

Best Practices Discussion

Fair Market Value Valuations of Not-for-Profit Entity Property Transfers

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Valuation analysts (“analysts”) are regularly engaged to provide fair market value opinions related to not-for-profit business entity transactions. Not-for-profit business entities are often involved in arm’s-length transactions, sometimes with for-profit business entities. Some of the typical transactions include royalty payments for the use of intellectual property, royalty revenue earned by licensing intellectual property, sales of assets, and purchases of assets. If the subject transaction is between a not-for-profit entity and a related party, then the transaction is required to be a fair market value transaction. This discussion provides an example of the methods and procedures that analysts can apply to value the transferred tangible property and intangible property of the not-for-profit entity.

INTRODUCTION

According to the website www.upcounsel.com, there are over 1.6 million not-for-profit organizations in the U.S.¹ There are 27 different types of not-for-profit organizations with differing rules and requirements.

This discussion focuses on the typical type of not-for-profit entity, the Internal Revenue Code Section 501(c)(3) type of not-for-profit organization. The 501(c)(3) type organization is typically involved in religious work, educational pursuits, charity work, and scientific discovery. All 501(c)(3) type organizations are tax exempt.

According to the website www.irs.gov, for an organization to be tax exempt, the organization should be organized and operated exclusively for exempt purposes set forth in Section 501(c)(3). In addition, none of the organization’s earnings may inure to any private shareholder or individual.

In addition, the entity may not be an “action organization.” That is, the entity may not attempt to influence legislation as a substantial part of its activities, and it may not participate in any campaign activity for or against political candidates. If the organization engages in an excess benefit transaction with a person having substantial influence over the organization, an excise tax may be imposed

on the person and any organization managers agreeing to the transaction.

It is more typical for a valuation analyst (“analyst”) to be engaged to estimate an arm’s-length royalty rate for a not-for-profit client than to estimate the value of the not-for-profit corporation—or its assets. However, the selection of an arm’s-length royalty rate is often an important procedure in the valuation of a not-for-profit entity’s asset—particularly of its intangible assets.

For example, if an analyst applies a relief from royalty method to value an intangible asset, the analyst will prepare a comparable uncontrolled transaction (“CUT”) method analysis. The preparation of the CUT analysis provides support for, and informs the selection of, an arm’s-length royalty rate.

A not-for-profit corporation can be valuable even if it does not earn a positive profit—perhaps the corporation provides public services free of charge. That entity may be valuable because not-for-profit corporations typically have identifiable intangible assets. A not-for-profit entity may have intangible assets that include customer lists, developed technology, trade name, trademark, and assembled workforce.

A non-income-producing asset may have value to the current business owner and/or to a hypothetical acquirer. If a valuation analysis is based on

a highest and best use premise, the analyst should consider the (1) income contribution of operating the subject asset and (2) cost savings of owning the subject asset. In other words, the value of a non-income-producing asset may represent its highest and best use value based on the avoided cost savings to recreate the asset.

To value a not-for-profit entity, or its assets, an analyst should consider the financial performance of the not-for-profit entity. Some not-for-profit corporations regularly lose money, some break even, and some regularly generate positive income.

From an accounting perspective, not-for-profit businesses report operating financial metrics in a slightly different format than for-profit businesses. For example, not-for-profit businesses recognize income on financial statements as the “change in net assets.” The change in net assets may be inclusive of monetary contributions, grant income, and fee income related to services.

This discussion considers three primary topics. First, this discussion provides procedural guidance on how to value certain not-for-profit organization assets. Second, this discussion addresses the selection of arm’s-length royalty rates for established technologies and other intangible assets. And, finally, this discussion presents valuation best practice concepts applied in the valuation of the total assets of a not-for-profit business.

As a best practice, it is recommended—but not always possible—that analysts use more than one method to arrive at—or support—a valuation conclusion. Additional method(s) can be used as a reasonableness check to compare to value conclusions. In certain situations, a supporting method may be used only as a tool to support an established value—and cannot be relied on to establish a value.

The following example provides a contextual framework for the three topics presented in this discussion.

HYPOTHETICAL EXAMPLE: NET NONPROFIT CORPORATION BACKGROUND

Net Nonprofit Corporation (“NNC”) was founded in 2010 by John Allen Doe. The NNC is a not-for-profit public benefit corporation organized under the Virginia Nonprofit Public Benefit Corporation Law for charitable purposes.

NNC is also organized and operated exclusively for charitable purposes within the meaning of Internal Revenue Code Sections 170(c)(2) and 501(c)(3).

NNC provides research related to medical diagnostic and scientific breakthrough discoveries. NNC has developed technology that is used in classrooms to instruct medical students on current developments and medical research best practices.

The primary sources of the NNC revenue are grants, contributions, and some fees for services. Revenue has increased significantly since the inception of NNC in 2010.

NNC management identifies its primary intangible assets as (1) its trademark, (2) its customer relationships, (3) its software delivery platform, (4) its education provided content, and (5) its media evaluation content.

Employees

According to management, NNC has enjoyed relatively low employee turnover since inception. NNC has a total of 200 employees. Its employees work in areas that include medical research science, copywriting, editing, web development, marketing, consumer research, communication, laboratory technology, and administration.

NNC Customer Relationships

Customers pay NNC for its scientific delivery platform analysis and review content. The fees that NNC receives from this service line represent the only service-related revenue NNC enjoys.

All other revenue-related income that is reported on the NNC statement of activity and changes in net assets are derived from contributions and donations. Some of the NNC customers include *Science Magazine*; *Journal of Biotechnology*; *Journal of Materials Science*; *Journal of Biology*; *Cell Magazine*; Youtube; Hulu, LLC; and Apple Inc.

Exhibit 1 illustrates NNC total revenue and NNC fee revenue that NNC has enjoyed over the past five years. Over this period, NNC total revenue increased by 18 percent on average. Also, over this five-year period, the NNC fee revenue has averaged 35 percent of total revenue (for use herein, total revenue includes contributions and grants).

Summary of Financial Position

NNC has approximately \$15 million in recorded asset value comprised of cash, short-term investments, pledges and grants receivable, accounts receivable, prepaid expenses, and equipment leasehold improvements.

Pledges and grants receivable account for the largest amount of total assets since 2013. This increase is primarily due to the NNC success

Exhibit 1
Net Nonprofit Corporation
NNC Total Revenue and NNC Customer Revenue
For the Five-Year Period 2013 to 2017

	2017	2016	2015	2014	2013
	\$000	\$000	\$000	\$000	\$000
Total Revenue	32,000	20,000	22,000	17,000	14,000
Fees for Services	10,500	8,500	6,000	5,550	5,250
<i>Percent of Total Revenue</i>	<i>33%</i>	<i>43%</i>	<i>27%</i>	<i>33%</i>	<i>38%</i>
<i>Average Percent of Total Revenue</i>	<i>35%</i>				
<i>Year-over-Year Growth Rate</i>	<i>24%</i>	<i>42%</i>	<i>8%</i>	<i>6%</i>	<i>12%</i>
<i>Average Growth Rate</i>	<i>18%</i>				

NNC generally operates at an income loss in most years. Therefore, its change in net assets generally indicates a decrease in most years. For fiscal year 2017, NNC generated positive income as it recorded a significant increase in contributions and grant monies.

Hypothetical Valuation Assignment

In fiscal year 2018, NNC intends to start a for-profit business operation that will share certain assets and activities with NNC. The new business will be organized as a subchapter C corporation.

In addition to sharing the use of certain NCC intellectual property, NNC management is considering selling certain NNC intangible assets to the new for-profit business. Because NNC may share certain assets, NNC also needs to establish arm’s-length royalty rates to be paid to NNC for the use of its intellectual property by the new for-profit business.

The objective of this analysis is to (1) estimate the fair market value of certain NNC intangible assets as of December 31, 2017 (the “valuation date”), and (2) estimate an arm’s-length transfer price for certain of the NNC intangible assets.

These NNC intangible assets are summarized as follows and are defined as the “subject assets”:

Group 1 – Brand Intangible Assets:

Trademark

Group 2 – Customers and Software Platform Intangible Assets:

Customer Relationships

NNC Software Delivery Platform

Group 3 – Content Intangible Assets:

Education Provided Content

Media Evaluation Content

The NNC subject assets analysis will be prepared based on the premise of value in continued use, as a going-concern business enterprise. For the purpose of this example, this premise of value represents the highest and best use of the subject assets.

in attracting contributions and donations. As of December 31, 2017, pledges and grants receivable represented approximately 59 percent of total assets.

Short-term investments are the second largest amount of total assets. The recorded value of short-term investments peaked in 2015. This recorded value has decreased since then, as NNC has increased its total revenue base.

The NNC liabilities are comprised of accounts payable and accrued expenses and deferred revenue, which are all current liabilities accounts. These accounts have remained relatively constant over the historical period and represent approximately 15 percent of total liabilities and net assets as of December 31, 2017.

