Selection and Adjustment of CUT Royalty Rates in the Relief from Royalty Method Valuation Analysis

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The relief from royalty ("RFR") method is one of the generally accepted income approach methods of intangible asset valuation. One of the components of the RFR method involves the analyst's selection of an appropriate arm's-length royalty rate. There are several generally accepted methods that an analyst may apply in the estimation of that arm's-length royalty rate. One of the generally accepted methods involves the analysis of so-called comparable uncontrolled transactions, or "CUTs." This discussion summarizes the generally accepted procedures related to the identification, selection, and adjustment of CUT intangible asset license agreements in the application of the RFR valuation method.

Introduction

Several generally accepted methods are available for the valuation of intangible assets and intellectual property. These methods are typically aggregated in three groups, or "approaches" to intangible asset valuation.

The three generally accepted approaches to intangible asset valuation are (1) the market approach, (2) the income approach, and (3) the cost approach.

This discussion focuses on aspects of the application of the relief from royalty method, which is a generally accepted income valuation approach method. In particular, this discussion focuses on the application of an important component of the relief from royalty method—the identification, selection, and adjustment of a market-derived royalty rate.

First, this discussion summarizes the relief from royalty ("RFR") method and some of the ways that an analyst may estimate a royalty rate to apply in that method. Second, this discussion summarizes the comparable uncontrolled transaction ("CUT") method to select the RFR method royalty rate. This discussion describes the application and considerations involved in that royalty rate selection method. Finally, this discussion presents an illustrative example of the selection of an arm's-length royalty rate using the CUT method.

The Relief from Royalty Method

The RFR method is one of several income approach methods to value intangible assets. Other income approach methods include the following:

- The capitalized excess earnings method
- The multi-period excess earnings method,
- The with and without method

A description of these other intangible asset income approach valuation methods is beyond the scope of this discussion.

The RFR method is based on the premise that the value of an intangible asset relates to the expense that the intangible asset owner avoids by owning the asset—instead of inbound licensing that asset.

In the RFR method, an estimate is made of the royalty rate that would be negotiated in an arm's-length transaction if the subject intangible asset were inbound licensed from an independent third party. The royalty expense savings ("relief") is calculated by multiplying a royalty rate, often expressed as a percentage of revenue times a determined royalty base (i.e., often the level of future revenue).

The application of the RFR method typically involves the following procedures:

- Understanding the subject intangible asset, including its primary characteristics, its intended use, its marketplace and industry applications, its useful economic life, and other relevant factors
- Researching and identifying guideline arm's-length license transactions to apply in the analysis
- Estimating a market-based hypothetical inbound license royalty rate to apply to the subject intangible asset
- Identifying financial projections often prepared by company management) for the subject intangible asset, and then applying the selected market-based royalty rate to those financial projections
- Estimating the appropriate income tax rate and required rate of return for the subject intangible asset (i.e., the present value discount rate)
- Incorporating the above projections and analyses to apply the relief from royalty method and estimate the value of the subject intangible asset (other adjustments may be appropriate, such as a tax amortization benefit adjustment)

As with all income approach property valuation methods, the RFR method is predicated on the present value of a future income stream—in this case, an income stream based on estimated royalty expense relief associated with owning the intangible asset.

There are several methods that may be applied to help the analyst select a market-derived hypothetical inbound license royalty rate. The following descriptions summarize three generally accepted methods to estimate a market-derived inbound license royalty rate:

- Comparable Uncontrolled Transaction ("CUT") Method—The hypothetical inbound license royalty rate is estimated by comparing the subject intangible asset to comparable intangible assets that have been transacted (i.e., licensed) during a reasonably recent period of time.
- Comparable Profits Method ("CPM")—The royalty rate for the subject intangible asset is estimated by comparing a selected profitability metric of guideline companies to the same profitability metric of the subject company. If the guideline companies derive profits from multiple intangible assets and other business lines, then the analysis would involve determining the profitability metric of the comparable intangible asset.

  This guideline company and guideline intangible asset profitability metric would then be used to assess the hypothetical inbound license royalty rate of the subject intangible asset.
- Profit Split Method—The hypothetical inbound license royalty rate of the subject intangible is estimated by examining the operating profits of the two parties to an intellectual property/intangible asset license agreement and "splitting" the profits based on the relative contributions of the intellectual property/intangible asset to the two constituent parties.

