

Annuity Payment Analysis for Grantor Retained Annuity Trusts

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A grantor retained annuity trust (“GRAT”) is an estate planning instrument that may be used to transfer wealth from the trust grantors to the trust beneficiaries. During the GRAT term, the grantor receives annuity payments. From time to time, valuation analysts are asked to estimate the fair market value of the GRAT annuity payment stream. Because a GRAT typically has predetermined payments during its remaining term, a GRAT annuity payment stream is generally comparable to a debt instrument. And, the valuation of GRAT annuity payments is generally comparable to the valuation of promissory note payments. This discussion provides an overview of GRATs. And, this discussion illustrates the valuation of transferred GRAT annuity payments.

INTRODUCTION

A grantor retained annuity trust (“GRAT”) is an irrevocable trust that remits to the grantor (i.e., the creator) principal payments plus a stated interest rate, typically on an annual basis. The payments are typically expressed as either:

1. a fixed dollar amount or
2. a percentage of the value of the assets transferred to the trust.

Upon the last payment, any assets remaining in the trust—that is, assets that are not used to satisfy the annuity payments of principal and interest—are transferred to the beneficiaries of the irrevocable trust free of any gift or estate taxes. This statement is true unless a taxable gift resulted from the creation of the trust.

The trust grantor retains the right to predetermined principal and interest payments during the

GRAT term. If the trust grantor dies during the term of the GRAT, then the assets of the GRAT will, in general, be included in the grantor’s gross estate for federal estate tax purposes.

When the assets being contributed to a GRAT are not publicly traded, then a valuation analyst (“analyst”) may be engaged to estimate the value of the privately held assets. This discussion focuses on the valuation of GRAT annuity payments—and not on the valuation of the underlying assets of the GRAT itself.

The analysis of GRAT annuity payments is generally comparable to the analysis of promissory note payments. The annuity payments are established under the terms and conditions of the subject GRAT agreement.

In the instance that the GRAT annuity payments are transferred, a taxpayer may engage an analyst to estimate the fair market value of the remaining GRAT annuity payments.



How Does a GRAT Work?

In order to understand how a GRAT works, it is helpful to understand the role of each party to a GRAT. Typically, there are three parties to a GRAT:

1. The grantor
2. The beneficiary
3. The trustee

The grantor contributes assets to the GRAT and is also the recipient of the GRAT annuity payments.

The beneficiary is the recipient of the grantor-contributed assets at the end of the GRAT term.

The trustee typically manages the trust on the grantor's behalf, and also transfers the assets held in the GRAT to the beneficiary at the end of the GRAT term.

In some instances, the grantor may also be the GRAT trustee. During the term of the GRAT, the annuity payments may be expressed as a fixed dollar amount or as a percentage fixed to the value of the contributed assets.

At the end of the defined term of the GRAT, the trustee transfers the remaining GRAT assets to the beneficiary (or a trust for the beneficiary), free of any gift or estate taxes.

Typically, in order to calculate the taxable gift to the beneficiary, the total value of the annuity payments is subtracted from the total value of the remaining assets of the GRAT.

The grantor retains the right to payments during the life of the grantor. Therefore, the GRAT assets are typically included in the grantor's estate if the

grantor dies during the GRAT term, regardless of whether the assets have a significantly greater value than the remaining annuity payments due to the grantor.¹

Consequently, the death of the grantor may eliminate any estate tax benefits obtained by creating the GRAT.

Additionally, the grantor does not obtain any tax benefits associated with creating the GRAT if the GRAT assets do not appreciate during the GRAT term and outperform the Internal Revenue Code Section 7520 rate.

In some instances, analysts are retained to estimate the fair market value of a GRAT annuity payment stream. The following sections describe the generally accepted process for estimating the present value of future

GRAT annuity payments.

VALUATION ANALYSIS OF THE REMAINING GRAT ANNUITY PAYMENTS

An analyst may consider all generally accepted security valuation approaches and methods in the GRAT analysis. The income approach is typically applied in a GRAT annuity payment analysis. The value of a fixed-income instrument typically is a function the following two factors:

1. The income stream
2. The risk-adjusted required rate of return for holding such a security

A frequently applied method for the valuation of remaining GRAT annuity payments is the discounted cash flow method (an income approach valuation method).

When securities cannot be bought or sold in the public market where the price can be readily observed, the value of the payments may be estimated by discounting the contractually scheduled payment amounts to present value. This discounting procedure involves applying a risk-adjusted required yield rate (or discount rate).

