

Intellectual Property and Insolvency Issues:
Valuation of Intellectual Property within a Bankruptcy Context

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VALUATION OF INTELLECTUAL PROPERTY WITHIN A BANKRUPTCY CONTEXT

INTRODUCTION

First, this discussion summarizes the various types of intellectual property assets and the general reasons why valuation analysts (“analysts”) are asked to value commercial intellectual property. Second, this discussion focuses on the specific reasons why analysts are asked to value debtor company intellectual property within a bankruptcy context. Third, this discussion describes and illustrates the generally accepted intellectual property valuation approaches and methods. Fourth, this discussion summarizes the common data sources and due diligence procedures related to an intellectual property valuation. And, finally, this discussion presents some analyst caveats and report writing guidelines for intellectual property valuations performed within a bankruptcy context.

Types of Intellectual Property

Whether or not the valuation analysis relates to a bankruptcy proceeding, there are only four categories of intellectual property:

- Patents
- Trademarks
- Copyrights
- Trade secrets

These four types of intellectual property are one subset of the general category of commercial intangible assets.

Patents, trademarks, and copyrights are created by and protected by federal statutes. Trade secrets are created under and protected under state statutes. However, most states have either completely adopted—or adopted the essence of—the Uniform Trade Secret Act within their state statutes.

For purposes of this bankruptcy-related discussion, only the debtor company may be the intellectual property owner (and, particularly, the licensor) or the intellectual property non-owner operator (i.e., the licensee). Therefore, in this discussion, the debtor company is generally referred to as “the owner/operator.”

For purposes of this bankruptcy-related discussion, the above-listed four intellectual property categories may be expanded slightly to include associated or contributory intangible assets.

The patents category includes patent applications, the technology and designs encompassed in the patent, and the engineering drawings and other technical documentation that accompanies the patent or patent application.

The trademarks category includes trademarks (both registered and unregistered), trade names, service marks, service names, trade dress, product labeling that includes trademarks, institutional advertising (including signage), and promotional materials that include trademarks.

The copyrights category includes both registered and unregistered copyrights on publications, manuscripts, white papers, musical compositions, plays, manuals, films, computer source code, blueprints, technical drawings, and other forms of documentation.

For purposes of this discussion, the trade secrets category includes any information or procedures that (1) the owner/operator keeps secret and (2) provides some economic benefit to the owner/operator. Such trade secrets include computer software source code, employee

manuals and procedures, computer system user manuals and procedures, station or employee operating manuals and procedures, chemical formula, food and beverage recipes, product designs, engineering drawings and technical documentation, plant or process schematics, financial statements, employee files and records, customer files and records, vendor files and records, and contracts and agreements.

It is not uncommon for an owner/operator to have two or more related intellectual properties. For example, the same product can have a utility patent and a design patent. The same product can have a patent and a trademark. The same software can hold a copyright and be a trade secret. The same procedure manuals can hold a copyright and be a trade secret. The same drawings and schematics can be included within a patent, have a copyright, and be a trade secret.

Because the owner/operator can own two or more related intellectual properties, analysts may be asked to assign values for the individual intellectual property for bankruptcy, fair value accounting, income tax accounting, property tax accounting, and many other purposes. In disputes related to infringement or breach of contract, it is often possible for two or more intellectual property assets to be damaged by the wrongful action. The analyst may be asked to assign or allocate the damages amount among the affected intellectual property. Of course, the damages analysis should consider each of the affected intellectual properties, but the damages analysis should not double count the amount of damages by assigning the same damages to two or more intellectual properties.

Within multinational corporations, different business units in different taxing jurisdictions can own different intellectual property. For example, a product design could benefit from a utility or design patent in county alpha, the product could be manufactured with a trade secret in county beta, and a trademark could be assigned to the final product in county gamma.

Such a multinational corporation manufacturer may analyze the intercompany transfer price considerations of each intellectual property application.

Reasons to Analyze Intellectual Property

For purposes of this discussion, analysts may be asked to perform intellectual property valuations for the following general reasons:

1. *Financial accounting*: fair value acquisition accounting and intangible asset impairment testing
2. *Income tax accounting*: value of a contribution from an owner to a company or of a distribution from a company to an owner, a charitable contribution, abandonment deduction, taxpayer solvency or insolvency analysis, or the purchase price allocation in a taxable acquisition
3. *Property tax accounting*: for intangible assets that are either subject to property tax or exempt from property tax
4. *Bankruptcy*: post-bankruptcy fresh start accounting, value of debt collateral, reasonably equivalent value of assets transferred into or out of the bankruptcy estate, fairness of the price of a bankruptcy estate asset sale, and debtor solvency or insolvency analysis
5. *Fairness of transaction price*: between any two arm's-length parties, between a parent corporation and a less-than-wholly-owned subsidiary, and between a for-profit entity and a not-for-profit entity

The preceding list presents many (but not all) of the common transactional and notational reasons to estimate an intellectual property value. The purpose of this listing is to demonstrate that there are numerous commercial reasons (most unrelated to a bankruptcy proceeding) to value an owner/operator's intellectual property.

And, related to all of these reasons, there is a profession of analysts who apply generally accepted intellectual property valuation approaches, methods, and procedures. These analysts comply with promulgated professional standards and rely upon a body of knowledge documented in a set of professional literature. Therefore, intellectual property valuation is not the

invention of one or more parties who are trying to gain some sort of an advantage in a bankruptcy proceeding.

Valuation Approaches and Methods

All of the generally accepted intangible asset valuation approaches are applicable to intellectual property. Cost approach methods are particularly applicable to the contributory (or backroom) types of intellectual property. Market approach methods are particularly applicable to intellectual property that is (or could be) licensed. And income approach methods are particularly applicable to intellectual property that produces a measurable amount of operating income for the owner/operator.

The cost approach is often applicable to the valuation of trade secret proprietary information and of copyrights on internal use software. For example, the cost approach may be used to value procedure manuals, training manuals, technical documentation and drawings, internal use training films, confidential books and records, confidential customer or supplier files, or the source code for internal use computer software. For these types of intellectual property assets, it may be difficult for the analyst to assemble comparable uncontrolled transaction (CUT) sale or license data or to identify asset-specific income measures.

The market approach is often applicable to the valuation of patents, trademarks, and certain copyrights. For such intellectual property, it is common for the asset owner/developer to license the use of the intellectual property to a third-party asset operator. The various forms of royalty payments from the licensee to the licensor (for example, royalty as a percent of revenue, as a percent of income, or on a per unit basis) may be used to estimate the intellectual property value.

The income approach is often applicable to the valuation of patented or unpatented (trade secret) processes or technologies. The income approach is also applicable to the valuation of certain trademarks and copyrights. For example, it may be applicable if the patented product or process (or the trade secret product formulation in process) allows the owner to generate increased revenue or experience decreased costs. This income measure may occur when the owner/operator experiences increased unit sales or increased unit selling prices due to the proprietary feature. Alternatively, it may occur if the owner/operator experiences decreased operating expenses or decreased other expenses due to a property process. The income approach is often used in the valuation of copyrights related to books, plays, musical compositions, or films and film libraries. This is because the analyst can often identify a measurable stream of income associated with the commercialization of the copyrighted work.

BANKRUPTCY-RELATED INTELLECTUAL PROPERTY VALUATIONS

The following discussion summarizes 10 common reasons why analysts are asked to value intellectual property within a bankruptcy context. The section citations refer to the United States Bankruptcy Code. The rule citations refer to the United States Bankruptcy Rules.

Reason 1: Preference Claims and Debtor Solvency (Section 547)

Creditors often retain an analyst to assess the debtor's solvency prior to the date of the bankruptcy filing. The creditors may want to claim that (1) the debtor was in fact solvent prior to the bankruptcy filing and (2) therefore, their receipt of either property or cash from the debtor was not an avoidable preference payment.

In a Chapter 11 bankruptcy matter, the appointed trustee may seek to avoid (i.e., reverse) any transfers of cash or property out of the bankruptcy estate. That avoidance brings more property and more cash back into the bankruptcy estate—to allow the trustee to settle more of the debtor’s liabilities. Section 547 allows the trustee to avoid certain so-called preference payments under certain circumstances. The relevant subsections of Section 547 follow:

- (b) Except as provided in subsections (c) and (i) of this section, the trustee may avoid any transfer of an interest of the debtor in property
 1. to or for the benefit of a creditor;
 2. for or on account of an antecedent debt owed by the debtor before such transfer was made;
 3. made while the debtor was insolvent; . . .
- (f) For purposes of this section, the debtor is presumed to have been insolvent on and during the 90 days immediately preceding the date of the filing of the petition.

Of course, the creditor recipients of the debtor’s property or cash may not be so willing to return the transaction proceeds to the bankruptcy estate. Hence, the creditors often retain an analyst to assess the debtor’s solvency prior to the date of the bankruptcy filing.

Reason 2: Fraudulent Transfers and Debtor Solvency (Section 548)

Often, the trustee retains an analyst to opine that the debtor corporation was insolvent on the pre-bankruptcy transfer dates. Alternatively, the affected creditors often retain an analyst to opine that the debtor corporation was solvent on the pre-bankruptcy transfer dates.

In the Chapter 11 bankruptcy filing, the trustee can avoid (or reverse) either transfers made by the debtor corporation or liabilities assumed by the debtor corporation under certain circumstances. An important factor in determining if the debtor’s transfer was fraudulent (and,

therefore, if the transfer may be avoided) is whether the debtor corporation was insolvent at the date of the transfer.

The relevant subsections of Section 548 related to fraudulent transfers and debtor solvency are presented below:

(a)(1) The trustee may avoid any transfer (including any transfer to or for the benefit of an insider under an employment contract) of an interest of the debtor in property, or any obligation (including any obligation to or for the benefit of an insider under an employment contract) incurred by the debtor, that was made or incurred on or within 2 years before the date of the filing of the petition, if the debtor voluntarily or involuntarily . . .

(A) made such transfer or incurred such obligation with actual intent to hinder, delay, or defraud any entity to which the debtor was or became, on or after the date that such transfer was made or such obligation was incurred, indebted; or

(b)(i) received less than a reasonably equivalent value in exchange for such transfer or obligation; and

(ii)(I) was insolvent on the date that such transfer was made or such obligation was incurred, or became insolvent as a result of such transfer or obligation;

(II) was engaged in business or a transaction, or was about to engage in business or a transaction, for which any property remaining with the debtor was an unreasonably small capital;

(III) intended to incur, or believed that the debtor would incur, debts that would be beyond the debtor's ability to pay as such debts matured; or

(IV) made such transfer to or for the benefit of an insider, or incurred such obligation to or for the benefit of an insider, under an employment contract and not in the ordinary course of business.

