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Financial Reporting Whitepaper: Measurement of Fair Value for Certain Transactions of Not-for-Profit Entities

American Institute of Certified Public Accountants. Financial Reporting Executive Committee

American Institute of Certified Public Accountants. Not-for-Profit Entities Fair Value Task Force

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Financial Reporting Whitepaper:

Measurement of Fair Value for Certain Transactions of Not-for-Profit Entities

This white paper reflects the provisions of Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 820, *Fair Value Measurement*, as modified by Accounting Standards Update (ASU) No. 2011-04, *Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs*. The amendments in ASU No. 2011-04 are effective as follows: for public companies—during interim and annual periods beginning after December 15, 2011; for nonpublic entities—for annual periods beginning after December 15, 2011. Early application by public entities is not permitted; nonpublic entities may apply the amendments in ASU No. 2011-04 early but no earlier than the interim periods beginning after December 15, 2011. Entities applying the provisions of FASB ASC 820 to financial statements for periods preceding the effective date of the amendments in ASU No. 2011-04 should consult FASB ASC regarding guidance that is effective for those financial statements.

Prepared by the AICPA Financial Reporting Executive Committee and the Not-for-Profit Entities Fair Value Task Force

This white paper is not a source of established accounting principles, as described in Financial Accounting Standards Board *Accounting Standards Codification* 105-10.

Introduction

This white paper discusses fair value measurement for certain issues pertaining to not-for-profit entities (NFPs).

Specifically, this white paper discusses fair value measurement pertaining to the following:

- Unconditional promises to give cash or other financial assets
- Beneficial interests in trusts
- Split-interest agreements

NFPs face various challenges in applying the provisions of Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 820, *Fair Value Measurement*, which codifies FASB Statement No. 157, *Fair Value Measurements*. Many of these challenges result from the fact that markets do not exist for these assets and liabilities. This white paper discusses the provisions of FASB ASC 820 as they pertain to the issues previously listed, and it provides the Financial Reporting Executive Committee's nonauthoritative views on applying the provisions of FASB ASC 820 to those issues.

Unconditional Promises to Give Cash

1. Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 958-605,[1] in discussing measurement principles for contributions, generally requires not-for-profit entities (NFPs) to measure at fair value recognized contributions of cash or other assets (for example, marketable securities, land, buildings, use of facilities or utilities, materials and supplies, other goods or services) and unconditional promises to give those items in the future.
2. The discussion of fair value measurements in FASB ASC 820-10-35 includes an exit price approach (that is, the price that would be received for a promise to give [asset] in an exchange involving hypothetical market participants, determined under current market conditions). Because no market exists for unconditional promises to give, assumptions about what a hypothetical acquirer would pay for these assets (the right to receive from the donor the cash flow inherent in the promise) are necessary in determining fair value. FASB ASC 820-10-35 and its interpretive guidance in FASB ASC 820-10-55 emphasize that because fair value is a market-based (not an entity-specific) measurement, the exit price is determined without regard to whether an entity intends to sell or hold an asset or a liability that is measured at fair value.
3. Paragraphs 4–32 address the application of FASB ASC 820-10-35 in determining the fair value of a promise to give cash at a date one year or more in the future. This white paper does not discuss the fair value of a promise to give nonfinancial assets. It also does not discuss how to determine the fair value of unconditional promises to give that are due in less than one year. As explained in FASB ASC 958-605-30-6, unconditional promises to give that are expected to be collected in less than one year may be measured at net realizable value because that amount results in a reasonable estimate of fair value.

What Is the Unit of Account for an Unconditional Promise to Give That Is Expected to Be Collected in One Year or More?

4. For an unconditional promise to give that is expected to be collected in one year or more, the unit of account implied in FASB ASC 958-605 is the individual (stand-alone) promise to give.[2] That means that the focus of the fair value measurement is on the individual (stand-alone) promise to give in which the exit price represents the amount that a hypothetical market participant would pay to acquire the right to receive from the donor the cash flows inherent in the promise to pay the NFP. The Financial Reporting Executive Committee (FinREC) believes that, consistent with the guidance in FASB ASC 820-10-35-17 on the measurement of the fair value of liabilities, it is appropriate to assume when measuring the fair value of a promise to give that the cash flows received by the hypothetical acquirer would be the same as the cash flows that would be received by the NFP and that no additional credit risk needs to be considered as a result of a hypothetical change in ownership.

What Valuation Technique(s) Should an NFP Use to Measure the Fair Value of an Unconditional Promise to Give That Is Expected to Be Collected in One Year or More?

5. FASB ASC 820-10-35-24A provides that valuation techniques consistent with the market approach, income approach, cost approach, or all three should be used to measure fair value. Paragraphs 3A–3G of FASB ASC 820-10-55 explain those valuation techniques.
6. FASB ASC 820-10-35-24 clarifies that "[a] reporting entity shall use valuation techniques that are appropriate in the circumstances and for which sufficient data are available to measure fair value, maximizing the use of relevant

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1 Pursuant to Financial Accounting Standards Board (FASB) Statement No. 168, *The* FASB Accounting Standards Codification® *and the Hierarchy of Generally Accepted Accounting Principles—a replacement of FASB Statement No. 162*, FASB *Accounting Standards Codification*™ (ASC) is the sole source of authoritative generally accepted accounting principles. To aid readers in using this white paper, as a drafting convention in referencing FASB ASC, this white paper sometimes references pronouncements that were issued prior to the effective date of FASB ASC and from which the FASB ASC paragraphs are derived.

2 In practice, some not-for-profit entities (NFPs) have pooled unconditional promises to give with certain similar characteristics. The Financial Reporting Executive Committee (FinREC) believes that such pooling is permissible in circumstances in which the measurement of fair value would not be materially different from a measurement that considers each unconditional promise to give as the unit of account.

observable inputs and minimizing the use of unobservable inputs." For an unconditional promise to give that is expected to be collected in one year or more, FinREC believes that a present value (PV) technique (an application of the income approach) will be the most prevalent valuation technique used to measure fair value. In reaching that conclusion, FinREC observes that the market approach typically would not be operational for measuring the fair value of unconditional promises to give cash because no market exists, and the cost approach is not used for valuing financial assets, such as promises to give.

PV Techniques

7. Paragraphs 4–20 of FASB ASC 820-10-55 discuss PV techniques. FASB ASC 820-10-55-5 states that

> [p]resent value (that is, an application of the income approach) is a tool used to link future amounts (for example, cash flows or values) to a present amount using a discount rate. A fair value measurement of an asset or a liability using a present value technique captures all of the following elements from the perspective of market participants at the measurement date:
>
> a. An estimate of future cash flows for the asset or liability being measured.
> b. Expectations about possible variations in the amount and timing of the cash flows representing the uncertainty inherent in the cash flows.
> c. The time value of money, represented by the rate on risk-free monetary assets that have maturity dates or durations that coincide with the period covered by the cash flows and pose neither uncertainty in timing nor risk of default to the holder (that is, a risk-free interest rate). For present value computations denominated in nominal U.S. dollars, the yield curve for U.S. Treasury securities determines the appropriate risk-free interest rate.
> d. The price for bearing the uncertainty inherent in the cash flows (that is, a risk premium).
> e. Other factors that market participants would take into account in the circumstances.
> f. For a liability, the nonperformance risk relating to that liability, including the reporting entity's (that is, the obligor's) own credit risk.

8. Risk and uncertainty associated with the amount, timing, or both, of cash flows of an asset (or a liability) are key considerations when measuring fair value because risk-averse market participants would demand compensation for bearing the uncertainty inherent in the cash flows (the risk premium).[3] Paragraphs 7–8 of FASB ASC 820-10-55 explain that

> [a] fair value measurement using present value techniques is made under conditions of uncertainty because the cash flows used are estimates rather than known amounts. In many cases, both the amount and timing of the cash flows are uncertain. Even contractually fixed amounts, such as the payments on a loan, are uncertain if there is risk of default.
>
> Market participants generally seek compensation (that is, a risk premium) for bearing the uncertainty inherent in the cash flows of an asset or a liability. A fair value measurement should include a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows. Otherwise, the measurement would not faithfully represent fair value. In some cases, determining the appropriate risk premium might be difficult. However, the degree of difficulty alone is not a sufficient reason to exclude a risk premium.

3 The FASB ASC glossary term *promise to give* notes that "the recipient of a promise to give has a right to expect that the promised assets will be transferred in the future, and the maker has a social and moral obligation, and generally a legal obligation, to make the promised transfer." As noted in paragraph 108 of FASB Statement No. 116, *Accounting for Contributions Received and Contributions Made*, in developing FASB Statement No. 116, FASB found that although legal remedies are available, they are seldom necessary because promises generally are kept. FinREC believes, however, that in many (if not most) cases, uncertainty will exist; therefore, it will be necessary to consider risk in a fair value measurement.

9. FinREC observes that the requisite risk assessment requires judgments and that those judgments are significant in some cases. In making that assessment, consistent with FASB ASC 820-10-35-54A, FinREC believes that an NFP need not undertake exhaustive efforts to obtain information from or about the donor. Rather, the NFP would assess the risk associated with the promise to give using information that is reasonably available in the circumstances, considering factors specific to the donor and promise to give. FinREC believes that those factors may include, but are not limited to, the following:
   - The ability of the donor to pay (credit risk), which may be indicated by published credit ratings (for example, a credit rating might be available for an enterprise that is a donor or comparable to the donor); financial analysis (for example, cash flow and ratio analysis); or credit reports for an individual donor
   - Factors specific to the donor that might be relevant in assessing the donor's commitment to honor its promise, such as the extent to which the donor is committed to, or otherwise involved in, the activities of the NFP (for example, whether the donor is a member of the governing board); the donor's history of charitable giving and involvement with charitable organizations, including, but not limited to, the NFP; and the donor's financial circumstances and history (past bankruptcies or defaults); financial condition (including other debt); current employment (including its stability); earnings potential over the term of the promise; and personal circumstances (including family situation, age, and health)
   - Risk factors that affect certain groups of donors (for example, economic conditions in certain geographical areas or industry sectors)
   - The NFP's prior experience in collecting similar types of promises to give, including the extent to which the NFP has enforced the promises
   - Whether the underlying asset is held in an irrevocable trust or escrow, which may reduce default risk

10. FASB ASC 820-10-55 discusses two PV techniques: (*a*) the traditional or discount rate adjustment (DRA) technique and (*b*) the expected PV (EPV) technique, which may be applied using one of two methods. Those PV techniques differ in how they adjust for risk. Key differences are summarized in the following table:

	DRA	*EPV Method 1*	*EPV Method 2*
Cash Flows	Single set of cash flows (contractual or promised, most likely).[4]	Expected (probability-weighted) cash flows (or expected value), adjusted for general market (systematic) risk by subtracting the cash risk premium. The risk-adjusted expected cash flows represent a certainty-equivalent cash flow.	Expected (probability-weighted) cash flows (or expected value).

4 Such nonprobability-weighted cash flows are referred to in this white paper as projected cash flows to distinguish them from expected cash flows, which are probability weighted.

