On December 6, 2013, the AICPA’s Financial Reporting Executive Committee (FinREC) issued the AICPA Accounting and Valuation Guide Assets Acquired to Be Used in Research and Development Activities (the Guide). It replaces the AICPA’s 2001 practice aid, Assets Acquired in a Business Combination to Be Used in Research and Development Activities: A Focus on Software, Electronic Devices & Pharmaceutical Industries.  

The Guide provides non-authoritative accounting and valuation guidance and illustrations for preparers, auditors, and valuation specialists regarding the initial and subsequent accounting for, valuation of, and disclosures related to in-process research and development (IPR&D) assets acquired in a business combination and in an asset acquisition.

The Guide reflects the guidance in ASC 820, Fair Value Measurements, and ASC 805, Business Combinations, and provides a discussion of “enabling technology” and incremental best practices to those provided in the practice aid. It also illustrates techniques used to determine the fair value of IPR&D assets for financial reporting purposes.

The guidance in the Guide does not contemplate accounting or reporting under IFRS and thus reflects best practices under U.S. GAAP only.

Background

Amounts assigned to acquired IPR&D assets can be a significant portion of the total acquisition price in a business combination or asset acquisition, particularly in the software, electronic device, pharmaceutical, and life science industries. Financial reporting constituents remain focused on the lack of financial statement comparability that arises from (i) differing views on what constitutes assets acquired to be used in research and development (“R&D”) activities, (ii) the use of various methodologies and assumptions to value these assets, and (iii) varying levels of disclosures provided for amounts allocated to the assets. The AICPA IPR&D Task Force (the Task Force) was formed to help address these concerns through the issuance of the 2001 practice aid and the 2013 Guide.

1 Portions of the Guide and 2001 practice aid, copyright © by the American Institute of Certified Public Accountants, are quoted or reproduced in this publication with permission.
The Guide was reviewed by FinREC, the senior technical body of the AICPA, and benefitted from public comments provided to FinREC during its development. While the Guide is non-authoritative, the practice aid that it replaces was widely recognized by preparers, auditors, and regulators as a resource on the financial reporting of acquired IPR&D.

The Guide focuses on the following areas:

- Overall valuation and accounting concepts relating to acquired IPR&D assets
- Key attributes of acquired IPR&D projects
- Differences in accounting treatment of IPR&D assets acquired in a business combination and IPR&D assets acquired in an asset acquisition
- Determination of useful lives
- Income tax considerations
- In-depth application of several valuation methods
- Disclosure

The Guide replaces the 2001 edition of the AICPA practice aid *Assets Acquired in a Business Combination to Be Used in Research and Development Activities: A Focus on Software, Electronic Devices & Pharmaceutical Industries*. The key changes and additions in the Guide include:

- The latest fair value measurement guidance from ASC 820
- Additional best practices and examples related to valuation techniques and methods used to measure the fair value of IPR&D with a focus on software, electronic devices, and pharmaceutical industries
- Concepts from ASC 805 addressing the capitalization of assets acquired in a business combination to be used in R&D activities vs. those acquired in an asset acquisition and the accounting impact of any alternative future use for such assets
- Elimination of the concept of “core technology” and the introduction of “enabling technology,” which has a narrower definition
- Best practices related to the initial and subsequent accounting for and disclosure of IPR&D, including several illustrative examples of the unit of account

**Accounting and reporting concepts**

*Accounting for assets acquired in a business combination that are to be used in R&D activities*

Identifiable assets acquired in a business combination must meet the definition of an asset in FASB Concepts Statement No. 6, *Elements of Financial Statements*, and be “capable of being separated or divided from the entity and sold, transferred, licensed,
rented, or exchanged, . . . regardless of whether the entity intends to do so” or “arise from contractual or other legal rights . . .”²

.6 The Task Force believes that in order for an IPR&D project acquired in a business combination to be capitalized it must have substance and be incomplete. To have substance, the R&D activities must constitute more than insignificant efforts and create value. Management should assess the probability of success and future potential cash inflow as a result of a given project—the lower the probability of both, the lower the likelihood that management could assert that the project has substance. The Task Force defined incomplete to mean that “there are remaining risks . . . or certain remaining regulatory approvals at the date of acquisition”³ and overcoming those risks or obtaining approvals requires an expectation that additional R&D costs will be incurred.