With regard to the above-described conditions related to a fraudulent transfer, Section 548 lists three separate fraudulent transfer tests that are performed as of the transfer date. These three fraudulent transfer tests are typically performed by the analyst. These three fraudulent transfer tests determine:

1. whether the debtor corporation was insolvent—i.e., whether the debtor company liabilities exceeded the debtor company liabilities at fair valuation,
2. whether the debtor corporation was expected to be able to pay its debts (including principal and interest payments) as such debts matured, and

3. whether the debtor corporation had an unreasonably small amount of capital to continue to be able to operate as a going concern.

The trustee may claim that a fraudulent transfer had occurred if the analyst concludes that the debtor corporation fails any of these three tests as of the transfer date. And, each of these tests is based on a financial analysis that is typically conducted by the analyst.

SECTION 101 – DEFINITION OF “INSOLVENT”

The previously mentioned claims of preference payments and fraudulent transfers are made, in part, based on the allegation that the debtor corporation was insolvent as of a particular point in time (i.e., a point in time related to a specific pre-bankruptcy transaction). As presented in the subsection below, Section 101 of the Bankruptcy Code provides the relevant definition for the term “insolvent”:

- (32) The term "insolvent" means—
- (A) with reference to an entity other than a partnership and a municipality, financial condition such that the sum of such entity's debts is greater than all of such entity's property, at a fair valuation, exclusive of—
 - (i) property transferred, concealed, or removed with intent to hinder, delay, or defraud such entity's creditors; and
 - (ii) property that may be exempted from property of the estate under section 522 of this title;
 - (B) with reference to a partnership, financial condition such that the sum of such partnership's debts is greater than the aggregate of, at a fair valuation—
 - (i) all of such partnership's property, exclusive of property of the kind specified in subparagraph (A)(i) of this paragraph; and
 - (ii) the sum of the excess of the value of each general partner's nonpartnership property, exclusive of property of the kind specified in subparagraph (A) of this paragraph, over such partner's nonpartnership debts; and
 - (C) with reference to a municipality, financial condition such that the municipality is—
 - (i) generally not paying its debts as they become due unless such debts are the subject of a bona fide dispute; or
 - (ii) unable to pay its debts as they become due.

The principal provision of this insolvency definition can be summarized as: are the debtor company's debts greater than the value of the debtor company's assets (including intellectual property), at fair valuation? The answer to that question is based on a valuation analysis. If the answer is yes (i.e., liabilities exceed the fair value of assets), then the debtor company is

insolvent. If the answer is no (i.e., the fair value of assets—including intellectual property—exceeds liabilities), then the debtor company is solvent.

REASON 3: ASSET SALES AND ADEQUATE PROTECTION (SECTION 363)

The trustee will often retain an analyst to opine that the price of the proposed Section 363 asset sale is fair, thereby providing adequate protection to the creditors. If the proposed asset sale transaction is controversial, then the creditors may also retain an analyst to opine that the price of the proposed asset sale is not fair (i.e., does not provide adequate protection to the creditors)—and that the court should not approve the proposed asset sale.

During a prolonged bankruptcy proceeding, it is common for a DIP to sell off some of the debtor corporation assets included in the bankruptcy estate. Such DIP assets subject to sale may be a subsidiary, division, or other business unit of the debtor corporation. In particular, the DIP may be able to sell off some underperforming business assets. And, the DIP may be able to sell off any nonoperating assets that are not part of the debtor company’s core business. Such asset sales (often referred to as “363 asset sales”) are typically intended to both (1) eliminate or reduce any DIP operating losses and (2) generate cash that would become available to pay off some of the debtor company’s liabilities.

However, in a bankruptcy proceeding, the trustee has to make sure that such 363 asset sales are fair to the stakeholders of the bankruptcy estate, such stakeholders are primarily the debt holders. The following subsection of Section 363 relates to asset sales from the bankruptcy estate.

(b)(1) The trustee, after notice and a hearing, may use, sell, or lease, other than in the ordinary course of business, property of the estate

(c)(1) If the business of the debtor is authorized to be operated under section 721, 1108, 1203, 1204, or 1304 of this title and unless the court orders otherwise, the trustee may enter into transactions, including the sale or lease of property of the estate, in the ordinary course of business, without notice or a hearing, and may

use property of the estate in the ordinary course of business without notice or a hearing.

(p) In any hearing under this section—

- (1) the trustee has the burden of proof on the issue of adequate protection; and
- (2) the entity asserting an interest in property has the burden of proof on the issue of the validity, priority, or extent of such interest.

REASON 4: DECREASE IN THE VALUE OF A CREDITOR'S INTEREST (SECTION 361)

After a 363 asset sale, or in other circumstances in which the secured creditor's interest in the debtor's property has been reduced, the secured creditor will often retain an analyst to assess (1) the amount by which the secured creditor's interest was reduced and (2) the value of the additional interest that the creditor should receive in order to obtain the "indubitable equivalent" of the value of the lost security.

The Bankruptcy Code provides protection for a creditor's interest in the debtor's property. Sometimes events occur during the bankruptcy proceeding that reduce the creditor's interest in the debtor's property (such as a 363 asset sale of that collateral property). In such an instance, Section 361 basically provides that the creditor should be made whole. The creditor could be made whole by receiving (1) cash from the trustee or (2) an additional lien on other debtor corporation property. The relevant subsections of Section 361 are presented below:

When adequate protection is required under section 362, 363, or 364 of this title of an interest of an entity in property, such adequate protection may be provided by—

- (1) requiring the trustee to make a cash payment or periodic cash payments to such entity, to the extent that the stay under section 362 of this title, use, sale, or lease under section 363 of this title, or any grant of a lien under section 364 of this title results in a decrease in the value of such entity's interest in such property;
- (2) providing to such entity an additional or replacement lien to the extent that such stay, use, sale, lease, or grant results in a decrease in the value of such entity's interest in such property; or
- (3) granting such other relief, other than entitling such entity to compensation allowable under section 503 (b)(1) of this title as an administrative expense, as

will result in the realization by such entity of the indubitable equivalent of such entity's interest in such property.

In these instances, the important questions often include: (1) by how much was the value of the creditor's interest (in the debtor's collateral property) reduced? and (2) what is the value of the additional interest that the creditor should receive in order to obtain the "indubitable equivalent" of the value of the lost security? These questions are important to the secured creditors, and these questions are typically answered by a valuation analysis.

REASON 5: BANKRUPTCY RULES REGARDING A SECURED CREDITOR'S INTEREST (RULES 3012 & 3018)

The recurring question of the value of the creditor's security interest in the debtor's property is typically answered by a valuation analysis.

In a Chapter 11 bankruptcy proceeding, the value of a secured creditor's security interest is important for a number of reasons. For example, the value of the creditor's security affects the creditor's influence with regard to the approval (or disapproval) of the proposed plan of reorganization. When there is a question about the value of a creditor's security interest, the court may hold a valuation hearing and hear testimony from analysts.

The following are sections of two relevant Bankruptcy Rules regarding the value of a secured creditor's interest:

Rule 3012 Valuation of Security

The court may determine the value of a claim secured by a lien on property in which the estate has an interest on motion of any party in interest and after a hearing on notice to the holder of the secured claim and any other entity as the court may direct.

Rule 3018 Acceptance or Rejection of Plan in a Chapter 9 Municipality or a Chapter 11 Reorganization Case

(a) Entities Entitled To Accept or Reject Plan; Time for Acceptance or Rejection.

A plan may be accepted or rejected in accordance with §1126 of the Code within the time fixed by the court pursuant to Rule 3017.

(d) Acceptance or Rejection by Partially Secured Creditor. A creditor whose claim has been allowed in part as a secured claim and in part as an unsecured claim shall be entitled to accept or reject a plan in both capacities.

A creditor typically wants to prove that it is a secured (versus an unsecured) creditor. And, a creditor particularly wants to prove that it is a fully secured (and not a partially secured) creditor. The determination of the value of the creditor's security interest in the debtor collateral property is often the result of a valuation analysis.

SECTION 560: DETERMINATION OF A SECURED CREDITOR'S STATUS (SECTION 1129)

Creditors, of course, are interested in determining whether their security interest in the debtor property is greater (or lesser) than the debtor's liability to them. This relationship (between (1) the value of the creditor's security and (2) the amount of the debtor's liability) affects the secured creditor's status throughout the bankruptcy proceeding.

The relevant subsections of Bankruptcy Code Section 560 related to a secured creditor's status are presented below:

(a) (1) An allowed claim of a creditor secured by a lien on property in which the estate has an interest, or that is subject to setoff under section 553 of this title, is a secured claim to the extent of the value of such creditor's interest in the estate's interest in such property, or to the extent of the amount subject to setoff, as the case may be, and is an unsecured claim to the extent that the value of such creditor's interest or the amount so subject to set off is less than the amount of such allowed claim. Such value shall be determined in light of the purpose of the valuation and of the proposed disposition or use of such property, and in conjunction with any hearing on such disposition or use or on a plan affecting such creditor's interest.

(b) To the extent that an allowed secured claim is secured by property the value of which, after any recovery under subsection (c) of this section, is greater than the amount of such claim, there shall be allowed to the holder of such claim, interest on such claim, and any reasonable fees, costs, or charges provided for under the agreement or State statute under which such claim arose.

As mentioned above, to the extent that the value of the creditor's security interest exceeds the amount of the debtor's liability, then the secured creditor can claim interest on that difference

during the bankruptcy proceeding. The recurring question of the value of the creditor's security interest in the debtor's property is typically answered by a valuation analysis.

REASON 6: REORGANIZATION PLAN CONFIRMATION (SECTION 1129)

An analyst may be asked to review the proposed reorganization plan. The analyst is asked to assess (and opine on) whether the proposed reorganization plan is "reasonable." Also, the analyst is asked to opine as to whether the proposed reorganization plan is "fair and equitable" to the various classes of creditors and to other stakeholders in the bankruptcy estate.

Analysts (and other financial advisors) are often called on to analyze and opine on the proposed plan of reorganization in a bankruptcy. The analyst can perform this reorganization plan analysis on behalf of the DIP or on behalf of any group of secured or unsecured creditors.

The relevant subsections of Section 1129 are presented below:

(a) The court shall confirm a plan only if all of the following requirements are met:

(7) With respect to each impaired class of claims or interests—

(A) each holder of a claim or interest of such class—

(i) has accepted the plan; or

(ii) will receive or retain under the plan on account of such claim or interest property of a value, as of the effective date of the plan, that is not less than the amount that such holder would so receive or retain if the debtor were liquidated under chapter 7 of this title on such date; . . .

(11) Confirmation of the plan is not likely to be followed by the liquidation, or the need for further financial reorganization, of the debtor or any successor to the debtor under the plan, unless such liquidation or reorganization is proposed in the plan. . .

(16) All transfers of property of the plan shall be made in accordance with any applicable provisions of nonbankruptcy law that govern the transfer of property by a corporation or trust that is not a moneyed, business, or commercial corporation or trust.

