BERNSTEIN

The Path from GRAT to Great:

Efficient Wealth Transfer with Grantor Retained Annuity Trusts

For wealthy families, the estate tax can loom large. Even with recent favorable changes to the law, many families may need to transfer wealth during their lifetimes to mitigate estate taxes. While grantor retained annuity trusts (GRATs) represent just one of many wealth transfer strategies, their scalability and flexibility make them a very powerful tool.

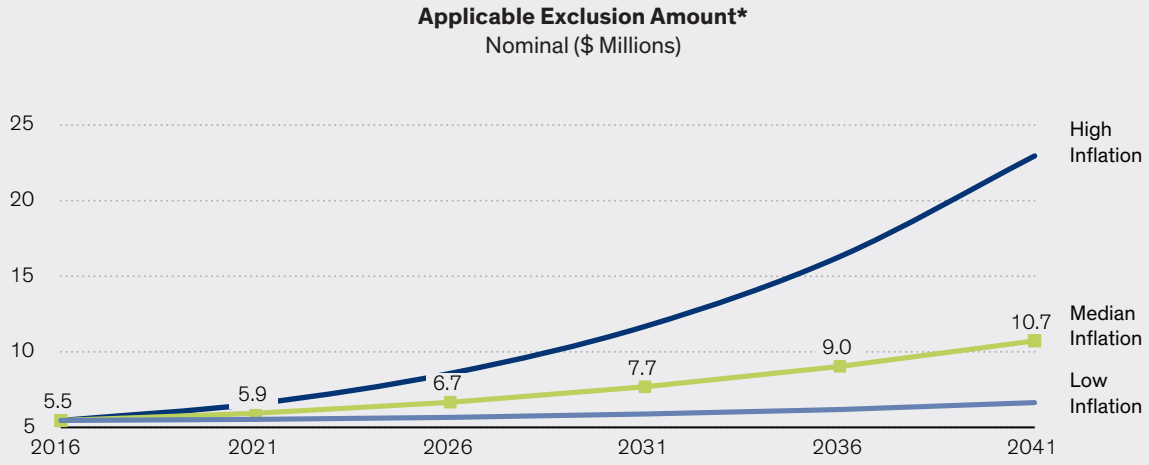
The rules governing GRATs are dictated by law.[1] However, key design decisions, both at inception ***and*** during administration, heavily influence their potential effectiveness. Each choice has an associated financial impact, and some choices are more significant than others. By understanding the economic trade-offs behind these key decisions, planners and wealthy families can take this strategy from "GRAT to great."

THE ESTATE TAX LANDSCAPE

The American Taxpayer Relief Act of 2012 (ATRA)[2] eliminated the need for federal estate tax planning for the overwhelming majority of US taxpayers by making permanent the $5 million applicable exclusion and indexing it for inflation.

The benefit of inflation indexing cannot be overstated. For 2016, the exclusion stands at $5.45 million per individual. Over the next 25 years, we expect the exclusion to grow to $10.7 million in a typical inflationary environment (*Display 1*). Based on these forecasts, a couple currently in their early sixties may have a combined exclusion of $21.4 million when they reach their late eighties. If inflation trends higher than expected, the exclusion could be even greater.

DISPLAY 1: PROJECTED EFFECT OF INFLATION ON APPLICABLE EXCLUSION



**Based on increases in inflation, rounded to the nearest $10,000. Applicable exclusion amount shown is for an individual, based upon 10th ("High"), 50th ("Median"), and 90th ("Low") percentile outcomes for the inflation-adjusted applicable exclusion amount.*
Based on Bernstein's estimates of the range of returns for the applicable capital markets as of December 31, 2015. Data do not represent past performance and are not a promise of actual future results or a range of future results. See Notes on Wealth Forecasting System at the end of this paper for additional information.
Source: AB

Clients should establish a GRAT only after consultation with estate planning attorneys and accountants and as part of an overall estate plan.

[1]*See § 2702 of the Internal Revenue Code of 1986, as amended ("Code"), and the Treasury regulations ("Treas. Reg.") thereunder.*
[2]*Pub. L. 112-240 (January 2, 2013)*

ESTATE PLANNING STILL MATTERS

Despite inflation indexing, certain families will still need advanced estate and gift tax planning:

- Those where the value of their estate at death is likely to exceed the applicable exclusion (or the amount of applicable exclusion they have remaining);
- Those who want to make lifetime gifts while still preserving the exclusion until death for income tax purposes (to secure a tax-free step-up in cost basis); and
- Those where state estate tax may motivate planning for additional wealth transfer.[3]

These families may benefit from an estate planning strategy that (1) transfers assets free of gift or estate tax, (2) freezes or reduces the value of their estate, and (3) preserves as much applicable exclusion as possible. When planned effectively, a GRAT strategy can accomplish all three of these objectives.

A GRAT strategy can help address a number of estate planning goals.

WHAT'S A GRAT?

A GRAT is a trust to which the grantor contributes assets but retains the right to receive fixed annuity payments for a specified number of years.[4]

- When the value of assets contributed to the GRAT equals the present value of the future stream of annuity payments, the remainder interest has a value of zero, and the GRAT is said to be "zeroed-out" for transfer tax purposes.[5] In a zeroed-out GRAT, there is no taxable gift at inception.
- During the annuity term, the grantor is the deemed owner of the GRAT for income tax purposes.[6] This feature is important because (1) the grantor must pay income taxes generated by the GRAT assets (usually out of his own pocket), enabling the GRAT assets to grow unencumbered; and (2) future transactions between the GRAT and the grantor are ignored for income tax purposes.[7]
- If the grantor survives the annuity term, funds remaining in the GRAT pass to the beneficiaries directly or in trust, without gift or estate tax.[8]
- However, if the grantor dies prior to the expiration of the annuity term, a portion or all of the trust assets will be included in the grantor's estate for estate tax purposes.[9]

[3]Sixteen states and the District of Columbia had an estate or inheritance tax that applied to transfers at death to lineal descendants as of December 2015.
[4]If the annuity interest is a "qualified interest" within the meaning of the Code, then the present value of that interest, discounted at the Section 7520 rate, is subtracted from the value of the initial contribution to the trust to determine the amount of any taxable gift.
[5]Some estate planners design GRATs so that the present value of the remainder interest at inception is very small, but greater than zero. Such a design allows the grantor to report the GRAT contribution on a gift tax return, which in turn causes the statute of limitations to run, limiting the amount of time that the Internal Revenue Service (IRS) has to audit the gift. In this paper, we refer to these GRATs as "zeroed-out," despite the fact that they are actually designed to have a remainder value slightly greater than zero.
[6]The so-called "grantor trust rules" are found in Code §§ 671–679; the grantor's retained interest in income generated by the GRAT causes the grantor to be deemed to own the GRAT assets for income tax purposes pursuant to Code § 677(a)(1). When that retained income interest ceases at the end of the annuity term, the grantor will no longer be deemed to own the trust assets for those purposes, unless another provision of the grantor trust rules is used to continue that deemed ownership.
[7]See Rev. Rul. 85-13, 1985-1 C.B. 184.
[8]Although any wealth transferred should avoid both gift and estate tax, generation-skipping transfer (GST) tax may apply if the beneficiaries are "skip persons," such as the grantor's grandchildren. The GST exemption, which can be used to avoid the GST tax, cannot be applied to a GRAT until the end of the annuity term. See Code § 2642(f).
[9]See Code §§ 2033, 2036; Treas. Reg. § 20.2036-1(c)(2).

GRATS IN ACTION

As an example of how this works, say a grantor transfers $100 to a zeroed-out GRAT and retains the right to receive a fixed payment each year during the annuity term, which can be as short as two years.[10] Those annuity payments are calculated based on the Section 7520 rate, which itself is based on mid-term US Treasury yields. As a result, the minimum required return for a successful zeroed-out GRAT is often lower than the expected return of many other asset classes. While virtually any asset can be contributed to a GRAT, our analysis focuses primarily on stocks, which have a strong likelihood of outperforming the Section 7520 rate over time.