	DRA	*EPV Method 1*	*EPV Method 2*
	The single set of cash flows are conditional cash flows (in other words, contractual or promised cash flows are conditional on the event of no default by the debtor).	The risk-adjusted expected cash flows are not conditional upon the occurrence of specific events because they are probability weighted.	The expected cash flows are not conditional upon the occurrence of specific events because they are probability weighted.
Discount Rate	Risk-adjusted discount rate derived from observed rates of return for comparable assets or liabilities that are traded in the market (that is, a market rate of return that corresponds to an observed market rate associated with such conditional cash flows and that, therefore, represents the amount that market participants would demand for bearing the uncertainty inherent in such cash flows).	Risk-free interest rate (for example, yield to maturity on U.S. Treasuries).	Risk-free interest rate (for example, yield to maturity on U.S. Treasuries), adjusted for general market (systematic) risk by adding risk premium. The risk-adjusted discount rate represents the expected rate of return that corresponds to an expected rate associated with such probability-weighted cash flows.

What Are Some of the Key Issues That an NFP Should Consider in Determining Which PV Technique to Use to Measure the Fair Value of an Unconditional Promise to Give That Is Expected to Be Collected in One Year or More?

11. Conceptually, the three PV methods discussed in the chart in the previous paragraph should give the same results. FinREC observes that in practice, however, certain techniques may be easier, more practical, or more appropriate to apply to certain facts and circumstances. FASB ASC 820-10-55-4 states that the "present value technique used to measure fair value will depend on facts and circumstances specific to the asset or liability being measured (for example, whether prices for comparable assets or liabilities can be observed in the market) and the availability of sufficient data."

12. A DRA technique using promised cash flows and observable market rates that reflect expectations about future defaults may be easier to apply at initial recognition than the EPV techniques, which require an NFP to probability weight the cash flows or estimate the systematic risk premium. However, to account for the unconditional promises to give in subsequent periods, the NFP must be able to identify when the level of defaults on its promises surpasses the level incorporated in the discount rate that it used for initial recognition, so that it can recognize an allowance for uncollectible promises on a timely basis if the actual uncollectible amounts exceed the amounts originally projected. This can be particularly challenging if the discount rate used is a market rate for which the level of default incorporated in the rate is not publicly available. The use of most likely cash flows, rather than promised cash flows, and a discount rate that is consistent with those cash flows will mitigate some of the challenges for subsequent measurement. That DRA technique is discussed in the next paragraph.

13. Although it might appear that the DRA technique may be easy to apply because it does not require an NFP to probability weight the cash flows or estimate the systematic risk premium, as required by the EPV technique, Fin-

REC observes that the DRA technique using promised cash flows may be impractical to apply. FinREC observes that if an NFP uses the DRA technique with promised cash flows, it must use a discount rate that reflects expectations about future defaults, and the NFP must be able to identify when the level of defaults on its unconditional promises to give surpasses the level incorporated in the discount rate it used. This is particularly challenging if the discount rate used is a market rate, such as for unsecured borrowings in which the level of default incorporated in the rate is typically not available. If the NFP does not identify the level of defaults incorporated in the discount rate, it would be unable to timely report a credit impairment loss when the actual uncollectible amounts exceed the amounts originally projected. Thus, the benefit of avoiding the calculation of probability-weighted cash flows on initial measurement (if using the DRA technique with promised cash flows) would be substantially negated by the fact that the NFP would nevertheless have to estimate the cash flows initially expected when determining the allowance for doubtful accounts in subsequent measurements.[5]

14. A DRA technique that uses most likely cash flows (rather than promised cash flows) might be practical to apply because the cash flows initially projected are known, but that technique requires the NFP to use a discount rate that reflects market participant assumptions that are consistent with risks inherent in most likely cash flows to avoid double counting or omitting the effects of risk factors. As explained in paragraph 19, the discount rate would be higher than the risk-free rate used in EPV method 1 or the discount rate used in EPV method 2 because most likely cash flows are uncertain, but the discount rate would be lower than the discount rate used with promised cash flows because some of the uncertainty of promised cash flows is removed in the determination of most likely cash flows. Because the three PV techniques trade off the ease of determining a discount rate against the ease of determining the cash flows, FinREC observes that no one PV technique is inherently better than another for measuring unconditional promises to give.

15. FinREC observes that in estimating fair value, an entity is not precluded from using fair value estimates provided by third parties, such as valuation specialists, in circumstances in which a reporting entity has determined that the estimates provided by those parties are determined in accordance with FASB ASC 820-10-35. For example, in using a PV technique, valuation specialists may be helpful in determining a discount rate that is consistent with the cash flows used.

What Are the Key Pricing Inputs When Using a PV Technique?

16. Key pricing inputs should reflect the factors that market participants would consider in setting a price for the promise to give. The FASB ASC 820-10-35 fair value hierarchy prioritizes market observable inputs but also allows for the use of unobservable (internally derived) inputs when relevant market observable inputs are unavailable. When using a PV technique, two key pricing inputs are the cash flows and discount rate. The factors considered in determining the cash flows and discount rate used should be documented.

17. As noted in FASB ASC 820-10-55-6(c), to avoid double counting or omitting the effects of risk factors, discount rates should reflect assumptions that are consistent with those inherent in the cash flows. For example, a discount rate that reflects the uncertainty in expectations about future defaults is appropriate if using contractual cash flows of a loan. That same rate should not be used if using expected (that is, probability-weighted) cash flows because the expected cash flows already reflect assumptions about the uncertainty of future defaults.

18. The cash flows used in a PV technique differ depending on the method used. Following is an illustration of cash flow estimates under the three methods (DRA, EPV method 1, and EPV method 2). Assume that an NFP holds a promise to give $100 in one year. The NFP believes that there is a 70 percent chance that it will collect the full

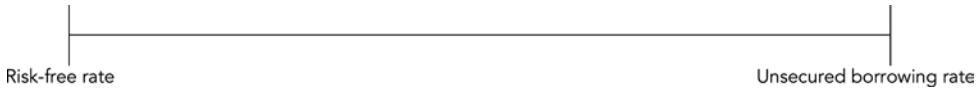
5 The discussion in paragraphs 12–14 assumes that the NFP does not elect to report contributions receivable pursuant to an election under FASB ASC 825, *Financial Instruments*. Instead, the discussion assumes that an NFP initially measures contributions receivable at fair value using present value techniques, which then is used as cost. In subsequent periods, that cost is amortized, with the interest element reported as additional contribution revenue, and a valuation allowance is reported to reflect credit impairment occurring after initial measurement.

amount, a 20 percent chance that it will collect $80, and a 10 percent chance that it will collect nothing. Under EPV method 2, expected cash flow would be calculated as follows:

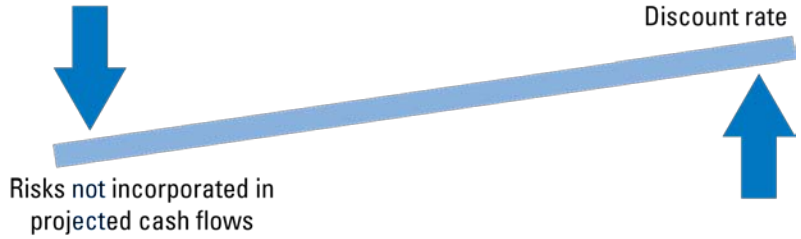
$100 x 70% = $70
$ 80 x 20% = $16
$ 0 x 10% = $ 0
$86

Under EPV method 1, the expected cash flow would be less than $86 because it would be adjusted (reduced) for systematic risk. Because of the challenges in determining an adjustment for systematic risk, utilization of EPV method 1 may not be practical. Under the DRA technique, both the promised cash flow and most likely cash flow are $100.

19. FASB ASC 820-10-55-6 discusses general principles for determining the discount rate when applying PV techniques. FinREC believes that the discount rate used would fall on a continuum between the risk-free rate (minimum) and unsecured borrowing rate (maximum).



Where the rate falls on the continuum would depend on the extent to which risk factors such as those discussed in paragraph 9 have been incorporated into the projected cash flows. (The lowest discount rate would be used for EPV method 1, and the highest discount rate would be used for the DRA technique using contractual cash flows,[6] as discussed in paragraphs 21–32.) The relationship between cash flows and discount rates is depicted as follows:



This diagram depicts the inverse relationship between risks being incorporated in projected cash flows and risks being incorporated in discount rates (that is, the discount rate increases as projected cash flows incorporate fewer risk factors and vice versa).

EPV Method 1

20. When using EPV method 1, the risk-adjusted expected cash flows are discounted by the risk-free interest rate, which may be indicated by the yield to maturity on U.S. Treasuries. The risk-free interest rate is appropriate in this case because all risk is built into the expected cash flows, which therefore represent a certainty-equivalent cash flow. As discussed in FASB ASC 820-10-55-15, EPV method 1 adjusts the expected cash flows for the systematic (market) risk by subtracting a cash risk premium in arriving at risk-adjusted expected cash flows. However, as pre-

6 For an unconditional promise to give, the contractual cash flows are the amounts promised by the donor, which are referred to as promised cash flows in this white paper.

viously discussed, determining a certainty-equivalent cash flow typically would be impracticable for unconditional promises to give.

EPV Method 2

21. When using EPV method 2, the expected cash flows are discounted by a risk-adjusted rate, which is determined based on the risk-free interest rate, adjusted for general market (systematic) risk by adding a risk premium.

22. In EPV method 2, some but not all risk is built into the expected cash flows. The expected cash flows are probability weighted and, therefore, adjusted for the likelihood of possible outcomes affecting the timing and amount of the cash flows. Probability weighting is not enough, however. It is also necessary to adjust for the risk premium that market participants would seek for accepting uncertainty. The following example illustrates this point:

> Asset B is a *certain* undiscounted cash flow of $10,000 due 10 years hence (a U.S. Treasury instrument is an example of asset B). Asset E has an *expected* undiscounted cash flow of $10,000 due 10 years hence; however, the actual cash flow from asset E may be as high as $12,000 or as low as $8,000 or some other amount within that range. A risk-averse individual would pay something less for asset E than asset B because of the uncertainty involved. Although the expected cash flow of $10,000 incorporates the uncertainty in cash flows from asset E, that amount does not incorporate the premium that market participants demand for bearing that uncertainty.

23. In EPV method 2, the compensation that market participants would seek for accepting uncertainty (the risk premium) is built into the discount rate. The risk-adjusted discount rate represents an expected rate of return that corresponds to an expected rate associated with such probability-weighted cash flows.

DRA

24. When using the DRA technique, the projected cash flows are discounted by a risk-adjusted rate. As discussed in FASB ASC 820-10-55-10

> the [DRA] technique uses a single set of cash flows from the range of possible estimated amounts, whether contractual or promised (as is the case for a bond) or most likely cash flows. In all cases, those cash flows are conditional upon the occurrence of specified events (for example, contractual or promised cash flows for a bond are conditional on the event of no default by the debtor).

25. The risk-adjusted discount rate used in the DRA technique is derived from observed rates of return for comparable assets or liabilities that are traded in the market. Accordingly, the contractual, promised, or most likely cash flows are discounted at an observed or estimated market rate for such conditional cash flows (that is, a market rate of return). Therefore, it represents the amount that market participants would demand for bearing the uncertainty inherent in such cash flows. In circumstances in which the projected cash flows already reflect assumptions about future defaults, NFPs should apply a discount rate that is commensurate with the reduced risk inherent in the cash flows that anticipate defaults, in order to avoid double counting that credit risk, as discussed in FASB ASC 820-10-55-6.

