FUNCTIONAL ANALYSIS AS PART OF A VALUATION, DAMAGES, OR TRANSFER PRICE ANALYSIS

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This article examines the application of a functional analysis in the development of an opinion as to valuation, damages, or transfer price.

Introduction

A functional analysis is one important component of a transfer price analysis. More specifically, a functional analysis is one component of any transfer price analysis related to the intercompany transfer of tangible property, intangible property, or services.

The typical intercompany transfer is a transfer of property or services between entities that are under common control. Such entities are often referred to as related parties. Such entities are sometimes also referred to as associated parties. A typical example of entities that are under common control would be two wholly owned subsidiaries (say, one domestic and one foreign) of the same multinational parent corporation. Such transfer price analyses may be performed for federal (for multinational taxpayers) or state (for multistate taxpayers) tax planning, compliance, or controversy purposes.

A functional analysis is often applied for purposes of assessing the comparability of the subject entity to selected guideline or benchmark entities. These selected guideline or benchmark entities could be comparable companies, securities, or properties (including tangible property and intangible property).

Many observers immediately think of a functional analysis within the context of the allocation of income and deductions among taxpayers for federal income tax purposes. The performance of a functional analysis is relevant in this context. As will be described, the regulations related to Section 482 explain the application of a functional analysis for purposes of determining reliability. As will be discussed, a functional analysis is certainly relevant to an intercompany transfer price determination made for purposes of Section 482 compliance.

In addition to transfer price analysis, a functional analysis is also relevant within the context of a value estimation and a damages measurement. For purposes of this discussion, a value estimate includes the valuation of a privately owned company, closely held securities, tangible assets, and intangible assets. Such valuations may be developed for taxation planning, compliance, and controversy (i.e., litigation) purposes. Moreover, such taxation reasons may include income tax, gift tax, estate tax, property tax, or sales and use tax. In addition, such valuations may be developed for

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transaction, financing, taxation, accounting, litigation, or other purposes.

For purposes of this discussion, a damages measurement includes the quantification of economic damages related to business entities, business ownership interests, tangible assets, and intangible assets. Such a damages measurement could relate to an injured party's damages sustained with regard to a tort claim or a breach of contract claim.

Such valuation, damages, and transfer price analyses are often performed by valuation analysts, forensic accountants, economists, and other types of professionals. This article refers to all of these professionals collectively as "analysts." The article summarizes the application of a functional analysis in the development of a valuation, damages, or transfer price opinion. This discussion considers the following topics:

1. What is (and what is not) a functional analysis.
2. The reasons for the analyst to perform a functional analysis—within the context of a valuation, damages, or transfer price analysis.
3. The functional analysis impact on valuation estimates.
4. The functional analysis impact on damages measurements.
5. The functional analysis impact on transfer price determinations.
6. The 12 steps of a functional analysis.
7. Who should perform the functional analysis.
8. Documentation of the functional analysis.

This article summarizes the principal considerations regarding a functional analysis within the context of developing a valuation, damages, or transfer price opinion.

What is functional analysis?

As mentioned above, many observers initially think of a functional analysis within the context of an intercompany transfer price determination between the controlled entities of a taxpayer (often a multinational taxpayer) for Section 482 compliance purposes. While there are broader applications of a functional analysis, the Section 482 regulations do provide a definition of a functional analysis that is generally applicable for this discussion.

Reg. 1.482-1(d)(3)(i) relates to comparability issues regarding the allocation of income and deductions among taxpayers. Specifically, this regulation section deals with the factors for determining comparability of transactions and companies. This regulation section describes a functional analysis as follows:

> (i) Functional analysis. Determining the degree of comparability between controlled and uncontrolled transactions requires a comparison of the functions performed, and associated resources employed, by the taxpayers in each transaction. This comparison is based on a functional analysis that identifies and compares the economically significant activities undertaken, or to be undertaken, by the taxpayers in both controlled and uncontrolled transactions. A functional analysis should also include consideration of the resources that are employed, or to be employed, in conjunction with the activities undertaken, including consideration of the type of assets used, such as plant and equipment, or the use of valuable intangibles. A functional analysis is not a pricing method and does not itself determine the arm's length result for the controlled transaction under review. Functions that may need to be accounted for in determining the comparability of two transactions include –
>
> (A) Research and development;
>
> (B) Product design and engineering;
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> (C) Manufacturing, production, and process engineering;
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> (D) Product fabrication, extraction, and assembly;
>
> (E) Purchasing and materials management;
>
> (F) Marketing and distribution functions, including inventory management, warranty administration, and advertising activities;
>
> (G) Transportation and warehousing; and
>
> (H) Managerial, legal, accounting and finance, credit and collection, training and personnel management services.

While this regulation lists eight functions, it does not imply that the eight-item list is exhaustive. Rather, the regulation section indicates that the factors to consider "include" the eight listed functions. In addition, the regulation does not imply that the eight listed factors cannot be disaggregated or rearranged.