What makes a GRAT great? Successfully navigating key trade-offs.

In this example, if the trust were established when the Section 7520 rate was 2.0%, two equal payments of $51.50 would be adequate to zero-out the GRAT. Assume the trust invested in an asset that returned exactly 8% each year. The $100 contribution would grow to $108 at the end of the first year, and $56.50 would remain after the first annuity payment. That $56.50 would earn another 8% in the second year, and after paying the annuity, $9.52 would be left for beneficiaries—almost 10% of the original contribution, transferred completely free of gift or estate tax!

While this example may seem simple, there is complexity in practice. Markets don't move in a straight line. Returns vary over time, and although the compound return over the full annuity term may exceed the Section 7520 rate, the *path* of that return may greatly influence the success or failure of the GRAT.

RETURN PATTERNS IMPACT OUTCOMES

Estate planning software often fails to consider the variability of the path of returns when designing a strategy, but our research shows that it matters a lot.

Continuing the above example, what if instead of an 8% return each year for two years, the assets in the GRAT made money in one year and lost money in the other? *Display 2* shows two return paths, both compounding annually at the same 8% return. However, Path A is up 28.5% in Year 1 and down 9.2% in Year 2, while Path B produces identical returns in reverse order. As you can see, the path of returns has a significant impact on the GRAT remainder.

DISPLAY 2: PATH MATTERS—SAME RETURN, DIFFERENT OUTCOME

Year	Path A	Path B
1	28.5%	(9.2)%
2	(9.2)%	28.5%
Compound Return	8.0%	8.0%
GRAT Remainder	$18.41	$0.00

Source: AB

This is the crux of the GRAT challenge: Not only does the compound return need to outperform the Section 7520 rate, but that return needs to occur in a pattern that actually transfers wealth.

BERNSTEIN'S "GRAT TO GREAT" FRAMEWORK

Planners face many choices when setting up a GRAT strategy. We can help quantify the trade-offs—and their impact on GRAT success—with a proven framework that addresses the key variables:

- **Goal:** How much money does the grantor want to transfer?
- **Size:** How much should the grantor contribute to the strategy?
- **Term:** How long should the GRAT last?
- **Structure:** How should the annuity payments be structured and disbursed?

[10]A fixed-term GRAT must be instituted "for a specified term of years" [see Treas. Reg. § 25.2702-3(d)(4)], which most practitioners interpret to require an annuity term of at least two years. There have been legislative proposals to lengthen this term.

- **Allocation:** What investments should the GRAT hold? Should that investment mix change over time? How should such changes be implemented?
- **Remainder:** Should the remainder beneficiary be a trust or one or more individuals? If a trust, should the grantor continue to bear the burden of future income taxes (often referred to as an "intentionally defective grantor trust" or "IDGT"), or should that burden shift to the trust and its beneficiaries after the annuity term?
- **Maintenance:** Should the grantor pay the GRAT's expenses? What about managing the portfolio through a limited liability company?

HOW MUCH TO TRANSFER?

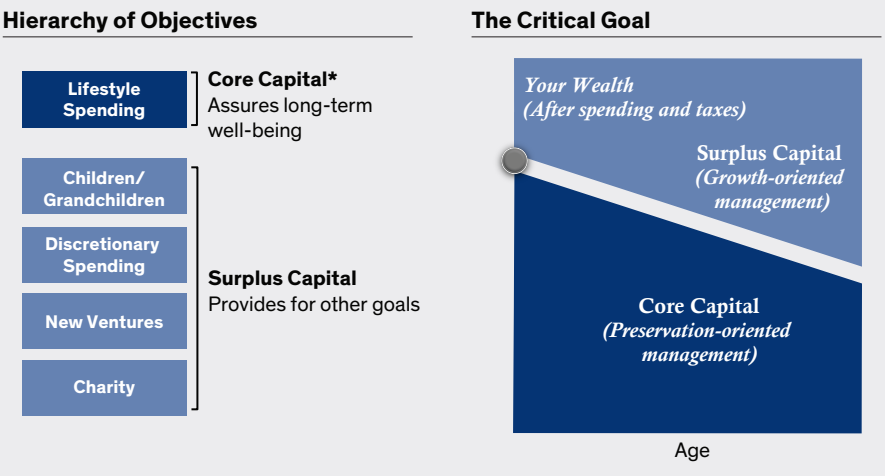
Determining the size of the trust represents one of the most fundamental questions in designing a GRAT strategy. Because a GRAT transfers only growth, not principal, a grantor may be willing to commit much more wealth to a GRAT than to a direct gift in which she retains no interest. But before determining a precise commitment, we must first understand how the GRAT economics interact with maintenance of the grantor's cash flow needs.

We advise our clients to set aside an amount of wealth that will support lifetime spending needs, indexed for inflation, with a very high degree of confidence. We call this amount "core capital." To calculate core capital, we start with a client's desired spending level and the amount of investment risk she is willing to assume. Then, using our proprietary Wealth Forecasting System, we solve for the amount of wealth that will sustain inflation-adjusted spending with high confidence even if market returns are poor, inflation exceeds expectations, or the client lives a very long time.

The amount to commit to a GRAT depends on the grantor's lifestyle.

Over time, the amount of core capital needed declines, because as people age, the required pool of wealth has fewer years of additional spending to support (*Display 3*). Any excess above the core amount may be considered "surplus capital"—an amount the grantor can give away, irrevocably, without impacting her lifestyle.

DISPLAY 3: CORE CAPITAL—A DISCIPLINED, RESEARCH-BASED FRAMEWORK



**The amount needed to support your lifestyle as long as you live*
Source: AB

SIZE MATTERS—OR DOES IT?

A grantor *can* contribute as much (or as little) to a GRAT as he wants. But remember that the grantor is entitled to the principal plus the Section 7520 rate as an annuity payment. In other words, he's not removing the contributed assets from his balance sheet forever. Thus, a GRAT can be funded with a combination of core *and surplus* capital, because even surplus capital contributed to the trust will be returned, subject to investment risk. We simply need to ensure that the GRAT strategy will not adversely impact the grantor's lifestyle—or if it might, that there is an "exit strategy" to ensure that the grantor's financial security will not be impaired.

In sizing the initial contribution, it's important to recognize the trade-offs that the grantor accepts: (1) forgoing excess return above the Section 7520 rate; (2) paying income taxes with respect to all of the assets during the annuity term; and (3) bearing all losses that the portfolio incurs. The longer the annuity term of the GRAT, the greater the potential risks to the grantor's financial security. It is imperative that these risks are quantified and understood by the grantor before any GRAT strategy is implemented. Using our deep expertise in dimensioning risk, we can help.

THE IMPACT OF CURRENT MARKET CONDITIONS

When designing a GRAT strategy, keep in mind that current capital-market conditions play a role. Future return paths may impact the grantor's core and surplus assets, as well as the potential success—or failure—of the GRAT itself.

For instance, Treasury bond yields hover near historic lows today, so new GRATs enjoy an unusually low Section 7520 rate, 1.8% as of June 2016. Meanwhile, the equity risk premium—which is the additional return investors seek for taking on stock risk—is now higher than normal. Low bond yields and relatively higher forecasts for equity returns make this environment especially attractive for funding a GRAT strategy with stocks.

While planners should always consider prevailing conditions before embarking on a wealth transfer strategy, the analysis can be complex. Through our sophisticated modeling, we can determine which key GRAT decisions are heavily influenced by today's conditions and which decisions are not as dependent on the current environment.

TERM: LONG, SHORT, OR A COMBINATION?

Once the amount to be contributed to the GRAT strategy has been established, the right term structure can raise the odds of success. Because stock markets tend to perform well over time, a zeroed-out long-term GRAT invested in equities has a higher likelihood of success (i.e., having a remainder value of at least one dollar). For that reason, some practitioners advocate locking in today's low Section 7520 rate with a long-term GRAT.

However, such a GRAT will experience only one long path of returns. What would happen if the last year of a good capital-market run ends in a significant downturn (or worse, what if the downturn happens in the first year, virtually ensuring the GRAT will fail)? Early years weigh more heavily on a GRAT's overall performance, because a larger pool of assets experiences that early-year return while much of the GRAT's annuity liabilities lie ahead.