(b)(1) Notwithstanding section 510(a) of this title, if all of the applicable requirements of subsection (a) of this section other than paragraph (8) are met with respect to a plan, the court, on request of the proponent of the plan, shall confirm the plan notwithstanding the requirements of such paragraph if the plan does not discriminate unfairly, and is fair and equitable, with respect to each class of claims or interests that is impaired under, and has not accepted, the plan.

(2) For the purpose of this subsection, the condition that a plan be fair and equitable with respect to a class includes the following requirements:

(A) With respect to a class of secured claims, the plan provides—

(i)(I) that the holders of such claims retain the liens securing such claims, whether the property subject to such liens is retained by the debtor or transferred to another entity, to the extent of the allowed amount of such claims; and

(II) that each holder of a claim of such class receive on account of such claim deferred cash payments totaling at least the allowed amount of such claim, of a value, as of the effective date of the plan, of at least the value of such holder's interest in the estate's interest in such property;

REASON 7: CRAM DOWN OF THE REORGANIZATION PLAN (SECTION 1129)

When the court seeks to confirm a proposed reorganization plan over the objection of creditors (a “cram down”), analysts may be asked to testify regarding their analysis of the reorganization plan and whether the reorganization plan is fair and equitable.

Ideally, all parties to the bankruptcy will accept the proposed reorganization plan. However, this general acceptance by all parties does not always happen. Often, one or more of the creditor groups is not satisfied with the reorganization plan. However, the court can still confirm the reorganization plan over the creditors’ objections. Even if the reorganization plan impairs the interests of one or more of the creditor groups, the court may confirm the proposed plan if the plan is “fair and equitable” with regard to all groups of creditors that are impaired. Analysts often testify in such bankruptcy hearings regarding their analyses of the reorganization plan and, particularly, regarding their opinions of whether the proposed plan is “fair and equitable” to all impaired creditor groups.

This judicial confirmation of such a reorganization plan is called a “cram down,” and such a cram down is allowed in Section 1129. The following discussion summarizes the provision of Section 1129:

Another requirement for reorganization plan confirmation is that, with respect to each class of claims, (1) such class has accepted the plan, or (2) such class is not impaired under the plan. If all the requirements for plan confirmation are met except for this one, the plan can still be confirmed *if* the plan does not discriminate unfairly, and is *fair and equitable* with respect to each class of claims or interests that is impaired under, and has not accepted the plan. This is known as a *cram down*.

REASON 8: SECURED CREDITOR RELIEF FROM THE AUTOMATIC STAY (SECTION 362)

The analyst may be asked to testify when a secured creditor seeks relief under Section 362 from the automatic stay against collection efforts.

After a bankruptcy filing, there is an automatic stay with regard to the creditors' ability to collect the debtor's prepetition debts. This automatic stay can be lifted by the court in certain instances. Section 362 allows for a secured creditor to receive relief from this automatic stay of collection efforts if two certain conditions are met. First, related to the secured property, the debtor corporation must have no equity in the property (i.e., the amount of the specific liability exceeds the value of the specific collateral asset). Second, the secured property must not be a necessary part of the debtor company's core business.

The analyst may be called on to provide expert testimony related to both of these questions with regard to a Section 362 motion. Here are the relevant subsections of Section 362:

On request of a party in interest and after notice and a hearing, the court shall grant relief from the [automatic] stay . . ., such as by terminating, annulling, modifying, or conditioning such stay—

(1) for cause, including the lack of adequate protection of an interest in property of such party in interest;

(2) with respect to a stay of an act against property . . ., if—

(A) the debtor does not have an equity in such property; and

(B) such property is not necessary to an effective reorganization. . .

REASON 9: COLLATERAL VALUATION FOR DIP FINANCING

An analyst may be asked to value the debtor company's proposed collateral property for DIP financing purposes. Frequently, that proposed collateral property is intellectual property.

A debtor company's ability to borrow is limited during a Chapter 11 proceeding. Without the court's authorization, the debtor company can only incur ordinary course of business trade debt, that will be allowed as an administrative expense in the bankruptcy case.

However, the court can authorize the debtor's obtaining of credit secured by a senior or equal lien on encumbered property of the bankruptcy estate. The court can authorize such debt only if (1) the debtor company is unable to obtain credit otherwise and (2) there is adequate protection of the interest of the holder of the lien on the property on which such senior or equal lien is proposed to be granted. This type of new debt is usually referred to as DIP financing.

So, in order to obtain DIP financing, the debtor company has to prove that the collateral property's value is greater than the amount of the new DIP liability. An analyst may be asked to value the proposed collateral property and to opine that the property's value is greater than the amount of the proposed financing.

The financially distressed DIP usually doesn't have a lot of property left to pledge for DIP financing collateral. Often the debtor company has already pledged all of its receivables, inventory, real estate, tangible personal property and equity in subsidiaries and joint ventures. However, the debtor company may not have previously pledged its intellectual property as secured debt collateral. Therefore, the DIP financing may involve the pledge of the debtor company's intellectual property assets as the DIP financing collateral.

Hence, the analyst may be asked to value the debtor company's intellectual property for DIP financing collateral purposes.

SECTION 101 – DEFINITION OF “INTELLECTUAL PROPERTY”

Bankruptcy Code Section 101, subsection 35A, provides the following definition of intellectual property:

- (35A) The term "intellectual property" means—
- (A) trade secret;
 - (B) invention, process, design, or plant protected under title 35;
 - (C) patent application;
 - (D) plant variety;
 - (E) work of authorship protected under title 17; or
 - (F) mask work protected under chapter 9 of title 17;
- to the extent protected by applicable nonbankruptcy law.
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REASON 10: THE ZONE OF INSOLVENCY AND THE DEBTOR CORPORATION DIRECTOR DUTIES

Before a bankruptcy filing, analysts are often asked to assess the financial condition of a financially distressed company. Before approving any major dividend, financing, capital expenditure, or other corporate decision, the corporation directors may want the analyst to opine as to whether the debtor corporation is operating near (or in) the zone of insolvency.

The directors of a debtor corporation typically owe a duty of loyalty, care, and good faith to the corporation and to its shareholders. But when a debtor corporation approaches the zone of insolvency, under the laws of most states, the directors owe those duties to creditors, too. In such a case, creditors (and not just shareholders) have standing to assert breach of fiduciary duty claims on the company’s behalf.

BANKRUPTCY REASONS TO VALUE INTELLECTUAL PROPERTY SUMMARY

Intellectual property valuation issues frequently arise in commercial bankruptcy proceedings. Therefore, analysts are often called on to assist the many parties to the commercial bankruptcy, including: the debtor in possession and/or the trustee, the management or directors of the pre-filing debtor corporation, the secured creditors committee, the unsecured creditors committee,

and other parties in interest to the proceeding (e.g., contract counterparties, unions, joint ventures, etc.).

This section summarized many (but not all) of the reasons why intellectual property valuations may be performed within a bankruptcy context. And, this section summarized many (but not all) of the issues that analysts commonly encounter when preparing bankruptcy valuations.

INTELLECTUAL PROPERTY VALUATION APPROACHES AND METHODS

This section describes and illustrates the three generally accepted intellectual property valuation approaches, specifically, the cost approach, the market approach, and the income approach. In addition, this section summarizes the intellectual property valuation synthesis and conclusion process.

Intellectual Property Valuation Approaches

Within a bankruptcy valuation, analysts typically attempt to use all three valuation approaches to value the owner/operator intellectual property. When that is possible, the analyst can develop mutually supportive evidence and a multi-faceted perspective regarding the intellectual property value. However, due to data constraints, it is common for an analyst to rely on only one or two valuation approaches in the intellectual property valuation process.

The following section summarizes the cost approach, market approach, and income approach valuation methods. And, this section summarizes the analyst's process of reconciling multiple value indications into a final intellectual property value conclusion.

Cost Approach Valuation Methods

There are several intellectual property valuation methods within the cost approach. Each valuation method uses a specific definition of cost. Two common cost definitions are:

1. reproduction cost new and
2. replacement cost new.

Reproduction cost new is the total cost, at current prices, to develop an exact duplicate of the subject intellectual property. Replacement cost new 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 originally designed. Utility is an economics concept that means the ability of the intellectual property to provide an equivalent amount of satisfaction.

There are also other cost definitions that may be applicable to a cost approach valuation. Some analysts consider cost avoidance as a cost approach measure. This cost measure quantifies either historical or prospective costs that are avoided because the owner/operator owns the intellectual property.

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

The cost measurement (whether replacement cost new, reproduction cost new, or some other cost measure) typically includes four 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), and (4) an opportunity cost/entrepreneurial incentive (to motivate the development process).

Typically, the intellectual property development material, labor, and overhead costs are easy to identify and quantify. The developer's profit can be estimated using several procedures. It is often estimated as a percentage rate of return on the total investment in the material, labor, and overhead costs. The entrepreneurial incentive is often measured as the lost profits during the replacement intellectual property development period. For example, let's assume it will take 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 income or license income) immediately. If the buyer "builds" its own hypothetical replacement patent, then the buyer will not earn any income (operating income or license income) 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 actual seasoned patent.

All four cost components—i.e., direct costs, indirect costs, developer's profit, and opportunity cost—should be considered in the intellectual property cost approach valuation. So, while the cost approach is different from the income approach, there are economic analyses included in the cost approach. These 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 intellectual property cost new (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 intellectual property less than the ideal replacement for itself.

Economic obsolescence is a reduction in value due to the effects, events, or conditions that are external to—and not controlled by—the intellectual property current use or condition. The impact of economic obsolescence is typically beyond the control of the owner/operator.

In any cost approach analysis, the analyst will estimate the amounts (if any) of intellectual property physical deterioration, functional obsolescence, and economic obsolescence. In this estimation, the analyst will consider the intellectual property actual age—and its expected remaining useful life (RUL).

A common cost approach formula for quantifying intellectual property replacement cost new is: $\text{reproduction cost new} - \text{curable functional obsolescence} = \text{replacement cost new}$. To estimate the intellectual property value, the following cost approach formula is commonly used: $\text{replacement cost new} - \text{physical deterioration} - \text{economic obsolescence} - \text{incurable functional obsolescence} = \text{intellectual property value}$.

Cost Approach Illustrative Example

Exhibits 1 and 2 present a simplified illustrative example of a cost approach intellectual property valuation. In this example, the analyst is asked to estimate the fair market value of the copyrights and trade secrets related to the hypothetical Kappa Company computer software. All of the Kappa Company computer software is subject to copyright protection. And, the software source code and the systems documentation and user manuals are treated as company trade secrets. The analyst is instructed that the appropriate valuation date is January 1, 2015.

The analyst decided to use the cost approach and the replacement cost new less depreciation method. Exhibit 1 includes the analysis of all four cost components of the cost approach. Exhibit 1 also illustrates the analyst's functional obsolescence considerations. Exhibit 2 presents the detailed calculation of one cost component of the cost approach: the developer's profit analysis.

