return on the buyer's initial investment of \$3.4 million.

Table A- The Effects of the	Discount Ra	ate on the	Present Va	lue of an Inc	come Stream	m
Company A- Hig	her Risk- B	uyer Dem	ands 40%	Discount Ra	te	
(\$000s)	1	2	3	4	5	Totals
Projected Net Income	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$10,000
x Present Value Factor	0.7143	0.5102	0.3644	0.2603	0.1859	
Present Value of Income	\$714	\$765	\$729	\$651	\$558	
Total Present Value (Years 1 to 5)						\$3,412
Discount Rate	40%					
Company B- Lov	wer Risk- B	uyer Dema	ands 20%]	Discount Ra	te	
(\$000s)	1	2	3	4	5	Totals
Projected Net Income	\$1,000	\$1,500	\$2,000	\$2,500	\$3,000	\$10,000
x Present Value Factor	0.8333	0.6944	0.5787	0.4823	0.4019	
Present Value of Income	\$833	\$1,042	\$1,157	\$1,206	\$1,206	
Total Present Value (Years 1 to 5)						\$5,444
Discount Rate	20%					

By contrast, Company B is perceived as less risky, thus warranting a rate of return/discount rate (d) of 20%. Consequently, the buyer of Company B is willing to pay about **\$5.4 million** for the exact same expected future income.

In short, a *higher discount rate results in a lower present value* of a given income stream and vice versa. Why this is the case and how the actual present value is determined are explained in the following sections.

The Present Value Factor Explained. As previously demonstrated, each expected annual future income figure is converted to its present value (or worth to a buyer today) by "discounting" the expected income/cash flow result back to its present value based on the expected rate of return (the discount rate, or "d"). The mechanism for computing this "present value factor" is shown in **Table B (see page 4)**. As an example, the present value factors for years one and two for Company A are calculated as shown in **Table B**.

In the previous example, income of \$1 million received at end of year 1 is multiplied by the present value factor (0.7143) to arrive at a present worth today (standing at year 0) of \$714,000. Stated another way, if the buyer could have instead invested the \$714,000 million at year 0 in an investment earning 40% annually it would grow to be worth \$1.0 million (\$714,000 x 1.40) at end of year 1. Therefore, the rational buyer is willing to pay \$714,000 for that future return of \$1.0 million expected at the end of year 1.

Similarly, income of \$1.5 million received at end of year 2 is multiplied by the present value factor (0.5102) to arrive at a present worth today (standing at year 0) of \$765,000. Alternatively, if the buyer could have instead invested the \$765,000 at year 0 in an

investment earning 40% annually it would grow to be worth about \$1.5 million (\$765,000 x 1.40 x 1.40) by the end of year 2. Therefore, the rational buyer is willing to pay \$765,000 for that future return of \$1.5 million expected at the end of year 2.

Total of Individual Present Values of Each Year's Expected Net Income or Cash Flow is the Total Company Value. By summing up the present values of each of the individual expected future income streams

Table B- How to Ca	lculate Present	Valu	e Using a Discount Ra	ate
(\$000s)				
Present Value =				
$\frac{\text{Income, Year } 1}{(1+d)^1}$	$\frac{\$1,000}{(1+0.40)^1}$	=	\$1,000 x 0.7143	= \$714
$+ \frac{\text{Income, Year 2}}{(1+d)^2}$	$\frac{\$1,500}{(1+.040)^2}$	=	\$1,500 x 0.5102	= \$765
etc. for years	s 3 to 5			

in **Table A**, the result is the present value (or worth) of companies A and B, or **\$3.4** million and **\$5.4** million, respectively. However, one more crucial piece of the puzzle will later need to be added. This is because the example used to illustrate the concept of present value in **Table A** was overly simplistic in that the income streams

for both companies ceased after five years. In reality, many businesses continue to thrive and are reasonably expected to produce much longer term annual income returns for their shareholders. How these continuing future income streams are quantified as to their impact on company value by the income approach is discussed later.

Present Value is the Essence of the Income Approach.

This quantification of the value, in today's dollars, of these expected future sources of return is at the core of business valuation and the income valuation approach. The income approach focuses on the value of a company's income streams. Whether derived by examining and using historic results as a roadmap to the possible future, or developing future forecasts, the value of a business is based on the present worth today of an anticipated series of future income streams realized (or hoped to be realized) from ownership of the business. This is the essence of the income valuation approach as previously illustrated in **Table A**.