Because a GRAT typically has predetermined payments during its remaining term, a GRAT is similar to a debt instrument—such as an annuity promissory note.

If the annuity payments are being transferred, the analyst may want to consider the gift tax

regulations which define fair market value for promissory notes as follows:

The fair market value of notes, secured or unsecured, is presumed to be the amount of unpaid principal, plus accrued interest to the date of the gift, unless the donor establishes a lower value. Unless returned at face value, plus accrued interest, it must be shown by satisfactory evidence that the note is worth less than the unpaid amount (because of the interest rate, or date of maturity, or other cause), or that the note is uncollectible, either in whole or in part (by reason of the insolvency of the party or parties liable, or for other cause), and that any property, if any, pledged or mortgaged as security is insufficient to satisfy the it.²

The next section provides an example of a GRAT annuity payment valuation analysis. This illustrative valuation analysis applies the discounted cash flow valuation method.

REMAINING GRAT ANNUITY PAYMENTS—VALUATION EXAMPLE

In a GRAT annuity payment analysis, the analyst may evaluate the subject GRAT by projecting the cash flow of the subject GRAT as stipulated by the subject GRAT agreement and then applying the required market yield.

Terms and Conditions of the Subject GRAT

The first procedure in the analysis of remaining GRAT annuity payments is typically a review of the terms and conditions of the subject GRAT.

During the review of the subject GRAT agreement, the analyst may determine the following:

1. The date of formation (when the GRAT was funded)
2. The date of the first annuity payment
3. The termination date
4. The annuity payment calculation/formula
5. The assets contributed to the trust

In the instance that the assets contributed to the GRAT are not publicly traded, the analyst may need to estimate the fair market value of the assets as of the date of formation. Additionally, the analyst may need to estimate the value the GRAT assets as of

the valuation date for the annuity payment stream analysis.

This example assumes that the assets contributed to the GRAT are 10,000 shares of ABC Company Inc. and that the shares have been appraised at \$500 per share. Therefore, the fair market value of the contributed assets is \$5 million as of the formation date.

The subject GRAT agreement includes terms that are summarized in Exhibit 1 below.

Exhibit 1 Illustrative Terms of the Subject GRAT

Initial Funded Amount	\$5,000,000
Date of Formation	3/31/2017
Date of First Annuity Payment	3/31/2018
Initial Annuity Payout Percentage	8.45%
Annual Increase in Yield	20.00%
Termination Date	3/31/2024

According to the hypothetical subject GRAT agreement, the annuity amount consists of seven payments, the first payment equal to 8.45 percent of the initial fair market value of the property transferred to the GRAT.

The initial annuity amount will increase by 20 percent in each succeeding year of the subject GRAT term.

The annuity amount is to be paid annually on the day preceding each anniversary of the subject GRAT.

Based on this information, one can project the annual annuity payments. The projected annuity payment schedule is presented in Exhibit 2.

Exhibit 2 Subject GRAT Annuity Payment Schedule

Payment Date	Annual Annuity Payout	Total Annuity Payment (\$)
3/31/2018	8.45%	422,500
3/31/2019	10.14%	507,000
3/31/2020	12.17%	608,400
3/31/2021	14.60%	730,080
3/31/2022	17.52%	876,096
3/31/2023	21.03%	1,051,315
3/31/2024	25.23%	1,261,578
		5,456,969

After the analyst has reviewed the subject GRAT agreement and projected the future GRAT annuity payments, the next procedure is to determine the appropriate present value discount rate to apply to the future GRAT annuity payments.

Selecting the Appropriate Present Value Discount Rate

In order to estimate the appropriate present value discount rate for future GRAT annuity payments, the analyst may analyze the risks associated with the subject GRAT. Generally, in a valuation of any payment stream or cash flow, the riskier the cash flow, the greater the present value discount rate.

The analyst may consider the following risk factors pertaining to future GRAT annuity payments:

1. Duration
2. Quality of the underlying assets
3. Coverage covenants (e.g., interest rate, debt service, asset coverage)

The analyst may also consider market indicators and market factors associated with the GRAT, including the following:

1. The risk-free rate
2. Individual debt yields
3. Industry outlook
4. Economic outlook

Additional factors may need to be considered depending on the complexity of the assignment.

In a GRAT annuity payment analysis, the risk analysis of the underlying GRAT assets is especially important. The subject GRAT is susceptible to risks associated with the volatility of the underlying assets.