Exhibit 1
Kappa Company
Computer Software Copyrights and Trade Secrets
Cost Approach—Replacement Cost New Less Depreciation (RCNLD) Method
Valuation Summary
As of January 1, 2015

Software System	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	<u>85</u>	<u>9</u>	<u>1,200</u>
Total Direct and Indirect Costs	11,856	24	172,900
Plus Developer's Profit [d]			10,500
Plus Entrepreneurial Incentive [e]			<u>31,200</u>
Total Replacement Cost New			214,600
Less Depreciation and Obsolescence [f]			<u>13,300.0</u>
Replacement Cost New Less Depreciation			201,300
Indicated Fair Market Value of the Kappa Copyrights and Trade Secrets (rounded)			<u>200,000</u>

Footnotes:

[a] The estimated development effort for each software category is equal to the average of the replacement development effort indication using (1) the COCOMO software cost engineering model and (2) the KnowledgePLAN software cost engineering model, rounded.

[b] The estimated time to develop replacement software in calendar months for each software category is equal to the average of the time to develop the replacement software in calendar months using (1) the COCOMO software engineering model and (2) the KnowledgePLAN software engineering model, rounded. The final figure in this column represents a weighted average time to develop the replacement software in calendar months (weighted by effort in person months), which is used to calculate the entrepreneurial incentive.

[c] Equal to the estimated development effort in person months multiplied by the \$14,585 cost per person month, rounded. The \$14,585 cost per person month was calculated by multiplying the blended hourly rate of \$82.87 provided by the Kappa 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 computer software developer's profit margin of 11 percent times 55 percent. This adjustment is made because 45 percent of software development workforce represents outside contractors, the cost of which already includes a market-based developer's profit.

[e] Calculated as (1) the Kappa Company present value discount rate of 17 percent times (2) the sum of the total direct and indirect replacement cost new and the developer's profit, divided by 2 times (3) the weighted average total development time of 2 years (based on the weighted average time to develop in person months of 24 months as described in footnote [b]).

[f] According to Kappa 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 functional obsolescence as follows:

System Scheduled for Replacement	Replacement Cost New*	Percent Obsolete	Obsolescence Allowance
Point of Sale	\$10,400,000	20%	\$2,100,000
Pioneer	\$32,700,000	20%	\$6,500,000
Voyager	\$5,800,000	80%	<u>\$4,700,000</u>
Total			<u>\$13,300,000</u>

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

Exhibit 2
Kappa Company
Computer Software Copyrights and Trade Secrets
Cost Approach—Replacement Cost New Less Depreciation (RCNLD) Method
Estimate of Computer Software Developer's Profit

<u>Profit Margin Comparison</u>		<u>Operating Profit Margins</u>			
		4/1/13- 3/31/14	4/1/12- 3/31/13	4/1/11- 3/31/12	
<u>Selected Industry Sectors</u>					
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 Systems Design Services - All Companies	[b]	4.3%	3.1%	2.1%	
SIC Code 7373 - Computer Systems Design Services - Sales of \$25 Million and Over	[b]	4.7%	4.3%	1.1%	
		<u>Adjusted Operating Profit Margins</u>			
<u>Selected Guideline Public Companies</u>	<u>Ticker</u>	for 2014/2013	for 2013/2012	for 2012/2011	Three-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%
<u>Selected Guideline Public Companies</u>					
High Profit Margins		29.0%	32.7%	33.2%	
Low Profit Margins		-0.5%	0.5%	0.8%	
Median Profit Margins		8.7%	6.7%	9.5%	
Average Profit Margins		10.8%	11.5%	12.2%	
Selected Computer Software Developer's Profit		11%			

Footnotes:

[a] The Risk Management Association (RMA) 2014-2013, 2013-2012, and 2012-2011 *Annual Statement Studies* - Custom Computer Programming Services.

[b] The Risk Management Association (RMA) 2014-2013, 2013-2012, and 2012-2011 *Annual Statement Studies* - Computer Systems Design Services.

[c] Capital IQ Database.

Based on the cost approach analysis summarized in Exhibit 1, the analyst concludes that the fair market value of the hypothetical Kappa Company computer software copyrights and trade secrets, as of January 1, 2015, is \$200 million.

Market Approach Valuation Methods

Analysts typically attempt to apply market approach methods first in the intellectual property valuation. This is because the market—that is, the economic environment where arm’s-length transactions between unrelated arm’s-length parties occur—is often considered to provide the best indicator of value. However, the market approach will only provide meaningful valuation evidence when the owner/operator intellectual property is sufficiently similar to the intellectual property that are transacting (by sale or license) in the marketplace. In that case, the guideline intellectual property transaction (sale or license) prices may indicate the expected price for the owner/operator intellectual property.

There are two principal market approach intellectual property valuation methods: (1) the comparable uncontrolled transaction (CUT) method and (2) the comparable profit margin (CPM) method. In the CUT method, the analyst searches for arm’s-length sales or licenses of benchmark intellectual property. In the CPM method, the analyst searches for companies that provide benchmarks to the owner/operator company.

In the CUT method, the analyst will more likely rely on CUT license transactions than on sale 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 will follow a systematic process in the CUT method valuation.

First, the analyst will research the appropriate exchange markets to obtain information about sale or license transactions, involving 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 owner/operator intellectual property. Some of the comparison attributes include the intellectual property type, intellectual property use, industry in which the intellectual property operates, date of sale or license, etc.

Second, the analyst will verify the transactional information by confirming (1) that the transactional data are factually accurate and (2) that the sale or license exchange transactions reflect arm's-length market considerations. If the guideline sale or license transaction was not conducted 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 for the sale or license of the intellectual property.

Third, the analyst will select 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 will develop a comparative analysis for each selected unit of comparison.

Fourth, the analyst will compare the selected guideline or comparable intellectual property sale or license transactions with the subject intellectual property, using the selected elements of comparison. Then, the analyst will adjust the sale or license price of each guideline transaction for any differences between the guideline intellectual property and the owner/operator 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 will select pricing metrics for the subject intellectual property from the range of pricing metrics indicated from the guideline or comparable transactions. The analyst may select pricing multiples in the low end, midpoint, or high end of the range of pricing metrics indicated by the transactional sale or license data. The analyst will select the subject-specific pricing metrics based on the analyst's comparison of the owner/operator intellectual property to the guideline intellectual property.

Sixth, the analyst will apply the selected subject-specific pricing metrics to the subject intellectual property financial or operational fundamentals (e.g., revenue, income, number of drawings, number of lines of code, etc.). This procedure will typically result in several market-derived value indications for the owner/operator intellectual property.

Seventh, the analyst will reconcile the various value indications provided by the analysis of the guideline sale and/or license transactions into a single market approach value indication. In this final reconciliation procedure, the analyst will summarize and review (1) the transactional data and (2) the quantitative analyses (i.e., the various pricing metrics) that resulted in each value indication. Finally, the analyst will resolve these value indications into a single value indication.

Table 1 describes several of the databases that the analyst may search in order to select intellectual property sale or license CUTs. Table 2 describes several of the print sources that the analyst may search in order to select intellectual property sale or license CUTs. Of course, the analyst may confer with the owner/operator management to explore whether the owner/operator has entered into any intellectual property license agreements (either inbound or outbound). These owner/operator license agreements could relate to either the subject intellectual property or to comparable intellectual property.

Table 1
Market Approach
Comparable Uncontrolled Transaction (CUT) Method
Common Intellectual Property License Transaction Databases

RoyaltySource

www.royaltysource.com—AUS Consultants produces a database that provides intellectual property license transaction royalty rates. 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 e-mail.

RoyaltyStat, LLC

www.royaltystat.com—RoyaltyStat is a subscription-based database of intellectual property license royalty rates and license agreements, 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.

Royalty Connection

www.royaltyconnection.com—Royalty Connection™ provides online access to intellectual property license royalty rate and other license information on all types of technology, patents, trade secrets, and know-how. The data are aggregated from information on all types of technology, patents, trade secrets, and know-how. The data are aggregated from arm's-length sale/license transactions, litigation settlements, and court-awarded royalty order from 1990 to the present. The intellectual property license database is frequently updated. Users can search by industry, product category, or keyword. The information provided includes the consideration paid for the intellectual property license and any restrictions (such as geographic or exclusivity).

ktMINE

www.bvmarketdata.com—ktMINE is an interactive intellectual property 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.

Table 2
Market Approach
Comparable Uncontrolled Transaction (CUT) Method
Common Intellectual Property License Transaction Print Sources

AUS Consultants publishes a monthly newsletter, *Licensing Economics Review*, which contains license royalty rates on selected recent intellectual property transactions. The December issue each year also contains an annual summary of intellectual property license royalty rates by industry.

Gregory J. Battersby and Charles W. Grimes annually author a book called *License Royalty Rates*, which is published 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.

Intellectual Property Research Associates produces three books that contain information on license royalty rates for patents, trademarks, and copyrights. The books are *Royalty Rates for Trademarks & Copyrights*, *Royalty Rates for Technology*, and *Royalty Rates for Pharmaceuticals & Biotechnology*.

The CPM method is also based on a comparative analysis. However, in this valuation method, the analyst is not relying on the sales and licenses of comparable or guideline intellectual property. Rather, the analyst is searching for comparable or guideline companies. The objective of the CPM method is to identify guideline companies that are comparative to the owner/operator company in all ways except one. The owner/operator company, of course, owns the subject intellectual property. Ideally, the selected guideline companies should provide a meaningful benchmark to the owner/operator—except that they do not own comparable intellectual property.

Ideally, the CPM method guideline companies operate in the same industry as the owner/operator 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 owner/operator has an established trademark and the guideline companies have generic trademarks. Or, the owner/operator owns the subject patent and the guideline companies produce unpatented (and presumably inferior) products.

Because of the economic benefit that the intellectual property provides, the owner/operator should earn a higher profit margin than the selected guideline companies. This profit margin comparison is usually made at the earnings before interest and taxes (or EBIT) level of income. This EBIT margin typically reflects the pretax operating income of the comparative companies—a measure of income that the intellectual property can influence. The incremental (or superior) profit margin earned by the owner/operator can then be converted into an intellectual property implied royalty rate. Typically, all of the excess profit margin is assigned to the intellectual property (if the intellectual property is the only reason for the owner/operator's superior profit margin).

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

Table 3 presents a nonexhaustive list of publicly traded company data sources that the analyst may use to (1) select guideline companies for the CPM method analysis and (2) obtain guideline company profit margin information to use in the CPM method analysis.

Table 3
Market Approach
Comparable Profit Margin (CPM) Method
Common 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

Accordingly, there are several market approach intellectual property valuation methods. However, each method is based on comparative analyses of either comparable intellectual property sales, comparable intellectual property license royalty rates, or comparable companies (that own generic intellectual property).

Market Approach Illustrative Example

Finally, Exhibit 3 presents an illustrative example of a market approach intellectual property valuation. In this example, the analyst is asked to estimate the fair market value of the hypothetical Tau Company (a telecommunications company) trademarks and trade names. The analyst is instructed that the appropriate valuation date is as of January 1, 2015.