Two Methods Within the Income Approach-One for Selfies, the Other for Beer. Two different income methods are available to quantify the value of a company's income stream. the discounted future income (or discounted future benefits) and capitalization methods. As will be shown, the former is well suited in valuing Doofusgram. while the latter fits the bill for Stinging Nettles. First, the stage will be set by explaining these two methods and their similarities and differences. Following this. we will illustrate each method via example.

Discounted Future Income and Capitalization

Methods-An Overview. The *discounted future income method* involves forecasting year-by-year results (as simplistically shown in **Table A**), and then converting these individual future income steams into their present worth using a discount rate (the rate of return required by a buyer for risk). Another option within the income approach is the *capitalization method*. This method is nothing more than a mathematical simplification (using a key assumption to be explained) of the discounted future income technique- dividing a single measure (e.g., the latest year's or a multi-year average) of a company's annual earnings or net cash flow by a capitalization rate to arrive at an estimate of value. As will be explained, the discounted future income method is the appropriate method for valuing Doofusgram while the capitalization method is directly applicable to valuing Stinging Nettles.

The primary difference between the discounted future income and capitalization methods is the expected growth rates of the future income streams. The mature, stable future long-term income (and expected growth in income over time) of Stinging Nettles is more appropriate for the capitalization method since that method mathematically assumes a steady, perpetual future annual rate of growth in the earnings or cash flow to be capitalized. By contrast, the valuation impacts of the more erratic and faster growth of the expected income in the next few years from Doofusgram can only be reliably captured by the discounted future income method.

Table C Discounted Future Income Method Formula							
$ \begin{array}{ccc} t & CFn \\ n=1 & (1+d)^n \end{array} $	+ (TVt 1 + d) ^t	Where:	$d = n = TV_t = TV_t = TV_t = 0$ where g = 0	Annual Income or Net Cash Flow Discount Rate Time Period Terminal Value, Year t CFt ⁺¹ (d-g) growth rate present value factor		

Explained in Greek. Every self-respecting theory has to have some Greek symbols and math involved and the income valuation approach is no exception. As dull as the math might be, it helps in understanding the simple differences between the discounted future income and capitalization methods and why each is appropriate for certain types of companies. **Table C** shows the generalized formula description of the discounted future income method. The formula shows the indicated value to be the sum of the present values of the annual income

streams and the capitalized future "terminal value" of the company.

The translation of the formula in **Table C** from Greek to English is as follows:

• The value of an investment (here, shares in a business) is the sum of the individual annual future income streams (measured by company income, net cash flow, or some similar measure) received for each forecast year in the future. Each year's amount is discounted back to its present value (or worth) at a rate of return (a discount rate) that takes into account risk and the time value of money.

ad it can charge to grow by inflation, or 2.5% annually. Therefore, in year 5 and afterward, the company's earnings are forecasted to grow at a more or less steady annual rate of 3.5% (1% from volume growth due to the anticipated population growth of teens, plus 2.5% due to price growth charged per ad seen). Thus, year 5 becomes the "terminal" (or so-called "steady state") year where the growth of Doofusgram matures. This leads to an important point.

The Lifetime Valuation Engagement. In theory, the valuator could simply forget about a terminal value. Instead, he or she could use a massive spreadsheet, and keep on going, forecasting each single future year's discrete income/net cash flows for Doofusgram for each and every year, year-by-year, out to infinity. From year 5

• At the final forecast year (year t), it is assumed that

the income/net cash flow will grow annually thereafter at a constant annual growth rate percentage (as measured by "g"). Therefore, within the discounted future income method itself, a capitalization is made of the final forecast year's earnings (or cash flow), dividing it by a capitalization rate. This capitalization rate incorporates risk (as measured by "d") and annual growth (as measured by "g"). This "capitalization" component will be discussed in more detail later in this article.

Back To Doofusgram. The

expectation by Client A is that his hopeful, youthful enterprise is going to grow rapidly in the next several

years, with very high rates of growth in revenues. While it is expected to generate losses in years 1 and 2, Client A believes that once most teens in America are posting selfies on Doofusgram, its cost of operations will be more than covered by ad revenues and begin producing large profits. However, there is a finite number of teens in the U.S. and not every single teen will like or want to use Doofusgram. Consequently, growth is eventually expected to mature (an oxymoron for a company that serves up selfies to teens) in years 4 and 5. After that, Client A believes that Doofusgram will be mature and only grow as fast as the growth rate of teens in the population, or 1% per year.

