TO: All Interested Parties

FROM: Rick Baumgardner, Chair
               Appraisal Practices Board

RE: **Exposure Draft –** *The Valuation of Customer-Related Assets*

DATE: December 5, 2013

The Appraisal Practices Board (APB) was officially formed by The Appraisal Foundation Board of Trustees on July 1, 2010. The APB has been charged with the responsibility of identifying and issuing voluntary guidance on recognized valuation methods and techniques, which may apply to all disciplines within the appraisal profession. As applied to valuation for financial reporting purposes this responsibility has been extended to best practices. The APB has prioritized topics to offer guidance in areas that valuation specialist and users of appraisal services have identified as the most pressing issues facing the profession.

Originally facilitated by The Appraisal Foundation, the work of the Valuation for Financial Reporting Work Groups is now formally adopted and published through the Appraisal Practices Board (APB) of The Appraisal Foundation.

On June 5, 2012, the APB issued a Discussion Draft on proposed *Best Practices for the Valuation of Customer-Related Assets* This document was a first draft containing questions and discussion points. There were 16 comment letters received during the comment period. These were considered by the SME Group on Customer Related Assets and the APB. This Exposure draft has benefited from those comments and attempted to address any issues arising from them. **Request for Comments:** The intent of this Exposure Draft is to obtain further comments from all interested parties.

All interested parties are encouraged to comment in writing to the APB before the deadline of April 30, 2014. Respondents should be assured that each member of the APB and the SME Group will thoroughly read and consider all comments.

Written comments on this Exposure Draft can be submitted by mail, email and facsimile.

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Exposure Draft:

The Valuation of Customer-Related Assets

Date Issued: **TBD**

Application: **Business Valuation, Intangible Assets**

Background: Since the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards No. 157 (FASB Statement No. 157), predecessor to Accounting Standards Codification ("ASC") 820 *Fair Value Measurement* (ASC 820)*,* and FASB Statement No. 141(R), predecessor to ASC 805 *Business Combinations*, there has been increased interest in the identification and recognition of the fair value of assets and liabilities in financial statements. Furthermore, the FASB and the International Accounting Standards Board ("IASB") have been working on a convergence project with an objective of having a consistent set of accounting standards that can be used globally. In that regard, the IASB has issued International Financial Reporting Standards 3 (revised) *Business Combinations* (IFRS 3R) and IFRS 13 *Fair Value Measurement*, both of which are largely similar to the same statements issued by the FASB. Accordingly, during the creation of this document, members of the International Valuation Standards Council ("IVSC") reviewed the document and discussed with members of this Working Group certain topics to try and ensure consistency with both a) valuation concepts in the International Valuation Standards ("IVS") and; b) fair value guidance in IFRS 13 that existed at the date of publication of this document.

Because of the need for financial statements to be both reliable and relevant, valuation practices must provide reasonably consistent and supportable fair value conclusions. To this end, it is believed that guidance regarding best practices surrounding certain specific valuation topics would be helpful. The topics are selected based on those in which the greatest diversity of practice has been observed. To date, three Working Groups have been sponsored by The Appraisal Foundation. The first Working Group addressed the topic of contributory assets and charges in a document titled *The Identification of Contributory Assets and Calculation of Economic Rents* dated May 31, 2010 (the "CAC Document" now known as "Valuation Advisory #1"). This second Working Group has addressed the general topic of customer-related assets. A third Working Group is addressing the topic of the control premiums as applied in valuations done for financial reporting purposes.

This document is intended to present helpful guidance for those that are preparing fair value measurements of customer-related assets; however, this paper is not intended to be an authoritative valuation standard. The Working Group believes that consideration of the facts and circumstances related to the asset(s) that are being valued may support a departure from the recommendations of this document. It is the belief of the Working Group that the valuation of assets in general and customer-related assets specifically is a complicated exercise that requires significant judgment. This paper seeks to present views on how to approach and apply the valuation process appropriate for customer-related assets.

Table of Contents

1 1.0   INTRODUCTION

2 1.1.1   This document (Valuation for Financial Reporting Advisory #2), entitled *The Valuation of Customer-*
3 *Related Assets,* is the result of deliberations by the Working Group on Customer-Related Assets (the second
4 Working Group in the "Best Practices for Valuations in Financial Reporting: Intangible Asset Working Group"
5 series) and input received from interested parties. Customer-related assets include customer lists, order or
6 production backlog, customer contracts and related relationships, and non-contractual customer relationships.
7 The purpose of this Valuation Advisory is to outline best practices in the valuation of customer-related assets
8 for financial reporting purposes.

9 1.1.2   There are multiple situations that may require the valuation of customer-related assets for financial
10 reporting purposes, including:

11   a.   Business combinations;

12   b.   Asset acquisitions;

13   c.   Goodwill impairment testing; and

14   d.   Long-lived asset impairment testing.

15 1.1.3   The approaches and methodologies used to value customer-related assets under each of the situations
16 above are similar. Additionally, the situations outlined above are similar in that they focus on a valuation of
17 only the customer-related assets of a business (i.e., existing customers) that meet the identification and
18 recognition criteria (which are discussed in detail in this document) at the effective date of the valuation. Future
19 customer-related assets, which do not meet the identification and recognition criteria, are not included in these
20 analyses and are considered to be part of goodwill. The majority of the accounting guidance is contained in the
21 Financial Accounting Standards Board ("FASB") Accounting Standards Codification™ ("ASC") and within the
22 International Financial Reporting Standards ("IFRSs").

23 1.1.4   The following discussion on the valuation of customer-related assets for financial reporting purposes
24 requires an understanding of relevant accounting and valuation concepts. In-depth discussion of these concepts
25 is beyond the scope of this Valuation Advisory and the reader is assumed to have a basic understanding of these
26 concepts. Specifically, the reader is assumed to have knowledge of relevant accounting and valuation concepts
27 as they relate to the valuation of assets and liabilities for financial reporting purposes outlined above in
28 paragraph 1.1.2.

29 1.1.5   The Working Group recognizes professional judgment is critical in effectively planning, performing,
30 and concluding a valuation. Professional judgment requires a process of fact-gathering, research, and analysis
31 to reach well-reasoned conclusions based on relevant facts and circumstances available at the time of the
32 conclusion.   Due to the nature of judgments, questioning and skepticism are appropriate.   Even then,
33 knowledgeable, reasonable, objective individuals can reach different conclusions for a given set of facts and
34 circumstances.

35 1.1.6   The following important clarifications regarding this document are also made:

36   a.   These best practices have been developed with reference to United States ("U.S.") Generally Accepted
37   Accounting Principles ("GAAP") and IFRSs effective as of the date this document was published.[1]
38   While the Working Group believes the best practices described herein may have application outside of
39   U.S. GAAP and IFRSs, valuation specialists should not apply these best practices to valuations prepared

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[1] IFRS 13 *Fair Value Measurement* was issued in May 2011 with an effective date of January 1, 2013.

40 under different standards/statutory requirements without a thorough understanding of the differences
41 between those standards and U.S. GAAP and IFRSs existing as of the date of this publication;

42 b. The Working Group has not used the terms "cash flow," "earnings," and "income" as commonly used in
43 the accounting literature. When these and similar terms are used, they will refer to an "economic
44 earnings" concept associated with the netting of expense and other charges against revenue;

45 c. The terms "value," "valuation," "valuing," "fair value," and any other reference to value throughout this
46 document are intended, for the purposes of this document, to be stated in accordance with "fair value" as
47 defined in ASC and IFRSs;

48 d. The discussions and examples in this Valuation Advisory make specific assumptions for illustrative
49 purposes only. While general principles have been provided for guidance to assist in the valuation of
50 customer-related assets, assumptions used in the valuation of any asset should be based on facts and
51 circumstances; and

52 e. The models used in the sample calculations are for illustrative purposes only and are not intended to
53 represent the only form of model, calculation, or final report exhibit that is generally considered
54 acceptable among valuation specialists.

55 1.1.7   This document provides detail related to valuation techniques that are used to value customer-related
56 assets for accounting-related purposes.[2]   The paper includes detailed discussion of the following topics:

57 a. Definitions of customer-related assets as set out in accounting literature and an exploration of the
58 economic characteristics of customer-related assets;

59 b. Valuation techniques used to estimate the fair value of customer-related assets that are viewed to be
60 representative of best practice; and

61 c. How customer-related assets interact with other assets of a business and best practice guidance on how
62 to address these relationships in fair value measurements.

63 1.1.8   The appendices at the end of this Valuation Advisory include examples of several techniques and
64 methodologies relevant to the valuation of customer-related assets. Each example provides a set of facts and
65 circumstances to demonstrate the associated valuation techniques discussed.

66 **2.0   ACCOUNTING BACKGROUND AND OVERVIEW**
67
68 **2.1   Accounting Standards and the Accounting Standards Codification**

69 2.1.1   In 2001, the FASB issued several accounting standards to address business combinations, intangible
70 assets and goodwill, and impairment testing guidance: Statement of Financial Accounting Standards No. 141,
71 *Business Combinations* ("FASB Statement No. 141"), Statement No. 142, *Goodwill and Intangible Assets*
72 ("FASB Statement No. 142"), and Statement No. 144, *Accounting for the Impairment or Disposal of Long-*
73 *Lived Assets* ("FASB Statement No. 144"). FASB Statement No. 141 required that certain assets acquired in a
74 business combination be recorded at fair value. FASB Statement No. 142 and FASB Statement No. 144 address
75 asset impairment.

76 2.1.2   In 2006, the FASB issued Statement No. 157, *Fair Value Measurements* ("FASB Statement No. 157"),
77 to provide a uniform definition of fair value and a framework for developing fair value measurements.
78 Subsequently, in 2007, as part of the joint development project between the FASB and the International

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[2] Accounting and appraisal standards refer to the terms "valuation approaches," "valuation techniques," and "valuation methods." This monograph uses these terms interchangeably as a way to convey the determination of value within an approach framework.

79 Accounting Standards Board ("IASB") the FASB issued a revised version of FASB Statement No. 141 (FASB
80 Statement No. 141R). FASB Statement No. 141R and International Financial Reporting Standard 3(R),
81 *Business Combinations* ("IFRS 3R"), are largely similar, although some small differences still remain. The
82 FASB and the IASB have been working to converge the IFRSs and U.S. GAAP. In May 2011, the FASB re-
83 issued via ASU 2011-4, ASC 820, *Fair Value Measurement,* in tandem with the IASB issuing, for the first time,
84 IFRS 13, *Fair Value Measurement*. IFRS 13 is virtually identical to ASC 820*,* although certain style
85 differences exist.

86 2.1.3   On July 1, 2009, the FASB changed the way accounting standards are organized and accessed. FASB
87 ASC is now the single source of authoritative U.S. GAAP. ASC does not change U.S. GAAP; however, it
88 combines all authoritative accounting standards issued by bodies such as the FASB, the American Institute of
89 Certified Public Accountants ("AICPA"), and the Emerging Issues Task Force ("EITF") into a topically
90 organized database. ASC supersedes all existing U.S. accounting literature (other than additional guidance
91 issued by the Securities and Exchange Commission ["SEC"]). Primary reference changes relevant to this
92 document due to ASC are as follows:

93   a. FASB Statement No. 141R → ASC 805, *Business Combinations*

94   b. FASB Statement No. 142 → ASC 350, *Intangibles—Goodwill and Other*

95   c. FASB Statement No. 144 → ASC 360, *Property, Plant, and Equipment*

96   d. FASB Statement No. 157 → ASC 820, *Fair Value Measurement*

97 2.1.4   With limited exceptions, ASC 805 and IFRS 3R both require that assets and liabilities acquired in a
98 business combination be measured at fair value. As mentioned above, under U.S. GAAP and IFRSs, fair value
99 measurement guidance is addressed in ASC 820 and IFRS 13, respectively.

100 2.1.5   Both ASC 805 and IFRS 3R pay a significant amount of attention to intangible assets in discussion and
101 examples, particularly for customer-related assets. International Accounting Standard 38, *Intangible Assets*
102 ("IAS 38") and the illustrative examples in IFRS 3R address the identification of intangible assets under IFRSs
103 and provides guidance on the nature of customer-related assets.
104
105 **2.2   Business Combinations**

106 2.2.1   In a business combination, ASC 805 and IFRS 3R require the recognition and measurement of the fair
107 value (with limited exceptions) of identifiable assets acquired (including financial assets, fixed assets, intangible
108 assets, and contingent assets), liabilities assumed (including financial liabilities and contingent liabilities), and
109 any non-controlling interest and/or previously held equity interest in the acquiree.

110 2.2.2   Fair value is defined in the ASC 820 Glossary and IFRS 13 (9) as "the price that would be received to
111 sell an asset or paid to transfer a liability in an orderly transaction between market participants at the
112 measurement date."

113 2.2.3   ASC 805 and IFRS 3R provide identification and recognition criteria for assets. For example, ASC
114 805-20-20 outlines the following: "An asset is identifiable if it meets either of the following criteria: (a) It is
115 separable, that is, capable of being separated or divided from the entity and sold, transferred, licensed, rented, or
116 exchanged, either individually or together with a related contract, identifiable asset, or liability, regardless of
117 whether the entity intends to do so, or (b) It arises from contractual or other legal rights, regardless of whether
118 those rights are transferable or separable from the entity or from other rights and obligations." IFRS 3R
119 outlines similar criteria. An asset may also meet the separable criteria if it cannot be sold, licensed or
120 exchanged individually, but could be when combined with a related contract, asset or liability (ASC 805-20-55-
121 5). Although ASC 805 and IFRS 3R do not provide specific guidance to determine whether an asset arises from

122 contractual or legal rights, the Working Group believes the criteria for recognition is intended to be broad.
123 Specific examples of intangible assets that meet the recognition criteria are discussed in ASC 805-20-55-11 to
124 55-45 and 55-52 to 55-57, and in paragraphs IE16-44 of IFRS 3R. It should be noted that these lists (which
125 include customer-related assets) are not intended to be all-inclusive.

126 2.2.4   Fair values are estimated using three generally accepted valuation approaches which are set out in ASC
127 820 and IFRS 13 as the Income Approach, the Cost Approach, and the Market Approach. A determination
128 must be made as to the appropriate methodology or methodologies to estimate the fair value of each type of
129 asset, liability, and non-controlling interest and/or previously held equity interest.

130
131 **2.3   Asset Acquisitions**

132 2.3.1   ASC 805 defines a business as "an integrated set of activities and assets that is capable of being
133 conducted and managed for the purpose of providing a return in the form of dividends, lower costs, or other
134 economic benefits directly to investors or other owners, members or participants" (ASC 805-10-20).   The
135 definition is further outlined in ASC 805-10-55-4 through 55-9 and in IFRS 3R (B8).

136 2.3.2   ASC 805-50-30-1 to 30-4 addresses the acquisition of assets rather than a business (also addressed in
137 IFRS 3R [2b]). An acquisition of assets or groups of assets that do not meet the definition of a business is
138 initially recognized at its cost to the acquiring entity (many acquisitions of groups of assets meet the definition
139 of a business and would therefore be accounted for as a business combination). Acquiring assets in groups
140 requires not only ascertaining the cost of the asset (or net asset) group but also allocating that cost to the
141 individual assets (or individual assets and liabilities) that make up the group. The cost of a group of assets
142 acquired in an asset acquisition is allocated to the individual assets acquired or liabilities assumed based on their
143 relative fair values and does not give rise to goodwill. Similar to asset valuations performed in relation to a
144 business combination, the fair values of all the individual assets included in an asset acquisition (including
145 customer-related assets) should be determined according to the fair value principles outlined in ASC 820. As
146 goodwill does not arise in a purchase of assets that are not a business, relative fair value adjustments may be
147 required.

148 **2.4   Goodwill and Indefinite-Lived Asset Impairment Testing[3]**

149 2.4.1   ASC 350 addresses impairment testing under U.S. GAAP of indefinite-lived intangible assets and
150 goodwill. ASC 350 outlines a two-step impairment test for goodwill, the first of which involves estimating the
151 fair value of a reporting unit. If the test indicates that the fair value of the reporting unit is less than the carrying
152 amount, the second step test follows the guidance set forth in ASC 805 and uses the fair value of the reporting
153 unit as part of a valuation of the assets and liabilities of the reporting unit. Therefore, the business combination
154 valuation process as outlined in ASC 805 (which may involve the valuation of customer-related assets) is
155 applicable to the ASC 350 step two test for goodwill impairment.   After the issuance of ASU 2011-08,
156 *Intangibles—Goodwill and Other (Topic 350): Testing Goodwill for Impairment,* ASC 350 allows companies
157 to consider qualitative factors to determine if it is more likely than not that a reporting unit's fair value is less
158 than its carrying amount. If it is more likely than not (i.e., greater than 50% probability) that the fair value is
159 less than the carrying amount, the entity would then need to perform the two-step goodwill impairment test.

160 2.4.2   IAS 36, *Impairment of Assets*, addresses impairment testing of certain non-financial assets and goodwill
161 under a model that is different than the model outlined in U.S. GAAP. An asset is tested for impairment either

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[3] FASB issued an exposure draft July 1, 2013 regarding ASC 350 that was a proposal of the Private Company Council (PCC Issue 13-01B). We understand that it has been endorsed by the FASB and that an ASU is in the process of being finalized.

162 on its own or as part of a cash-generating unit ("CGU"), which is defined in IAS 36 as the smallest group of
163 assets that generates cash inflows from continuing use that are largely independent of the cash inflows from
164 other assets or groups of assets. Impairment exists when the carrying amount of an asset or CGU exceeds its
165 recoverable amount. The recoverable amount is the greater of its fair value less costs of disposal and its value
166 in use. The impairment model under IAS 36 is a single step test and does not include the second step test that is
167 applied under U.S. GAAP when the fair value of a reporting unit is below its carrying amount.

168 2.4.3   While fair value less costs of disposal is a well understood concept, value in use is a measurement basis
169 that is only applied in impairment testing under IFRS. As an IFRS-specific measurement, IAS 36 prescriptively
170 describes how value in use is to be measured using discounted cash flow techniques; for example, IAS 36 (30-
171 57) states that "estimates of future cash flows include: a) projections of cash inflows from the continued use of
172 the asset; b) projections of cash flows that are necessarily incurred to generate the cash inflows from the
173 continued use of the asset (including cash outflows to prepare the asset for use) and can be directly attributed, or
174 allocated on a reasonable and consistent basis, to the asset; and c) net cash flows, if any, to be received or paid
175 for the disposal of the asset at the end of its useful life." The standard notes that future cash flows should not
176 include cash flows that arise from restructuring improvements that have not yet been committed, or
177 improvements or enhancements to the asset or cash generating unit's performance.

178 2.4.4   ASC 350 and IAS 36 both address impairment of indefinite-lived intangible assets other than goodwill
179 via a single step test. Impairment arises if the carrying amount exceeds the fair value (or the greater of fair
180 value less cost to sell or value in use under IAS 36).[4] Indefinite-lived intangible assets, which typically include
181 trade names, trademarks, and brands[5], as well as in-process research and development (IPR&D) or other
182 intangible assets that are not yet available for use, are required to be tested annually or upon the occurrence of a
183 triggering event. In the Working Group's view, customer-related assets generally would not qualify as an
184 indefinite-lived asset.

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[4] The fair value guidance under either IFRS 3R or IFRS 13 does not apply to the "value in use" measure as described in IAS 36.

[5] In-process R&D or intangible assets that are not yet available for use are not indefinite-lived, but are treated in the same manner as indefinite-lived assets.

2.5 Long-Lived Asset Impairment Testing

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186 2.5.1   ASC 360 addresses impairment testing for long-lived assets held and used, or assets held for sale or
187 disposal. ASC 360 uses a recoverability test to determine if the carrying amount of a held and used asset or
188 asset group is recoverable. If the asset or asset group is not recoverable, fair value measurements are used to
189 determine the amount of impairment. ASC 360-10-20 defines an asset group as the unit of accounting for a
190 long-lived asset or assets to be held and used, which represents the lowest level for which identifiable cash
191 flows are largely independent of the cash flows of other groups of assets and liabilities. This is typically
192 measured based on cash flows that the asset or asset group would generate over the remaining useful life of the
193 asset or the primary asset in the asset group. The recoverability test compares the sum of the undiscounted cash
194 flows of the asset or asset group to the carrying amount of the asset or asset group. If the carrying amount
195 exceeds the undiscounted cash flows, there is a second step test in which the fair value of the asset or assets that
196 comprise the asset group, which may include customer-related assets, is determined for the purpose of
197 estimating the amount of impairment. ASC 360-10-35-28 states: "An impairment loss for an asset group shall
198 reduce only the carrying amounts of a long-lived asset or assets of the group. The loss shall be allocated to the
199 long-lived assets of the group on a pro rata basis using the relative carrying amounts of those assets, except that
200 the loss allocated to an individual long-lived asset of the group shall not reduce the carrying amount of that
201 asset below its fair value whenever that fair value is determinable without undue cost and effort."

202 2.5.2   As noted in 2.4.2, IAS 36 covers impairment for both long-lived assets and goodwill using a one-step
203 recoverability test.

204 2.5.3   Under U.S. GAAP, there is a prescribed order for impairment testing (assuming the assets are not held
205 for sale) where indefinite-lived assets should be tested under ASC 350 first, then long-lived assets tested under
206 ASC 360, and lastly goodwill tested under ASC 350 (ASC 350-20-35-31). It is important to use the adjusted
207 balance sheet carrying amounts as a result of each preceding test. In other words, if an indefinite-lived asset
208 was impaired, the impairment amount may impact the carrying amount of the ASC 360 asset group and/or the
209 ASC 350 reporting unit carrying amount. Similarly, if a long-lived asset was impaired, the impairment amount
210 may impact the ASC 350 reporting unit carrying amount.

211 2.5.4   Under IAS 36, like U.S. GAAP, individual assets, (both finite and indefinite-lived), are tested for
212 impairment prior to testing goodwill for impairment. If an asset is impaired, the amount is adjusted in the CGU
213 prior to the goodwill impairment test being applied. In many cases, when an individual asset's recoverable
214 amount cannot be determined, it is tested as part of the CGU.   If there is impairment at the CGU level, the
215 amount is first applied to goodwill with any remaining impairment applied to other assets in the scope of IAS
216 36 on a pro-rata basis. IAS 36 does not permit an asset's carrying amount to be written down below the higher
217 of fair value less costs of disposal (if determinable), value in use (if determinable), and zero.

218 IAS 36 also requires entities to assess whether there is any indication that an impairment loss recognized in
219 prior periods for an asset other than goodwill or a CGU (not applicable to goodwill) may no longer exist or may
220 have decreased (IAS 36.110-125). If there is an indication that the value of the asset may have increased, the
221 previously recognized impairment may be reversed in full or in part. Where the reversal applies to a CGU, the
222 carrying amounts other than goodwill would be increased on a pro-rata basis, but not to exceed the pre-
223 impairment amount—i.e., the amount at which the asset would have been recorded if no impairment was taken.
224 For example, for an asset with a finite life, if impairment was recorded two years prior, one could not write the
225 asset back to the pre-impairment amount, but rather to that amount less two years of additional amortization.
226

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3.0   IDENTIFICATION OF CUSTOMER-RELATED ASSETS AND VALUE CONSIDERATIONS

3.1   Introduction

230 3.1.1   When valuing customer-related assets, the Working Group believes that asset identification and
231 qualitative considerations are equally as important as the selection of valuation methodology and other
232 quantitative factors. This section provides an overview of issues to consider when identifying customer-related
233 assets and qualitative considerations that will assist in assessing the relative importance of customer-related
234 assets compared to other assets present in an entity. These qualitative factors are critical to the valuation
235 process and should be continually revisited throughout the valuation analysis.

3.2   Identification of Customer-Related Assets

237 3.2.1   Since the issuance of ASC 805's predecessor standard (i.e., FASB Statement No. 141R) and ASC 350,
238 customer-related assets have been the subject of additional guidance from the FASB and SEC. Specifically, the
239 FASB's EITF clarified the identification and recognition criteria for customer-related assets in EITF Issue 02-
240 17, *Recognition of Customer Relationship Intangible Assets Acquired in a Business Combination* (FASB
241 Statement No. 141R nullified the EITF and incorporated the guidance in the standard), and FASB Staff Position
242 ("FSP") FAS 142-3, *Determining the Useful Life of Intangible Assets* (also nullified and incorporated into ASC
243 350). In addition, the SEC staff has discussed the topic of customer-related assets in speeches. Although not
244 authoritative, these efforts were aimed at clarifying the implementation guidance in the accounting standards as
245 well as addressing interpretation and practice diversity issues.

246 3.2.2   Customer-related assets, like other intangible assets, must meet certain recognition criteria to be
247 considered identifiable for financial reporting purposes. ASC 805 continues the guidance set forth in prior U.S.
248 GAAP where identifiable assets are recognized if they are contractual, arise from legal rights, or if they are
249 separable and can be separated and sold, rented, or leased (ASC 805-20-25-10, IFRS 3R Appendix A, and
250 B31). An intangible asset should be separately recognized even if the asset is subject to transfer restrictions or
251 the contract is subject to a cancellation option. However, the impact of these features may affect the fair value
252 of the intangible asset.

253 3.2.3   Certain customer-related intangible assets may not require recognition separate from goodwill since
254 they fail to meet the contractual-legal or separability criteria. An example of such assets includes walk-up
255 customers.

256 3.2.4   ASC 805 and IFRS 3R identify several types of customer-related intangible assets that require separate
257 recognition in a business combination, including customer contracts and related relationships, non-contractual
258 customer relationships, order or production backlog, and customer lists. These customer-related assets are
259 defined and/or described in ASC 805-20-55-20 to 28 and in IFRS 3R.IE23-IE31.

260 3.2.5   ASC 820 asserts that fair value should represent the attributes of the asset from the perspective of a
261 market participant. For example, if there is a legal restriction on the use or sale of an asset, those facts should
262 be considered in the measurement. However, if the restriction is an attribute of the holder of the asset rather
263 than the asset, such a restriction would be excluded from the fair value consideration if other potential market
264 participants would be able to access and use the asset without restriction. For example, the holder of an asset
265 may be restricted from fully utilizing it by government regulations driven by competition concerns. However,
266 other market participants with a lesser market share may not be restricted in the same manner and may be able

267 3.2.6   to realize a greater value from the asset.

268 3.2.7   The accounting literature provides guidance related to the different categories of customer-related
269 assets as described in the following paragraphs:

270 3.2.8   A *Customer List* "consists of information about customers, such as their names and contact information.
271 A customer list also may be in the form of a database that includes other information about the customers, such
272 as their order histories and demographic information. A customer list generally does not arise from contractual
273 or other legal rights. However, customer lists are valuable and frequently leased or exchanged. Therefore, a
274 customer list acquired in a business combination normally meets the separability criterion for recognition apart
275 from goodwill" (ASC 805-20-55-21, IFRS 3R IE24).