If the underlying assets do not outperform the Section 7520 federal applicable rate, the grantor (1) will receive back the trust property and (2) will not receive the estate tax benefits associated with the GRAT.

Section 7520 Federal Midterm Rate Analysis

Since the Section 7520 federal midterm rate is the “hurdle rate” for the GRAT to be successful, the analyst may consider the Section 7520 federal midterm rate when estimating the fair market value of the remaining annuity payments of the GRAT.

Let’s assume that as of March 31, 2021, an analyst is engaged to estimate the value of the remaining annuity payments of the GRAT described in

Exhibits 1 and 2. The analyst may elect to estimate the present value of the annuity payments by discounting the future annuity payments by the March 2021 federal midterm rate.

The present value of the remaining annuity payments, after applying the March 2021 federal 7520 midterm rate of 0.74 percent,³ is presented in Exhibit 3.

After discounting the remaining annuity payments by the Section 7520 federal midterm rate of 0.74 percent, the present value of the GRAT annuity payments is approximately \$3.87 million, indicating a total discount of approximately 1.3 percent.

Although the Section 7520 federal midterm rate provides the minimum required return of the GRAT assets, it is a formula rate that does not consider the specific risks attributable to the subject GRAT annuity payments.

Let’s assume you are offered the opportunity to purchase a stream of GRAT annuity payments. GRAT A is funded with \$1 million of Coca-Cola Company publicly traded stock. GRAT B is funded with \$1 million of stock for a privately owned dial-up Internet service business.

If the underlying GRAT assets do not outperform the federal Section 7520 midterm rate, the GRAT will fail and you will not receive all of the GRAT annuity payments.

Which GRAT annuity payment stream would you rather purchase? A better question may be, how much of a discount would be required for you to select GRAT B over GRAT A?

This scenario is intended to illustrate that not every annuity payment stream is equal. Therefore, the analyst may consider a market-based yield analysis in order to determine the appropriate discount rate for a stream of GRAT annuity payments.

Market-Based Yield Analysis

In addition to applying the Section 7520 federal midterm rate, the analyst may also consider market-based yields to maturity that reflect the risks associated with the remaining annuity payments of the subject GRAT. The analyst may consider various market sources for applicable market yield data.

The analyst may consider comparable corporate bonds, comparable corporate bond indexes, Treasury bonds, interest rates of comparable debt securities, and other comparable securities.

If the analyst elects to utilize a bond or bond index as a risk proxy, then the analyst should determine what comparable publicly traded bond or bond index best represents the risk associated with the remaining annuity payments.

In order to determine which bond grade is the most comparable to the risk associated with the remaining GRAT annuity payments, the analyst may consider reviewing a bond rating scale. Standard & Poor's ("S&P") provides a bond rating scale,⁴ which can assist the analyst for selecting a comparable bond rating.

S&P broadly defines the investment-grade bond ratings as follows:⁵

- "AAA" – An obligator has extremely strong capacity to meet its financial commitments.
- "AA+ or AA-" – An obligator has very strong capacity to meet its financial commitments.
- "A+ or A-" – An obligator has strong capacity to meet its financial commitments but is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions.
- "BBB+ or BBB-" – An obligator has adequate capacity to meet its financial commitments. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligator to meet its financial commitments.

S&P broadly defines the sub-investment-grade bond ratings benchmarked in our analysis as follows:⁶

- "BB+ or BB-" – An obligator is less vulnerable in the near term than other lower-rated obligors. However, it faces major ongoing uncertainties and exposure to adverse business, financial, or economic conditions which could lead to the obligor's inadequate capacity to meet its financial commitments.
- "B+" – An obligator is more vulnerable than the obligors rated 'BB+ or -', but the obligor currently has the capacity to meet its financial commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.
- "B" – An obligator is more vulnerable than the obligors rated 'B+', but the obligors currently has the capacity to meet its financial

Exhibit 3 Present Value of the Subject GRAT Annuity Payments Section 7520 Federal Midterm Rate

Payment Date	Annual Annuity Payout	Total Annuity Payment (\$)	Selected Market Yield	Present Value Factor	Present Value of Cash Flow (\$)
3/31/2021	14.60%	730,080	0.74%	1.0000	730,080
3/31/2022	17.52%	876,096	0.74%	0.9927	869,661
3/31/2023	21.03%	1,051,315	0.74%	0.9854	1,035,927
3/31/2024	25.23%	1,261,578	0.74%	0.9781	1,233,956
		3,919,069			3,869,623

commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.