26. Determining the observed rate of return for comparable assets that are traded in the market requires an analysis of market data for comparable assets. FASB ASC 820-10-55-11 explains that "[c]omparability is established by considering the nature of the cash flows (for example, whether the cash flows are contractual or noncontractual and are likely to respond similarly to changes in economic conditions), as well as other factors (for example, credit standing, collateral, duration, restrictive covenants, and liquidity)." As a basis for assessing comparability, FinREC believes that best practice is for the NFP to assess the likelihood that the donor will not honor its promise to give

(default risk), as well as the risk premium reflecting the amount that market participants would demand because of the risk (uncertainty) in the cash flows.[7]

27. Market comparable data that might be relevant in determining the risk-adjusted discount rate used in the DRA technique will differ depending on the donor (for example, whether the donor is an individual, a corporation, or a foundation). Some examples follow.

28. If the donor is an individual, FinREC believes that the risk-adjusted discount rate might be determined using unsecured consumer lending rates that are generally available from published sources (major financial institutions). FinREC believes that best practice is to use those unsecured consumer lending rates in circumstances in which the credit characteristics of the donor are similar to the credit characteristics of those with unsecured debt.

29. FinREC believes that in applying the DRA technique using promised cash flows for promises from individuals, an unsecured consumer lending rate might be a starting point for determining an observable market interest rate. The NFP, however, may need to make adjustments to that rate, as discussed in paragraph 32, including, but not limited to, adjustments based on differences in the credit characteristics of the donor compared with the credit characteristics of borrowers of unsecured debt. (FinREC believes that such adjustments might be made based on the average credit characteristics of a homogeneous group of donors in circumstances in which the results would not be materially different from making such adjustments based on the specific credit characteristics of an individual donor.)

30. If the donor is a corporation, and the DRA technique using promised cash flows is used, FinREC believes that the risk-adjusted discount rate might be determined using the yield on publicly traded debt, whether issued by the corporation itself or a comparable corporation. FinREC believes that best practice is to use that yield on publicly traded debt in circumstances in which the promise to give is similar to the publicly traded debt. If the donor is a private foundation, FinREC believes that the risk-adjusted discount rate might be similarly determined using the yield on publicly traded debt, whether issued by the foundation itself, a comparable foundation, or a comparable corporation.[8]

31. In either case (whether the donor is a corporation or foundation), the NFP would consider factors specific to the promise, including its terms and risk, in assessing the extent to which the promise to give is similar to publicly traded debt. For example, FinREC believes that a promise to give a single fixed contribution at a future date likely would be more analogous to publicly traded zero coupon debt that pays a single amount at a future date than to a debt instrument that periodically pays interest or principal, or both.[9]

32. In all cases, the NFP would evaluate comparability and adjust available market data for differences, so that the risk-adjusted discount rate used to measure fair value (such as unsecured lending rates or yield on publicly traded debt) is reasonable when considered in the context of the donor and cash flows used. For example, as discussed in paragraphs 12–14, if the NFP uses most likely cash flows, rather than promised cash flows, to mitigate some of the challenges for subsequent measurement, an observed market rate based on promised cash flows (such as an unsecured lending rate or a yield on publicly traded debt) would be adjusted downward to reflect the fact that most likely cash flows incorporate an assessment of default.

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7 FinREC believes that a promise to give is different from a trade receivable. A promise to give arises from a donative intent. It is not an exchange transaction in which each of the parties to the exchange receives equivalent value and, generally, will be expected to exercise rights created by the exchange to enforce the terms of the transaction. FinREC believes that information derived from a trade receivable might be relevant in determining the discount rate used in the discount rate adjustment technique. However, adjustments to that information might be needed to incorporate the risk inherent in the cash flows in situations in which the NFP does not have a practice of enforcing its rights to receive promises to pay.

8 In considering the yield on debt issued by a foundation or other NFP, FinREC believes that the relevant input is the taxable yield, not the tax-exempt yield.

9 For publicly traded zero coupon debt, comparability should be established based on its remaining term to maturity. For a debt instrument that periodically pays interest, principal, or both, FinREC believes that comparability should be established based on its duration, not its remaining term to maturity. Duration refers to the weighted average term over which the debt cash flows will be received.

Beneficial Interests in Trusts

33. An NFP may have a beneficial interest in a trust that is reported at fair value, pursuant to FASB ASC 958-605-30-14. A beneficial interest is recognized by an NFP if a donor transfers cash or other assets to an independent trustee (such as a bank, trust company, foundation, or private individual) or other fiscal agent of the donor,[10] and the donor specifies that the NFP will receive a distribution from the trust assets. In such circumstances, the NFP's asset is the irrevocable right to the stream of cash flows (an interest in the cash flows). The trustee typically controls the investment decisions and timing of distributions to the NFP, and the NFP cannot transfer its interest. Although the cash or other assets in the trust are not controlled by the NFP, the NFP recognizes as its asset the beneficial interest in the trust assets. (If, however, the trustee has variance power to redirect the benefits to another entity, or if the NFP's rights to the benefits are conditional, the NFP would not recognize its potential for distributions from the trust until the NFP has received a distribution or otherwise receives an unconditional right to distributions under the trust agreement.)

34. For purposes of the discussion in this white paper, charitable trusts fall into one of two types: nonperpetual trusts or perpetual trusts. In a nonperpetual trust held by a third party, the NFP will receive its distributions during the term of the trust agreement, and at some point, no later than the end of the term specified in the trust agreement (for example, the end of a specified number of years or upon the death of the donor), the distributions to the NFP will cease. Interests in charitable lead trusts and charitable remainder trusts are examples of these types of beneficial interests in trusts. In contrast, the distributions from a perpetual trust never end. Beneficial interests in perpetual trusts exist because the NFP has the irrevocable right to receive the income earned on trust assets in perpetuity, but the NFP will never receive the assets held in trust.

35. Paragraphs 36–54 address questions related to the application of FASB ASC 820-10-35 in determining the fair value of a beneficial interest in a trust held by a third party.

What Is the Unit of Account for a Beneficial Interest in a Trust?

36. The subject of the fair value measurement (unit of account) for a beneficial interest in a trust is each individual beneficial interest. An NFP that receives distributions from three trusts has three beneficial interests and three units of account for which it must determine fair value.

37. There currently is no market in which beneficial interests in charitable trusts trade; therefore, no observable exit price will exist for a beneficial interest. The fair value of a beneficial interest in trust must be determined by assuming a hypothetical transaction at the measurement date, considered from the perspective of a hypothetical market participant that would purchase the beneficial interest. The objective of a fair value measurement is to determine the price that would be received to sell the beneficial interest at the measurement date, even though it is not possible to sell the beneficial interest because of donor-imposed or legal restrictions.

38. The NFP's asset is the right to receive cash flows from the trust, not the assets of the trust itself. Although the trust assets may be investments for which quoted prices in an active market are available, the NFP does not control those investments; they are not the NFP's assets, and they are not the unit of account for the fair value measurement.

How Should NFPs Estimate the Fair Value of Interests in Perpetual Trusts?

39. FASB ASC 958-605-30-14 (footnote 7 to paragraph 6.45 of the AICPA Audit and Accounting Guide *Not-for-Profit Entities*[11]) discusses circumstances in which an NFP has the irrevocable right to receive the income earned on trust assets in perpetuity but never receives the assets held in trust. It provides as follows:

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10 To ease readability, this white paper uses the term *trustee* to encompass both a trustee and fiscal agent of the donor that is not a trustee.

11 References are to the 2011 edition of the AICPA Audit and Accounting Guide *Not-for-Profit Entities*, unless otherwise noted.

> The fair value of a perpetual trust held by a third party generally can be measured using the fair value of the assets contributed to the trust, unless facts and circumstances indicate that the fair value of the beneficial interest differs from the fair value of the assets contributed to the trust.

40. FinREC believes that this guidance continues to be relevant in measuring an NFP's interest in a perpetual trust, in accordance with FASB ASC 820, *Fair Value Measurement*. FinREC believes that in practice, the fair value of the assets in the trust can be used as an input when measuring a beneficial interest in a perpetual trust, generally without further adjustment (see paragraphs 50–51 for adjustments that FinREC considered and rejected). Circumstances may exist, however, in which the fair value of the beneficial interest differs from the fair value of the assets held by the trust.
41. For example, if the trustee has been instructed not to distribute assets from the trust for a period of years or to distribute only a minor portion of the income that is available for distribution from the trust, the fair value of the beneficial interest may differ from the fair value of the assets contributed to the trust. Similarly, in circumstances in which the trustee has the ability to determine the amount of the distributions and chooses not to distribute assets from the trust or to distribute only a minor portion of the income available for distribution from the trust, the fair value of the beneficial interest may differ from the fair value of the assets in the trust. The fair value of the beneficial interest will also differ from the fair value of the assets of the trust if the trust distributions are shared among two or more NFPs; in that case, the proportionate share of the trust assets may be used to measure the beneficial interest.
42. If facts and circumstances indicate that the fair value of the beneficial interest differs from the fair value of the assets contributed to the trust, the income approach (PV technique) may also be utilized to measure the fair value of the beneficial interest in the trust. If the PV technique is used, a beneficial interest in a trust would be measured as the PV of the future distributions projected to be received, discounted at an appropriate rate. For a perpetual trust, the formula for an annuity in perpetuity would be used.[12] Assuming that payments begin at the end of the current period, the formula for an annuity in perpetuity is simply the distribution amount divided by the appropriate discount rate or yield (paragraphs 48–49 discuss determining an appropriate discount rate).
43. If an NFP is uncertain whether facts and circumstances indicate that the fair value of the beneficial interest differs from the fair value of the assets contributed to the trust, the NFP might compute the fair value of the trust under both methods. Then, as instructed in FASB ASC 820-10-35-24B, the results of the valuation techniques (respective indications of fair value) would be evaluated, considering the reasonableness of the range of values indicated by those results. A fair value measurement is the point within that range that is most representative of fair value in the circumstances.

How Should NFPs Estimate the Fair Value of Interests in Nonperpetual Trusts?

44. If a charitable trust exists for a term, the income approach for measuring the fair value (PV techniques) is likely the most practical method for measuring the beneficial interest in the trust. The beneficial interest in the trust would be measured as the PV of the future distributions projected to be received over the expected term of the agreement, discounted at an appropriate rate (paragraphs 48–49 discuss determining an appropriate discount rate). The fair value of the assets of a trust would not be be used to measure a beneficial interest unless that interest was in a perpetual trust. The following example uses a discount rate adjustment technique (paragraphs 24–32 and appendix A, "Present Value Techniques in Paragraphs 4–20 of Financial Accounting Standards Board *Accounting Standards Codification* 820-10-55," provide additional information about the discount rate adjustment technique).

12 The value of the distributions in perpetuity is measurable because the distributions that are anticipated far in the future have extremely low present value. Because the corpus of the trust is never paid, there is no present value for the corpus.