In the early years of the historical period, from 2010 to 2013, unrestricted net assets represented the majority of the recorded balance ranging from 50 percent to 70 percent of total liabilities and net assets.

As of December 31, 2017, NNC reported book value of \$13.0 million in net working capital and net tangible assets. NNC also had a recorded book value of \$500,000 of short-term interest-bearing debt obligations.

Total NNC revenue increased throughout the period. The increase was primarily due to an increase in multiyear contributions.

Over the past few years since inception, total revenue increased by a compound annual growth rate (“CAGR”) of 13 percent.

Over the same period, total expenses increased by a CAGR of 16 percent. The increase in expenses represent the NNC investment in employees as it builds its large database of education-related content.

As a *hypothetical condition*, the NNC subject assets value is based on the simplifying assumption that NNC is operated as a for-profit entity.³

Although NNC is organized and operated as a not-for-profit entity, in this case, the most likely buyer for the NNC assets would be a for-profit entity. A typical for-profit entity would use the subject assets in a profit-maximizing capacity. Therefore, the analysis is based on the explicit assumption that NNC is a for-profit entity.

In addition to estimating the value of the subject assets, this analysis provides an estimate of an arm’s-length transfer price for some of the intangible assets in Group 1 and Group 3.

Intangible Asset Valuation Methods

For this example, the analyst considered eight intangible asset valuation methods to value the subject assets. The analyst considered four income approach valuation methods, including (1) the yield capitalization method, (2) the profit split method, (3) the multi-period excess earnings method (“MPEEM”), and (4) the distributor method.

The market approach valuation methods that the analyst considered include (1) the relief from royalty method and (2) the CUT method.

The cost approach methods that the analyst considered include (1) the reproduction cost new less depreciation method and (2) the replacement cost new less depreciation method.

The yield capitalization method was not applied. This is because this valuation method involves projected income or cost savings in perpetuity. The only intangible asset that enjoys projected income or cost savings in perpetuity has a highest and best use value estimated by using another valuation method.

The profit split method was not applied. This is because this valuation method is typically applied when two parties are working together in a joint venture where the economic income or cost savings attributable to the intangible asset are required to be split among the parties. Since NNC does not currently have this type of arrangement with another party, the profit split method is not applicable.

The distributor method was not applied. This is because NNC customers are primarily end users and not wholesalers or distributors.

The replacement cost new less depreciation method was not applied. This is because the NNC assets are specific to the NNC business and cannot be replaced. These assets can, however, be reproduced.

Exhibit 2 presents each of the subject assets and the valuation method that was applied to estimate each fair market value indication.

In order to estimate the fair market value of the NNC trademark, the relief from royalty method was applied. The CUT method was applied to identify arm’s-length license transactions that supported the selection of an arm’s-length royalty rate. The arm’s-length royalty rate was applied in the relief from royalty method to estimate the fair market value of the NNC trademark.

The MPEEM was applied to estimate the fair market value of the customer relationships. Since the NNC customers are end users, and since the intangible asset relied upon to generate customer revenue is the ratings and reviews content, the MPEEM is the most appropriate valuation method to apply to the customer relationships.

The reproduction cost new less depreciation (“RPCNLD”) method was applied to value the existing NNC software network delivery platform (the “delivery platform”) and all content intangible assets. Since these assets do not directly generate income, the cost approach, and specifically the RPCNLD method, is the most appropriate valuation method to value these intangible assets.

Exhibit 2 Net Nonprofit Corporation Valuation Methods Applied to the Subject Assets	
Type of Intangible Asset	Valuation Method
Group 1– Brand: Trademark	Relief from Royalty
Group 2 – Customers and Delivery Platform: Customer Relationships NNC Software Delivery Platform	Multiperiod Excess Earnings Reproduction Cost New less Depreciation
Group 3 – Content: Education Provided Content Media Evaluation Content	Reproduction Cost New less Depreciation Reproduction Cost New less Depreciation



THE SEARCH FOR GUIDELINE PUBLICLY TRADED COMPANIES

In order to perform the MPEEM and RPCNLD methods, the analyst searched for guideline publicly traded companies. The purpose of the search was to identify guideline publicly traded companies to use as financial benchmarks.

Because NNC is a not-for-profit organization, its financial statements, its financial ratios, and its business structure do not resemble a for-profit business. For the purpose of this hypothetical example, it is assumed that the most likely market for the subject assets is a market comprised of for-profit business entities.

From the perspective of a for-profit business, the for-profit buyer (1) would prefer to pay a price less than fair market value, (2) is unwilling to pay a price greater than fair market value, but (3) is typically willing to pay a price equal to fair market value.

Similarly, the for-profit seller (1) would prefer to sell at a price higher than fair market value, (2) is unwilling to sell at a price less than fair market value, but (3) is typically willing to sell at a price equal to fair market value.

GUIDELINE PUBLICLY TRADED COMPANIES

The search for guideline publicly traded companies focused on companies that bear similarities to NNC in terms of market and industry competition, risk,

and expected returns and that own and operate assets in the same or similar lines of business.

Typically, the first step in the search for guideline companies is the determination of the appropriate Standard Industrial Classification (“SIC”) code.

The following SIC codes were considered in the search for NNC guideline publicly traded companies:

- SIC code 2700: Printing, publishing, and allied industries
- SIC code 2731: Book publishing
- SIC code 7370: Computer programming, data processing, and other computer-related services
- SIC code 7372: Prepackaged software
- SIC code 7375: Information retrieval services
- SIC code 8200: Educational services
- SIC code 8299: Schools and educational services

Although many of the NNC direct competitors are private, companies were identified that (1) provide products and services that require similar skills and expertise, (2) have similar end users, and (3) provide many similar products and services. In addition, the identified companies are subject to similar risk factors that affect NNC’s business operations.

However, because NNC business operations are unique and because NNC is a nonprofit company, the identified companies provide only general guidance on market and industry investment risk, profitability, and expected return.

Based on descriptions provided by the Capital IQ database, the following six publicly traded companies were selected to be used as guideline publicly traded companies:

- Cambium Learning Group, Inc.
- Houghton Mifflin Harcourt Company
- Yelp Inc.
- Sasbadi Holdings Berhad
- K12 Inc.
- 3P Learning Limited

These guideline companies were used to establish for-profit business benchmarks. Benchmarks were used to estimate NNC asset values. These guideline companies were also used to prepare a reasonableness check to test the reasonable of the NNC intangible asset valuation analysis.

GROUP 1—BRAND (TRADEMARKS ANALYSIS)

The NNC trademark analysis is based on the relief from royalty method and the CUT method.

This relief from royalty method is based on the principle that an intangible asset operator/licensee would be willing to pay the intangible asset owner/licensor for the right to use the intangible asset. Since NNC owns its trademark, it is relieved from having to pay a royalty to license its own trademark from a third-party licensor.

To estimate (1) the arm's-length royalty rate associated with the subject trademark and (2) the fair market value of a trademark, the analyst applied the following procedures:

- Discussed the use of the trademark with company management
- Researched guideline arm's-length licensed CUTs to use in the analysis
- Estimated the arm's-length, market-based royalty rate for the subject based on the CUTs
- Estimated the required rate of return for the subject trademark using the guideline publicly traded company financial benchmark analysis
- Applied the relief from royalty method to provide an indication of fair market value for the subject trademark
- Applied a tax amortization benefit adjustment related to the potential income tax savings from the tax amortization based on the value of the subject trademark that a for-profit buyer would enjoy

Nine arm's-length trademark license transactions were considered in order to select an arm's-length royalty rate. Based on these nine license transactions, certain statistics were calculated including the mean, median, low, and high indications.

The analyst prepared statistical calculations for two groups:

1. The low end of the royalty rate indications
2. The high end of the royalty rate indications

Exhibit 3 presents the nine CUT transactions and corresponding statistical calculations.

As presented in Exhibit 3, the mean and median of the low end of the royalty rate range were 3.5 percent and 2.0 percent, respectively. The mean and median of the high end of the royalty rate range were 6.3 percent and 5.0 percent, respectively.

The interquartile range statistical analysis of the nine CUTs was also calculated. The interquartile results were used to support selection of the arm's-length royalty rate.⁴ The selected interquartile range on the low end of the royalty rate range was 2 percent and 5 percent, respectively. The selected interquartile range on the high range of the royalty rate range was 4 percent and 7 percent, respectively.

Using the various arm's-length license transactions, an indicated range of arm's-length royalty rates of 2 percent and 7 percent was identified. The low end of the indicated range, or 2 percent, is the median (or the second quartile) of the low end of the royalty rate range. The high end of the indicated range, or 7 percent, is the third quartile (or high end of the interquartile range) of the high end of the royalty rate range.

For this example, an arm's-length royalty rate of 5 percent was selected. This 5 percent royalty rate represents a premium to the midpoint of the indicated royalty rate range.⁵

This rate also represents the median of the high end of the royalty rate range. In selecting the arm's-length royalty rate of 5 percent, the analyst considered that, according to NNC management, the NNC brand is highly regarded in the scientific education market and considered a premium name.