Since Doofusgram generates its revenue selling ads targeted at those teens, Client A expects the prices per

Table D-Forecasting Doofusgram: to Infinity and Beyond								
(\$000s)	1	2	3	4	5	6		
Revenues	\$50	\$1,500	\$18,000	\$950,000	\$983,250	\$1,017,664		
% Change	N/A	2900.0%	1100.0%	5177.8%	3.5%	3.5%		
Expenses	(\$2,050)	(\$9,000)	(\$14,300)	(\$47,000)	(\$48,645)	(\$50,348)		
Operating Profit	(\$2,000)	(\$7,471)	\$3,711	\$903,052	\$934,605	\$967,316		
Income Taxes	\$0	\$0	(\$1,484)	(\$361,221)	(\$373,842)	(\$386,926)		
Net Income	(\$2,000)	(\$7,471)	\$2,227	\$541,831	\$560,763	\$580,390		
% Change	N/A	N.M.	N.M.	24230.1%	3.5%	3.5%		
x Present Value Factor	0.714	0.510	0.364	0.260	0.186	0.133		
Present Value of Income	(\$1,428)	(\$3,810)	\$811	\$140,876	\$104,302	\$77,192		
Discount Rate (for Risk)	40%							

and forward, each year's expected future cash flow would grow by 3.5% annually. For example, **Table D** shows the revenue, expense and net income forecasts of the selfie company by year into the future. Like every brash Internet entrepreneur, Client A says Doofusgram revenues are forecasted to quickly near the billion dollar level in year 4, then mature and grow along with expenses and earnings each year by 3.5% annually for year 5 and thereafter. Although **Table D** stops at year 6 for space reasons, the valuator could theoretically continue this calculation forever (*memo to marketing department: start selling perpetuity valuation assignments*).

Single Period Capitalization Method: Use for Stable Future Expected Growth in Earnings/Net Cash Flow. If a company's net income or net cash flow is expected to grow at a more or less stable annual rate into the future, there is no need to calculate year-by-year net income or cash flow into the hereafter. Instead, at the point at which a mature growth rate is achieved (year 5 in the **Table D** example), the present value of all of the future income or cash flow from that point forward can be mathematically simplified to a capitalization formula as shown in **Table E**.

	Table EFormula for the Capitalization Method
Value = Where:	Income for the Coming Year (d-g)
d=]	Discount Rate (Required Annual Rate of Return For Risk) Annual Future Growth Rate

In short, where the expected future growth rate is stable, the capitalization method (depicted in **Table E**) would give *exactly* the same answer as the discounted future income method!

The Doofusgram Hybrid Scenario-Rapid Initial

Growth, Followed by Maturity. In Doofusgram's case we have two situations present. The earlier years are expected to realize very rapid growth that is far greater than the later periods (year 5 and beyond) when things are expected to mature and stabilize. Because of these two different scenarios, we cannot simply use the single period capitalization method alone with Doofusgram. This is why the discounted future income method existsit is used to capture the year-by-year effects of rapid growth in the earlier years, followed by capitalizing the final terminal year earnings/cash flow (once things mature).

In this instance, the income stream for the coming year is for year 6, the first year after year 5 (the year Doofusgram's growth matures). Since Doofusgram is forecasting \$580.39 million in net income for year 6, then the present value, as of the end of year 5, for the future income for years 6 and beyond to infinity, taking into account risk and the time value of money, here as measured by our discount rate, 40%, would be calculated as follows:

Terminal Value, End of Year 5	=	Net Income Year 6 (d - g)
Terminal Value	=	<u>\$580,390,000</u> (0.40- 0.035)
Terminal Value, Year 6	=	<u>\$580,390,000</u> (0.365)
(here, 36.5% is the "cap")	rate)	(0.505)
Terminal Value, Year 6	=	\$1,590,109,589

In short, if Doofusgram were sold at the end of year 5

based on the expectation that its income for years 6 and thereafter would grow annually going forward at a 3.5%, mature annual growth rate, the capitalized value of that point of the income from years 6 and onward would be **\$1.59 billion**.