45. For example, assume that a donor establishes a charitable lead unitrust with assets valued at $100,000, naming Main Bank as trustee, the donor as the noncharitable beneficiary, and Charity as the charitable beneficiary. Main Bank is to invest and manage the trust assets, paying out 5 percent of the fair value of the trust assets as of the valuation date each year to Charity until the donor's death and then paying the remaining trust assets to the donor's estate. The donor's life expectancy is 10 years. For information about determining life expectancy, see paragraph 92.

46. To use PV techniques, Charity would begin by estimating the cash flows that it will receive. Main Bank has invested the trust assets in its collective trust, and it estimates that the trust will have an average return of 4 percent, net of trustee fees, over the next 5 years. For simplicity's sake, assume that the valuation date is as of the beginning of the year.

Date	*Projected Trust Income*	*Projected Payout*	*Projected Fair Value of the Trust*
Beginning			$100,000
Year 1	$4,000	$5,000	99,000
Year 2	3,960	4,950	98,010
Year 3	3,920	4,900	97,030
Year 4	3,881	4,851	96,060
Year 5	3,842	4,803	95,099
Year 6	3,804	4,756	94,147
Year 7	3,766	4,707	93,206
Year 8	3,728	4,660	92,274
Year 9	3,691	4,614	91,351
Year 10	3,654	4,568	90,437

Charity would then apply a discount rate to the projected payouts. The discount rate should reflect the risks associated with the cash flows; it cannot be less than 4 percent because that is the rate of return of the trust assets (see paragraphs 48–49). The PV of the projected payments is computed as follows, using PV factors for a single amount due in the future at 4 percent:

Date	*Projected Payout*	*PV Factor*	*PV of Payout*
Year 1	$5,000	0.96154	$4,808
Year 2	4,950	0.92456	4,577
Year 3	4,900	0.88900	4,356
Year 4	4,851	0.85480	4,147
Year 5	4,803	0.82193	3,948
Year 6	4,756	0.79031	3,759
Year 7	4,707	0.75992	3,577
Year 8	4,660	0.73069	3,405
Year 9	4,614	0.70259	3,242
Year 10	4,568	0.67556	3,086
Estimate of fair value			$38,905

Charity would recognize $38,905 as the fair value of the beneficial interest and its contribution when notified of the irrevocable gift at the beginning of year 1.

47. The preceding method can also be used to estimate the fair value of remainder interests in charitable trusts that are held by third-party trustees. Assume the same trust as in paragraph 46 but that Charity holds the remainder interest. Using the first table in paragraph 46, Charity computes the amount that it expects to receive upon the death of the donor as $90,437. To estimate the fair value of that payment, Charity uses the factor for a single payment of $90,437 due in 10 years at 4 percent (0.67556) and computes a fair value of the remainder interest of $61,095. Note that the values of the lead interest ($38,905) and remainder interest ($61,095) equal the value of the trust assets ($100,000).

If PV Techniques Are Used to Measure a Beneficial Interest in a Trust, How Is the Appropriate Discount Rate Determined?

48. Much of the discussion about PV techniques in paragraphs 7–15 is equally applicable when using PV techniques to measure beneficial interests in trusts. When estimating future distributions from the trust and discount rates, assumptions that market participants would use in their estimates should be used, and the discount rates should reflect assumptions that are consistent with those inherent in the cash flows. This prevents double counting or omitting the effects of risk factors.

49. When determining the appropriate discount rate to be used to value a beneficial interest in a charitable trust, it is important to remember that the cash flows from the trust to the NFP beneficiary are at least as risky as the cash flows within the trust itself. That is, if the trustee is receiving a yield to maturity of 4 percent to cover the risk of investing the trust assets, then the risk as a beneficiary of the cash flows from the investments of the trust is at least 4 percent. Risks that change the pattern of the cash flows can cause the discount rate to be higher. In other words, the discount rate should always be greater than or equal to the assumed rate of the return on the trust itself. As a result, an estimate of the fair value of the beneficial interest in the trust assets should never exceed the fair value of the trust assets (or the proportionate share thereof if there is more than one charitable beneficiary).

What Other Factors Did FinREC Consider Regarding the Measurement of the Fair Value of a Beneficial Interest in a Trust?

50. FinREC considered whether the fact that the trustee controls the investment decisions should affect the fair value of the NFP's beneficial interest in the trust. FinREC believes the fact that the trustee controls the investment decisions typically has no effect on the fair value of the asset (the beneficial interest in the trust). Assuming that the trustee exercises its fiduciary responsibilities, FinREC believes that the trustee's control over such investment decisions generally is neither an enhancement nor a diminishment of the NFP's interest in the trust.

51. FinREC also considered whether the risk premium related to the individual investments held in the trust should be considered in estimating the fair value of the beneficial interest in the trust. FinREC believes that the risk premium related to the individual investments held in the trust should not be separately considered in estimating the fair value of the asset (interest in the trust) because that risk premium is already built into the price of each individual investment held in the trust. However, as noted in paragraphs 48–49, the rate of return on the assets of the trust is a consideration when determining the appropriate discount rate if the income approach and PV techniques are used to measure fair value.

How Are Subsequent Measurements of Fair Value Made?

52. FASB ASC 958-30-35-2 and 958-605-35-3 require that an NFP remeasure at fair value at each reporting date its beneficial interest in a trust held by a third-party trustee. The NFP should remeasure its beneficial interest by applying the same technique that it used upon initial measurement, but it should update all the assumptions, including the discount rate, to reflect current market conditions. However, a change in a valuation technique or its application (for example, a change in its weighting when multiple valuation techniques are used or a change in an

adjustment applied to a valuation technique) is appropriate if the change results in a measurement that is equally or more representative of fair value in the circumstances. For further information, see paragraph 103.

What Considerations, if Any, Are There for Making Required Disclosures of Fair Value When the Asset Measured Is a Beneficial Interest in a Perpetual Trust Held by a Third Party?

53. An NFP should make the disclosures about fair value measures required by FASB ASC 820-10-50. In making disclosures about the inputs to fair value measurement, as required by FASB ASC 820-10-50-1, FinREC believes that if the fair value of the beneficial interest in a perpetual trust is measured using the fair value of the trust assets, best practice is for an NFP to disclose (*a*) the terms of the trust and practice of the trustee pertaining to distributions and (*b*) that the NFP has used the fair value of the trust assets to determine the fair value of the beneficial interest.

54. As noted in paragraphs 36–38, the unit of account is the beneficial interest in the trust itself. In making the disclosures about the level of the fair value hierarchy within which the fair value measurements are categorized in their entirety, as required by FASB ASC 820-10-50-2, FinREC believes that it is reasonable to analogize to the guidance in FASB ASC 820-10-35-54B, which addresses how a fair value measurement should be categorized if net asset value per share is used as a practical expedient to measure an investment in an entity that measures all of its investments at fair value. That guidance says that if a reporting entity will never have the ability to redeem its investment at net asset value per share (or its equivalent), the fair value measurement of the investment should be categorized as a level 3 fair value measurement. Accordingly, by analogy, the measurement for a beneficial interest in a perpetual trust should also be categorized as a level 3 fair value measurement because the NFP will never receive the trust's assets.

55. Because a beneficial interest in a perpetual trust is categorized as a level 3 measure, an NFP is required to disclose the information required for recurring fair value measurements using significant unobservable inputs. NFPs that are public entities are required to disclose the sensitivity of the fair value measurement to changes in unobservable inputs; other NFPs are not so required.

Split-Interest Agreements

56. *Split-interest agreements* (sometimes referred to as deferred giving) are agreements in which a donor makes an initial gift to a trust or directly to an NFP in which the NFP has a beneficial interest but is not the sole beneficiary. The period covered by the agreement is expressed either as a specific number of years or the remaining life of an individual or individuals designated by the donor. The assets are invested and administered by the NFP, a trustee, or a fiscal agent. Under agreements referred to as lead interests, the NFP receives any distributions or income during the agreement's term, and the donor (or other individuals or entities designated by the donor) receives all or a portion of the assets remaining at the end of the agreement's term. In agreements referred to as remainder interests, the donor (or other individuals or entities designated by the donor) receives the distributions during the term, and the NFP receives all or a portion of the assets remaining at the end of the agreement's term. Split-interest agreements, therefore, are a combination of a contribution and an exchange transaction.

Remainder Interests

57. Three primary types of remainder agreements exist: charitable remainder trusts, charitable gift annuities, and pooled income funds.

Charitable Remainder Trusts

58. Under charitable remainder trusts, as described in the glossary of FASB ASC and paragraph 6.47 of the Audit and Accounting Guide *Not-for-Profit Entities*, the donor establishes and funds a trust, the terms of which provide that specified distributions are to be made to a designated beneficiary or beneficiaries over the trust's term. The distributions to the beneficiaries may be for a specified dollar amount (an arrangement called a charitable remainder annuity trust) or specified percentage of the trust's fair market value, as determined annually (an arrangement

called a charitable remainder unitrust). Some charitable remainder unitrusts limit the annual payout to the lesser of the stated percentage or actual income earned. Obligations to the beneficiaries are limited to the trust's assets.

Charitable Gift Annuities

59. Charitable gift annuities are similar to charitable remainder trusts except that, as described in FASB ASC 958-30-05-11 (paragraph 6.52 of the Audit and Accounting Guide *Not-for-Profit Entities*), no trust exists. The assets received are held as general assets of the NFP, and the annuity liability is a general obligation of the NFP. Under charitable gift annuities, the NFP agrees to pay a fixed amount for a specified period of time to the donor or to individuals or entities designated by the donor.

Pooled Income Funds

60. The third type of remainder agreement, described in the FASB ASC glossary and paragraph 6.56 of the Audit and Accounting Guide *Not-for-Profit Entities*, is a pooled income fund. A *pooled income fund* is a trust for which the NFP is trustee. These trusts pool the contributions of many donors and invest those gifts as a group. Donors are assigned a specific number of units in the pooled income fund based on the proportion of the fair value of their contributions to the total fair value of the pooled income fund on the date of the donor's entry to the pooled fund. Until his or her death, the donor (or the donor's designated beneficiary or beneficiaries) is paid the actual income (as defined under the arrangement) earned on the donor's assigned units. Upon the donor's death, the value of the assigned units reverts to the NFP.

Lead Interests

61. The most common type of lead interest arrangement is one in which a donor establishes and funds a trust with specific distributions to be made to a designated NFP over a specified period. The distributions may be a fixed dollar amount (an arrangement called a charitable lead annuity trust) or fixed percentage of the trust's fair market value, as determined annually (a charitable lead unitrust). Upon termination of the trust, the remainder of the trust assets is paid to the donor or beneficiaries designated by the donor.

Recognition of Split-Interest Agreements

62. As noted in FASB ASC 958-30-30 (chapter 6, "Split-Interest Agreements," of the Audit and Accounting Guide *Not-for-Profit Entities*), recognition of split-interest agreements generally requires the assets, liabilities, and contribution to be initially measured at fair value. FASB ASC 958-30 provides guidance for determining the fair value of the contribution of either a lead or remainder interest.

