

Intellectual Property Valuations within Bankruptcy Controversies - Part 2

INTRODUCTION

Part one of this article (*FVLE* 83, March/April 2020), examined the general nature and purpose of an intellectual property (IP) valuation in a bankruptcy controversy. It described the objective of such an analysis and presented resources for comparative benchmark analysis industry data. This installment introduces the three generally accepted valuation approaches applied by the analyst and summarizes the *cost* approach and the *market* approach and methods applied within each of these two approaches. Part three of this article, in the June/July 2020 issue, will examine the *income* approach as it is used in intellectual property valuations within bankruptcy as well as the synthesis and conclusion in such a valuation. It will also present the attributes of an effective valuation expert report and look at who should perform an IP valuation.

GENERALLY ACCEPTED VALUATION APPROACHES AND METHODS

The three generally accepted intellectual property valuation approaches are the *cost* approach, the *market* approach, and the *income* approach. Analysts typically consider, and attempt to apply, all three generally accepted approaches in each intellectual property valuation. Practically, however, many intellectual property valuations are based primarily on the application of one approach.

For each intellectual property valuation, the analyst selects the generally accepted approach (or approaches):

1. for which there is the greatest quantity and quality of available data,
2. for which the analyst can per-

form the most comprehensive due diligence procedures,

3. that best reflect the actual transactional negotiations of market participants in that industry,
4. that best fit the characteristics (e.g., use, age, etc.) of the debtor intellectual property, and
5. that are most consistent with the professional experience and informed judgment of the analyst.

Within each valuation approach, there are several valuation methods that the analyst can select and apply, and within each method there are numerous valuation procedures that the analyst can perform. Valuation procedures are performed within a method to conclude a value indication. The analyst may perform two or three valuation methods within a single valuation approach.

For example, the analyst may perform three different income approach methods and reconcile the three value indications in order to conclude a single income approach value indication. The analyst reconciles the various value indications (if more than one approach is used). This synthesis of the various value indications results in a final value conclusion for the debtor company intellectual property.

All of the *cost* approach valuation methods are based on the principle of substitution. That is, the value of the actual intellectual property is influenced by the cost to create a substitute intellectual property.

As will be discussed, all *cost* approach methods apply a comprehensive definition of cost, including consideration of an opportunity cost component during the intellec-



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tual property development stage. In addition, the cost of the substitute intellectual property should be reduced (or depreciated) in order to make the substitute intellectual property comparable to the actual intellectual property.

Unlike many identifiable intangible assets, intellectual property assets may not be fungible. That is, the marketplace may or may not be able to replace the actual intellectual property with a substitute intellectual property. Therefore, although the *cost* approach is applied in intellectual property valuation, it may have certain application limitations.

All *market* approach methods are based on the principles of (1) efficient markets and (2) supply and demand. That is, the value of the debtor company intellectual property may be estimated by reference to prices paid in the marketplace for the arm's-length sale or license of comparable (or guideline) intellectual property. Comparable
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expert TIP

This article (Part Two) summarizes the *cost* approach and the *market* approach and methods applied within each of these two approaches.

uncontrolled transaction (CUT) data related to sales or licenses are analyzed in order to extract pricing multiples or other metrics that can be applied to the debtor company intellectual property.

All income approach methods are based on the principle of anticipation. That is, the value of any investment is the present value of the income that the owner/operator expects to receive from owning or operating that investment. All income approach methods involve a projection of some measure of owner/operator income over the intellectual property's expected useful economic life (UEL). Such income measures may relate to:

1. the income earned from operating the intellectual property in the owner/operator business enterprise and/or
2. the income earned from licensing the intellectual property from the owner/licensor to an operator license that will pay a royalty (or some other fee) for the use of the intellectual property.

This income projection is converted to a present value by the use of a risk-adjusted present value discount rate (or an annuity direct capitalization rate).

Cost approach methods may be particularly applicable to the valuation of a recently developed intellectual property. In the case of relatively new intellectual property, the debtor company development cost and effort development data may be available (or may be subject to accurate estimation). In addition, cost approach methods may be applicable to the valuation of in-process intellectual property and to noncommercialized intellectual property (e.g., intellectual property held primarily for defensive use).

However, in all cases, the analyst should realize that the intellectual property value is not derived from the cost measure alone. Rather, the intellectual

property value is derived from the cost measure (however defined) less appropriate allowances for all forms of depreciation and obsolescence.

Market approach methods may be applicable when there is a sufficient quantity of comparable (almost identical) or guideline (similar from an investment risk and expected return perspective) intellectual property transaction data. These transactions may relate to either sale or license transactions. Such arm's-length, third-party transactions are often called CUT sales or licenses.

The analyst attempts to extract market-derived valuation pricing indications (e.g., pricing multiples or other metrics) from these CUT data to apply to the corresponding metrics of the debtor's intellectual property.

Income approach methods may be applicable in situations where the intellectual property is used to generate a measurable amount of income. This income can either be:

1. operating income (when the intellectual property is used in the owner's business operations) or
2. ownership income (when the intellectual property is licensed from the owner/licensor to an operator/licensee) to produce royalty income.