For the subject entity, a functional analysis basically considers the following topics:

1. What products and services are offered to customers or clients (and how are those products and services designed or developed).
2. What is the source of supply of the materials, labor, and overhead that is needed to produce those products and services (including sourcing dependence and sourcing logistics issues).
3. How the products and services are manufactured or otherwise produced.
4. How the products and services are differentiated, promoted, priced, and sold (including advertising and branding issues).

5. How the inventory of products and services (including raw materials, work in process, and finished goods/services) are created, packaged, and stored.
6. How the products and services are delivered (including shipping, transportation, and other delivery logistics issues).
7. What assets are utilized to perform the functions within the business entity (including working capital assets, tangible assets, and intangible assets).
8. How profits are earned in the business enterprise (including the cost/volume/profit relationships with regard to both (a) production/service creation cost of sales and (b) production/service delivery revenue recognition).
9. How the accounting, finance, human resources, management information, marketing, sales, and other administrative activities operate within the subject entity.
10. How the subject entity is organized, managed, and capitalized (legally and administratively), including both (a) the relationship between the entity owners and the entity operators/managers and (b) the relationship between the entity and its sources of capital.

There are various financial, competitive, and operational analyses that may be components of the functional analysis. There are also some types of financial, economic, and industry analysis that are not really components of the functional analysis. These considerations of what are components—and what are not components—of the functional analysis are summarized next.

Considerations that are components of the functional analysis

Exhibit 1 presents a listing of the typical considerations in the performance of a functional analysis. This Exhibit 1 list is not intended to disagree with or to replace the eight factors listed in Reg. 1.482-1(d)(3)(i). Rather, the Exhibit 1 list of considerations is intended to expand on and to clarify the Reg. 1.482-1(d)(3)(i) list. Exhibit 1 is presented to serve as a checklist of functional analysis considerations for developing a valuation, damages, or transfer price opinion.

Depending on the objective of the analysis, the Exhibit 1 considerations may be used to develop an understanding of the subject entity, ownership interest, or property. The Exhibit 1 considerations may also be used to compare the functions performed, assets employed, and risks assumed between two controlled entities under common ownership. Also, the Exhibit 1 considerations may be used to compare the functions performed, assets employed, and risks assumed between a controlled transaction and an uncontrolled transaction—particularly within the context of an intercompany transfer price determination.

Considerations that are not substitutes for a functional analysis

As Exhibit 1 implies, there may be many components to the assessment of the subject entity's functions performed, assets employed, or risks assumed. The following analyses may also be performed as part of a valuation, damages, or transfer price analysis. In addition, the following analyses may be considered as a part of—or a component of—a functional analysis. However, the following analyses are not a substitute for a functional analysis of the subject entity, ownership interest, or tangible/intangible property:

1. Historical financial statement ratio or trend-line analysis.
2. State of the regional or national economy analysis.
3. State of the subject industry (or the subject profession) analysis.
4. Acquisition due diligence analysis.
5. Quality of earnings analysis.
6. SWOT (strengths, weaknesses, opportunities, threats) analysis.
7. History and description of the subject entity, ownership interest, or property.
8. Selection (and analysis) of guideline public companies, or guideline merger and acquisition transactions, or guideline royalty rates.

Each of the above analyses has a place in a business or property valuation, damages measurement, or transfer price analysis. However, each of the above analyses is different than a functional analysis of the subject entity, ownership interest, or property.

Reasons to perform a functional analysis

Whether the analysis objective is a value estimate, a damages measurement, or a transfer price determination, the reasons for conducting a functional analysis are pretty much the same.

The first reason to conduct a functional analysis is to familiarize the analyst with the subject entity, ownership interest, or tangible/

intangible property. The research required and the diligence necessary to conduct the functional analysis results in the analyst developing both a broad and a deep understanding of the subject of the analysis. By performing the functional analysis, the analyst better understands how the subject entity works.

The second reason to conduct a functional analysis is to allow the analyst to assess comparability. The comparability assessment may allow the analyst to:

1. Identify and select comparable companies, comparable transactions, comparable licenses, or other comparable transfers;
2. Compare and contrast the functions of two related party (or associated) entities that are under common ownership (i.e., two controlled parties);
3. Compare and contrast a controlled transaction with one or more uncontrolled (i.e., arm's-length) transactions;
4. Make normalization adjustments to comparable companies, transactions, and licenses to make them more comparable to the analysis subject; and
5. Make comparisons of the conditions in transactions between related parties—that is, the controlled transactions—with the conditions in comparable transactions between unrelated (or arm's-length) parties—that is, the uncontrolled transactions.

The third reason to conduct a functional analysis is to allow the analyst to assess the relative contribution of the various functions performed either (1) within the subject entity or (2) between the related (or associated) parties in a controlled transaction.

The fourth reason to conduct a functional analysis is to allow the analyst to identify the various assets that are used (1) in the operation of the subject entity or (2) in the conduct of the controlled transaction. These assets are employed to perform the various functions associated with the subject entity. The assets considered in the functional analysis may include working capital accounts, tangible assets (real estate and tangible personal property), and intangible assets.