.7 The Task Force believes that assets acquired in a business combination to be “used in R&D activities” are distinguishable from other assets acquired. In particular, such assets should be part of an R&D project for which an entity is expected to incur additional costs.

.8 The Task Force identified the following categories of assets used in R&D activities:

- Assets that will continue to be actively pursued by the acquirer in ongoing R&D activities
- Assets that the entity intends to hold to prevent others from obtaining access to them so as to "defend" the value of other intangibles used in R&D activities
- Assets that the entity intends to outlicense while continuing to play an active role in the development of the licensed asset
- Assets temporarily idled

.9 The following assets would not be considered to be used in R&D activities:

- Assets produced by acquired R&D activities that are complete, except for certain individually completed assets that are solely and directly related to IPR&D projects still in development as described in paragraph 2.37 of the Guide.
- Assets used to defend a developed product
- An outlicensed arrangement where the entity does not play an active role in continued development of the licensed asset
- Assets indefinitely idled
- Goodwill, or elements of acquired value ascribed to goodwill

**Unit of account**

.10 The Task Force does not believe it would be appropriate to combine tangible assets used in R&D activities with intangible assets used in R&D activities into a single unit of account. Likewise, finite-lived intangible assets should not be combined with indefinite-lived intangible assets into a single unit of account.

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² Paragraph 2.07 of the Guide
³ Paragraph 2.17 of the Guide
Separately identifiable IPR&D assets that share similar characteristics (and are substantially the same) may be aggregated into a single unit of account. The Task Force identified the following indicators to aid in determining whether intangible assets may be considered similar and combined (the list is not exhaustive):  

- Phase of development  
- Nature of activities and costs necessary to further develop the related IPR&D project  
- Risks associated with further development  
- Amount and timing of benefits expected  
- Expected economic life of the developed asset(s)  
- Whether there is an intent to manage costs for developed assets separately or on a combined basis  
- Whether the asset would be transferred by itself or with other separately identifiable assets  

Judgment is needed to determine whether the characteristics of the intangible assets are sufficiently similar so as to be grouped together as a single unit of account. IPR&D assets are often unique; therefore, it might be difficult to assert sufficient similarity in some situations.

One common scenario illustrated in the Guide relates to separate potential regulatory approval (in various jurisdictions) of a single drug resulting from an IPR&D project and whether there are separate jurisdictional IPR&D assets or one combined asset. The Guide evaluates this scenario through a spectrum of the indicators discussed above to demonstrate how different conclusions may be drawn.

**PwC observation:**
The post-acquisition accounting for IPR&D asset(s) will be impacted by the determination of the unit of account. In certain scenarios, it may be appropriate for IPR&D assets resulting from the same acquisition to result in different completion dates and, hence, different amortization periods and/or useful lives. Additionally, various factors could trigger the impairment of one IPR&D asset while other assets are not impacted. The determination of the unit of account is judgmental and will be dependent on the facts and circumstances of each acquisition.

It is not uncommon for an asset or liability arising from a contingency to be acquired in a business combination. ASC 805 specifically requires contingent assets and liabilities to be separately recognized. Instances where a separate liability is recorded for contingent payments that could be made related to acquired IPR&D assets should not result in a reduction of the value of the acquired assets since the payments would already be considered in the value of the contingent liability.

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4 Paragraph 2.20 of the Guide
**PwC observation:**

Under ASC 805, assets acquired and liabilities assumed in a business combination that arise from contingencies will be recognized at fair value at the acquisition date if fair value can be determined during the measurement period. Contingencies will typically be valued using a form of the income approach. Depending on the contingency, this approach could be a single discounted cash flow, an option model, a multiple scenario Probability Weighted Expected Return Method, or a Monte Carlo simulation.