276 3.2.9   An *Order or Production Backlog* "arises from contracts such as purchase or sales orders. An order or
277 production backlog acquired in a business combination meets the contractual-legal criterion even if the purchase
278 or sales orders are cancelable" (ASC 805-20-55-22, IFRS 3R IE25). As described above, the ability to cancel
279 sale or purchase orders does not impact whether the order or production backlog should be recognized
280 separately as an intangible asset, although it may impact its fair value measurement.

281 3.2.10 *Customer Contracts and the Related Customer Relationships* are identified because "if an entity
282 establishes relationships with its customers through contracts, those customer relationships arise from
283 contractual rights. Therefore, customer contracts and the related customer relationships acquired in a business
284 combination meet the contractual-legal criterion, even if confidentiality or other contractual terms prohibit the
285 sale or transfer of the contract separately from the acquiree" (ASC 805-20-55-23, IFRS 3R IE26). As described
286 above, the ability to cancel a contract or the fact that the contract is subject to transfer restrictions does not
287 impact whether the customer contract should be recognized separately as an intangible asset, although it may
288 impact its fair value measurement. It should also be noted that customer contracts that are deemed to be
289 unfavorable to market terms may give rise to a liability (see ASC 805-20-55-31).

290 3.2.11   The words "contractual" and "legal rights" are not explicitly defined in ASC 805 or its predecessor.
291 Interpretive guidance was introduced in EITF Issue 02-17 (nullified and incorporated into ASC 805): "The
292 Task Force reached a consensus on Issue 3 that an order or a production backlog arising from contracts such as
293 purchase or sales orders (even if the purchase or sales orders are cancelable) as described in paragraph A19 of
294 FASB Statement No. 141 is considered a contract subject to paragraph A20. The Task Force observed that
295 under that conclusion, if an entity has a customer relationship with customers through those types of contracts,
296 that customer relationship arises from contractual rights and therefore meets the contractual-legal criterion for
297 recognition as an intangible asset apart from goodwill."

298 3.2.12   A *Customer Relationship* is defined as a relationship that "exists between an entity and its customer if
299 the entity has information about the customer and has regular contact with the customer, and the customer has
300 the ability to make direct contact with the entity" (ASC 805-20-55-25, IFRS 3R IE28). "Customer relationships
301 meet the contractual-legal criterion if an entity has a practice of establishing contracts with its customers,
302 regardless of whether a contract exists at the acquisition date. Customer relationships also may arise through
303 means other than contracts, such as through regular contact by sales or service representatives…Consequently,
304 if an entity has relationships with its customers through these types of contracts, the customer relationships also
305 arise from contractual rights and therefore meet the contractual-legal criterion" (ASC 805-20-55-25, IFRS 3R
306 IE28).

307 3.2.13   The Working Group believes the best practice is the identification of customer-related assets that
308 include the value arising from the existing contractual period as well as any value arising from probability-
309 adjusted post-contract expected renewals. There are situations when it may be more intuitive to measure the
310 two components separately; however, even in cases where the components are measured separately, the

311 combined asset value may be recognized as a single asset. It should be noted that certain international and tax
312 reporting guidelines may support the separate recognition of the two components.

313 3.2.14 *Non-Contractual Customer Relationships* are discussed in the following paragraphs, including
314 statements in ASC 805, IFRS 3R, and examples.

315 3.2.15 ASC 805 indicates that "a customer relationship acquired in a business combination that does not arise
316 from a contract may nevertheless be identifiable because the relationship is separable. Exchange transactions
317 for the same asset or a similar asset that indicate that other entities have sold or otherwise transferred a
318 particular type of non-contractual customer relationship would provide evidence that the non-contractual
319 customer relationship is separable. For example, relationships with bank depositors are frequently exchanged
320 with the related deposits and therefore meet the criteria for recognition as an intangible asset separately from
321 goodwill" (ASC 805-20-55-27, IFRS 3R IE31).

322 3.2.16 Examples of non-contractual customer relationships which typically do not meet recognition criterion
323 are customers who frequent retail stores but do not participate in the loyalty program of the store (i.e., walk-in
324 customers). These customers generally do not meet the definition of a customer-related asset because the entity
325 possesses limited identifying information and the customer does not enter into a contract. These walk-in
326 customers typically are not recognized as assets as they fail to meet the recognition criteria. In some cases,
327 where information is exchanged between the entity and the customer, a customer list may meet the separability
328 criteria and have value. This often occurs with retailers that offer loyalty programs which enable the retailer to
329 retain information about walk-in customers, thus meeting the recognition criteria (separability).

330 3.2.17 Some entities offer loyalty programs to incentivize customers to continue to shop at the store or use
331 services (i.e., airlines and hotels). Under IFRSs, International Financial Reporting Interpretations Committee
332 Interpretation 13, *Customer Loyalty Programmes* (IFRIC 13), addresses customer loyalty programs from the
333 perspective of recognizing revenue or a liability related to an obligation to fulfill the award. However, it does
334 not address whether non-contractual customers of an entity would be recognized as a result of the program.
335 Under U.S. GAAP, there is limited guidance as to whether customers enrolled in loyalty programs represent
336 customer-related assets. The Working Group believes that when the arrangement is with a store, such as a
337 grocery store, the intangible asset would most likely be a customer list.   Such lists are generally separable,
338 although each situation should be examined to determine if it meets the appropriate recognition criteria. Other
339 programs that are arranged through credit cards, frequent flyer programs and hotel programs may meet the
340 contractual-legal criteria to have separate recognition. Such a program appears to represent an asset and a
341 conditional obligation (e.g., liability) on the part of an entity to provide additional economic value to its
342 customers beyond the service or goods purchased by the customers.

343 3.2.18 Once general categories of customer relationships are identified, it may be necessary to disaggregate
344 them further according to differences in various customer attributes. For example, customer relationships may
345 differ based on the products they purchase or characteristics such as profit margins, attrition patterns,
346 geographic locations, sizes, etc. In these cases, it may be appropriate to value these customer-related assets
347 separately. Such characteristics may also have an impact on the methodology chosen and inputs used.

348 **3.3   Value Considerations**

349 3.3.1   In valuing customer-related assets, the valuation specialist should consider aspects of both the
350 quantitative and the qualitative importance of the customer-related assets, including the importance and value of
351 the customer-related asset itself, the importance of the customer-related asset to the entity, and the relationship
352 of the subject customer-related asset with the entity's other assets and liabilities. Such considerations facilitate a
353 better understanding of a market participant's view of the asset.

354 3.3.2   The existing accounting literature does not explicitly address the economic aspects of customer-related
355 or other non-financial assets. Rather, valuation specialists determine how the economics (cash flows or costs)
356 will be allocated among acquired assets including the customer-related assets. At a basic level, the issue is the
357 nature of the customer-related asset relative to the other assets of the business in question. An example may be
358 what is referred to as purchase order customers. Here, the accounting literature requires recognition (as
359 purchase orders meet the contractual criteria) but in certain circumstances it may be reasonable to assume that
360 the customer-related assets are not a driving force of the business and their respective fair value presumably is
361 less significant than other assets. In many cases, the importance of the customer-related assets relative to other
362 assets is fairly clear. In other cases, it is more difficult to assess the relative importance of different assets. In
363 any case, it is critically important to make reasonable assumptions about how the cash flows are allocated
364 among the different assets of a business.

365 3.3.3   In assessing the relative importance of the various assets of a business, it may be useful to identify the
366 "primary asset(s)." While there are no references to primary assets in FASB literature (aside from ASC 360,
367 which uses the term in a different manner), an SEC staff speech[6] noted the importance of assessing the
368 characteristics of customers and referenced the concept of a primary asset. In our view, a primary asset of a
369 business is an asset which has significant importance to the business relative to other assets and is a key
370 business driver from an economic perspective (e.g., cash flows).

371 3.3.4   Depending upon the nature of the business, the primary asset(s) may be tangible assets such as real or
372 personal property; identifiable intangible assets such as customers, technology or brands; or other assets or
373 business attributes such as workforce, assemblage of assets, or other elements of goodwill. In addition, it may
374 also be possible for there to be no clear primary asset(s) in a business. Determination of the primary asset(s)
375 assists the valuation specialist in choosing the appropriate methods to value the assets of the business, including
376 customer-related assets.

377 3.3.5   It is important to observe that customer-related assets have characteristics that are different from most
378 other assets of a business. Customer-related assets can be viewed as the result of the business assets used to
379 create and sell a product or service (there is not a business unless customers purchase the goods and/or services
380 offered by the entity). Most other assets are typically used to create and sell products or services that are
381 purchased by the customers. In other words, a company assembles fixed assets, working capital and other
382 intangible assets to produce a product or provide a service. A question arises as to why the customers are
383 paying a company what may appear to be more than a fair return on the actual assets deployed by the company
384 to create and sell the product or service. This is an assessment that needs to be made when considering the
385 relative value of the assets of a business.

386 3.3.6   When valuing customer-related assets in the context of a business combination, the valuation exercise is
387 holistic in nature and must keep in context the relative contributions and values of all the assets of the business.
388 The intent of this section is to focus more closely on considerations that affect the valuation of the customer-
389 related assets; however, these considerations could also be applied to most other assets acquired in a business
390 combination. The relative contribution of all the assets to the total cash flow or profit of the business needs to be
391 understood by the valuation specialist. There are a number of ways a valuation specialist can evaluate the
392 relative cash flow or profit allocation associated with the various assets. For example, some of the assets can be
393 benchmarked to observed royalty data. It may also be possible to view the business as one or more businesses,
394 which may allow the valuation specialist to analyze returns to different peer groups that own different asset
395 mixes. Peer company margin analyses may also provide relative indications of proper return allocations for the
396 assets. These considerations, along with the various qualitative characteristics discussed below, will allow the

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[6] Remarks made by SEC professional accounting fellow Joseph Ucuzoglu at the 2006 AICPA National Conference on Current SEC and PCAOB Developments.

397 valuation specialist to make a better informed decision regarding the relative importance of each of the assets
398 acquired to the overall business cash flows and profit.

399 3.3.7   The following are factors to be considered for the purpose of gaining a qualitative understanding of the
400 relative importance of the customer-related assets being valued and subsequently selecting appropriate valuation
401 methodologies.   They are grouped into four categories: industry characteristics, company characteristics,
402 product/service characteristics, and asset characteristics.

403 3.3.8   *Industry Characteristics:*

404   a.   Concentration of Firms – Industries can be classified along a continuum, with highly fragmented
405   providers at one end and highly concentrated providers at another. At one extreme (i.e., in a pure
406   monopoly) customers have no choice but to buy products or services from the sole provider. In the
407   absence of choice, it may be reasonable to conclude customer-related assets have nominal value, or that
408   the value of customer-related assets is limited to a simple calculation of the cost to identify and contract
409   with the customers. In such a case, a different asset (e.g., an exclusive operating right or a unique and
410   protected technology with no meaningful substitutes) is giving rise to excess income in the form of
411   monopoly profits and such income should be recognized in those assets that create the excess profit. At
412   the other extreme (i.e., in a fragmented market), given the ability to choose among multiple providers
413   and all else being equal, customers that repeatedly choose the entity may represent an asset of high
414   relative importance compared to other assets. Conceptually, these customers could have their needs
415   equally met by many providers, yet they choose the entity.

416   b.   Buyer Power – Similar to the factor above, evidence of strong buyer power may indicate the relative
417   importance of customer assets. If customers have power, which is usually a function of choice and/or
418   low switching costs, a demonstrated ability by the subject business to retain these customers suggests
419   they are an important asset. If customers have little power (e.g., less choice and/or high switching
420   costs), the entity's demonstrated ability to retain the customers is likely due to a different asset. That
421   said, it may be the nature of the customer contracts that limit choice, which would suggest a higher value
422   for customer-related assets.

423   c.   Barriers to Entry – Industries with high barriers to entry may enjoy excess economic profits. The source
424   of the barriers to entry should be considered. For example, a unique technology might not be easily
425   replicated, which limits competition and customer choice. This in turn limits customer-related asset
426   value—the valuable asset is the technology.

427 3.3.9   *Company Characteristics:*

428   a.   Type of Company – As a simple starting place, the type of company may indicate whether customer-
429   related assets will have significant value. For example, a retail operation with largely walk-in business
430   may not have an identifiable customer base. However, a wireless telecommunications company with
431   mostly long-term contractual subscribers may have significant customer-related assets.

432   b.   Relative Asset Class Spend – Consideration of relative investments (i.e., operating or capital
433   expenditures) made in different asset classes may indicate the relative importance of those assets,
434   including customer-related assets. For example, a company that spends significantly on development of
435   customer relationships or customer retention (selling, marketing, proposals, customer care, etc.) may
436   have important and valuable customer-related assets. If spending on technology and/or brands is
437   comparable, the asset mix may be well balanced. However, if spending on technology and/or brands is
438   significantly more, the customer-related assets might be less valuable.

439   c.   Marketing Strategy – The marketing strategy of a company may indicate the importance of customer-
440   related assets. For example, if a company references existing customers in its marketing collateral, it
441   likely believes those customers are valuable assets that help generate sales to new customers.

442   d. <u>Transaction Structure and Strategy</u> – In instances where customer relationships are being valued as part
443   of a transaction, it is important to understand the reasons why the market participant is making the
444   business or asset acquisition and the underlying basis for the pricing. For example, the valuation
445   specialist needs to understand if a significant part of the acquisition rationale is to acquire the existing
446   customer relationships and their related revenues and earnings, if the business purpose is to increase
447   market share, and/or if the business purpose is to increase the acquirer's ability to cross-sell to new
448   customers. Understanding the strategic intent of the transaction may provide insight into the importance
449   of the customer-related assets.

450 3.3.10 *Product/Service Characteristics:*

451   a. <u>Product Differentiation</u> – This is a consideration similar to buyer power and barriers to entry. Highly
452   differentiated products may limit customer choice, which reduces customer-related asset value. At the
453   other extreme, less differentiated products may indicate strong relationships if customers choose one
454   company over others. However, the value of such relationships may be low because excess income is
455   low.

456   b. <u>Switching Costs</u> – This factor is similar to barriers to entry, but specific to the company. If switching
457   costs are high, customers may be captive. However, the source of the high switching costs may lead to
458   the most valuable asset(s). For example, if switching costs are high because of restrictive contract
459   terms, customer contracts may be valuable. However, if switching costs are high because of geographic
460   proximity issues, the customer contract might have less value.

461   c. <u>Life Cycle Stage</u> – The life cycle of different products may indicate the relative importance of one asset
462   versus another. A leading-edge technology may indicate an important technology-related asset but a
463   less valuable customer-related asset due to customers having limited choice if they want the leading-
464   edge technology.

465   d. <u>Protective Rights</u> – All protective rights should be examined: patents, customer contracts, registered
466   brands, etc. The presence of protective rights may have implications on the value of any particular asset.

467 3.3.11 *Customer-Related Asset Characteristics:*

468   a. <u>Purchase-Order Based vs. Long-Term Contract Based</u> – The nature of customer contracts can range
469   from purchase-order based to long-term contract based. If purchase-order based, buying patterns can be
470   recurring or non-recurring. These distinctions may inform the valuation specialist about, among other
471   things, a) the relative importance of the customer-related asset, and b) attrition patterns for a customer
472   model. If relationships are long-term contract based, the terms of the contract(s) should be analyzed.
473   These terms include the typical length of a contract and the rights of each party with respect to renewal,
474   termination, price/volume adjustments, take or pay clauses, minimums, etc. This analysis may impact
475   choice of model, attrition assumptions, and other valuation inputs.

476   b. <u>Attrition</u> – Historical and expected attrition patterns should also be discussed with management, which
477   will inform the valuation specialist about possible lifing scenarios and, in turn, affects the relative value
478   of the customer assets. This is a qualitative analysis used to assess the relative importance of customer-
479   related assets at the outset of an engagement. Quantitative analysis of customer attrition would also be
480   completed as part of the actual valuation, as discussed in more detail in Appendix A of this Valuation
481   Advisory.

482   c. <u>Depth of Knowledge</u> – Customer relationships should be examined for depth of knowledge possessed by
483   the business about the customers. For example, walk-in customers at a convenience store may not be
484   identifiable nor do they meet recognition criteria. Conversely, purchase-order based customers in a
485   business-to-business context may be readily identifiable and recurring historical buying patterns may be

486 observable, which would suggest these customer relationships are recognizable and should be
487 considered for valuation.

488 **4.0   VALUATION METHODOLOGIES**

489 **4.1   Introduction**

490 4.1.1   There are three generally accepted approaches a valuation specialist may consider in the valuation of
491 customer-related assets: the Income Approach, the Cost Approach, and the Market Approach. A general
492 overview of the three approaches (and variations, where applicable) follows below. The Working Group
493 believes that the methodologies discussed below are representative of best practices for financial reporting
494 valuations.

495 4.1.2   The Income Approach is the most common approach used in the valuation of customer-related assets;
496 therefore, the application of the Income Approach is the primary focus of this Valuation Advisory. However, in
497 the valuation process, methodology or model choice should reflect careful qualitative and quantitative
498 assessment of the asset and the availability of necessary data. In addition, each of these approaches, as well as
499 the inputs used to value the customer-related assets, should be considered from the viewpoint of market
500 participants.

501 **4.2   Income Approach**

502 4.2.1   The Income Approach is used to estimate fair value based on the future cash flows that an asset can be
503 expected to generate over its useful life. The theory underlying this approach is that the valuation of an
504 investment in income-producing assets is directly related to the future cash flow generated by such assets. Cash
505 flow represents the recovery of the investment and the receipt of income produced by such an investment (a
506 return on that investment).

507 4.2.2   ASC 820 states that "the income approach uses valuation techniques to convert future amounts (for
508 example, cash flows or earnings) to a single present amount (discounted). The measurement is based on the
509 value indicated by current market expectations about those future amounts" (ASC 820-10-20). A similar
510 definition is included in IFRS 13.B10.

511 4.2.3   The methods under the Income Approach that are commonly utilized to value customer related assets
512 are the following:

513 4.2.4   *Multi-Period Excess Earnings Method* – The Multi-Period Excess Earnings Method (MPEEM) is an
514 Income Approach methodology. The MPEEM measures economic benefits by calculating the cash flow
515 attributable to an asset after deducting appropriate returns for contributory assets used by the business in
516 generating the customer-related asset's revenue and earnings (commonly referred to as "contributory asset
517 charges" or CACs).

518 4.2.5   *Distributor Method* – The Distributor Method (also known as the Distributor Model) is a variation of
519 the MPEEM that may be appropriate when the nature of the relationship between an entity and its customers is
520 similar to that of a distribution company and its customers. Specifically, the Distributor Method is appropriate
521 when the customer-related activities and the value added by those activities are similar for the entity and
522 distributors. The application of the Distributor Method incorporates distributor-based margins and CACs
523 consistent with a distributor in the valuation of customer-related assets. Using distributor inputs directly
524 isolates the cash flow attributable to the customer-related assets, similar to how the use of a royalty rate isolates
525 cash flow associated with a particular asset.

526 4.2.6   *With-and-Without Method* – The With-and-Without Method (sometimes referred to as the Premium
527 Profits Method, International Valuation Standard 210, *Intangible Assets*) estimates the value of customer-related
528 assets by quantifying the impact on cash flows under a scenario in which the customer-related assets must be
529 replaced (assuming all of the assets required to operate the business are in place except the customer-related
530 assets and have the same productive capacity). The projected revenues, operating expenses, and cash flows are
531 calculated in a "With" and "Without" scenario, and the differential between the cash flows from the two
532 scenarios serves as the basis for estimating the fair value of the customer-related asset.

533 4.2.7   *The Cost Savings Method* – The Cost Savings Method is a form of the Income Approach that directly
534 measures an expected future benefit stream of an asset in terms of the future after-tax costs which are avoided
535 (or reduced) as a result of owning the asset. This method has similarities to the Cost Approach but is based on a
536 direct measure of future economic benefits as opposed to returns on past investments.   The Cost Savings
537 Method may be appropriate when the subject asset results in saving costs, avoiding expenditures, or improving
538 efficiency, etc. This method is more common when the re-creation period for the asset is short and cost saving
539 can be estimated in a straight-forward manner.

540 4.3   Cost Approach

541 4.3.1   The Cost Approach uses the concept of replacement as an indicator of fair value. The premise of the
542 Cost Approach is that a prudent investor would pay no more for an asset than the amount for which the utility of
543 the asset could be replaced.

544 4.3.2   ASC 820 defines the cost approach as follows: "The cost approach is a valuation technique based on the
545 amount that currently would be required to replace the service capacity of an asset (often referred to as current
546 replacement cost)" (ASC 820-10-20). A similar definition exists in IFRS 13.B8.

547 4.3.3   The SEC has indicated that in certain instances when using a replacement cost approach, it may also be
548 appropriate to include opportunity costs incurred.[7] These opportunity costs represent the foregone cash flows
549 during the period when the asset was originally created. In the view of the Working Group, the Cost Approach
550 is best used in circumstances where the customer-related asset can be replaced in a short period of time and is
551 likely to have relatively low opportunity costs or when total replacement costs are easily estimated. In instances
552 where it takes a long time to replace the customer-related asset and opportunity costs may be significant or
553 when replacement costs are not easily estimated, another valuation methodology may be more appropriate.

554 4.3.4   The Working Group believes that inclusion of opportunity costs in the Cost Approach makes the
555 approach similar in nature to the With-and-Without Method described above, which is a derivation of the
556 Income Approach. It is also important to note that the inclusion of an opportunity cost concept, which is a time-
557 based input, also makes the Cost Approach similar to an Income Approach.

558 4.4   Market Approach

559 4.4.1   The Market Approach is used to estimate fair value based on market prices of comparable assets. The
560 valuation process is essentially that of comparison and correlation between the subject asset and other similar
561 assets.   Characteristics of the subject and similar assets and conditions of sale for comparable assets are
562 analyzed and potentially adjusted to indicate a value of the subject asset. The level of activity in the market in
563 which the transaction is observed is a factor that should be considered in assessing the reliability of such an
564 indication.

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[7]Remarks made by SEC professional accounting fellow Sandie Kim at the 2007 AICPA National Conference on Current SEC and
PCAOB Developments.

565 4.4.2   ASC 820 states that the market approach is "a valuation technique that uses prices and other relevant
566 information generated by market transactions involving identical or comparable assets or liabilities (including a
567 business)" (ASC 820-10-20). A similar reference is included in IFRS 13.B5.

568 4.4.3   The Market Approach is used for the valuation of customer-related assets when the assets are traded in
569 observable markets. This makes the Market Approach very difficult to apply in most industries. However,
570 there are certain types of customer-related assets that may be valued using the Market Approach. For example,
571 newspaper subscribers, pharmacy prescription data and lists, bank core depositors, loan customers, credit card
572 customers, etc., may be appropriately valued using the Market Approach.

573 4.4.4   In our view, because transactions of customer-related assets typically are not observable, nor do they
574 occur in an active market, we believe that use of this approach will be rare. Valuation specialists should attempt
575 to use either the Income and/or Cost Approach when market-based indicators of value do not exist or are
576 perceived to be unreliable.

577 **5.0   APPLICATION OF THE INCOME APPROACH**

578 **5.1   Introduction**

579 5.1.1   The Income Approach is used to estimate fair value based on the future cash flows that an asset can be
580 expected to generate over its useful life. The theory underlying this approach is that the valuation of an
581 investment in cash-generating assets is directly related to the future cash flow generated by such assets.

582 5.1.2   Generally, the cash flows related to customer-related assets are generated by a group of assets working
583 together (i.e., the customer-related asset together with other assets of the business; for example—working
584 capital, property, plant, and equipment, trademarks, and technology). The use of an Income Approach involves
585 the determination of the following, each of which, as well as the value of the customer-related assets, should be
586 considered from a market participant viewpoint:

587   a.   The cash flows applicable to the asset being valued;

588   b.   The economic life of the asset; and

589   c.   An appropriate discount rate that reflects the risk of the projected cash flows.

590 5.1.3   The following sections outline key assumptions used in the various Income Approach methodologies.

591 **5.2   Multi-Period Excess Earnings Method (MPEEM)[8]**

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[8] This Method and certain of its inputs is discussed in more detail in the CAC Document. The CAC Document, titled *The Identification of Contributory Assets and Calculation of Economic Rents* and dated May 31, 2010, was created by the first Working Group and addressed the topic of contributory assets and charges.

592 5.2.1   The MPEEM is a form of Income Approach where projected cash flows applicable to the asset being
593 valued are estimated. Cash flows are based on prospective revenue and earnings, net of taxes and CACs for
594 other assets used in generating the revenue and earnings and other adjustments as applicable (e.g., deferred
595 revenue adjustment). Each of the major inputs to the MPEEM is described in more detail below. As indicated
596 in other sections of this Valuation Advisory, all inputs should be consistent with market participant
597 assumptions. Because the starting point is commonly the prospective financial information (PFI) prepared by
598 the subject company, care must be taken to ensure this consistency. In the following section, inputs most likely
599 to require a market participant adjustment are highlighted.

600 5.2.2   *Prospective Financial Information* – A financial forecast for the entity should be the starting point for
601 identifying the cash flows associated with customer-related assets. Adjustments to forecasts provided by
602 management may be necessary in order to ensure that the PFI used is consistent with market participant
603 assumptions.

604 5.2.3   Market participant revenue and operating expense synergies are included in fair value measurements of
605 intangible assets and should be identified in the customer-related asset forecasts and evaluated against
606 observable market participant data as long as the synergies are related to the identified intangible asset being
607 valued and are assumed to be a component of the consideration exchanged in a hypothetical purchase of the
608 asset by a market participant. Buyer-specific synergies are excluded from fair value measurements and should
609 be identified and excluded from customer-related asset forecasts.

610 5.2.4   *Customer Revenue* – The MPEEM begins with an estimation of the revenues associated with customers
611 present at the measurement date and should not include revenue attributable to future customer relationships.
612 Revenues may be based on the overall forecast or may be segmented in order to give consideration to multiple
613 groups of non-homogeneous customers. Revenues for each customer group are projected over their estimated
614 economic life based on expected growth and attrition (or probability of loss). The following inputs/factors
615 should be considered when assessing customer revenue.

616 5.2.5   Growth Rate for Existing Customers – Future revenue from existing customers should reflect price
617 and/or volume changes. Price changes represent variation in the price per unit, while volume changes represent
618 variation in the number of units sold. Price and volume projections should be consistent with market participant
619 expectations.

620 5.2.6   Contractual Renewals and Revenue Patterns – When valuing customer contracts, it may be appropriate
621 to focus on revenue patterns associated with contract renewals as opposed to customer attrition patterns.
622 Discrete probabilities may be assigned to future contract renewals beyond the term of the current contracts in
623 place.