(continued on page 9)

Bernstein's Wealth Forecasting System℠ Is Uniquely Able to Help

Our proprietary analytical model, the Bernstein Wealth Forecasting System, helps determine core capital by producing a probability-based distribution of outcomes. To do so, this robust tool uses a Monte Carlo model that simulates 10,000 plausible paths of return for each asset class plus inflation. Rather than draw randomly from a set of historical returns to produce estimates for the future, the model's forecasts:

(1) are based on the building blocks of returns, such as inflation, yields, yield spreads, corporate earnings, and price multiples;

(2) incorporate the linkages that exist among the returns of various asset classes;

(3) take into account current market conditions at the beginning of the analysis; and

(4) factor in a reasonable degree of randomness and unpredictability.

Using the Annuity to Increase Chance of Success

Practitioners have a variety of options when seeking to optimize a GRAT. For instance, Treasury regulations allow GRAT annuity payments to increase by up to 20% each year,[11] but does that improve GRAT efficiency? Since stocks tend to appreciate over time, an increasing annuity should help a long-term GRAT because more wealth remains in the strategy over time. In the short-term rolling strategy, however, the amount of wealth committed to the strategy is designed to stay static for the term because each annuity payment is rolled into a new GRAT. Thus, increasing the annuities in each two-year GRAT does not have much impact. In fact, it may be less efficient.

An increasing annuity may help certain GRATs transfer more wealth.

Let's return to our simple example of a GRAT initially funded with $100, but instead of two payments of $51.50, assume that the first payment is $46.86 and the second payment is 20% higher, $56.24. Looking again at our two volatile paths that produce a compound 8% return, we see that with an increasing annuity both Path A and Path B transfer wealth. However, the magnitude of Path A's "win" is slightly lower than in the case of the level-annuity GRAT, while Path B produces a very modest remainder (*Display 4*).

What's happening here? Reducing the first-year payout dampens the impact of volatility on the remainder value. Over multiple short-term GRATs, this results in less impressive "wins" and fewer devastating "losses."

DISPLAY 4: INCREASING ANNUITY, INCREASING BENEFIT?

Year	Path A	Path B
1	28.5%	(9.2)%
2	(9.2)%	28.5%
Compound Return	8.0%	8.0%
GRAT Remainder		
Level	$18.41	$0.00
Increasing	$17.89	$0.22

Source: AB

While reducing volatility is generally regarded as desirable in investing, zeroed-out short-term GRATs have a unique feature that sets them apart: Families benefit from a GRAT win, but are not punished for a loss. When a GRAT fails economically, all the money gets returned to the grantor, who absorbs the loss without additional tax or other penalty.

However, investments that fail economically in the short term often recover quickly—as we frequently see with stocks—which represents an opportunity for the grantor. If she can contribute a greater amount at a low valuation to the next short-term, zeroed-out GRAT in the series, she can favorably exploit positive bursts of volatility that the capital markets experience from time to time.

Increasing annuity payments by 20% somewhat undermines the effects of that positive volatility and thus detracts from the effectiveness of the rolling strategy.

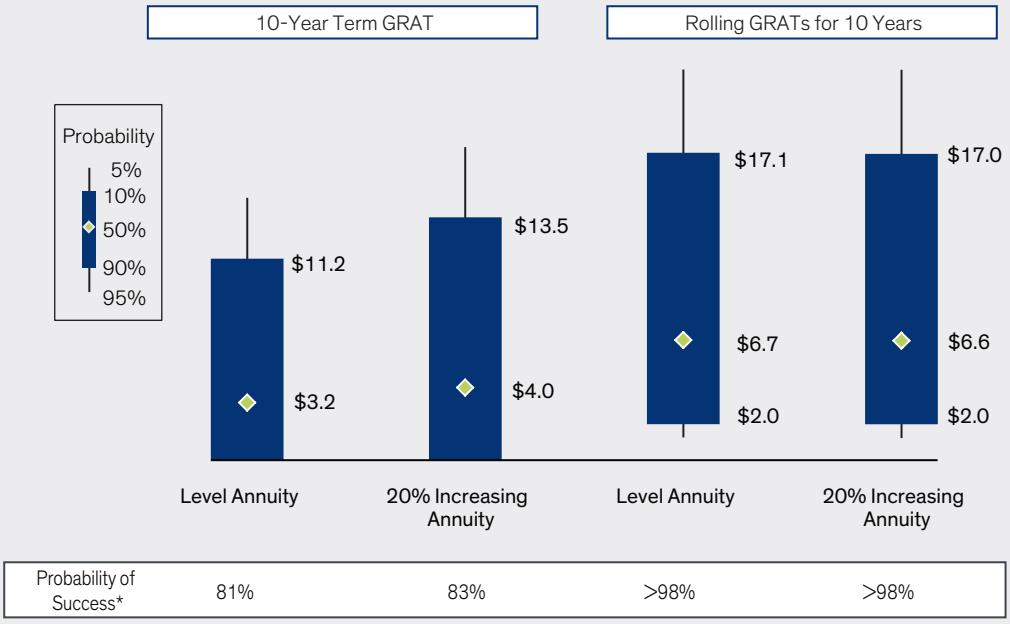
Display 5, next page, shows the results of increasing the annuity amounts over a 10-year horizon.

[11] *See Treas. Reg. § 25.2702-3(b)(1)(ii)(A).*

Using the Annuity to Increase Chance of Success

DISPLAY 5: INCREASING ANNUITY PAYMENTS ONLY HELPS LONG-TERM GRATS

Range of Remainder Value—Year 10
$10 Million GRAT Strategy
$ Millions, Real



Probability of Success*	81%	83%	>98%	>98%

**The probability of success is the probability that the GRAT remainder will be larger than the IRS expected (i.e., larger than the implied gift grown at the Section 7520 rate until the end of the term). If the implied gift is zero, then the probability of success is the probability that the GRAT remainder is greater than zero. Based on Bernstein's estimates of the range of returns for the applicable capital markets over the next 10 years. All GRATs are zeroed-out using an initial Section 7520 rate of 1.8%. GRATs funded after the first year of the analysis are zeroed-out using Bernstein's projection of the Section 7520 rate at that time. Assumes an investment allocation of 100% globally diversified equities for all GRATs.*

Data do not represent past performance and are not a promise of actual future results or a range of future results. Asset values represent the estimated market value; if the assets were liquidated, additional capital gains or losses would be realized that are not reflected here. See Notes on Wealth Forecasting System at the end of this paper for additional information.

Source: AB

Given that severe downturns are difficult to predict, we often recommend a series of shorter-term (usually two-year) GRATs. In this "rolling" GRAT structure, the grantor receives an annuity payment each year and starts a new two-year GRAT with those assets (*Display 6*). A series of short-term rolling GRATs offers a much higher probability of success than a single long-term GRAT, because the series offers the grantor more opportunities to find a fruitful path of returns above the Section 7520 rate over a given time horizon. While any one GRAT might succeed or fail, there's a better chance that at least some of the two-year GRATs will succeed.

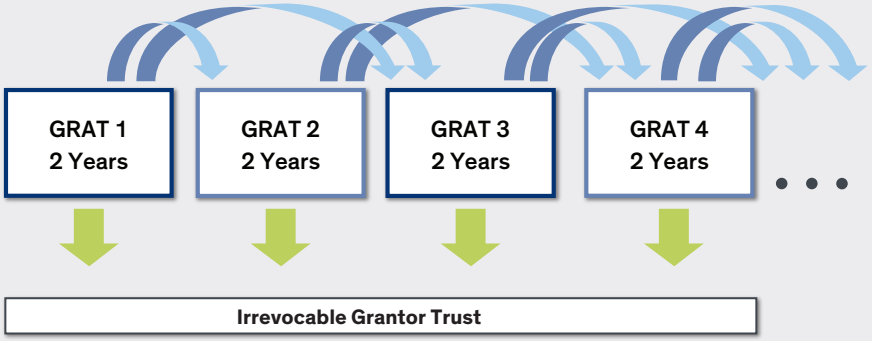
Consider 1999 to 2008, the worst 10-year period ever for US stocks, as measured by the S&P 500 Index. This period had some poor early returns (from 2000 to 2002) and terrible returns at the end (in 2008). A long-term GRAT established at the beginning of this period would have failed (*Display 7a, next page*). However, because this 10-year period included several years of positive returns, a series of short-term GRATs initiated in 1999 would have succeeded.