Exhibit 3
 Tau Company
 Trademarks and Trade Names
 Market Approach—Relief from Royalty Method
 Valuation Summary
 As of January 1, 2015

<u>Present Value of Discrete Trademark Income:</u>	Projected Calendar Years				
	2015	2016	2017	2018	2019
	\$000	\$000	\$000	\$000	\$000
Management-provided Revenue Projection [a]	8,634,139	8,358,945	8,042,393	7,720,369	7,377,326
Arm's-length Trademark License Royalty Rate [b]	2%	2%	2%	2%	2%
Projected Pretax Trademark Income	172,683	167,179	160,848	154,407	147,547
Less Projected Income Tax Rate [c]	<u>37%</u>	<u>37%</u>	<u>37%</u>	<u>37%</u>	<u>37%</u>
Projected After-tax Trademark Income	108,790	105,323	101,334	97,277	92,954
Discounting Periods [d]	0.5000	1.5000	2.5000	3.5000	4.5000
Present Value Factor @ 11% [e]	<u>0.9492</u>	<u>0.8551</u>	<u>0.7704</u>	<u>0.6940</u>	<u>0.6252</u>
Present Value of Trademark Income	<u>103,264</u>	<u>90,061</u>	<u>78,068</u>	<u>67,510</u>	<u>58,115</u>
Sum of Present Values of Trademark Income	<u>397,018</u>				
<u>Present Value of Terminal Period Trademark Income:</u>					
Fiscal 2020 Normalized Trademark Income [f]	\$ 92,954				
Direct Capitalization Multiple [g]	<u>7.579</u>				
Terminal Value of Trademark Income	704,498				
Present Value Factor @ 11%	<u>0.6252</u>				
Present Value of Terminal Value	<u>\$ 440,452</u>				
<u>Trademark Valuation Summary:</u>					
Present Value of Discrete Trademark Income	\$ 397,018				
Present Value of Trademark Terminal Value	<u>440,452</u>				
Indicated Fair Market Value of the Tau Trademarks (rounded)	<u>\$ 840,000</u>				

Footnotes:

[a] Revenue projection provided by Tau management, consistent with the company's long-range financial plan.

[b] Based on an analysis of arm's-length license agreements between parties for similar property, as presented in Exhibit 4.

[c] Based on the Tau Company expected effective income tax rate.

[d] Calculated as if cash flow is received at mid-year.

[e] Based on the Tau Company weighted average cost of capital, presented in Exhibit 5.

[f] Based on the 2019 projected after-tax trademark income and an expected long-term growth rate of zero percent.

[g] Based on a present value of an annuity factor for an 11 percent discount rate and a 15-year expected RUL.

The analyst decided to use the market approach and the relief from royalty (RFR) method in this trademark valuation. Exhibit 4 summarizes the analyst's search for, selection of, and analysis of comparable uncontrolled transaction (CUT) trademark license agreements. Like Tau Company, the CUT trademark license data are all related to the telecommunications industry.

Exhibit 4
 Tau Company
 Trademarks and Trade Names
 Market Approach—Relief from Royalty Method
 CUT Trademark License Transactions

Trademark Licensors	Trademark Licensee	Comparable Uncontrolled Transaction (CUT) Trademark License Description	License Start Year	License Royalty Rate Range		License Upfront/ Flat Fee
				Low	High	
Southwestern Bell Telephone	Affiliate Group	The affiliate group imputed an affiliate compensation fee or “royalty” for the affiliates’ right to the name, reputation, and public image of the parent telephone company. The affiliates recognize the franchise-like benefits realized as a result of their relationship with the licensor.	2012	5.0%	5.0%	NA
Cable and Wireless PLC	Hong Kong Telecommunications Ltd.	In a related party transaction, the Company entered into an agreement with a subsidiary, a Hong Kong telephone company, for the use of its trade marks (in particular, use of the telecommunication name and logo in connection with international business) on relevant products and services.	2012	8.0%	8.0%	NA
AT&T Corp.	KIRI Inc.	The licensor grants to the licensee a nonexclusive, non-transferable, non-sub licensable license to use the licensed marks (AT&T and globe design logo) solely in connection with the marketing, advertising, promotion and provision of the licensed services (such as telecommunication and internet services) in the licensed territory.	2013	2.50%	4.00%	\$2.5 million minimum guarantee
Nextel	Nextel Partners	A partnership or alliance between a U.S. parent company and a publicly owned spin off company includes a licensing agreement for rights to use the Nextel brand name. The licensee owns its own spectrum and provides services as Nextel.	2012	0.50%	1.00%	0
France Telecom (Orange Brand Services Limited, UK)	PTK Centertel	PTK Centertel is rebranding its name from Idea to Orange. Idea, which now holds 32.2% of the market, will change its name and logo (trademark). PTK Centertel will pay the France Telecom a royalty for use of the Orange name.	2013	1.6%	1.6%	NA

Intellectual Property and Insolvency Issues: Valuation of Intellectual Property Within a Bankruptcy Context

Trademark Licensor	Trademark Licensee	Comparable Uncontrolled Transaction (CUT) Trademark License Description	License Start Year	License Royalty Rate Range		License Upfront/ Flat Fee
				Low	High	
Qwest Communications International, Inc. [a]	Unical Enterprises, Inc.	An exclusive, limited nontransferable, revocable right to use the following trademarks: Techline, Easytouch, Favorite, Classic Favorite, Classic Favorite Plus, Phototouch, Choice, Competitor, Competitor Plus, Roommate, Plaza, Favorite Plus, Easyreach, Big Button, EZ Button, Cleartech, Favorite Messenger II, Digimate, Mountain Bell. Nonexclusive, limited, nontransferable revocable right to use the following trademarks: B Office, Bell Symbol, Bell mark, Northwestern Bell. All of the above in connection with corded telephones, cordless telephones, answering machines, integrated telephone/answering devices, and computers and monitors.	2013	2.1%	2.2%	NA
Virgin Enterprises Limited	NTL Inc.	The licensee entered into a trademark license agreement under which they are entitled to use certain Virgin trademarks within the United Kingdom and Ireland. The agreement was entered into on the same date and is an exclusive license covering a number of aspects of our consumer business, including the provision of communications services (such as internet, television, fixed line telephony, and upon the acquisition of Virgin Mobile, mobile telephony), the acquisition of branding sports, movie and other premium television content, and the branding and sale of certain communications equipment related to the licensee consumer businesses, such as set top boxes and cable modems.	2013	0.25%	0.25%	£8.5 million minimum annual royalty

NA = Not applicable

	Indicated CUT License Agreement Royalty Rate Range	
	Low	High
	<u>Indications</u>	<u>Indications</u>
High Rate	8.0%	8.0%
Low Rate	0.3%	0.3%
Mean Rate	2.9%	3.2%
Median Rate	2.1%	2.2%

Exhibit 5 summarizes the analyst's calculation of the Tau Company present value discount rate. This discount rate is used to present value the royalty income projection over the trademark expected RUL.

Exhibit 5
Tau Company
Weighted Average Cost of Capital
As of January 1, 2015

Cost of Equity Capital:

Method #1: Modified Capital Asset Pricing Model (Ex Post Equity Risk Premium)		Source
Risk-free Rate of Return	4.5%	20-year U.S. Treasury bond, <i>The Federal Reserve Statistical Release</i> , as of December 31, 2014.
General Equity Risk Premium	7.10%	
Multiplied by: Industry Beta	<u>1.05</u>	<i>Stocks Bonds Bills & Inflation</i> , Morningstar, Inc., 2014.
Industry-adjusted General Equity Risk Premium	7.4%	
Size Equity Risk Premium	0.7%	2nd decile, <i>Stocks Bonds Bills & Inflation</i> , Morningstar, Inc., 2014.
Company-Specific Equity Risk Premium	<u>2.0%</u>	
Indicated Cost of Equity Capital	<u>14.6%</u>	Valuation analyst estimate.
Method #2: Modified Capital Asset Pricing Model (Supply Side Equity Risk Premium)		Source
Risk-free Rate of Return	4.5%	20-year U.S. Treasury bond, <i>The Federal Reserve Statistical Release</i> , as of December 31, 2014.
General Equity Risk Premium	6.20%	
Multiplied by: Industry Beta	<u>1.05</u>	<i>Stocks Bonds Bills & Inflation</i> , Morningstar, Inc., 2014.
Industry-adjusted General Equity Risk Premium	6.5%	
Size Equity Risk Premium	0.7%	2nd decile, <i>Stocks Bonds Bills & Inflation</i> , Morningstar, Inc., 2014.
Company-Specific Equity Risk Premium	2.0%	
Indicated Cost of Equity Capital	13.7%	Valuation analyst estimate.

Intellectual Property and Insolvency Issues: Valuation of Intellectual Property Within a Bankruptcy Context

Method #3: Duff & Phelps, LLC Risk Premium Report Model					Source
Risk-free Rate of Return		4.5%			20-year U.S. Treasury bond, <i>The Federal Reserve Statistical Release</i> , as of December 31, 2014.
Equity Risk Premium Over Risk-free Rate:					
	Qwest Corporat Fundamental	Regression Equation Variables		Risk Premium Over	
	\$MM	Constant	Coefficient	Risk-free Rate [a]	
Book Value of Equity	977	17.397%	-2.949%	8.6%	<i>Duff & Phelps, LLC Risk Premium Report 2014.</i>
5-Year Average Net Income	1,169	14.216%	-2.715%	5.9%	
Total Assets	15,397	18.036%	-2.725%	6.6%	
5-Year Average EBITDA	4,957	15.583%	-2.709%	5.6%	
Total Revenue	9,877	16.420%	-2.192%	7.7%	
Number of Employees (not in Mil)	24,000	17.675%	-2.210%	8.0%	
Median Equity Risk Premium Over Risk-free Rate				7.1%	
Company-Specific Risk Premium				2.0%	Valuation analyst estimate.
Indicated Cost of Equity Capital				13.6%	
Method #4: Build-Up Model					Source
Risk-free Rate of Return				4.5%	20-year U.S. Treasury bond, <i>The Federal Reserve Statistical Release</i> , as of December 31, 2014.
General Equity Risk Premium				7.1%	<i>Stocks Bonds Bills & Inflation</i> , Morningstar, Inc., 2014.
Industry Equity Risk Premium				0.0%	Morningstar, SIC 4813, average 2011 - 2014.
Size Equity Risk Premium				0.7%	2nd decile, <i>Stocks Bonds Bills & Inflation</i> , Morningstar, Inc., 2014.
Company-Specific Equity Risk Premium				2.0%	Valuation analyst estimate.
Indicated Cost of Equity Capital				<u>14.3%</u>	
Selected Cost of Equity Capital				<u>14.0%</u>	Median of Methods #1 - #4 Indicated Cost of Equity Capital

Cost of Debt Capital:

Before Tax Cost of Debt Capital		7.6%			Beta Company cost of debt.
Income Tax Rate		<u>37%</u>			Beta Company effective income tax rate.
Selected Cost of Debt Capital		<u>4.8%</u>			

Weighted Average Cost of Capital Calculation:

Selected Cost of Equity Capital		14.0%			
Multiplied by Equity / Invested Capital		<u>70%</u>			Based on median of selected guideline companies. (Rounded)
Equals Weighted Cost of Equity Capital		9.8%	10%		
Selected Cost of Debt Capital		4.8%			
Multiplied by Debt / Invested Capital		<u>30%</u>			Based on median of selected guideline companies. (Rounded)
Equals Weighted Cost of Debt Capital		1.4%	<u>1%</u>		

Weighted Average Cost of Capital (rounded)

11%

[a] Estimated as the constant plus the coefficient multiplied by the log of the financial fundamental.