I Want My Money Now, Not 5 Years From

Now. But the buyer of Doofusgram is not standing at the end of year 5, but instead at year 0 (today, the valuation date). Therefore, due to the time value of money, he or she would not pay that

\$1.59 billion amount today for income not received until five years in the future. In addition, the seller would also want to make sure the value captured the benefits to be received by the buyer up to year 5 as well. This brings us to the full presentation of the discounted future income method, which incorporates the values of the year-byyear income during the growth periods up to year five, as well as the capitalized value for years 6 and beyond for Doofusgram as shown in **Table F**.

The \$536 Million Check From Google. Based on Table F, Client A is not likely to get his expected billions of dollars from Google since the value by the discounted future income method is \$536 million. One thing is certain, though- he'll need a good family law attorney! This example illustrates why the discounted future income method is useful for rapidly growing companies or where financial results in a company are not yet mature or stable, but which are expected to become so in the near future. The method is able to capture both types of situations. By contrast, the single period capitalization method alone would not have been able to do so. The only caveat (and it is a big one) leads to yet another simple valuation truth:

Garbage In, Garbage Out: Forecasts Need to Have a Reasonable Basis. Clients can forecast anything, being optimistic to the point of delusion (perhaps like Client A with Doofusgram), overly pessimistic, distorting