Income approach methods may be applied when the owner/operator has elected to not currently commercialize the intellectual property. An example may be when this forbearance of use is for the purpose of protecting the income that is produced by the owner/operator's other intellectual property.

COST APPROACH VALUATION METHODS

There are several intellectual property valuation methods included in the cost approach. Each of the valuation methods applies a particu-

lar definition of cost. These definitions of cost include the following:

1. Reproduction cost new (RPCN)
2. Replacement cost new (RCN)

RPCN is the total cost, at current prices, to develop an exact duplicate of the actual intellectual property. RCN is the total cost, at current prices, to develop an asset having the same functionality or utility as the actual intellectual property.

Functionality is an engineering concept that means the ability of the intellectual property to perform the task for which it was designed. Utility is an economics concept that means the ability of the intellectual property to provide an equivalent amount of satisfaction.

There are other cost definitions that may be applicable to a cost approach valuation. Some analysts consider a measure of cost avoidance as a cost approach method. This method quantifies either historical or prospective costs that are avoided because the debtor company actually owns its own intellectual property.

Some analysts consider historical cost or trended historical cost as a cost measure. In the trended historical cost method, historical development costs are identified and trended to the valuation date by an inflation-based index factor. Regardless of the specific cost definition applied, all cost approach methods include a comprehensive definition of cost.

The cost measurement (whether RCN, RPCN, or some other cost measure) typically includes the following four individual cost components:

1. Direct costs (e.g., materials)
2. Indirect costs (e.g., engineering and design labor)
3. The intellectual property developer's profit (on the direct cost and indirect cost investment)
4. An opportunity cost/entrepreneur

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neurial incentive (to motivate the intellectual property development process)

The intellectual property development material, labor, and overhead costs may be easy to identify and quantify. The developer's profit may be estimated using several procedures. It is often estimated as a percentage profit margin on the developer's investment in the material, labor, and overhead costs.

The entrepreneurial incentive may be measured as the lost profits during the replacement intellectual property development period. Alternatively, entrepreneurial incentive is sometimes measured as a fair rate of return on investment during the duration of the intellectual property development process.

For example, let's assume that it takes two years to develop a replacement patent. If the buyer buys the seller's actual patent, then the buyer can start earning income (either operating or license income) immediately.

To illustrate entrepreneurial incentive, let's consider the development (or replacement) of a patent. If the intellectual property buyer "builds" its own hypothetical replacement patent, then the intellectual property buyer will not earn any income (operating or license) during the two-year development period. The two years of lost profits during the hypothetical patent development period represents the opportunity cost of developing a new replacement patent—compared to buying the debtor's actual patent.

All four cost components—that is, direct costs, indirect costs, developer's profit, and entrepreneurial incentive (or opportunity cost)—should be considered in the cost approach valuation. While the cost approach is a different set of analyses from the income approach, there are economic analyses included in the cost

approach.

These cost approach economic analyses provide indications of both:

1. the appropriate levels of opportunity cost (if any) and
2. the appropriate amount of economic obsolescence (if any).

The current cost metric (however measured) should be adjusted for losses in value due to:

1. physical deterioration,
2. functional obsolescence, and
3. economic obsolescence.

Physical deterioration is the reduction in value due to physical wear and tear. It is unlikely that an intellectual property will experience physical deterioration.

Functional obsolescence is the reduction in value due to the intellectual property's inability to perform the function (or yield the periodic utility) for which it was originally designed. The technological component of functional obsolescence is a decrease in value due to improvements in technology that make the actual intellectual property less than the ideal replacement for itself.

The economic obsolescence component of external obsolescence is a reduction in value due to the effects, events, or conditions that are external to—and not controlled by—the intellectual property's current use or condition. The impact of economic obsolescence is typically beyond the control of the debtor company.

In any cost approach analysis, the analyst typically estimates the amounts (if any) of intellectual property physical deterioration, functional obsolescence, and economic obsolescence. In this estimation, the analyst typically considers the intellectual property's actual age—and its expected UEL.

Analysts sometimes apply the following cost approach formula to quantify RCN:

RPCN – curable functional obsolescence = RCN

To estimate the intellectual property value, analysts often apply the following cost approach formula:

RCN – physical deterioration – economic obsolescence – incurable functional obsolescence = intellectual property value

Exhibits 1 and 2 on pages 16 and 17 present illustrative examples of an intellectual property cost approach valuation analysis. In these illustrative examples, let's assume that the analyst is retained to estimate the fair market value of the copyrights and trade secrets intellectual property related to the Alpha Debtor Company (Alpha) internally developed computer software. All of the Alpha internally developed computer software is subject to copyright protection. And, the software source code and the systems documentation and user manuals are treated as debtor company trade secrets.

The assignment valuation date is as of January 1, 2020. Based on the analyst's highest and best use (HABU) analysis, the analyst concluded that value in continued use is the appropriate valuation premise for this analysis.

Based on the quantity and quality of available data, let's assume that the analyst decides to apply the cost approach and the replacement cost new less depreciation (RCNLD) valuation method. Exhibit 1 includes the analysis of all four cost components of the intellectual property cost measurement. Exhibit 1 also illustrates the analyst's physical deterioration, functional obsolescence, and economic obsolescence considerations.

Exhibit 2 presents the calculation of the developer's profit cost component of the Alpha software replacement-cost-new analysis.