The rolling GRAT strategy works in this example because it breaks the dismal 10-year horizon into a series of nine two-year paths. Only five out of the nine rolling GRATs in this illustration succeed, but that's enough to transfer $3.6 million to the next generation from an initial contribution of $10 million (*Display 7b, next page*).

There's one additional benefit to a short-term rolling GRAT strategy: It minimizes mortality risk. The longer the annuity term, the greater the risk that the grantor will die during that period, resulting in estate tax inclusion. By breaking up a single long-term GRAT into two-year chunks, the rolling GRAT strategy shortens each horizon that the grantor needs to survive, thus muting the risk of mortality.

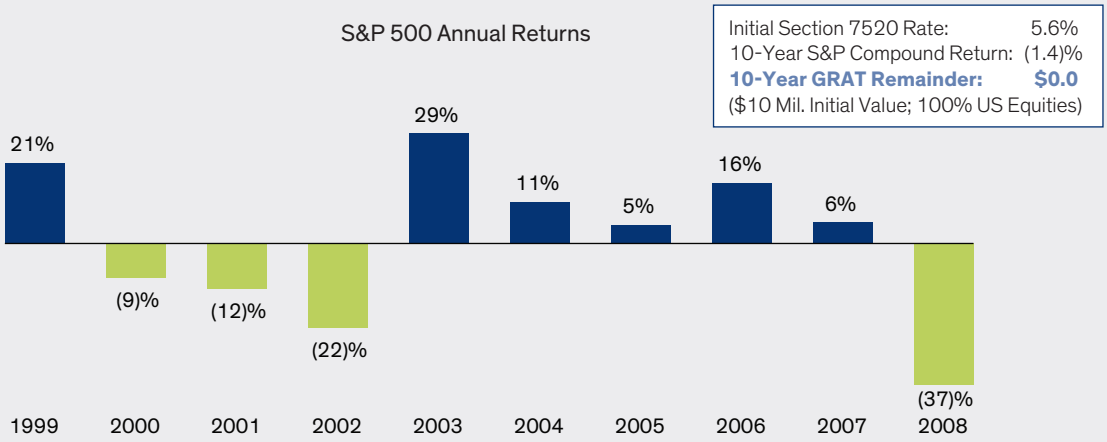
DISPLAY 6: SHORT-TERM ROLLING GRATS

- Contribute initial assets to a two-year trust
- Annual payout is contributed to a new two-year GRAT every year
- Any assets remaining in a GRAT at the end of its term pass tax-free to a grantor trust for the children*



**Assuming the GRAT is zeroed-out so that the present value of the annuity stream, discounted by the Section 7520 rate, equals the original contribution, and assuming the grantor survives the term of the GRAT*
Source: AB

DISPLAY 7a: A SINGLE LONG-TERM GRAT MAY NOT WORK IN A POOR MARKET



Past performance is no guarantee of future results. *10-year GRAT assumed to begin January 1, 1999*
Source: IRS, Standard & Poor's, and AB

DISPLAY 7b: ROLLING GRATS—EVEN A FEW GOOD YEARS ARE ENOUGH

Two-Year GRATs
$10 Million Initial Value; 100% US Equities

	99–00	00–01	01–02	02–03	03–04	04–05	05–06	06–07	07–08
Section 7520 Rate	5.6%	7.4%	6.8%	5.4%	4.2%	4.2%	4.6%	5.4%	5.6%
S&P Compound Two-Year Return	4.9%	(10.5)%	(17.2)%	0.1%	19.5%	7.8%	10.2%	10.5%	(18.5)%
GRAT Remainder ($ Millions)	$0.6	—	—	—	$1.7	$0.4	$0.3	$0.6	—

Two-Year Rolling GRATs Cumulative Remainder: $3.6 Million

Past performance is no guarantee of future results. *Analysis assumes each new GRAT begins in January of the year stated.*
Source: IRS, Standard & Poor's, and AB

TESTING THE ROLLING STRATEGY

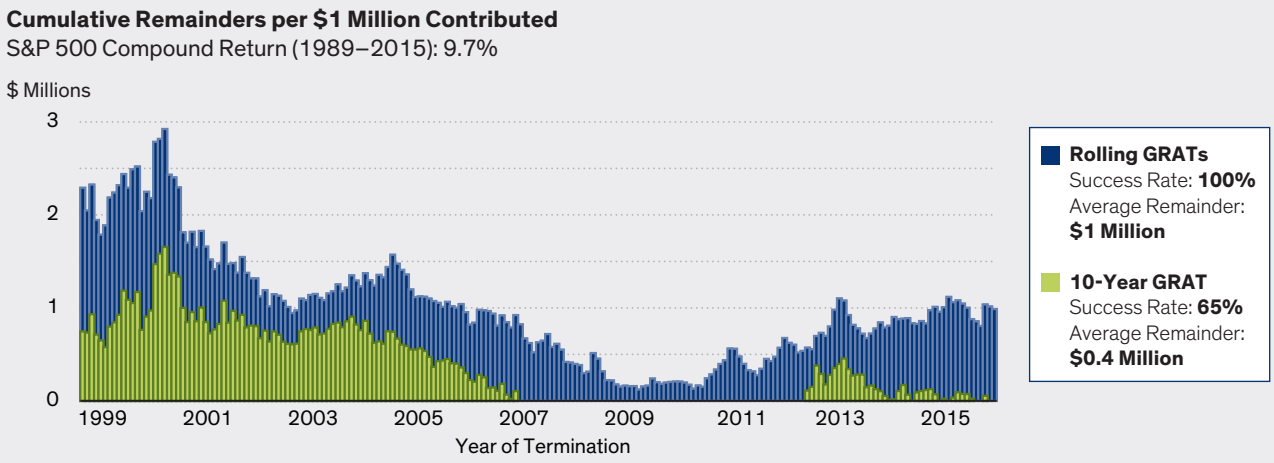
To ensure that the tech bubble of 2000 to 2002 and the financial crisis of 2008 did not just produce an anomalous decade, we looked at rolling 10-year periods over a longer horizon: from May 1989 through December 2015, which happens to be the full history of the Section 7520 rate. A series of zeroed-out, two-year rolling GRATs created at the beginning of any month during this period and systematically funded with US stocks received as annuities over 10 years would have transferred wealth *every time*. Meanwhile, only 65% of single 10-year term GRATs commenced each month during this period would have been successful (*Display 8*).

We recognize that this 25-year-plus horizon represents a period of declining interest rates, which may have given the rolling strategy an edge, as each new GRAT in the series could be incepted at a lower Section 7520 rate than its single 10-year counterpart. To account for this potential bias, we looked back even further to the 60-year period beginning in 1956[12] (*Display 9, next page*).

This period includes an extended period of rising interest rates, from January 1956 through September 1983. When we compare the cumulative wealth transferred for each 10-year period, again commencing monthly, we see that rolling GRATs transferred wealth every time, while a single 10-year GRAT transferred wealth in just over half of all such periods.