624 5.2.7   Revenue Synergies and Dis-Synergies – In some cases, market participants may believe that revenue
625 synergies or dis-synergies may be derived through an acquisition. Potential revenue synergies (e.g., cross-
626 selling opportunities, entrance into new market opportunities, etc.) or dis-synergies (e.g., revenue lost from
627 buyer/target product cannibalization, customers leaving post-acquisition to avoid supplier over-concentration,
628 etc.) should be reviewed to ensure that they are consistent with market participant assumptions. If they are
629 deemed to reflect market participant assumptions, the revenues should be included (for synergies) or excluded
630 (for dis-synergies) in the customer-related asset valuation. The value associated with revenue synergies should
631 reflect an appropriate level of earnings, taxes, and contributory charges—which, in certain circumstances, may
632 differ from those of the customer revenues excluding synergies. For example, if a buyer is projecting revenue
633 synergies from being able to sell a target's products through the buyer's existing distribution network, the
634 revenues associated with these sales may have different margins than the target's revenues excluding synergies
635 and require contributory asset charges that are unique to this revenue stream (e.g., contributory asset charges for
636 the buyer's distribution network, workforce, etc.).

637 5.2.8   Economic Life – Economic life is defined as "the total period of time over which an asset is expected to
638 generate economic benefits for one or more users."[9]   Cash flows are terminated when they or their present
639 values become de minimis and no longer have significant economic value. For backlog-type assets, contract
640 terms or other reliable estimates of order fulfillment may be available to estimate the economic life. For
641 contractual customer relationships, the economic life is generally based on the contractual term plus any
642 expected renewals, which should be consistent with the provisions of the contract and market participant
643 assumptions. For a discussion of the difference between economic life and useful life, see section 9.7 of this
644 paper.

645 5.2.9   For customer-related assets that are not subject to contracts with a defined length, the appropriate
646 economic life is less obvious and typically requires additional analysis. The economic life is a function of the
647 growth of existing customer revenue net of attrition. Frequently, the cash flows related to the projected revenue
648 approach, but never arrive at, zero. Such a result would imply an infinite projection period. As a result, a
649 question arises as to when the projections should be truncated in order to determine the economic life of the
650 customer relationship. Several common methods used in practice are outlined below:

651 5.2.10   Method A: The number of periods in the valuation model should be extended for many years until
652 effectively 100% of the total present value of cash flows is identified. Cash flows are extended until the
653 inclusion of the last discrete projection year does not materially change the value conclusion. An appropriate
654 materiality threshold should be discussed with management before the valuation specialist makes this
655 determination. This method is generally mechanical in nature and extends the forecast period many years into
656 the future, with no specified guideline for determination of the point at which cash flows should be truncated.

657 5.2.11   Method B: Under this view, the valuation specialist determines when to truncate the cash flows. Two
658 approaches generally seen in practice are the following:

659   a. Method B1:   The number of periods in the valuation model is extended for many years so that
660   effectively 100% of the cash flows are identified, similar to the approach used in View A. However,
661   unlike View A, the number of periods in the valuation model is then truncated at the point where the
662   vast majority of the present value of the total cash flows is captured. Common thresholds used for the
663   vast majority of the present value of the total cash flows are 90%, 95%, or 99%. The truncation
664   threshold chosen should be reviewed for materiality.

665   b. Method B2: The valuation model is extended until the present value of cash flows occurring after the
666   final year is immaterial to the overall value. As a result, cash flows can be truncated at the point where
667   the present value of cash flow generated in a given year is less than a defined percentage of the
668   cumulative cash flows for all years up to and including that year. Common truncation points are where
669   the present value of the last discrete year of projected cash flows is adding 3%, 2%, or 1% to the present
670   value of the total cash flows captured up to that point. The truncation threshold chosen should be
671   reviewed for materiality.

672 5.2.12   The following example illustrates the use of methods B1 and B2 to truncate cash flows.
673

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[9]International Valuation Standards Council International Valuation Glossary, significantly based on the definition from the
International Glossary of Business Valuation Terms, which was adopted by the American Institute of Certified Public Accountants,
the American Society of Appraisers, the National Association of Certified Valuation Analysts, the Canadian Institute of Chartered
Business Valuators, and the Institute of Business Appraisers.

674 *Example 5.1: Cash Flow Truncation*

Year	Present Value of Cash Flows	Method B1: Cumulative Percent of Present Value Captured	Method B2: Incremental Percent of Present Value Captured
1	65.5	15.9%	15.9%
2	64.2	31.4%	15.6%
3	57.5	45.4%	13.9%
4	50.0	57.5%	12.1%
5	42.7	67.8%	10.3%
6	32.3	75.7%	7.8%
7	24.4	81.6%	5.9%
8	18.5	86.1%	4.5%
9	14.0	89.5%	3.4%
10	10.6	92.0%	2.6%
11	8.0	94.0%	1.9%
12	6.1	95.5%	1.5%
13	4.6	96.6%	1.1%
14	3.5	97.4%	0.8%
15	2.6	98.0%	0.6%
16	2.0	98.5%	0.5%
17	1.5	98.9%	0.4%
18	1.1	99.2%	0.3%
19	0.9	99.4%	0.2%
20	0.7	99.5%	0.2%
21	0.5	99.7%	0.1%
22	0.4	99.7%	0.1%
23	0.3	99.8%	0.1%
24	0.2	99.9%	0.1%
25	0.2	99.9%	0.0%
26	0.1	99.9%	0.0%
27	0.1	100.0%	0.0%
28	0.1	100.0%	0.0%
29	0.1	100.0%	0.0%
30	0.0	100.0%	0.0%
Total	**412.6**		

675

676 5.2.13   Method B1 shown above is based on the cumulative percent of present value captured through each
677 year in the projection period, while Method B2 shown above is based on the incremental percent of present
678 value added by each additional year in the projection period.

679 5.2.14   In this example, the common truncation points of 90%, 95%, and 99% under Method B1 are achieved
680 in years 9, 12, and 17, respectively. In dollar figures, the example indicates that approximately $369.2, $393.8,
681 and $408.0 of the total cash flow of $412.6 is being captured through years 9, 12, and 17, respectively. Stated
682 another way, by truncating the projections in years 9, 12, and 17, dollar values of $43.5, $18.8, and $4.6,
683 respectively, would not be captured in the concluded value.

684 5.2.15   In this example, the common truncation points of 3%, 2%, and 1% under Method B2 are achieved in
685 years 18, 19, and 22, respectively. In dollar figures, the example indicates that an incremental $1.1, $0.9, and
686 $0.4 are being included in years 18, 19, and 22, respectively.

687 5.2.16   Although the present value of the cash flows in this example extend for 30 years, it may be reasonable
688 to truncate the cash flows by giving consideration to one or both of the methods discussed above. When
689 determining the appropriate truncation threshold, the materiality of the present value of cash flows beyond the
690 truncation threshold should be taken into consideration.

691 5.2.17   <u>Attrition</u> – Attrition is the measurement of the rate of decay/loss of existing customers.   When
692 determining future customer decay/loss patterns, there are two key considerations that a valuation specialist
693 must factor into the analysis. First, the valuation specialist needs to consider the types and quality of data that
694 may be available to make future attrition estimates. Second, the valuation specialist needs to be able to apply
695 various methodologies to determine the future attrition pattern using the given data available.

696 5.2.18   Attrition can be measured by reviewing several data sources including: historical customer count data
697 for the same population or a subset, historical customer revenue data for the same population or a subset, or
698 comparable population revenue and/or customer count data. Attrition rates generally are calculated based on an
699 analysis of historical customer revenue or count data. For customers with similar characteristics (e.g., size and
700 profitability), determining an attrition pattern using historical revenue or customer count data is the generally
701 accepted and widely applied methodology used to estimate customer attrition and economic life parameters. In
702 situations where the customer-related assets have different size, profitability, or other significant characteristics,
703 it is sometimes necessary to divide the customer-related assets into smaller subsets to get a more closely
704 comparable data set. Table 5.1 below outlines several of the common attrition data sources outlined above and
705 advantages and disadvantages of using each.
706

707 *Table 5.1: Common Attrition Data Sources*

Source	Description	Most Frequently Used When…	Advantages	Disadvantages
Historical Population Revenue	Revenue data for the customer population being valued is available, by customer, for a historical period of time. The revenue data is analyzed and attrition is calculated using revenue gains and losses from the customer population studied.	Historical revenue data by customer has been maintained by the subject company. Future net growth/attrition expectations are expected to be similar to historical population characteristics.	Intuitive. Can be an objective input if complete data is available. Closest proxy for measuring expected changes in cash flow.	Data may not reflect a full business cycle and can be either overly optimistic or pessimistic. Highly dependent on quality of data maintained by the subject company. Revenue attrition and revenue growth may be combined in the attrition metric derived from historical data. Past data may not be reflective of future customer attrition (e.g., in a consolidating industry).
Historical Population Customer Count (also referred to as Customer Churn)	Customer count data for the customer population is available for a historical period of time. Customer data is analyzed and attrition is calculated using customer additions and deletions from the population studied.	Historical customer data has been maintained by the subject company. Revenue per customer is consistent across the population and future revenue per customer can be projected and will be consistent for the population.	Intuitive. Can be a reasonable proxy for cash flow especially if customers generate similar revenue amounts.	Revenue attrition may differ significantly from customer count attrition. Applications are limited to instances when individual customers within a population have similar revenue amounts.
Historical Population Subset Revenue and Count	In the absence of sufficient data related to the entire customer population, historical revenue and customer count data related to a subset of the population is used to estimate attrition for the entire population.	Population subset characteristics are consistent with the characteristics of the entire population.	Data sets may be more manageable and easier to do analysis on.	It may be difficult to determine if the population subset reflects the attrition characteristics of the entire population.
Comparable Customer Population Revenue or Count	Historical customer revenue and count data is unavailable for the population being valued, however, comparable customer population revenue and/or count data is available.	Historical revenue and customer count data is not maintained by the company, however, data is available for a similar customer population. Similar customer population data typically comes from previous acquisitions or perhaps by an acquiring company's own customer population, assuming the population characteristics are similar.	Provides an alternative to quantify attrition patterns in absence of a good population data set.	Customer population comparability may be challenged and needs to be well supported.

708

709 5.2.19   An attrition analysis is used to assist in projecting the expected cash flows relating to existing customer-
710 related assets. The following paragraphs will discuss best practices to determine attrition patterns and how to
711 apply them to future revenues or customer count.

712 The most commonly used approaches to conduct an attrition analysis are outlined below and examples are
713 provided in Appendix A:

714   a. *Geometric or arithmetic averages using historical customer population revenue or customer count –*
715   These approaches typically use a geometric or arithmetic average of historical customer population

716   revenue or customer count loss to project future attrition. The historical data used for these approaches
717   come from the same customer group or population being valued. In order to use this approach, quality
718   historical data needs to be maintained by management for the same customer relationship population
719   being valued. These approaches tend to be relatively easy and straightforward mathematical
720   calculations. A demonstration of this approach is outlined in Appendix A, example A.1.

721 b. *Geometric or arithmetic averages using historical customer subset or comparable population revenue*
722   *or customer count* – This approach uses similar techniques as outlined above to analyze data. However,
723   data may not be available for the entirety of the specific customer population being valued and therefore
724   a subset of the population data or comparable customer population data may need to be collected. In the
725   context of a business combination, source data for this approach could be previous acquisitions by an
726   acquirer or the acquirer's own customer population data, if similar. In addition, data on customer lives
727   from comparable company public filings or other source data may be used to assist in this approach.

728 c. *Customer attrition estimates from third-party data sources* – This approaches uses third-party data
729   sources to estimate future attrition rates or patterns. Third party data sources are not widely available
730   and this approach is also limited by issues of comparability. However, it may be seen as a reliable
731   quantitative source when comparable population data is available.

732 d. *Statistical techniques* – Statistical techniques study customer account retirement behavior over a fixed
733   historical period in order to determine customer relationship life characteristics. One of the most widely
734   used statistical techniques is the retirement rate method. The retirement rate method starts by gathering
735   initiation and termination date information for both active and retired customers within a population set.
736   The observed historical retirement rates are calculated for individual customer vintages using a time
737   series analysis. These retirement rates are then combined to construct an observed survivor curve for the
738   customer population. Once the observed survivor curve is calculated, it may be compared to Iowa or
739   Weibull survivor curve models to smooth the observed retirement pattern and extend the survivor curve.
740   Typically, a least squares regression technique is used to compare the observed curve to the survivor
741   curve models. Using this technique allows the valuation practitioner to compare the observed curve to
742   model survivor curves and determine which model best minimizes the squared differences. These
743   statistical approaches are widely accepted and the valuation specialist can best fit the observed curve to
744   model expected future decay/loss patterns. These approaches require good quality historical data on the
745   customer population in order to conduct the analysis. A demonstration of this approach is outlined in
746   Appendix A, example A.2.

747 e. *Management estimates* – Often, and especially for early-stage companies, revenue and customer count
748   data for the subject company or from other industry sources is difficult to collect or does not exist. In
749   these cases, management may estimate future attrition patterns. These estimates may be based on
750   factors such as the useful life of other assets (e.g., technology), macro-industry trends, etc. The
751   advantage to this approach is that these estimates are based on management's educated estimate and
752   reflect their knowledge and experience. However, these estimates lack objective and verifiable
753   supporting evidence. Even when management estimates are used, the valuation practitioner should
754   make every attempt to document the rationale for these estimates. A demonstration of this approach is
755   outlined in Appendix A, example A.3.

756 5.2.20 Although the Working Group believes that the quality of data should not always be the primary driver
757 of approach selection, a reasonable hierarchy of approach quality may be as follows (most preferred to least
758 preferred):

759 a. Actual historical revenue and customer count attrition data from the same customer group or population
760   being valued is used to determine future attrition trends. This may take the form of geometric or
761   arithmetic calculations or more sophisticated statistical techniques.

762 b. Actual historical revenue and customer count attrition data from a subset of the customer group or
763   population being valued is used to determine future attrition trends. This may take the form of geometric
764   or arithmetic calculations or more sophisticated statistical techniques.

765 c. If the above is not available, the historical attrition experienced by the acquiring company for a
766   comparable customer group to the population being valued (either from internally-generated customers
767   or from similar customers previously acquired).

768 d. If the above is not available, attrition derived from observed industry or other appropriate third party
769   data sources.

770 e. If the above is not available, attrition estimates derived through discussions with management.

771 5.2.21 While the above four methods of estimating attrition are useful, there are a number of circumstances in
772 which an analysis of historical attrition may be inadequate when projecting future attrition. In all cases, factors
773 that market participants may deem to affect future attrition patterns should be considered in addition to
774 historical attrition data when estimating future revenue attributable to customer-related assets.

775 a. *Arbitrary or Random Customer Purchases* – Customers may make purchases in a non-predictable or
776   seemingly arbitrary manner. In these cases, the guiding principle remains estimating the cash flow that
777   is attributable to current customers. As such, the analysis should focus on determining a normalized or
778   longer-term expected pattern. It may be that customer purchases are random month-over-month or even
779   year-over-year but exhibit an even longer-term trend, possibly based on economic cycles. In some
780   cases, an analysis of aggregate revenue from a group of customers may be appropriate if the buying
781   patterns are uncorrelated and an increase in purchases by one customer is offset by an unrelated decline
782   in purchases by another customer. Even if purchase levels are considered random, it may be expected
783   that customers would leave over time.

784 b. *Small Number of Customers* – If a small number of historically stable customers account for a
785   significant portion of revenue, historical attrition may understate the true risk of customer loss. In this
786   case, it may be possible to estimate the probability of each customer renewing their purchases using
787   specific customer and contract characteristics. Or, an aggregate customer analysis that views the
788   attrition rate as more of a probability adjustment may be more appropriate.

789 c. *No Observed Historical Attrition* – Sometimes, customers or certain groups of customers have
790   historically exhibited little or no actual revenue attrition, or possibly even revenue growth. This may
791   occur in industries where customers are large and the customer universe is small. This pattern may be
792   expected to persist going forward, but it could also be the result of a period of unsustainable growth, a
793   change in customer characteristics, or simply an entity having a very limited number of customers. If
794   the pattern is expected to persist as observed in the past, historical attrition may be used to project future
795   cash flows. However, in most cases it is likely this pattern would no longer hold and normal attrition
796   would occur at some point in the future. Other methods would need to be explored, including an
797   analysis of an alternative period of time, further customer sampling, or an analysis of economic or other
798   external factors. Detailed guidance from management may be required.

799 d. *Customer Retention is Related to Other Assets* – Customer retention may be driven by products,
800   technology, logistics, pricing, or other assets and elements of a business (identifiable or not). If the life

801 of the customer is constrained by an asset with a limited life, this factor should be incorporated into the
802 valuation of the customer-related asset. However, if customer attrition is calculated to be low, or even
803 zero, due to the presence of another asset in the business, a question arises as to whether future cash
804 flows should be considered attributable to customers. For example, a customer's life may be closely
805 correlated to the lifespan of a technology asset. If the technology becomes obsolete, the customer
806 attrition pattern may be significantly different than historical experience would indicate. During the
807 transition between technologies, a customer may effectively make another purchasing decision that will
808 be based on how the new technology meets their needs.

809 5.2.22 For some types of businesses (those providing services to customers at a specific location, for instance),
810 attrition can be bifurcated into migration churn and loss churn. Migration churn is typically applicable in
811 situations where customers are identified by location or address and occurs when a customer changes location
812 and must stop and re-start service (for example, a cable customer moves and disconnects service but re-
813 subscribes from a new location). Loss churn refers to the total loss of a customer. The Working Group believes
814 that the decision as to whether a customer relationship is severed upon the migration of a customer is a
815 subjective one and should be discussed with management. Factors to consider in making this determination
816 include:

817   a. The opportunity of the customer to change providers during the move and the ease of doing so;

818   b. The length of the period between stopping and re-starting the service; and

819   c. Whether the migration is seamless or whether a material selling effort is required to retain the customer.

820 5.2.23 Total business revenue is always derived from two sources: customers that existed at the date of value
821 and customers added subsequently. Implicit in this, a valuation specialist could also determine attrition of
822 revenues from customers that existed at the measurement date by studying what portion of total forecasted
823 revenue is assumed to be derived from customers who were added subsequently. The reasonableness of attrition
824 assumptions should be assessed in the context of the overall business revenue projection. This can be
825 accomplished by using the existing customer revenue projection and the total customer revenue projection to
826 imply other assumptions that must be made regarding new customers. For example, what is the implied new
827 market share (i.e., share captured) of potential new customers in each period? What is the implied incremental
828 market share captured each year? The answers to these questions should be assessed for reasonableness.

829 5.2.24 After the revenue projection is estimated, the next step in the MPEEM is to estimate the operating
830 margin expected to be earned by the customers being valued.

831 5.2.25 *Expected Profitability/Earnings* – The forecast associated with existing customers should only capture
832 the profit and cash flows related to the customer-related assets being valued. The initial basis for estimating the
833 expected profitability of existing customers should be the PFI. If the PFI includes expenses that are unrelated to
834 the customer relationships being valued, it should be adjusted to exclude these expenses. Examples include the
835 portion of sales and marketing expense associated with the addition of new customers and the portion of
836 research and development (R&D) expense associated with new products that will only be purchased by new
837 customers. In addition, for entities that have grown through acquisition, valuation specialists should remove
838 any historical amortization expense related to pre-existing intangible assets that may or may not be accounted
839 for through a contributory asset charge. Including the contributory asset charge and the historical intangible
840 amortization expense would "double count" the proxy for return of the intangible assets.

841 5.2.26 In circumstances where the buyer is projecting market participant revenue synergies or dis-synergies as
842 part of the transaction, the valuation specialist should ensure consistency when evaluating the incremental profit
843 or loss related to the synergies.

844 5.2.27 When multiple customer groups are present and management does not track operating expenses by
845 customer group, the expenses should be allocated in an economically appropriate manner. Commonly used
846 allocation metrics include customer count, volume, revenue, and gross profit.

847 5.2.28 Certain expense adjustments may also be necessary to be consistent with the CACs being applied.
848 When the assembled workforce CAC is applied such that it captures the initial value of the assembled
849 workforce as well as growth in the workforce over time, the MPEEM should exclude operating expenses related
850 to the growth of the workforce to avoid double counting. It is noted, however, that future operating expenses
851 should include costs related to maintaining the assembled workforce that existed on the measurement date.

852 5.2.29 Certain CACs are often applied in the form of a royalty rate (e.g., for trademarks, technology, or other
853 intellectual property). The expenses being applied should be consistent with the assumptions of the selected
854 royalty rate. A royalty rate should be analyzed to determine whether it compensates the licensor for all
855 functions (ownership rights and responsibilities) associated with the asset. Such an analysis would include
856 consideration of expenses recognized by the licensee versus expenses otherwise considered to be the
857 responsibility of the licensor. A royalty rate that is "gross" would consider all functions associated with
858 ownership of a licensed asset to reside with the licensor (and therefore it is likely that R&D expenses should be
859 excluded from the forecast) while a royalty rate that is "net" would consider some or all functions associated
860 with the licensed asset to reside with the licensee (and therefore it may be appropriate to include some or all of
861 the R&D expenses in the forecast).

862 5.2.30 For further discussion related to the above CAC-related adjustments, see the CAC Document.

863 5.2.31 *Taxes* – The tax rate used should reflect the tax implications from a market participant perspective. The
864 tax rate should not include entity-specific considerations (e.g., net operating losses or NOLs, tax credits, etc.).
865 While these tax attributes contribute to the value of the entity, they do not affect the value of the customer
866 relationships. A common starting point is the statutory tax rate, which is the rate the company pays on its
867 income prior to any adjustments for NOLs, tax credits, or other similar items. This generally includes both a
868 Federal and state component in the U.S.   For non-U.S. companies or companies that are taxed in multiple
869 jurisdictions, the valuation specialist should determine the appropriate rate for the tax jurisdiction(s).

870 5.2.32 *Contributory Asset Charges* – The application of the MPEEM includes the estimation of CACs (also
871 known as capital charges). A CAC represents the return on investment ("ROI") an owner of the asset would
872 require. The ROI is comprised of a pure investment return (commonly referred to as *return on*) and, in cases
873 where the contributory asset deteriorates in value over time, a recoupment of the original investment amount
874 (commonly referred to as *return of*). The distinguishing characteristic of a contributory asset is that it is not the
875 subject income-generating asset itself; rather, it is an asset that is required to support the subject income-
876 generating asset.   The CAC represents the charge that is required to compensate for an investment in a
877 contributory asset. In other words, it is a means of allocating a portion of the subject entity's expected cash
878 flow to each of the contributory assets that support that cash flow, giving consideration to rates of return
879 required by market participants investing in such assets. By including CACs in the valuation of the subject
880 asset, the cash flow related to the subject asset can be isolated and discounted at an appropriate rate of return to
881 estimate fair value. Similar to the revenue and earnings, care must be taken to ensure that the CACs are
882 consistent with the market participant synergy-adjusted PFI. This may include CACs on a market participant
883 buyer's assets utilized in generating the projected market participant synergies. Conceptually, the adjustment of
884 earnings for CACs should result in an estimation of the projected cash flows attributable to the subject customer
885 relationships. The issue of preferred methods for determining appropriate CACs for use in the MPEEM is the
886 focus of the CAC Document. Please reference this document for a detailed discussion of this MPEEM
887 component.

888 5.2.33 *Discount Rate* – When valuing customer-related assets using the MPEEM, the discount rate chosen
889 should reflect the risk profile of the customer-related assets from a market participant perspective. The
890 estimated weighted average cost of capital ("WACC"); cost of equity capital; and the internal rate of return
891 ("IRR") are reference points to determine the discount rate of a customer relationship asset.

892 5.2.34 The WACC is based on an analysis of current market rates of return in the subject industry and
893 represents the *return on* the investment in the subject entity required by market participants, including both debt
894 and equity investments. The WACC represents the required returns on interest-bearing debt and equity capital
895 weighted in proportion to their estimated percentages in an optimal industry capital structure. The required
896 return on equity capital for an entity is commonly estimated using the capital asset pricing model ("CAPM").
897 However, there are other methods that can potentially be utilized to calculate required equity returns, such as
898 the Fama-French three-factor model and the buildup method. Regardless of the method used, the WACC
899 should include risk elements that a market participant would consider when evaluating the subject company or
900 subject assets and liabilities. Judgment must be used to ensure the discount rate reflects the specific risk
901 elements or characteristics of the customer relationship.

902 5.2.35 An IRR typically is calculated in a business combination and represents the discount rate which equates
903 the present value of the PFI to the purchase price.[10] The WACC and the IRR should be compared and reviewed
904 for reasonableness. An IRR that is significantly different from the WACC may warrant a reassessment of both
905 the PFI and the WACC calculation to determine if market participant assumptions are being consistently
906 applied or if adjustments need to be made in either the PFI or WACC. While the purchase price is often the
907 best indication of fair value, the valuation specialist needs to be alert for circumstances when this is not the case
908 and there is evidence of buyer-specific synergies, over-payment, or a bargain purchase.

909 5.2.36 The CAC Document notes that "typically intangible assets necessitate a higher rate of return than the
910 WACC, due to the riskier and less liquid nature of intangible assets relative to working capital and fixed
911 assets…Circumstances can arise where the required return on intangible assets is at or below the WACC,
912 depending on the relative asset mix and the specific nature of the intangible assets." In deriving an appropriate
913 discount rate for a specific intangible asset, it may be useful to first calculate the average return to intangible
914 assets and goodwill in aggregate. This approach still relies on the WACC or IRR but provides additional
915 insight into the risk profile of the goodwill and intangible assets as a group. Individual intangible asset discount
916 rates can then be determined. Using the WACC, cost of equity capital, IRR, or the average intangible asset and
917 goodwill discount rate as a starting point, a number of customer-related risk issues should be analyzed when
918 determining the appropriate discount rate for customer-related assets relative to these benchmarks, including:

919   a. Risk profile of the customer-related asset cash flow (i.e., more or less risky than the overall company
920   cash flow, more or less risky than other fixed/intangible assets);

921   b. Source of future business growth (established customer relationships versus new customers);

922   c. Presence of significant switching costs;

923   d. Nature of relationships (presence or lack of a long term contract, dependence on a very small number of
924   customers, etc.);

925   e. If a contract is present, length of the contract, strength/enforceability of the contract, and likelihood of
926   renewal;

927   f. Reasons customers are retained; and

928   g. Stability/volatility of individual relationships and the revenue derived from those relationships.

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[10] "Purchase price" as used in this document refers to the total value of both equity and debt capital in a business.

929 5.2.37   The above is not intended to be an exhaustive list. Further, while certain factors may lead to increased
930 or decreased risk (and therefore higher or lower discount rates), these factors should not be viewed from a
931 mechanical checklist or build-up perspective. Rather, these factors should assist the valuation specialist in
932 choosing an appropriate discount rate by enabling a more complete understanding of the valuation.

933 5.2.38   Once the fair value of the assets and liabilities have been estimated, an analysis is performed to evaluate
934 whether the rates of return (i.e., discount rates) used to estimate the fair values of the individual assets that were
935 valued using an Income Approach and the implied return on goodwill are reasonable in the context of the IRR
936 and the WACC. This analysis is known as the weighted average return on assets (WARA). The WARA is
937 calculated as the sum of the required rates of return for normal working capital, fixed assets, and intangible
938 assets, weighted by each asset's proportionate share of the total value of the entity (where "total value of the
939 entity" means the combined value of debt and equity investment required in the subject entity adjusted to reflect
940 a taxable purchase).