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EXHIBIT 1

**Alpha Debtor Company – Fair Market Value
Computer Software – Copyrights and Trade Secrets
Cost Approach – Replacement Cost New less Depreciation Method
Valuation Summary – As of January 1, 2020**

Debtor Company Computer Software Systems	Estimated Software Replacement Development Effort in Person Months [a]	Time to Develop Replacement Software (in calendar months [b])	Indicated RCNLD Component [c] \$000
AS/400	4,531	29	66,100
Point of Sale	575	25	8,400
Tandem	3,304	16	48,200
Unisys	1,229	5	17,900
Pioneer	1,807	41	26,400
Voyager	325	12	4,700
Host to Host	85	9	1,200
Total Direct Costs and Indirect Costs	11,856	24	172,900
Plus: Developer's Profit [d]			10,500
Plus: Entrepreneurial Incentive [e]			31,200
Equals: Total Replacement Cost New			214,600
Less: Physical Deterioration [f]			-
Less: Functional Obsolescence [g]			13,300
Less: Economic Obsolescence at 18% of RCNLD [h]			36,200
Equals: Replacement Cost New less Depreciation			165,100
Indicated Fair Market Value of the Alpha Software Copyrights and Trade Secrets (rounded)			165,000

- [a] The estimated development effort for each software system is equal to the average of the replacement development effort indications (measured in person-months of software engineering effort from applying (1) the COCOMO software development effort model and (2) the KnowledgePLAN software development effort model with the average (rounded).
- [b] The estimated elapsed amount of time to develop the replacement software in calendar months for each software system is equal to the average of the replacement software development time estimates in calendar months using (1) the COCOMO development effort model and (2) the KnowledgePLAN development effort model (with the average rounded). The final figure in this column represents a weighted average amount of time estimated to develop the replacement software in calendar months (weighted by effort in person months), which is used to calculate the entrepreneurial incentive cost component.
- [c] Equal to the estimated amount of development effort measured in person-months times \$14,585 total direct and indirect costs per person month, rounded. The cost per person month is calculated by multiplying the blended hourly rate of \$82.87 provided by the Alpha Debtor Company vice president of data processing, by 176 (8 hours per day times 22 days per month).
- [d] Calculated as (1) total direct replacement cost new times (2) a market-derived computer software developer's profit margin of 11 percent times 55 percent. This adjustment is based on the analyst's due diligence conclusion that 45 percent of software development workforce represents outside contractors, the cost of which already includes a market-based developer's profit margin.
- [e] Calculated as (1) the Alpha Debtor Company present value discount rate of 17 percent times (2) the sum of the total direct and indirect costs replacement-cost-new cost component and the developer's profit cost component, divided by 2 times (3) the weighted average total development time period of two years (based on the weighted average time to develop in person months of 24 months as described in footnote).
- [f] The analyst concluded that there is no physical deterioration related to the Alpha software.
- [g] According to Alpha Debtor Company data processing management, the Point of Sale system is scheduled to be replaced and upgraded in approximately five years. The Pioneer system is also scheduled to be replaced and upgraded in approximately five years. And, the Voyager system is scheduled to be substantially upgraded next year. Therefore, the analyst estimated the functional obsolescence allowance as:

Computer Software System Scheduled for Replacement	Replacement Cost New*	Percent Obsolete	Functional Obsolescence Allowance (rounded)
Point of Sale	\$10,400,000	20%	\$2,100,000
Pioneer	\$32,700,000	20%	\$6,500,000
Voyager	\$5,800,000	80%	\$4,700,000
Total			\$13,300,000

In this particular valuation, the analyst concluded that there was no physical depreciation related to the Alpha software.

*Includes the developer's profit and entrepreneurial incentive cost of components.

[h] The analyst concluded that the appropriate present value discount rate for Alpha Debtor Company is 17 percent. However, the Alpha business operations are only earning a total return on investment of 14 percent. Therefore, Alpha is experiencing economic obsolescence.

The analyst measured the economic obsolescence as follows:

Required Alpha Return on Investment (ROI)	17%
Less: Actual Alpha Return on Investment	14%
Equals: Income Loss Percentage (ILP)	3%
Economic Obsolescence Percent (3% ILP ÷ 17% ROI)	18%

Note: These data are hypothetical and are presented for illustrative purposes only.

EXHIBIT 2

**Alpha Debtor Company – Fair Market Value
Computer Software – Copyrights and Trade Secrets
Cost Approach – Replacement Cost New less Depreciation Method
Estimate of Computer Software Developer's Profit
As of January 1, 2020**

Profit Margin Comparison Benchmarks

		Operating Profit Margins		
		4/1/18 3/31/19	4/1/17 3/31/18	4/1/16 3/31/17
SIC Code 7371 – Custom Computer Programming Services – All Companies	[a]	4.2%	4.2%	4.8%
SIC Code 7371 – Custom Computer Programming Services – Sales of \$25 million and over	[a]	7.4%	3.8%	2.2%
SIC Code 7373 – Computer System Design Services – All Companies	[b]	4.3%	3.1%	2.1%
SIC Code 7373 – Computer System Design Services – Sales of \$25 million and over	[b]	4.7%	4.3%	1.1%