Why does the rolling strategy work well regardless of interest-rate trends? Well, all else equal, the path of stock market returns over the annuity term is *the* single determinant of a GRAT's success or failure. Although stock market returns are difficult to predict, the more opportunities that a strategy has to deliver returns that exceed the Section 7520 rate—whatever

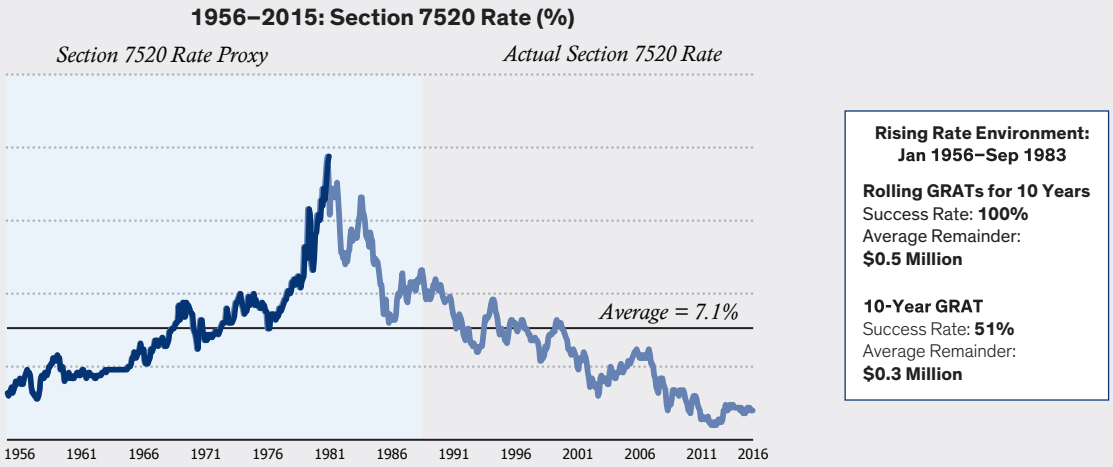
DISPLAY 8: AS RATES TRENDED LOWER, ROLLING GRATS CREATED MORE WEALTH



Past performance is no guarantee of future results. *Reflects the cumulative wealth transferred for each 10-year period between May 1989 and December 2015 for a two-year term rolling GRAT strategy in which remainder values are reinvested in a grantor trust, and a 10-year term GRAT with annuity payments increasing by 20% each year.*
Source: IRS, Standard & Poor's, and AB

[12]*Code § 7520 did not become applicable until May 1989, so we created a proxy for prior months based on the IRS's methodology for computing the Section 7520 rate and historical Treasury bond yields.*

DISPLAY 9: EXPANDED HISTORY OF THE SECTION 7520 RATE



Past performance is no guarantee of future results. *Reflects the cumulative wealth transferred for each 10-year period between January 1956 and September 1983 (214 rolling periods) for a two-year term rolling GRAT strategy in which remainder values are reinvested in a grantor trust, and a 10-year term GRAT with annuity payments increasing by 20% each year.*
Actual monthly Section 7520 rate from May 1989 through December 2015 and using a proxy based on IRS methodology for the Section 7520 rate for January 1956 through April 1989
Source: IRS, Standard & Poor's, and AB

that rate is—the more successful that strategy will be. It takes only a handful of wins over time to produce a successful rolling GRAT strategy; the key is to maximize the opportunity for success. Rolling GRATs create more paths of return, and thus more opportunities for the grantor to transfer wealth.[13]

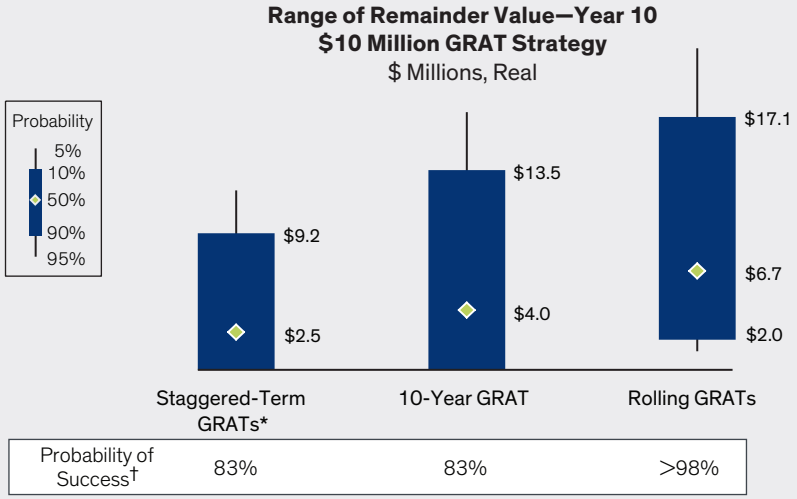
It rarely pays to stagger the terms on multiple GRATs.

IS STAGGERING WORTHWHILE?

What could cause a rolling GRAT strategy to fail? The biggest risk may be legislative. In recent years, Congress has considered legislation that would (1) outlaw zeroed-out GRATs, requiring that the present value of the remainder interest, at inception, equal some percentage—say 25%—of the initial contribution; and (2) mandate a minimum annuity term of 10 years for each GRAT established after the proposal becomes law. Either of these provisions, if adopted, would "kill" the effectiveness of short-term rolling GRATs. Faced with this legislative risk, is it more advantageous to "grandfather" a series of staggered-term GRATs (e.g., simultaneously set up GRATs that have annuity terms of two, four, six, and eight years) and divide the initial contributions among those trusts?

[13] *Is it fair to compare a series of two-year rolling GRATs to a single long-term GRAT? After all, assets originally committed to rolling GRATs remain fully invested in the strategy for 10 years, while the single-GRAT strategy "leaks" assets back to the grantor and out of the strategy over time. One way to address this issue analytically would be to invest the first annuity from the 10-year GRAT into a new nine-year GRAT, the second annuity from the 10-year GRAT and the first from the nine-year GRAT into a new eight-year GRAT, and so on, so that all the money stays invested in the strategy. Although this methodology arguably creates a fairer comparison, it would be administratively burdensome—at its peak, eight separate GRATs would exist—and would do nothing to mute the mortality risk of the single 10-year GRAT. A more practical alternative would compare a rolling GRAT strategy with an installment sale to an IDGT that requires annual interest installments with a balloon principal payment at maturity. Previously published Bernstein research made this comparison and concluded that, at least for a portfolio of marketable stocks, the rolling GRAT strategy is more efficient as a wealth transfer vehicle.*

DISPLAY 10: ROLLING GRATS ARE EVEN PROJECTED TO OUTPERFORM STAGGERED-TERM GRATS



**Consists of a two-, four-, six-, eight-, and 10-year term GRAT, with each GRAT funded in equal amounts and zeroed-out assuming annuity payments increase by 20% per year; remainder beneficiary is an IDGT.*
†The probability of success is the probability that the GRAT remainder will be larger than the IRS expected (i.e., larger than the implied gift grown at the Section 7520 rate until the end of the term). If the implied gift is zero, then the probability of success is the probability that the GRAT remainder is greater than zero.
Based on Bernstein's estimates of the range of returns for the applicable capital markets over the next 10 years. All GRATs are zeroed-out using an initial Section 7520 rate of 1.8%. GRATs funded after the first year of the analysis are zeroed-out using Bernstein's projection of the Section 7520 rate at that time. Assumes an investment allocation of 100% globally diversified equities for all GRATs.
Data do not represent past performance and are not a promise of actual future results or a range of future results. Asset values represent the estimated market value; if the assets were liquidated, additional capital gains or losses would be realized that are not reflected here. See Notes on Wealth Forecasting System at the end of this paper for additional information.
Source: AB

Our analysis suggests no. We compared a series of staggered-term GRATs with a single long-term GRAT and found that the probability of successfully transferring wealth over the time period was equal (*Display 10*). That's because every one of the staggered-term GRATs experiences the same path of return as the longer-term GRAT over the first few years. Since the paths are not diversified, a downturn in the capital markets during the early years would impact ***all*** GRATs in the strategy equally, assuming that they had similar asset allocations. In short, staggered-term GRATs don't efficiently address the issue.[14]