As implied above, many of the methods to estimate a royalty rate involve a selection and analysis of guideline companies—or guideline intangible assets. In this way, although the RFR method is an income approach method, it often incorporates components of empirical, market data through the selection and application of the royalty rate within the analysis.

The following section focuses on the application of the CUT method to estimate an intellectual property/intangible asset arm's-length inbound license royalty rate.

Estimating a Royalty Rate Using the CUT Method

The CUT method is often considered by analysts when selecting a royalty rate to apply in the RFR method. The CUT method is often appropriate if transactions exist in the marketplace (typically arm's-length license transactions) that are sufficiently

comparable to the attributes and benefits associated with the subject intangible asset.

The first procedure in the application of the CUT method involves researching and identifying arm's-length license transactions involving intangible assets that are sufficiently comparable to the subject asset. The analyst typically starts by conducting a broad search of third-party license transactions.

Analysts may rely on commercial intellectual property license databases, such as the RoyaltySource database and the ktMINE database, to screen for potential CUTs to use in the analysis.

These commercial intellectual property license databases typically allow the analyst to filter through license transactions using various search criteria. These commercial databases often provide details on the arm's-length, third-party license agreements, in addition to the full text of the license agreements.

Some of the screening criteria or comparable characteristics the analyst may consider when searching through a commercial license database are presented below:

- Limiting the search to agreements involving the licenses of intangible property similar to the subject intangible asset (e.g., if the subject intangible asset is enterprise software, the analyst may limit the search to third-party licenses of software)
- Limiting the searches to license agreements that involve intangible property in a similar industry (e.g., if the subject intangible asset is primarily used in the medical profession, the analyst may limit the search to the health care industry)
- Limiting the searches to license agreements that involve nonrelated parties as the licensor and licensee
- Limiting the searches to license agreements that involve intangible property located in (or being licensed to) a certain geographic area or region
- Limiting the searches to agreements that involve royalty rates based on a certain metric (e.g., if the analyst intends to select and apply a royalty rate based on projected revenue, the analyst may limit the search to encompass only third-party license agreements that involve revenue-based royalty rates)

The above list is not exhaustive—there may be several other characteristics that analysts may wish to filter based on the specific facts and circumstances surrounding the subject intangible asset.

Further, the search for CUTs is often influenced by the prevalence of third-party license transactions in the intangible asset's industry or marketplace. For example, if the intangible asset is a trademark in an industry where trademark licenses are typical, then the analyst may be able to be more specific and targeted in the commercial license agreement database searches.

Depending on the specificity of the initial screening criteria, the analyst identifies a certain number of preliminary CUTs. The analyst likely then conducts further due diligence (either by reading through detailed descriptions of each identified license transaction or by reading through a copy of the actual third-party license agreement).

Once the analyst has selected the CUTs to apply in the analysis, the next procedure involves a comparison of the selected third-party license transactions to the intangible asset. For example, let's say the analyst selected a group of eight CUTs that were considered to be sufficiently similar to the intangible asset so as to provide meaningful valuation guidance.

Despite those eight selected licensing transactions being potential CUTs, there may still be certain differences between each CUT and the subject intangible asset. In addition, intellectual property/intangible asset license transactions can be customized in their pricing structure, and the analyst may want to understand the financial terms of each selected CUT.

After selecting CUTs, the analyst often performs a comparative analysis of each CUT intangible property to the subject intangible asset. This procedure often involves a qualitative and quantitative analysis comparing the terms and characteristics of the various CUT intangible property to the characteristics of the subject intangible asset.

Exhibit 1 presents a nonexhaustive list of some typical characteristics that the analyst may consider when reviewing each CUT in comparison to the subject intangible asset. This analysis may help the analyst select a hypothetical inbound license royalty rate for the intangible assets in relation to the range of royalty rates indicated by the CUTs.

For example, let's say each of the eight selected CUT licenses incorporates a bundle of assets (e.g., the CUTs may all involve trademark licenses, but each involves the license of multiple trademarks). In contrast, let's assume the subject intangible asset is only one specific trademark.