The selection also considered that the NNC's prominent and growing web presence is due, based on discussions with NNC management, to its successful search engine optimization techniques that have generated a high level of internet traffic and, consequently, a high membership base.

Because the NNC scientific journal review product offerings are generally available to the public and to educators, and because of the high quality of its website and the user experience, the NNC trademark enjoys wide exposure and acceptance in the educational products space. The selected arm's-length royalty rate recognizes this valuable intangible quality of the NNC trademark.

According to management, the NNC trademark is expected to continue to exist and yield economic benefits indefinitely. The analyst concluded that the estimated useful economic life ("UEL") of the NNC trademark is indefinite as of the valuation date and, therefore, is valued in perpetuity.

Exhibit 3
Net Nonprofit Corporation
Royalty Rate Analysis
Comparable Uncontrolled Transactions Method
As of December 31, 2017

#	Name [a]	Licensor	Licensee	Intellectual Property Product	Effective Date	Expiration Date	Term [b] (Years)	Exclusivity [c]	Royalty Rates [d] CUT Range																											
									Low	High																										
1	"Lamaze"	Lamaze International, Inc.	iVillage, Inc.	Publications in media bearing advertising	7/1/2000	7/1/2015	15	Exclusive	3.0%	3.0%																										
2	"Networld"	Networld Publishing, Inc.	Waldrop Enterprises, Inc.	Education learning aids	1/1/2005	12/31/2009	5	Exclusive	2.0%	2.0%																										
3	"Two Dog Net"	Two Dog Net, Inc.	D. W.C. Installations	Education, entertainment, children Internet	9/10/2002	9/10/2007	5	Exclusive	7.0%	7.0%																										
4	"Atari"	Atari, Inc. (United States)	Games, Inc.	Online games for children	1/2/2004	1/2/2009	5	Multi-exclusive	2.0%	18.0%																										
5	"Bravo Foods"	Marvel Enterprises, Inc.	Bravo Foods International Corp.	Comic book and other publications	12/1/2004	12/31/2006	2	Multi-exclusive	2.0%	4.0%																										
6	"Rich Dad"	Rich Dad Operating Company, LLC	Tigrent, Inc.	Educational materials	9/1/2013	9/1/2018	5	Exclusive	5.0%	5.0%																										
7	"Sony"	Sony Computer Entertainment America, Inc.	Ziff Davis Media Inc.	PlayStation Magazine publications	3/31/2005	3/31/2007	2	Multi-exclusive	1.0%	5.0%																										
8	"Sports Illustrated"	Time, Inc., Sports Illustrated For Kids	Bay Area Multimedia	Publications and content for kids	7/12/2000	7/12/2004	4	Multi-exclusive	2.0%	5.0%																										
9	"Marvel Characters"	Marvel Enterprises, Inc.	Famous Fixins, Inc.	Characters used in movies, TV, home video	6/30/2001	12/31/2003	3	Multi-exclusive	7.5%	7.5%																										
<table border="0"> <tr> <td>Mean Royalty Rate</td> <td>3.5%</td> <td>6.3%</td> </tr> <tr> <td>Median Royalty Rate</td> <td>2.0%</td> <td>5.0%</td> </tr> <tr> <td>Low Royalty Rate</td> <td>1.0%</td> <td>2.0%</td> </tr> <tr> <td>High Royalty Rate</td> <td>7.5%</td> <td>18.0%</td> </tr> <tr> <td>Quartile 1</td> <td>2.0%</td> <td>4.0%</td> </tr> <tr> <td>Quartile 2</td> <td>2.0%</td> <td>5.0%</td> </tr> <tr> <td>Quartile 3</td> <td>5.0%</td> <td>7.0%</td> </tr> <tr> <td>Quartile 4</td> <td>7.5%</td> <td>18.0%</td> </tr> <tr> <td>Count</td> <td>9</td> <td>9</td> </tr> </table>										Mean Royalty Rate	3.5%	6.3%	Median Royalty Rate	2.0%	5.0%	Low Royalty Rate	1.0%	2.0%	High Royalty Rate	7.5%	18.0%	Quartile 1	2.0%	4.0%	Quartile 2	2.0%	5.0%	Quartile 3	5.0%	7.0%	Quartile 4	7.5%	18.0%	Count	9	9
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Count	9	9																																		
<p>Royalty Rate Range for all CUTs (rounded) [e] 2.0% 7.0%</p> <p>Selected Royalty Rate (rounded) [f] 5.0%</p>																																				

[a] These license agreements were selected based on the following criteria: (1) the intellectual property is a trademark and/or trade name and (2) its business is related to delivering its products or services through the Internet and related to education, publications, or entertainment.

[b] These license agreements may include one or more renewal periods thereby extending its original term.

[c] Multi-exclusive refers to a license agreement with different exclusivity terms. For example, a license agreement with three royalty rates may have a 1 percent royalty rate for the U.S. on an exclusive basis, a 2 percent royalty rate for Canada on an exclusive basis, and a 3 percent royalty rate for Mexico on an exclusive basis. Additionally, multi-exclusive may refer to an exclusive agreement with one party and a nonexclusive agreement with another party. Finally, multi-exclusive may refer to an exclusive agreement for a certain term followed by a nonexclusive agreement for the remainder of the term.

[d] Based on our review of the CUTs, all the royalty rates are based on a percent of net sales or gross sales.

[e] The royalty rate range represents the second quartile (or median) for the low and the third quartile for the high of the indicated CUT license royalty rates. We included the third quartile because NNC is a premium brand. We also considered the Company's prominent web presence that have generated high traffic and a high membership base.

[f] The selected royalty rate is a modest premium over the median of the royalty rate range and is effectively the median of the high end of the indicated CUT license royalty rate range. Sources: kiMINE and analyst estimates.

Since the NNC trademark is used in all areas of the NNC business, the selected royalty rate of 5 percent was applied to the NNC projected total revenue. That application resulted in the pretax royalty relief attributable to the NNC trademark for each year of the projection period.

Next, in order to estimate the value to a hypothetical for-profit buyer, the analyst adjusted the annual pretax royalty relief for income taxes and then discounted the after-tax royalty relief to a present value using a present value discount rate. The present value discount rate reflects the risks inherent in the NNC business overall and in the trademark intangible asset.

Calculating the Present Value Discount Rate

For this example, a weighted average cost of capital was used as the NNC present value discount rate or required rate of return. This rate of return calculation provides an estimate of the required return a for-profit investor would expect to earn on an investment in the overall NNC business enterprise and in the NNC trademark intangible asset, as if NNC was treated as a for-profit entity.

Exhibit 4 presents the NNC cost of equity calculation. For this example, the NNC cost of equity capital was estimated using the build-up model.

In Exhibit 4, to estimate the cost of equity capital using the build-up model, the following components were added together: (1) the risk-free rate of return of 2.6 percent, (2) the general equity risk premium of 6.0 percent, (3) the industry-related equity risk premium of 0.3 percent, and (4) the size-related equity risk premium of 5.4 percent.

Based on the application of the build-up model, the cost of equity capital was 14.3 percent.

Rate of Return on Interest-Bearing Debt

For this example, a pretax cost of debt of 4.2 percent was applied. That debt rate was based on the Moody's Baa corporate bond index rate as of the valuation date. The next procedure was to calculate the after-tax cost of debt capital by tax affecting the pretax cost of debt (i.e., multiplying it by 1 minus the blended income tax rate of 30 percent), to account for the tax deductibility of interest payments.

Based on the analysis, the after-tax cost of debt capital for NNC is 2.9 percent.

Weightings of Capital Components

Next, an equity capital structure of 90 percent and a debt capital structure of 10 percent was applied. The selected capital structure was based on the average of (1) the guideline publicly traded companies capital structure and (2) the median industry capital structure presented in the Duff & Phelps, LLC, *2017 Valuation Handbook: U.S. Industry Cost of Capital*.

Weighted Average Cost of Capital

Using (1) an estimated required rate of return on equity capital of 14.3 percent, (2) an estimated after-tax cost of debt capital of 2.9 percent, and (3) a capital structure mix of 90 percent equity and 10 percent debt, a weighted average cost of capital ("WACC") of 13 percent (rounded) was calculated.

Group 1—NNC Trademark Conclusion

Exhibit 5 presents the NNC trademark analysis conclusion.