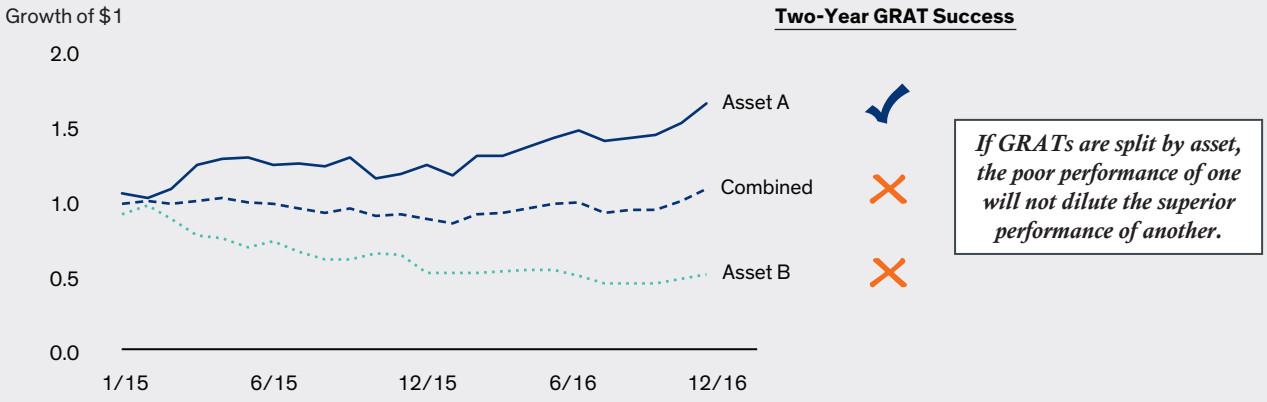
ALLOCATION: A KEY CONSIDERATION

Determining an appropriate investment mix represents another key part of the "GRAT to great" framework. Zeroed-out GRATs can confer "wins" to beneficiaries free of transfer tax only if the returns earned over the annuity term exceed the Section 7520 rate. Given that the rate remains stable for the GRAT's term, the trustee's task is to choose an asset allocation that is likely to outperform that hurdle.[15]

To ensure alignment between the wealth transfer goals and the grantor's financial safety, we often start with the grantor's existing asset allocation and look to fund the GRAT strategy from assets with the highest return potential over the annuity term. For a series of short-term GRATs, this often means choosing stocks, which tend to produce high returns with high volatility. A concentrated position in a single stock tends to be even more volatile than the overall stock market; because short-term rolling

[14]A more interesting approach to legislative risk in a low-rate environment might be to contribute most of the assets to the first of a series of two-year rolling GRATs, but allocate a portion to a longer-term strategy. That alternate strategy could be a long-term GRAT, an installment sale to an IDGT, or even a charitable lead annuity trust (CLAT). Using such a bifurcated approach arguably provides a more effective hedge against future legislative change than staggered terms.
[15]In a GRAT strategy, the grantor bears all the risk of a market decline, so allocation of the grantor's retained assets must account for his giving up returns in excess of the Section 7520 rate while retaining substantial risk.

DISPLAY 11: ASSET SPLITTING TO HARNESS UPSIDE OF VOLATILITY



This illustration is not meant to be indicative of any specific assets.
Source: AB

GRATs exploit volatility, these concentrated positions can be attractive candidates for contribution.

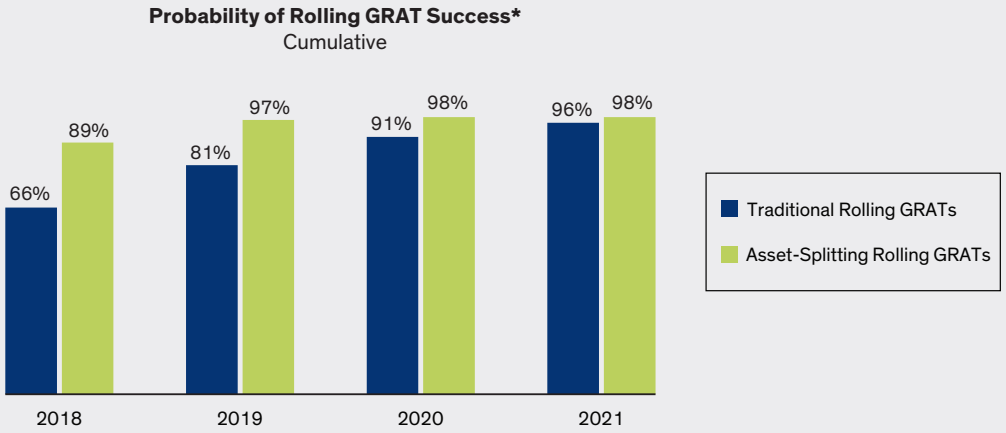
Further, it may be advantageous to contribute different kinds of stocks to separate GRATs. Different classes of stocks don't always move in tandem. For example, in some years, US stocks may outperform international and emerging-market stocks. Similarly, small-cap stocks may outperform the larger companies in the S&P 500. Creating a separate GRAT for various kinds of stocks creates more potential paths of return—and thus a greater opportunity that a particular GRAT may outperform the Section 7520 rate.

Consider the three portfolios depicted above (*Display 11*); each has its own path of return. A diversified portfolio combining Assets A and B may struggle to beat the Section 7520 rate, but when the two assets are split into separate GRATs, the GRAT funded with Asset A may succeed, while the GRAT funded with Asset B might fail. Since GRAT "wins" are rewarded and "losses" disregarded, the asset-splitting strategy would transfer wealth even though one GRAT succeeded and the other failed.

Our analysis demonstrates that such "asset splitting" improves the odds that a zeroed-out, short-term rolling GRAT strategy will transfer wealth in the first two years and increase the amount of wealth transferred over time (*Displays 12 and 13*). But in most cases, the amount of additional wealth that can be transferred with asset splitting is not materially greater over longer horizons. The most compelling cases for asset splitting are (1) when the grantor is older or in poor health, because the need for "quick wins" is heightened; and (2) when the grantor has a concentrated position in one or more stocks, because segregating those positions is likely to produce substantially better results than saddling a diversified portfolio with the "risk drag" that often accompanies a concentrated position.

Asset allocation is important from the very start, but inception is not the only time when the trustee should evaluate the investment mix in a GRAT. Our research shows that if a two-year GRAT's return lags the Section 7520 rate in the first year, the likelihood of that GRAT succeeding drops dramatically: from about 70% if the first-year return equals or exceeds the Section 7520 rate, to only 38% if the GRAT return lags.

DISPLAY 12: ASSET SPLITTING INCREASES PROBABILITY OF SUCCESS



**The probability of success is the probability that the GRAT remainder will be larger than the IRS expected (i.e., larger than the implied gift grown at the Section 7520 rate until the end of the term). If the implied gift is zero, then the probability of success is the probability that the GRAT remainder is greater than zero.*
Based on Bernstein's estimates of the range of returns for the applicable capital markets. All GRATs are zeroed-out using an initial Section 7520 rate of 1.8%. GRATs funded after the first year of the analysis are zeroed-out using Bernstein's projection of the Section 7520 rate at that time. Assumes an investment allocation of 100% globally diversified equities for all GRATs.
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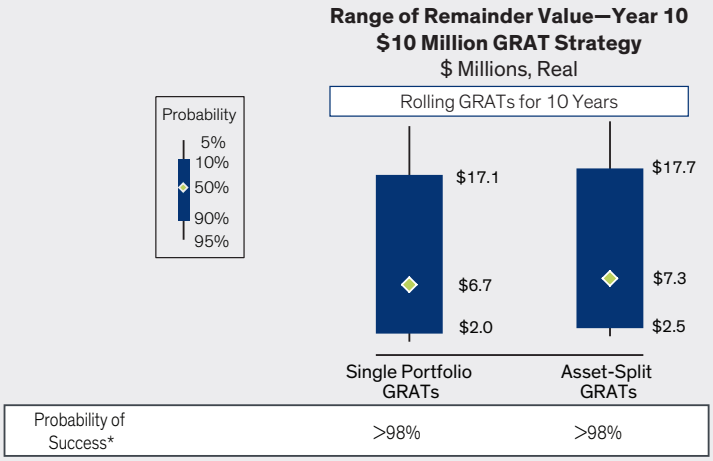
Source: AB

