Section 529 College Savings Plans: Are They Really for Everyone?*

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College savings plans are among the hottest new tax and financial planning ideas to come along in years. Innumerable articles extol their virtues, but are they right for everyone? After providing some background information, this article points out a potential opportunity cost of using the plans and identifies a significant group of taxpayers who would probably be better off if they did not use a section 529 plan to pay tuition costs.

Basics of Section 529 Plans

Almost every state now has a section 529 College Savings Plan. These plans make it easier for families to accumulate funds to finance college education.

Generally, there are two types of section 529 plans—prepaid educational arrangements and educational savings accounts. Under a pre-paid educational arrangement, a specified current contribution purchases a specific amount of future tuition—for example, 12 credit hours. In effect, a parent can pay future tuition at today's prices. Under the latter type of plan, a donor makes contributions to a higher education account. While the contributions do not guarantee payment of any given quantity of education, the contributed funds grow tax free. This article focuses on educational savings accounts and refers to them as section 529 plans.

How Section 529 Plans Operate

A donor, usually a parent or grandparent, contributes cash to a section 529 plan account to pay the educational expenses of a designated beneficiary, typi-

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cally a child or grandchild. The contribution is invested according to the terms of the specific state plan chosen. Although all state plans provide the same tax-free accumulation, each has its own special rules with respect to contribution limits, annual fees, withdrawal policies, deductibility for state income tax purposes, and permissible participants. In addition, each state makes available different investment alternatives. When the beneficiary is ready to go to college, the funds in the account may be used to pay the beneficiary's tuition and certain other college expenses. Eligible expenses include tuition, fees, books, supplies, equipment and room and board.

Section 529 plans could be thought of as providing income tax benefits similar to those of a Roth IRA. After-tax dollars are contributed to the plan with no tax consequences at the time of the contribution. The funds then grow on a tax-free basis. No tax is paid as the assets grow inside the plan and no tax is paid when plan funds are distributed to pay higher education expenses. Many states augment these federal income tax advantages with income tax breaks of their own. Most of them exempt earnings on the plan assets from state income tax for qualified withdrawals, and some even allow state income tax deductions for contributions.

To What Extent Should a Taxpayer Use a Section 529 Plan?

Answering this question requires distinguishing between taxpayers who have possible transfer tax exposure and those who do not. For the latter group, the analysis is quite simple.

Taxpayer with No Transfer Tax Exposure

The effect of the tax-free growth is to significantly increase the rate of return on assets invested to pay for future college tuition. This can produce a large economic benefit, as shown in the following example.

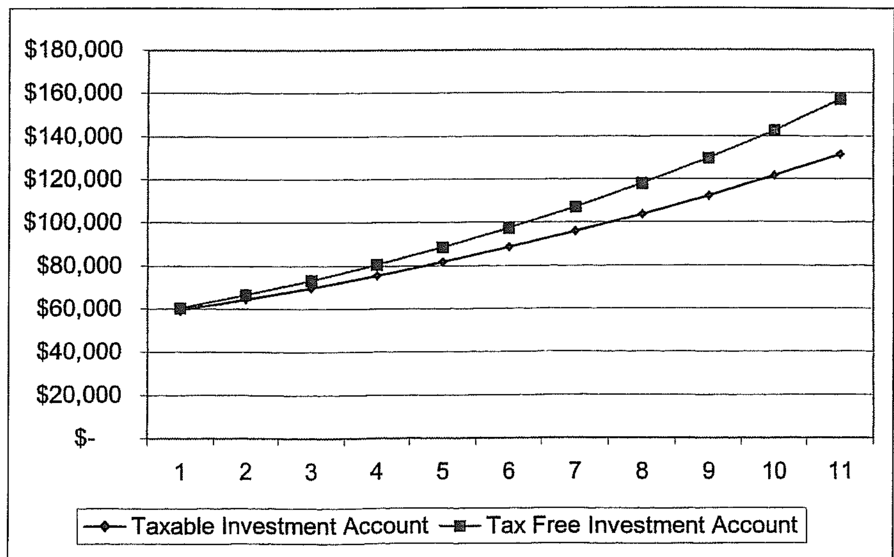
Example 1. Assume the following facts:

- Total return on taxpayer's portfolio is 10%
- 7.5% appreciation
- 2.5% dividends
- Actively-managed portfolio with 50% of capital gain recognized each year
- Capital gains tax rate of 20%
- Ordinary income tax marginal rate of 40%
- Time horizon of 11 years
- Amount invested of $55,000

For every dollar invested, the taxpayer will have 7.5 cents of appreciation and 2.5 cents of dividend income. The tax payable on the 7.5 cents of capital gain will be $0.075 x .20 x .50 = $0.0075, or 0.75 cents on the dollar. The tax payable on the ordinary income will be $0.025 x .40 = 0.10 cents on the dollar. The total tax paid will be 1.75 cents on the dollar. This tax payable will reduce the total return on the investment from 10 cents on the dollar, or 10 percent, to 8.25 cents on the dollar, or 8.25 percent.

Assuming a 10-percent rate of return, the $55,000 invested will grow to $156,921. At the 8.25 percent after-tax rate of return, the $55,000 invested will grow to only $131,544, or $25,377 less. The benefit of tax-free compounding is illustrated in Figure 1.

Figure 1
Tax Free Compounding



Taxpayers with Transfer Tax Concerns

For a taxpayer with estate tax concerns, the choice is not so simple. While the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) (P.L. 107-16) repeals the estate tax, it is not at all clear whether the repeal will ever go into effect. A sunset provision in the Act provides that, unless a future Congress acts to continue repeal, the pre-EGTRRA transfer

tax system will be reinstated in 2011. *See* EGTRRA section 901. The conventional wisdom seems to be that sometime before 2011 a compromise will be struck under which the transfer tax system will continue, but with increased exemption amounts and lower marginal rates. Given current deficits and the fact that there will be four new Congresses and at least one new president before 2011, taxpayers with large estates are well advised to continue with tax motivated estate planning.

One of the most basic, most effective estate planning strategies is to make maximum use of section 2503. Section 2503(b) currently provides an $11,000 per year, per donee exclusion. The amount increases to $22,000 if the donor's spouse joins in making gifts. Over a period of time, section 2503(b) can be used to transfer very large amounts tax-free. For example, if a donor transfers $11,000 per year to a child for 20 years and the growth rate on the assets transferred is eight percent, the child will have $503,382 at the end of the 20-year period. Assuming a 50 percent transfer tax rate, the tax savings as of that date would be $251,691.

Section 2503(e) allows additional tax-free transfers. It provides that, if a taxpayer makes tuition (or medical) payments for an individual, that payment is not treated as a transfer by gift. There is no transfer for gift tax purposes at all—no payment of gift tax, no use of applicable exclusion amount, not even any use of annual exclusion amount. Thus, section 2503(e) allows for tax-free transfers in a given year in addition to the annual exclusion amount granted under section 2503(b).

Taking advantage of a section 529 plan changes the use a taxpayer can make of section 2503 in three ways. One is favorable and the other two unfavorable. The favorable change is that a section 529 plan allows the donor to accelerate future annual exclusion amounts into the current year. Instead of transferring $11,000 per year, the taxpayer can transfer $55,000 in the first year, although by doing so uses up the annual exclusions for the current year and the next four years. This "borrowing" has a very favorable effect because money can be transferred to the college savings account earlier, giving it a longer period to grow and to benefit from tax-free compounding. It also allows the donor to remove more appreciation from the gross estate because the amounts transferred early accumulate in the hands of the beneficiary rather than in the hands of the donor.

One of the unfavorable changes is that, by using annual exclusions to transfer money to a section 529 plan, the taxpayer loses the ability to leverage those annual exclusions by making transfers of discounted assets. These discounted assets would typically be family limited partnership (FLP) units and the amount of the discount might range from 15 percent to 55 percent. The other unfavorable change is that the taxpayer effectively loses the ability to use section 2503(e) to make gift tax-free transfers of tuition when the beneficiary enrolls in college. Thus, using a section 529 plan produces both important benefits and important opportunity costs for the taxpayer with transfer tax concerns.

Figure 2 summarizes the economic tradeoffs.