63. Prior to FASB Statement No. 157, which is reflected in FASB ASC 820, the fair value of the contribution inherent in a split-interest agreement was estimated using the income approach (PV technique). Beginning with the 2007 edition, the Audit and Accounting Guide *Not-for-Profit Organizations* was conformed to FASB Statement No. 157, and it (and FASB ASC) indicates that PV techniques are one valuation technique for measuring the fair value of the contribution and liability; other valuation techniques are also available, as described in FASB Statement No. 157.

64. Paragraphs 6.10–.11 of the 2011 edition of the Audit and Accounting Guide *Not-for-Profit Entities*, which has been conformed to FASB ASC, in discussing initial measurement of lead and remainder agreements (other than pooled income funds or net income unit trusts), provide as follows:

> **6.10** Per FASB ASC 958-30-30-7, under a lead interest agreement, the fair value of the contribution can be estimated directly based on the present value of the future distributions to be received by the NFP as a beneficiary. Under lead interest agreements, the future payments to be made to other beneficiaries will be made by the NFP only after the NFP receives its benefits. In those situations, the present value of the future payments to be made to other beneficiaries may be estimated by the fair value of the assets contributed by the donor under the agreement less the fair value of the benefits

to be received by the NFP. If present value techniques are used, the fair value of the benefits to be received by the NFP should be measured at the present value of the benefits to be received over the expected term of the agreement.

6.11 Per FASB ASC 958-30-30-8, under remainder interest agreements, the present value of the future payments to be made to other beneficiaries can be estimated directly based on the terms of the agreement. Future distributions will be received by the NFP only after obligations to other beneficiaries are satisfied. In those cases, the fair value of the contribution may be estimated based on the fair value of the assets contributed by the donor less the fair value of the payments to be made to other beneficiaries.

65. Prevalent practice is to measure the fair value of the contribution and liability using commercially available software aimed at determining the amount of the donor's tax deduction. The objective of that software is to measure the tax deductibility of the gift, which may not necessarily result in a fair value measurement. To use that software for measuring in accordance with generally accepted accounting principles (GAAP), NFPs would need to consider the assumptions that are inherent in the software's calculations (such as interest rate and mortality) and determine whether those assumptions are market participant assumptions that are appropriate for the measurement of fair value. If the assumptions are inappropriate, the NFP must determine whether the output from the software can be adjusted to reflect a fair value measurement that complies with GAAP. The NFP must consider whether the differences in the resulting values are significant enough that the software should not be used to determine the fair value of the contribution for financial statement purposes. One method to test whether the software can be used would be to use sampling to select split-interest agreements for testing and then compare the measurements arrived at using the methods described in this white paper with the measurements from the software.
66. Paragraphs 67–102 of this white paper address questions related to the application of FASB ASC 820-10-35 in determining the fair value of split-interest agreements.

Can the Market Approach Be Used to Value the Liability?

67. In some respects, assets and liabilities related to split-interest agreements are similar to assets and liabilities related to fixed- and variable-rate annuity contracts that are sold by insurance companies. However, certain differences exist between annuities offered by insurance companies and annuities offered by NFPs. The following are the most significant differences:
    - For most types of agreements, a donor who enters into a split-interest agreement is able to take a charitable contribution deduction on his or her tax return in the year that the agreement is signed and funded. Split-interest agreements that do not result in an initial charitable contribution deduction have other tax benefits. Insurance company contracts are investment vehicles, some of which offer tax-deferral opportunities.
    - Annuities offered by insurance companies generally pay out at a higher rate of return than annuities offered by NFPs. Because of the individual's intention to make a tax-deductible contribution, an individual generally is willing to accept a lower payout rate from an NFP than he or she would accept from an insurance company.
    - The insurance industry is highly regulated, and states have insurance guarantee associations that provide the purchasers of insurance company products with varying degrees of limited protection against the inability of the insurance company to pay its obligations under the agreements. (As of May 2011, 22 of the 50 states provided protection for the PV of an annuity contract to a maximum of $100,000, and another 18 provided protection of $250,000. The other 10 states provided higher degrees of protection. Most states, however, restrict insurance agents and companies from advertising the existence of that protection.) Some states do not regulate split-interest agreements; other states regulate them but not to the extent that insurance companies are regulated. For example, a state may require the NFP to do one, two, or all of the following:

maintain minimum reserves, create a segregated trust, or limit its investment options to those perceived to be conservative. Those NFP requirements, however, are not as pervasive or extensive as requirements for insurance companies, and reserves, when required, typically are held by the NFP rather than a third party.

- An insurance company typically includes fees, a profit margin, or both in its contracts, whereas an NFP that enters into an annuity or unitrust agreement typically does not build any fees (or only very low fees to cover costs) into the agreement because the NFP will receive its benefits via the contribution portion of the agreement.
- It may be difficult to find a marketplace for annuities offered by insurance companies that is similar to the marketplace for variable annuities offered by NFPs (unitrusts). Variable annuities offered by insurance companies include a plethora of investment returns, tax deferral strategies, and payout terms. In addition, variable annuities offered by insurance companies are structured differently than variable annuities offered by NFPs. Variable annuities offered by NFPs hold the assets funding the annuity in trust. Further, variable annuities offered by NFPs pay an agreed-upon rate that is applied to the fair value of the trust assets on the annual measurement date. In comparison, variable annuities offered by insurance companies generally have a guaranteed lifetime income component that results in a liquidation of the assets. The variable component of such annuities offered by insurance companies generally increases in circumstances in which the total return on the assets exceeds a defined value.

68. FASB ASC 820-10-35-50 requires an entity using a market approach to adjust the observed market prices for the differences between the item being measured and the item for which the price was observed. It is unclear whether and how the NFP should adjust for the tax deductibility, adjust for the protection provided by the guarantee association, and remove the profit and fee components from the observed market prices for the insurance company contracts. FinREC observes that for these reasons, it may not be practical to utilize the market approach for all split-interest agreements.
69. FinREC believes that the market approach is generally not feasible for split-interest agreements with variable payments. Variable annuities offered by insurance companies include a plethora of investment returns, tax deferral strategies, and payout terms. In addition, variable annuities offered by insurance companies are structured differently than variable annuities offered by NFPs. Variable annuities offered by NFPs pay an agreed-upon rate that is applied to the fair value of the trust assets on the annual measurement date. In comparison, variable annuities offered by insurance companies generally have a guaranteed lifetime income component that results in a liquidation of the assets. The variable component of annuities offered by insurance companies generally increases in circumstances in which the total return on the assets exceeds a defined value. The market approach, therefore, is not feasible for split-interest agreements with variable payments because prices in an active market for obligations similar to split-interest agreements with variable payments cannot be observed with a reasonable cost and effort.
70. In contrast to split-interest agreements with variable payments, FinREC observes that there are many similarities between annuities offered by insurance companies and split-interest agreements with fixed payments. Given these similarities, FinREC believes that NFPs may use market information about annuities offered by insurance companies as inputs into a fair value measurement when determining the fair value of the liabilities under split-interest remainder agreements with fixed payments. FinREC believes that the fair value of a liability for a series of fixed payments would be similar, assuming the risk of nonperformance (credit standing) was the same. (Paragraphs 73–77 discuss credit standing.) Thus, the market approach is feasible for certain split-interest agreements with fixed payments.

How Should NFPs Estimate the Fair Value of Liabilities Under Split-Interest Remainder Agreements With Fixed Payments?

71. For liabilities under split-interest remainder agreements with fixed payments, FinREC believes that one of two approaches will be the best valuation technique for measuring fair value. In the circumstances described in paragraph 76, FinREC believes that a market approach using level 2 inputs, as described in paragraphs 3A–3C of FASB ASC 820-10-55, will provide the best measure. In other circumstances, as described in paragraph 78, FinREC believes that the income approach, in the form of PV techniques using level 2 inputs for interest rates, yield curves, and life expectancy tables, will provide the best measure. NFPs could, of course, use other valuation techniques to measure the fair value of liabilities under split-interest remainder agreements with fixed payments.

72. FinREC notes that observable prices are readily available from the websites of insurance companies and brokers for annuities with fixed payments and terms that are similar to split-interest liabilities with fixed payments. FinREC believes that for split-interest agreements with fixed payments, those quoted prices may be considered level 2 inputs, pursuant to the FASB ASC glossary definition of *level 2 inputs* and FASB ASC 820-10-35-48, because they are an observable quoted price for a similar liability and in an active market.

73. NFPs should consider the need to make adjustments to market prices of annuities offered by insurance companies (level 2 inputs) in estimating the fair value of liabilities under split-interest remainder agreements with fixed payments to reflect the difference in credit risk.

74. Market participants may have reasons for placing little or no emphasis on the credit standing of the payer, such as the following:
    - Historically and in the current market, few defaults are observed on annuities from either NFPs or insurance companies.
    - If an NFP is the payer, their affinity for the NFP and their donative intent.
    - If an insurance company is the payer, the high degree of regulation of the insurance industry, including the protection provided by state guarantee associations that assume some or all of the liability to the annuitant if the insurance company defaults.

75. Even though market participants may place little or no emphasis on the credit standing of the payer, the following characteristics may cause annuity obligations of an NFP to have a different risk profile than annuities offered by insurance companies:
    - Differences in credit standing
    - The existence and extent of insurance company regulation, including protection provided by state guarantee associations
    - Whether the NFP annuity obligation is adequately funded through a trust
    - The existence and extent of minimum reserve requirements related to NFP annuity obligations

Therefore, it may be difficult to find a marketplace for annuities offered by insurance companies that is similar to the marketplace for annuities offered by NFPs, and market quotes for fixed payment annuities offered by insurance companies may need to be adjusted for credit quality or credit enhancement features.

76. FASB ASC 820-10-35-50 requires that observed market prices be adjusted if they are for liabilities that are similar to, rather than the same as, the liability being measured (level 2 measures). FinREC observes that the insurance industry is highly regulated, which results in (*a*) annuities being offered by insurance companies that have a strong, superior, or excellent capacity to meet their financial commitments (creditworthiness), or (*b*) market participants viewing insurance companies as equally creditworthy because of protection provided by a state guarantee association. Thus, FinREC believes that the use of market quotes for fixed payment annuities offered by

insurance companies should be limited to situations for which the credit risk associated with an NFP's obligation to make fixed payments is similar. Specifically, FinREC believes that the market quotes for fixed payment annuities offered by insurance companies will be most representative for measuring split-interest obligations in any of the following situations:

- The annuity obligation is adequately funded from assets held in an irrevocable trust, and the NFP is observing its fiduciary responsibilities as trustee.
- The NFP has a credit standing similar to that of the insurance companies whose quotes are observed in the marketplace. That is, the NFP has an "investment grade" credit standing reflecting strong, superior, or excellent capacity to meet financial commitments. Note that the NFP's credit standing may be based on the NFP's own assessment, rather than a rating by a third-party rating agency.
- The NFP holds a commercially available annuity that provides cash flows to the beneficiary in the amount of and for the entire term of the agreement.