Exhibit 4 Net Nonprofit Corporation Hypothetical Weighted Average Cost of Capital Cost of Equity Capital As of December 31, 2017

Model: Build-Up Model:		Source
Risk-Free Rate of Return	2.6%	20-year U.S. Treasury bond, <i>Federal Reserve Statistical Release</i> as of December 31, 2017 as of December 31, 2017
General Equity Risk Premium	6.0%	Duff & Phelps, LLC, <i>2017 Valuation Handbook: U.S. Guide to Cost of Capital</i>
Industry Equity Risk Premium	0.3%	Duff & Phelps, LLC, <i>2017 Valuation Handbook: U.S. Guide to Cost of Capital</i> SIC codes 2700, 7370, 7372, 7375, and 8200
Size Equity Risk Premium	5.4%	Duff & Phelps, LLC, <i>2017 Valuation Handbook: U.S. Guide to Cost of Capital</i>
Indicated Cost of Equity Capital	14.3%	
Selected Cost of Equity Capital	14.3%	

Exhibit 5
Net Nonprofit Corporation
Relief from Royalty Method
Trademark Valuation Summary
As of December 31, 2017

Valuation Variables	Projected Fiscal Year Ended December 31,				
	2018 \$000	2019 \$000	2020 \$000	2021 \$000	2022 \$000
Revenue [a]	35,200	39,000	41,000	42,230	43,497
<i>Growth Rate</i>	<i>10.0%</i>	<i>10.8%</i>	<i>5.1%</i>	<i>3.0%</i>	<i>3.0%</i>
Arm's-Length Trademark Royalty Rate	<u>5.0%</u>	<u>5.0%</u>	<u>5.0%</u>	<u>5.0%</u>	<u>5.0%</u>
Pretax Trademark Royalty Relief	1,760	1,950	2,050	2,112	2,175
Income Taxes	30% <u>528</u>	<u>585</u>	<u>615</u>	<u>633</u>	<u>652</u>
After-Tax Trademark Royalty Relief	1,232	1,365	1,435	1,478	1,522
Discount Period	0.5000	1.5000	2.5000	3.5000	4.5000
Present Value Factor @ 13% [b]	13% <u>0.9407</u>	<u>0.8325</u>	<u>0.7367</u>	<u>0.6520</u>	<u>0.5770</u>
Present Value of Trademark Royalty Relief	<u>1,159</u>	<u>1,136</u>	<u>1,057</u>	<u>964</u>	<u>878</u>
Present Value of Discrete Trademark Royalty Relief	<u>5,195</u>				
Present Value of Terminal Period Cash Flow:					
Fiscal 2023 Trademark Royalty Relief [c]	\$ 1,568				
Direct Capitalization Rate [d]	<u>10%</u>				
Terminal Value	15,681				
Present Value Factor	<u>0.5770</u>				
Present Value of Terminal Value	<u>\$ 9,047</u>				
Valuation Summary:					
Present Value of Discrete Trademark Royalty Relief	\$ 5,195				
Present Value of Terminal Value Royalty Relief	<u>9,047</u>				
Indicated Total Present Value of the Trademark	14,242				
Tax Amortization Benefit [e]	<u>2,268</u>				
Indicated Fair Market Value of the Trademark (rounded)	<u>\$ 16,500</u>				

[a] Based on discussions with management, the NNC trademark relates to 100 percent of the NNC total revenue projection.

[b] The hypothetical NNC weighted average cost of capital.

[c] Equal to 2022 after-tax trademark income, multiplied by (1 + expected long-term growth rate of 3 percent).

[d] Calculated as the hypothetical NNC weighted average cost of capital of 13 percent - expected long-term growth rate of 3 percent.

[e] A hypothetical acquirer of the NNC business would expect income tax amortization benefits to be included.

Sources: Discussions with management and analyst calculations.

Based on this illustrative example, the indicated total present value of the NNC trademark is approximately \$14.2 million prior to the application of the tax amortization benefit.

The \$2.3 million tax amortization benefit is the present value of the income tax savings resulting from the amortization of the NNC trademark value over a 15-year period.

The tax amortization benefit was added to the indicated total present value of the NNC trademark to yield an indicated fair market value of the NNC trademark.

Based on the application of the relief from royalty method, the indicated fair market value of the NNC trademark is \$16.5 million. Based on the

application of the CUT method, a 5 percent arm's-length royalty rate was estimated.

CUSTOMER RELATIONSHIPS— CONSUMER

Exhibit 6 presents the fair market value analysis of the NNC consumer customer relationships. For this example, the MPEEM was applied to estimate the fair market value of the consumer customer relationships.

By applying this method, the fair market value of the consumer customer relationships is estimated from the present value of the net cash flow attributed to the customers over their expected UEL, which is expected to decay over time.

Based on discussions with management, and the analysis of management-prepared financial projections, a 2.5 percent customer attrition rate was selected. The 2.5 percent customer attrition rate was applied to projected revenue on an annual basis. Starting at the total revenue in year 1, the prior year's revenue is decreased by the 2.5 percent attrition rate per year.

The next procedure is to estimate the servicing costs needed to generate the surviving customer revenue. Based on an analysis of publicly traded guideline companies, an operating income margin of 15 percent was applied to the total customer revenue after attrition in order to estimate the operating income from existing customers.

Since NNC is a not-for-profit company, its actual operating income margin is not at a market level of operating income margin based on its "revenue." However, the NNC consumer customer relationships was valued based on the hypothetical condition of treating NNC as a for-profit business, instead of as a not-for-profit business.

Therefore, the operating income margin was selected based on observed guideline publicly traded companies' operating income margins, which represent market level profit margins.

In the next procedure, a royalty expense was subtracted, which was based on a 5 percent royalty rate for the NNC trademark. This procedure accounts for the contributory asset charge or capital charge related to the NNC trademark.

Since some of Group 3 content is delivered to NNC customers, a capital charge was applied for these intangible assets. Therefore, a capital charge of 5 percent was subtracted for the educational reviews and media content. In Exhibit 7, the CUTs

considered and used to support the 5 percent capital charge selection are presented.

The analysis of existing customers included an estimate of avoided marketing costs. These marketing costs relate to new customer development rather than the servicing of existing customers. NNC management estimated these expenses to be 5 percent of customer revenue after attrition.

After making the adjustments to operating income, an income tax rate of 30 percent was applied to the projected income to arrive at the after-tax income before contributory asset charges.

For the next procedure, the after-tax income was reduced for contributory asset charges. The after-tax income attributable to the consumer customer relationships was reduced by the estimated required return on (1) operating net working capital (not including cash and short-term investment assets) and (2) net tangible assets. These contributory assets are assumed to be in place and used throughout the projection period.

The contributory asset charge equates to the market-derived return on the tangible and intangible assets that are used or used up in the production of the income from the customer relationships.

To estimate the contributory asset charge, the required rate of return for each identified asset was estimated. The NNC trademark and the Group 3 content were not included in the contributory asset charge. The capital charge costs related to those assets were separately subtracted from operating income, as described above.

Net working capital is less liquid than cash, but more liquid and, therefore, less risky, than other long-term assets or fixed assets. The required rate of return for net working capital is estimated to be less than that of the other NNC asset classes.

The required rate of return for the net working capital is estimated to be 5.2 percent, which equates to a weighted average return using (1) 80 percent of the NNC cost of debt capital and (2) 20 percent of the NNC cost of equity capital.

Next, it was estimated that the NNC tangible assets would be financed with a combination of debt and equity capital. Since tangible assets are long-term assets and less liquid than working capital, the required return for tangible assets was estimated to be higher than the return on working capital.

Accordingly, the weighted average return on the tangible assets was estimated to be 6.3 percent, which equates to a weighted average return using (1) 70 percent of the NNC cost of debt capital and (2) 30 percent of the NNC cost of equity capital.

Exhibit 6 Net Nonprofit Corporation Multi-Period Excess Earnings Method Customer Relationships Valuation Summary As of December 31, 2017