Adjusted Operating Profit Margins

Selected Guideline Public Company Benchmarks	Ticker	2019/2018	2018/2017	2017/2016	3-Year Average
Accenture plc	ACN [c]	11.6%	11.4%	11.6%	11.5%
Analysts International Corp.	ANLY [c]	-0.5%	0.5%	0.8%	0.3%
Bearing Point Ind.	BGPT [c]	4.8%	6.7%	8.7%	6.7%
Cap Gemini Ernst & Young Group	CGEY [c]	-0.1%	4.7%	9.8%	4.8%
Cognizant Technology Solutions Corp.	CTSH [c]	19.7%	20.0%	19.1%	19.6%
Computer Sciences Corporation	CSC [c]	6.6%	5.6%	6.2%	6.1%
Electronic Data Systems Corp.	EDS [c]	8.7%	10.3%	9.5%	9.5%
Infosys Technologies Ltd.	INFY [c]	29.0%	32.7%	33.2%	31.7%
Perot Systems Corp.	PER [c]	10.2%	6.1%	6.7%	7.6%
Unisys Corporation	UIS [c]	7.5%	4.5%	6.2%	6.1%
Wipro Ltd.	WIT [c]	21.1%	23.8%	22.8%	22.6%

Selected Guideline Companies

High Operating Profit Margin	29.0%	32.7%	33.2%
Low Operating Profit Margin	-0.5%	0.5%	0.8%
Median Operating Profit Margin	8.7%	6.7%	9.5%
Average Operating Profit Margin	10.8%	11.5%	12.2%

Selected Computer Software Developer's Profit

11%

[a] The Risk Management Associates 2019-2018, 2018-2017, and 2017-2016 *Annual Statement Studies* – Custom Computer Programming Services.

[b] The Risk Management Associates 2019-2018, 2018-2017, and 2017-2016 *Annual Statement Studies* – Computer Systems Design Services.

[c] S&P Capital IQ database.

Note: The above data are hypothetical and are presented for illustrative purposes only.

Based on the cost approach (and the RCNLD method) valuation analysis summarized in Exhibit 1, the analyst concluded that the fair market value of the Alpha software-related copyrights and trade secrets intellectual property, as of January 1, 2020, is \$165 million (rounded).

In summary, in the bankruptcy controversy intellectual property valuation, the analyst should be aware of the following misconceptions regarding the cost approach:

1. The cost approach value indication does not equal accounting net book value (and it is not the so-called net book value method).
2. The cost approach to intellectual property valuation is not the asset-based approach to business valuation.
3. The cost approach only considers future costs. The cost approach is not a backward-looking analysis.
4. The so-called cost savings method is an income approach valuation method, not a cost approach valuation method.
5. The cost approach considers capitalizable expenditures, and not current period expenses.
6. The cost approach should consider an opportunity cost component (as part of the entrepreneurial incentive cost component).
7. The cost approach should consider all forms of obsolescence.
8. The cost approach does not typically consider any income tax considerations.
9. Except for certain GAAP accounting fair value measurement purposes, it is typically inappropriate to apply a tax amortization benefit (TAB) adjustment value to any cost approach value indication.

MARKET APPROACH VALUATION METHODS

Analysts often attempt to apply

market approach methods first in the intellectual property valuation process. This is because the market—that is, the economic environment where arm’s-length transactions between unrelated market participants occur—often provides a supportable indication of value.

However, the market approach will only provide meaningful valuation evidence when the actual (i.e., the debtor’s) intellectual property is sufficiently similar to the guideline intellectual property assets that are transacting (by sale or license) in the marketplace. In that case, the guideline transaction (sale or license) prices may provide market-derived evidence of the expected price for the debtor company’s intellectual property.

The generally accepted market approach intellectual property valuation methods include the following:

1. The comparable uncontrolled transaction (CUT) method
2. The comparable profit margin method (CPM)
3. The relief from royalty (RFR) method

In the CUT method, the analyst searches for arm’s-length sales or licenses of either comparable or guideline intellectual property. The analyst extracts market-derived pricing multiples from the CUT data.

In the CPM method, the analyst searches for companies that may provide benchmark guidance with regard to the profit margin contribution of the intellectual property to the debtor company.

In the RFR method, the analyst recognizes that the debtor company in fact owns the subject intellectual property. In applying this method, the analyst assumes that, if the debtor did not own the intellectual property, then the debtor would have to inbound license the use of that property from a third-party licensor. Therefore, because the debtor does own

the subject intellectual property, the debtor is “relieved” from having to pay a royalty payment on the inbound license of the property. The analyst values the subject intellectual property as the present value of the license royalty expense payment that the debtor company is “relieved” from paying.

In the application of the CUT method, the analyst often relies on CUT license transactions. This is because third-party licenses of intellectual property are more common than third-party sales of intellectual property. Nonetheless, for both sale and license transactions, the analyst follows a systematic process in the CUT selection and analysis process.

First, the analyst researches the appropriate exchange markets to obtain information about sale or license transactions, involving either guideline (i.e., similar from an investment risk and expected return perspective) or comparable (i.e., almost identical) intellectual property that may be compared to the intellectual property.

Some of the comparison attributes may include characteristics such as intellectual property type, intellectual property use, industry in which the intellectual property operates, date of sale or license, and so on.