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**Core technology**

.15 The 2001 practice aid defined core technology as “those technical processes, intellectual property, and the institutional understanding that exist within an organization with respect to products or processes that have been completed and that will aid in the development of future products, services, or processes that will be designed in a manner to incorporate similar technologies.”

The Task Force believes that the central element of core technology represents “technical processes, intellectual property, and institutional understanding,” each of which generally meets the criteria in ASC 805 for separate recognition. As such, the Task Force believes it is not necessary to recommend that core technology be separately recognized as an intangible asset, but rather the elements of core technology should each be recognized separately as identifiable intangible assets, including possibly IPR&D.

.16 The Task Force also discussed enabling technology. Enabling technology is defined in the Guide as “underlying technology that has value through its continued use or reuse across many products or product families.” Enabling technology is not a replacement for core technology. It is perhaps a subset of what would previously have been core technology. Examples of enabling technology provided by the Task Force include a portfolio of patents, a software object library, or an underlying form of drug delivery technology. If enabling technology meets the accounting criteria for recognition, it could be a separate unit of account if it does not share the useful life, growth, risk and profitability of the products in which it is used. To illustrate the above concepts, the Guide includes a few illustrative examples of enabling technology in the pharmaceutical industry for drug delivery mechanisms along with a generic example covering an acquisition of a portfolio of patents.

**PwC observation:**

The concept of core technology has not been carried forward to the Guide. Further, the Guide states that enabling technology will be recognized as a separate asset less frequently than core technology had previously been recognized and that the introduction of enabling technology is not expected to significantly contribute to the amount of recognized goodwill. As a result, we expect that elements of value previously included in core technology will increase the value of developed technology and/or IPR&D assets.

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5 Appendix A of the 2001 practice aid
6 Paragraph 2.25 of the Guide
7 Paragraph 6.51 of the Guide
Tangible assets acquired in a business combination to be used in R&D activities

.17 The Task Force notes that “acquired tangible assets to be used in R&D activities . . . should be recognized and measured at their fair value. After initial recognition, [they] . . . are accounted for in accordance with their nature.”

Key differences in the accounting for IPR&D acquired in an asset acquisition

.18 Tangible and intangible assets purchased from others for use in R&D activities in an asset acquisition are capitalized only if they have an alternative future uses. This is different from assets purchased in a business combination to be used in R&D activities, where alternative future use is not a factor. For an R&D asset to have alternative future use, it must be reasonably expected (greater than 50% chance) that the reporting entity will achieve economic benefit from such alternative use and further development is not needed at the acquisition date to use the asset. Alternative future use includes use in a future R&D project. However, if the R&D activity has commenced as of the acquisition date, it would be considered current use rather than future use, and the cost of the asset would be expensed. Additionally, alternative future use does not include future use that is contingent upon the successful completion of a current R&D project. The Guide provides several examples in the electronic device, pharmaceutical, and software industries to illustrate alternative future use concepts.

PwC observation:

The Guide does not include any new interpretations of existing guidance beyond updating the content of the 2001 practice aid to include concepts from ASC 820 and ASC 805. Accordingly, it is expected that capitalization of IPR&D via asset acquisitions will continue to be uncommon because meeting the alternative future use criterion will require overcoming a relatively high hurdle.

.19 Other key differences in the accounting for an asset acquisition compared to a business combination include:

- Assets acquired in an asset acquisition are measured at cost based on their relative fair values, while assets acquired in a business combination are measured at fair value.

- IPR&D assets acquired in a business combination are considered indefinite-lived (because incompleteness is an essential characteristic) until the completion or abandonment of the associated R&D project, while IPR&D assets acquired as part of an asset acquisition could be finite or indefinite-lived (or if no alternative future use, expensed immediately). For IPR&D assets capitalized in an asset acquisition, it is expected that the majority would have a finite life due to the fact that there must be a currently available alternative future use and typically such use would be expected to produce economic benefit for a finite period of time.