941 5.2.39   The returns indicated by the three analyses (IRR, WACC, and WARA) should be reviewed for
942 reasonableness and any material differences should cause additional analysis. The additional analysis may
943 include material revisions to the selected discount rates and the fair values that were originally estimated or
944 revisions to the PFI used in the analysis. If the PFI is determined to reflect market participant assumptions and
945 buyer-specific synergies are not included and the WACC and IRR still do not reconcile, it may indicate over-
946 payment or under-payment for the acquired entity. There is additional discussion regarding the WARA analysis
947 and the estimation of asset discount rates in the CAC Document.

948 5.2.40   Tax Amortization Benefit – A Tax Amortization Benefit (TAB) reflects the present value of tax savings
949 relating to the amortization of the intangible asset over its tax life. The TAB is included in the value
950 conclusion, whether the actual or hypothetical transaction is taxable or non-taxable, for all intangible assets that
951 are valued using an income-based technique including the MPEEM. There may be instances (e.g., in certain
952 global geographies or in certain instances when the market participant for an asset is a non-profit) where the
953 addition of a TAB may not be warranted. In instances such as those, the valuation specialist may want to
954 consider specific advice from a tax specialist.

955 5.2.41   Accounting guidance in U.S. GAAP (such as ASC 740, *Income Taxes*) requires that fair value should
956 not be net of any deferred tax liability or asset. It is generally believed that the fair value of an asset should not
957 differ because the tax structure of a transaction differed. Generally accepted valuation methodology follows this
958 guidance. The inputs to the TAB calculation include an appropriate discount rate, the tax rate used in the
959 model, and the number of years for which the tax deduction is effective.

960 5.2.42   The Working Group notes that there is some discussion in the valuation profession regarding what the
961 appropriate discount rate should be for a TAB calculation. The discount rate used should be aligned with the
962 risk associated with the TAB itself. Many valuation specialists argue that the risk of the TAB is closely aligned
963 with the risk of the underlying asset that generates the TAB. Others argue that the risk of the TAB is more
964 closely aligned with the risk of the profit of a market participant that would realize the TAB (i.e., a market
965 participant WACC). For the examples in this Monograph, the Working Group has used a discount rate equal to
966 the rate used to value the intangible asset itself.

967 5.2.43   In the U.S., there is a 15-year statutory life for most intangible assets.   In other jurisdictions around the
968 world, there are a variety of conventions ranging from a statutory life to the estimated useful life. In some
969 countries, the amortization of intangible assets for tax purposes is not permitted. The valuation specialist should
970 be cognizant of tax regulations and tax jurisdictions around the world and whether those factors will impact the
971 use of the TAB.

972 5.2.44   The following example outlines how to calculate a TAB (assuming U.S. tax law).

973 *Example 5.2: TAB Calculation*

Assumptions

Present Value of Customer Relationship Cash Flows Excluding Value of TAB	100.00
Straight Line Annual Tax Amortization Period in Years (n)	15.0
Discount Rate (r)	12.5%
Tax Rate (t)	40.0%

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
Present Value of Cash Flows Excluding TAB	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Straight Line Annual Amortization Rate	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%	6.7%
Tax Rate	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Present Value Factor (1)	0.9428	0.8381	0.7449	0.6622	0.5886	0.5232	0.4651	0.4134	0.3675	0.3266	0.2903	0.2581	0.2294	0.2039	0.1813
Present Value of TAB Step-Up Factor	2.51	2.23	1.99	1.77	1.57	1.40	1.24	1.10	0.98	0.87	0.77	0.69	0.61	0.54	0.48

TAB Step-Up Factor	18.76
Fair Value of Customer Relationship (2)	123.09
Less: Present Value of Cash Flows Excluding TAB	100.00
TAB	**23.09**

Sample Calculations
(1) Calculated Using Mid-Year Convention
(2) Fair Value of Customer Relationship = (Present Value of Cash Flows Excluding TAB / (1 - TAB Step-Up Factor / Present Value of Cash Flows Excluding TAB))

974 5.2.45   The value of the TAB can also be calculated using the following equation:

975 TAB = Present Value of Cash Flows Excluding TAB * (n / (n - (Annuity Factor * Mid-Year Convention
976 Adjustment Factor * t)) - 1), where:

977 Annuity Factor = $(1 / r) - ((1 / r) / (1 + r)^n) = PV(r, n, -1)$

978 Mid-Year Convention Adjustment Factor = $(1 + r)^{0.5}$

979 Where: n = Straight Line Annual Tax Amortization Period in Years
980   t = Tax rate
981   r = Discount Rate

982 Applied to the example above, the TAB equation would be:

983 TAB = $100 * (15 / (15 - (PV(0.125,15,-1) * (1 + 0.125)^{0.5} * 0.4)) - 1) = 23.09$

984 5.2.46   For specific examples of the application of the MPEEM, see Appendix B, Examples B.2 and B.3.

985 **5.3   Distributor Method**

986 5.3.1   The Distributor Method, a subset of the MPEEM, relies upon market-based distributor data or other
987 appropriate market inputs to value customer relationships. It may also be viewed as a profit split method, in
988 which function-specific profit is allocated to the identified assets. The underlying theory is that a business is
989 composed of various functional components (such as manufacturing, distribution, and intellectual property) and
990 that market-based data may be used if available to reasonably isolate the revenue, earnings, and cash flow
991 related to these functional areas. Using distributor inputs directly isolates the cash flow attributable to the
992 customer-related assets, similar to how the use of a royalty rate isolates cash flow associated with a particular
993 asset. A benefit of using the Distributor Method is that it uses market-based data to support the selection of
994 profitability and other inputs related to customer-related activities (similar to selection of a royalty rate in a
995 relief-from-royalty model), thereby allowing the potential use of the MPEEM to value other assets of the
996 business if appropriate.

997 5.3.2   The Distributor Method may be applied to many different industries, such as a wide range of
998 manufacturing industries and the branded consumer products industry, among others. For example, in the
999 branded consumer products industry, customer relationships generally have a supporting role and in many cases
1000 are extremely stable due to end consumer demand for the company's products. Distributor inputs may serve as
1001 a reasonable proxy for the inputs used to value customer relationships because the customer relationships of
1002 manufacturing companies in the consumer products industry may be similar to the relationships that distributors
1003 have with their customers. The relationships are generally transactional in nature with minimal switching costs.

1004 5.3.3   There may be additional situations where a selected group of companies provides an appropriate proxy
1005 for the customer relationship function. An example would be an industry in which certain companies have
1006 proprietary intellectual property ("IP") and others do not. Those that do not have proprietary IP would likely
1007 have lower margins and may, for purposes of valuing the customer related asset, provide reasonable inputs in
1008 the same manner as a distributor.

1009 5.3.4   Using distributor inputs is appealing when valuing certain customer relationships because it directly
1010 isolates the cash flow attributable to the customer assets. For example, the cash flows related to product
1011 technology or brand are included in the distributor's cost of goods sold (i.e., product cost). The use of this
1012 methodology gives the valuation specialist the option to use the MPEEM to value another asset of the business
1013 (e.g., brand or technology) without the challenges caused by multiple MPEEMs with circular cross-charges.

1014 5.3.5   Key inputs to the Distributor Method are described below. These inputs should be considered from a
1015 market participant perspective.

1016 5.3.6   *Comparable Companies* – When applying the Distributor Method, the valuation specialist should select
1017 a group of comparable distributors such that the nature of the relationship between the entity and its customers
1018 is similar to that of the distribution comparables and their customers. Several types of distributors are typically
1019 observed in the marketplace. For example, distributors of branded consumer products have limited margins and
1020 although they can distinguish themselves in the marketplace through pricing and service, they have no ability to
1021 differentiate through the goods they sell because typically other distributors are selling the exact same products.
1022 In contrast, industrial distributors may be able to differentiate based on pricing and service as well as breadth of
1023 inventory and the related ability to provide specialized products demanded by customers. Finally, value added
1024 distributors/resellers may realize higher margins because they are providing additional value in the form of
1025 services.

1026 5.3.7   *Revenue* – Similar to the earlier description for the MPEEM, revenues projected in the Distributor
1027 Method should reflect revenue expected from the acquired customers and should include expected growth and
1028 attrition for the existing customer relationships, as described previously in Section 5.2 of this Valuation
1029 Advisory.

1030 5.3.8   *Expected Profitability/Earnings* – When valuing customer-related assets under the Distributor Method,
1031 margins used in the MPEEM should be consistent with those realized by distributors or other businesses that
1032 share characteristics similar to the customer-related assets being valued. It is important to understand the nature
1033 of the customer relationship so that an appropriate market-based margin may be applied. For instance, if the
1034 relationships are purchase order-based (and similar to those of a distributor), a distributor-type margin may be
1035 most appropriate. On the other hand, if the company's relationships with its customers are stronger and the
1036 company provides additional services, a value added reseller margin may be more appropriate. The selection of
1037 the appropriate margin requires an understanding of the nature of the company's relationships with its
1038 customers and involves judgment in determining the appropriate group of comparable companies and where the
1039 subject relationships fit within that group.

1040 5.3.9 *Contributory Asset Charges* – The CAC assumptions utilized in the application of the Distributor
1041 Method should be consistent with the selection of the distributor margin and will include CACs for assets
1042 utilized by a distributor. These assets typically include working capital, fixed assets, corporate trademarks, and
1043 workforce. CACs should not be included for assets not typically used by distributors, such as product
1044 trademarks, technology, or manufacturing assets. CACs for these assets are not required because their value is
1045 captured in the distributor's cost of goods sold. The Working Group notes that CACs for a distributor in
1046 aggregate are typically lower than the CACs for an integrated entity that also performs other non-distribution
1047 activities. Please reference the First Working Group Paper for a detailed discussion of CACs.

1048 5.3.10 *Discount Rate* – Selection of the appropriate discount rate is generally calculated in a similar manner as
1049 described above for the MPEEM, but with one potential additional consideration. In addition to the market-
1050 based WACC or transaction-based IRR, it is also possible to support a discount rate for the asset by calculating
1051 a WACC using distributor inputs. The distributor WACC calculation would incorporate distributor betas and
1052 capital structures. As there are typically more publicly traded companies in a given industry than publicly
1053 traded distributors in the same industry, the information required for the distributor WACC calculation may be
1054 limited and the result should be viewed as an additional or corroborating input rather than a primary input.
1055 Regardless of the method used, the selected discount rate should appropriately match the risk characteristics of
1056 the customer-related asset being valued and should be reasonable in the context of the WARA.

1057 5.3.11 *Other Considerations* – Other considerations, such as calculating the TAB and determining the
1058 economic life are consistent with the general form of the MPEEM as described earlier.

1059 5.3.12 For a specific example of the application of the Distributor Method, see Appendix B, Example B.1.

1060 **5.4   With-and-Without (or Premium Profits) Method**

1061 5.4.1   The With-and-Without Method is a specific application of the Income Approach. This method
1062 estimates the value of customer-related assets by quantifying the impact on cash flows under a scenario in
1063 which the customer-related assets must be replaced and assuming all of the existing assets are in place except
1064 the customer-related assets.

1065 5.4.2   This method requires two models to be used to value the customer-related asset. The "With Scenario"
1066 (also referred to as the "Base Case") captures the estimated cash flows from the business if all of the existing
1067 assets were in place *including* the customer-related assets. In forecasting the cash flows of the business with the
1068 customer-related assets in place (the With Scenario), the information used should be consistent with or a
1069 component of the overall PFI for the business. The **"**Without Scenario" captures the estimated cash flows from
1070 the business if *all* of the existing assets were in place *except* the customer-related assets. The forecasted cash
1071 flow includes the impact of re-establishing the customer-related assets (i.e., the cost to recreate the customer-
1072 related assets). The key adjustments made in developing the Without Scenario are detailed below.

1073 5.4.3   *Revenue* – The Without Scenario revenue projection involves estimating the sales levels generated if
1074 the customer-related assets did not exist at the measurement date and had to be established with the benefit of
1075 all other assets in place. To estimate the impact on revenue, the following key factors should be considered:

1076   a.   Expected time to recreate customer-related assets and achieve revenue levels projected in the With
1077   Scenario;

1078   b.   Historical time it took to build the customer-related assets to current revenue levels;

1079   c.   Typical sales cycle;

1080   d.   Length of time it takes to establish a new relationship with a prospect;

1081   e.   Typical length of time between a sales proposal and a customer placing an order;

1082 f. Level of competition in the industry; and

1083 g. Switching costs for the customer once they have accepted and started using the vendor's product. For
1084   example, if products are typically designed into a customer's end product specifications for an entire
1085   product cycle, it may take more time to establish the initial customer relationship.

1086 5.4.4 *Cost of Goods Sold* – If there are high fixed costs associated with manufacturing/servicing the product
1087 and/or low market pricing is required to gain market share, the costs of goods sold assumption should be
1088 adjusted to reflect the lower gross margins that would be generated.

1089 5.4.5 *Operating Expenses/Replacement Costs* – The PFI also should be adjusted to include the additional
1090 direct and indirect costs that would be incurred to reestablish the customer-related assets. Examples of
1091 replacement costs that may be required to establish relationships include:

1092 a. Additional selling costs associated with headcount, travel, etc., that would be required to reestablish
1093   customer relationships. As a benchmark, it is helpful to understand what portion of the subject business
1094   headcount and expenses support the generation of new customers; and

1095 b. R&D and other engineering costs associated with customizing products to re-establish customer
1096   relationships.

1097 5.4.6 *Additional Assets and Expenditures* – The PFI should also consider the impact of any additional assets
1098 or expenditures necessary above and beyond the assets existing at the date of value to achieve the incremental
1099 cash flow associated with re-building the existing customer base.

1100 5.4.7 *Fixed versus Variable Costs* – If the time period to rebuild the customer-related asset is relatively short,
1101 one would expect a business would not change its expense structure and most of the operating expenses would
1102 be fixed. If the time period to rebuild the customer-related asset is longer, a business may modify its expense
1103 structure during the time necessary to recreate the asset. These costs should be viewed from a market
1104 participant perspective. As the time period required to rebuild the customer-related asset increases, the
1105 subjectivity of the assumptions required increases, which may limit the practicability of this approach.

1106 5.4.8 *Depreciation and Capital Expenditures* – If the time period to rebuild the customer-related asset is
1107 relatively short, one would expect a business would not change its level of capital investment since projected
1108 capital outlays will be needed in a short time period once the customer-related asset is fully recreated. If the
1109 time period to rebuild the customer-related asset is longer, a business may modify its capital investment outlay
1110 during the time necessary to recreate the asset. This change in capital investment would also affect the
1111 forecasted depreciation.

1112 5.4.9 *Net Working Capital* – It is important assess the impact of the rebuilding process on working capital in
1113 the Without Scenario. Certain working capital components (such as accounts receivable and payable) may scale
1114 quickly with changes in revenue. Other working capital components (such as inventory) may be more fixed in
1115 nature due to the inability to sell off inventory to customers at the onset of the Without Scenario.

1116 5.4.10 *Discount Rate* – The Working Group believes that the discount rate used should be commensurate with
1117 risks inherent in the projected cash flows and that the discount rates used in the With Scenario and the Without
1118 Scenario should be the same. Theoretically, differences in risks between the two scenarios should be reflected
1119 in the undiscounted expected cash flows.

1120 5.4.11 The fair value of the customer-related asset is determined as follows:

1121 a. Determine the With Scenario fair value;

1122 b. Develop the Without Scenario fair value;

1123   c. Subtract the With Scenario fair value from the Without scenario fair value; and

1124   d. Add the TAB to conclude on the fair value for the customer-related asset.

1125 *Example 5.3: With-and-Without Method*

1126 Company A acquires Company B, a developer of software technology solutions. Company A acquired
1127 Company B primarily for its technology and all other assets were thought to be easily replaceable. Company
1128 B's customer-related assets were valued using the With-and-Without Method. Based on a review of Company
1129 B's operations, it is believed that the customer-related assets could be replaced ratably over a period of two
1130 years. The discount rate is 12.5% and the tax rate is 40%. The fair value of the customer-related assets is
1131 determined to be $421.5 million, as calculated below:

With-and-Without Method (With Scenario)

	Year 0	Year 1	Year 2	Year 3
Revenue With Existing Customers	$ 750.0	$ 1,000.0	$ 1,200.0	$ 1,500.0
Less: Cost of Goods Sold	(375.0)	(500.0)	(600.0)	(750.0)
Gross Profit	375.0	500.0	600.0	750.0
Less: Operating Expenses	(150.0)	(200.0)	(240.0)	(300.0)
Less: Incremental "Re-Creation" Expenses	-	-	-	-
Pre-tax Income	225.0	300.0	360.0	450.0
less: Income Taxes (40.0%)	(90.0)	(120.0)	(144.0)	(180.0)
Net Income	135.0	180.0	216.0	270.0
Plus: Depreciation		50.0	60.0	75.0
Less: Changes in NWC		(20.0)	(16.0)	(24.0)
Less: CAPEX		(50.0)	(60.0)	(75.0)
Net Returns on Customer-related Assets		$ 160.0	$ 200.0	$ 246.0
Midpoint		0.5	1.5	2.5
Present Value Factor		0.9428	0.8381	0.7449
Present Value of Cash Flows		$ 150.8	$ 167.6	$ 183.3

Sum of Present Value of Cash Flows (With Scenario)	$ 501.7
Sum of Present Value of Cash Flows (Without Scenario)	159.3 See schedule on next page.
Difference Between Scenarios	342.4
TAB	79.1
Fair Value	**$ 421.5**

TAB Calculation:

Tax Life (n)	15	
Tax Rate (t)	40.0%	
Discount Rate (r)	12.5%	
Annuity Factor	6.63	= PV(r, n, 1)
Mid-Year Adj Factor	1.06	= (1 + r) ^ 0.5
TAB Factor	23.1%	= (n / (n - (Annuity Factor * Mid-Year Adj Factor * t)) - 1)

Working Capital (WC) Calculation

		Year 0	Year 1	Year 2	Year 3
Accounts Receivable (% of Rev.)	7.5%	56.3	75.0	90.0	112.5
Inventory (% of CoGS)	15.5%	58.1	77.5	93.0	116.3
Accounts Payable (% of CoGS)	14.5%	54.4	72.5	87.0	108.8
Total WC		60.0	80.0	96.0	120.0
WC / Revenue		8.0%	8.0%	8.0%	8.0%
WC Investment			20.0	16.0	24.0

With-and-Without Method (Without Scenario)

	Year 0	Year 1	Year 2	Year 3
Revenue Without Existing Customers	$ 750.0	$ 200.0	$ 800.0	$ 1,500.0
Less: Cost of Goods Sold	(375.0)	(100.0)	(400.0)	(750.0)
Gross Profit	375.0	100.0	400.0	750.0
Less: Operating Expenses	(150.0)	(40.0)	(160.0)	(300.0)
Less: Incremental "Re-Creation" Expenses	-	(100.0)	(100.0)	(100.0)
Pre-tax Income	225.0	(40.0)	140.0	350.0
less: Income Taxes (40.0%)	(90.0)	16.0	(56.0)	(140.0)
Net Income	135.0	(24.0)	84.0	210.0
Plus: Depreciation		50.0	60.0	75.0
Less: Changes in NWC		1.4	(5.4)	(56.0)
Less: CAPEX		(50.0)	(60.0)	(75.0)
Net Returns on Customer-related Assets		$ (22.6)	$ 78.6	$ 154.0
Midpoint		0.5	1.5	2.5
Present Value Factor		0.9428	0.8381	0.7449
Present Value of Cash Flows		$ (21.3)	$ 65.9	$ 114.7
Sum of Present Value of Cash Flows (Without Scenario)		$ 159.3		

Working Capital (WC) Calculation

		Year 0	Year 1	Year 2	Year 3
Accounts Receivable (% of Rev.)	7.5%	56.3	15.0	60.0	112.5
Inventory (Max of % of CoGS & Starting Inv.)	15.5%	58.1	58.1	62.0	116.3
Accounts Payable (% of CoGS)	14.5%	54.4	14.5	58.0	108.8
Total WC		60.0	58.6	64.0	120.0
WC / Revenue		8.0%	29.3%	8.0%	8.0%
WC Investment			-1.4	5.4	56.0

Comments:

> Cost of Goods Sold and Operating Expenses are a stable % of revenue. As such, their levels reflect revenue levels.

> The Incremental "Re-Creation" Expenses are those required to re-create the lost customer relationships.

> The Pre-Tax Income reflects the offsetting effects of lower CoGS and Operating Expenses in conjunction with higher Re-Creation expenses.

> Working capital was projected by modeling A/R, Inventory and A/P.

  A/R is modeled as a constant percent of revenue, as such it declines when revenue declines.

  Inventory is modeled as the greater of a % of CoGS or starting Inventory. This reflects the expectation management would not liquidate inventory they could sell after a modest period of time.

  A/P is modeled as a constant percent of CoGS, as such it declines when CoGS declines.

  The overall working capital source/use reflects the contrasting impacts of these items.

> Depreciation is the same as the With Scenario as it is assumed there are no changes to the fixed asset base or capex.

> Capex is assumed to be the same as in the With Scenario.

5.5 Cost Savings Method

5.5.1 The Cost Savings Method has elements of both the Income Approach and the Cost Approach. However, it is typically considered to be a form of the Income Approach. The Cost Savings Method is used to estimate the value of customer-related assets based on costs/expenses avoided via ownership of the asset (assuming all of the existing assets are in place except the customer-related assets). In the context of an operating entity, costs saved or avoided implicitly result in positive cash flows relating to the asset being valued. In this way, it is a form of the Income Approach in that the conclusion is based on the present value of future cash flows.

5.5.2 It should be noted that there is a distinction between a Cost Savings Method as described herein and a Cost Approach. The Cost Approach uses the concept of replacement as an indicator of fair value. The premise of the Cost Approach is that a prudent investor would pay no more for an asset than the amount for which the utility of the asset could be replaced. Alternatively, the Cost Savings Method considers prospective costs avoided and the related profits resulting from the ownership of the asset.

5.5.3 The following sections outline key assumptions used in the Cost Savings Method:

5.5.4 *Operating Expenses/Replacement Costs Avoided* – Central to the valuation of an asset via this method is an estimate of the hypothetical costs saved or expenses avoided due to the existence of the customer-related asset. As this method estimates costs saved rather than revenue/costs incurred, the PFI that was developed in support of the transaction may not directly provide the information required for this approach. However, an estimate may be obtainable by comparing the PFI with a baseline projection that assumes the subject asset is absent.

5.5.5 *Discount Rate* – The Working Group believes that the discount rate used should be commensurate with risks inherent in the projected cash flows. Using this method, the risk is associated with the cost savings being achieved—e.g., the level of uncertainty surrounding the ability to achieve the projected savings. In many cases, there is greater certainty about cost savings than revenue growth, synergies, etc. As such, it may be appropriate for the discount rate to be less than the overall company discount rate. However, the selection of the discount rate should reflect asset-specific facts and circumstances.

5.5.6 *Economic Life* – The economic life is the period over which the costs are avoided via ownership of the asset. As such, the economic life is based on the attributes of the asset and is determined in a manner consistent with that used in an MPEEM as described earlier.

5.5.1 *Other Considerations* – Other considerations include taxes and TAB and are consistent with the general form of the MPEEM as described earlier.

5.5.2 The fair value of the customer-related asset is determined as follows:

    a. Determine the cost savings for each projected year (or other period);

    b. Adjust the sum of the cost savings and related profit for taxes;

    c. Calculated the present value of the tax-affected cost savings; and

    d. Add the TAB to conclude on the fair value for the customer-related asset.

Example 5.4: Cost Savings Method

Company A acquires Company B, a manufacturer of consumables for the life sciences industry. Company A acquired Company B primarily for its technology and all other assets were thought to be easily replaceable.

1171 Company B's customer-related assets are largely wholesalers and manufacturer representatives and were valued
1172 using the Cost Savings Method. Based on a review of Company B's operations, it is believed that the customer-
1173 related assets could be re-created over a period of five years. The discount rate is 12.5% and the tax rate is
1174 40%. The fair value of the customer-related assets is determined to be $90.2 million, as calculated below:

Cost Savings Method	Year 1	Year 2	Year 3	Year 4	Year 5
Annual Cost Savings	$ 50.0	$ 40.0	$ 30.0	$ 20.0	$ 10.0
less: Income Taxes (40.0%)	(20.0)	(16.0)	(12.0)	(8.0)	(4.0)
After-Tax Cost Savings	30.0	24.0	18.0	12.0	6.0
Midpoint	0.5	1.5	2.5	3.5	4.5
Present Value Factor	0.9428	0.8381	0.7449	0.6622	0.5886
Present Value of Cash Flows	$ 28.3	$ 20.1	$ 13.4	$ 7.9	$ 3.5
Sum of Present Value of Cash Flows	$ 73.3				
TAB	16.9				
Fair Value	**$ 90.2**				

TAB Calculation:

Tax Life (n)	15	
Tax Rate (t)	40.0%	
Discount Rate (r)	12.5%	
Annuity Factor	6.63	= PV(r, n, 1)
Mid-Year Adj Factor	1.06	= (1 + r) ^ 0.5
TAB Factor	23.1%	= (n / (n - (Annuity Factor * Mid-Year Adj Factor * t)) - 1)

1175

1176 **6.0   APPLICATION OF THE COST APPROACH**

1177 **6.1   Introduction**

1178 6.1.1   The Cost Approach uses the concept of replacement as an indicator of fair value. The premise of the
1179 Cost Approach is that a prudent investor would pay no more for an asset than the amount for which the utility of
1180 the asset could be replaced.

1181 6.1.2   The application of the Cost Approach to value customer-related assets should consider the following
1182 items:

1183   a. Direct costs (e.g., materials, labor, advertising, direct selling, etc.);

1184   b. Indirect costs (e.g., general and administrative overhead);

1185   c. Developer's profit;

1186   d. Opportunity costs; and

1187   e. Obsolescence.

1188 6.1.3   The exclusion of indirect costs, developer's profit, opportunity costs, and/or obsolescence may be
1189 appropriate or inappropriate based on the specific facts and circumstances and inputs used to value the
1190 customer-related asset. The goal is to factor in all costs (direct, indirect, opportunity), profit, and obsolescence
1191 that a market participant would consider in the valuation of the customer-related asset.

1192 6.1.4   The Working Group believes the use of a Cost Approach to value customer-related assets may be
1193 appropriate under certain fact patterns, including but not limited to the following:

1194   a. There are very few identified customer relationships;

1195   b. There is limited or no sales history with existing customers;

1196   c. There is limited or poor ability of management to forecast cash flows associated with existing
1197   customers;

1198   d. Management's projection for existing customers suggests negative cash flow for the foreseeable future,
1199   but nonetheless customers are viewed as having some value for other reasons;

1200   e. The customer relationships do not convey significant rights or obligations—i.e., they are non-exclusive;
1201   and

1202   f. There are no significant barriers to entry or switching costs.

1203 6.1.5   The time period required to recreate the asset(s) is an important consideration because a significant
1204 recreation period may suggest that significant opportunity costs exist. As it may be difficult to reliably estimate
1205 the magnitude of these opportunity costs, another valuation technique, such as an income-based methodology,
1206 may be more appropriate.