77. In situations similar to those in the preceding paragraph, facts and circumstances may lead to a conclusion that an NFP would make no adjustment for credit risk to the market prices of annuities offered by insurance companies when it estimates the fair value of liabilities under split-interest remainder agreements with fixed payments.
78. In situations dissimilar to those described in paragraph 76, FinREC believes that the income approach, in the form of PV techniques that maximize the use of observable inputs for interest rates, yield curves, and life expectancy tables, will be the best valuation technique for split-interest agreements with fixed payments. The income approach, including considerations for determining the discount rate, is discussed further in paragraphs 93–102.
79. FinREC believes that when using PV techniques to determine the fair value of a split- interest agreement's obligation to make fixed payments, NFPs should consider the risk premium that hypothetical market participants would demand for bearing the uncertainty inherent in the cash flows of the obligation. For example, a market participant would likely demand a premium to be compensated for uncertainties associated with the life span of an annuitant. Market quotes for annuities of insurance companies already include this risk premium.
80. Some NFPs have used tables provided by the IRS or similar tables in planned giving software to estimate the fair value of liabilities under split-interest remainder agreements with fixed payments. FinREC believes that such tables may be inappropriate for estimating the fair value of liabilities under split-interest remainder agreements with fixed payments because they are not regularly updated and are based on the population at large, rather than the population likely to buy an annuity or enter into a split-interest agreement. FinREC believes that quoted market prices for fixed-payment annuities in active markets appropriately consider the expected life of the relevant pool of annuitants. As a result, entities may want to use the life expectancy date from other sources, such as those discussed in paragraph 92.

How Should Discount Rates Be Determined if the Income Approach Is Used, Including Should Any Risk Premium That Hypothetical Market Participants Would Demand for Bearing the Inherent Uncertainties Be Incorporated in the Cash Flows?

81. In discussing discount rates used in PV measurements, FASB ASC 958-30-30-6 (paragraph 6.09 of the Audit and Accounting Guide *Not-for-Profit Entities*) specifies that a discount rate commensurate with the risks involved should be used if PV techniques are used to measure the fair value of split-interest obligations. In practice, some NFPs have used surrogates for a discount rate commensurate with the risks involved, such as average rate of return on the investment portfolio or average interest rate on outstanding borrowings, asserting that those surrogates generally did not result in measures that resulted in material misstatements in the financial statements.
82. FASB ASC 820-10-55-5 lists the elements that a fair value measurement of an asset or a liability should capture when using PV techniques (see paragraph 7).

83. In determining fair value, entities should consider the risk that actual cash flows (in both timing and amount) may differ from the cash flows used in the PV calculation. All other factors being equal, therefore, the higher the risk that actual cash flows may differ from the cash flows used in the PV calculation, the higher the discount rate or rate of return.

How Should NFPs Account for the Changes in the Liabilities Under Split-Interest Agreements With Fixed Payments in Subsequent Periods?

84. FASB ASC 958-30-35 (chapter 6 of the Audit and Accounting Guide *Not-for-Profit Entities*) discusses recognition and measurement during the term of a split-interest agreement. The NFP has two options available for reporting the liabilities under split-interest agreements with fixed payments: it can elect the fair value option, pursuant to FASB ASC 825-10-25, or amortize the discount associated with the obligation (remainder trust) or contribution (lead interest) and adjust for changes in life expectancies (if payments are life dependent).

85. FASB ASC 820-10-35-25 requires that valuation techniques be applied consistently, unless a change in valuation techniques results in a measurement that is equally or more representative of fair value in the circumstances (also see paragraph 103). If the NFP elects to report the annuity payment liability at fair value in subsequent periods, it should use the same method to determine fair value as it used at initial recognition, unless a change in valuation techniques results in a measurement that is equally or more representative of fair value in the circumstances. That is, if, at initial recognition, the NFP used market quotations gathered from the Internet for commercially available annuity products with similar terms, it should repeat that process, unless a change in valuation techniques results in a measurement that is equally or more representative of fair value in the circumstances, and the liability would be adjusted upward or downward to reflect the new market quote. If, at initial recognition, the NFP used PV techniques to estimate the fair value, it should update all the elements described in paragraph 81, including the discount rate assumptions, in arriving at the current fair value estimate.

86. If the NFP does not elect to report the annuity liability at fair value, it should not adjust the discount rate assumptions. It should update only the actuarial assumptions, including life expectancy. FinREC observes that if the NFP initially measured the liability using market quotes, it would determine the imputed discount rate to be used in amortizing the liability.[13] To do so, the NFP might solve for the discount rate using the fixed payment amount; the life expectancies at the inception of the contract (obtained from a reliable published source, such as the National Center for Health Statistics [NCHS]); and the market quote (the PV at initial measurement). That imputed discount rate would be used in the subsequent periods' remeasurements over the life of the agreement.

How Should NFPs Estimate the Fair Value of Split-Interest Liabilities With Variable Payments?

87. For liabilities under split-interest agreements with variable payments (sometimes referred to as charitable unitrusts), FinREC believes that an income approach, using PV techniques and level 2 inputs for interest rates, as described in the FASB ASC glossary and paragraphs 3F–3G of FASB ASC 820-10-55, often will be the best valuation technique for measuring fair value. This white paper, therefore, discusses various techniques under an income approach for measuring the fair value of liabilities under split-interest remainder agreements with variable payments.

88. All variable payment split-interest agreements hold the assets in trust; therefore, the trust is the obligor, not the NFP that serves as trustee. Holding the assets in trust provides significant protection (similar to collateral) against the risk of default because
    - the variable payments are computed as a percentage of the trust assets; thus, the payments decrease if investment losses cause a decrease in the trust assets.

13 Accounting for split-interest agreements with embedded derivatives is outside the scope of this white paper.

- split-interest remainder agreements that result in tax deductions must have a remainder interest equal to or greater than 10 percent of the fair value of the assets initially transferred to the trust, which provides additional protection against default.

89. To use the income approach to measure the fair value of the contribution and obligation of a split-interest agreement with variable payments, an NFP must make assumptions about the following inputs to the PV techniques:
    - Projected rate of return on the investments in the trust
    - Discount rate for the obligation
    - The expected mortality of the individual on which termination of the agreement depends, if the agreement is life dependent

90. In circumstances in which cash is invested, the investor is subject to various types of risk, including market risk, credit risk, inflation risk, and so forth. FinREC observes that because the payments to the beneficiary depend upon the assets in the trust, the cash flows from the trust are at least as risky as the cash flows of the trust investments. That is, if the trustee expects, for example, a rate of return on the trust investments of 6 percent (due to the risk of investing the trust assets), then the beneficiary of the cash flows from the trust also bears at least that same risk. FinREC believes that because the beneficiary also bears that risk, best practice is for the discount rate to also reflect that risk; therefore, the discount rate in this example would be at a minimum 6 percent.

91. FinREC observes that defaults rarely occur on split-interest agreements with variable payments because they are collateralized obligations, and NFPs generally perform their trust duties as assigned. Therefore, FinREC believes that if the NFP is complying with all of its fiduciary duties as trustee, best practice is to use the same rate for the projected rate of return on the investments and discount rate. The NFP can use either the risk-neutral rate or projected earnings rate on the trust assets.

92. Life expectancy information can be obtained from various sources, such as recent annuity tables published by the Society of Actuaries, including the Annuity 2000 Mortality Table (adopted by the National Association of Insurance Commissioners in 1996), or the NCHS ("United States Life Tables" in the *National Vital Statistics Reports*). The Annuity 2000 Mortality Tables reflect the fact that individuals who purchase annuities tend to be wealthier and, thus, healthier than the general public.[14] The tables published by the NCHS are based on the general public. Some sources suggest that a minimum of two years and a maximum of six years would be added to the life expectancies in mortality tables based upon the general public to reflect annuitants' expected longer lives.

93. An example of an income approach calculation for a charitable remainder unitrust appears in exhibit 1; the example uses a discount rate adjustment technique. Paragraphs 24–32 and appendix A provide additional information about the discount rate adjustment technique.

14 This mortality table can be adjusted to reflect the fact that mortality rates improve over time. For example, projection scale G is used to adjust annual rates of mortality in individual annuity tables.

EXHIBIT 1

FACT SET

94. James Joyce establishes a charitable remainder unitrust with assets valued at $100,000, naming ABC Charity as the remainder beneficiary and trustee. The unitrust agreement specifies that Mr. Joyce will receive 6 percent of the value of the trust assets annually, based on the fair value of the trust assets on the measurement date. Mr. Joyce is 75 years old when the agreement is signed. Payments are made at the end of the year.

95. The following table provides information for determining a risk-neutral rate, which is measured as the risk-free rate adjusted for the credit swap spread rate.[1] The credit swap spread measures a more liquid market in which AA banks lend to each other. The credit swap spread rate is measured as the difference between the London Interbank Offered Rate (LIBOR) and the Treasury bill (T bill) rate. The boxes indicate observable market returns.

Portfolio return and discount rate:

	LIBOR	0.83%	
	T-bill	0.16%	
Assume constant by duration	Swap spread	0.67%	
	1-year Treasury	0.47%	
	2-year Treasury	0.86%	
Linear interpolation between	3-year Treasury	1.29%	
years 3 and 5	4-year Treasury	1.64%	
	5-year Treasury	1.98%	
Linear interpolation between	6-year Treasury	2.21%	
years 5 and 10	7-year Treasury	2.44%	
	8-year Treasury	2.67%	
	9-year Treasury	2.90%	
	10-year Treasury	3.12%	
Linear interpolation between			
years 10 and 30	30-year Treasury	4.07%	0.048% per year

The preceding observable market rates are used to compute the return on the investments in the portfolio for purposes of estimating the trust assets at the beginning of the year. They are also used to develop the discount factors. For example, the trust assets at the beginning of year 2 are computed as $100,000 x (1 + 0.0047 [the 1-year Treasury rate] + 0.0067 [the swap spread]) – $100,000 x 6% payment. The discount factor for year 2 is computed as the year 1 discount factor x (1 / (1 + 0.0086 [the 2-year Treasury rate] + 0.0067 [the swap spread])).