- No goodwill is recorded in an asset acquisition.

- Transaction costs in an asset acquisition are capitalized, while such costs incurred as part of a business combination are expensed.

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8 Paragraph 2.38 of the Guide
- Contingencies acquired in an asset acquisition are accounted for in accordance with ASC 450, Contingencies. Contingencies acquired in a business combination are measured at fair value if determinable during the measurement period. If fair value is not determinable, an asset or liability is recognized if information is available before the end of the measurement period indicating that it is probable an asset existed or a liability had been incurred at the acquisition date and the amount can be reasonably estimated.

- Contingent consideration in an asset acquisition should be accounted for in accordance with the relevant GAAP (e.g., ASC 815, Derivatives and Hedging, and ASC 450, Contingencies), whereas in a business combination it is measured at fair value.

**Subsequent accounting for acquired intangible assets that are to be used in R&D activities**

**Business combinations — accounting for indefinite-lived IPR&D**

.20 Indefinite-lived IPR&D assets should be tested for impairment annually or more frequently if events occur or circumstances change indicating that it is more likely than not that the asset is impaired.

.21 A qualitative impairment test can be performed to determine whether it is necessary to perform the quantitative test under ASC 350, Intangibles – Goodwill and Other. Qualitative indicators of a potential impairment include cost increases, declining cash flows, legal, regulatory, contractual, or business factors, and entity-specific events such as changes in management, certain industry/market deterioration, or other macroeconomic factors.

**PwC observation:**

In certain cases, it may be difficult to apply the qualitative impairment test to IPR&D assets since, given the nature of the assets, they are subject to frequent and significant changes in fair value. Entities therefore may decide to test for impairment using the quantitative test. For additional guidance, see PwC’s *A Global Guide to Accounting for Business Combinations and Noncontrolling Interests* (BCG 10.4.4).

.22 R&D expenditures related to the acquired indefinite-lived IPR&D asset and incurred subsequent to its acquisition should be expensed as incurred unless such costs are for materials, equipment, or facilities that have an alternative future use as described in ASC 730, Research and Development.

.23 If an entity has permanently ceased R&D efforts associated with acquired IPR&D assets and has no plans to sell, license, or use the assets defensively, the assets should be written off.

.24 An entity might outlicense its rights to indefinite-lived IPR&D assets to a third party. These arrangements can include the third-party transferee making an initial fixed nonrefundable payment and paying royalties based on future sales of products incorporating the underlying technology. The initial payment is often less than the carrying amount of the asset. The Task Force did not provide specific guidance for the derecognition of the outlicensed asset or recommend whether a loss should be recorded.
PwC observation:
The revenue recognition guidance resulting from the FASB and IASB’s joint revenue recognition project is expected to cover sales of goods and services, including the receipt of variable consideration and derecognition of non-financial assets. Until that guidance is released, entities should follow existing practice and recognize a loss when the initial fixed nonrefundable payment is less than the carrying amount of the outlicensed assets.

Business combinations — accounting for assets resulting from R&D activities
.25 The completion of an IPR&D project represents an asset resulting from R&D activities. A reporting entity should assess the asset resulting from R&D activities for impairment and determine an appropriate useful life as such assets would generally have a finite useful life.

.26 The useful life of assets resulting from R&D activities should be reassessed at least annually.

.27 Per ASC 350, the amortization method should reflect the pattern that economic benefits of the intangible assets are consumed or otherwise used up. If the pattern cannot be reliably determined, a straight-line approach should be used.