Second, the analyst verifies the transactional information by confirming that (1) the transactional data are factually accurate and (2) the sale or license exchange transactions actually reflect arm’s-length market considerations. If the guideline sale or license transaction was not at arm’s-length market conditions, then adjustments to the transactional data may be necessary.

This verification procedure may also elicit additional information about the current market conditions related to the potential sale or license of the actual intellectual property.

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Third, the analyst selects relevant units of comparison (e.g., income pricing multiples or dollars per unit—such as “per drawing” or “per line of code”). And, the analyst develops a comparative analysis for each selected unit of comparison.

Fourth, the analyst compares the selected guideline or comparable intellectual property sale or license transactions with the debtor company’s actual intellectual property, using the selected elements of comparison.

Then, the analyst adjusts the sale or license price of each guideline transaction for any differences between (1) the guideline intellectual property and (2) the actual intellectual property. If such comparative adjustments cannot be measured, then the analyst may eliminate the sale or license transaction as a guideline for future valuation consideration.

Fifth, the analyst selects pricing metrics to apply to the actual intellectual property from the range of pricing metrics indicated from the guideline or comparable transactions.

The analyst may select pricing multiples at the low end, mid-point, or high end of the range of pricing metrics indicated by the transactional sale or license data. The analyst selects the subject-specific pricing metrics based on the analyst’s comparison of the actual intellectual property to the guideline intellectual property.

Sixth, the analyst applies the selected subject-specific pricing metrics to the debtor company’s financial or operational fundamentals (e.g., revenue, income, number of drawings, number of lines of code, etc.). This procedure typically results in several market-derived value indications for the debtor company’s intellectual property.

Seventh, the analyst reconciles the various value indications produced from the analysis of the guideline sale and/or license transactions into a single market

TABLE 1 Market Approach Representative Intellectual Property License Transaction Automated Databases
<p>RoyaltySource www.royaltysource.com—AUS Consultants provides a database that includes third-party intellectual property license agreement royalty rate data. The database can be searched by industry, technology, and/or keyword. The information provided includes the license royalty rates, name of the licensee and the licensor, a description of the intellectual property licensed (or sold, if applicable), the transaction terms, and the original sources of the information provided. Preliminary CUT results are available online and a final report is sent to the subscriber via email.</p>
<p>RoyaltyStat, LLC www.royaltystat.com—RoyaltyStat is a subscription-based database of third-party intellectual property license agreement royalty rate data, compiled from Securities and Exchange Commission documents. It is searchable by SIC code or by full text. The CUT results can be viewed online or archived. The intellectual property transaction database is updated daily. The full text of each intellectual property license agreement in the database is available.</p>
<p>ktMINE www.bvmarketdata.com—ktMINE is an interactive intellectual property license agreement database that provides direct access to license royalty rates, actual license agreements, and detailed agreement summaries. The database contains over 7,800 intellectual property license agreements. The intellectual property license database is updated frequently. License agreements are searchable by industry, keyword, and various other parameters. The full text of each intellectual property license agreement is available.</p>

TABLE 2 Market Approach Representative Intellectual Property License Transaction Print Sources
<p>Gregory J. Battersby and Charles W. Grimes author a book called <i>License Royalty Rates</i>, which is published annually by Aspen Publishers. This reference tool provides intellectual property license royalty rates for 1,500 products and services in 10 different licensed product categories: art, celebrity, character/entertainment, collegiate, corporate, designer event, music, nonprofit, and sports.</p>
<p>Intellectual Property Research Associates produces three books that contain information on license royalty rates for patents, trademarks, and copyrights. The books are <i>Royalty Rates for Trademarks & Copyrights</i>, <i>Royalty Rates for Technology</i>, and <i>Royalty Rates for Pharmaceuticals & Biotechnology</i>.</p>

approach value indication. In this final reconciliation procedure, the analyst summarizes and reviews (1) the transactional data and (2) the quantitative analyses (i.e., various pricing multiples) that resulted in each value indication.

Finally, the analyst resolves these multiple value indications into a single market approach value indication.

Table 1 above describes several of the automated databases that analysts may search to look for intellectual property license royalty rate data. **Table 2** above describes several of the print sources that analysts may search to look for intellectual property license royalty rate data.

The analyst may confer with
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the debtor company management to explore whether the debtor itself has entered into any intellectual property license agreements (either inbound or outbound). These debtor company license agreements could relate to either the debtor intellectual property (i.e., outbound licenses) or to comparable intellectual property (i.e., inbound licenses).

The CPM method is also based on a comparative analysis. However, in this valuation method, the analyst does not rely on sales or licenses of comparable intellectual property. Rather, the analyst searches for comparable or guideline companies.

The objective of the CPM method is to identify guideline companies that are comparative to the debtor company in all ways except one. The debtor, of course, owns the actual intellectual property. Ideally, the selected guideline companies should provide a comparable benchmark to the debtor—except that they do not own comparable intellectual property.