Table F- Disc	counted Future I	ncome Met	hod Applie	d to Doofus	gram		Consequently, the valuator estimates the
(\$000s)	1	2	3	4	5	6	annual rate of return
Revenues	\$50	\$1,500	\$18,000	\$950,000	\$983.250	\$1,017,664	for risk (the discount
% Change	N/A	2900.0%	1100.0%	5177.8%	3.5%	3.5%	rate) for Stinging
C							Nettles is 20%, much
Expenses	(\$2,050)	(\$9,000)	(\$14,300)	(\$47,000)	(\$48,645)	(\$50,348)	lower than the 40%
Operating Profit	(\$2,000)	(\$7,500)	\$3,700	\$903,000	\$934,605	\$967,316	rate for Doofusgram.
Income Taxes	\$0	\$0	(\$1,480)	(\$361,200)	(\$373,842)	(\$386,926)	As shown in Table G
Net Income	(\$2,000)	(\$7,500)	\$2,220	\$541,800	\$560,763	\$580,390	calculating the value of
% Change	N/A	N.M.	N.M.	24305.4%	3.5%	3.5%	Stinging Nettles by th
							capitalization method
X Present Value Factor	0.714	0.510	0.364	0.260	0.186	0.133	is simple.
Present Value of Income	(\$1,428)	(\$3,825)	\$808	\$140,868	\$104,302	N/A	<u>^</u>
Total of Present Values of Incom +Present Value, Yr, 0, of Capitali		Bevond)	\$240,725 \$295 760				the steps to calculate the value of Stinging Nettles is simply as
Total of Present Values of Incom +Present Value, Yr. 0, of Capitali Total Company Value by Me	zed Value (Yr. 6,	, Beyond)	\$240,725 \$295,760 \$536,485				*
+Present Value, Yr. 0, of Capitali Total Company Value by Me	zed Value (Yr. 6,		\$295,760 \$536,485				the value of Stinging Nettles is simply as
+Present Value, Yr. 0, of Capitali Total Company Value by Me C	zed Value (Yr. 6, thod		\$295,760 \$536,485		40.0%		the value of Stinging Nettles is simply as follows:
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk)	zed Value (Yr. 6, thod Calculation of Ca	pitalization	\$295,760 \$536,485		40.0% (3.5%)		the value of Stinging Nettles is simply as follows:Calculate the
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk) Minus: Long-Term Annual Grov	zed Value (Yr. 6, thod Calculation of Ca wth Rate (Yrs. 6 an	pitalization nd Beyond)	\$295,760 \$536,485	-	(3.5%)		 the value of Stinging Nettles is simply as follows: Calculate the capitalization
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk)	zed Value (Yr. 6, thod Calculation of Ca wth Rate (Yrs. 6 an	pitalization nd Beyond)	\$295,760 \$536,485				 the value of Stinging Nettles is simply as follows: Calculate the capitalization rate- Calculate the
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk) Minus: Long-Term Annual Grov Equals: Capitalization (or "Cap") Capitalized Value, End o	zed Value (Yr. 6, thod Calculation of Ca vth Rate (Yrs. 6 an Rate, Applied to Y of Year 5, Based	pitalization nd Beyond) Year 6 on Expected	\$295,760 \$536,485 Rate d Mature In	come for Ye	(3.5%) 36.5%		 the value of Stinging Nettles is simply as follows: Calculate the capitalization rate- Calculate the capitalization rate by
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk) Minus: Long-Term Annual Grov Equals: Capitalization (or "Cap") Capitalized Value, End o	zed Value (Yr. 6, thod Calculation of Ca vth Rate (Yrs. 6 an Rate, Applied to Y	pitalization nd Beyond) Year 6 on Expected	\$295,760 \$536,485 Rate d Mature In	come for Ye	(3.5%) 36.5%		 the value of Stinging Nettles is simply as follows: Calculate the capitalization rate- Calculate the capitalization rate by subtracting the long- term expected future annual growth rate of
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk) Minus: Long-Term Annual Grow Equals: Capitalization (or "Cap") Capitalized Value, End G Gro	zed Value (Yr. 6, thod Calculation of Ca vth Rate (Yrs. 6 an Rate, Applied to Y of Year 5, Based	pitalization nd Beyond) Year 6 on Expected	\$295,760 \$536,485 Rate d Mature In	acome for Ye	(3.5%) 36.5% ear 6		 the value of Stinging Nettles is simply as follows: Calculate the capitalization rate- Calculate the capitalization rate by subtracting the long- term expected future annual growth rate of income (3.5%) from
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk) Minus: Long-Term Annual Grov Equals: Capitalization (or "Cap") Capitalized Value, End o Grov Net Income Expected Year 6	zed Value (Yr. 6, thod Calculation of Ca vth Rate (Yrs. 6 an Rate, Applied to Y of Year 5, Based	pitalization nd Beyond) Year 6 on Expected	\$295,760 \$536,485 Rate d Mature In	come for Ye	(3.5%) 36.5% ear 6 \$580,390		 the value of Stinging Nettles is simply as follows: Calculate the capitalization rate- Calculate the capitalization rate by subtracting the long- term expected future annual growth rate of income (3.5%) from the discount rate of
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk) Minus: Long-Term Annual Grow Equals: Capitalization (or "Cap") Capitalized Value, End o Gro Net Income Expected Year 6 Divided by Capitalization Rate	zed Value (Yr. 6, thod Calculation of Ca vth Rate (Yrs. 6 an Rate, Applied to Y of Year 5, Based	pitalization nd Beyond) Year 6 on Expected	\$295,760 \$536,485 Rate d Mature In		(3.5%) 36.5% ear 6 \$580,390 0.365		 the value of Stinging Nettles is simply as follows: Calculate the capitalization rate- Calculate the capitalization rate by subtracting the long- term expected future annual growth rate of income (3.5%) from the discount rate of 20%. The result is
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk) Minus: Long-Term Annual Grow Equals: Capitalization (or "Cap") Capitalized Value, End o Gro Net Income Expected Year 6 Divided by Capitalization Rate Value, End of Year 5	zed Value (Yr. 6, thod Calculation of Ca vth Rate (Yrs. 6 an Rate, Applied to Y of Year 5, Based	pitalization nd Beyond) Year 6 on Expected	\$295,760 \$536,485 Rate d Mature In		(3.5%) 36.5% ear 6 \$580,390		 the value of Stinging Nettles is simply as follows: Calculate the capitalization rate- Calculate the capitalization rate by subtracting the long- term expected future annual growth rate of income (3.5%) from the discount rate of 20%. The result is a capitalization rate
+Present Value, Yr. 0, of Capitali Total Company Value by Me C Discount Rate (for Risk) Minus: Long-Term Annual Grow Equals: Capitalization (or "Cap") Capitalized Value, End o Gro Net Income Expected Year 6 Divided by Capitalization Rate	zed Value (Yr. 6, thod Calculation of Ca vth Rate (Yrs. 6 at Rate, Applied to of Year 5, Based owing at 3.5% At	pitalization nd Beyond) Year 6 on Expected nnually The	\$295,760 \$536,485 Rate d Mature In creafter		(3.5%) 36.5% ear 6 \$580,390 0.365 \$1,590,110		 the value of Stinging Nettles is simply as follows: Calculate the capitalization rate- Calculate the capitalization rate by subtracting the long- term expected future annual growth rate of income (3.5%) from the discount rate of 20%. The result is

the outcome for ulterior motives, or well meaning but unsupported. The business appraiser's job is to be unbiased in this analysis, instead gauging how the hypothetical willing buyer might look at the situation, and if necessary and able given the facts, the appraiser might have to develop his or her own forecasts or make adjustments to those of the client.