The fifth reason to conduct a functional analysis is to allow the analyst to identify the risks that are being assumed by the subject entity. A significant portion of the return earned by the entity's operations is due to the risks assumed by the entity. The functional analysis allows the analyst to compare these risks (1) within the subject entity; (2) between the subject entity and the selected comparable companies, transactions, and licenses; and (3) between related party (or associated) entities in a controlled transaction.

Each of these five reasons assists in the development of the valuation, the damages measurement, or the transfer price determination.

Functional analysis impact on the valuation estimate

The functional analysis allows the analyst to understand the value creation within the subject entity. While the functional analysis is primarily considered to be a procedure for assessing—and adjusting for—comparability, the functional analysis does not only impact the market approach to business or property valuation. There are comparability considerations in all generally accepted valuation approaches.

The three generally accepted approaches to value a business or business ownership interest are the income approach, the market approach, and the asset-based approach. The three generally accepted approaches to value a tangible property or an intangible property are the income approach, the market approach, and the cost approach.

In the income approach, the functional analysis informs the analyst with regard to:

1. Revenue projections;
2. Expense projections;
3. Investment projections;
4. Present value discount rate components; and
5. Expected long-term growth rate considerations.

A functional analysis is relevant to an intercompany transfer price determination made for purposes of Section 482 compliance. A functional analysis is also relevant within the context of a value estimation and a damages measurement.

In the market approach, the functional analysis informs the analyst with regard to:

1. Normalizing the historical financial or operational results of the subject entity or property;
2. Selecting comparable (or guideline or benchmark) companies, transactions, or licenses;
3. Adjusting/normalizing the historical financial or operational results of the comparable companies, transactions, or licenses;

4. Selecting the adjusted pricing multiples that were extracted from the comparable companies, transactions, or licenses; and
5. Applying the selected market-derived pricing multiples to the subject entity, ownership interest, or property.

In the asset-based approach, the functional analysis informs the analyst with regard to:
1. The valuation of tangible assets;

While there are broader applications of a functional analysis, the Section 482 regulations do provide a definition of a functional analysis that is generally applicable for this discussion.

2. The existence of identifiable intangible assets;
3. The applicable valuation variables (including useful economic life) to apply to value the identifiable intangible assets;
4. The capitalized excess earnings method valuation of goodwill; and
5. The valuation of liabilities—and, particularly, contingent liabilities.

In the cost approach, the functional analysis informs the analyst with regard to:
1. The measurement of useful economic life—for both tangible property and intangible property;
2. The identification and measurement of functional obsolescence (including the technological obsolescence component) of tangible and intangible property;
3. The identification and measurement of economic obsolescence of tangible and intangible property;
4. The normalization of the property owner's financial and operational metrics—particularly with regard to tangible and intangible property; and
5. The selection of the valuation variables to perform the capitalized income loss method to measure economic obsolescence for tangible and intangible property.

As indicated above, the functional analysis has applications to all of the generally accepted business valuation approaches and property valuation approaches.

Functional analysis impact on damages measurements

Analysts may be asked to identify and measure damages related to businesses, business ownership interests, tangible property, or intangible property. These damages are often caused by a wrongful action. The wrongful action could relate to (1) a breach of some type of contractual agreement or (2) a tortious action. The contract could include any type of merger or acquisition agreement, commercial goods or services contract, license, lease, franchise, employment or services agreement, noncompete/nonsolicitation agreement, or other commercial contract. The tort could include a breach of trustee's (or other party's) fiduciary duty, lender liability duty, an entity's duty to its shareholders, or any other type of duty.

In the measurement of the business or property damages, analysts may apply these generally accepted damages measurement methods:
1. Lost profits.
2. Reasonable royalty rate.
3. Cost to cure (including lost business or property value).

The functional analysis informs the analyst throughout the damages measurement assignments. First, the functional analysis helps the analyst identify the component of the business or property that was damaged. The functional analysis may not identify the damages event or the party who conducted the wrongful action. However, the functional analysis should help to identify (1) what entity/property functions were damaged, (2) the relative importance of those damaged functions to the subject entity/property, and (3) the value creation due to the functions—or, in this case, the value destruction due to any damage to those functions.

Second, the functional analysis should help to identify the entity/property's normal financial or operational variables—that is, the entity/property's metrics "before" or "without" the damages event. The analyst can compare those normal financial or operational variables to the entity/property's current metrics—that is, "after" or "with" the damages event. The differences in these metrics before and after (or without and with) damages is one measure of lost profits.

In particular, the functional analysis may help to develop (and to test the reasonableness of) any damages projection variables—including revenue, expenses (fixed and variable), investments, and other prospective financial variables.

Third, the functional analysis may help to identify (1) when the damages impact started (i.e., the beginning of the damages period), (2) the term of the damages period, and (3) when the damages impact ended—if it did end (i.e., the end of the damages period).

Fourth, the functional analysis may help to identify and measure the impact of any damaged party[esq]s mitigation efforts in response to the damages event.

Fifth, the functional analysis may help to identify, compare, normalize, select, and apply arm's-length license agreement royalty rates in a reasonable royalty rate damages analysis.