Ideally, the CPM method guideline companies operate in the same industry as the debtor company. Ideally, the guideline companies have the same types of raw materials and the same types of sources of supply. Ideally, the guideline companies have the same type of customers. Ideally, the guideline companies produce the same type of products or services. And, ideally, the only difference should be that the debtor company has an established intellectual property (e.g., trademark or patent) and the guideline companies have generic intellectual property (e.g., no trademark or patent). For example, the debtor may own and operate the subject patent while the guideline companies produce unpatented (and presumably inferior) products.

Because of the economic benefit that the actual intellectual property provides, the debtor com-

TABLE 3
Market Approach
Representative Data Sources for Guideline Company Profit Margins
FactSet Research Systems, Inc. – FactSet
Hoover’s, Inc. – Hoover’s Company Records
Mergent, Inc. – MergentOnline
Morningstar, Inc. – Morningstar Equity Research
Standard & Poor’s – Capital IQ
Thomson Reuters – Thomson ONE Analytics

pany should earn a higher profit margin than the selected guideline companies. This profit margin comparison is usually measured at the earnings before interest and taxes (or EBIT) level of income.

The incremental (or superior) profit margin earned by the debtor company can then be converted into an intellectual-property-related royalty rate. Typically, all of the excess profit margin is assigned to the intellectual property (if the subject intellectual property is the only reason for the debtor’s superior profit margin).

This royalty rate (derived from the excess profit margin) is then multiplied by the debtor company revenue in order to estimate the amount of implied royalty income generated from the debtor’s intellectual property. This hypothetical royalty income is capitalized over the intellectual property’s expected UEL. The result of this capitalization procedure is an estimate of the intellectual property value, according to the CPM method.

Table 3 above presents a nonexhaustive list of publicly traded company data sources that analysts may use to:

1. select guideline companies for the application of the CPM method analysis and
2. obtain guideline company profit margin information to apply in the CPM method analysis.

The relief from royalty method also relies on arm’s-length

CUT data. Some analysts consider the RFR method to be an income approach valuation method. This is because a projected royalty expense savings is capitalized in order to reach a value indication. Other analysts consider the RFR method to be a cost approach method. This is because the “cost” of the royalty (i.e., the expense of the license payment) is avoided because the rights associated with the intellectual property are owned by the debtor owner/operator. However, this method is typically considered a market approach method because the RFR method relies on market-derived, empirical CUT data.

In applying the RFR method, the analyst assumes that the debtor company does not own the actual intellectual property. Without this ownership, the debtor company would have to license the intellectual property from a hypothetical licensor. So the debtor company becomes a hypothetical licensee that licenses the intellectual property from a hypothetical third-party licensor. In that scenario, the debtor company (as licensee) would have to pay a royalty payment to the hypothetical owner (as licensor). The royalty payment would be for a use license to use the intellectual property in the debtor’s business operations.

In reality, the debtor does own the intellectual property. Because of that ownership, the debtor avoids the expense of pay-

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ing a use license royalty payment to a third-party licensor. Therefore, the debtor's intellectual property can be valued by reference to this hypothetical royalty payment that the debtor is relieved from making.

The hypothetical royalty payment is often calculated as (1) a market-derived royalty rate multiplied by (2) the debtor owner/operator's revenue. Accordingly, the application of this method requires (1) an analysis of CUT license royalty rates and (2) a projection of the debtor company revenue related to the use of the actual intellectual property.

In this method, the revenue expected to be generated by the intellectual property (from all sources) during its UEL is multiplied by the selected royalty rate. The product of the multiplication is a projection of the royalty expense that the owner/operator is relieved from paying because of its ownership of that intellectual property. This projected royalty expense "relief" is capitalized over the intellectual property's UEL. The result of this capitalization process is the intellectual property value indication.

Although the projected royalty expense is typically based on a royalty rate multiplied by the debtor's revenue, it could also be based on a royalty rate multiplied by gross profit, net income, number of units produced, number of units sold, or some other owner/operator metric. The royalty expense should be the amount of the net royalty expense that the debtor is relieved from paying. Therefore, if the debtor would have to pay for intellectual property development, maintenance, promotion, or legal protection expenses (as part of its licenses agreement), then these expenses should be subtracted from the royalty expense projection. The objective of the analysis is to measure the net benefit to the debtor from not having to inbound license the intellec-

tual property. So, when analyzing the CUT data, the analyst should consider which party would be responsible for these intellectual property maintenance expenses: the actual owner or licensee or the hypothetical owner or licensor.

In the application of the RFR method, the analyst typically performs the following procedures:

1. Select and document the criteria to be used for selecting the CUT license agreements; such criteria could include type of intellectual property, type of owner/operator, type of industry in which the property is used, size of the market in which the property is used, and dates and term of the license agreements.
2. Assess the terms of each selected CUT license agreement with consideration of
 - the description of the bundle of legal rights for the CUT licensed intellectual property.
 - the description of any maintenance or other expenditures required for the CUT intellectual property (for example, product development, advertising, product promotion, or legal protection).
 - the effective date of the CUT license agreement.
 - the termination date of the CUT license agreement.
 - the degree of exclusivity of the CUT license agreement.
3. Assess the current status of the industry and the associated relevant market and prospective trends.
4. Estimate an appropriate market-derived capitalization rate for the subject royalty expense projection; the capitalization rate considers the risk of the royalty expense projection and the UEL of the intellectual property.
5. Apply the market-derived capitalization rate to the royalty expense avoidance projection in order to conclude a value indication.