Valuation Variables	Year:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000	\$000
Baseline Customer Revenue before Attrition	13,650	15,015	16,066	16,869	17,375	17,897	18,434	18,987	19,556	20,143	20,747	21,370	22,011	22,671	23,351	24,052	24,773	25,516	26,282	
<i>Growth Rate</i>	30.0%	10.0%	7.0%	5.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Customer Attrition Rate	2.5%	98%	95%	93%	90%	88%	86%	84%	82%	80%	78%	76%	74%	72%	70%	68%	67%	65%	63%	62%
Customer Revenue after Attrition	13,309	14,274	14,891	15,245	15,309	15,374	15,440	15,505	15,571	15,638	15,704	15,771	15,838	15,905	15,973	16,041	16,109	16,177	16,246	
Operating Income Margin	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Estimated Operating Income from Remaining Customers	1,996	2,141	2,234	2,287	2,296	2,306	2,316	2,326	2,336	2,346	2,356	2,366	2,376	2,386	2,396	2,406	2,416	2,427	2,437	
<i>Growth Rate</i>	NA	7.3%	4.3%	2.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
Less: Trademark Royalty Rate	5.00%	665	714	745	762	765	769	772	775	779	782	785	789	792	795	799	802	805	809	812
Less: Educational Content Royalty Rate	5.00%	665	714	745	762	765	769	772	775	779	782	785	789	792	795	799	802	805	809	812
Less: Total	10.00%	1,331	1,427	1,489	1,524	1,531	1,537	1,544	1,551	1,557	1,564	1,570	1,577	1,584	1,591	1,597	1,604	1,611	1,618	1,625
Plus: Avoided Marketing Costs	5.0%	665	714	745	762	765	769	772	775	779	782	785	789	792	795	799	802	805	809	812
Pretax Income	30.0%	1,331	1,427	1,489	1,524	1,531	1,537	1,544	1,551	1,557	1,564	1,570	1,577	1,584	1,591	1,597	1,604	1,611	1,618	1,625
Income Taxes		399	428	447	457	459	461	463	465	467	469	471	473	475	477	479	481	483	485	487
Income before Contributory Asset Charge		932	999	1,042	1,067	1,072	1,076	1,081	1,085	1,090	1,095	1,099	1,104	1,109	1,113	1,118	1,123	1,128	1,132	1,137
Contributory Asset Charge		75	80	84	86	86	87	87	87	88	88	88	89	89	90	90	90	91	91	92
Income after Contributory Asset Charge		857	919	958	981	985	990	994	998	1,002	1,007	1,011	1,015	1,019	1,024	1,028	1,032	1,037	1,041	1,046
Discount Period		0.500	1.500	2.500	3.500	4.500	5.500	6.500	7.500	8.500	9.500	10.500	11.500	12.500	13.500	14.500	15.500	16.500	17.500	18.500
Present Value Discount Factor	13.0%	0.9407	0.8325	0.7367	0.6520	0.5770	0.5106	0.4518	0.3999	0.3539	0.3132	0.2771	0.2452	0.2170	0.1921	0.1700	0.1504	0.1331	0.1178	0.1042
Indicated Present Value of Income		806	765	706	640	569	505	449	399	355	315	280	249	221	197	175	155	138	123	109
Indicated Total Present Value of Income		\$ 7,155																		
Tax Amortization Benefit		1,140																		
Indicated Fair Market Value of Customer Relationships (rounded)		\$ 8,300																		

Exhibit 7
Net Nonprofit Corporation
Royalty Rate Analysis
Comparable Uncontrolled Transactions Method
Selected Comparable Uncontrolled Transaction Royalty Rates
As of December 31, 2017

#	Name	Licensor	Licensee	Intellectual Property Product	Effective Date	Expiration Date	Term (Years)	Exclusivity	Royalty Rates																									
									CUT Range	High																								
1	"EP Global"	EP Global Communications, Inc., Exceptional Parent Magazine	EBSCO Publishing, Inc.	Publications of information products	10/1/2005	10/1/2008	3	Multi-exclusive	20.0%	20.0%																								
2	"Playboy"	Playboy Entertainment Group, Inc.	Playboy TV-Latin America, LLC	Publication of video content and trademark	4/1/2002	4/1/2012	10	Exclusive	17.5%	17.5%																								
3	"Televisa"	Televisa, S.A. de C.V.	Univision Communications Inc.	Broadcast video content and trademark	1/1/2011	12/31/2025	15	Multi-exclusive	11.9%	16.2%																								
4	"War is Boring"	War is Boring, Ltd., Co.	Bright Mountain, LLC	Website content and trademark	NA	NA	NA	NA	NA	NA																								
5	"Bracey"	John & Katherine Bracey	Geothatre Productions Inc.	Copyright materials including trademark	7/11/2003	NA	NA	Exclusive	7.5%	7.5%																								
6	"Sylvan"	Sylvan Learning Systems, Inc.	eSylvan, Inc.	Educational materials and trademark	6/30/2000	Perpetual	NA	Multi-exclusive	4.0%	4.0%																								
7	"Busybox"	busybox.com, inc.	M2 Software Equity, LLC	Digital media content and trademark	2/11/2000	3/31/2001	1	Nonexclusive	20.0%	20.0%																								
8	"Freedom Leaf"	Freedom Leaf, Inc.	Freedom Leaf Iberia, B. V.	Publishing content and trademark	12/15/2016	Perpetual	NA	Exclusive	5.0%	10.0%																								
9	"Franchise Films"	Franchise Films, Inc.	Bay Multimedia, Inc.	Interactive entertainment video game software products and trademark	4/7/2000	4/7/2003	3	NA	10.0%	10.0%																								
10	"Spyglass"	Spyglass Entertainment Group, L.P.	Bay Area Multimedia, Inc.	Interactive entertainment video game software products and trademark	10/25/2000	10/25/2005	5	Exclusive	6.0%	8.0%																								
<table border="0"> <tr> <td>Mean Royalty Rate</td> <td>11.3%</td> </tr> <tr> <td>Median Royalty Rate</td> <td>10.0%</td> </tr> <tr> <td>Low Royalty Rate</td> <td>4.0%</td> </tr> <tr> <td>High Royalty Rate</td> <td>20.0%</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Royalty Rate Range for all CUTs (rounded)</td> <td>10.0% - 10.0%</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Indicated Royalty Rate including the Trademark</td> <td>10.0%</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Less: Trademark Royalty Rate</td> <td>5.0%</td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td>Selected Royalty Rate (rounded)</td> <td>5.0%</td> </tr> </table>											Mean Royalty Rate	11.3%	Median Royalty Rate	10.0%	Low Royalty Rate	4.0%	High Royalty Rate	20.0%	<hr/>		Royalty Rate Range for all CUTs (rounded)	10.0% - 10.0%	<hr/>		Indicated Royalty Rate including the Trademark	10.0%	<hr/>		Less: Trademark Royalty Rate	5.0%	<hr/>		Selected Royalty Rate (rounded)	5.0%
Mean Royalty Rate	11.3%																																	
Median Royalty Rate	10.0%																																	
Low Royalty Rate	4.0%																																	
High Royalty Rate	20.0%																																	
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Indicated Royalty Rate including the Trademark	10.0%																																	
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Less: Trademark Royalty Rate	5.0%																																	
<hr/>																																		
Selected Royalty Rate (rounded)	5.0%																																	

For this example, it is necessary to multiply (1) the required rate of return for each asset class by (2) the fair market value of each asset class to arrive at the MPEEM contributory asset charge.

This calculation results in a contributory asset charge of \$75,000 in year 1 of the projection period, or approximately 0.56 percent of the remaining customer base revenue. In years 2 through 19, the contributory asset charge would remain at approximately 0.56 percent of the projected revenue from the remaining customer base.

After adjusting the projected economic income to reflect the contributory assets charge, the projected cash flow was discounted to a present value using a present value discount rate of 13 percent.

The present value discount rate of 13 percent is equal to the WACC and considers (1) the consumer customer relationships intangible asset compared to the other intangible assets, (2) the required rate of return on each of the acquired categories of assets, and (3) the risk of the remaining consumer customer financial projections.

Group 2—Customer Relationships Conclusion

Based on the analysis, the indicated total present value of the income for the customer relationships is approximately \$7.2 million prior to the application of the tax amortization benefit.

The \$1.1 million tax amortization benefit represents the present value of the income tax savings from the amortization of the customer relationships value over a 15-year period.

The tax amortization benefit was added to the indicated total present value of the income for the customer relationships to yield an indicated fair market value of the customer relationships.

The indicated fair market value of the customer relationships, using the MPEEM, is \$8.3 million, as presented in Exhibit 6.

GROUP 2—NNC SOFTWARE DELIVERY PLATFORM

The NNC network has been expanded by the NNC education team. Approximately 10,000 schools use the NNC education content. The success the NNC has enjoyed in building such a large network is due to the development of an effective delivery platform that delivers the education content to the network of schools and teachers.

The education content that NNC has developed is comprised of (1) scientific reviews and analysis and (2) the development of its own curriculum for scientific applications.

Since revenue is not directly generated from the delivery platform, the RPCNLD method was applied to estimate the value of the delivery platform.

The RPCNLD method involves estimating the cost to construct, at current prices, an exact duplicate of the subject intangible asset, using the same materials, production standards, design, layout, and quality of workmanship as the subject intangible asset. The reproduced intangible asset will include the same inadequacies, superadequacies, and obsolescence as the actual intangible asset.

The components of cost involved in the RPCNLD method are as follows:

1. Direct labor costs
2. Nonlabor, indirect materials, and overhead costs
3. Developer's profit
4. Entrepreneurial incentive
5. Depreciation and obsolescence

NNC management provided the cost information required to reproduce the software delivery platform. These costs were direct labor base salary costs of all the NNC employees required to reproduce the delivery platform, an allocation of benefits costs, an allocation of nonlabor and overhead costs, and the level of effort in number of weeks. The total of these costs were \$7.1 million, as presented in Exhibit 8.

Developer's Profit

The developer of any intangible asset expects to be reimbursed for all the costs that were incurred in the technology development phase in addition to receiving a profit or return on these costs.

In other words, the developer expects (1) a return *of* all the material, labor, and overhead costs incurred and (2) a profit or return *on* all the material, labor, and overhead costs incurred.