Based on discussions with Tau Company management and on research regarding comparable telecommunications industry trademark life cycles, the analyst determined that the average RUL of the subject trademarks was 20 years. Therefore, the trademark valuation is based on a 20-year trademark royalty income projection period.

Based on the market approach valuation analysis summarized in Exhibit 3, the analyst concluded a fair market value of \$840 million for the Tau Company trademarks and trade names, as of January 1, 2015.

Income Approach Valuation Methods

In this valuation approach, value is estimated as the present value of the future income from the ownership/operation of the intellectual property. The present value calculation has three principal components:

1. An estimate of the duration of the intellectual property income projection period, typically measured as the analyst's estimate of the intellectual property RUL
2. An estimate of the intellectual property-related income for each period in the projection, typically measured as either owner income (e.g., license royalty income), operator income (e.g., some portion of the operator's business enterprise income), or both
3. An estimate of the appropriate capitalization rate, typically measured as the required rate of return on an investment in the intellectual property

For purposes of the income approach, the RUL relates to the time period over which the owner/operator expects to receive any income related to the intellectual property (1) license, (2) use, or (3) forbearance of use. In addition to the term of the RUL, the analyst is also interested in the shape of the RUL curve. That is, the analyst is interested in the annual rate of decay of the future intellectual property income.

For purposes of the income approach, different intellectual property income measures may be relevant. If properly applied, these different income measures can be used in the income approach to derive a value indication. Some of the different income measures include:

1. gross or net revenues,
2. gross income (or gross profit),
3. net operating income,
4. net income before tax,
5. net income after tax,
6. operating cash flow,
7. net cash flow,
8. incremental income,
9. differential income,
10. royalty income,
11. excess earnings income, and
12. several others (such as incremental income).

Because there are different income measures that may be used in the income approach, it is important for the capitalization rate (either the discount rate or the direct capitalization rate) to be derived on a basis consistent with the income measure used.

Regardless of the measure of income considered in the income approach, there are several categories of valuation methods that are typically used to value intellectual property:

1. Valuation methods that quantify an incremental level of intellectual property income— That is, the owner/operator will expect a greater level of revenue (however measured) by owning/operating the intellectual property as compared to not owning/operating the intellectual property. Alternatively, the owner/operator may expect a lower level of costs—such as capital costs, investment costs, or operating costs—by owning/operating the intellectual property as compared to not owning/operating the intellectual property.
2. Valuation methods that estimate a relief from a hypothetical license royalty payment— That is, these relief from royalty (RFR) methods estimate the amount of hypothetical royalty payment that the owner/operator (as licensee) does not have to pay to a third party licensor for the use of the intellectual property. The owner/operator is “relieved” from

having to pay this hypothetical license royalty payment for the use of the intellectual property. This is because the owner/operator, in fact, owns the intellectual property.

3. Valuation methods that estimate a residual measure of intellectual property income— That is, these methods typically start with the owner/operator overall business enterprise income. Next, the analyst identifies all of the tangible assets and routine intangible assets (other than the intellectual property) that are used in the owner/operator overall business. These assets are typically called contributory assets. The analyst then multiplies a fair rate of return times the value of each of the contributory assets. The product of this multiplication is the fair return on all of the contributory assets. The analyst then subtracts the fair return on the contributory assets from the owner/operator business enterprise total income. This residual (or excess) income is the income that is associated with the intellectual property.
4. Valuation methods that rely on a profit split—That is, these methods typically also start with the owner/operator overall business enterprise income. The analyst then allocates or “splits” this total income between (1) the owner/operator tangible assets and routine intangible assets and (2) the intellectual property. The profit split percent (e.g., 20%, 25%, etc.) to the intellectual property is typically based on the analyst’s functional analysis of the owner/operator business operations. This functional analysis identifies the relative importance of (1) the intellectual property and (2) the contributory assets to the production of the owner/operator total business income.
5. Valuation methods that quantify comparative income. That is, these methods compare the owner/operator income to a benchmark measure of income (that, presumably, does not benefit from the use of the intellectual property). Common benchmark income measures include: (1) the owner/operator income before the intellectual property development, (2) industry average income levels, or (3) selected guideline publicly traded company income levels. A common measure of income for these comparative analyses is the earnings before interest and taxes (or EBIT) margin. This EBIT income is considered to be a pretax measure of operating income. When publicly traded companies are used as the comparative income benchmark, the method is often called the comparable profit margin (or CPM) method.

All of these income approach valuation methods can be applied using either the direct capitalization procedure or the yield capitalization procedure.

In the direct capitalization procedure, the analyst (1) estimates a normalized income measure for one future period (typically, one year) and (2) divides that measure by an appropriate investment rate of return. The appropriate investment rate of return is called the direct capitalization rate. The direct capitalization rate may be derived for (1) a perpetuity time

period or (2) a specified finite time period. This decision will depend on the analyst's estimate of the intellectual property RUL.

Typically, the analyst will conclude that the intellectual property has a finite RUL. In that case, the analyst may use the yield capitalization procedure. Or, the analyst may use the direct capitalization procedure with a limited life direct capitalization rate. Mathematically, the limited life capitalization rate is typically based on a present value of annuity factor (PVAF) for the intellectual property RUL.

In the yield capitalization procedure, the analyst projects the appropriate income measure for several future time periods. The discrete time period is typically based on the intellectual property RUL. This income projection is converted into a present value by the use of a present value discount rate. The present value discount rate is the investor's required rate of return—or yield capitalization rate—over the expected term of the income projection.

The result of either the direct capitalization procedure or the yield capitalization procedure is the income approach value indication for the intellectual property.

Income Approach Illustrative Example

Exhibit 6 presents a simplified illustrative example of an income approach intellectual property valuation. In this example, the analyst is asked to estimate the fair market value of the hypothetical Pi Company pharmaceutical product patent. As described below, the Pi patent is used to manufacture the Delta pharmaceutical product line. The analyst is instructed that the appropriate valuation date is January 1, 2015.

Intellectual Property and Insolvency Issues: Valuation of Intellectual Property Within a Bankruptcy Context

[a] Considers the historical weighted decay rates for the Delta patented product line revenue.

<u>Delta product line</u>	2012	2013	2014	Three-Year Average
Weighted Annual Revenue Decay Rate	23.4%	23.6%	23.3%	23.4%

[b] Represents 77 percent of the Delta product line revenue in 2015 based on the estimated attrition rate. Thereafter, the Delta product line revenue is decreased annually based on (1) the estimated attrition rate and (2) the negative annual growth rate.

[c] The projected 2019 EBITDA margin is maintained after 2019.

[d] The projected 2019 depreciation expense as a percent of revenue is maintained after 2019.

[e] Based on (1) working capital requirement for the Delta product line and (2) the return on working capital estimated based on the Pi Company weighted average cost of capital (WACC).

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Working Capital - % of Consolidated Pi Company Revenue	-7%	-7%	-7%	-7%	-7%	-7%	-7%	-7%	-7%	-7%
Working Capital Requirement (times Delta product line revenue)	(250,270)	(182,305)	(129,500)	(90,287)	(61,813)	(47,596)	(36,649)	(28,220)	(21,729)	(16,732)
Return on Working Capital	11%	(27,530)	(20,053)	(14,245)	(9,932)	(6,799)	(5,236)	(4,031)	(3,104)	(2,390)

[f] Equals the sum of projected capital expenditure allocated to the Pi product line based on (1) % of revenue and (2) the return on tangible assets requirement estimated (based on the WACC).

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Net Tangible Assets as % of Pi Consolidated Revenue (see Exhibit 7)	113%	113%	113%	113%	113%	113%	113%	113%	113%	113%
Tangible Assets Requirement (times Delta product line revenue)	4,038,767	2,941,962	2,089,816	1,457,025	997,520	768,090	591,430	455,401	350,659	270,007
Return on Tangible Assets	11%	444,264	323,616	229,880	160,273	109,727	84,490	65,057	50,094	38,572

[g] Routine intangible assets contributory asset charge as percent of consolidated revenue multiplied by the revenue attributable to the Delta patented product line.

[h] Calculated as if all cash flow received at midyear.

The analyst decided to use the income approach and the excess earnings method. Because the patent product revenue is expected to change at a non-constant rate over time, the analyst decided to use the yield capitalization procedure. Using this procedure, this valuation method is often called the multiperiod excess earnings method (or MEEM).

The Pi Company patent is used to manufacture the Delta pharmaceutical product line. Based on the remaining legal life of the Pi patent and the Delta product line revenue decay rate (considering the effect of a competitive drug product), the analyst estimates a 10-year RUL for the Delta patent.

Pi Company management provided the analyst with a financial projection for the overall Pi Company and for the Delta product line. The analyst performed a revenue decay rate analysis related to the Delta product line in order to conclude a Delta product patent revenue growth rate (or, in this case, decay rate).

Exhibit 6 presents the projection of the Delta product line revenue and profit over its expected 10-year RUL. The analyst estimated an appropriate capital charge on all of the Pi Company contributory assets, including working capital assets, tangible assets, and routine (non-patent) intangible assets. This contributory asset analysis is summarized on Exhibit 7.

Exhibit 7
Pi Company
Valuation of Pharmaceutical Patent on Delta Product
Income Approach—Yield Capitalization Procedure
Contributory Asset Capital Charge Analysis

	FYE 12/31/15				
<u>Tangible Assets Capital Charge:</u>	<u>\$000</u>				
Beginning Tangible Assets [a]	12,034,000				
Capital Expenditures [a]	1,162,971				
Depreciation Expense [a]	<u>(2,249,209)</u>				
Net Tangible Assets	10,947,762				
Consolidated Pi Company Revenue [a]	9,691,426				
Net Tangible Assets as % of Consolidated Revenue	113%				
Routine Intangible Assets Capital Charge:	[a]	[b]			
	Fair	Estimated			
	Market	Required	Annual		
	Value	Rate of	Return		
	\$000	Return	\$000		
Trademarks/Trade Names	970,000	11%	106,700		
Internally Developed Computer Software	2,510,000	11%	276,100		
Trained and Assembled Workforce	580,000	11%	<u>63,800</u>		
Total Contributory Intangible Assets			446,600		
	12/31/15	12/31/16	12/31/17	12/31/18	12/31/19
	\$000	\$000	\$000	\$000	\$000
Consolidated Pi Company Revenue [a]	9,691,426	9,382,534	9,027,219	8,665,762	8,280,712
Intangible Assets Capital Charge (from above analysis)	446,600	446,600	446,600	446,600	446,600
Intangible Asset Capital Charge as % of Consolidated Revenue	4.6%	4.8%	4.9%	5.2%	5.4%

Footnotes:

[a] From the Pi Company business plan.