Sixth, the functional analysis may help to identify the costs to cure the impact of the damages event. This is because such an analysis may identify the particular entity/property functions that were damaged—to allow the analyst to estimate the cost to cure (i.e., repair) the damaged function.

Seventh, the functional analysis may inform the selection of the historical valuation variables to develop the "before" business or property valuation. The current (post-damages event) application of the functional analysis may inform the analyst's selection of the post-damages valuation variables to develop the "after" business or property valuation. The difference in the "before" value and the "after" value is one indication of the lost business value or lost property value.

The development of the functional analysis may also help to identify all of the entity's operational components and tangible/intangible assets that were impacted by the damages event. Also, the performance of the functional analysis may help the analyst to quantify the lost profits, reasonable royalty rate, or cost to cure related to the business or property damages.

Functional analysis impact on transfer price determination

As mentioned above, a functional analysis is an important procedure in an intercompany transfer price analysis. The transfer price analysis helps to identify the value chain. A value chain separates a business into a series of value-generating functions. This value chain helps provide the analyst with a foundation from which to identify (1) the functions performed, (2) the assets employed, and (3) the risks assumed. This foundation helps the analyst to understand the activities that create value in the subject entity, ownership interest, or property.

As mentioned above, Reg. 1.482-1 provides an introduction to the allocation of income and deductions among taxpayers. Reg. 1.482-1(d)(3)(i) describes a functional analysis within the context of the factors for determining the comparability of transactions.

Reg. 1.482-2 includes guidance related to the determination of taxable income in specific situations. These specific situations include:

1. Loans or advances;
2. The performance of services for another;
3. The use of tangible property; and
4. The transfer of property.

Reg. 1.482-3 describes the methods to determine taxable income with regard to the transfer of tangible property. These methods for determining an arm's-length transfer price with regard to tangible property include:

1. The comparable uncontrolled price method;
2. The resale price method;
3. The cost plus method, and
4. Unspecified method.

Whether the analysis objective is a value estimate, a damages measurement, or a transfer price determination, the reasons for conducting a functional analysis are pretty much the same.

Reg. 1.482-3(c)(3)(ii)(A) discusses functional comparability with regard to the resale price method. Specifically, this regulation section deals with comparability and reliability considerations within the application of the resale price method.

Reg. 1.482-3(d)(3)(ii)(A) discusses functional comparability with regard to the cost plus method. Specifically, this regulation section deals with comparability and reliability consideration within the application of the cost plus method.

Reg. 1.482-4 describes the methods to determine taxable income with regard to the transfer of intangible property. First, this regulation provides a description of what is intangible property. Second, this regulation describes the following methods for determining an arm's-length transfer price with regard to intangible property:

1. Comparable uncontrolled transaction method.
2. Unspecified methods.

Reg. 1.482-5 describes the comparable profits method. Specifically, Reg. 1.482-5(c)(2)(ii) discusses functional, risk, and resources comparability. This regulation section presents these factors within the context of comparability and reliability considerations in the application of the comparable profits method.

Reg. 1.482-6 describes the application of the profit split method. This regulation provides guidance with regard to:

1. The comparable profit split method, and
2. The residual profit split method.

Reg. 1.482-7 relates to cost sharing arrangements. Reg. 1.482-8 provides examples of the application of the best method rule.

Reg. 1.482-9 relates to the determination of an arm's-length transfer price related to controlled services transactions. Reg. 1.482-9(d)(3)(ii)(A) describes functional comparability. This regulation section discusses comparability and reliability considerations within the context of the application of the gross services margin method. Reg. 1.482-9(c)(3)(ii)(A) also describes functional comparability. This regulation section discusses comparability and reliability considerations within the context of the application of the cost of services plus method.

In all cases, the regulations discuss the functional analysis within the context of assessing—and adjusting for—comparability. These assessments—and adjustments—are made (1) to the subject entity or property or (2) between the related (or associated) parties to the controlled transaction. These assessments and adjustments are based on:

There is no specific guidance or limitation as to what type of professional should perform the functional analysis.

1. The relative contribution of the various functions performed;
2. The assets (both tangible and intangible) used to perform these functions; and
3. The risks assumed by the subject entity or the related parties.

The 12 steps of the functional analysis

As mentioned above, there are many considerations related to the development of a functional analysis. These many considerations are equally relevant whether the functional analysis is developed for valuation, damages, or transfer price purposes.

Exhibit 1 is intended to only present a partial listing of typical analyst considerations. Exhibit 1 does not present a comprehensive list of all considerations. However, all of the considerations or procedures may be categorized into what this discussion refers to as the 12 steps of the functional analysis.

These 12 steps do not necessarily have to be performed in the order or sequence presented. However, the listing of steps is presented in a logical sequence. Some of the steps may be performed simultaneously. Some of the steps may be performed out of order. However, this discussion recommends that all of the 12 steps should be developed, to a greater or less extent, before the functional analysis is considered to be complete.

It is important to recognize that each so-called "step" represents a category or grouping of many procedures and investigations. These categories of procedures are called "steps" to remind the analyst to proceed from the initial understanding of the subject entity to the final assessment of the risks assumed by that subject entity. After completing all of these 12 steps, the analyst should have developed—and documented—an understanding of the subject entity's functions performed, assets employed, and risks assumed.