Developer's Profit Based on Public Company Profit Margins

Estimating a reasonable return on costs can be accomplished by searching for companies in the same industry with personnel or departments housing the same requisite skills involved as NNC.

Examining the profit margins of the guideline publicly traded companies provides a reasonable

Exhibit 8
Net Nonprofit Corporation
Cost Approach
Reproduction Cost New less Depreciation Method
Software Delivery Platform
As of December 31, 2017

Net Nonprofit Corporation Employee Category [a]	Number of Employees	On a Per-Employee Basis			Number of Weeks	Reproduction Cost New less Depreciation \$000
		Average Weekly Base Salary Cost \$000	Employee Benefits Cost Allocation %	Nonlabor Cost Allocation %		
Chief Product Officer/Chief Technology Officer	1	4,086	25	20	88	521
Vice President Product Development	1	2,904	25	20	88	371
Senior Software Engineer	8	2,705	25	20	72	2,259
Software Engineer	1	1,777	25	20	72	186
Lead QA	1	2,428	25	20	64	225
QA	1	1,863	25	20	64	173
Graphic Design	4	1,138	25	20	20	132
Designer	1	2,020	25	20	20	59
Product Manager	2	1,471	25	20	20	85
Technical Product Manager	1	1,827	25	20	16	42
Contract Developers	NA	NA	NA	NA	NA	3,000
Total Reproduction Cost New (\$000)						7,053
Plus: Combined Developer's Profit and Entrepreneurial Incentive at a Rate of Return of 15% (\$000) [b]						1,058
Indicated RPCN before Depreciation and Obsolescence (\$000)						8,111
Less: Depreciation and Obsolescence (\$000) [c]						-
Minus: Income Tax Expense [d]						-
Indicated Reproduction Cost New less Depreciation and Obsolescence (\$000)						8,111
Tax Amortization Benefit (\$000) [d]						-
Indicated Fair Market Value of Delivery Platform (\$000) (rounded)						8,100

[a] Based on information provided by management.

[b] Combined developer's profit and entrepreneurial incentive rate of return represented by the discount rate plus a premium of 200 basis points.

[c] The obsolescence rate is zero since (1) NNC regularly upgrades the delivery platform for the latest improvements in technology and know-how and (2) the reproduction cost new less depreciation method assumes that the delivery platform is developed using current techniques in technology and know-how.

[d] For fair value measurement purposes, the cost approach can be applied on either a pretax or an after-tax basis. Since this example relates to the fair market value standard of value, we assume this calculation is not affected by taxation issues. See Mark L. Zyla, *Fair Value Measurement: Practical Guidance and Implementation*, 2nd ed. (Hoboken, NJ: John Wiley & Sons, 2013), 192-194.

Sources: Information provided by management and analyst calculations.

estimate of rates of returns on costs. The developer would expect to achieve returns that are competitive with the returns these companies earn. Otherwise, the developer would not consider entering into the development process.

Based on the examination of the cost of equity capital calculation using guideline publicly traded companies, the appropriate return on costs is estimated to be 13 percent.

Entrepreneurial Incentive

In addition to the developer's profit, the intangible asset owner expects to earn an additional economic

benefit as motivation to enter into the development process. There are two components to the entrepreneurial incentive: (1) opportunity costs and (2) risk.

The opportunity costs relate to the time and resources the intangible asset owner would expect to invest in order to develop the intangible asset. These are costs because the time and resources could have been diverted to other investments or projects that already generate profits.

The span of time measured in the opportunity costs start from the inception of the original intellectual content of the intangible asset to the point after its commercialization when the returns would be comparable to those of other investments.

“Functional obsolescence is the reduction of intangible asset value due to its inability to perform the function, or yield the economic utility, for which it was originally designed.”

The intangible asset owner would also expect an economic benefit commensurate with the risk characteristics of the project. If there is uncertainty that the project would be successful and generate profits, then the entrepreneurial incentive is in addition to the opportunity costs that provide motivation to the intangible asset owner to enter into the development process.

The entrepreneurial incentive is estimated to be a 200 basis point premium to the developer’s profit.

The combined developer’s profit and entrepreneurial incentive rate of return of 15 percent was applied to the total costs to reproduce the delivery platform. This resulted in an expected rate of return of \$1.1 million as presented in Exhibit 8.

Depreciation and Obsolescence

The software delivery platform costs and expected rates of returns by themselves do not result in a value indication. In order to arrive at a value indication, the intangible asset must be adjusted for depreciation and obsolescence. Since the software delivery platform would be reproduced new, there would be no applicable depreciation.

There are three forms of obsolescence considered in a cost approach analysis: (1) physical deterioration, (2) functional and technological obsolescence, and (3) economic obsolescence.

Physical deterioration is the reduction of value due to physical wear and tear resulting from continued use. This type of obsolescence is not applicable to the software delivery platform.

Functional obsolescence is the reduction of intangible asset value due to its inability to perform the function, or yield the economic utility, for which it was originally designed. The delivery platform is regularly being upgraded for the latest improvement in technology and know-how. Therefore, its functionality is not obsolete. Technological obsolescence is a type of functional obsolescence.

Technological obsolescence decreases intangible asset value due to improvements in technology that make the actual asset less than the ideal replacement for itself. As in the case of functional obsolescence, since the delivery platform is regularly being upgraded for the latest improvement in

technology and know-how, technological obsolescence is not applicable to the reproduced delivery platform.

Group 2—Software Delivery Platform Conclusion

Based on the analysis, based on the RPCNLD method, the indicated fair market value of the software delivery platform is approximately \$8.1 million, as presented in Exhibit 8.

GROUP 3—EDUCATIONAL-RELATED CONTENT

The education-related content consists of 1,000 titles of education curricula. NNC has built up this education-related content since 2012. Over this time, NNC developed an average 200 titles per year of scientific-education-related ratings content.

The RPCNLD method was applied to estimate the value of the scientific-education-related content. Exhibit 9 presents the RPCNLD method application to estimate the value of the scientific education related content.

The following valuation inputs related to the education content. These inputs are similar to the detailed discussion of the Group 2 inputs previously discussed:

- The total annual costs to reproduce the education content is \$3.6 million.
- The number of titles reproduced annually is 200.
- The annual reproduction cost per title is approximately \$18,139.
- The total number of titles in the NNC library is 1,000.
- The estimated total reproduction cost new is \$18.1 million.
- In same manner as applied in the Group 2 analysis, a combined developer’s profit and entrepreneurial incentive of 15 percent was applied.
- This resulted in an expected return based on the combined developer’s profit and entrepreneurial incentive of \$2.7 million and an estimated reproduction cost new before depreciation and obsolescence of \$20.9 million.
- The first method of estimating functional obsolescence resulted in a functional obsolescence estimate of 20 percent.

Exhibit 9
Net Nonprofit Corporation
Cost Approach
Reproduction Cost New less Depreciation Method
Educational Content
As of December 31, 2017

Net Nonprofit Corporation Employee Category [a]	Number of Employees	On a Per-Employee Basis			Number of Weeks	Reproduction Cost New less Depreciation \$000
		Average Weekly Base Salary Cost \$000	Employee Benefits Cost Allocation %	Nonlabor Cost Allocation %		
VP & GM	1	6.000	30	20	26	234
VP Scientific Programs	1	3.000	30	20	52	234
Senior Director Learning	1	2.000	30	20	52	156
Program Managers	10	1.500	30	20	52	1,170
Editorial Staff	5	1.400	30	20	52	546
Freelance Editors	20	NA	NA	NA	NA	1,288
Total Annual Reproduction Cost New (\$000) [a, b]						3,628
Number of Titles Produced Annually [a, b]						200
Total Annual Reproduction Cost New per Title (\$000)						18.139
Total Number of Titles Reproduced [a]						1,000
Total Reproduction Cost New (\$000)						18,139
Plus: Combined Developer's Profit and Entrepreneurial Incentive at a Rate of Return of 15% (\$000) [c]						2,721
Indicated RPCN before Depreciation and Obsolescence (\$000)						20,860
Less: Depreciation and Obsolescence of 20% (\$000)						4,172
Less: Income Tax Expense [d]						-
Indicated Reproduction Cost New less Depreciation and Obsolescence (\$000)						16,688
Tax Amortization Benefit (\$000) [d]						-
Indicated Fair Market Value of Education Ratings and Reviews Content (\$000) (rounded)						16,700

[a] Based on information provided by management.

[b] Based on information provided by management, the total annual reproduction costs required to produce 200 titles are \$3.6 million.

[c] Combined developer's profit and entrepreneurial incentive rate of return represented by the discount rate plus a premium of 200 basis points.

[d] For fair value measurement purposes, the cost approach can be applied on either a pretax or an after-tax basis. Since this example relates to the fair market value standard of value, we assume this calculation is not affected by taxation issues. See Mark L. Zyla, *Fair Value*

Measurement: Practical Guidance and Implementation, 2nd ed. (Hoboken, NJ: John Wiley & Sons, 2013), 192-194.