[b] Based on the Pi Company weighted average cost of capital.

In order to control the number of exhibits, let's assume that Pi Company has the same 11 percent cost of capital as presented in the previous Tau Company (market approach) example (see Exhibit 5). Accordingly, the analyst used 11 percent as the Pi Company weighted average cost of capital—or present value discount rate.

Based on the income approach valuation analysis summarized in Exhibit 6, the analyst estimated that the fair market value of the hypothetical Pi Company patent on the Delta product was \$790 million, as of January 1, 2015.

Valuation Synthesis and Conclusion Procedures

In the valuation synthesis and conclusion process, the analyst should consider the following question: Does the selected valuation approach(es) and method(s) accomplish the analyst's assignment? That is, does the selected approach and method actually quantify the desired objective of the analysis, such as:

- a defined value,
- a transaction price,
- a third-party license rate,
- an intercompany transfer price,
- an economic damages estimate,
- an intellectual property bundle exchange ratio, and
- an opinion on the intellectual property transaction fairness.

The analyst should also consider if the selected valuation approach and method analyzes the appropriate intellectual property bundle of legal rights. The analyst should consider if there were sufficient empirical data available to perform the selected valuation approach and method. That is, the valuation synthesis should consider if there were sufficient data available to make the analyst comfortable with the analysis conclusion. And, the analyst should consider if the selected approach and method will be understandable to the intended audience for the intellectual property valuation.

INTELLECTUAL PROPERTY VALUATION ANALYTICAL ISSUES AND CAVEATS

As described above, issues related to the intellectual property valuation are commonplace within a bankruptcy context. Related financial issues (e.g., corporate solvency, transactional fairness, reasonableness of a business plan, reasonably equivalent value in a property transfer) are also common within the bankruptcy environment. Analysts who perform bankruptcy-related intellectual property valuations should be familiar with (1) the analytical issues that are specific to a bankruptcy valuation and (2) the caveats that help analysts address these issues.

Analytical Issues in Bankruptcy Valuations

Analysts who value intellectual property within the commercial bankruptcy context should be familiar with the following common analytical issues:

1. There is no Bankruptcy Code definition (or standard) for the term “value.” Analysts who practice in this discipline sometimes use fair value, fair market value, market value, other standards of value. Bankruptcy Code Section 506 provides that “value shall be determined in light of the purpose of the valuation and of the proposed disposition or use of such property, and in conjunction with any hearing on such disposition or use or on a plan affecting such creditor’s interest.” However, this statutory guidance does not provide an actual standard of value.
2. The analyst’s use of hindsight in the bankruptcy valuation is discouraged. The courts seem to adopt the so-called “known or knowable principle” with regard to the analyst only using information that was knowable as of the defined valuation date. Of course, in many bankruptcy matters, there is usually a controversy among the opposing analysts over when actual events (favorable or unfavorable) would have been known or knowable as of the defined valuation date.
3. The analyst’s reliance on (and due diligence regarding) the company management-prepared financial projections should be justified. The questions that the analyst typically considers with regard to the use of management-prepared financial projections in the bankruptcy valuation may include the following:
 - How contemporaneous are the projections to the valuation date?
 - Were the projections prepared after the valuation date but, if so, were they still prepared based on assumptions that were known or knowable as of the valuation date?
 - Were the various unreconciled versions of the management-prepared projections?

- What was the purpose for which the management projections were prepared?
 - How skilled has company management been historically in preparing financial projections?
 - How reliable is the selected set of management-prepared projections?
 - Should the analyst consider various projection scenarios?
 - Were the financial projections ever relied on by an independent party (e.g., auditors, regulators, financing source)?
4. The analyst should document a replicable and transparent selection of valuation variables. The questions that the analyst typically considers with regard to the use of valuation variables in the bankruptcy valuation may include the following:
- Should the valuation variables reflect the current financial state of the debtor corporation?
 - Should the valuation variables reflect reorganized financial state of the debtor corporation?
 - Should the valuation variables reflect a willing buyer/willing seller or an industry average set of assumptions?
 - How does the assumed financial condition of the debtor corporation affect the selected cost of capital components (e.g., the k_d , k_e , debt/equity ratio) and the concluded weighted average cost of capital (WACC)?
 - How does the assumed financial condition of the debtor corporation affect the terminal value expected long-term growth rate?
 - Should the selected discount rate relate to the operating risk of the debtor company or to the performance risk of the specific financial projections?
5. The analyst should consider the fact that current interest rates are still at historically low levels. The questions that the analyst typically considers with regard to the selected interest rate in the bankruptcy valuation cost of capital analysis may include the following:
- How should the currently low risk-free rate of return affect the selection of the cost of debt capital?
 - How should the currently low corporate bond interest rates affect the selection of the cost of debt capital?
 - Can the debtor corporation actually realize such low capital costs?
 - Does an understated WACC calculation overstate the debtor corporation business value?
6. The analyst should be prepared to explain and defend the reasonableness of the analyst's due diligence procedures. The questions that the analyst typically considers in the due diligence process of the bankruptcy valuation may include the following:
- Does the bankruptcy assignment involve a contemporaneous valuation or a retrospective valuation?

- Did the analyst have access to the debtor corporation management and/or to other relevant parties?
 - Did the analyst consider that the parties’ memories and perceptions of pre-petition events and conditions often change over time?
 - Did the analyst recognize the fact that only a limited amount of debtor corporation documents may be available?
 - Could the analyst’s industry research be subject to various interpretations?
 - Did the analyst appreciate the fact that hindsight is always “20/20” when performing a retrospective valuation analysis?
7. The analyst should consider all of the income tax effects on the debtor corporation value. The questions that the analyst typically considers in the income tax deliberations during the bankruptcy valuation may include the following:
- What is the debtor’s effective income tax rate?
 - What is the amount of the debtor’s cash income tax expense?
 - What is the value of the debtor corporation deferred tax assets or tax liabilities?
 - What is the debtor’s expected use of NOLs and other income tax attributes?
 - How will a possible change of ownership affect the debtor corporation’s tax attributes?
 - How will a possible change of ownership affect the debtor corporation’s asset tax basis?
8. The analyst should avoid the use of industry so-called valuation rules of thumb as a specific valuation method. The questions that analysts typically consider with regard to the interpretation of industry valuation rules of thumb may include the following:
- Are there any industry rules of thumb with regard to financial metric pricing multiples?
 - Are there any industry rules of thumb with regard to operational metric pricing multiples?
 - Are there any industry rules of thumb that may imply values of debtor company intangible assets/contingent liabilities (e.g., capitalization of debtor corporation operating leases)?
 - Are there any industry rules of thumb for consideration with regard to any of the individual financial projection variables?
 - Do the industry rules of thumb assume the average company in the subject industry?
 - If they are valid, how are the industry rules of thumb supported by any empirical transaction data?
9. The analyst will typically perform a cash flow test within a solvency analysis, and such a solvency analysis may be prepared for many bankruptcy purposes. The questions that the

analyst typically considers with regard to the solvency analysis cash flow may include the following:

- Should the analyst include the corporation’s raising of either new debt capital or new equity capital during the cash flow test projection period?
 - Should the analyst consider the debtor’s current credit availability during the cash flow test projection period?
 - Should the analyst consider any debtor corporation asset sales during the cash flow test projection period?
 - Did the analyst adequately consider the longest term debtor corporation debt outstanding in the cash flow test projection period?
 - Did the analyst adequately consider any debtor corporation debt balloon payments later in the cash flow test projection period?
10. The analyst should consider the appropriateness of applying a market approach in an inactive transaction market. The questions that the analyst typically considers with regard to the use of the market approach in an inactive market may include the following:
- Are there any sufficiently comparable public companies available for consideration in the market approach analysis?
 - Are there any sufficiently comparable merger and acquisition (M&A) transactions available for consideration in the market approach analysis?
 - Is there a sufficiently active current market for the debtor company assets or securities?
 - How reliable are any “backsolve” valuation method sale transactions of the debtor company securities with regard to providing meaningful valuation guidance?

Analyst Caveats for Performing Bankruptcy Valuations

Analysts may consider the following practical caveats with regard to the preparation of intellectual property valuations within a bankruptcy context:

1. The analyst should accept legal counsel’s advice and instructions; the analyst should also:
 - Document all of the legal counsel’s instructions
 - Document all of the legal counsel’s definitions of technical legal terms
 - Not practice law without a license
 - Let the legal counsel take responsibility for all legal issues related to the bankruptcy
2. Legal counsel is not always totally forthcoming with the analyst; the analyst should also:

- Be aware of any “creeping commitments” (or unintended expansions) regarding the scope of work in the analyst’s engagement
 - Be aware of any legal counsel-imposed limitations on the analyst regarding access to all of the documents in the case
3. The analyst should document, document, document—both in the valuation workpapers and in the valuation report; in particular, the analyst may:
- Document all debtor corporation management and other party interviews
 - Document all due diligence procedures performed
 - Document why the analyst selected or rejected each valuation method that was considered in the analysis
 - Document why the analyst selected or rejected each valuation variable that was considered in the analysis
 - Document why the analyst selected or rejected each set of financial projections that was relied on (or not relied on) in the analysis
 - Use contemporaneously prepared financial projections relied on by others (including management), if possible, and not use financial projections prepared after litigation (if possible)
4. The analyst should use generally accepted valuation approaches, methods, and procedures in the bankruptcy valuation; in particular, the analyst typically should not:
- Use de novo valuation methods (or use de novo valuation method naming conventions)
 - Rely on “rules of thumb” pricing methods to achieve specific value indications to include in the final value conclusion
5. The analyst should use confirmatory valuation approaches and methods in the bankruptcy analysis; in particular, the analyst may:
- Explain the valuation synthesis and conclusion process
 - Explain the quantitative (or qualitative) value conclusion process so that it is replicable, transparent, and auditable
6. The analyst should use confirmatory source documents, if possible; in particular, the analyst may:
- Look for confirmatory source documents
 - Look for contradictory source documents
 - Explain the process and reasoning for selecting the specific source documents relied on
 - Look at and consider all source documents that are made available to the analyst in discovery or otherwise
 - Avoid wearing “hindsight blinders”—i.e., the process of excluding post-valuation date documents that contain pre-valuation date information

7. The analyst should consider all debtor corporation intangible assets in the bankruptcy valuation analysis; in addition, the analyst should consider all debtor corporation contingent liabilities in the bankruptcy valuation analysis
8. The analyst should consider the expected income tax affects in all of the bankruptcy valuation (and solvency, fairness, and related opinion) analyses; in that consideration, the analyst may:
 - Consult with an independent income tax expert, if one is needed
 - Consult with an income tax expert colleague, if one is available
9. In bankruptcy-related litigation, the analyst should be mindful that “your expert report is your best friend”; the analyst should be mindful that:
 - The valuation analyst’s report should be clear, convincing, and cogent
 - The valuation analyst’s report should be replicable and transparent
 - The valuation analyst’s report should be adequately supported with source documents
 - The analyst should also be mindful of the expert report caution that: “If it’s not in the report, you didn’t do it”
10. The analyst should know his or her own technical limitations in performing the valuation; that is, the analyst should rely on third party specialists for input into the valuation, when needed; such third party specialists may include:
 - Industry experts
 - Tax accounting experts
 - Financing accounting experts
 - Real estate appraisal experts
 - Personal property appraisal experts
 - Other experts

INTELLECTUAL PROPERTY VALUATION REPORT WRITING GUIDELINES

There are numerous objectives of a bankruptcy-related intellectual property valuation report. Of course, the analyst wants to persuade the report reader (whether the reader is a potential sale/license transaction participant, the debtor, a creditor, a judge or other finder of fact, etc.). The analyst also wants to defend the intellectual property value conclusion.