Figure 2

	529 Plan	2503(e) Strategy
Tax-Free Growth	Yes	No
Acceleration of Annual Exclusion	Yes	No
Use of 2503(e)	No	Yes
Discounted Gifts Available	No	Yes

Running the Numbers

The first step in quantifying the benefits of the section 529 strategy and the section 2503(e) strategy is to be clear on what is being compared. Both could be thought of as strategies to maximize the amount transferred tax-free to the beneficiary, measured as of the date the beneficiary makes his or her last tuition payment. In both cases, the taxpayer has the use of annual exclusion amounts for five years. In the section 529 alternative, these annual exclusion amounts are accelerated and the amount transferred grows at the before-tax rate of return. By contrast, in the section 2503(e) alternative, the amount transferred can be leveraged by using discounted assets, but the assets will grow at the after-tax rate of return. The section 2503(e) alternative has the additional advantage of allowing the taxpayer to make tax-free transfers of the tuition payments when the beneficiary attends college. Note that the income tax advantage of the section 529 plan (higher rate of return) is built into the analysis.

A series of examples illustrates the economics of the decision. These examples are all based on the following general fact situation:

- Taxpayer wishes to make maximum tax-free transfer possible to Beneficiary using his annual exclusion amounts for the next five years plus section 2503(e)
- Before-tax investment rate is 10%
- After-tax investment rate is 8.25%
- First tuition payment for Beneficiary will be made at the end of Year 12
- Annual tuition is $49,504

To begin with, several somewhat simplified calculations make the points as clearly as possible. The first example quantifies the benefit of the acceleration of the annual exclusion amounts.

Example 2. Taxpayer (T) wishes to use the annual exclusions for the next five years to make tax-free transfers to Beneficiary (B). T wishes to maximize the tax-free transfer to B (measured as of the date B enters college in 12 years). T can either transfer $55,000 now (Scenario 1), or $11,000 now and $11,000 more in each of the next four years (Scenario 2). Assume that the growth rate is 10 percent in both cases. In Scenario 1, B will end up with $172,614 at the end of 12 years (prior to distribution for tuition). In Scenario 2, B will end up with only $143,955, or $28,659 less. This comparison is shown in Figure 3.

Example 2 shows that the benefit of accelerating the annual exclusion amounts is very substantial.

Now add the second benefit of the section 529 plan to the analysis.

Example 3. Assume the same facts as in Example 2, except that the rate of return in Scenario 2 is now only 8.25 percent. Under these facts, B will now have only $122,283 in Scenario 2, or $50,330 less than in Scenario 1. This comparison is shown in Figure 4.

The next step is to factor in valuation discounts.

Example 4. Assume the same facts as in Example 3, except that the assets used to make the annual exclusion gifts are entitled to a 30 percent discount. This means that T will now be able to make each transfer $15,714 instead of $11,000 (11,000/.7). This will increase the amount B has at the end of 12 years to $174,690 ($122,283/.7). Note that this is slightly more than in the section 529 plan scenario.

Figure 5 illustrates the benefit of using discounted assets in gifting. Note that while the discounted gifting alternative is still ahead after 12 years, the section 529 option is gaining and will soon overtake it. The reason is that the higher rate of return keeps compounding, causing the benefit of the higher rate to accelerate over time.

The discounted gifting strategy is already starting to look favorable, but there is an additional

Figure 3

Scenario 1
Front End Loading Made to 529 Plan

Year	Beginning Balance	Additions	Pre-Tax Growth Rate	Ending Balance
1	$ -	$ 55,000.00	$ 5,500.00	$ 60,500.00
2	$ 60,500.00		$ 6,050.00	$ 66,550.00
3	$ 66,550.00		$ 6,655.00	$ 73,205.00
4	$ 73,205.00		$ 7,320.50	$ 80,525.50
5	$ 80,525.50		$ 8,052.55	$ 88,578.05
6	$ 88,578.05		$ 8,857.81	$ 97,435.86
7	$ 97,435.86		$ 9,743.59	$ 107,179.44
8	$ 107,179.44		$ 10,717.94	$ 117,897.38
9	$ 117,897.38		$ 11,789.74	$ 129,687.12
10	$ 129,687.12		$ 12,968.71	$ 142,655.84
11	$ 142,655.84		$ 14,265.58	$ 156,921.42
12	$ 156,921.42		$ 15,692.14	$ 172,613.56