Back to Stinging Nettles and the Capitalization

Method. As noted earlier, Stinging Nettles is past the rapid growth phase and is now a mundane, steady growth business. As seen in Table G, in recent years revenues and earnings have been plugging away at an average annual growth rate of 3.5% and there is every reason to believe this will continue at a similar rate moving forward. Also, because Stinging Nettles is a well-established and proven company, the risk associated with the expectation of future income is much lower than for high flyer Doofusgram.

• Adjust the capitalization rate to be applicable to **historic results-** Since the capitalization rate is applicable to the coming year's net income (here 2016), that growth must be backed out to apply the capitalization rate to the latest year's historic results (here year 2015) as shown in **Table G**. The result is a 15.9% cap rate applicable to 2015 income.

• Divide income by capitalization rate to get the company value- Divide the 2015 actual income of \$344,000 by the 15.9% cap rate and, voila, the result is a value of **\$2.164 million** for Stinging Nettles by the capitalization method!

A Guide to Selecting the Appropriate Method. The facts in every circumstance are unique, so it is impossible

Historic, Actual Results by Year									
(\$000s)	2011	2012	2013	2014	2015	Avg.			
Revenues	\$5,000	\$5,150	\$5,356	\$5,517	\$5,738				
% Change	N/A	3.0%	4.0%	3.0%	4.0%	3.5%			
Expenses	\$4,500	\$4,635	\$4,820	\$4,965	\$5,164				
Operating Profit	\$500	\$515	\$536	\$552	\$574				
Income Taxes	\$0	\$0	(\$214)	(\$221)	(\$230)				
Net Income	\$500	\$515	\$322	\$331	\$344				
% Change	N/A	3.0%	4.0%	3.0%	4.0%	3.5%			
	Calculatio	on of Capita	lization Rate	e					
Discount Rate (Ann	ual Rate of Re	eturn for Risl	c)		20.0%				
Minus: Long-Term	Annual Grow	th Rate			(3.5%)				
Capitalization (or	"Cap") Rate, A	Applicable to	Future Yr. 2	016 -	16.5%				
x Adjustment For G	rowth in Year	2016 (1/1 +	growth rate)		0.9662				
Capitalization I	Rate, Historic	Net Income	e, Year 2015		15.9%				
	Value by	Capitalizat	ion Method						
Actual Net Income,	Year 2015				\$344				
Divided by Capitaliz	zation Rate				0.159				
Value by Capital	ization Math	ho			\$2,164				

to present hard and fast rules for when a particular method makes the most sense. Nonetheless, in general the following circumstances might point to one or the other method within the income approach:

Scenarios where the capitalization method may be more appropriate:

• Relatively stable historic and/or expected future results, with income or net cash flow growing at a relatively stable rate annually.

• In cyclical companies (e.g., contractors, etc.) where year-by-year results cannot be reasonably forecast as is needed in the discounted future income method. Instead, a multi-year average of earnings/net cash flow over the business cycle (including high, medium and low years) may be a good indicator of the long-term average outlook for returns to the buyer.

• Companies that have matured, even if they were rapidly growing in the past.

Scenarios where the discounted future income method may be more appropriate:

• Rapidly growing results are expected for the near-term, followed by a more modest and mature growth rate.

• Deteriorating results expected over the next few years (e.g., due to the expect ending of a major customer contract), followed by mature and stabilized growth.

• Where the future results of a company are expected to change materially from their recent actual history (e.g., a company is coming out with an exciting new product line or service, or the company has been mired in the Great Recession, but there is strong reason to expect that results are going to materially recover).

• A company (e.g., a joint venture between two companies) is projectrelated and has a finite expected life, at which time the venture will end.

While the previous list is not exhaustive, it nonetheless provides helpful examples of the analytical process necessary to determine which income approach might be appropriate in a particular situation.

Summary. At its core, the income approach really is that simple. Deciding whether the discounted future income or capitalization method is the appropriate method boils down to understanding the history and the expected future dynamics of the company being valued. This is where elbow grease is necessary as the valuator must attempt to fully understand the company at issue and the many internal and external factors that impact it, its expected future results, and its risk. This is where the real work occurs in business valuation and future articles will deal with some of these factors, as well as how the all important discount rate is actually determined. It is hoped that the examples in this article have provided a basis for a more intuitive understanding of the income approach and how this knowledge can be used to (a) better understand business valuations, and (b) ascertain if the method being used by the business appraiser makes sense. •

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