1 The Treasury yield curve rates published by the U.S. Treasury are an alternative set of risk-free rates.

Estimate of Fair Value of Obligation to the Beneficiary and ABC Charity's Contribution

Yr.	Mortality	Probability of Payment	Trust Assets at Beginning of the Year	Trust Return/ Discount Rate	Payout	Projected Payment	Discount Factor	Present Value of Payout
	A	B = 1 – A	$C = C_{prev} \times (1+D_{prev}/100) - E_{prev}$	D	E = 6% x C	F = B x E	G	H = F x G
1	0.028304	0.971696	$100,000	1.140	$6,000	$5,830	0.98873	$5,764
2	0.030830	0.941739	95,140	1.530	5,708	5,376	0.97383	5,235
3	0.033570	0.910125	90,887	1.960	5,453	4,963	0.95511	4,740
4	0.036543	0.876867	87,215	2.305	5,233	4,589	0.93359	4,284
5	0.039760	0.842002	83,993	2.650	5,040	4,243	0.90949	3,859
6	0.043231	0.805602	81,179	2.878	4,871	3,924	0.88405	3,469
7	0.046962	0.767769	78,645	3.108	4,719	3,623	0.85740	3,106
8	0.050960	0.728644	76,370	3.338	4,582	3,339	0.82970	2,770
9	0.055233	0.688399	74,337	3.568	4,460	3,070	0.80112	2,460
10	0.059782	0.647245	72,529	3.790	4,352	2,817	0.77186	2,174
11	0.064614	0.605424	70,926	3.838	4,256	2,576	0.76637	1,974
12	0.069729	0.563208	69,393	3.885	4,164	2,345	0.76055	1,783
13	0.075129	0.520895	67,925	3.933	4,076	2,123	0.75442	1,602
14	0.081346	0.478522	66,521	3.980	3,991	1,910	0.74799	1,429
15	0.087988	0.436418	65,177	4.028	3,911	1,707	0.74126	1,265
16	0.095054	0.394935	63,891	4.075	3,833	1,514	0.73425	1,112
17	0.102537	0.354440	62,661	4.123	3,760	1,333	0.72696	969
18	0.110440	0.315295	61,485	4.170	3,689	1,163	0.71940	837
19	0.117691	0.278188	60,360	4.218	3,622	1,007	0.71159	717
20	0.125100	0.243386	59,284	4.265	3,557	866	0.70354	609
21	0.132647	0.211102	58,255	4.313	3,495	738	0.69525	513
22	0.140309	0.181482	57,272	4.360	3,436	624	0.68673	428
23	0.148066	0.154611	56,333	4.408	3,380	523	0.67800	354
24	0.163725	0.129297	55,436	4.455	3,326	430	0.66907	288
25	0.182176	0.105742	54,579	4.503	3,275	346	0.65995	229
26	0.204277	0.084142	53,762	4.550	3,226	271	0.65064	177
27	0.231053	0.064701	52,983	4.598	3,179	206	0.64117	132
28	0.263745	0.047636	52,239	4.645	3,134	149	0.63154	94
29	0.287334	0.033949	51,532	4.693	3,092	105	0.62176	65
30	0.314649	0.023267	50,858	4.740	3,051	71	0.61185	43
31	0.346177	0.015212	50,217	4.788	3,013	46	0.60181	28
32	0.382403	0.009395	49,608	4.835	2,976	28	0.59167	17

Estimate of Fair Value of Obligation to the Beneficiary and ABC Charity's Contribution

Yr.	Mortality	Probability of Payment	Trust Assets at Beginning of the Year	Trust Return/ Discount Rate	Payout	Projected Payment	Discount Factor	Present Value of Payout
	A	B = 1 – A	$C = C_{prev} \times (1+D_{prev}/100) - E_{prev}$	D	E = 6% x C	F = B x E	G	H = F x G
33	0.423813	0.005413	49,030	4.883	2,942	16	0.58142	9
34	0.470893	0.002864	48,482	4.930	2,909	8	0.57108	5
35	0.524128	0.001363	47,964	4.978	2,878	4	0.56067	2
36	0.584004	0.000567	47,473	5.025	2,848	2	0.55019	1
37	0.651007	0.000198	47,010	5.073	2,821	1	0.53965	0
38	0.725622	5.43E-05	46,574	5.120	2,794	0	0.52907	0
				Total Fair Value of Donor's Interest				$52,543
Life expectancy		13.441806		**Total Fair Value of ABC Charity's Interest**				$47,457

96. The calculation in exhibit 1 incorporates a yield curve and mortality probabilities. The Financial Reporting Executive Committee believes that a shortcut method would provide an adequate estimate of fair value in circumstances in which the results would not be materially different than the more precise method illustrated in exhibit 1. Exhibit 2 presents a shortcut calculation for the same fact set as exhibit 1.

EXHIBIT 2

97. Rather than using annual mortality statistics, the beneficiary's life expectancy is used, and 13.44 years (exhibit 1) is rounded to 14 years. Instead of using the yield curve used in exhibit 1, the average return over the life of the beneficiary is projected. The boxes indicate observable market returns. As in exhibit 1, the return on Treasuries after year 10 is imputed using a linear interpolation of the 10-year and 30-year rates. Thus, the average return is computed as follows:

1-year Treasury	0.47%
2-year Treasury	0.86%
3-year Treasury	1.29%
4-year Treasury	1.64%
5-year Treasury	1.98%
6-year Treasury	2.21%
7-year Treasury	2.44%
8-year Treasury	2.67%
9-year Treasury	2.90%
10-year Treasury	3.12%
11-year Treasury	3.17%
12-year Treasury	3.22%
13-year Treasury	3.26%
14-year Treasury	3.31%
	32.55%
Average Treasury	2.32%
Swap spread	0.67%
Average return	2.99%

The average return is used to compute the return on the investments in the portfolio for purposes of estimating the trust assets at the beginning of the year. It is also used as the discount rate, which is computed using the formula 1 / (1 + interest rate),^{n} in which *n* is the number of years. The estimate of the obligation to the beneficiary and ABC Charity's contribution is as follows, using the shortcut method:

Estimate of Fair Value of Obligation to the Beneficiary and ABC Charity's Contribution

	Projected Trust Balance: Beginning of Year	Projected Trust Income	Projected Trust Payout	Present Value Factor	Present Value of Payout
	$A = A_{prev} + B_{prev} - C_{prev}$	$B = A \times 2.993\%$	$C = A \times 6\%$	D	$E = C \times D$
Year 1	$100,000	$2,993	$6,000	0.9709	$5,826
Year 2	96,993	2,903	5,820	0.9427	5,486
Year 3	94,077	2,816	5,645	0.9153	5,167
Year 4	91,249	2,731	5,475	0.8887	4,866
Year 5	88,505	2,649	5,310	0.8629	4,582

Estimate of Fair Value of Obligation to the Beneficiary and ABC Charity's Contribution

	Projected Trust Balance: Beginning of Year	Projected Trust Income	Projected Trust Payout	Present Value Factor	Present Value of Payout
	$A = A_{prev} + B_{prev} - C_{prev}$	$B = A \times 2.993\%$	$C = A \times 6\%$	D	$E = C \times D$
Year 6	85,844	2,570	5,151	0.8378	4,315
Year 7	83,263	2,492	4,996	0.8135	4,064
Year 8	80,760	2,417	4,846	0.7898	3,827
Year 9	78,331	2,345	4,700	0.7669	3,604
Year 10	75,976	2,274	4,559	0.7446	3,394
Year 11	73,692	2,206	4,422	0.7229	3,196
Year 12	71,476	2,140	4,289	0.7019	3,010
Year 13	69,327	2,075	4,160	0.6815	2,835
Year 14	67,243	2,013	4,035	0.6617	2,670
		Total Fair Value of Donor's Interest			**$56,842**
		Total Fair Value of ABC Charity's Interest			**$43,158**

98. The shortcut method in exhibit 2 results in an obligation to the beneficiary of $56,842 as compared with $52,543 in the more exact method in exhibit 1, which is a difference of $4,299 or 8 percent. The primary reason for the difference is the use of the average return over the life expectancy of the beneficiary instead of the yield curve. In circumstances in which the average return is used, and the yield curve is upward sloping (as is typical), the trust assets are not depleted as rapidly, and the projected payments to the beneficiary are larger.

99. Exhibits 1 and 2 used a risk-neutral rate adjusted by the swap spread as the projected return on the trust assets and discount rate. As discussed in paragraph 90, if a not-for-profit entity (NFP) uses the projected earnings rate on the trust assets in the PV calculation, and the NFP is complying with all its fiduciary duties as trustee, best practice is to use that projected earnings rate as the discount rate. Exhibit 3 presents a shortcut calculation for the same fact set as exhibits 1 and 2 but uses the projected earning rate on the trust assets as the discount rate, rather than the risk-neutral rate.

EXHIBIT 3

100. The beneficiary's life expectancy from exhibit 1 (13.44 years) is rounded to 14 years. Instead of using the yield curve used in exhibit 1 or the average return over the life of the beneficiary used in exhibit 2, the projected return on the portfolio of 4 percent is used as the discount rate and rate of return on the trust assets.

101. The shortcut method in exhibit 3 results in an obligation to the beneficiary of $56,479 as compared with $52,543 in the more exact method in exhibit 1, a difference from exhibit 1 of $3,936 or 7.5 percent. The primary reason for the difference is the use of the average return on trust investments over the life expectancy of the beneficiary instead of the yield curve. In circumstances in which the average return is used, and the yield curve is upward sloping (as is typical), the trust assets are not depleted as rapidly, and the projected payments to the beneficiary are larger. The difference from the shortcut method using the risk-neutral rate is negligible ($56,842 compared with $56,479).

Estimate of Fair Value of Obligation to the Beneficiary and ABC Charity's Contribution

	Projected Trust Balance: Beginning of Year	Projected Trust Income	Projected Trust Payout	Present Value Factor	Present Value of Payout
	$A = A_{prev} + B_{prev} - C_{prev}$	B = A x 4%	C = A x 6%	D	E = C x D
Year 1	$100,000	$4,000	$6,000	0.9615	$5,769
Year 2	98,000	3,920	5,880	0.9246	5,436
Year 3	96,040	3,842	5,762	0.8890	5,123
Year 4	94,119	3,765	5,647	0.8548	4,827
Year 5	92,237	3,689	5,534	0.8219	4,549
Year 6	90,392	3,616	5,424	0.7903	4,286
Year 7	88,584	3,543	5,315	0.7599	4,039
Year 8	86,813	3,473	5,209	0.7307	3,806
Year 9	85,076	3,403	5,105	0.7026	3,586
Year 10	83,375	3,335	5,002	0.6756	3,380
Year 11	81,707	3,268	4,902	0.6496	3,185
Year 12	80,073	3,203	4,804	0.6246	3,001
Year 13	78,472	3,139	4,708	0.6006	2,828
Year 14	76,902	3,076	4,614	0.5775	2,665
				Total Fair Value of Donor's Interest	**$56,479**
				Total Fair Value of ABC Charity's Interest	**$43,521**

102. To determine the sensitivity of the fair value measurements to changes in the rate used for the investment return, a not-for-profit entity (NFP) or its auditors can perform a sensitivity analysis by substituting different rates of return and discount rates into the spreadsheet used to compute the fair value estimates. Doing so results in the following values of the obligation, using the shortcut method, and the following rates. Readers are reminded that the discount rate would equal the projected rate of return on the investments if the NFP is complying with all of its fiduciary duties as trustee.

Portfolio Return	*Discount Rate*	*Obligation*
2.99%	2.99%	$56,842
1.00	1.00	57,574
2.00	2.00	57,205
4.00	4.00	56,479
5.00	5.00	56,122

Changes in Valuation Techniques

103. In accordance with paragraphs 25–26 of Financial Accounting Standards Board (FASB) *Accounting Standards Codification* (ASC) 820-10-35, a change in a valuation technique or its application (for example, a change in its weighting when multiple valuation techniques are used or a change in an adjustment applied to a valuation technique) is appropriate if the change results in a measurement that is equally or more representative of fair value in the circumstances. That might be the case if, for example, any of the following events occur:

    a. New markets develop.
    b. New information becomes available.
    c. Information previously used is no longer available.
    d. Valuation techniques improve.
    e. Market conditions change.