1207 6.1.6   It should be noted that there is a distinction between a Cost Approach as described herein and a Cost
1208 Savings Method. Specifically, the Cost Savings Method can be considered a form of the Income Approach. In
1209 the context of the valuation of customer-related assets, the Cost Savings Method considers prospective costs
1210 avoided resulting from ownership of the asset.

1211 6.1.7   The following sections outline key assumptions used in the Cost Approach.

1212 **6.2   Cost Approach**

1213 6.2.1   Key inputs to the Cost Approach are described below:

1214 6.2.2   *Direct Costs* – Direct costs are expenses that can be directly linked to the creation of the existing
1215 customer-related asset (e.g., materials, labor, or other asset-specific expense). Examples may include sales staff
1216 time, company-specific marketing expenses, and customer entertainment. Although direct costs should reflect
1217 the current costs that would be incurred to re-create customer-related assets of equal utility, historical costs
1218 adjusted for inflation and/or other factors may be a reasonable proxy.

1219 6.2.3   *Indirect Costs* – Indirect costs are expenses that cannot be directly linked to the creation of a specific
1220 existing customer-related asset (e.g., overhead). These costs are typically proportionally allocated to all the
1221 customer-related assets. Examples would include advertising campaign costs, public relations expenses, broad
1222 media campaigns, and general printing costs. Indirect costs generally also include general and administrative
1223 costs that were needed to oversee the creation of the customer-related asset. Similar to direct costs, historical
1224 indirect costs should be stated on a current cost basis (i.e., adjusted for inflation and/or other factors).

1225 6.2.4   Direct and indirect costs should be inclusive of all costs associated with recreating the customer base at
1226 the date of valuation, including those costs that did not result in the successful addition of a new customer.
1227 Inefficient efforts that are deemed to be irrelevant to the creation of the customer-related asset should be
1228 excluded from the total cost build-up analysis. Examples of these costs may include marketing expenditures
1229 related to unsuccessful sales channels, unsuccessful advertising campaigns, etc. However, certain inefficiencies
1230 may be appropriate to include in a cost build-up because they are inherent to the nature of acquiring customers
1231 and cannot be avoided even with knowledge of the most productive marketing strategy. Examples of these

1232 costs may include marketing costs directed toward the solicitation of a potential customer base that do not result
1233 in successful customer additions (i.e., the "fully-loaded" cost per customer should include unsuccessful
1234 solicitation attempts). Inclusion of only costs related to successfully developing an existing customer
1235 relationship would lead to "survivorship bias."

1236 6.2.5 *Developer's Profit* – Developer's profit reflects the expected return on the investment (direct plus
1237 indirect costs). Developer's profit can be calculated based on a reasonable profit margin on the development
1238 activities. This profit margin should be based on a market participant data, as available.

1239 6.2.6 The developer's profit can be estimated by reviewing market participant margins on similar activities.
1240 For instance, in deriving the developer's profit on sales and marketing activities a reasonable metric may be to
1241 review margins of value added resellers or value added distributors. The actual margins of the subject business
1242 may also be reflective of an appropriate margin.

1243 6.2.7 *Opportunity Costs* – Opportunity costs represent foregone value (measured as returns, profits, cash
1244 flows, or a similar metric) during the period that the recreation of the asset has an impact on the business.
1245 These costs are only present if the asset cannot be utilized while being created. If opportunity costs are
1246 significant, application of the Cost Approach might not be applicable.

1247 6.2.8 Opportunity costs may be calculated based on a reasonable rate of return on the expenditures (including
1248 developer's profit) while the asset is being created. For example, a reasonable rate of return on the costs may
1249 be estimated similar to the rates of return determined in valuing customer-related assets or other assets.
1250 Although consistent with deriving market rates of return on other intangible assets, direct market evidence
1251 typically is not available. A reasonable rate of return may be estimated by reviewing the WACC, IRR and other
1252 similar metrics. The premise behind this approach is that the costs incurred to recreate the asset could have
1253 otherwise been invested, which would have resulted in a return on an alternate investment.

1254 6.2.9 Opportunity costs can also be measured as lost profits or lost cash flows that occur as a result of not
1255 having the asset in place. For example, revenue and related profit is not received from existing customers while
1256 the customer-related asset is being recreated. The amount of profit lost is a function of the amount of time
1257 required to recreate the asset and the impact that the asset has on the business.

1258 6.2.10 Although developer's profit and opportunity costs both reflect an element of profit while the customer
1259 asset is being constructed, they relate to different elements. From a practical perspective, the developer's profit
1260 is the level of profit required on the creation of the customer asset—i.e., the level of profit a third party would
1261 require if they were engaged in the activities of creating the customer-related assets. In contrast, opportunity
1262 costs reflect the cash flow foregone while the asset is being recreated.

1263 6.2.11 *Obsolescence* – In order to determine the value of the customer-related assets, it is important to
1264 consider various forms of obsolescence. Forms of obsolescence regularly considered in a cost approach include
1265 physical deterioration, incurable functional and technological obsolescence, and economic or external
1266 obsolescence. Due to the nature of customer-related assets, it is very unlikely that physical deterioration or any
1267 form of incurable functional and technological obsolescence would be present.

1268 6.2.12 Economic obsolescence may be evident if the customer-related asset cannot generate a fair rate of
1269 return over its remaining useful life based on the indication of value. Economic obsolescence can be calculated
1270 as the present value of the economic shortfall measured as the difference between the forecasted return on the
1271 customer-related asset versus the owner's required return or demonstrated historical return. Alternatively,
1272 economic obsolescence can be calculated as the present value of the economic shortfall measured as the
1273 difference between the forecasted profit margin on the asset versus the owner's required profit margin or
1274 demonstrated historical margin on the asset.

1275 6.2.13 *Taxes* – The conclusion of the Cost Approach should not be tax-affected or adjusted for the TAB. A
1276 pre-tax conclusion is consistent with an exit price that a market participant would receive for the asset.

1277 ***Example 6.1: Cost Approach***

1278 Company A acquires Company B, a manufacturer of branded consumer electronics. Company A acquired
1279 Company B primarily for its brand and all other assets were thought to be easily replaceable. The purchase
1280 price is $500 million (on a cash-free, debt-free basis). There are 1,000 customers. Company B's customer-
1281 related assets were valued using a Cost Approach. Based on a review of Company B's operations, the
1282 customer-related assets were created ratably over the past three years at an historic cost of $21 million (direct
1283 costs of $15 million and indirect costs of $6 million). The historical costs are deemed to be representative of
1284 direct and indirect costs as of the date of value (i.e., they are current costs). The developer's profit margin was
1285 estimated based on market observations of profit margins earned by companies that perform similar activities.
1286 Opportunity costs were calculated using a 12% rate of return and an average three month lead time between
1287 when the company first invests in a new customer when and the first purchase is made. This reflects the profit
1288 that could otherwise be earned on an investment of commensurate risk during the three month period. There are
1289 various metrics that may be appropriate indications of required return for purposes of calculating an opportunity
1290 cost; in this case the WACC was viewed to be the most appropriate as it reflects the overall risk-adjusted rate of
1291 return for the business. For the purposes of this analysis, no obsolescence was determined to be present.

1292 The fair value of the customer-related assets is determined to be $26.9 million, as calculated on the next page:

1293

Cost Approach		
Figures in millions unless otherwise indicated		
		% of Total Value
Direct & Indirect Costs		
Direct Costs	$ 15.0	55.5%
Indirect Cost	6.0	22.2%
Total Costs	21.0	
Developer's Profit		
Developer's Profit Margin	20% (1)	
Developer's Profit	5.3	19.4%
Opportunity Cost		
# of Customers	1,000	
Average Lead Time (Months)	3	
Required Return	12%	
Investment per Customer (actual)	26,250.0 (2)	
Opportunity Cost per Customer (actual)	787.5 (3)	
Total Opportunity Costs	0.8 (4)	2.9%
Total Cost	**$ 27.0**	100.0%

(1) Calculated as: (Cost / (1 - Margin) * Margin), such that the margin earned on the
   the cost is 20%.   In this case, (Developer's Profit) / (Developer's Revenue consisting
   of Costs plus Developer's Profit) = 5.3 / (21.0 + 5.3) = 20% margin.
(2) Calculated as: Total Costs (including Developer's Profit) / # of Customers
(3) Calculated as: Lead Time in Years * Required Return * Investment per Customer
(4) Calculated as: Opportunity Cost per Customer * # of Customers

1294 **7.0 APPLICATION OF THE MARKET APPROACH**

1295 **7.1 Introduction**

1296 7.1.1   The Market Approach is used to estimate fair value based on market prices of comparable assets. The
1297 valuation process is essentially that of comparison and correlation between the subject asset and similar assets.
1298 Characteristics and conditions of sale for comparable assets are analyzed and potentially adjusted to indicate a
1299 value of the subject asset. For this approach to be reliable, there are two requirements: an active market and an
1300 exchange of comparable assets.

1301 7.1.2   The Market Approach is infrequently used to estimate the fair value of customer-related assets.
1302 Customer-related assets are rarely transacted on a stand-alone basis; rather, they are typically acquired as part of
1303 a business or group of assets. Therefore, information on market transactions of customer-related assets
1304 generally is not available. A further limitation of the Market Approach is that if observable transactions exist,
1305 the uniqueness of customer-related assets typically results in a lack of comparability with the subject asset.
1306 However, this approach may be appropriate for certain types of customer lists such as prescription files,
1307 subscriber lists, or frequent flyer/shopper lists when reasonable transaction data exist.

1308 **7.2 Methodology**

1309 7.2.1   *Valuation Multiples* – Similar to conducting a market approach for the purpose of valuing a business
1310 enterprise or an equity interest in a business, a valuation multiple should be derived based on comparable
1311 market transaction information.   To the extent possible, the valuation multiple should be adjusted for
1312 differences between the subject asset and the comparable assets.   The related rights, obligations, and risk
1313 profiles of the assets should also be considered when selecting an appropriate multiple.   For example, a
1314 customer list rental rate may not reflect the fair value of the customer list asset and adjustments may be
1315 necessary to this market indication to arrive at a fair value metric.

1316 7.2.2   *Taxes* – Market approach estimates of value are typically not adjusted for taxes, nor is a TAB typically
1317 applied, as the price paid in a market transaction theoretically includes consideration of relevant tax issues.

1318 *Example 7.1: Market Approach*

1319 Company A acquires Company B, a regional pharmacy chain. Company B generates $1.0 million in revenue
1320 per year and has 20,000 individual records. Market transactions indicate that pharmacy records sell for $5 per
1321 record.   The comparable pharmacy records are sufficiently similar to the records of Company B that no
1322 adjustments to the observed valuation multiple are necessary. The value of the customers is $100,000, as
1323 calculated below:

1324   20,000 records x $5 per record = $100,000

1325
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8.0   VALUATION METHODOLOGY SELECTION

8.1.1   The choice of an appropriate valuation methodology is critical to appropriately valuing customer-related assets. As previously indicated, there are a number of methodologies that may be used. While certain approaches are more commonly used and/or more broadly appropriate than others, all approaches have positive and negative attributes. The facts and circumstances specific to the customer-related asset being valued will drive methodology selection.

8.1.2   Another issue to consider in relation to intangible assets in general is whether assemblage or going concern value (both elements of goodwill) is embedded in the fair value of the asset and whether or not it should attach to the asset. Many believe that use of an excess earnings method or with-and-without method can lead to assemblage value or going concern value being included in the residual cash flows because contributory charges or other adjustments for those elements of goodwill are not generally determinable. Please see the CAC Document for further discussion related to this topic. The Working Group acknowledges that it is possible that elements of goodwill may be included in asset values based on the aforementioned valuation techniques; however, in most cases it is difficult to measure how much goodwill-related value may be included, nor is it generally acceptable for a going concern/goodwill CAC to be applied. We note that this has commonly been viewed as an acceptable limitation of the MPEEM that is outweighed by the method's many advantages.

8.1.3   The valuation specialist should choose the methodology that is most appropriate and provides the best indication of fair value:

8.1.4   *MPEEM* – The MPEEM is a broadly-used approach and may be employed when the customer-related asset being valued is a primary asset or when a different asset is the primary asset and can be appropriately valued using another valuation methodology. While the MPEEM is commonly used because it incorporates PFI, there are a number of both limitations and advantages to the method. In instances where the elements of goodwill of a business are believed to have significant value, the propensity of the MPEEM to include goodwill elements in the cash flows attributed to the customer-related assets becomes greater. This is commonly viewed to be an acceptable limitation of the method; however, consideration of other valuation methodologies may be appropriate in such circumstances. Additionally, use of the MPEEM requires a number of assumptions and valuation judgments, including the development of CACs, attrition analyses, and lifing, among others. In the Working Group's view, the MPEEM is a useful valuation method and its limitations are widely accepted and typically do not become problematic so long as the analysis and underlying assumptions are well-supported.

8.1.5   *The Distributor Method* – A benefit of using the Distributor Method is that it uses market-based data to support the selection of profitability and other inputs related to customer-related activities (similar to selection of a royalty rate in a relief-from-royalty model), thereby allowing the potential use of the MPEEM to value other assets of the business if appropriate. Using distributor inputs is appealing when valuing certain customer relationships because it directly isolates the cash flow attributable to the customer assets; however, similar to the MPEEM, these cash flows may also contain some elements of goodwill. This method is often appropriate when customer relationships are generally transactional in nature with minimal switching costs. In order to effectively utilize this method, market data must be available for distributors that have relationships with their customers that are similar to the relationships the subject entity has with its customers. The use of this methodology gives the valuation specialist the option to use the MPEEM to value another asset of the business (e.g., brand or technology) without the challenges caused by multiple MPEEMs with circular cross-charges. In addition, similar to the MPEEM, this method requires a significant number of assumptions and subjective judgments including CACs, attrition, and lifing, among others.

8.1.6   *The With-and-Without Method* – The With-and-Without Method is most commonly used when the customer assets are not the primary asset. The method works best when reasonable estimates can be made for

1371 the time and resources required to recreate the asset. This is more common when the re-creation period is short
1372 (e.g., less than three years). However, in some cases, use of the With-and-Without Method may produce asset
1373 cash flows that include elements of goodwill. Since the method presumes that the differential cash flow results
1374 in the customer value, one could argue that the differential relates to other assets as well, including elements of
1375 goodwill. While the method is logical in theory, it requires significant information and judgment in quantifying
1376 the impact of the absence of the subject asset upon the cash flows of the business. By using the With-and-
1377 Without Method to value customer-related assets, the MPEEM may then be used to value another intangible
1378 asset (e.g., a primary or other asset).

1379 8.1.7   *The Cost Savings Method* – The Cost Savings Method is a form of the Income Approach that directly
1380 measures an expected future benefit stream of an asset in terms of the future after-tax costs which are avoided
1381 (or reduced) as a result of owning the asset. This method has similarities to the Cost Approach but is based on a
1382 direct measure of future economic benefits as opposed to returns on past investments.   The Cost Savings
1383 Method may be appropriate when the subject asset results in saving costs, avoiding expenditures, or improving
1384 efficiency, etc. This method is more common when the re-creation period for the asset is short and cost saving
1385 can be estimated in a straight-forward manner.

1386 8.1.8   *The Cost Approach* – The Working Group believes the use of a Cost Approach to value customer-
1387 related assets may be appropriate under certain fact patterns, including but not limited to the following:

1388   a.   There are very few identified customer relationships;

1389   b.   There is limited or no sales history with existing customers;

1390   c.   There is limited or poor ability of management to forecast cash flows associated with existing
1391   customers;

1392   d.   Management's projection for existing customers suggests negative cash flow for the foreseeable future,
1393   but nonetheless customers are viewed as having some value for other reasons;

1394   e.   The customer relationships do not convey significant rights or obligations—i.e., they are non-exclusive;
1395   and

1396   f.   There are no significant barriers to entry or switching costs

1397 8.1.9   Although intuitive and objective, the Working Group believes that the Cost Approach suffers from a
1398 number of limitations that restrict is usefulness. The Cost Approach may understate the value of customer-
1399 related assets that are not easily replaceable or which create an economic benefit that exceeds the historical cost
1400 of developing the relationship. Additionally, due to survivorship bias, inconsistencies with other approaches,
1401 and other challenges in estimating the required inputs, the Cost Approach may not yield a reasonable value.
1402 There are limited situations where other approaches may be considered too difficult, inappropriate, or
1403 subjective, and in these cases a Cost Approach may provide a reasonable indication of value.

1404 8.1.10 *The Market Approach* – The Market Approach is most appropriate for valuing customer-related assets
1405 when there have been market transactions of comparable assets and the market data is available. Although
1406 intuitive and objective, the Working Group believes that the Market Approach suffers from a number of
1407 limitations that restrict is usefulness. Customer-related assets are rarely transacted on a standalone basis, and in
1408 most cases any observable historical transactions will not be comparable. However, in limited situations, such
1409 as when valuing certain types of customer lists, historical transactions may exist and provide an objective
1410 indication of value.

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9.0   OTHER CONSIDERATIONS

9.1   Introduction

9.1.1   This section addresses other technical issues not previously covered in this document that may be relevant to the valuation of customer-related assets depending on the facts and circumstances.

9.2   Backlog

9.2.1   Backlog typically represents a subset of the customer-related asset. As previously defined, backlog represents products or services that have been contracted but have not been delivered or invoiced as of the measurement date. Conversely, the value of customer relationships is affected by revenues and earnings that arise from future orders placed by existing customers. In estimating the fair value of customer relationship assets, backlog (if material) should be valued separately. The need for separate treatment is driven by differences in the characteristics of backlog and typical customer relationship assets (such as life, risk profile, profitability).

9.2.2   When backlog is valued separately from the customer relationship asset, care must be taken to ensure that customer value is not double counted. Typically, the value of the backlog should be excluded from the value of the customer relationship asset. The valuation of both assets using an MPEEM approach is commonly accomplished by excluding backlog revenue and operating profit from the customer relationship valuation. An additional concern (though it is an accounting consideration rather than a valuation consideration) is the treatment of amortization. When straight-line amortization is used rather than the pattern of economic benefit, it is common to begin amortizing all assets in the first period. This will lead to concurrent amortization in periods where both backlog and other customer-related assets exist.

9.3   Deferred Revenue

9.3.1   Deferred revenue is a liability (either current or non-current) that arises from the accounting for transactions in which a customer has already paid for goods and service and cash has been received but the obligation has not been delivered. A common example is computer service contracts or extended service contracts where the contract is paid at inception but the service obligation will be delivered over the term of the contract.

9.3.2   If a strictly cash-based forecast is used in the estimation of the value of a customer-related asset and deferred revenue is present, only revenue and expenses associated with future sales from existing customers should be included in the forecast. If fulfillment expenses associated with deferred revenues from prior sales are included in the cash-based forecast, they must be removed from the customer-related asset model. No adjustment to revenue is necessary because the cash-based forecast would already exclude the deferred revenue that has already been received.

9.3.3   If an accrual-based customer-related asset forecast is provided and deferred revenue is present, in addition to removing the fulfillment expense associated with deferred revenue from the customer-related asset model, the projected deferred revenue itself must also be removed because the related cash has already been received (i.e., the customer-related asset projections should not include either revenue or expense associated with the deferred revenue).

1450 9.3.4   The Working Group believes that if deferred revenue and its related cash are included in working
1451 capital and the related CAC, no additional adjustments need to be made to an accrual forecast, besides the one-
1452 time adjustment mentioned in paragraph 9.3.3, to estimate the cash flows of the customer-related asset.   If
1453 deferred revenue is excluded from working capital and the related CAC, the valuation specialist should consider
1454 any additional adjustments needed to determine the cash flow related to the customer-related asset.

1455 9.3.5   The conceptual framework underlying the preceding discussion is that the value of the customer-related
1456 asset should be the same independent of whether the forecast is cash- or accrual-based.

9.4   Step-Up Considerations for Inventory

1458 9.4.1   When valuing customer-related assets using the MPEEM, it is generally accepted practice to calculate
1459 CACs based on the fair value of the contributory assets used in generating the revenue, earnings and cash flows
1460 relating to the asset being valued. According to the CAC Document, "valuation specialists should not only
1461 exclude one-time adjustments from market participant levels of working capital used in the CAC calculation,
1462 but should also make sure to adjust for the effects of any one-time modifications of the PFI utilized in the
1463 valuation of the subject intangible asset to avoid double counting profit or expense. More specifically, the
1464 profit included in the inventory step-up (if applied) would need to be removed from the PFI of the subject
1465 intangible asset so that the profit is not recognized more than once."

9.5   Overlapping Customers

1467 9.5.1   Overlapping customers exist when an acquirer purchases an acquiree that has many of the same
1468 customers. For example, Company A sells football equipment to Retailers L, M and O. Company A acquires
1469 Company B, a maker of soccer equipment, in a business combination and Company B also sells its products to
1470 L, M and O. Under previous U.S. GAAP, some entities argued that Company B's customers should not be
1471 recognized at fair value because Company A already had established relationships with L, M and O and it did
1472 not gain new customer relationships. The counterargument that was highlighted in an SEC speech[11] stated that
1473 Company A had likely gained shelf space at the retailers and enhanced its economic relationships as it would
1474 now receive incremental cash flows resulting from Company B's relationships. The key take away from the
1475 speech is that the economics of customer-related assets from a market participant perspective are the most
1476 important consideration (assuming they meet the contractual-legal or separable criteria) rather than the nature of
1477 the relationships on an entity specific basis.

9.6   Pre-Existing Relationships in a Business Combination

1479 9.6.1   ASC paragraph 805-10-25-20 (equivalent discussion in IFRS 3R B51-B53) states that an "acquirer and
1480 the acquiree may have a pre-existing relationship or other arrangement before negotiations for the business
1481 combination began, or they may enter into an arrangement during the negotiations that is separate from the
1482 business combination. In either situation, the acquirer shall identify any amounts that are not part of what the
1483 acquirer and the acquiree (or its former owners) exchanged in the business combination, that is, amounts that
1484 are not part of the exchange for the acquiree. The acquirer shall recognize as part of applying the acquisition
1485 method only the consideration transferred for the acquiree and the assets acquired and liabilities assumed in the
1486 exchange for the acquiree. Separate transactions shall be accounted for in accordance with the relevant
1487 generally accepted accounting principles (GAAP)."

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[11]Remarks made by SEC professional accounting fellow Pamela Schlosser at the 2005 AICPA National Conference on Current SEC
and PCAOB Developments.

1488 9.6.2   In addition to the language above, ASC 805 provides the following example for the effective settlement
1489 of a supply contract as a result of a business combination (use of the word "Target" in the quote below indicates
1490 the acquiree):

1491 9.6.3   "Acquirer purchases electronic components from Target under a five-year supply contract at fixed rates.
1492 Currently, the fixed rates are higher than rates at which Acquirer could purchase similar electronic components
1493 from another supplier. The supply contract allows Acquirer to terminate the contract before the end of the initial
1494 5-year term only by paying a $6 million penalty. With 3 years remaining under the supply contract, Acquirer
1495 pays $50 million to acquire Target, which is the fair value of Target based on what other market participants
1496 would be willing to pay" (ASC 805-10-55-30).

1497 9.6.4   "Included in the total fair value of Target is $8 million related to the fair value of the supply contract
1498 with Acquirer. The $8 million represents a $3 million component that is at-market because the pricing is
1499 comparable to pricing for current market transactions for the same or similar items (selling effort, customer
1500 relationships, and so forth) and a $5 million component for pricing that is unfavorable to Acquirer because it
1501 exceeds the price of current market transactions for similar items. Target has no other identifiable assets or
1502 liabilities related to the supply contract, and Acquirer has not recognized any assets or liabilities related to the
1503 supply contract before the business combination" (ASC 805-10-55-31).

1504 9.6.5   "In this Example, Acquirer recognizes a loss of $5 million (the lesser of the $6 million stated settlement
1505 amount and the amount by which the contract is unfavorable to the acquirer) separately from the business
1506 combination. The $3 million at-market component of the contract is part of goodwill" (ASC 805-10-55-32).

1507 9.6.6   The Working Group believes that although this example discusses customer contracts, non-contractual
1508 customer relationships would be treated similarly and would not lead to the recognition of an identifiable
1509 intangible asset.

1510 **9.7   Asset Life and Amortization**

1511 9.7.1   The life of an asset can be defined in two ways: economic life and useful life. Economic life is a
1512 valuation concept, while useful life is an accounting estimate. Economic life and useful life are discussed
1513 further below.

1514 9.7.2   *Economic Life* – Economic life has various (albeit similar) definitions in existing valuation literature.
1515 For the purposes of this document, economic life is defined as "the period of time over which property may
1516 generate economic benefits."[12]   In an Income Approach, the economic life is equal to the period over which
1517 cash flows are projected and are based on a perspective of a market participant. The fair value of an asset is
1518 equal to the sum of the present value of cash flows expected to be generated by the asset over its economic life.

1519 9.7.3   For backlog-type assets, management will often have contract terms or other reliable estimates of order
1520 fulfillment to estimate the economic life. For contractual customer relationships, the economic life is generally
1521 based on the contractual term plus any expected renewals, which should be consistent with the provisions of the
1522 contract and market participant assumptions. For non-contractual relationship assets, the economic life is less
1523 obvious and its determination typically requires further analysis, such as an attrition analysis.

1524 9.7.4   *Useful Life* – ASC 350 (and IAS 38 88-96) states that "the accounting for a recognized intangible asset
1525 is based on its useful life to the reporting entity" (ASC 350-30-35-1). ASC 350 defines the useful life of an

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[12]International Glossary of Business Valuation Terms, which has been adopted by the American Institute of Certified Public
Accountants, the American Society of Appraisers, the National Association of Certified Valuation Analysts, the Canadian Institute of
Chartered Business Valuators, and the Institute of Business Appraisers.

1526 intangible asset as "the period over which the asset is expected to contribute directly or indirectly to the future
1527 cash flows of that entity" (ASC 350-30-35-2). While this definition is similar to that of economic life, the
1528 Working Group believes there could be differences between economic life and useful life since the useful life
1529 determination is an entity-specific determination and the economic life relates to market participant assumptions
1530 contained in the valuation model. ASC 350 provides additional guidance for evaluating useful life by stating
1531 that "The useful life of an intangible asset to an entity is the period over which the asset is expected to
1532 contribute directly or indirectly to the future cash flows of that entity. The useful life is not the period of time
1533 that it would take that entity to internally develop an intangible asset that would provide similar benefits" (ASC
1534 350-30-35-2). ASC 350 also provides guidance on what factors one should consider when determining the
1535 useful life of an asset for a given entity (ASC 350-30-35-3).

1536 9.7.5   The useful life of an intangible asset is categorized as either finite or indefinite. An indefinite-lived
1537 intangible asset is not amortized; rather, it is tested annually for impairment. Intangible assets with a finite life
1538 are amortized. ASC 350 specifies that "the method of amortization shall reflect the pattern in which the
1539 economic benefits of the intangible asset are consumed or otherwise used up. If that pattern cannot be reliably
1540 determined, a straight-line amortization method shall be used" (ASC 350-30-35).