Income tax considerations — valuation allowance
.28 In situations where a deferred tax liability related to acquired IPR&D assets is recorded, the Task Force noted that when performing a valuation allowance assessment, it is important to consider whether the deferred tax liability should be considered a source of income to realize a benefit from deferred tax assets. This is due to the fact that deferred tax liabilities related to indefinite-lived intangible assets cannot typically be used to support realization of deferred tax assets where tax attributes expire unless the deferred tax liability is expected to reverse prior to the tax attribute expiring. In certain circumstances an entity may be able to reliably estimate when the IPR&D will cease being indefinite lived and therefore a potential source of income. Absent that ability, IPR&D should be considered similar to other indefinite-lived intangible assets for the purpose of determining recoverability of deferred tax assets.

PwC observation:
Patents are often elements of acquired IPR&D. Entities with European subsidiaries can take advantage of “patent box” schemes, which offer a reduced income tax rate on income derived from patents and therefore impact the rate at which deferred tax liabilities are established. For further information see Patent Box and technology incentives: Tax and financial reporting considerations issued by PwC on August 20, 2013.

Disclosure

Business combinations
.29 Required disclosures related to a business combination include amounts recognized as of the acquisition date for each major class of assets acquired and liabilities assumed. As it relates to IPR&D, additional disclosures are only necessary if quantitatively or qualitatively material—individually or in the aggregate. IPR&D disclosures should not
give undue emphasis to IPR&D, as such disclosures should be considered in the context of the financial statements as a whole.

.30 The Task Force notes the following for consideration within MD&A: 9

- IPR&D projects represent a known event that may produce uncertainty that could reasonably be expected to materially affect future operating results
- IPR&D projects may require a material demand on liquid resources to fund completion of the projects
- Management’s objectives regarding material acquisitions
- The risk that certain early-stage IPR&D projects could become impaired

.31 Registrants are typically encouraged to supply forward-looking information. The Guide notes that when doing so, the legal implications of including that information in the financial statements, as opposed to outside the financial statements, such as in MD&A, should be considered, particularly as they relate to safe harbor protections.

**Additional considerations for asset acquisitions**

.32 ASC 350 requires disclosure of the amount of IPR&D acquired in an asset acquisition and written off in the period, and the line item in the income statement in which the amounts written off are reported.

**Valuation concepts**

.33 Under ASC 805, fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

.34 Valuation techniques used to value IPR&D assets include the cost, market, and income approaches. If multiple approaches are used, the results should be analyzed to determine the reasonableness of the values produced by each approach.

**PwC observation:**

If different valuation approaches give widely disparate results, care should be taken to understand the reasons for the differences in value. Simply taking an average of widely disparate values is generally not appropriate.

.35 The cost approach considers the amount that would be required to replace the service capacity of an asset (i.e., the current replacement cost). While the cost approach is a frequently used valuation technique, it is not commonly used for the valuation of IPR&D assets. The cost approach can be used in the valuation of early stage IPR&D when the stage of development is so early that reliable estimates about future benefits cannot be determined, as market participants would likely be willing to pay for the incurred costs. The cost approach could also be appropriate for valuing single purpose tangible R&D assets or assets that can be substituted effectively through replacement or reproduction.

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9 Paragraph 5.07 of the Guide
PwC observation:

The cost approach is not commonly used for valuing later stage IPR&D assets because in many cases the cost of creating a technology will not represent its fair value. For example, if significant amounts are spent on developing a pharmaceutical compound that ultimately is not effective, the cost approach would overstate the value of the compound as others would not be willing to purchase it at its cost.

.36 The market approach leverages prices and other relevant information generated by market transactions. However, such prices are rarely available due to the fact that IPR&D assets typically transfer with the sale of a business, not individually. In the rare cases that IPR&D assets transfer individually, they may not be comparable to the subject assets due to the particular characteristics of each IPR&D asset. Therefore, this approach is seldom used to value IPR&D assets.

.37 The income approach converts future estimates of cash flows into a single current value. The cash flows are discounted to present value using a discount rate that reflects the risks of achieving the cash flows. The fair value measurement represents the current market expectations of the future amounts.

.38 It is important that the nature of the IPR&D asset’s cash flows match the discount rate. If conditional cash flows are used, which do not consider downside scenarios, the discount rate must be increased to incorporate the risk of the downside scenarios, which are not found in the projections.