Exhibit 1
Characteristics That Can Affect Intangible Property Third-Party License Royalty Rates

Type of Intangible Property Attribute/Characteristic	Positive Influence on the License Royalty Rate	Negative Influence on the License Royalty Rate
Bundle or Single Asset	License includes a bundle of assets	License is for a single asset
Term of License (number of years)	License is for a long time period	License is for a short time period
License Exclusivity	License is exclusive	License is nonexclusive
License Territory	License allows use in many territories (e.g., worldwide)	License allows use in few territories (e.g., a single state)
Up-Front Fees	License excludes up-front or fixed fees (i.e., with the up-front fees, the royalty rate may have been lower)	License includes up-front or fixed fees (i.e., without the up-front fees, the royalty rate may have been greater)
Other Costs/Commercial Readiness	Licensee may need to incur additional direct costs to further develop or commercialize the licensed asset	Licensee will not need to incur additional direct costs beyond any up-front fees and royalty payments
Market/Industry Use	Licensed asset is used in a relatively more lucrative market or industry	Licensed asset is used in a relatively less lucrative market or industry
Quality of Asset	Licensed asset is perceived as a superior product	Licensed asset is perceived as an inferior product
Timeliness of Asset	Licensed asset is perceived as modern and new	Licensed asset is perceived as old

All else being equal, this factor would suggest the analyst would select a relatively lower royalty rate for the subject asset. That is because licensors may be willing to pay a greater royalty rate for the license of multiple trademarks (i.e., the licenses for the CUTs), compared to a license of a single trademark (i.e., the intangible asset).

The analyst considers a number of factors and conducts the comparative analysis between (1) the characteristics of the CUT licenses and the licensed intangible assets and (2) the characteristics of the subject intangible asset.

Depending on the results of that analysis, the analyst should then have support for selecting a royalty rate in relation to the range of royalty rates indicated by the CUTs. For instance, if the analyst determines that the intangible asset overall has more negative economic attributes relative to the CUTs, the analyst may select a royalty rate toward the lower end of the range indicated by the third-party license CUTs.

The analyst should understand the circumstances or complexities involved with the pricing structure of each CUT. That is, some license transactions may be relatively straightforward and include fee structure based on a single royalty rate for the entirety of the license term, with no other financial considerations. However, some license transactions may involve both a royalty rate component as well as a fixed cost or up-front fee component.

For example, a licensee may be required to pay the licensor $1 million up-front in addition to a royalty rate that is based on 3 percent of net sales for products sold using the licensed trade name. In those cases, the analyst should understand how the additional fee components may have affected the agreed upon third-party license royalty rate.

Finally, third-party license agreements may change the royalty rates throughout the license term based on certain milestones (e.g., the royalty rate may change halfway through the license term, or it may change based on reaching certain sales milestones). In those instances, the analyst should understand how the range of royalty rates may affect the analysis.

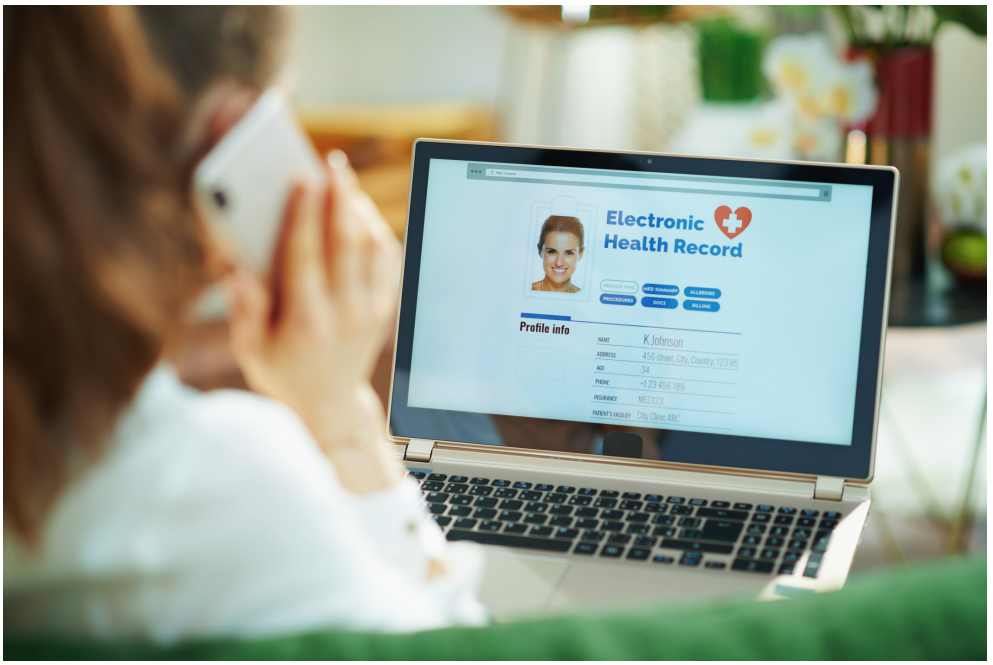
The analyst may present each CUT based on the high royalty rate included in the license agreement and the low royalty rate included in the license agreement.