1541 9.7.6   Depending on the methodology used to select a useful life, the useful life may differ significantly from
1542 the economic life. The following example illustrates the relationship between the economic life and potential
1543 useful lives of an asset and the resulting possible annual amortization schedules based on the pattern of benefits
1544 and straight-line methodologies. The pattern of benefits amortization is based on the pattern of annual
1545 undiscounted cash flows relative to the sum of all undiscounted cash flows over the economic life of the asset.
1546 The straight line amortization is based on the value of the asset, a qualitative assessment of the useful life, and
1547 constant annual amortization through the useful life of the asset.

1548 *Example 9.1: Amortization Patterns*

1549 9.7.7   Company A, an international manufacturer and marketer of widgets, acquires Company B, a regional
1550 marketer of widgets. The primary acquisition rationale is access to the target's customer base. Company B has
1551 significant market penetration in the southeastern U.S. The customer relationships are transactional (i.e.,
1552 purchase order-based and no long term contracts exist). Customer attrition is estimated to be 10% per year,
1553 offset by an assumption of 3% annual growth in cash flow from the customer relationships being valued. The
1554 value of the customer relationships, assuming a 15% discount rate, is $480 million over a 20-year economic life.
1555 The economic life ends when the discounted cash flows occurring after the economic life are immaterial to the
1556 fair value conclusion.

1557 9.7.8   Based on guidance provided in ASC 350, the customer relationships would be amortized in a manner
1558 that would reflect the pattern in which the economic benefits of the intangible asset are consumed or otherwise
1559 used up. However, in practice many companies use a straight-line amortization method that approximates the
1560 amortization method based on pattern of benefits. The table below summarizes the undiscounted cash flow,
1561 discounted flow, amortization over the expected pattern of benefits, and the straight-line amortization over 12,
1562 14 and 16 years. This table is intended to show the differences between possible amortization methodologies.
1563 Although the table below displays a comparison of the different amortization methodologies, the method
1564 selected is an accounting issue that is determined by management and reviewed/discussed with their auditors.

1565 *Table 9.1: Economic versus Useful Life (in millions)*

	Economic Life		Useful Life			
	Undiscounted Cash Flows	Discounted Cash Flows	Pattern of Benefits Amortization	Straight-Line Amortization		
				12 Years	14 Years	16 Years
Year 1	100.00	93.25	43.92	40.04	34.32	30.03
Year 2	93.00	75.41	40.85	40.04	34.32	30.03
Year 3	86.49	60.98	37.99	40.04	34.32	30.03
Year 4	80.44	49.32	35.33	40.04	34.32	30.03
Year 5	74.81	39.88	32.86	40.04	34.32	30.03
Year 6	69.57	32.25	30.56	40.04	34.32	30.03
Year 7	64.70	26.08	28.42	40.04	34.32	30.03
Year 8	60.17	21.09	26.43	40.04	34.32	30.03
Year 9	55.96	17.06	24.58	40.04	34.32	30.03
Year 10	52.04	13.79	22.86	40.04	34.32	30.03
Year 11	48.40	11.16	21.26	40.04	34.32	30.03
Year 12	45.01	9.02	19.77	40.04	34.32	30.03
Year 13	41.86	7.30	18.39		34.32	30.03
Year 14	38.93	5.90	17.10		34.32	30.03
Year 15	36.20	4.77	15.90			30.03
Year 16	33.67	3.86	14.79			30.03
Year 17	31.31	3.12	13.75			
Year 18	29.12	2.52	12.79			
Year 19	27.08	2.04	11.89			
Year 20	25.19	1.65	11.06			
Total	1,093.94	480.47	480.47	480.47	480.47	480.47

1566 Notes:

1567 (1) Pattern of Benefits = Undiscounted Cash Flow in Year / Total Undiscounted Cash Flow x Total Present
1568 Value. Year 1 example calculation: 100.00 / 1,093.94 x 480.47 = 43.92.

1569 (2) Straight-Line Amortization = Total Present Value / Number of Years of Straight-Line Amortization.
1570 Year 1 example calculation: 480.47 / 12 = 40.04.

1571 (3) Years 12, 14 and 16 are included only for illustrative purposes.

1572 9.7.9 The graph below illustrates the cumulative sum of amortization using the pattern of benefits method
1573 and straight-line amortization over 12, 14 and 16 years. In this example, a 12-year straight-line amortization
1574 appears to be the closest proxy to the pattern of benefits in the earlier years while the 16-year straight-line
1575 amortization appears to be the best proxy in the later years. This chart indicates that certain amortization
1576 methods may be more appropriate than others depending on facts and circumstances. For instance, straight-line
1577 amortization patterns are shown here as an example, but other methods such as declining balance may also be

1578 appropriate to consider. As mentioned above, this determination should be made by management and
1579 reviewed/discussed with their auditors.

1580 *Figure 9.1: Amortization Patterns*

Amortization Patterns
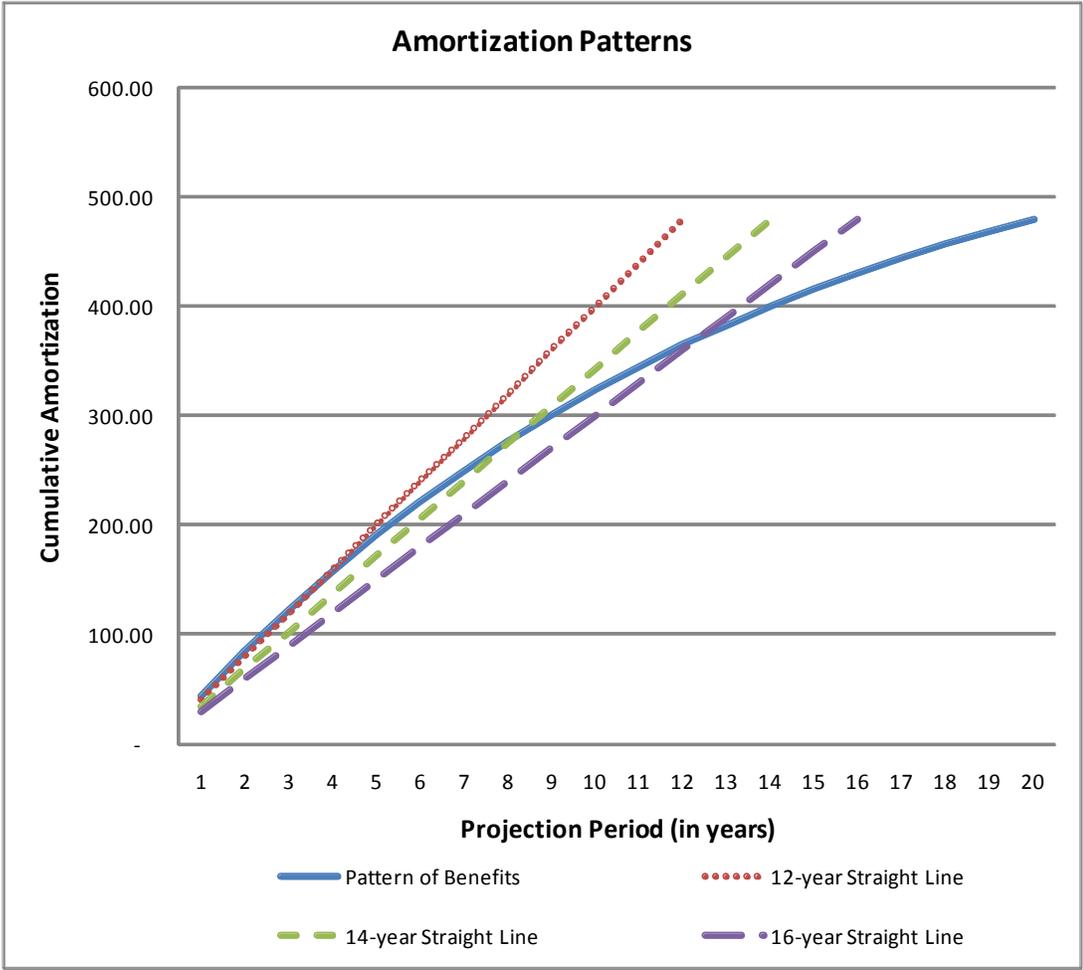
1581 9.7.10   It is generally straight-forward to identify economic and useful life patterns when an income approach
1582 is used to value customer-related assets. However, when other approaches are used, such as a cost approach,
1583 the issue can be more difficult to assess. When using a cost approach, the historical expense or cost pattern
1584 relied upon may not have any correlation to the life of the customer-related asset itself. Initial costs, as well as
1585 any ongoing maintenance costs, both need to be considered when determining the economic life of the
1586 customer-related asset.

9.8   Testing Outputs

1588 9.8.1   In the context of the estimation of asset values in a business combination, there are several ways to
1589 "test" the output of a customer-related asset valuation for reasonableness. The following high-level procedures
1590 can be helpful in assessing the value of customer relationships.

1591 9.8.2   *Output versus Expectation* – A customer value should be assessed relative to qualitative expectations at
1592 the outset of an engagement. Given our qualitative view, does the quantitative answer make sense? Can we
1593 compare the output to prior experience (i.e., customer value as a percentage of purchase consideration and/or
1594 total intangible asset value including goodwill)? How does the customer value compare to the value of other

1595 assets in the context of the qualitative considerations discussed above? Is the value derived for the customer
1596 relationship consistent with press releases discussing the transaction? Is it a primary or secondary asset and are
1597 the approaches used consistent with management's view of the customer relationship asset?

1598 9.8.3   *Implied New Customer Assumptions* – Given forecasts of overall revenue for the subject business and
1599 forecasts of revenue attributable to existing customers, a forecast of revenue attributable to future customers can
1600 be implied. This future customer revenue forecast should be assessed for reasonableness. For instance, are
1601 implied growth rates realistically attainable given the sales and marketing expense assumptions? The total
1602 industry customer population can be used to calculate implied incremental market share captured each year.
1603 Are these results reasonable?

1604 9.8.4   *Reconciliation* – A number of reconciliation tests can be performed, which will assist with the
1605 assessment of customer value and, in some cases, other asset values. Profit margins for existing and new
1606 customers should reconcile to the margins associated with the business enterprise. Does the profit margin
1607 reconciliation make sense and tie back to the total? Sales and marketing expenses for existing and new
1608 customers should tie to the total sales and marketing expense assumptions used by the business. Do these
1609 assumptions tie together?

1610 9.8.5   *Other Assumptions* – Certain other assumptions in a customer model may infer information about the
1611 value of existing customers, and the resulting customer value should be assessed relative to these inferences.
1612 For example, in the MPEEM it may be appropriate to add back expenses associated with new customer
1613 acquisitions (see discussion above). All else equal, if new customer acquisition costs are relatively high, it may
1614 be reasonable to expect a relatively higher value for existing customers because of the implied higher
1615 investment required to have attracted them. Given new customer costs, does the value for existing customers
1616 make sense? Does the revenue contribution or profit contribution from existing versus new customers make
1617 sense? The financial overlay presented in the CAC Document toolkit may be helpful to a valuation practitioner
1618 when assessing the consistency and output of asset valuations in the context of a business combination.

1619 **9.9   Convergence of U.S. GAAP and IFRSs**

1620 9.9.1   The FASB and the IASB have been working on converging accounting standards for several years and
1621 are most likely to continue this endeavor.[13]

1622 9.9.1   Over the past few years the two groups have jointly revised the business combinations accounting
1623 standards (ASC 805 and IFRS 3R) and the fair value measurements standards (ASC 820 and IFRS 13). With
1624 respect to valuation matters, the business combination standards are virtually identical, although some
1625 differences remain related to accounting in the post-acquisition period (i.e., recognition and measurement of
1626 impairment losses as discussed in sections 2.4 and 2.5).

1627 9.9.2   Also, as noted, the fair value measurements standards are also virtually identical. The only potential
1628 area for differences has to do with the unit of account. Neither standard specifies the unit of account; rather,
1629 both standards indicate that the unit of account is established under other Codification topics or specific IFRSs
1630 that require or permit fair value measurement or disclosure. As a result, there may be differences that arise in
1631 valuations of intangible assets related to the unit of account.
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[13] Further discussion of the convergence plans is available at www.ifrs.org and www.fasb.org.

1633

10.0 SUMMARY

1634

1635 10.1.1   There are multiple situations that require the valuation of customer-related assets for financial reporting
1636 purposes, including:

1637   a. Business combinations;

1638   b. Asset acquisitions;

1639   c. Goodwill impairment testing; and

1640   d. Long-lived asset impairment testing.

1641 10.1.2   The Working Group believes that asset identification and qualitative considerations are equally as
1642 important as the selection of valuation methodology and quantitative factors/considerations.

1643 10.1.3   Customer-related assets, like other intangible assets, must meet certain recognition criteria to be
1644 considered identifiable for financial reporting purposes. ASC 805 continues the guidance set forth in prior U.S.
1645 GAAP where identifiable assets are recognized if they are contractual, or arise from legal rights, or if they are
1646 separable and can be separated and sold, rented, or leased (ASC 805-20-55, IFRS 3R Appendix A).

1647 10.1.4   There are three standard approaches a valuation specialist may consider in the valuation of customer-
1648 related assets: the Income Approach, the Cost Approach, and the Market Approach. The Income Approach is
1649 the most common approach used in the valuation of customer-related assets and is viewed by the Working
1650 Group as the preferred methodology in most situations. However, in the valuation process, methodology or
1651 model choice should reflect careful qualitative and quantitative assessment of the asset.

1652 10.1.5   Factors to consider for the purpose of gaining a qualitative understanding of the customer-related asset
1653 include: industry characteristics, company characteristics, product/service characteristics, and asset
1654 characteristics.

1655 10.1.6   The Income Approach is used to estimate fair value based on the cash flows that an asset can be
1656 expected to generate over its useful life. The most commonly used income approach methodologies include the
1657 MPEEM, the Distributor Method (a subset of the MPEEM), the Cost-Savings Method, and the With-and-
1658 Without Method.

1659 10.1.7   Many implementation issues arise in the valuation of customer-related assets. This document seeks to
1660 highlight these issues and set forth the Working Group's view of best practices. The Working Group notes that
1661 professional judgment is necessary in the valuation of any asset and that the purpose of this document is to
1662 assist in reducing diversity of practice in the specific topics addressed by the Valuation Advisory. It is the goal
1663 of the Working Group that the guidance set forth in this Valuation Advisory, combined with the application of
1664 professional judgment, will result in measurements of fair value that represent the highest level of professional
1665 practice and that are consistent with the goals of fair value measurement for financial reporting.

1666
1667

11.0 LIST OF ACRONYMS USED

1668 **11.0 LIST OF ACRONYMS USED**

1669 AICPA   American Institute of Certified Public Accountants
1670 ASC   Accounting Standards Codification^{TM}
1671 CAC   Contributory Asset Charge
1672 CAPM   Capital Asset Pricing Model
1673 EITF   Emerging Issues Task Force
1674 FAS   Financial Accounting Standard
1675 FASB   Financial Accounting Standards Board
1676 FSP   FASB Staff Position
1677 GAAP   Generally Accepted Accounting Principles
1678 IAS   International Accounting Standard
1679 IASB   International Accounting Standards Board
1680 IFRIC   International Financial Reporting Interpretations Committee
1681 IFRSs   International Financial Reporting Standards
1682 IPR&D   In-Process Research & Development
1683 IRR   Internal Rate of Return
1684 IVSC   International Valuation Standards Council
1685 MPEEM   Multi-Period Excess Earnings Method
1686 NOL   Net Operating Loss
1687 PFI   Prospective Financial Information
1688 R&D   Research and Development
1689 ROI   Return on Investment
1690 RUL   Remaining Useful Life
1691 SEC   Securities and Exchange Commission
1692 SG&A   Selling, General & Administrative
1693 TAB   Tax Amortization Benefit
1694 WACC   Weighted Average Cost of Capital
1695 WARA   Weighted Average Return on Assets
1696
1697

12.0 REFERENCES

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Financial Accounting Standards Board, EITF 02-17, *Recognition of Customer Relationship Intangible Assets Acquired in a Business Combination* (nullified and subsumed into ASC 805)

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International Accounting Standard 36, *Impairment of Assets*

International Accounting Standard 38, *Intangible Assets*

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    American Society of Appraisers
    National Association of Certified Valuation Analysts
    The Canadian Institute of Chartered Business Valuators
    The Institute of Business Appraisers

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1733 Ucuzoglu, Joseph B., Speech by SEC Staff: Remarks Before the 2006 AICPA National Conference on Current
1734 SEC and PCAOB Developments

1735
1736

13.0 GLOSSARY

13.1 Glossary of Terms

Backlog
Arises from contracts such as purchase or sales orders. An order or production backlog acquired in a business combination meets the contractual-legal criterion even if the purchase or sales orders are cancelable.
[Source: Financial Accounting Standards Board *Accounting Standards Codification Topic 805, Business Combinations* (formerly Statement of Financial Accounting Standards No. 141 [Revised 2007])]

Business Enterprise
A commercial, industrial, service, or investment entity (or a combination thereof) pursuing an economic activity.
[Source: International Valuation Standards Council International Valuation Glossary, based on the definition in the International Glossary of Business Valuation Terms]

Capital Charge
A fair return on an entity's *contributory assets*, which are tangible and intangible assets used in the production of income or cash flow associated with an intangible asset being valued. In this context, *income or cash flow* refers to an applicable measure of income or cash flow, such as net income, or operating cash flow before taxes and capital expenditures. A capital charge may be expressed as a percentage return on [sic][14] an economic rent associated with, or a profit split related to, the contributory assets.
[Source: AICPA Statement on Standards for Valuation Services, Appendix C, Glossary of Additional Terms]

Contributory Asset Charge (CAC)
See Capital Charge.

Customer List
Consists of information about customers, such as their names and contact information. A customer list also may be in the form of a database that includes other information about the customers, such as their order histories and demographic information. A customer list generally does not arise from contractual or other legal rights.
[Source: Financial Accounting Standards Board *Accounting Standards Codification Topic 805, Business Combinations* (formerly Statement of Financial Accounting Standards No. 141 [Revised 2007])]

Customer Relationship
A relationship that exists between an entity and its customer if the entity has information about the customer and has regular contact with the customer, and the customer has the ability to make direct contact with the entity.
[Source: Financial Accounting Standards Board *Accounting Standards Codification Topic 805, Business Combinations* (formerly Statement of Financial Accounting Standards No. 141 [Revised 2007])]

Deferred Revenue
Deferred revenue is a liability that is created when monies are received by a company for goods and services not yet provided. Revenue will be recognized, and the deferred revenue liability eliminated, when the services are performed. Deferred revenue stems from the accounting concept of revenue recognition, under which

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[14] The word "or" would be more appropriate.

1776 revenues are recognized only when the earnings process is complete. If funds are received and no goods or
1777 services have yet been provided, the process is not complete; thus revenue cannot be recognized, and a deferred
1778 revenue liability is recorded. Specifically, the deferred revenue account is credited, and cash (or other assets)
1779 are debited. Deferred revenue is recorded in specific industries under particular circumstances. For instance, a
1780 software company might post deferred revenue for a maintenance agreement under which services will be
1781 provided over several years.
1782 [Source: www.investorglossary.com]

1783 **Economic Life**
1784 The total period of time over which an asset is expected to generate economic benefits for one or more users.
1785 [Source: International Valuation Standards Council International Valuation Glossary, based on the definition in
1786 the International Glossary of Business Valuation Terms]

1787 **Fair Value**
1788 Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly
1789 transaction between market participants at the measurement date.
1790 [Source: Financial Accounting Standards Board *Accounting Standards Codification Topic 820, Fair Value*
1791 *Measurements* (formerly Statement of Financial Accounting Standards No. 157)]

1792 **Fixed Asset**
1793 Assets with a physical manifestation. Examples include land and buildings, plant and machinery, fixtures and
1794 fittings, tools and equipment, and assets in the course of construction and development.
1795 [Source: International Valuation Standards, 7th Ed]

1796 **Goodwill**
1797 An asset representing the future economic benefits arising from other assets acquired in a business combination
1798 that are not individually identified and separately recognized.
1799 [Source: Financial Accounting Standards Board *Accounting Standards Codification Topic 805, Business*
1800 *Combinations* (formerly Statement of Financial Accounting Standards No. 141 [Revised 2007])]

1801 **Going Concern**
1802 A business enterprise that is expected to continue operations for the foreseeable future.
1803 [Source: International Valuation Standards Council International Valuation Glossary, based on the definition
1804 in the International Glossary of Business Valuation Terms]

1805 **In-Process Research and Development (IPR&D)**
1806 Research and development project that has not yet been completed. Acquired IPR&D is a subset of an
1807 intangible asset to be used in R&D activities.
1808 [Source: AICPA Practice Aid – *Assets Acquired in a Business Combination to Be Used in Research and*
1809 *Development Activities: A Focus on Software, Electronic Devices, and Pharmaceutical Industries*, 2001,
1810 Appendix A, Glossary of Terms]

1811 **Intangible Assets**
1812 An intangible asset is an asset (not including a financial asset) that lacks physical substance. As used in this
1813 Statement, the term intangible asset excludes goodwill.
1814 [Source: Financial Accounting Standards Board *Accounting Standards Codification Topic 805, Business*
1815 *Combinations* (formerly Statement of Financial Accounting Standards No. 141 (Revised 2007))]

1816 **Internal Rate of Return (IRR)**
1817 A discount rate at which the present value of the future cash flows of the investment equals the acquisition cost
1818 of the investment.

1819 [Source: International Valuation Standards Council International Valuation Glossary, based on the definition in
1820   the International Glossary of Business Valuation Terms]

1821 **Market Participant**
1822 Market participants are buyers and sellers in the principal (or most advantageous) market for the asset or
1823 liability that are:
1824   a. Independent of the reporting entity; that is, they are not related parties
1825   b. Knowledgeable, having a reasonable understanding about the asset or liability and the transaction
1826   based on all available information, including information that might be obtained through due
1827   diligence efforts that are usual and customary
1828   c. Able to transact for the asset or liability
1829   d. Willing to transact for the asset or liability; that is, they are motivated but not forced or otherwise
1830   compelled to do so.
1831 [Source: Financial Accounting Standards Board *Accounting Standards Codification Topic 820, Fair Value*
1832 *Measurements* (formerly Statement of Financial Accounting Standards No. 157)]

1833 **Non-Contractual Customer Relationship**
1834 A customer relationship acquired in a business combination that does not arise from a contract but may
1835 nevertheless be identifiable because the relationship is separable.
1836 [Source: Financial Accounting Standards Board *Accounting Standards Codification Topic 805, Business*
1837 *Combinations* (formerly Statement of Financial Accounting Standards No. 141 [Revised 2007])]

1838 **Order Production**
1839 See Backlog.

1840 **Prospective Financial Information (PFI)**
1841 A forecast of expected future cash flows.
1842 [Source: AICPA Practice Aid – *Assets Acquired in a Business Combination to Be Used in Research and*
1843 *Development Activities: A Focus on Software, Electronic Devices, and Pharmaceutical Industries,* 2001,
1844 paragraph 5.2.07]

1845 **Rate of Return**
1846 An amount of income (loss) and/or change in value realized or anticipated on an investment, expressed as a
1847 percentage of that investment
1848 [Source: International Valuation Standards Council International Valuation Glossary, based on the definition in
1849 the International Glossary of Business Valuation Terms]

1850 **Remaining Useful Life**
1851 See Useful Life.

1852 **Tax Amortization Benefit**
1853 Tax relief available on amortization of the capitalized asset.
1854 [Source: International Valuation Standards Council International Valuation Glossary]

1855 **Useful Life**
1856 The period over which the asset is expected to contribute directly or indirectly to the future cash flows of an
1857 entity.
1858 [Source: Financial Accounting Standards Board *Accounting Standards Codification Topic 350, Intangibles—*
1859 *Goodwill and Other*]

1860 **Weighted Average Cost of Capital (WACC)**

1861 A discount rate estimated by the weighted average, at market values, of the cost of all financing sources in a
1862 business enterprise's capital structure.
1863 [Source: International Valuation Standards Council International Valuation Glossary]
1864

1865 **13.2 Glossary of Entities Referred to in Document**

1866 **American Institute of Certified Public Accountants (AICPA)**
1867 The national, professional organization for Certified Public Accountants in the US. Provides members with
1868 resources, information, certification, and licensing. Established in 1887.
1869 [Source: Derived from the AICPA's website, www.aicpa.org]

1870 **Emerging Issues Task Force (EITF)**
1871 Assists the FASB in improving financial reporting through the timely identification, discussion, and resolution
1872 of financial accounting issues within the framework of the FASB ASC. Task Force members are drawn from a
1873 cross section of the FASB's constituencies, including auditors, preparers, and users of financial statements.
1874 Established in 1984.
1875 [Source: Derived from the FASB website, www.fasb.org]

1876 **International Accounting Standards Board (IASB)**
1877 London-based independent standard-setting body responsible for the development and publication of IFRSs and
1878 for approving Interpretations of IFRSs as developed by the IFRS Interpretations Committee.
1879 [Source: Derived from the IFRS Foundation website, www.ifrs.org]

1880 **International Valuation Standards Council (IVSC)**
1881 An independent, not-for-profit, private sector organization based in London, UK. The IVSC is a membership
1882 organization and is open to a wide range of stakeholders including professional institutes, valuation providers,
1883 standard setters, regulators of valuation services and academia. Members are provided with a forum for
1884 participation in the work of the IVSC which can advise the Boards on agenda priorities. The IVSC currently has
1885 74 member bodies from 54 countries.
1886 [Source: Derived from the IVSC website, www.ivsc.org]

1887 **IFRS Interpretations Committee (IFRIC)**
1888 Interpretive body with mandate to review on a timely basis widespread accounting issues that have arisen within
1889 the context of current IFRS. Work is aimed at reaching consensus on the appropriate accounting treatment
1890 (IFRIC Interpretations) and providing authoritative guidance on those issues.
1891 [Source: Derived from the IFRS Foundation website, www.ifrs.org]

1892 **Financial Accounting Standards Board (FASB)**
1893 The designated organization in the private sector for establishing standards of financial accounting and
1894 reporting. Those standards govern the preparation of financial reports and are officially recognized as
1895 authoritative by the SEC and AICPA.
1896 [Source: Derived from the FASB's website, www.fasb.org]

1897 **Securities and Exchange Commission (SEC)**
1898 Mission is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation in
1899 the United States. Established in 1934.
1900 [Source: Derived from the SEC website, www.sec.gov]
1901

APPENDIX A: ATTRITION RATE CALCULATION EXAMPLES

1902

1903 Attrition is discussed in Section 5.0 (Application of the Income Approach). Please note that the following
1904 examples (A.1 through A.4) are separate and no numerical comparisons should be made between the various
1905 examples. The data and years used in each example do not relate to one another.