These 12 steps—or categories or groupings of analyst procedures—are listed in Exhibit 2. The first 10 steps on Exhibit 2 primarily relate to the functions performed at the subject entity. Step 11 on Exhibit 2 primarily relates to the assets employed at the subject entity. Step 12 on Exhibit 2 primarily relates to the risks assumed by the subject entity.

For purposes of this discussion and for purposes of applying Exhibit 2, the phrase "subject entity" encompasses an individual subject entity, an ownership interest in such an entity, the tangible property or intangible property of such an entity, or two related parties performing associated functions (and controlled transactions) as part of a common ownership entity.

The type of analyst to conduct the functional analysis

There is no specific guidance or limitation as to what type of professional should perform the functional analysis. Similarly, there is no specific guidance or limitation as to what type of professional should perform a valuation analysis, damages measurement, or transfer price determination.

Some observers have referred to the functional analysis as an economic analysis. It is true that the functional analysis includes the consideration of the inputs and the outputs of a subject entity. Similarly, the functional analysis includes the consideration of the cost/volume/profit relationships of a subject entity. Also, these considerations involve the application of microeconomics principles. However, by that general definition, all valuation, damages, and transfer price analyses involve the application of microeconomics principles.

The *Internal Revenue Manual* does not address the question of what type of professional should perform the functional analysis. However, the *Internal Revenue Manual* does provide perspective on the various types of professionals who may be involved in the transfer price analysis related to intangible property. Section 4.61.3.4.6 of the *Internal Revenue Manual* relates to "Transfers of Intangible Property" and provides the following perspective related to intangible property comparable uncontrolled transactions and arm's-length license royalty rate analyses:

1. Determining arm's length royalty amounts for controlled transfers of intangibles may require the support of the following specialists:

1. Economists
2. Engineers
3. Industry experts
4. Experts in the field of licensing intangibles
5. Marketing experts
6. Other inside and outside experts

The fact that economists are mentioned first in the above listing may be one reason why some observers associate economists with intercompany transfer price analyses. While the above list specifically relates to intangible property transfer prices, it is reasonable to conclude that any of the above-mentioned categories of professionals could perform a functional analysis.

In addition to the *Internal Revenue Manual* listing of types of professionals, accountants—and particularly forensic accountants—have particular experience and expertise with regard to all three disciplines of valuation, damages measurement, and transfer price determination. All three of these disciplines require a thorough understanding of generally accepted accounting principles ("GAAP"), income tax accounting principles, accounting systems and procedures, and the analysis of financial statements and other financial documents. In addition, most forensic accountants have a breadth and depth of experience related to business operations, data gathering and special investigations, and due diligence procedures and associated documentation.

Although not specifically mentioned in the *Internal Revenue Manual*, valuation analysts have specialized training and experience that would qualify them to perform the functional analysis. Valuation analysts routinely apply microeconomics principles. Valuation analysts have to understand both GAAP accounting and income tax accounting. Also, most valuation analysts are skilled at data gathering, interviewing and investigative techniques, and due diligence procedures. Most importantly, valuation analysts have to develop both broad and deep skills with regard to performing, interpreting, and applying comparability analyses.

There is no specific guidance or requirement related to the documentation of the functional analysis. This article's recommendations are presented as best practices related to functional analysis within the context of a valuation or a damages measurement or a transfer price analysis.

That is, most valuation analysts are experienced with regard to identifying, adjusting, normalizing, extracting pricing data from, and applying pricing multiples derived from comparables. Such comparables could include comparable companies, comparable business interests, comparable tangible property, and comparable intangible property. The comparable transactions could include sales, leases, licenses, or other types of transfers.

Valuation analysts have experience and expertise in assessing and adjusting for comparability—a fundamental component of the functional analysis. In addition, like certified public accountants, valuation analysts pursue specialized training based on a standardized body of knowledge, are tested and credentialed based on that standardized body of knowledge, pursue continuing professional education requirements, and comply with documented ethics standards and other professional standards. Many of the other types of professionals included in the above *Internal Revenue Manual* list do not meet these various qualifications.

Overall, and more important than a particular professional credential or academic benchmark, the appropriate type of professional to perform the functional analysis is a

EXHIBIT 1 Functional Analysis Considerations Related to Valuation, Damages, or Transfer Price Analyses

1. Organization considerations

A. Type of entity

1. Description of whether the subject is a business entity, business ownership interest, tangible property, or intangible property.
2. Description and documentation of ownership of the subject entity.
3. Description of legal structure of the subject entity.
4. Description of tax structure of the subject entity.
5. Description of any ownership relationships with related parties, applicable parties, or other common ownership.
6. Description of corporate governance (e.g., board of directors).
7. Description of operational executive or management structure (e.g., management organization chart).
8. Description of operational functions structure (e.g., departmental organization chart).
9. Description and locations of owned tangible property.
10. Description and locations of leased tangible property.