For instance, if a license agreement calls for a royalty rate of 6 percent in the first year, 4 percent in years two through four, and 1 percent in each year thereafter, the analyst may present the "low" royalty rate for that CUT as 1 percent and the "high" royalty rate for that CUT as 6 percent.

The analyst may analyze the average or median of both the indicated "low" royalty rates and "high" royalty rates to narrow down a selection range to apply to the intangible asset.

In addition to presenting the high and low royalty rates, the analyst may select a representative royalty rate for each CUT. For example, let's say a license agreement with a 15-year term has a royalty rate of 10 percent of sales for the first year of the agreement and 2 percent for the next 14 years of the agreement.

The analyst may indicate the representative royalty rate being a weighted average of approximately 2.5 percent, since all but one year of the license agreement uses that relatively lower royalty rate.



Illustrative Example

This discussion presents an illustrative example of the process that an analyst may go through to select a hypothetical inbound license royalty rate to apply in the RFR method.

Let's assume that the analyst estimates the fair value of a bundle of enterprise software and related assets that was developed and owned by a hospital group.

The bundle of assets includes various systems and documentation that, together, encompass a suite of software that a hospital may use to manage numerous aspects of day-to-day administration. These functions include patient health record storage and analysis, payment processing and insurance interface, physician and staff scheduling, risk analysis, payroll processing, and other administrative functions.

In addition, the analyst discovers through the course of due diligence that the subject software is currently only usable in the United States. It would require significant additional development and customization to be compatible with hospital groups in other countries.

While it is not currently feasible to use in other countries, the analyst understands that it would not require significant additional development costs for it to be usable by other U.S.-based hospitals.

Finally, the analyst learns that the subject software (1) was developed recently (it was developed over the course of three years and was only just completed less than a year ago) and (2) is considered to be cutting edge and of high quality in the marketplace.

The analyst was provided a set of financial projections that include a projection of hospital revenue that assumes the use of the subject software. The analyst decides to apply the RFR method in the valuation of the software intangible property.

In order to select a hypothetical inbound license royalty rate to apply in the analysis, the analyst first performs various license transaction searches using several commercial intellectual property license databases.

The analyst performs searches based on the following criteria:

1. Agreements involving licenses of software and relates assets
2. Agreements containing the keywords "health care," "hospital," or "medical" within the description
3. Agreements that involved the health care industry
4. Agreements that involve nonrelated parties as licensee and licensor
5. Agreements that involve royalty rates based on either net revenue or gross revenue.

Based on those screening criteria, the analyst identified 20 potential license transactions from the commercial database searches. The analyst then analyzed the terms and descriptions of each license transaction. From that analysis, the valuation analyst excluded a number of transactions.

For example, even though the 20 potential license transactions all contained the initial screening

criteria, there were several that specifically involved software that was used by health insurers, rather than hospitals. And, there were several more that, upon further analysis, included the license of additional assets (such as trademarks, trade names, and technology patents) such that the analyst determined they were not sufficiently similar to the subject software.

After that additional screening, the analyst selected six arm;s-length license transaction that were suitable to use as CUTs. Exhibit 2 presents a summary of the royalty rates for each of the six selected CUTs.