Sources: Information provided by management and analyst calculations.

- The second method of estimating functional obsolescence resulted in a functional obsolescence estimate of 25 percent.
- A functional obsolescence estimate of 20 percent was selected and applied to the education content.

provided from NNC management reflecting the aging or seasoning and the usage of scientific content. NNC management provided website page views by the year in which the content was created.

The total NNC website page views were 2.1 million and covered the content created from 2012 through 2017. It was observed that there were greater website page views for content created in 2017, or 650,000 page views, in contrast to website page views for content created in 2015, or 500,000 page views.

FUNCTIONAL OBSOLESCENCE ANALYSIS

In order to estimate the obsolescence for the scientific educational content, statistical information was



This indicates that the 2015 content is subject to some level of functional obsolescence because it does not yield the same utility, as measured by website page views, as the 2017 content.

Two methods were applied to estimate functional obsolescence. The first method is based on total website page views for content created in each year from 2012 to 2017. Since 2017 yielded the greatest website page views, comparisons of each of the other year's website page views as a percentage of 2017's website page views were performed.

For example, based on the total website page views for content created in 2017, the 2015 content represented 77 percent ($500,000 \div 650,000$).

Applying this percentage to the total number of page views for 2015 resulted in an adjusted total website page view for 2015 content of 384,615 ($500,000 \times 77$ percent). In other words, based on this method, 77 percent of the content created in 2015 is not considered functionally obsolete and 23 percent of the content is considered functionally obsolete.

Applying this process to the remaining years results in an adjusted total website page views of 1.7 million, or 20 percent of the total 2.1 million website page views that were not considered functionally obsolete. Consequently, 20 percent of the scientific educational content was considered obsolete.

The second method of estimating functional obsolescence includes consideration not only of the website page views for each year in which content was created, but also of the actual number of content created in each year.

For example, the total number of page views for 2017 of 650,000 was divided by the total number of content titles created in 2017 of 200 to arrive at 3,250 website page views per content title. In looking at 2015 again, making the same calculation results in 1,667 website page views per content title ($500,000$ total website page views divided by 300 total number of content titles created).

The 1,667 website page views per content title in 2013 is 51 percent of the 3,250 website page views per content title in 2017. Therefore, based on this method, 51 percent of the content titles in 2017 is not considered functionally obsolete and 49 percent is considered functionally obsolete.

Applying this same process to all analysis years results in an adjusted total website page views per developed content title of 8,184 not considered functionally obsolete compared to a total website page views per developed content title of 10,983, or 25 percent.

Therefore, based on this method of estimating functional obsolescence, 25 percent of the content titles are considered functionally obsolete.

Based on the two methods discussed above, a functional obsolescence estimate of 20 percent for education-related content was selected, as presented in Exhibit 10.

Group 3—Educational Related Content Conclusion

Applying the selected obsolescence estimate of 20 percent to the estimated indicated value before depreciation and obsolescence of \$20.9 million results in an indicated fair market value of the scientific education ratings.

The indicated fair market value of the scientific education content, using the RPCNLD method, is \$16.7 million, as presented in Exhibit 9.

GROUP 3—MEDIA EVALUATION CONTENT

The media evaluation content consists of 300 titles of science-related media reviews. It is understood that the media evaluation content was initially developed by two individuals from the company

Exhibit 10
Net Nonprofit Corporation
Cost Approach
Reproduction Cost New less Depreciation Method
Analysis of Functional Obsolescence—Educational Content
As of December 31, 2017

Website Page Views Data [a]	Methods of Estimating Functional Obsolescence						
	Method 1			Method 2			
	Total Website Page Views	Adjusted Total Website Page Views	Adjusted Total Website Page Views	Developed Content Titles	Developed Content Title	Total Website Page Views per Developed Content Title as a % of 2017	Adjusted Total Website Page Views per Developed Content Title
	#	#	#	#	#	#	#
Content Create Year: 2017	650,000	100	650,000	200	3,250	100	3,250
Content Create Year: 2016	600,000	92	553,846	200	3,000	92	2,769
Content Create Year: 2015	500,000	77	384,615	300	1,667	51	855
Content Create Year: 2014	250,000	38	96,154	150	1,667	51	855
Content Create Year: 2013	120,000	18	22,154	100	1,200	37	443
Content Create Year: 2012	10,000	2	154	50	200	6	12
Total	2,130,000		1,706,923	1,000	10,983		8,184
Measure of Functional Obsolescence	Method 1		20%	Method 2			25%
Indicated Functional Obsolescence							20%
Selected Functional Obsolescence							20%

[a] Company management provided information on the development of scientific education ratings and review content titles by year from 2012 to 2017.
Sources: Information provided by management and analyst calculations.

Media Makers. NNC did not acquire this company, but simply hired the two individuals from it in 2013.

The RPCNLD method was applied to estimate the value of the media evaluation content. This analysis is presented in Exhibit 11.

The following are the inputs for the analysis of the media evaluation content:

- The total annual cost to reproduce the media evaluation content is \$1.3 million.
- The number of titles reproduced annually is 100.
- The annual reproduction cost per title is \$13,451.
- The total number of titles to be reproduced is 300.
- This resulted in an estimate of total reproduction cost new of \$4.0 million.
- A combined developer's profit and entrepreneurial incentive of 15 percent was applied.

- This resulted in an expected return based on the combined developer's profit and entrepreneurial incentive of \$605,000 and an estimated reproduction cost new before depreciation and obsolescence of \$5.8 million.
- No information was provided regarding website page views for the media evaluation content. Based on discussions with NNC management, the website page view information from the education content was relied on.
- A functional obsolescence estimate of 20 percent for media evaluation content was selected and used in this analysis.

Group 3—Media Evaluation Content Conclusion

Applying the selected obsolescence estimate of 20 percent to the estimated indicated RPCN before

Exhibit 11
Net Nonprofit Corporation
Cost Approach
Reproduction Cost New less Depreciation Method
Media Evaluation Content
As of December 31, 2017

Net Nonprofit Corporation Employee Category [a]	Number of Employees	On a Per-Employee Basis			Number of Weeks	Reproduction Cost New less Depreciation \$000
		Average Weekly Base Salary Cost \$000	Employee Benefits Cost Allocation %	Nonlabor Cost Allocation %		
Chief Product Officer/Chief Technology Officer	1	4.086	25	20	26	154
Scientific Director	2	2.324	25	20	52	351
Analyst	5	1.765	25	20	52	666
Freelance Editors	8	NA	NA	NA	NA	175
Total Annual Reproduction Cost New (\$000) [a, b]						1,345
Number of Titles Produced Annually [a, b]						100
Total Annual Reproduction Cost New per Title (\$000)						13.451
Total Number of Titles Reproduced [a]						300
Total Reproduction Cost New (\$000)						4,035
Plus: Combined Developer's Profit and Entrepreneurial Incentive at a Rate of Return of 15% (\$000) [c]						605
Indicated RPCN before Depreciation and Obsolescence (\$000)						4,641
Minus: Depreciation and Obsolescence of 20% (\$000) [d]						928
Less: Income Tax Expense [e]						-
Indicated Reproduction Cost New less Depreciation and Obsolescence (\$000)						3,713
Tax Amortization Benefit (\$000) [e]						-
Indicated Fair Market Value of Media Evaluation Content (\$000) (rounded)						3,700

[a] Based on information provided by management.

[b] Based on information provided by management, the total annual reproduction costs required to produce 100 titles are \$1,345,000.

[c] Combined developer's profit and entrepreneurial incentive rate of return represented by the discount rate plus a premium of 200 basis points.

[d] The obsolescence rate is based on the obsolescence analysis for scientific education content.

[e] For fair value measurement purposes, the cost approach can be applied on either a pretax or an after-tax basis. Since this example relates to the fair market value standard of value, we assume this calculation is not affected by taxation issues. See Mark L. Zyla, *Fair Value Measurement: Practical Guidance and Implementation*, 2nd ed. (Hoboken, New Jersey: John Wiley & Sons, Inc., 2013), 192-194.

Sources: Information provided by management and analyst calculations.

depreciation and obsolescence of \$4.6 million results in an indicated fair market value of the media evaluation content.

The indicated fair market value of the media evaluation content, using the RPCNLD method, is \$3.7 million, as presented in Exhibit 11.

INTANGIBLE ASSET VALUATION SUMMARY AND CONCLUSION— THE NNC SUBJECT ASSETS

As part of the analysis, the three generally accepted approaches to intangible asset valuation were con-

sidered: (1) the income approach, (2) the market approach, and (3) the cost approach.

This example relied on (1) the income approach, and specifically the MPEEM; (2) the market approach, and specifically the relief from royalty method; and (3) the cost approach, and specifically the RPCNLD method, to estimate the value of the subject assets.

As presented in Exhibit 12, based on the analysis, the fair market value of the NNC subject assets, as of the valuation date, is \$53.3 million (rounded):

During the analysis of the NNC intangible assets, arm's-length royalty rates were estimated (1) for the NNC trademark and (2) for the use of NNC generated content.