Scenario 2
Ratable Contributions Over Five Years Made to 529 Plan

Year	Beginning Balance	Additions	Pre-Tax Growth Rate	Ending Balance
1	$ -	$ 11,000.00	$ 1,100.00	$ 12,100.00
2	$ 12,100.00	$ 11,000.00	$ 2,310.00	$ 25,410.00
3	$ 25,410.00	$ 11,000.00	$ 3,641.00	$ 40,051.00
4	$ 40,051.00	$ 11,000.00	$ 5,105.10	$ 56,156.10
5	$ 56,156.10	$ 11,000.00	$ 6,715.61	$ 73,871.71
6	$ 73,871.71		$ 7,387.17	$ 81,258.88
7	$ 81,258.88		$ 8,125.89	$ 89,384.77
8	$ 89,384.77		$ 8,938.48	$ 98,323.25
9	$ 98,323.25		$ 9,832.32	$ 108,155.57
10	$ 108,155.57		$ 10,815.56	$ 118,971.13
11	$ 118,971.13		$ 11,897.11	$ 130,868.24
12	$ 130,868.24		$ 13,086.82	$ 143,955.06

benefit to consider—namely the use of section 2503(e).

Example 5. Assume the same facts as in Example 4 and in addition that T takes advantage of section 2503(e) to make transfer tax-free payments of tuition on B's behalf. Assuming the same 8.25 percent discount rate, the present value of these four payments of $49,504 is $163,055. When added to the value of assets transferred tax-free under section 2503(b), the total value of tax-free transfers under the section 2503(e) alternative is $337,745 as of the date B enters college. This is nearly double the tax-free transfer in the section 529 plan alternative.

Figure 5
Comparison of Alternatives Prior to Education Expense

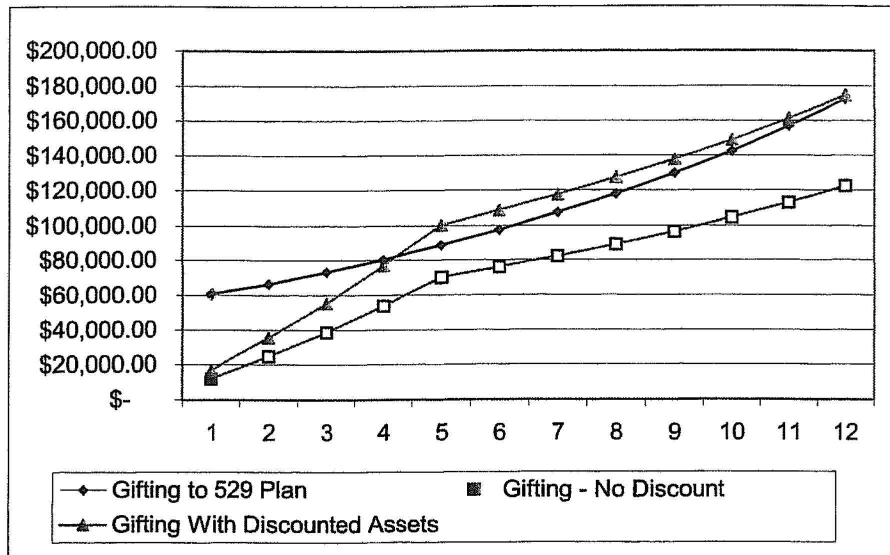


Figure 4

Scenario 1

Front End Loading Made to 529 Plan				
Year	Beginning Balance	Additions	Pre-Tax Growth Rate	Ending Balance
1	$ -	$ 55,000.00	$ 5,500.00	$ 60,500.00
2	$ 60,500.00		$ 6,050.00	$ 66,550.00
3	$ 66,550.00		$ 6,655.00	$ 73,205.00
4	$ 73,205.00		$ 7,320.50	$ 80,525.50
5	$ 80,525.50		$ 8,052.55	$ 88,578.05
6	$ 88,578.05		$ 8,857.81	$ 97,435.86
7	$ 97,435.86		$ 9,743.59	$ 107,179.44
8	$ 107,179.44		$ 10,717.94	$ 117,897.38
9	$ 117,897.38		$ 11,789.74	$ 129,687.12
10	$ 129,687.12		$ 12,968.71	$ 142,655.84
11	$ 142,655.84		$ 14,265.58	$ 156,921.42
12	$ 156,921.42		$ 15,692.14	$ 172,613.56