In order to accomplish these objectives, the content and format of the valuation report should demonstrate that the analyst (1) understood the specific intellectual property valuation

assignment; (2) understood the debtor's intellectual property and the subject bundle of legal rights; (3) collected sufficient debtor financial and operational data; (4) collected sufficient industry, market, and competitive data; (5) documented the specific debtor's intellectual property economic benefits; (6) performed adequate due-diligence procedures related to all available data; (7) selected and applied all applicable income-, market-, and cost-approach valuation methods; and (8) reconciled all value indications into a final intellectual property analysis conclusion.

The final procedure in the intellectual property analysis is for the analyst to defend the value conclusion in a replicable and well-documented valuation report. The written valuation report should:

1. explain the intellectual property valuation assignment;
2. describe the debtor's intellectual property and the subject bundle of legal rights;
3. explain the selection or rejection of all generally accepted valuation approaches and methods;
4. explain the selection and application of all specific analysis procedures;
5. describe the analyst's data gathering and due diligence procedures;
6. list all documents and data considered by the analyst;
7. include copies of all documents that were specifically relied on by the analyst;
8. summarize all of the qualitative analyses performed;
9. include schedules and exhibits documenting all of the quantitative analyses performed;
10. avoid any unexplained or unsourced valuation variables or analysis assumptions; and
11. allow the report reader to be able to replicate all of the analyses performed.

In order to encourage the report reader's acceptance of the intellectual property valuation report conclusion, the report should be (1) clear, convincing, and cogent; (2) well organized, well written, and well presented; and (3) free of grammar, punctuation, spelling, and mathematical errors.

In summary, the effective (i.e., persuasive) intellectual property valuation report will tell a narrative story that (1) defines the analyst's assignment; (2) describes the analyst's data gathering and due diligence procedures; (3) justifies the analyst's selection of the generally accepted intellectual property valuation approaches, methods, and procedures; (4) explains how the analyst performed the valuation synthesis and reached the final value conclusion; and (5) defends the analyst's intellectual property value conclusion.

Who Should Perform the Intellectual Property Valuation?

An important consideration in a bankruptcy-related valuation is, what type of professional should perform the intellectual property valuation? There are many categories of professionals who perform intellectual property valuation (and damages, transfer price, etc.) analyses. These categories of professionals include accountants, economists, licensing executives, IP consultants, industry specialists, and valuation analysts. Typically, both the bankruptcy party and the legal counsel will be involved in the decision regarding which category of professional to retain, and the bankruptcy party and the legal counsel need to decide on the appropriate category of professionals before they can interview and retain an individual professional.

Some parties may consider the relative costs of the valuation service in selecting the category of professionals to retain. However, the "cost" of being wrong in this decision process is typically much greater than the "cost" of the professional's valuation fee. For whatever bankruptcy-related purpose that the intellectual property valuation will be used for, the most qualified professional should be retained. When the effectiveness of the intellectual property valuation analysis and report will influence a buyer, seller, lender, licensor, licensee, judicial

finder of fact, etc., the parties should not be concerned about finding a budget-priced valuation professional.

Each of the above-listed professionals has their strengths and weaknesses as an intellectual property valuation candidate, and one category of analyst may be preferred for one type of assignment (such as negotiating a DIP intellectual property license agreement) over another type of assignment (say, testifying as an expert witness in a fraudulent conveyance or preference item dispute).

Accountants (particularly certified public accountants—or CPAs) typically have a great deal of credibility with parties involved in a bankruptcy. Accountants (particularly CPAs) typically have the credentials to be qualified as expert witnesses. Accountants are typically familiar with the financial accounting and taxation aspect of IP valuation. Many accountants perform IP valuations according to rules-based methods, which are often promulgated by the Financial Accounting Standards Board or by the Internal Revenue Service. Such methods are particularly applicable for fair value accounting disclosures or for Internal Revenue Code Section 482 compliance purposes. However, some accountants are not particularly comfortable with judgment-based (compared to rules-based) valuation methods and procedures, and IP valuations are often a relatively small part of the practice of most accountants.

Economists (particularly Ph.D.s.) also have a great deal of credibility with parties involved in a bankruptcy, and they typically have the credentials to be qualified as expert witnesses. In fact, since valuation analysis is one particular type of economic analysis, many regulatory and taxation authorities (e.g., the Internal Revenue Service) often accept economists as intellectual property valuation analysts. This acceptance is particularly true for intercompany transfer price analysis and for other rules-based IP valuations. However, economists can

sometimes perform very theoretical (and not empirically based) analyses, and are not always familiar with the generally accepted valuation approaches, methods, and procedures. Accordingly, economists' valuation analyses are sometimes difficult for a layperson to understand, and these analyses may not stand up to a contrarian challenge, particularly in a litigation environment.

Licensing executives typically have a great deal of practical experience in negotiating and structuring arm's-length intellectual property license agreements. This experience may cross many types of intellectual property and industries. Therefore, licensing executives often have a great deal of personal and/or anecdotal evidence regarding intellectual property values, royalty rates, and the like. However, because it is anecdotal, this evidence often cannot be independently confirmed. While licensing executives often know how intellectual property valuations are performed, they may not know (or be able to explain) why intellectual property valuations are performed that way.

Licensing executives often also rely on so-called industry rules of thumb and not on the generally accepted valuation approaches, methods, and procedures. Therefore, licensing executives are often more familiar with the licensing profession's practice and procedures than with the valuation profession's practices and standards.

Intellectual property consultants typically assist their employers and clients to develop strategic plans to maximize the value of intellectual property. These plans often start with the process of identifying the debtor's intellectual property. These plans often consider the competitive strengths, weaknesses, opportunities, and threats related to the intellectual property. The plans then analyze how the intellectual property is used by the debtor and how it can be

further commercialized outside of the debtor. These consultants often assist their employers or clients to finance, license, or otherwise monetize the intellectual property.

However, many IP consultants prepare more qualitative than quantitative valuation analyses. Many of the intellectual property analyses are also high-level (i.e., conceptual) rather than empirical (i.e., practical). These consultants often rely more on “black box” types of analyses and less on the replicable generally accepted valuation approaches, methods, and procedures. Also, these consultants may not subscribe to any promulgated professional standards.

Industry specialists typically are not intellectual property specialists, but instead are electronics industry specialists, software industry specialists, telecommunications industry specialists, etc. They are often retired industry executives or consultants who focus on consulting in one or two industries and provide industry clients with financial forecasting, strategic planning, competitive analysis and other consulting services. Industry specialists have often been involved in business brokerage, business start-up, or bankruptcy transactions in their industry. They will perform intellectual property valuations as one of their industry services.

While these industry specialists know a great deal about their industry, they may not know a lot about intellectual property or intellectual property valuation. Accordingly, the justification for their valuation analysis and value conclusion is typically “in my experience” as opposed to empirical data and recognized (and replicable) valuation professional practices and standards.

Analysts may have varying academic or professional backgrounds. Individuals are typically included in this category if they have completed professional training and receiving

professional recognition by one or more of the professional valuation-credentialing organizations.

These organizations typically promulgate intangible asset valuation professional standards, conduct both pre-credential training and post-credential continuing professional education courses and offer comprehensive examination programs leading to a professional credential or accreditation. Such organizations include the American Institute of Certified Public Accountants (grants the ABV credential), American Society of Appraisers (grants the ASA credential), Institute of Business Appraisers (grants the CBA credential) and National Association of Certified Valuators and Analysts (grants the CVA credential).

These professionals typically have the training and credentials to qualify as expert witnesses, and these professionals typically apply generally accepted intellectual property valuation approaches, methods, and procedures. These professionals typically subscribe to—and comply with—the generally accepted valuation profession standards and practices.

Ultimately, the party to the bankruptcy and the bankruptcy counsel have to decide what type of professional is best suited to conduct the debtor intellectual property valuation (or damages, transfer price, etc.) analysis. There should be a match (of experience and expertise) between the selected analyst and the purpose and objective of the assignment. There should also be a match (of personalities and professional philosophies) between the selected analyst and the client.

In the final selection, the type of professional may be less important than the qualifications and the abilities of the individual analyst. Nonetheless, most intellectual property valuations are (at least potentially) subject to a contrarian review.

Therefore, the party to the bankruptcy and the lawyer should select an intellectual property analyst who can deliver a valuation analysis and report (and expert testimony, if needed) that will convince the intended report (or testimony) audience and will stand up to a rigorous contrarian challenge. An analyst who has applied generally accepted valuation approaches, methods, and procedures and an analyst who has complied with generally accepted professional standards and practices may be in the best position to meet that challenge.

SUMMARY AND CONCLUSION

Valuation analysts are often called on to value a debtor company's intellectual property for a variety of bankruptcy-related reasons. This discussion summarized many of the general reasons and the bankruptcy-related reasons for valuing commercial intellectual property. This discussion summarized and illustrated the generally accepted intellectual property valuation approaches, methods, and procedures. In addition, this discussion summarized the analyst caveats related to performing intellectual property valuation analysis—including a description of common data sources and common due diligence procedures.

The final procedure in the intellectual property valuation is the preparation of a clear, convincing, and cogent valuation report. This discussion summarized the attributes related to an effective (i.e., persuasive) intellectual property valuation report. These attributes also relate to the presentation of effective valuation expert testimony.

Finally, this discussion also considered the question of which type of professional should prepare the bankruptcy-related intellectual property valuation. The various categories of professionals each have their respective strengths and weaknesses as intellectual property

valuation candidates. Ultimately, the most effective type of bankruptcy valuation analyst is one who can defend his or her intellectual property valuation during a rigorous contrarian challenge.