DISPLAY 13: ASSET SPLITTING CAN ENHANCE WEALTH TRANSFER



**The probability of success is the probability that the GRAT remainder will be larger than the IRS expected (i.e., larger than the implied gift grown at the Section 7520 rate until the end of the term). If the implied gift is zero, then the probability of success is the probability that the GRAT remainder is greater than zero.*
Based on Bernstein's estimates of the range of returns for the applicable capital markets over the next 10 years. All GRATs are zeroed-out using an initial Section 7520 rate of 1.8%. GRATs funded after the first year of the analysis are zeroed-out using Bernstein's projection of the Section 7520 rate at that time. Assumes an investment allocation of 100% globally diversified equities for all GRATs.
Data do not represent past performance and are not a promise of actual future results or a range of future results. Asset values represent the estimated market value; if the assets were liquidated, additional capital gains or losses would be realized that are not reflected here. See Notes on Wealth Forecasting System at the end of this paper for additional information.
Source: AB

After a bad first year, the trustee may be able to increase the probability of future success by reallocating to something less volatile, such as cash or bonds, and redirecting the "risk budget" to a fresh GRAT. This reallocation can be implemented by selling securities, but such a sale may trigger taxable capital gains. In addition, the grantor may not have stocks on hand to fund the fresh GRAT. However, many GRAT instruments provide the grantor with another mechanism to reallocate assets between the GRAT and her personal portfolio; this mechanism is often referred to as the "power of substitution."[16]

When used appropriately, substitution can be particularly effective.

BY THE POWER OF SUBSTITUTION: THE GRANTOR'S WEAPON AGAINST INCOME TAXES

Many GRAT documents allow the grantor, acting in a nonfiduciary capacity, to replace assets in the GRAT with other assets of equivalent value. This clause is included primarily to ensure that the grantor will be treated as the "deemed owner" of the GRAT's assets for income tax purposes, but its inclusion in the document may have important collateral benefits:

Basis Management

The power of substitution can be used to manage income tax basis. If low-basis assets initially funded the GRAT, the power of substitution may be exercised before the end of the annuity term to exchange cash or bonds held by the grantor for the low-basis assets held in the GRAT. This (1) ensures that the remainder beneficiaries do not "inherit" low-basis assets and (2) allows for a "step-up" of the low-basis assets if retained by the grantor until death.

Immunization

The power of substitution also provides a tax-efficient way to "immunize" a GRAT that has underperformed. If a GRAT is clearly failing, the grantor can reacquire the GRAT's assets by substituting cash or bonds of equivalent value.[17] The grantor can then use the recovered assets to establish a new GRAT, which provides a fresh path of future returns. This type of asset substitution allows the grantor to press the reset button—albeit at a lower equity value and subject to a new Section 7520 rate, but with potentially more opportunity for success. Assessing the potential benefits of immunizing an underperforming GRAT can be complex—and represents another area where Bernstein can help.

In practice, this strategy was particularly effective after the financial crisis of 2008. GRATs that were immunized at the bottom of the market in March 2009 transferred significant wealth over the next two years. Our research shows that when a two-year GRAT lags the Section 7520 rate in the first year, systematically immunizing that GRAT and starting a new two-year GRAT with the recovered stocks can maximize wealth transfer over time.[18]

AND IN THE END: REMAINDERS

To build upon the success of any GRAT strategy, it may be advisable for the GRAT remainder to be retained in an IDGT, rather than distributed directly to the remainder beneficiaries or retained in a taxable trust for their benefit. As deemed owner of the IDGT's assets for income tax purposes, the grantor—not the trust or its beneficiaries—must pay the trust's income taxes. Compounding GRAT successes for many years free of

[16]Code § 675(4)(C) provides that the grantor is deemed to own any portion of a trust over which there is a power of administration, exercisable by anyone in a nonfiduciary capacity, without the approval or consent of any person acting in a fiduciary capacity, "to reacquire trust corpus by substituting other property of an equivalent value." The IRS has ruled that such a power of substitution will not cause the trust assets to be includable in the estate of the deemed owner upon his death (Rev. Rul. 2008-22, 2008-16, I.R.B. 796). Note that the power of substitution is not necessary to create a grantor trust; if another so-called grantor power were used, the grantor presumably could still enter into a negotiated agreement with the trustee to reacquire trust assets for fair market value—without triggering any taxable gain. The difference between the two approaches? The power of substitution may be exercised by the grantor unilaterally, whereas any other grantor power would necessitate a purchase-and-sale agreement between the grantor and the trustee.

[17]There is considerable debate among practitioners about whether the grantor may use a promissory note, rather than cash or bonds, to immunize a GRAT. The Treasury regulations prohibit a trustee from issuing a note or other debt instrument to satisfy an annuity payment [see Treas. Reg. § 25.2702-3(d)(6)(i)], but are silent on the use of a note issued by the grantor to reacquire trust property. Out of (perhaps) an abundance of caution, some practitioners counsel against the use of a note to reacquire assets from a GRAT, even though that strategy is not expressly addressed by the regulations.

[18]Similarly, a trustee may want to "lock in" the success of a GRAT that has outperformed. Here, instead of immunizing the entire GRAT, the trustee generally should reacquire only the amount of stock necessary to make the remaining annuity payments, so that the remainder beneficiaries' eventual "share" of the trust can benefit from any additional stock appreciation. Ideally, the grantor would contribute the reacquired stocks to a new two-year GRAT, so that the strategy can continue apace.

income tax can multiply the wealth transfer benefits substantially. Further, the grantor can engage in asset substitutions and other strategies with the IDGT to maximize future returns and preserve income tax basis—all without having those transactions being treated as taxable sales between the grantor and the trust.

To account for the possibility that the grantor's continuing obligation to pay income taxes on behalf of the IDGT and its beneficiaries may become too burdensome, a mechanism can be included in the trust instrument to "turn off" that obligation in the future, as circumstances dictate.

Without proper administration, a GRAT's design can be undermined.

MAINTENANCE AND ADMINISTRATION OF GRATS

Proper administration is essential to a successful GRAT strategy. As previously discussed, administration involves monitoring the GRAT to ensure that its assets are appropriately invested. Moreover, prudent administration entails properly accounting for expenses and periodically reviewing the asset mix to determine whether a reallocation is warranted, whether by substitution or otherwise.

PAYMENT OF EXPENSES

Once a GRAT is established, further contributions cannot be made.[19] But what would happen if a grantor were to pay certain expenses on behalf of the GRAT? For example, could the grantor pay the trust's investment management fees and deduct those costs against the trust's taxable income? Unfortunately, any expense that the grantor pays on behalf of a GRAT during the annuity term would likely be treated as an impermissible additional contribution to the trust. As a result, the GRAT, not the grantor, must pay all proper expenses incurred with respect to administration, including investment management and legal fees.[20]

LLC FOR ADMINISTRATION, NOT FOR DISCOUNTS

Managing a portfolio through a business entity such as a limited liability company (LLC) may facilitate more efficient administration when a grantor establishes and maintains multiple GRATs. Rather than "tearing apart" a carefully constructed portfolio and allocating the assets among several GRATs, each portfolio may be managed within a single LLC. Ownership interests in that LLC—rather than portfolio assets—may be allocated among the grantor, the GRATs, and the remainder beneficiaries as the economics of the strategy require. Structuring the investments in this manner is less disruptive, can achieve economies of scale, and provides an easier means of paying annuities and GRAT "wins" to the appropriate constituents.

Note that the LLC's primary purpose is to facilitate smooth administration of a multiple-GRAT strategy, not to generate valuation discounts. Those discounts do not typically improve the economic performance of a short-term rolling GRAT strategy all that much because the bulk of each annuity must be paid using discounted LLC units. Although a valuation discount may reduce the estate tax liability if the grantor were to die during the annuity term, that benefit must be weighed against the dollar-for-dollar loss of a basis step-up and the increased risk of audit—the IRS hates valuation discounts. Today, many families are forgoing valuation discounts and using one or more LLCs simply to facilitate the efficient administration of GRATs and other lifetime wealth transfer strategies.