PwC observation:

IPR&D projects may often have significant technological and market risks. As a result IPR&D assets can be among the riskiest assets of a business and tend to be valued with higher discount rates than many other intangible assets.

.39 ASC 820 requires that the prospective financial information (PFI) used to value assets be based on market participant assumptions. As a result, only synergies that would be recognized by market participants should be considered.

.40 The valuation must consider the highest and best use of the assets by market participants. Although the acquirer of the assets may wish to discontinue the IPR&D, if market participants would maximize their value by continuing the IPR&D, this assumption should be used in the valuation of the assets.

.41 The income approach will typically include a tax amortization benefit, which represents the tax savings the purchaser will obtain from amortizing the purchased intangible assets. Unless market participants are not taxpayers, a tax amortization benefit is generally considered in the valuation of the intangible assets regardless of whether the acquisition was structured as a taxable or non-taxable transaction.

.42 The primary forms of the income approach that are used to value IPR&D assets include the multi-period excess earnings method, relief from royalty method, decision tree analysis method, and split method. Less commonly, IPR&D assets are valued using Monte Carlo analysis, option-based methods, manufacturing cost savings methods, incremental revenue or profit methods, “with and without” methods, and the Greenfield method.

.43 The multi-period excess earnings method estimates fair value by using PFI for a collection of assets, as opposed to a single asset, when there is an identifiable stream of prospective cash flows. These cash flows will often be a result of not only the IPR&D, but also of working capital, fixed assets, workforce, and other intangible assets. In order to
reflect the value of only the IPR&D, contributory asset charges (i.e., economic rents) are deducted from the net cash flows for the collection of assets to isolate the excess earnings attributable solely to the intangible asset being valued.

PwC observation:
The multi-period excess earnings method is commonly used when the intangible asset being valued is the primary asset that is responsible for generating the cash flows. The fair value of the primary asset is determined after taking into account returns on the other (contributory) assets in the group of assets associated with the PFI.

.44 The relief from royalty method values IPR&D assets on the basis of the royalty payment that the owner of the assets does not have to pay because it owns the assets rather than licenses them from a third party. The after tax estimated royalty payments are discounted to present value. When valuing IPR&D assets, it may also be appropriate to consider costs to complete, probability of completion, and post-completion maintenance costs.

PwC observation:
The relief from royalty method is commonly used for assets that are licensed in exchange for a royalty payment, such as trademarks, trade names, and patents. While it is often difficult to obtain licensing information for identical assets, industry average rates or licenses of similar assets may be used to estimate the appropriate royalty rate.

.45 The decision tree analysis method is an income-based method that captures the expected benefits, costs, and probabilities of contingent outcomes at future decision points. These decision points are when a major investment decision will be made. The method allows for a decision of whether to continue to devote resources to development based on the expected future benefits. The ability to analyze future values, change course, and potentially avoid future investment costs that are not expected to provide a return is the key differentiating factor with the decision tree analysis. This method is most commonly used for assets that are subject to risks that are not market derived, such as the success of an individual technology.

.46 Intangible assets such as IPR&D are challenging to value. For a more detailed description of the methodologies used in valuing intangible assets, please refer to PwC’s *A Global Guide to Accounting for Business Combinations and Noncontrolling Interests* (BCG 7.4).

### Questions?

PwC clients who have questions about this Dataline should contact their engagement partner. Engagement teams who have questions should contact the Business Combinations team in the National Professional Services Group (1-973-236-7801).

### Authored by:

Dusty Stallings  
Partner  
Phone: 1-973-236-4062  
Email: dusty.stallings@us.pwc.com

Richard Billovits  
Director  
Phone: 1-646-471-4262  
Email: richard.billovits@us.pwc.com

Brandon Heiman  
Senior Manager  
Phone: 1-973-236-4261  
Email: brandon.j.heiman@us.pwc.com

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