As presented above, the analyst reviewed the range of both the high and low royalty rates indicated by the CUTs. In addition, for each CUT, the analyst selected a "representative" royalty rate based on a review of the specific terms of each license. Overall, the selected CUTs have license royalty rates ranging from 3 percent of revenue to 12 percent of revenue.

During the course of the assignment, the analyst may perform an in-depth analysis of each selected CUT.

In addition to identifying the royalty rate (or royalty rates) attached to each license agreement, the analyst may want to understand (1) additional terms and characteristics associated with both the license agreement and the licensed intangible property and (2) how those terms and characteristic compare to the subject intangible asset.

Exhibit 3 presents an example of how an analyst may organize and present the comparative analysis for one of the sample CUTs license agreements.

Based on the analysis of each license agreement, the analyst noted the following characteristics for the selected CUT intangible property—relative to the subject software:

- Each of the six CUTs were for worldwide licenses. In contrast, the subject software is only expected to be used within the United States. This factor indicates an inbound license royalty rate for the subject software that may be on the lower end of the indicated range.
- The six CUTs contained a mix in terms of modernity and functionality of the licensed software. Most of the CUTs involved soft-

Exhibit 2
Illustrative CUT License Agreement Analysis
Indicated Range of Arm's-Length Royalty Rates Based on the Selected CUTs

CUT License Agreement #	Arm's-Length License Agreement Royalty Rate: Low (% of Revenue)	High (% of Revenue)	Representative (% of Revenue)	Analyst's Comments
1	5.0	5.0	5.0	Royalty rate is set at 5% for the duration of the lease agreement.
2	5.0	10.0	7.5	Royalty rate of 10% for first $1 million of revenue each month, and 5% for all sales over $1 million. Average royalty rate would likely fall in between the high and the low.
3	4.0	4.0	5.0	Royalty rate is set at 4% for the duration of the license agreement.
4	8.0	8.0	8.0	Royalty rate is set at 8% for the duration of the license agreement.
5	3.0	10.0	3.5	Royalty rate of 10% in first year, 5% in second year, and 3% in each years 3 through 10. Average royalty rate would likely be near the low.
6	5.0	12.0	9.0	Royalty rate of 6% for first 200 users, stepping up to 12% for 501 or more users. Average royalty rate would likely fall between the high and the low.

Range of License Agreement Royalty Rates (as a % of revenue):

Low	3.0	4.0	3.5
High	8.0	12.0	9.0
Average	5.0	8.2	6.3
Median	5.0	9.0	6.3

Exhibit 3
Sample License Agreement Analysis
For "License A" in the Illustrative Example

Company Criteria	Comparability Criterion Description	Comparability to the Subject Intangible Assets and Other Analyst Notes
License agreement synopsis	License agreement between two unrelated entities involving a worldwide license to software programs and related technology known as the Hospital Management System.	
Intellectual property bundle/single	Bundle—includes several pieces of software and related technology.	The subject asset is also a bundle of software and related assets.
Licensor	Licensor ABC, Inc.	
Licensee	Licensee XYZ, LLC	
Type of license	Software programs and related technology	The subject asset is also a bundle of software and related assets.
License	"Hospital Management System"	
Products	The Hospital Management System is a suite of software that allows hospital groups to manage every facet of patient interaction. The Hospital Management System can record and track encounters between patients and health care providers for performance evaluation and maintenance of records. The software is able to manage patient records, in addition to providing interfaces to allow approval and processing of payments. There are other functions as well, such as physician and staff payroll processing and other administrative functions. The Hospital Management System was first developed in 1999, although there have been periodic updates to the software since then.	The subject asset also involves business enterprise software that is used for health-care-related administrative functions. However, the subject assets are newly developed and a modern, cutting-edge system, whereas the Hospital Management System may be considered less modern since it was first created over 20 years ago.
Market	Health care	The subject asset is also used in the health care industry.
Beginning date	November 2005	
Expiration date	November 2015	
Exclusivity	Exclusive	Licensors may charge greater royalty rates for exclusive use of licensed assets
Territory	Worldwide	The subject asset is limited to markets in the U.S.
Payment	Royalty rate of 5 percent of monthly net sales throughout the 10-year term of the license agreement	Flat royalty rate, so representative royalty rate for this license agreement is 5 percent
Other fees	Yes, up-front fee of $500,000 cash	Licensors may charge lower royalty rates if there are additional up-front fees involved
Royalty rate range and representative royalty rate	5 percent—based on the terms of the license, there is a flat royalty rate based on net revenue	
Other comments [a]	The Hospital Management System is comparable to the subject assets in that both are business enterprise software that are used for health-care-related administrative functions. However, the Hospital Management System license is a worldwide license, unlike the subject asset, which is likely limited to use inside the U.S. However, the up-front fees associated with the Hospital Management System license may indicate the royalty rate of 5 percent is understated (i.e., without an up-front fee, the licensor may have charged a higher royalty rate). In addition, the subject asset is likely more modern and of higher quality than the Hospital Management System. Overall, those factors indicate a reasonable royalty rate for the subject asset may be slightly higher than the rate attached to the Hospital Management System license.	
Source	RoyaltySource database and SEC Form 10-K, Licensor ABC, Inc., 2/13/2006	