Revisions resulting from a change in the valuation technique or its application are accounted for as a change in accounting estimate. The disclosure provisions of FASB ASC 250, *Accounting Changes and Error Corrections*, for a change in accounting estimate are not required for revisions resulting from a change in a valuation technique or its application.

Appendix A: Present Value Techniques in Paragraphs 4–20 of Financial Accounting Standards Board *Accounting Standards Codification* 820-10-55

55-4 Paragraphs 820-10-55-5 through 55-20 describe the use of present value techniques to measure fair value. Those paragraphs focus on a discount rate adjustment technique and an expected cash flow (expected present value) technique. Those paragraphs neither prescribe the use of a single specific present value technique nor limit the use of present value techniques to measure fair value to the techniques discussed. The present value technique used to measure fair value will depend on facts and circumstances specific to the asset or liability being measured (for example, whether prices for comparable assets or liabilities can be observed in the market) and the availability of sufficient data.

The Components of a Present Value Measurement

55-5 Present value (that is, an application of the income approach) is a tool used to link future amounts (for example, cash flows or values) to a present amount using a discount rate. A fair value measurement of an asset or a liability using a present value technique captures all of the following elements from the perspective of market participants at the measurement date:

a. An estimate of future cash flows for the asset or liability being measured.
b. Expectations about possible variations in the amount and timing of the cash flows representing the uncertainty inherent in the cash flows.
c. The time value of money, represented by the rate on risk-free monetary assets that have maturity dates or durations that coincide with the period covered by the cash flows and pose neither uncertainty in timing nor risk of default to the holder (that is, a risk-free interest rate). For present value computations denominated in nominal U.S. dollars, the yield curve for U.S. Treasury securities determines the appropriate risk-free interest rate.
d. The price for bearing the uncertainty inherent in the cash flows (that is, a risk premium).
e. Other factors that market participants would take into account in the circumstances.
f. For a liability, the nonperformance risk relating to that liability, including the reporting entity's (that is, the obligor's) own credit risk.

General Principles

55-6 Present value techniques differ in how they capture the elements in the preceding paragraph. However, all of the following general principles govern the application of any present value technique used to measure fair value:

a. Cash flows and discount rates should reflect assumptions that market participants would use when pricing the asset or liability.
b. Cash flows and discount rates should take into account only the factors attributable to the asset or liability being measured.
c. To avoid double counting or omitting the effects of risk factors, discount rates should reflect assumptions that are consistent with those inherent in the cash flows. For example, a discount rate that reflects the uncertainty in expectations about future defaults is appropriate if using contractual cash flows of a loan (that is, a discount rate adjustment technique). That same rate should not be used if using expected (that is, probability-weighted) cash flows (that is, an expected present value technique) because the expected cash flows already reflect assumptions about the uncertainty in future defaults; instead, a discount rate that is commensurate with the risk inherent in the expected cash flows should be used.

d. Assumptions about cash flows and discount rates should be internally consistent. For example, nominal cash flows, which include the effect of inflation, should be discounted at a rate that includes the effect of inflation. The nominal risk-free interest rate includes the effect of inflation. Real cash flows, which exclude the effect of inflation, should be discounted at a rate that excludes the effect of inflation. Similarly, after-tax cash flows should be discounted using an after-tax discount rate. Pretax cash flows should be discounted at a rate consistent with those cash flows.

e. Discount rates should be consistent with the underlying economic factors of the currency in which the cash flows are denominated.

Risk and Uncertainty

55-7 A fair value measurement using present value techniques is made under conditions of uncertainty because the cash flows used are estimates rather than known amounts. In many cases, both the amount and timing of the cash flows are uncertain. Even contractually fixed amounts, such as the payments on a loan, are uncertain if there is risk of default.

55-8 Market participants generally seek compensation (that is, a risk premium) for bearing the uncertainty inherent in the cash flows of an asset or a liability. A fair value measurement should include a risk premium reflecting the amount that market participants would demand as compensation for the uncertainty inherent in the cash flows. Otherwise, the measurement would not faithfully represent fair value. In some cases, determining the appropriate risk premium might be difficult. However, the degree of difficulty alone is not a sufficient reason to exclude a risk premium.

55-9 Present value techniques differ in how they adjust for risk and in the type of cash flows they use. For example:

a. The discount rate adjustment technique (see paragraphs 820-10-55-10 through 55-12) uses a risk-adjusted discount rate and contractual, promised, or most likely cash flows.

b. Method 1 of the expected present value technique (see paragraph 820-10-55-15) uses risk-adjusted expected cash flows and a risk-free rate.

c. Method 2 of the expected present value technique (see paragraph 820-10-55-16) uses expected cash flows that are not risk adjusted and a discount rate adjusted to include the risk premium that market participants require. That rate is different from the rate used in the discount rate adjustment technique.

Discount Rate Adjustment Technique

55-10 The discount rate adjustment technique uses a single set of cash flows from the range of possible estimated amounts, whether contractual or promised (as is the case for a bond) or most likely cash flows. In all cases, those cash flows are conditional upon the occurrence of specified events (for example, contractual or promised cash flows for a bond are conditional on the event of no default by the debtor). The discount rate used in the discount rate adjustment technique is derived from observed rates of return for comparable assets or liabilities that are traded in the market. Accordingly, the contractual, promised, or most likely cash flows are discounted at an observed or estimated market rate for such conditional cash flows (that is, a market rate of return).

55-11 The discount rate adjustment technique requires an analysis of market data for comparable assets or liabilities. Comparability is established by considering the nature of the cash flows (for example, whether the cash flows are contractual or noncontractual and are likely to respond similarly to changes in economic conditions), as well as other factors (for example, credit standing, collateral, duration, restrictive covenants, and liquidity). Alternatively, if a single comparable asset or liability does not fairly reflect the risk inherent in the cash flows of the asset or liability being measured, it may be possible to derive a discount rate using data for several

comparable assets or liabilities in conjunction with the risk-free yield curve (that is, using a build-up approach). Paragraph 820-10-55-33 illustrates the build-up approach.

55-12 When the discount rate adjustment technique is applied to fixed receipts or payments, the adjustment for risk inherent in the cash flows of the asset or liability being measured is included in the discount rate. In some applications of the discount rate adjustment technique to cash flows that are not fixed receipts or payments, an adjustment to the cash flows may be necessary to achieve comparability with the observed asset or liability from which the discount rate is derived.

Expected Present Value Technique

55-13 The expected present value technique uses as a starting point a set of cash flows that represents the probability-weighted average of all possible future cash flows (that is, the expected cash flows). The resulting estimate is identical to expected value, which, in statistical terms, is the weighted average of a discrete random variable's possible values with the respective probabilities as the weights. Because all possible cash flows are probability-weighted, the resulting expected cash flow is not conditional upon the occurrence of any specified event (unlike the cash flows used in the discount rate adjustment technique).

55-14 In making an investment decision, risk-averse market participants would take into account the risk that the actual cash flows may differ from the expected cash flows. Portfolio theory distinguishes between two types of risk:

a. Unsystematic (diversifiable) risk
b. Systematic (nondiversifiable) risk.[1]

55-15 Method 1 of the expected present value technique adjusts the expected cash flows of an asset for systematic (that is, market) risk by subtracting a cash risk premium (that is, risk-adjusted expected cash flows). Those risk-adjusted expected cash flows represent a certainty equivalent cash flow, which is discounted at a risk-free interest rate. A certainty equivalent cash flow refers to an expected cash flow (as defined), adjusted for risk so that a market participant is indifferent to trading a certain cash flow for an expected cash flow. For example, if a market participant was willing to trade an expected cash flow of $1,200 for a certain cash flow of $1,000, the $1,000 is the certainty equivalent of the $1,200 (that is, the $200 would represent the cash risk premium). In that case, the market participant would be indifferent as to the asset held.

55-16 In contrast, Method 2 of the expected present value technique adjusts for systematic (that is, market) risk by applying a risk premium to the risk-free interest rate. Accordingly, the expected cash flows are discounted at a rate that corresponds to an expected rate associated with probability-weighted cash flows (that is, an expected rate of return). Models used for pricing risky assets, such as the capital asset pricing model, can be used to estimate the expected rate of return. Because the discount rate used in the discount rate adjustment technique is a rate of return relating to conditional cash flows, it is likely to be higher than the discount rate used in Method 2 of the expected present value technique, which is an expected rate of return relating to expected or probability-weighted cash flows.

55-17 To illustrate Methods 1 and 2, assume that an asset has expected cash flows of $780 in 1 year determined on the basis of the possible cash flows and probabilities shown below. The applicable risk-free interest rate for

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[1 The systemic (or nondiversifiable risk) of an asset (or a liability) refers to the amount by which the asset (or liability) increases the variance of a diversified portfolio when it is added to that portfolio. Portfolio theory holds that in a market in equilibrium, market participants will be compensated only for bearing the systemic or nondiversifiable risk inherent in the cash flows. In markets that are inefficient or out of equilibrium, other forms of return or compensation might be available.]

cash flows with a 1-year horizon is 5 percent, and the systematic risk premium for an asset with the same risk profile is 3 percent.

Possible Cash Flows	Probability	Probability-Weighted Cash Flows
$500	15%	$75
$800	60%	$480
$900	25%	$225
Expected cash flows		$780

55-18 In this simple illustration, the expected cash flows ($780) represent the probability-weighted average of the 3 possible outcomes. In more realistic situations, there could be many possible outcomes. However, to apply the expected present value technique, it is not always necessary to take into account distributions of all possible cash flows using complex models and techniques. Rather, it might be possible to develop a limited number of discrete scenarios and probabilities that capture the array of possible cash flows. For example, a reporting entity might use realized cash flows for some relevant past period, adjusted for changes in circumstances occurring subsequently (for example, changes in external factors, including economic or market conditions, industry trends, and competition as well as changes in internal factors affecting the reporting entity more specifically), taking into account the assumptions of market participants.

55-19 In theory, the present value (that is, the fair value) of the asset's cash flows is the same whether determined using Method 1 or Method 2, as follows:

a. Using Method 1, the expected cash flows are adjusted for systematic (that is, market) risk. In the absence of market data directly indicating the amount of the risk adjustment, such adjustment could be derived from an asset pricing model using the concept of certainty equivalents. For example, the risk adjustment (that is, the cash risk premium of $22) could be determined using the systematic risk premium of 3 percent ($780 – [$780 × (1.05/1.08)]), which results in risk-adjusted expected cash flows of $758 ($780 – $22). The $758 is the certainty equivalent of $780 and is discounted at the risk-free interest rate (5 percent). The present value (that is, the fair value) of the asset is $722 ($758/1.05).

b. Using Method 2, the expected cash flows are not adjusted for systematic (that is, market) risk. Rather, the adjustment for that risk is included in the discount rate. Thus, the expected cash flows are discounted at an expected rate of return of 8 percent (that is, the 5 percent risk-free interest rate plus the 3 percent systematic risk premium). The present value (that is, the fair value) of the asset is $722 ($780/1.08).

55-20 When using an expected present value technique to measure fair value, either Method 1 or Method 2 could be used. The selection of Method 1 or Method 2 will depend on facts and circumstances specific to the asset or liability being measured, the extent to which sufficient data are available, and the judgments applied.

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