B. Entity documents

1. Organization documents (e.g., articles of the corporation).
2. Operational documents (e.g., partnership agreements, member agreements).
3. Entity ownership documents (e.g., shareholder agreements, buy/sell agreements).
4. Asset ownership documents (e.g., deeds, legal descriptions, licenses, leases).
5. Entity transferability documents (e.g., franchise agreement restrictions, regulated industry considerations).
6. Ownership interest transferability considerations (e.g., security puts and calls).
7. Recent board of directors or executive/management committee minutes.
8. Copies of any business or operating permits or certificates.
9. Copies of any inbound or outbound intellectual property licenses.
10. Copies of any joint venture, joint development, joint commercialization, etc., agreements.
11. List of registrations of all intellectual property, including domestic and international patents, copyrights, and trademarks.
12. Copies of documents that illustrate the entity's use of domestic and international patents, copyrights, trademarks, and trade names.

2. Operations considerations

A. Operational functions

1. Description of products produced and services provided.
2. Description of how products and services are designed, developed, or engineered.
3. Description of raw materials inputs (sources, costs, and logistics of supply and supply chain risks).
4. Description of labor inputs (sources, costs, and logistics of supply and supply chain risks).
5. Description of overhead (including operating expense inputs) (sources, costs, and logistics of supply and supply chain risks).
6. Description of product manufacturing or services production process.
7. Description of production scheduling and quality control procedures.
8. Description of product warehousing and in-process services storage.
9. Description of product warranty and product return risk elements.
10. Description of products and services shipping and delivery logistics.
11. Description of how intellectual property (patents, copyrights, trademarks, and trade secrets) are developed, documented, and registered.
12. Description of how intellectual property (patents, copyrights, trademarks, and trade secrets) are commercialized and protected

B. Administrative functions

1. Description of accounting functions.
2. Description of receivables/cash collection function and payables/cash disbursement function.
3. Description of treasury (cash management and banking relationship) function.
4. Description of capitalization, capital structure, and financing functions.
5. Description of products/services design and engineering function.

6. Description of production engineering/services delivery efficiency function.
7. Description of advertising and market research function.
8. Description of packaging and branding function.
9. Description of human resources, recruiting, training, benefits function.
10. Description of general counsel function.
11. Description of information technology, management information function.
12. Description of regulatory compliance and other compliance functions.

C. Competition and competitive position functions

1. Listing and description of principal competitors.
2. Approximate size of principal competitors.
3. Ranking of principal competitors by market share and by relative market share.
4. Products/services features differentiation with competitors.
5. Products/services pricing differentiation with competitors.
6. Products/services distribution differentiation with competitors.
7. Products/services intellectual property differentiation with competitors.
8. Description of total market size.
9. Description of total market growth rate.
10. Description of how customers use the entity's products/services

D. Risk/expected return considerations

1. Description of materials source of supply risk.
2. Description of labor source and supply risk.
3. Description of operating leverage (fixed costs coverage) risk.
4. Description of financing leverage (debt service coverage) risk.
5. Description of tangible property risk.
6. Description of environmental risk.
7. Description of litigation risk.
8. Description of intellectual property risk.
9. Description of customer concentration risk.
10. Description of executive concentration dependence risk.
11. Description of regulatory change risk.
12. Description of products/services liability risk.

3. Financial considerations

A. Accounting principles and financial statements

1. Descriptions of current accounting principles applied.
2. Comparison of entity accounting principles to competitor accounting principles.
3. Description of recent changes in accounting principles applied.
4. Discussion of revenue recognition principles.
5. Discussion of expense recognition principles.
6. Discussion of taxation accrual and deferred tax principles.
7. Discussion of tangible asset capitalization and depreciation principles.
8. Discussion of intangible asset recognition principles.
9. Discussion of liability recognition principles.
10. Discussion of any adjustments to capital accounts.
11. Discussion of cash flow statement working capital accounts.
12. Discussion of cash flow statement noncash revenue and expense accounts.
13. Discussion of cash flow statement investment accounts.
14. Discussion of cash flow statement financing accounts.

B. Financial statement projection considerations

1. Description of the term (time period) of any financial projections.
2. Description of the level of detail included in any financial projections.
3. Description of financial projections internal development procedures.
4. Description of financial projections internal review procedures.

EXHIBIT 1 Functional Analysis Considerations Related to Valuation, Damages, or Transfer Price Analyses, cont.

5. Comparison of financial projections to historical financial statements.
6. Comparison of financial projections to guideline company financial projections.
7. Comparison of financial projections to industry financial projections.
8. Comparison of historical financial projections to historical financial statements for prior projection periods.
9. Copies of any strategic plans or competitive analyses.
10. Copies of any debt service payment projections (including any considerations of liquidity or solvency).

C. Valuation considerations

1. Description of the process for selecting guideline public companies.
2. Procedures for assessing the subject entity's comparability to selected guideline public companies.
3. Procedures for adjusting the financial data of guideline public companies.
4. Description of the process for selecting guideline M&A transactions.
5. Procedures for assessing the subject entity's comparability to selected guideline M&A transactions.
6. Procedures for adjusting the financial data of selected guideline M&A transactions.
7. Description of any recent offers to buy the subject entity or the entity's securities.
8. Description of any recent sales (or other exchanges) of the subject entity or the entity's securities.
9. Descriptions of any value indications (including historical development costs) of tangible real property and tangible personal property.
10. Descriptions of any value indications (including historical development costs) of general commercial intangible assets and of intellectual property.