[a] This analyst estimate is based on an analysis of the terms of the license agreement.

ware that was relatively newly developed and appeared to have similar (or even greater) functionality than the subject software. Some of the CUTs involved software that was a few years old and may be considered less modern than the subject software.

Overall, this factor is relatively neutral and indicates the inbound license royalty rate for the subject software may be towards the middle of the indicated range.

- Five of the six CUTs contained a certain amount of up-front fees in addition to the indicated royalty rates. This indicates that many of the indicated royalty rates may be slightly understated, since in the absence of those up-front fees, the licensor likely would have demanded relatively higher royalty rates as compensation.

  This factor indicates an inbound license royalty rate for the subject software that may be on the higher end of the indicated range.

- Each of the six CUTs included a bundle of software and related intangible property, similar to the subject software. Accordingly, this is a neutral factor and indicates the inbound license royalty rate for the subject software may be towards the middle of the indicated range.

After performing the above illustrative analysis, the analyst concluded that, overall, the mix of positive, negative, and neutral factors indicates that the inbound license royalty rate for the subject software is likely to be towards the middle of the range indicated by the CUTs.

Based on the specific features of several of the CUTs, the analyst determined that the representative royalty rates are more informative than the indicated high or low royalty rates for each CUT. Accordingly, the analyst primarily considered the average and median of the representative royalty rates as being most indicative of a hypothetical inbound license royalty rate for the subject software.

Ultimately, the analyst selected a royalty rate of 6.5 percent of net revenue to apply in the RFR valuation method analysis. The analyst applied that 6.5 percent royalty rate—in combination with a set of revenue projections, a selected income tax rate, and a selected present value discount rate—to measure the fair value of the subject software.

Summary and Conclusion

The RFR method is a generally accepted intangible asset income approach valuation method. One of the components of the RFR method involves the selection and application of a hypothetical inbound license royalty rate.

There are several generally accepted methods that may be used to select the hypothetical inbound license royalty rate. One of the methods is the comparable uncontrolled transaction (or CUT) method.

This discussion summarized the various procedures and considerations involved with the application of the CUT method to select an arm's-length inbound license royalty rate. The CUT method is often applicable as long as the analyst is able to identify arm's-length license transactions that are sufficiently comparable to the subject intellectual property/intangible asset.

Applying the CUT method, the analyst performs several analyses, including a search for arm's-length license transactions, an analysis of those transactions relative to the subject intangible property and, importantly, an analysis of the royalty rate indicated by each license transaction.

In addition to the CUT method, there are other methods that an analyst may apply in the selection of an arm's-length inbound license royalty rate in the application of the RFR method. In order to further support a selected royalty rate, it may be possible for the analyst to apply multiple methods in an attempt to corroborate the royalty rate selection.

Finally, although this discussion focused on the CUT method in the context of the RFR method, a CUT analysis may also be applied to estimate a royalty rate for other purposes.

The CUT method may also be applied to estimate a royalty rate for a domestic intercompany transfer pricing analysis, an international intercompany transfer pricing analysis, or any number of situations where a company or investor may need to estimate an royalty rate within the context of a valuation, damages, or transfer price analysis.

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