1906 *Example A.1: Historical Population Revenue and Customer Count Calculations*

1907 Attrition analyses using historical customer or revenue data begin with the collecting of historical customer
1908 population count or revenue losses or gains over a historical period of time. Since the attrition data determined
1909 through the historical analysis is considered to be consistent across relationship vintages and year groups, the
1910 survivor curve developed has the general characteristics of an exponential distribution. When an exponential
1911 decay pattern is assumed, the average life expectancy of new customers should be equal to the average life
1912 expectancy of the old customers used in the historical analysis.

1913 The following basic examples demonstrate the calculation of an attrition rate using historical customer data as
1914 well as customer revenue data. Revenue attrition incorporates two factors: the level of revenue lost due to
1915 customer attrition and the level of revenue growth that occurs from retained customers. As such, it can be
1916 measured in an aggregated or disaggregated manner. The disaggregated method measures the customer attrition
1917 and revenue growth aspects separately. The aggregated method views them together by measuring the level of
1918 revenue attributable to customers present at the start of the measurement period.
1919

1921 *Table A.1.a: Historical Customer Population Data*

Customer #	Time -5	Time -4	Time -3	Time -2	Time -1
1	$ 50,689	$ 51,196	$ 53,244	$ 54,575	$ 55,666
2	25,896	$ 24,601	$ 25,339	$ -	$ -
3	14,589	$ 14,881	$ 15,030	$ 14,729	$ -
4	5,452	$ 5,507	$ 5,396	$ 5,612	$ 5,781
5	9,416	$ 9,887	$ -	$ -	$ -
6	9,256	$ -	$ -	$ -	$ -
7	22,902	$ 23,589	$ 23,825	$ 22,634	$ 23,086
8	14,580	$ 14,872	$ 15,169	$ 15,624	$ 16,249
9	987	$ -	$ -	$ -	$ -
10	11,569	$ 10,412	$ -	$ -	$ -
11	9,856	$ 9,659	$ 9,369	$ 9,838	$ -
12	8,905	$ 9,350	$ 9,537	$ 9,442	$ -
13	2,774	$ 2,885	$ 2,972	$ 3,031	$ 3,061
14	12,683	$ 13,063	$ 13,325	$ 13,725	$ 14,136
15	4,914	$ 4,963	$ 5,062	$ 5,012	$ 4,811
16	13,498	$ -	$ -	$ -	$ -
17	11,782	$ 12,489	$ 13,113	$ 13,900	$ 14,456
18	-	33,569	$ 32,898	$ 31,582	$ 32,213
19	-	-	30,569	$ 61,138	$ 67,252
20	-	-	-	-	40,618
Total Revenue	$ 229,748	$ 240,923	$ 254,848	$ 260,840	$ 277,330

1922 *Table A.1.b: Aggregated Lost Customer Revenue and Growth*
1923
1924 The following table shows how total customer attrition can be determined by aggregating historical customer
1925 attrition and growth into one calculation. This allows the valuation specialist to project future attrition and
1926 growth as a single input in a valuation analysis.
1927
1928 The total revenue in each historical year from the customers' existing in vintage year Time -5 is determined for
1929 each subsequent year. The revenue losses, or growth, are determined for each historical year.
1930

	Time -5	Time -4	Time -3	Time -2	Time -1
Revenue from Initial Customers	229,748	207,354	191,381	168,121	137,247
Revenue Losses with Attrition		-9.7%	-7.7%	-12.2%	-18.4%
Geometric Average	= 1 - ((137,247 / 229,748) ^ (1/4)) = 12.1%		Arithmetic Average	= 12.0%	

1931

1932
1933 *Table A.1.c: Using Historical Revenue Attrition – Aggregated Components*

1934 The above calculation can be used to forecast future attrition. Note that there is no separate revenue growth
1935 added to the forecast. It is already included in the 12.1% attrition calculation as explained above.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Prior Year Annual Revenue (A)	$277,330	$243,751	$214,238	$188,298	$165,499	$145,460	$127,848
Aggregate Revenue Attrition (B)	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%
Current Year Annual Revenue = A x (1 - B)	$243,751	$214,238	$188,298	$165,499	$145,460	$127,848	$112,368

1936

1937 *Tables A.1.d and A.1.e: Disaggregated Lost Customer Revenue and Growth*
1938
1939 Using the same data as outlined in Table A.1.a, the following tables show how total customer revenue attrition
1940 can be determined by disaggregating customer revenue and growth. This allows the valuation specialist to
1941 project future attrition and growth as two separate inputs in a valuation analysis. The following table calculates
1942 the lost revenue without any growth.
1943
1944 The lost revenue can be calculated using any base vintage year. In the following example, the attrition,
1945 inclusive of revenue growth is determined for the Time -5 vintage customer population. For example, the Time
1946 -4 lost revenue of $23,741 represents the amount of Time -5 revenue lost from customers not existing in year

1947 Time -4 [customer 6 ($9,256) plus customer 9 ($987) plus customer 16 ($13,498)]. The Time -3 lost revenue of
1948 $20,985 represents the amount of Time -5 revenue lost from customers not existing in year Time -3 [customer 5
1949 ($9,416) plus customer 10 ($11,569)]. This lost revenue calculation is determined in a similar manner for each
1950 year.
1951
1952 *A.1.d*
1953

	Time -5	Time -4	Time -3	Time -2	Time -1
Total Revenue Remaining from Existing Customers (Vintage Time -5)	$ 229,748	$ 206,007	$ 185,022	$ 159,126	$ 125,776
Lost Revenue	N/A	$ 23,741	$ 20,985	$ 25,896	$ 33,350
Lost Revenue Attrition		= 23,741 / 229,748 = 10.3%	= 20,985 / 229,748 = 9.1%	= 25,896 / 229,748 = 11.3%	= 33,350 / 229,748 = 14.5%
Geometric Average	= 1 - ((125,776 / 229,748) ^ (1/4)) = 14.0%	Arithmetic Average	= 11.3%		

1954

1955
1956 The next step is the determination of historical revenue growth. The starting point for this analysis is the
1957 determination of revenue in Time -5 from customer existing at the date of value (in this example defined as
1958 Time -1 existing customers). The $125,776 represents the total revenue in year Time -5 from customers that
1959 exist at Time -1 (customers 1, 4, 7, 8, 13, 14, 15, and 17). The revenue in each successive year is the revenue
1960 remaining each year from this same customer group. From this revenue, annual growth and losses can be
1961 determined. Note that the final revenue conclusion in this example at Time -1 of $137,247 is the same as in the
1962 combined calculation above shown in Table A.1.b.
1963
1964 *A.1.e*

	Time -5	Time -4	Time -3	Time -2	Time -1
Revenue from Retained Customers	125,776	128,564	132,106	134,112	137,247
Revenue Growth		2.2%	2.8%	1.5%	2.3%
Geometric Average	= ((137,247 / 125,776) ^ (1/4)) - 1 = 2.2%	Arithmetic Average	= 2.2%		

1965

1966 *Table A.1.f: Using Historical Revenue Attrition – Disaggregated Components*
1967
1968 The above calculation can be used to forecast future attrition. Note that there are two separate inputs: one for
1969 lost revenue and one for revenue growth. In this example, please note that the final Year 7 revenue is equal to
1970 the same Year 7 revenue as in the aggregated example in Table A.1.c.

1971

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Prior Year Annual Revenue (A)	$277,330	$243,751	$214,238	$188,298	$165,499	$145,460	$127,848
Revenue Growth (B)	= 2.2%	= 2.2%	= 2.2%	= 2.2%	= 2.2%	= 2.2%	= 2.2%
Lost Revenue Attrition (C)	= 14.0%	= 14.0%	= 14.0%	= 14.0%	= 14.0%	= 14.0%	= 14.0%
Current Year Annual Revenue $= A \times (1 + B) \times (1 - C)$	$243,751	$214,238	$188,298	$165,499	$145,460	$127,848	$112,368

1972 *Table A.1.g: Using Historical Customer Count*
1973
1974 The following table shows a similar approach to calculate attrition using customer count data versus customer
1975 revenue data. The data used to calculate the attrition in the following table is from Table A.1.a.
1976

	Time -5	Time -4	Time -3	Time -2	Time -1
Total Customers	17	15	14	13	11
Total Remaining Existing Customers (Vintage Time -5)	17	14	12	11	8
Customer Losses	N/A	3	2	1	3
Customer Loss Attrition		= 3 / 17 = 17.6%	= 2 / 17 = 11.8%	= 1 / 17 = 5.9%	= 3 / 17 = 17.6%
		17.65%	11.76%	5.88%	17.65%
Geometric Average	$= 1 - ((8 / 17)^{(1/4)})$ $= 17.2\%$	Arithmetic Average	= 13.2%		

1977 ***Example A.2: Statistical Techniques***

1978 Using an analysis of historical customer count survival data, the following renewal probabilities and expected
1979 survivor curve by survival vintage year have been calculated. Developing a renewal probability distribution by
1980 age vintage requires a large amount of quality data in order to inform the renewal probabilities by age vintage. It
1981 is possible to develop a similar analysis using management estimates of renewal probabilities by age vintage.

1982 ***Table A.2.a: Renewal Probabilities by Age Vintage***

Age	Renewal Probability %	Expected Survivor Curve %
0	0%	100.0%
1	70%	70.0%
2	74%	51.8%
3	78%	40.4%
4	82%	33.1%
5	86%	28.5%
6	90%	25.6%
7	90%	23.1%
8	90%	20.8%
9	90%	18.7%
10	90%	16.8%
11	90%	15.1%
12	90%	13.6%
13	90%	12.3%
14	90%	11.0%
15	90%	9.9%
16	90%	8.9%
17	90%	8.0%
18	90%	7.2%
19	90%	6.5%
20	90%	5.9%

1983

1984 Statistical analysis applied to the customer population data above can identify a survivor curve that describes
1985 customer life expectancy. The Weibull distribution is one example that has historically been used to describe
1986 life characteristics. There are many other statistical techniques and variations of the Weibull distribution that
1987 can be applied to customer analysis and are outside the parameters of this monograph. However, this example
1988 is meant to demonstrate how statistical analyses may be used in the valuation of customer relationships.

1989 The Weibull distribution is described mathematically as:

1990 $S(t) = e ^{\wedge} -((t/a)^{\wedge}b)$ with $t > 0$

1991   Where:

1992 $S(t)$ = survival percentage at time t

1993   t = time or duration of the customer relationship

1994   e = exponential function

1995   a = scale parameter

1996   b = shape parameter

1997 Linear regression techniques are used to compare the expected renewal probability survivor curve with the
1998 Weibull distribution survivor curve through a curve-fitting comparison process that solves for the shape and
1999 scale parameters that are unique to the Weibull survivor curve that best fits the expected survival curve.
2000 Alternatively, if spreadsheet software is unavailable, probability paper can be used to manually develop the
2001 Weibull distribution curve with the best fit. In this example, it was determined that a scale parameter (a) of
2002 3.959 and a shape parameter of 0.707 created the Weibull curve with the best fit. Given these scale and shape
2003 parameters, the Weibull percent survival curve percentages are compared to the expected survival curve
2004 percentages from Table A.2.a above.

2005 *Table A.2.b: Survival Curve Comparisons*

Age	Renewal Probability %	Expected Survivor Curve %	Weibull Percent Surviving %
1	70%	70.0%	68.5%
2	74%	51.8%	54.0%
3	78%	40.4%	44.0%
4	82%	33.1%	36.5%
5	86%	28.5%	30.7%
6	90%	25.6%	26.1%
7	90%	23.1%	22.4%
8	90%	20.8%	19.3%
9	90%	18.7%	16.7%
10	90%	16.8%	14.6%
11	90%	15.1%	12.8%
12	90%	13.6%	11.2%
13	90%	12.3%	9.8%
14	90%	11.0%	8.7%
15	90%	9.9%	7.7%
16	90%	8.9%	6.8%
17	90%	8.0%	6.1%
18	90%	7.2%	5.4%
19	90%	6.5%	4.8%
20	90%	5.9%	4.3%

2006

2007 The above expected survival curve and Weibull percent surviving curves are plotted below to show the curve
2008 fit:
2009

2010   *Chart A.2.a: Survival Curve Comparisons*
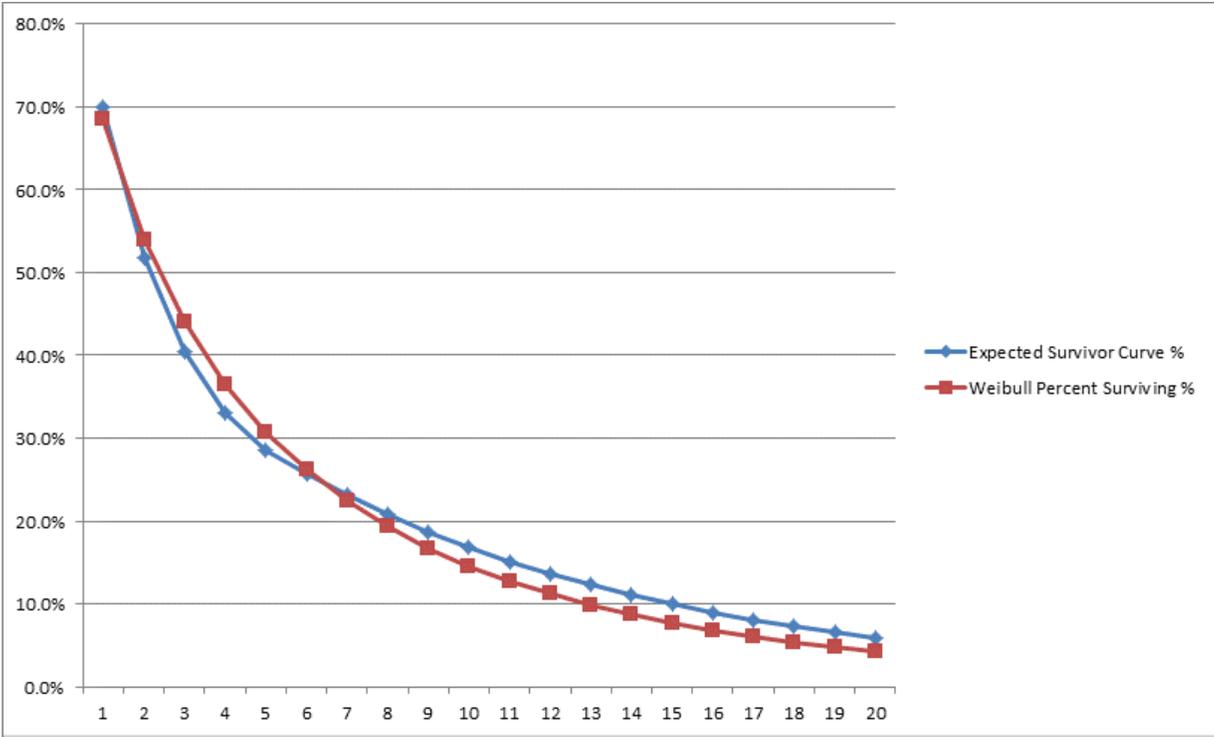
2011

2012

2013   The average life expectancy for the customer population is solved using the gamma function and the scale and
2014   shape parameters from the Weibull distribution. Most spreadsheet software allows for the computation using
2015   the gamma function:

2016   Life Expectancy = a * e ^ (gammaln (1 + (1/b)))

2017   Life Expectancy = 5 years

2018
2019   *Example A.3: Management Estimates*

2020   Attrition analyses using management estimates generally take two forms: management's estimation of future
2021   attrition or management's direct estimate of future revenues from the existing customer base. Care should be
2022   taken using these methods to understand exactly what information management is including in their forecast.
2023   For example, if management is providing attrition estimates, does the estimate include or exclude expected
2024   revenue growth from the existing customer base? The following examples demonstrate the calculation of an
2025   attrition rate using the two primary forms of management estimates: management's estimation of future
2026   attrition and management's direct estimate of future revenues from the existing customer base.
2027

2028 *Table A.3.a: Using Management Provided Revenue Attrition*

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**
Prior Year Annual Revenue (A)	$277,330	$242,803	$212,574	$186,108	$162,938	$142,652	$124,892
Attrition per Management (B)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Growth in Sales from Existing Base (C)	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Current Year Annual Revenue $= A \times (1 - B) \times (1 + C)$	$242,803	$212,574	$186,108	$162,938	$142,652	$124,892	$109,343

2029 *Table A.3.b: Using Management Estimate of Total Revenues*

	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**
Total Revenue	$277,330	$305,064	$335,570	$369,127	$406,040	$446,644	$491,308
Percentage from Existing Base (A)	90.0%	75.0%	60.0%	45.0%	30.0%	15.0%	5.0%
Total Revenue from Existing Base $= A \times B$	$249,597	$228,798	$201,342	$166,107	$121,812	$ 66,997	$ 24,565

2030 The valuation specialist may choose to perform certain high-level assessments of the data provided by
2031 management. For instance, what annual attrition rate is implied by the run-off of the existing base of
2032 customers? What is the implied total market share gain in any given year indicated by the new customer
2033 additions projected by management?

2034 *Example A.4: Irregular Attrition Patterns*

2035 The valuation specialist should take care in measuring the rate of decay relating to the customer relationships.
2036 Frequently, customer relationship attrition patterns demonstrate irregular patterns that are not linear or do not
2037 demonstrate a "smooth" geometric pattern. In some cases customer related revenue, and in turn cash flow, may
2038 initially increase before decreasing. In other cases customer revenue, and in turn cash flow, may decline
2039 significantly before leveling off to a normalized rate. The table below presents three scenarios where attrition
2040 rates change over time. In each of these scenarios, attrition rates are calculated based on historical customer
2041 data and are applied to future time periods.

2042 *Table A.4.a: Irregular Attrition Patterns*

Attrition Rate By Year	Scenario 1 - Base Case	Scenario 2 - Growth Then Decline	Scenario 3 - Significant Decline Then Stable
Year 1	-10.0%	20.0%	-50.0%
Year 2	-10.0%	-20.0%	-10.0%
Year 3	-10.0%	-20.0%	-10.0%
Year 4	-10.0%	-20.0%	-10.0%
CAGR	-10.0%	-11.5%	-22.3%

2043 Scenarios 1 and 3 are commonly used methods in applying historical customer data based attrition rates.
2044 Scenario 2 shows negative attrition (or growth) from existing customers in the first year. Growth in existing
2045 customers reflects revenue growth since addition of new customers would not be included in the valuation of
2046 existing customer relationships. The modeling of growth in existing customer revenue either as revenue growth
2047 or as negative attrition should not result in a different value conclusion.

2048 The valuation specialist needs to adjust the calculated attrition rates to account for differing perspectives
2049 between the data used to calculate the rate and where the data is applied. For instance, the attrition rate and
2050 percent surviving for Scenario 1 could be viewed as follows:

2051 *Table A.4.b: Percent Surviving Attrition Calculation – Scenario 1*

	Attrition Rate	Percent Surviving	Calculation
Year 1	-10.0%	90.0%	Prior year = 100.0%; current year = 90.0%
Year 2	-10.0%	81.0%	Prior year = 90.0%; current year = 81.0%
Year 3	-10.0%	72.9%	Prior year = 81.0%; current year = 72.9%
Year 4	-10.0%	65.6%	Prior year = 72.9%; current year = 65.6%

2052 The percent surviving in Year 1 reflects the attrition rate of 10% because the data used in deriving the attrition
2053 rate is determined based on an entire fiscal year. In our experience customer attrition statistics are calculated by
2054 comparing customer data over multiple fiscal years as opposed to comparing customers that existed at the
2055 beginning of a fiscal year with those at the end of the fiscal year.

2056 The attrition rate and percent surviving for Scenario 2 case could be viewed as follows:

2057 *Table A.4.c: Percent Surviving Attrition Calculation - Scenario 2*

	Attrition Rate	Percent Surviving	Calculation
Year 1	20.0%	120.0%	Prior year = 100.0%; current year = 120.0%
Year 2	-20.0%	96.0%	Prior year = 120.0%; current year = 96.0%
Year 3	-20.0%	76.8%	Prior year = 96.0%; current year = 76.8%
Year 4	-20.0%	61.4%	Prior year = 76.8%; current year = 61.4%

2058 Note: Year 1 percent surviving exceeds 100% due to expected growth in revenue from existing customers
2059 exceeding expected attrition of existing customers during the first projected year.

2060 The table above is reflective of a revenue-based attrition calculation because the application of negative attrition
2061 using a customer count-based attrition rate would be reflective of new customer additions. The value associated
2062 with new customer additions is not included in the value existing customer-related assets.

2063 The attrition rate and percent surviving for Scenario 3 case could be viewed as follows:

2064 *Table A.4.d: Percent Surviving Attrition Calculation - Scenario 3*

	Attrition Rate	Percent Surviving	Calculation
Year 1	-50.0%	50.0%	Prior year = 100.0%; current year = 50.0%
Year 2	-10.0%	45.0%	Prior year = 50.0%; current year = 45.0%
Year 3	-10.0%	40.5%	Prior year = 45.0%; current year = 40.5%
Year 4	-10.0%	36.5%	Prior year = 40.5%; current year = 36.5%

2065 *Example A.5: Partial Period Issues Related to Attrition*

2066 Care should be taken in applying an attrition rate to partial periods. Table A.4.a below provides an example of
2067 estimated attrition rates and percent surviving for a scenario where the attrition rate is estimated to be 10% and
2068 there is no adjustment needed for a partial period in year one. Table A.4.b below shows the percent surviving
2069 calculations assuming that year one of the forecast is a partial period with 25% of year one cash flows used to
2070 value the customer relationships.

2071 *Table A.5.a: Percent Surviving Assuming No Partial Period*

Scenario 1 - No Partial Period	Attrition Rate (A)	Percent Surviving - Beginning of Year (B)	Percent Surviving - End of Year C = B * (1 - A)	Average Percent Surviving for the Year D = (B + C) / 2
Year 1	10.0%	100.0%	90.0%	95.0%
Year 2	10.0%	90.0%	81.0%	85.5%
Year 3	10.0%	81.0%	72.9%	77.0%

2072 *Table A.5.b: Percent Surviving Assuming Partial Period Adjustment*

Scenario 2 - Partial Period when Year 1 is 25% of a Full Year	Attrition Rate (A)	Partial Period Percentage (B)	Percent Surviving - Beginning of Year (C)	Percent Surviving - End of Year D = C * (1 - B * A)	Average Percent Surviving for the Year = (C + D) / 2
Year 1	10.0%	25.0%	100.0%	97.5%	98.8%
Year 2	10.0%	100.0%	97.5%	87.8%	92.6%
Year 3	10.0%	100.0%	87.8%	79.0%	83.4%

The Working Group believes that the above annualized attrition calculations represent average losses throughout any given annual period. Therefore, we do not feel it is appropriate to average beginning and ending revenue and customer counts to correspond to any mid-year discounting convention. The notion of average losses over a given discrete period is already captured in the attrition calculation itself.

2073

APPENDIX B: CASE STUDY EXAMPLES

2074

2075 The following examples were developed to illustrate a set of facts and circumstances and the related valuation
2076 of the customer relationship asset. Professional judgment must be utilized in the valuation process.
2077 Additionally, as the case studies are simplified examples, in practice a full analysis would be substantially more
2078 robust and would include the valuation of other assets and liabilities, supporting exhibits, and a comprehensive
2079 narrative.

2080 The following assumptions relate to each of the examples.

2081   a.   As a simplifying assumption, depreciation is considered to be a reasonable estimate of the *return of* capital related
2082   to fixed assets.

2083   b.   The determination of contributory asset charges is consistent with the methodology in the CAC Document.

2084   c.   Certain inputs, such as the Return on Working Capital, normally have supporting calculations. These
2085   calculations are outside the scope of this document.

2086 *Example B.1: Consumer Branded Product Company*

2087 *Transaction*

2088 On March 15, 20x9, AcquireCo purchased TargetCo for a purchase price of $500 million in cash in a stock deal.
2089 The transaction was competitive with two additional companies interested in purchasing TargetCo.

2090 AcquireCo's rationale for undertaking the transaction included the following:

2091   a.   Immediate entry into TargetCo's markets.

2092   b.   TargetCo's portfolio of regionally dominant brands.

2093   c.   Significant cost synergies.

2094   d.   The ability to sell TargetCo's brands in adjacent regions.

2095   e.   Prevent AcquireCo's competitors from obtaining TargetCo's brands and market dominance.

2096 *Acquirer Profile*

2097 AcquireCo is a publicly-held multinational food & beverage producer. Its strategy is to maintain a portfolio of
2098 strong brands catering to various segments of the market. The brands are typically longstanding brands with
2099 strong market share and superior brand equity in their respective markets and regions. Some brands were
2100 developed in-house over a period of many decades while others are long-standing brands which were acquired.
2101 In recent years, the company has refocused its strategy and exited non-core areas.

2102 *Target Description*

2103 TargetCo is a leading producer of branded snack products in the Southeast. Founded in 1905, its brands have
2104 achieved near iconic status and virtually all consumers in its region are familiar with them. TargetCo is
2105 headquartered in Atlanta and conducts business in the surrounding region. The company differentiates itself by
2106 producing fresh products using high quality ingredients.

2107 *Assets Acquired*

2108 Assets acquired as a part of the transaction included fixed and intangible assets. Fixed assets consisted largely
2109 of machinery and working capital. Intangible assets consisted of trademarks and related recipes (collectively
2110 referred to as brands) and customer relationships.

2111 *Customer Characteristics*

2112 Customers consist of wholesalers and retailers of the company's products. While the customers enable
2113 TargetCo to reach its customers, they are not a key business driver. The key driver of revenue is consumer
2114 demand for the product. The strength of this consumer demand is witnessed in a recent event. One retailer, a
2115 supermarket, decided to stop carrying the brands after a disagreement over pricing. Two days later the
2116 supermarket decided to resume selling TargetCo brands as those sales had largely been lost rather than
2117 transitioning to other brands and private label products as expected.

2118 An analysis of historical customer sales indicated annual customer attrition of approximately 7.6% and annual
2119 revenue attrition (due to loss of customers) of approximately 4.1% (based on geometric average calculations).
2120 Based on the expectation that historical results are indicative of future attrition, the estimated attrition rate is
2121 5.0%. Revenue growth at retained customers is expected to be approximately 1% per year.

2122 *Facts and Circumstances Leading to the Methodology Selection*

2123 Based on discussions with management it was determined that there are two intangible assets present: brands
2124 and customer relationships. The brands were determined to be the company's primary asset. The brands have
2125 dominant positions and strong brand equity. The retailer carries the brand based on the knowledge that there is
2126 significant customer demand. As such, the relationships with the wholesaler or retailer enable the company to
2127 reach the consumer but are not primary drivers of the consumer purchasing decision.

2128 Based on the factors above, the valuation specialist determined that the company specific multi-period excess
2129 earnings method was most appropriately used to value the brands and the Distributor Model was most
2130 appropriate to value the customer relationships.

2131 The rationale for the selected method is that the customer-related activities and the value added by those
2132 activities are similar for the entity and distributors. TargetCo and distributors maintain customer relationships
2133 by providing the desired product in a cost effective and timely manner. As such, distributors which have
2134 economic characteristics that are representative of the relationship between the company and its customers were
2135 chosen to serve as a proxy for the valuation of the customer-related assets. In particular, the selected companies
2136 distribute food products to various retail establishments including grocery, discount and convenience stores.
2137 The operating margin is believed indicative of the margin earned by the customer relationship function and the
2138 contributory asset charges reflect the assets required to service the customer sales function.