4. Assets employed and SWOT/risks assumed considerations

A: Assets employed

1. Description of—and use of—cash and marketable securities.
2. Description of—and use of—accounts receivable.

professional who understands how that functional analysis can be applied in the development of the value estimate, the damages measurement, or the transfer price determination.

Documentation of the functional analysis

As with the type of professional who performs the functional analysis, there is no specific guidance or requirement related to the documentation of the functional analysis. The following recommendations are presented as best practices (and not as professional standards or professional organization requirements) related to functional analysis within the context of a valuation or a damages measurement or a transfer price analysis. This best practices guidance assumes that the analyst prepares some type of written or oral report to document the development and the conclusion of the subject analysis.

As a general best practice, both the analyst's work papers and the analyst's report (whether for valuation or damages or transfer price) should include documentation of:

1. The selection of—and the rejection of—all relevant considerations and steps—and the reasons for that selection and/or rejection;
2. The data gathering process applied with regard to all of the selected considerations;
3. The selection of (and the rejection of—and the reasons therefor) all data sources;
4. A listing of all documents generally considered and of all documents specifically relied on in the functional analysis, including a description of the source of each document; copies of all of the documents relied on by the analyst should be included in the work paper file;
5. All due diligence procedures performed (including the conduct of any subject entity management interviews or any third-party interviews);
6. The schedules and exhibits prepared to summarize all of the quantitative comparability and other analyses performed;
7. The analyst's assessment of each consideration developed—documented with a commentary, description, flowchart, or other explanation;
8. The analyst's conclusion related to each of the 12 steps (or the 12 categories of procedures)—

3. Description of—and use of—prepaid expenses.
4. Description of—and use of—inventory accounts.
5. Description of—and use of—other current asset accounts.
6. Description of—and use of—land and buildings.
7. Description of—and use of—tangible personal property.
8. Description of—and use of—other tangible assets.
9. Description of—and use of—intellectual property assets.
10. Description of—and use of—other identifiable intangible assets.
11. Description of—and use of—intangible value in the nature of goodwill.
12. Description of—and use of—nonoperating or investment assets.
13. Description of—and use of—current liabilities.
14. Description of—and use of—long-term interest-bearing debt.
15. Description of—and use of—other long-term liabilities.
16. Description of—and use of—contingent liabilities.

B. SWOT and risks assumed considerations

1. List of principal competitive strengths.
2. Description of how competitive strengths affect the entity's operating results.
3. Description of how competitive strengths affect the entity's risks.
4. List of the principal competitive weaknesses.
5. Description of how competitive weaknesses affect the entity's operating results.
6. Description of how competitive weaknesses affect the entity's risks.
7. List of the principal competitive opportunities.
8. Description of how competitive opportunities affect the entity's operating results.
9. Description of how competitive opportunities affect the entity's risks.
10. List of principal competitive threats.
11. Description of how the principal competitive threats affect the entity's operating results.
12. Description of how the principal competitive threats affect the entity's risks.

documented with a commentary, description, flowchart, or other explanation;

9. A listing of each of the qualitative or quantitative factors leading up to the analyst's conclusions regarding these functional analysis components: (a) functions performed by the subject entity—and the relative importance thereof; (b) assets employed by the subject entity—both tangible and intangible assets; and (c) risks assumed with regard to the subject entity's operations.
10. A narrative summary and conclusion describing the analyst's functional analysis opinion, including a conclusory discussion of (a) functions performed; (b) assets employed; and (c) risks assumed.

Also as a general best practice, analysts may become familiar with the analysis documentation and reporting procedures described in:

1. *The Mandatory Performance Framework*, and
2. *The Application of the Mandatory Performance Framework*.

These best practices documentation guidelines were developed for the Certified in Entity and Intangibles Valuation ("CEIV") professional credential program developed by the Corporate and Intangibles Valuation Organization, LLC. These best practices guidelines are only "mandatory" for CEIV credential holders when they are performing fair value measurement valuations. However, while not mandatory for non-CEIV analysts, these guidelines do provide "best practices" guidance with regard to the analysis documentation and reporting. Such best practices guidance with regard to the functional analysis may also be applied generally to all aspects of the valuation, damages, or transfer price analysis.

There are various checklists available with regard to the performance of a functional analysis—particularly within the context of an intercompany transfer price determination. For example, the *Internal Revenue Manual* includes a "Transfer Pricing Functional Analysis Questionnaire" as Exhibit 4.61.3-4 of the manual. The use of such a checklist is a convenient resource for the analyst, particularly for purposes of completing a functional analysis with regard to Section 482 compliance.