Exhibit 12
Net Nonprofit Corporation
Valuation Summary of Certain Identifiable Intangible Assets
As of December 31, 2017

Net Nonprofit Corporation Assets	Exhibit Reference	Indicated Value of NNC Assets \$000
<u>Certain Identified Net Nonprofit Corporation, Intangible Assets:</u>		
Group 1 - Brand Intangible Assets:		
Trademark	5	16,500
Group 2 - Customers and Delivery Platform Intangible Assets:		
Customer Relationships	6	8,300
Software Delivery Platform	8	8,100
Group 3 - Content Intangible Assets:		
Educational Content	9	16,700
Media Evaluation Content	11	3,700
Fair Market Value of Certain Identified Net Nonprofit Corporation, Intangible Assets (rounded)		53,300

Sources: As indicated above and analyst estimates and calculations.

Along the way, a 5.0 percent arm’s-length royalty rate for both the trademark—Group 1 asset—and the NNC generated content—Group 3 assets—were concluded.

REASONABLENESS CHECK ON THE VALUE OF THE NNC ASSETS

In order to reconcile and check for reasonableness of the conclusion reached in Exhibit 12, it was necessary to estimate the total value of NNC, under the same hypothetical condition, related to (1) the implied NNC total equity value and (2) the implied NNC total invested capital value.

In order to estimate the NNC total equity value, the asset-based approach, and specifically the asset accumulation method, was applied.

Exhibit 13 presents the calculation of the implied NNC valuation estimate based on the asset accumulation method. In order to arrive at the fair market value of NNC total assets, it was necessary to add (1) net other assets (working capital, cash-related assets, and tangible assets) and (2) the estimated value of the NNC trained and assembled workforce.

These assets were not discretely valued as part of the subject analysis to estimate the value of the NNC subject assets of \$53.3 million. Therefore, it was necessary to add \$13.0 million of net other assets and \$500,000 of trained and assembled workforce value to \$53.3 million to arrive at \$66.8 million.

Based on the analysis, it is concluded that the implied NNC equity value was \$66.8 million, as of the valuation date.

To calculate the implied NNC invested capital value, \$500,000 of NNC interest-bearing debt was added to the implied NNC equity value. Therefore, based on the analysis, it is concluded that the implied NNC invested capital value was \$67.3 million as of the valuation date.

Application of Reasonable Check Based on Guideline Publicly Traded Company Pricing Multiples

In order to check the total value of the subject assets for reasonableness, the following two procedures were performed using the guideline publicly traded companies selected for benchmarking purposes.

Exhibit 13
Net Nonprofit Corporation
Asset Accumulation Method Valuation Summary
As of December 31, 2017

Net Nonprofit Corporation Assets	Exhibit Reference	Indicated Value of NNC Assets \$000
Fair Market Value of Certain Identified Net Nonprofit Corporation, Intangible Assets (rounded)	12	53,300
Net Other Assets (including short-term assets and net fixed assets)		13,000
Trained and Assembled Workforce		<u>500</u>
Fair Market Value of Net Nonprofit Corporation Assets (total equity approximation)		<u>66,800</u>
Interest-Bearing Debt		500
Fair Market Value of Net Nonprofit Corporation Assets and Liabilities (invested capital approximation)		<u>67,300</u>
Sources: As indicated above and analyst estimates and calculations.		

The first procedure is to check the implied NNC equity value and NNC invested capital value compared to total costs. Typically, profitability metrics are used, such as operating income; earnings before interest and taxes; or earnings before interest, taxes, depreciation, and amortization. Since NNC is a not-for-profit company, there is no direct comparison.

The analyst examined guideline publicly traded company multiples of market value of invested capital ("MVIC") compared to total costs. This analysis is presented in Exhibit 14.

For the next procedure, the total costs multiples implied by the total value of the subject assets were calculated. This analysis is presented in Exhibit 15.

Since the implied valuation pricing multiples in Exhibit 15 fall within the indicated range of multiples of the guideline publicly traded companies in Exhibit 14, this analysis indicates that the total value of the subject assets is reasonable.

The second procedure is to check the valuation results compared to revenue. In this case, guideline publicly traded company pricing multiples based on MVIC to revenue were used. The results of this

Exhibit 14
Net Nonprofit Corporation
Guideline Publicly Traded Company Multiples of Total Cost
As of December 31, 2017

	Guideline Publicly Traded Companies					
	MVIC as a Multiple of Total Costs				Interquartile Range	
	Low	High	Average	Median	Quartile 1	Quartile 2
Latest 12-Month Total Costs	0.87	5.82	2.96	2.83	1.74	2.83
5-Year Total Costs	0.92	6.77	3.78	3.76	1.74	3.76
Indicated Range of Multiples				1.74	to	3.29

analysis is presented in Exhibit 16.

Next, revenue multiples implied by the total value of the subject assets were calculated. This calculation is presented in Exhibit 17.

Since the implied valuation multiples in Exhibit 17 fall within the indicated range of multiples of the guideline publicly traded companies in Exhibit 16, this analysis indicates that the total value of the subject assets is reasonable.

Exhibit 15
Net Nonprofit Corporation
Implied Valuation Multiples Based on Total Costs
As of December 31, 2017

		NNC Values of:	
		Equity	Invested Capital
Implied Valuation Multiples:			
Latest 12-Month Total Costs	28,800	2.32	2.34

SUMMARY AND CONCLUSION

Depending on the valuation assignment facts and circumstances, the analyst may encounter a unique valuation problem: a problem that is outside the ordinary scope of typical valuation issues.

Analysts are often engaged to estimate fair market value related to not-for-profit business transactions. Not-for-profit businesses are often involved in arm’s-length transactions. However, it is more typical for an analyst to estimate an arm’s-length royalty rate for a not-for-profit client than to estimate the value of the not-for-profit entity—or its assets.

To illustrate certain concepts and provide context, an example was presented. That example was based on the hypothetical Net Nonprofit Corporation. Because NNC is a not-for-profit business, the analysis of the subject assets and a reasonableness check of the concluded value were based on the hypothetical condition that NNC was a for-profit business.

In this example, treating the not-for-profit business as a for-profit business was an essential procedure. It stands to reason that the most likely acquirer of a nonprofit business—or its assets—will be a for-profit business. That reason is due, in-part, to the fact that there are many more for-profit businesses than nonprofit businesses. And, for-profit businesses are more likely than nonprofit businesses to buy existing business assets.

Treating NNC as a for-profit business is a hypothetical condition that serves as the basis to apply public market-based evidence in the example analysis. Relevant market-based evidence was applied to (1) value certain not-for-profit intangible assets and (2) check for reasonableness based on the implied total not-for-profit business value.

As a best practice, more than one method should be used to estimate a value—or to at least corroborate a value estimate. The example illustrates how guideline publicly traded companies can be used to corroborate a value conclusion.

In the example, an application of the guideline publicly traded company method was used. This application is unique. This is because it involved the use of cost-based pricing multiples and not earnings-based pricing multiples. The application of cost based pricing multiples was necessary because NNC did not earn revenue on the majority of its intellectual property.

Notes:

1. <https://www.upcounsel.com/types-of-nonprofits>, accessed January 28, 2019.
2. <https://www.irs.gov/charities-non-profits/charitable-organizations/exemption-requirements-section-501c3-organizations>, accessed January 28, 2019.
3. The *Uniform Standards of Professional Appraisal Practice* (“USPAP”) 2018-2019 edition, on page 4, defines a hypothetical condition as follows: “a condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis.”
4. The interquartile range is between the 25th percentile, or the first quartile, and the 75th percentile, or the third quartile.
5. The midpoint of 2.0 percent and 7.0 percent interquartile range, the selected indicated royalty rate range, is 4.5 percent.

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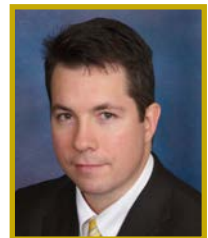


Exhibit 16
Net Nonprofit Corporation
Guideline Publicly Traded Company Multiples of Revenue
As of December 31, 2017

	Guideline Publicly Traded Companies					
	MVIC as a Multiple of Revenue				Interquartile Range	
	Low	High	Average	Median	Quartile 1	Quartile 2
Latest 12-Month Revenue	0.84	4.36	2.57	2.64	1.75	2.64
5-Year Revenue	<u>0.88</u>	<u>6.01</u>	<u>3.38</u>	<u>3.26</u>	<u>1.80</u>	<u>3.26</u>
Indicated Range of Multiples				1.77	to	2.95

Exhibit 17
Net Nonprofit Corporation
Implied Valuation Multiples Based on Revenue
As of December 31, 2017

		NNC Values of:	
		Equity	Invested Capital
		66,800	67,300
Implied Valuation Multiples:			
Latest 12-Month Revenue	32,000	2.09	2.10