CONCLUSION

GRATs—especially short-term rolling GRATs—represent a powerful and flexible tool used by wealthy families to transfer assets. But to truly optimize the wealth transfer efficiency, planners need to have a detailed understanding of how the GRAT structure will interact with the grantor's other goals and overall estate plan. Bernstein's analysis can help families and their estate planning team with the initial design as well as the ongoing maintenance of the strategy. Working together, we believe our insights can take the strategy from "GRAT to great." ■

[19] *See Treas. Reg. § 25.2702-3(b)(5).*

[20] *The grantor may, however, pay fees that are properly allocable to her, such as the cost of any appraisal that may be required in connection with filing a gift tax return.*

NOTES ON WEALTH FORECASTING SYSTEM

1. **Purpose and Description of Wealth Forecasting System℠** Bernstein's Wealth Forecasting System is designed to assist investors in making their long-term investment decisions as to their allocation of investments among categories of financial assets. Our planning tool consists of a four-step process: (1) Client-Profile Input: the client's asset allocation, income, expenses, cash withdrawals, tax rate, risk-tolerance level, goals, and other factors; (2) Client Scenarios: in effect, questions the client would like our guidance on, which may touch on issues such as when to retire, what his/her cash-flow stream is likely to be, whether his/her portfolio can beat inflation long-term, and how different asset allocations might impact his/her long-term security; (3) The Capital Markets Engine: our proprietary model that uses our research and historical data to create a vast range of hypothetical market returns, which takes into account the linkages within and among the capital markets, as well as their unpredictability; and finally (4) A Probability Distribution of Outcomes: Based on the assets invested pursuant to the stated asset allocation, 90% of the estimated ranges of probable returns and asset values the client could experience are represented within the range established by the 5th and 95th percentiles on "box-and-whiskers" graphs. However, outcomes outside this range are expected to occur 10% of the time; thus, the range does not guarantee results or establish the boundaries for all outcomes. Estimated market returns on bonds are derived taking into account yield and other criteria. An important assumption is that stocks will, over time, outperform long bonds by a reasonable amount, although this is in no way a certainty. Moreover, actual future results may not meet Bernstein's estimates of the range of market returns, as these results are subject to a variety of economic, market, and other variables. Accordingly, the analysis should not be construed as a promise of actual future results, the actual range of future results, or the actual probability that these results will be realized. The information provided here is not intended for public use or distribution beyond our private meeting. Of course, no investment strategy or allocation can eliminate risk or guarantee returns.
2. **Rebalancing** Another important planning assumption is how the asset allocation varies over time. We attempt to model how the portfolio would actually be managed. Cash flows and cash generated from portfolio turnover are used to maintain the selected asset allocation between cash, bonds, stocks, REITs, and hedge funds over the period of the analysis. Where this is not sufficient, an optimization program is run to trade off the mismatch between the actual allocation and targets against the cost of trading to rebalance. In general, the portfolio is expected to be maintained reasonably close to the target allocation. In addition, in later years, there may be contention between the total relationship's allocation and those of the separate portfolios. For example, suppose an investor (in the top marginal federal tax bracket) begins with an asset mix consisting entirely of municipal bonds in his/her personal portfolio and entirely of stocks in his/her retirement portfolio. If personal assets are spent, the mix between stocks and bonds will diverge from targets. We put primary weight on maintaining the overall allocation near target, which may result in an allocation to taxable bonds in the retirement portfolio as the personal assets decrease in value relative to the retirement portfolio's value.
3. **Expenses and Spending Plans (Withdrawals)** All results are generally shown after applicable taxes and after anticipated withdrawals and/or additions, unless otherwise noted. Liquidations may result in realized gains or losses, which will have capital gains tax implications.
4. **Modeled Asset Classes** The following assets or indexes were used in this analysis to represent the various model classes:

Asset Class	Modeled as:	Annual Turnover
Cash Equivalents	Three-Month Treasury Bills	100%
US Diversified	S&P 500 Index	15%
US Value	S&P/Barra Value Index	15%
US Growth	S&P/Barra Growth Index	15%
US Low Volatility Equity	MSCI US Minimum Volatility Index	15%
Developed International	MSCI EAFE Index (Unhedged)	15%
Emerging Markets	MSCI Emerging Markets Index	20%
US Small-/Mid-Cap	Russell 2500 Index	15%
High-Risk International	Country Fund	15%

5. **Volatility** Volatility is a measure of dispersion of expected returns around the average. The greater the volatility, the more likely it is that returns in any one period will be substantially above or below the expected result. The volatility for each asset class used in this analysis is listed in the Capital-Market Projections section at the end of these Notes. In general, two-thirds of the returns will be within one standard deviation. For example, assuming that stocks are expected to return 8.0% on a compounded basis and the volatility of returns on stocks is 17.0%, in any one year it is likely that two-thirds of the projected returns will be between (8.9)% and 28.8%. With intermediate government bonds, if the expected compound return is assumed to be 5.0% and the volatility is assumed to be 6.0%, two-thirds of the outcomes will

typically be between (1.1)% and 11.5%. Bernstein's forecast of volatility is based on historical data and incorporates Bernstein's judgment that the volatility of fixed income assets is different for different time periods.

6. **Technical Assumptions** Bernstein's Wealth Forecasting System is based on a number of technical assumptions regarding the future behavior of financial markets. Bernstein's Capital Markets Engine is the module responsible for creating simulations of returns in the capital markets. These simulations are based on inputs that summarize the current condition of the capital markets as of December 31, 2015. Therefore, the first 12-month period of simulated returns represents the period from December 31, 2015, through December 31, 2016, and not necessarily the calendar year of 2016. A description of these technical assumptions is available on request.
7. **Tax Implications** Before making any asset allocation decisions, an investor should review with his/her tax advisor the tax liabilities incurred by the different investment alternatives presented herein, including any capital gains that would be incurred as a result of liquidating all or part of his/her portfolio, retirement-plan distributions, investments in municipal or taxable bonds, etc. Bernstein does not provide tax, legal, or accounting advice. In considering this material, you should discuss your individual circumstances with professionals in those areas before making any decisions.
8. **Tax Rates** Bernstein's Wealth Forecasting System has used various assumptions for the income tax rates of investors discussed in this paper. The federal income tax rate is Bernstein's estimate of either the top marginal tax bracket or an "average" rate calculated based upon the marginal rate schedule. For 2016 and beyond, the maximum federal tax rate on investment income is 43.4%, and the maximum federal long-term capital-gains tax rate is 23.8%. Federal tax rates are blended with applicable state tax rates by including, among other things, federal deductions for state income and capital-gains taxes. The state tax rate generally represents Bernstein's estimate of the top marginal rate, if applicable.
9. **Capital-Market Projections**

	Median 10-Year Growth Rate	Mean Annual Return	Mean Annual Income	One-Year Volatility	10-Year Annual Equivalent Volatility
Cash Equivalents	1.6%	1.8%	1.8%	0.3%	3.6%
US Diversified	6.0%	7.5%	2.4%	16.3%	15.2%
US Value	6.4%	7.8%	2.9%	16.0%	15.0%
US Growth	5.6%	7.4%	1.9%	18.1%	16.7%
US Small-/Mid-Cap	6.4%	8.3%	2.0%	18.7%	17.7%
US Low Volatility Equity	6.3%	7.3%	3.6%	14.2%	13.7%
Developed International	7.3%	9.2%	3.4%	18.1%	16.8%
Emerging Markets	5.6%	9.3%	3.1%	26.1%	25.6%
High-Risk International	7.5%	10.3%	2.2%	22.0%	21.0%
Inflation	2.1%	2.4%	n/a	1.1%	5.5%

	Median 25-Year Growth Rate	Mean Annual Return	Mean Annual Income	One-Year Volatility	25-Year Annual Equivalent Volatility
Inflation	2.7%	3.1%	n/a	1.3%	10.5%

Based on 10,000 simulated trials each consisting of 10-year and 25-year periods. Reflects Bernstein's estimates and the capital-market conditions of December 30, 2015.
Data do not represent past performance and are not a promise of actual future results or a range of future results.

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