2139 *Table B.1: Consumer Branded Product Company*

		Year 1	Year 2	Year 3	Year 4	Year 5
Revenue at Acquisition	(1)	360,652				
Revenue Adjusted for Growth		360,652	364,259	367,901	371,580	375,296
Remaining After Attrition	(2)	95.0%	90.3%	85.7%	81.5%	77.4%
Revenue After Attrition		342,619	328,743	315,429	302,654	290,397
EBITA	(3)	14,047	13,478	12,933	12,409	11,906
Less: Income Taxes		5,619	5,391	5,173	4,964	4,763
Debt Free Net Income		8,428	8,087	7,760	7,445	7,144
Debt Free Net Income Margin		2.5%	2.5%	2.5%	2.5%	2.5%
Returns on Supporting Assets						
Normal Working Capital	(4)	(2,467)	(2,367)	(2,271)	(2,179)	(2,091)
Property, Plant & Equipment	(4)	(857)	(822)	(789)	(757)	(726)
Workforce	(4)	(445)	(427)	(410)	(393)	(378)
Return on Supporting Assets		(3,769)	(3,616)	(3,470)	(3,329)	(3,194)
% of Revenue		-1.1%	-1.1%	-1.1%	-1.1%	-1.1%
Net After Tax Cash Flow to Customer Relationships		4,660	4,471	4,290	4,116	3,949
Partial Period Adjustment		1.000	1.000	1.000	1.000	1.000
Period		0.500	1.500	2.500	3.500	4.500
Discount Factor	(5)	0.933	0.811	0.705	0.613	0.533
PV of Cash Flow		4,345	3,625	3,025	2,524	2,106
PV of Cash Flows		25,529				

Tax Benefit=L/(L-(Fa*T))			
Tax Life	15 Years		
Tax Rate	40.0%		
Discount Rate	15.0%		
Amortization Factor	6.2706		
Tax Benefit	20.1%	5,126	
Fair Value		30,655	
Fair Value (Rounded)	(6)	**31,000**	

Assumptions		Year 1	Year 2	Year 3	Year 4	Year 5	
Growth of Retained Customers		1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Attrition	(2)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
EBITA Margin	(3)	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Tax Rate		40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
WC to Revenue Ratio	(4)	9.0%	9.0%	9.0%	9.0%	9.0%	9.0%
Return on WC	(4)	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
PP&E to Revenue Ratio	(4)	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Return on PP&E	(4)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Workforce	(4)	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Discount Rate	(5)	15.0%					

2140 Notes:

2141   (1) Initial revenue is based on the market participant PFI.

2142   (2) Attrition is based on the historical attrition analysis.

2143   (3) EBITA margin is based on market participant data.

2144   (4) The fixed asset and working capital levels are based on observable market inputs for distributors. The
2145   workforce charge is based on the value of the workforce. The workforce was valued based on its cost to
2146   recreate. A low charge is consistent with the expectation that a distributor would achieve significant
2147   revenue per employee.

2148   (5) The selected discount rate is based on valuation specialist's assessment of risk. Though not displayed, it
2149   is assumed the discount rate is reasonable when viewed within the context of the overall analysis.

2150   (6) The customer relationship asset was valued over its 20 year life. Five years are shown for display
2151   purposes. For purposes of this example, no material customer relationship value was assumed to exist
2152   after year 20.

2153 *Testing Outputs*

2154 As part of a standard customer relationship valuation, it is important that the valuation specialist tests the
2155 outputs of their analysis. The Working Group believes that this is a critical step that needs to occur in order for
2156 the valuation to be considered complete. The following paragraph is an example of some of the elements that
2157 can be addressed as it pertains to the case study. It exists as an illustration of a simple example and practical
2158 application in a valuation engagement would likely need to be more robust.

2159 The value of the customer relationships was determined to be $31 million or approximately 6.2% of the total
2160 purchase price. Additionally, when valuing the customer relationships, the cash flow attributed to the customer
2161 relationships is a low portion of the total margin. This is reasonable given the following factors. The customers
2162 are highly transactional and driven by a need to provide consumers with the desired product. The brands owned
2163 by the company are the key driver of sales and were the primary acquisition rationale. They are iconic in their
2164 region and consumers seek out retailers which carry the brands.

2165 ### Example B.2: Defense Company

2166 *Transaction*

2167 On March 15, 20x9, AcquireCo purchased TargetCo for a purchase price of $125 million in cash in a stock deal.
2168 AcquireCo approached TargetCo with an offer. While the transaction was not competitive, investment bankers
2169 did reach out to other potential acquirers. The transaction occurred at a multiple which appears in line with
2170 other transactions within the industry.

2171 AcquireCo's rationale for undertaking the transaction included the following:

2172   a. TargetCo has approximately 15 long-standing relationships with agencies and departments within the
2173   US military and defense communities.

2174   b. TargetCo has a highly qualified workforce consisting of engineers and programmers, most of whom
2175   have security clearances.

2176 *Acquirer Profile*

2177 AcquireCo is a mid cap publicly traded defense firm. It provides information technology, information systems,
2178 systems integration, and related engineering services to the military and intelligence communities. It enters into
2179 multi-year contracts which often have multiple potential extensions. AcquireCo was founded in 1982 and is
2180 headquartered in Falls Church, Virginia.

2181 *Target Description*

2182 TargetCo is a provider of information technology and related services to certain intelligence related agencies
2183 and offices. The company was founded in 1999 by a former intelligence officer and has achieved rapid growth
2184 since its founding. It currently has nearly 30 customers, approximately half of whom have been customers for at
2185 least five years. TargetCo is located in Fairfax, Virginia.

Assets Acquired

Assets acquired as a part of the transaction included fixed and intangible assets. Fixed assets consisted largely of working capital. Fixed assets were minimal and consisted mainly of furniture and computers. The only identifiable intangible acquired was customer relationships. Another key acquisition rationale, the assembled workforce, is not a recognized intangible asset.

Customer Characteristics

TargetCo enters into multi-year contracts with customers. These contracts may be cost-plus, time-and-materials or firm fixed price. The company earns margins that are higher than typically observed among market participants. There are several factors. First, the company has a higher portion of contracts that are fixed price than most market participants. Since these contracts offer a fixed price for the service performed, they are higher risk but also potentially higher margin. Additionally, TargetCo performs primarily high end work. While publicly traded market participants are sufficiently large that they have both high and low margin contracts, TargetCo has limited low margin contracts.

A five year revenue forecast was provided on a customer-by-customer basis. Management estimated the revenue by customer by adjusting for expected pricing and contract renewals. Low attrition has been experienced previously and is expected in the future. Long-standing relationships between multiple individuals at TargetCo and its customers, as well as engineers who are "embedded" at customer sites lead to strong retention rates. While all contracts and extensions are cost competitive, management indicates they are typically the preferred provider.

Facts and Circumstances Leading to the Methodology Selection

Based on discussions with management it was determined that the only identifiable intangible asset present is the customer relationship asset. As the unique asset, the value of the customer relationship asset was estimated utilizing the Multi-Period Excess Earnings Approach. Company specific inputs were utilized as the above average margins reflect the profitability of the contracts and relationships in place. A market participant would obtain the same level of profitability from these relationships.

2211 ***Table B.2: Defense Company***

		Year 1	Year 2	Year 3	Year 4	Year 5
Revenue After Attrition	(1)	100,000	99,132	95,532	86,679	85,985
EBITA	(2)	12,000	11,896	11,464	10,402	10,318
Adjustments						
Sales & Marketing Add-Back	(3)	1,000	991	955	867	860
Adjusted EBITA		13,000	12,887	12,419	11,268	11,178
Less: Income Taxes		5,200	5,155	4,968	4,507	4,471
Debt Free Net Income		7,800	7,732	7,452	6,761	6,707
Debt Free Net Income Margin		7.8%	7.8%	7.8%	7.8%	7.8%
Returns on Supporting Assets						
Normal Working Capital	(4)	(1,200)	(1,190)	(1,146)	(1,040)	(1,032)
Property, Plant & Equipment	(4)	(150)	(149)	(143)	(130)	(129)
Workforce	(5)	(3,000)	(2,974)	(2,866)	(2,600)	(2,580)
Return on Supporting Assets		(4,350)	(4,312)	(4,156)	(3,771)	(3,740)
% of Revenue		*-4.4%*	*-4.4%*	*-4.4%*	*-4.4%*	*-4.4%*
Net After Tax Cash Flow to Customer Relationships		3,450	3,420	3,296	2,990	2,966
Partial Period Adjustment		1.000	1.000	1.000	1.000	1.000
Period		0.500	1.500	2.500	3.500	4.500
Discount Factor	(6)	0.933	0.811	0.705	0.613	0.533
PV of Cash Flow		3,217	2,773	2,324	1,834	1,582

PV of Cash Flows		18,814
Tax Benefit=L/(L-(Fa*T))		
Tax Life	15 Years	
Tax Rate	40.0%	
Discount Rate	15.0%	
Amortization Factor	6.2706	
Tax Benefit	20.1%	3,778
Fair Value		22,592
Fair Value (Rounded)	(7)	**23,000**

Assumptions							
EBITA Margin	(2)	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
Sales & Marketing Add-Back	(3)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Tax Rate		40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
WC to Revenue Ratio	(4)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Return on WC	(4)	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
PP&E to Revenue Ratio	(4)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Return on PP&E	(4)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Workforce	(5)	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Discount Rate	(6)	15.0%					

2212 Notes:

2213 (1) Revenue attributable to customers present at acquisition was provided by management. Subsequent to
2214 the five year forecast provided by management, 5% annualized attrition was applied. This is based on
2215 historical and expected results.

2216 (2) The margin is based on the projected margin. It is believed to be representative of the margin market
2217 participants would earn through use of customer relationship asset.

2218 (3) Sales and marketing expenses related to the addition of new customers were added back.

2219 (4) The fixed asset and working capital levels are based on historical levels.

2220 (5) The workforce charge is based on the value of the workforce. The workforce was valued based on its
2221 cost to recreate. A significant charge is viewed as reasonable. The workforce is highly sophisticated and
2222 substantial time and effort would be required to reassemble it. The CAC Document outlines potential

2223   adjustments to the valuation related to the workforce, such as an addback of expenditures related to
2224   growth of the workforce and the addition of a hypothetical tax benefit from amortization of the
2225   workforce asset—consistent with the practical expedient methodology in the CAC Document, these
2226   adjustments have not been included in this example.

2227   (6) The selected discount rate is based on valuation specialist's assessment of risk. Though not displayed, it
2228   is assumed the discount rate is reasonable when viewed within the context of the overall analysis.

2229   (7) The customer relationship asset was valued over its 20 year life. Five years are shown for display
2230   purposes.

2231 *Testing Outputs*

2232 The value of the customer relationships was determined to be $23 million or approximately 18.4% of the total
2233 purchase price. Additionally, the cash flow margin attributed to the customer relationships is approximately half
2234 of the tax affected EBITA margin. This is reasonable given the following factors. The customer relationships, in
2235 conjunction with the workforce, were the primary acquisition rationale. The company has multi-year contracts
2236 with government agencies. Additionally, due to the skill set of its workers and its understanding of customer
2237 needs, it has a strong track record of winning contract extensions. Externally, the importance of the customer
2238 relationships is emphasized in that the company publishes a press release when it wins significant contracts.

2239 ***Example B.3: Packaging Solutions Provider***

2240 *Transaction*

2241 On June 30, 20x9, FinancialBuyer partnered with key members of management to undertake a management
2242 buyout of TargetCo. The purchase price was $200 million and the transaction was structured as a stock
2243 purchase. The transaction was competitive with multiple financial buyers bidding.

2244 FinancialBuyer's rationale for undertaking the transaction included the following:

2245   a. FinancialBuyer co-invests with management in well-run mid-size companies.

2246   b. TargetCo is the leading packaging solutions provider in its region.

2247   c. The company is well known and respected within its market niche. Its reputation for high quality
2248   products and timely service drives strong sales.

2249   d. The company's customers are highly recurring and stable. They are recurring due to high quality
2250   products provided in a timely and cost effective manner.

2251 *Acquirer Profile*

2252 FinancialBuyer is a private equity firm investing in family and management owned businesses. It typically co-
2253 invests with management in mid-sized specialty firms that operate in defensible niches having high barriers to
2254 entry. It seeks to acquire strong operating companies with management that have demonstrated a commitment
2255 to growth and profitability.

2256 *Target Description*

2257 TargetCo is a leading provider of packaging solutions in its region. Founded in 1978, it has highly recurring
2258 relationships with a variety companies that utilize its packaging solutions. The company has several national
2259 competitors and one regional competitor. Due to the scale necessary to operate profitably, competition from

2260 new entrants is considered unlikely. The company is highly regarded in its market niche for providing high
2261 quality products in a timely and cost effective manner.

2262 *Assets Acquired*

2263 Assets acquired as a part of the transaction included fixed and intangible assets. Fixed assets consist largely of
2264 machinery and working capital. Intangible assets consist largely of customer relationships and the corporate
2265 trade name. Additionally, there is an assembled workforce and limited proprietary technology.

2266 *Customer Characteristics*

2267 Customers consist of a variety of companies which utilize TargetCo's packaging solutions. The customers have
2268 historically been highly recurring. The recurring nature of the customers is based on the quality of products and
2269 service provided. Management believes that were the company to deliver lower quality service or raise prices
2270 significantly, customers would be lost to competitors. The company is a preferred provider to its customer base
2271 and though customers have several choices for their packaging needs, they prefer to utilize TargetCo.

2272 An analysis of historical customer sales indicated average customer attrition of approximately 6.8% and
2273 revenue attrition of approximately 4.5%. This is in line with expectations of low attrition with smaller
2274 customers turning over more often. Based on the expectation that historical results are indicative of future
2275 attrition, the estimated attrition rate is 5.0%. Revenue growth at retained customers is expected to be
2276 approximately 1% per year

2277 *Facts and Circumstance Leading to the Methodology Selection*

2278 Based on discussions with management it was determined that there are three intangible assets present:
2279 customer relationships, the corporate trade name and proprietary technology. Customer relationships are the
2280 unique asset and the corporate name and proprietary technology are contributory assets. As such, the MPEEM
2281 was utilized to value the customer relationships and contributory asset charges were taken for use of the
2282 working capital, fixed assets, corporate trade name and proprietary technology.

2283 **Table B.3: Packaging Solutions Provider**

		Year 1	Year 2	Year 3	Year 4	Year 5
Revenue at Acquisition	(1)	250,000				
Revenue Adjusted for Growth		250,000	252,500	255,025	257,575	260,151
Remaining After Attrition	(2)	98.8%	93.8%	89.1%	84.7%	80.4%
Revenue After Attrition		246,875	236,877	227,283	218,078	209,246
EBITA	(3)	35,303	33,873	32,501	31,185	29,922
Pretax Returns on Supporting Assets						
Trademark	(4)	(4,938)	(4,738)	(4,546)	(4,362)	(4,185)
Technology	(4)	(1,234)	(1,184)	(1,136)	(1,090)	(1,046)
Adjusted EBITA		29,131	27,951	26,819	25,733	24,691
Less: Income Taxes		11,653	11,181	10,728	10,293	9,876
Debt Free Net Income		17,479	16,771	16,092	15,440	14,815
Debt Free Net Income Margin		7.1%	7.1%	7.1%	7.1%	7.1%
Returns on Supporting Assets						
Normal Working Capital	(5)	(2,963)	(2,843)	(2,727)	(2,617)	(2,511)
Property, Plant & Equipment	(5)	(4,938)	(4,738)	(4,546)	(4,362)	(4,185)
Workforce	(5)	(1,234)	(1,184)	(1,136)	(1,090)	(1,046)
Return on Supporting Assets		(9,134)	(8,764)	(8,409)	(8,069)	(7,742)
% of Revenue		-3.7%	-3.7%	-3.7%	-3.7%	-3.7%
Net After Tax Cash Flow to Customer Relationships		8,344	8,006	7,682	7,371	7,073
Partial Period Adjustment	(6)	0.500	1.000	1.000	1.000	1.000
Period		0.250	1.000	2.000	3.000	4.000
Discount Factor	(7)	0.966	0.870	0.756	0.658	0.572
PV of Cash Flow		4,029	6,962	5,809	4,847	4,044

PV of Cash Flows		44,711				

Tax Benefit=L/(L-(Fa*T))			
Tax Life	15 Years		
Tax Rate	40.0%		
Discount Rate	15.0%		
Amortization Factor	6.2706		
Tax Benefit	20.1%	8,978	
Fair Value		53,689	
Fair Value (Rounded)	(8)	**54,000**	

Assumptions		Year 1	Year 2	Year 3	Year 4	Year 5	
Growth of Retained Customers	(2)	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Attrition	(2)	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
EBITA Margin	(3)	14.3%	14.3%	14.3%	14.3%	14.3%	14.3%
Royalty Rate - Trademark	(4)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Royalty Rate - Technology	(4)	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Tax Rate		40.0%	40.0%	40.0%	40.0%	40.0%	40.0%
WC to Revenue Ratio	(5)	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Return on WC	(5)	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
PP&E to Revenue Ratio	(5)	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Return on PP&E	(5)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Workforce	(5)	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Discount Rate	(7)	15.0%					

2284 Notes:

2285   (1) Initial revenue is based on the market participant PFI.

2286   (2) Attrition is based on the historical attrition analysis.

2287   (3) The margin is based on the market participant PFI.

2288 (4) The corporate trade name and the proprietary technology were valued utilizing the relief from royalty
2289 approach and the royalty rate was used as the pre-tax contributory asset charge. The selected royalty rate
2290 reflects the relative importance of the intangible asset to the business and market transaction data
2291 obtained from a third party source.

2292 (5) The fixed asset and working capital levels are based on the company's historical and expected fixed
2293 asset and working capital requirements. Additionally, they appear reasonable when viewed relative to
2294 comparable companies. The workforce charge is based on the value of the workforce. The workforce
2295 was valued based on its cost to recreate.

2296 (6) The partial period assumes the first period is half a year.

2297 (7) The selected discount rate is based on valuation specialist's assessment of risk. Though not displayed, it
2298 is assumed the discount rate is reasonable when viewed within the context of the overall analysis.

2299 (8) The customer relationship asset was valued over its 20 year life. Five years are shown for display
2300 purposes.

2301 *Testing Outputs*

2302 The value of the customer relationships was determined to be $52 million or approximately 26% of the total
2303 purchase price. Additionally, the cash flow margin attributed to the customer relationships is approximately
2304 40% of the tax affected EBITA margin. This is reasonable given the following factors. The customer
2305 relationships were a primary acquisition rationale. Customers are highly recurring and it has taken a number of
2306 years for the company to develop the level of relationships it has in place. Though the market is highly cost
2307 competitive, customers prefer to use the TargetCo as their packaging provider.

2308 ***Example B.4: Hardware Company***

2309 *Transaction*

2310 On January 1, 2011, TechCo purchased TargetTechCo for a purchase price of $2.1 billion and the transaction
2311 was structured as a stock purchase. The transaction was competitive with multiple strategic buyers bidding.

2312 TechCo's rationale for undertaking the transaction included the following:

2313   a. Strong existing technology platform

2314   b. Strong development pipeline of new projects

2315   c. Ongoing and recurring purchases of components by manufacturers integrating them into larger systems

2316 *Acquirer Profile*

2317 TechCo is a publicly-traded technology company that focuses on developing hardware and software products.
2318 They are considered by many to be one of the largest market participants in their industry segment and have
2319 traditionally made acquisitions a large part of their growth strategy. Acquisitions are considered by TargetCo
2320 management as a necessary way to accelerate their technology roadmap.

2321 *Target Description*

2322 TargetTechCo is a leading provider of hardware components which other manufacturers integrate into
2323 assembled systems. They spend a significant amount each year on research and development and their
2324 management philosophy has always been to develop state of the art technologies that would "speak for

2325 themselves" in the marketplace. They, unfortunately, have spent too little on sales and marketing and,
2326 consequently, sales have dropped in recent years, even though many of their competitors agree that they
2327 develop a high quality solution.

2328 *Assets Acquired*

2329 Assets acquired as a part of the transaction included fixed and intangible assets. Fixed assets are relatively
2330 immaterial to the total purchase price. Intangible assets consist largely of technology, in-process research and
2331 development, and customer relationships.

2332 *Customer Characteristics*

2333 Customers consist of a variety of companies which utilize TargetTechCo's hardware components. While market
2334 participants would likely also expect to leverage the acquired business's established customer relationships to
2335 sell existing and new products, the continuation of the customer relationships is largely dependent on the
2336 technological capabilities offered by the business's products.

2337 *Facts and Circumstance Leading to the Methodology Selection*

2338 Based on discussions with management it was determined that there are three intangible assets present:
2339 customer relationships, existing technology, and in-process research and development. Technology and in-
2340 process research and development were the primary assets identified. Customer relationships were determined
2341 to be a secondary asset. As such, the MPEEM was utilized to value the technology and in-process research and
2342 development. A with-and-without model was used to value the customer relationships.

Table B.4.1: Hardware Company With Approach

	2010	2011	2012	2013
Revenue With Existing Customers	$ 600.0	$ 750.0	$ 1,000.0	$ 1,200.0
Less: Cost of Goods Sold	(300.0)	(375.0)	(500.0)	(600.0)
Gross Profit	300.0	375.0	500.0	600.0
Less: Operating Expenses	(120.0)	(150.0)	(200.0)	(240.0)
Less: Incremental "Re-Creation" Expenses	-	-	-	-
Pre-tax Income	180.0	225.0	300.0	360.0
less: Income Taxes (40.0%)	(72.0)	(90.0)	(120.0)	(144.0)
Net Income	108.0	135.0	180.0	216.0
Plus: Depreciation		37.5	50.0	60.0
Less: Changes in NWC		(6.0)	(10.0)	(8.0)
Less: CAPEX		(37.5)	(50.0)	(60.0)
Net Returns on Customer-related Assets		$ 129.0	$ 170.0	$ 208.0
Midpoint		0.5	1.5	2.5
Present Value Factor		0.9325	0.8109	0.7051
Present Value of Cash Flows		$ 120.3	$ 137.8	$ 146.7

Sum of Present Value of Cash Flows (With Scenario)	$ 404.8	
Sum of Present Value of Cash Flows (Without Scenario)	370.5	See schedule on next page.
Difference Between Scenarios	34.3	
TAB	6.9	
Fair Value	**$ 41.2**	

TAB Calculation:

Tax Life (n)	15	
Tax Rate (t)	40.0%	
Discount Rate (r)	15.0%	
Annuity Factor	5.85	= PV(r, n, 1)
Mid-Year Adj Factor	1.07	= (1 + r) ^ 0.5
TAB Factor	20.1%	= (n / (n - (Annuity Factor * Mid-Year Adj Factor * t)) - 1)

Working Capital (WC) Calculation

		2010	2011	2012	2013
Accounts Receivable (% of Rev.)	5.0%	30.0	37.5	50.0	60.0
Inventory (% of CoGS)	10.0%	30.0	37.5	50.0	60.0
Accounts Payable (% of CoGS)	12.0%	36.0	45.0	60.0	72.0
Total WC		24.0	30.0	40.0	48.0
WC / Revenue		4.0%	4.0%	4.0%	4.0%
WC Investment			6.0	10.0	8.0

Table B.4.2: Hardware Company Without Approach

	2010	2011	2012	2013
Revenue Without Existing Customers	$ 600.0	$ 400.0	$ 900.0	$ 1,200.0
Less: Cost of Goods Sold	(300.0)	(200.0)	(450.0)	(600.0)
Gross Profit	300.0	200.0	450.0	600.0
Less: Operating Expenses	(120.0)	(80.0)	(180.0)	(240.0)
Less: Incremental "Re-Creation" Expenses	-	(10.0)	(10.0)	(5.0)
Pre-tax Income	180.0	110.0	260.0	355.0
less: Income Taxes (40.0%)	(72.0)	(44.0)	(104.0)	(142.0)
Net Income	108.0	66.0	156.0	213.0
Plus: Depreciation		50.0	60.0	75.0
Less: Changes in NWC		(2.0)	(10.0)	(12.0)
Less: CAPEX		(20.0)	(45.0)	(60.0)
Net Returns on Customer-related Assets		$ 94.0	$ 161.0	$ 216.0
Midpoint		0.5	1.5	2.5
Present Value Factor		0.9325	0.8109	0.7051
Present Value of Cash Flows		$ 87.7	$ 130.6	$ 152.3
Sum of Present Value of Cash Flows (Without Scenario)	$ 370.5			

Working Capital (WC) Calculation		2010	2011	2012	2013
Accounts Receivable (% of Rev.)	5.0%	30.0	20.0	45.0	60.0
Inventory (Max of % of CoGS & Starting Inv.)	10.0%	30.0	30.0	45.0	60.0
Accounts Payable (% of CoGS)	12.0%	36.0	24.0	54.0	72.0
Total WC		24.0	26.0	36.0	48.0
WC / Revenue		4.0%	6.5%	4.0%	4.0%
WC Investment			2.0	10.0	12.0

Comments:

> Cost of Goods Sold and Operating Expenses are a stable % of revenue. As such, their levels reflect revenue levels.

> The Incremental "Re-Creation" Expenses are those required to re-create the lost customer relationships.

> The Pre-Tax Income reflects the offsetting effects of lower CGS and Operating Expenses in conjunction with higher Re-Creation expenses.

> Working capital was projected by modeling A/R, Inventory and A/P.

  A/R is modeled as a constant percent of revenue, as such it declines when revenue declines.

  Inventory is modeled as the greater of a % of CGS or starting Inventory. This reflects the expectation management would not liquidate inventory they could sell after a modest period of time.

  A/P is modeled as a constant percent of CoGS, as such it declines when CoGS declines.

  The overall working capital source/use reflects the contrasting impacts of these items.

> Depreciation is the same as the With Scenario as it is assumed there are no changes to the fixed asset base.

> Capex is lower in the mid-term as it is assumed to be a percent of revenue.

Testing Outputs

The value of the customer relationships was determined to be $41.2 million, or approximately 2% of the total
purchase price. This is reasonable given the following factors:

2349   a.   The customers are attracted and retained due to the technology (i.e., valuation specialist determined that
2350   the technology is a primary asset and the customers are not a primary asset).

2351   b.   The company manufactures components which are used by customers in assembled systems.

2352   c.   Manufacturers purchase these components due to their quality and their ability to meet rigorous
2353   specifications.

2354 If, hypothetically, the company were to no longer have its customers, it would quickly regain them due to the
2355 need for its hardware components. Use of the With-and-Without Method is consistent with the nature of these
2356 relationships. It appears reasonable in that it returns a value which is a relatively small portion of the purchase
2357 price. A customer-relationship asset that has a longer life may be considered a more significant asset to the
2358 business economics. A more substantial portion of the purchase price was ascribed to the technology, both
2359 developed and in-process, which is consistent with the business drivers and the purchase rationale.