The RFR method has particular application for the types of intellectual property that are typically licensed between licensors and licensees. This method is also applicable when there are a sufficient number of CUT license agreements related to sufficiently similar intellectual property.

The RFR method may be especially applicable when the intended standard of value is fair value or fair market value because it is based on actual arm's-length transactions (licenses) between independent parties. It may be applicable when the analyst has access to the debtor's financial projections, especially debtor revenue projections. It may be also be applicable when the analyst has developed an estimate of the intellectual property's UEL.

The RFR method may be less applicable in the following circumstances:

- In the analysis of intellectual property that is not typically licensed between a licensor and a licensee, such as trade secrets
- When there is not a sufficient quantity of CUT license agreements or if the licensed intellectual property is not sufficiently similar to the actual intellectual property
- When the analyst does not have access to the debtor's financial projections or cannot estimate the subject intellectual property's UEL
- When the analyst does not have sufficient information about which CUT party (licensor or licensee) is responsible for the intellectual property maintenance and protection expenses

Let's assume that Beta Debtor Company (Beta) is a designer and manufacturer of high-end women's apparel products. Let's assume that the analyst is retained to estimate the fair value of the Beta trademarks and trade names
Continued on next page

as of January 31, 2020. Based on the quantity and quality of available data, let's assume that the analyst has decided to apply the market approach and the RFR valuation method. Based on the analyst's HABU analysis, the analyst concluded that value in continued use is the appropriate valuation premise for this analysis.

Companies like Beta regularly license their trademarks and trade names to other manufacturers. In fact, Beta has entered into a number of outbound trademark license agreements during the past few years.

The premise of the RFR valuation method is that the debtor would be willing to pay a hypothetical third-party owner a royalty payment for the right to use the subject intellectual property. Because Beta actually owns the subject trademarks, Beta is relieved from having to make a royalty payment to license the trademarks from a third-party licensor.

The analyst performed the following procedures to estimate an arm's-length royalty rate associated with the Beta trademarks and trade names:

- Discussed the intended use of the Beta trademarks with the debtor company management
- Searched for guideline arm's-length license transactions to use in the valuation
- Estimated the appropriate market-based royalty rate for the Beta trademarks
- Estimated the required rate of return on the value of the Beta trademarks
- Estimated the Beta trademarks' UEL to apply in the RFR method in order to conclude an initial value indication
- Adjusted the initial value indication for a TAB adjustment (that is, market participants would expect to benefit from the amortization tax deductions related to the purchase of the subject intellectual property)

- Concluded a final fair value indication for the Beta trademarks

The analyst reviewed several automated databases that report arm's-length intellectual property license agreements, including the ktMINE and RoyaltySource databases. **Exhibit 3** on page 23 presents the analyst's selection of arm's-length trademark or trade name license agreements that relate to the lines of women's apparel products. These license agreements, which relate to high-end women's apparel brands such as Anne Klein, Danskin, Christian Dior, and Donna Karan, indicated an average and a median market-based trademark license royalty rate of 6.2 percent and 6.5 percent, respectively.

The analyst also reviewed the arm's-length royalty rates that Beta actually earns from the outbound licensing of its own women's apparel trademarks. As presented in Exhibit 3, these outbound trademark license royalty rates ranged from 6.0 percent to 6.5 percent from the C&C Laundry, Gotcha/Girl Star, and Jantzen licensees.

Based on (1) the analyst's assessment of the various trademark and trade name arm's-length license agreements in the marketplace and (2) the analyst's consideration of the debtor management plans to showcase the Beta trademarks, the analyst concluded that a royalty rate of 6.5 percent (of revenue) is appropriate for the Beta trademarks.

The analyst calculated the fair value of the Beta trademarks as the present value of the expected after-tax royalty expense savings attributed to these trademarks. Accordingly, the analyst calculated the "relieved" royalty expense payment by applying the selected (6.5 percent) royalty rate to the projected Beta product line revenue. The analyst applied the

6.5 selected royalty rate to the projected revenue attributed to Beta-branded products for the fiscal years ended January 31, 2021, through January 31, 2026. The projected revenue was based on the debtor management revenue projections (which the analyst concluded to be consistent with those of market participants). Those projections contemplate a 2 percent annual growth rate in the dollar volume of the Beta-branded products.

After the year ended January 31, 2026, the debtor company management expects (as would market participants) to replace the Beta trademarks and trade names with a new set of trademarks and trade names. Therefore, the analyst selected six years as the expected UEL of the Beta trademarks.

The analyst reviewed the selected CUT license agreements. In these agreements, the licensor was responsible for the intellectual property maintenance expense and legal expense. Therefore, the analyst did not need to adjust the RFR royalty payment for any expenses that would be paid by Beta (as the hypothetical licensee).

The analyst adjusted the annual royalty expense payment for income taxes and discounted the after-tax royalty expense savings to a present value using a present value discount rate. The present value discount rate reflects the risks inherent in the ownership/operation of the subject trademarks. The analyst applied a present value discount rate of 14 percent, which was the Beta weighted average cost of capital (again, consistent with the expectations of market participants).

This RFR method valuation analysis is summarized in **Exhibit 4** on page 24.