EXHIBIT 2 Steps in the Performance of a Functional Analysis Related to a Valuation, Damages, or Transfer Price Conclusion

1. Gather and review all relevant subject entity legal documents. (This step includes documents regarding organization structure, legal form, tax status, and owners—e.g., shareholder, partnership, LLC member—agreements.)
2. Gather and review all relevant entity organization charts. (This step includes both personnel reporting charts and functional relationship clients and considers both entity governance procedures and quality, quantity, tenure, and experience of entity/function leaders.)
3. Understand and document the products/services design, R&D, and products/services differentiation functions. (This step includes the assessment of how the entity's products or services are developed and how these products or services are intended to address their competition in the relevant marketplace.)
4. Understand and document the materials, labor, and overhead procurement function. (This step includes consideration of how and when the entity procures all of its materials, labor, and overhead inputs—for entities in every type of industry or profession.)
5. Understand and document the products/services production function. (This step includes the assessment of how the entity processes all of its material, labor, and overhead components to produce a product or a service—including the quality control of the product or service production.)
6. Understand and document the inventory and products/services storage function. (This step includes both the in-process and finished inventory of goods and the in-process and finished inventory of services.)
7. Understand and document the sales and marketing function. (This step includes the assessment of the products or services pricing, packaging, advertising, promotional, trademark development and protection, and other branding—on a stand-alone basis and in response to competitive products and services.)
8. Understand and document the shipping and distribution logistics function. (This step includes consideration of how the products or services are delivered to the customer or client—including freight, insurance, returns, warranty and repairs, and other expenses.)
9. Understand and document the accounting, finance, information systems, human resources, legal, and other administration functions. (This step includes the assessment of (a) how information is generated and used throughout the organization, (b) how human resources are developed and administered, (c) how financial statements and operational documents are prepared and used, (d) how cash management and treasury operations are performed, and (e) how the entity is capitalized with debt and equity capital sources.)
10. Assess and document the entity's strategic position in comparison to competitors in the relevant industry or profession. (This step includes (a) measurement of the entity's market share/selective market share, market size, and market growth rate; (b) evaluation of the entity's customer or client needs; and (c) assessment of the entity's competitive strengths, weaknesses, opportunities, and threats.)
11. Describe and document the assets used by the entity to perform the functions. (This step includes a listing, description, and assessment of relative importance/contribution of (a) all working capital accounts; (b) all tangible property types and accounts—owned and leased; (c) all general intangible property types and accounts—owned and licensed; and (d) all intellectual property types and accounts—owned and licensed.)
12. Evaluate and document the risks assumed by the entity to perform the functions. (This step includes a listing, description, and assessment of all product/service liability, operating leverage, financial leverage, environmental, supply dependence, customer dependence, technology dependence, employee dependence, intellectual property dependence, tax litigation, commercial litigation, credit and collection, inventory control, property and casualty, foreign exchange, market/competitor, and other risks.)

Any checklist or questionnaire only documents what the analyst did—that is, the procedures the analyst performed. While such a listing of procedures performed is an important component of the functional analysis documentation, it does not provide a complete set of the functional analysis documentation. The work papers and the report should not only describe the procedures that the analyst performed—but also what conclusions the analyst developed after performing those procedures. In other words, the work papers and the report should document the analyst's thought process and rationale.

Ideally, the functional analysis work papers and report should be sufficient to allow another analyst (or the report reader) to:

1. Replicate the data gathered, the procedures performed, and the considerations made;
2. Duplicate the analyst's thought process and decision-making; and
3. Recreate the analyst's opinions and conclusions.

A well-documented set of work papers and a well-documented report (written or oral) will accomplish these objectives related to the functional analysis. These documentation objectives apply equally to a valuation, damages, or transfer price analysis.

Summary and conclusion

Many observers associate a functional analysis with a transfer price determination, and particularly with a transfer price analysis performed for Section 482 compliance purposes. Section 482 relates to the allocation of income and deductions related to the intercompany transfers of tangible property, intangible property, or services.

A functional analysis is one important component of a transfer price analysis. However, experienced analysts understand that a functional analysis is also an important component of a valuation estimate and a damages measurement. In fact, a functional analysis is relevant any time the analyst needs to thoroughly understand the subject entity—and particularly to understand the value drivers that impact the subject entity.

A functional analysis is relevant when the analyst needs to understand (1) both the various functions that are performed at the entity and the relative importance of these functions, (2) the various assets employed at the entity—including the working capital assets, the tangible assets, and the intangible assets, and (3) the various risks assumed by the entity's operations—including operational risks, financial risks, dependence risks, litigation risks, and other risks. All of these factors are important to any analyst performing a valuation, damages, or transfer price analysis.

This article considered what is (and what is not) a functional analysis, and the reasons to perform the functional analysis. This discussion summarized the applications of a functional analysis within a valuation, damages, or transfer price determination, and the many considerations typically made by the analyst into what was called the 12 steps of conducting the functional analysis.

Finally, this article considered the various types (or categories) of professionals who may be involved in developing the functional analysis, and described documentation guidelines related to the functional analysis. These documentation guidelines relate to both the analyst's work papers and the analyst's report—both written and oral.

Overall, this discussion summarized the basic considerations of the functional analysis within the context of developing a valuation, damages, or transfer price opinion. ■