- "B-" – An obligator is more vulnerable than the obligors rated 'B', but the obligors currently has the capacity to meet its financial commitments. Adverse business, financial, or economic conditions will likely impair the obligor's capacity or willingness to meet its financial commitments.
- "CCC" – An obligator is currently vulnerable, and is dependent upon favorable business, financial, and economic conditions to meet its financial commitments.
- "CC" – An obligator is currently highly vulnerable. The 'CC' rating is used when default has not yet occurred, but S&P Global Ratings expects default to be a virtual certainty, regardless of the anticipated time to default.
- "C" – An obligator is currently highly vulnerable and is expected to have lower chances of recovery than higher rated obligations.
- "D" – An obligator rated D is in default or in breach of an imputed promise.

After selecting the most appropriate bond rating to utilize as a risk proxy for the GRAT annuity payments, the analyst also considers the term to maturity. If the GRAT is anticipated to terminate (along with the annuity payments) in four years, then a 20-year bond yield may not be the most appropriate proxy.

Going back to the previous GRAT example from Exhibits 2 and 3, let's compare the difference in applying a market-based yield versus the Section 7520 midterm rate.

Assume that the GRAT and its underlying assets were carefully analyzed, and the analyst determines that the risk of the GRAT annuity payments is comparable to holding a high-quality corporate bond (AAA, AA, and A).

In this case, the analyst may decide to limit the screen to bonds and bond indexes that are rated AAA, AA, or A. Based on the four remaining years of GRAT payments, as presented in Exhibit 2, the analyst may decide to select a bond or bond index with a comparable term. In this case, the five-year Federal Reserve Bank of St. Louis (“FRED”) High Quality Corporate Bond Spot Rate may be a reasonable proxy.

As of March 31, 2021, the five-year FRED High Quality Corporate Bond Spot Rate is 1.33 percent. Exhibit 3 presents the present value of the remaining subject GRAT annuity payments by applying the 1.33 percent present value discount rate.

After discounting the remaining annuity payments by the five-year FRED High Quality Corporate Bond Spot Rate of 1.33 percent, the total present value of cash flow is approximately \$3.83 million, indicating a total discount of approximately 2.2 percent.

Because of today’s historically low interest rates, the discount rates applied to the GRAT annuity payment examples in Exhibits 3 and 4 are much lower than the discount rates that may have been applied to these annuity streams two to three years ago. To illustrate this difference, Exhibit 5 compares the differences of applying various market yields.

SUMMARY AND CONCLUSION

Analysts may be engaged to estimate the present value of future annuity payments (or specifically GRAT annuity payments). The valuation should consider (1) the terms and conditions of the subject annuity payments and (2) the volatility and risk associated with the underlying assets of the trust.

Exhibit 5 Discount Rate Sensitivity Analysis

Selected Market Yield	Present Value of Cash Flow (\$)
1.33%	3,831,082
3.00%	3,726,053
5.00%	3,610,000
10.00%	3,340,000

An analyst may evaluate the future annuity payments of a GRAT by:

1. projecting the cash flow of the subject GRAT as stipulated by the subject GRAT agreement and then
2. applying the required market yield. As discussed, there are various sources and proxies for determining the appropriate market yield rate (i.e., discount rate) to apply to projected annuity payments.

Clients should confer with trust and estate counsel regarding the strategy of implementing a GRAT. If the grantor elects to contribute privately held assets to the GRAT, the grantor should engage an analyst to estimate the fair market value of the underlying GRAT assets.

Notes:

1. Internal Revenue Code Sections 2036 and 2039
2. Internal Revenue Code Section 25.2512-4.
3. <https://www.irs.gov/businesses/small-businesses-self-employed/section-7520-interest-rates>
4. <https://www.spglobal.com/ratings/en/about/intro-to-credit-ratings>
5. Ibid.
6. Ibid.

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Exhibit 4 Present Value of the Subject GRAT Annuity Payments 5-Year FRED High Quality Corporate Bond Spot Rate

Payment Date	Annuity Payout	Annuity Payment (\$)	Market Yield	Value Factor	Present Value of Cash Flow (\$)
3/31/2021	14.60%	730,080	1.33%	1.0000	730,080
3/31/2022	17.52%	876,096	1.33%	0.9869	864,597
3/31/2023	21.03%	1,051,315	1.33%	0.9739	1,023,898
3/31/2024	25.23%	1,261,578	1.33%	0.9611	1,212,507
		3,919,069			3,831,082