Based on the application of the RFR method, the indicated fair value of the Beta trademarks is

Continued on page 24

EXHIBIT 3

**Beta Debtor Company
Trademarks and Trade Names
Selection of CUT Trademark and License Agreements
As of January 31, 2020**

Trademark or Trade Name Licensee	Trademark or Trade Name Licensor	Industry in Which Trademark is Used	License Agreement Royalty Rate as a % of Revenue	Initial Date of License Agreement	Lease Agreement Term (Years)
Maxwell Shoe Company, Inc.	Anne Klein B.D.S., Inc.	Customer nondurables	6.0	July '18	5
Tandy Brands Accessories, Inc.	Hermes	Men's and women's apparel	5.0	Aug. '19	5
Innovo Group, Inc.	Michael Caruso & Co., Inc.	Men's and women's accessories	6.0	Feb. '18	5
Innovo Azteca Apparel, Inc.	Blondie Rockwell, Inc.	Women's apparel	8.0	Feb. '17	5
Wundies Industries	Danskin, Inc.	Women's apparel	4.5	Nov. '17	10
Various	Christian Dior	Women's apparel	7.5	Jan. '18	5
Fashion Mag Apparel, Inc.	Hachette Filipacchi Presse	Women's apparel	6.0	Jan. '16	10
Yes Clothing Company	Marbel Sportswear, Inc.	Men's and women's apparel	7.0	April '16	5
Miss Erika, Inc.	McNaughton Apparel Holdings, Inc.	Women's apparel	5.0	Aug. '17	5
Ridgeview, Inc.	Ellen Tracy, Inc.	Women's apparel	7.0	Dec. '18	5
Designer Holdings, Ltd.	Donna Karan International, Inc.	Women's apparel	7.0	Sept. '19	10
BIB Ltd.	Mark TM, LLC	Young men's and women's apparel	4.0	Nov. '18	5
Gygnés Designs	Kenzo	Women's apparel	<u>8.0</u>	July '17	5
		Mean CUT Royalty Rate	6.2		
		Median CUT Royalty Rate	6.0		
C&C Laundry	Beta Debtor Company	Women's apparel	6.5		
Gotcha/Girl Star	Beta Debtor Company	Women's apparel	6.0		
Jantzen	Beta Debtor Company	Women's apparel	<u>6.5</u>		
		Mean Beta Royalty Rate	6.3		
		Median Beta Royalty Rate	6.5		
		Selected License Royalty Rate for the Beta Trademarks (as a percent of revenue)	<u>6.5%</u>		

Sources: ktMINE and RoyaltySource intellectual property license agreement databases.

EXHIBIT 4

**Beta Debtor Company
Fair Value
Beta Trademarks and Trade Names
Market Approach – Relief from Royalty Method
Valuation Summary
As of January 31, 2020**

Valuation Variables	Projected Fiscal Years Ended January 31,					
	2021	2022	2023	2024	2025	2026
	\$000	\$000	\$000	\$000	\$000	\$000
Projected Beta Product Line [a]	84,846	86,543	88,274	90,039	91,480	93,677
Revenue Growth Rate	2%	2%	2%	2%	2%	2%
Arm's-Length License Royalty Rate [b]	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%
Pretax Royalty Expense Relief	5,515	5,625	5,738	5,853	5,970	6,089
Income Taxes at 36% [c]	1,985	2,025	2,066	2,107	2,149	2,192
After-tax Royalty Expense Relief	3,530	3,600	3,672	3,746	3,821	3,897
Present Value Factor at 14% [d]	0.9366	0.8216	0.7207	0.6322	0.5545	0.4864
Present Value of Royalty Expense Relief	3,306	2,958	2,647	2,368	2,118	1,895
Total Present Value of Royalty Expense Relief	15,292					
Tax Amortization Benefit Factor Adjustment	1.19					
Indicated Fair Value of the Beta Trademarks	18,197					
Fair Value of the Beta Trademarks (rounded)	18,000					

[a] Revenue estimates based on debtor company management financial projections.

[b] Royalty rate based on an analysis of CUT trademark license agreements.

[c] Based on debtor company management financial projections.

[d] Based on Beta weighted average cost of capital.

approximately \$15,292,000, prior to the application of the TAB factor.

As the analyst was estimating the fair value of the Beta trademarks, the analyst applied a TAB factor adjustment of 1.19 (based on a 14 percent present value discount rate, a 36 percent income tax rate, and a 15-year Internal Revenue Code Section 197 tax amortization period). The analyst applied the 1.19 TAB adjustment to the total present value of the royalty expense relief (before the TAB adjustment).

Based on the RFR method analysis summarized in this illustrative example, the analyst concluded that the fair value of the Beta trademarks and trade names, as of January 31, 2020, was \$18 million (rounded).

In summary, there are several intellectual property market approach valuation methods. However, they are all based on comparative analyses of either comparable intellectual property sales, comparable intellectual property license royalty rates, or comparable com-

panies (that own generic intellectual property).

Part three of this article, which will appear in the June/July issue, will cover using the income approach in an intellectual property bankruptcy valuation. It will also provide guidance on the valuation synthesis and conclusion, the attributes of an effective report, and who should perform such a valuation. [↪](#)