Scenario 2

Gifting Over Five Years Under 2503(b)				
Year	Beginning Balance	Additions	After-Tax Growth Rate	Ending Balance
1	$ -	$ 11,000.00	$ 907.50	$ 11,907.50
2	$ 11,907.50	$ 11,000.00	$ 1,889.87	$ 24,797.37
3	$ 24,797.37	$ 11,000.00	$ 2,953.28	$ 38,750.65
4	$ 38,750.65	$ 11,000.00	$ 4,104.43	$ 53,855.08
5	$ 53,855.08	$ 11,000.00	$ 5,350.54	$ 70,205.62
6	$ 70,205.62		$ 5,791.96	$ 75,997.59
7	$ 75,997.59		$ 6,269.80	$ 82,267.39
8	$ 82,267.39		$ 6,787.06	$ 89,054.45
9	$ 89,054.45		$ 7,346.99	$ 96,401.44
10	$ 96,401.44		$ 7,953.12	$ 104,354.56
11	$ 104,354.56		$ 8,609.25	$ 112,963.81
12	$ 112,963.81		$ 9,319.51	$ 122,283.33

To make the economic relationship between the section 529 plan and the section 2503(e) discounted gift alternative as clear as possible, the continued benefit of tax-free compounding inside the section 529 plan after the beneficiary has entered college (three more years) has been ignored. Of course, the benefit of the higher rate of return would not apply to the full amount in the section 529 plan at the time the beneficiary entered school because tuition payments would have to be made each year.

Example 6 shows how this continuing benefit can be quantified within the framework of the analysis.

Example 6. Assume the same facts as in Example 4 and recall that the amount of the annual tuition payment was $49,504. Assuming a 10-percent rate of return, the section 529 plan account is reduced to exactly

$0 after the last tuition payment as shown in the following chart:

172,614	49,504	123,110	135,421
135,421	49,504	85,917	94,509
94,509	49,504	45,004	49,504
49,504	49,504	0	

Assuming instead an 8.25 percent rate of return, the chart looks like this:

172,614	49,504	123,110	133,267
133,267	49,504	83,763	90,673
90,673	49,504	41,169	44,565
44,565	49,504	(4,939)	

The value of this amount discounted back to the date the beneficiary begins college at an 8.25 percent discount rate (the opportunity cost of capital) is $3,894. If this amount was added to the $172,614 amount in the section 529 plan in Example 4, the result would be $176,508. This would be slightly more that the $174,690 in the discounted gift alternative before adding in the benefit of the section 2503(e) transfer, but still only a little more than half the total tax-free transfer when the amount of the tax-free tuition payments is added in.

Relevant Variables in the Decision Model

The analysis presented above is very fact sensitive and changing the level of certain variables could make a significant difference. These variables include the following:

- The rate of tax on the outside investment
- Marginal income tax rate
- Probability of estate tax repeal
- Longevity of taxpayer
- Whether investment alternatives inside the section 529 plan are as favorable as investment alternatives outside the plan
- Discounts available
- Time horizon

Tax Rate on Outside Investment

One of the key considerations in determining whether the section 529 alternative makes sense is the marginal income tax rate that would have to be paid on investments outside the section 529 plan. As this rate increases, the difference between before-tax and after-tax rates increases, making the section 529 alternative more and more favorable. At one extreme, one could assume that all of the return on the investment is ordinary income. With a 40 percent ordinary tax rate, the after-tax rate of return would be only six percent. This reduces the future value of the series of $11,000 gifts to the beneficiary to $98,831. At the other extreme, one could assume that the taxpayer invested in an index fund with virtually no current tax. In this situation, the assets transferred to B would appreciate at the same (or nearly the same) 10 percent after-tax rate as the assets in the section 529 plan.

Taxpayer's Marginal Income Tax Rate

The income tax advantage of a section 529 plan derives from tax-free appreciation. The more tax the taxpayer would pay on an outside investment, the greater this benefit is. Increasing the marginal income tax rate increases the amount of income tax paid. Marginal income tax rates could vary significantly depending on the taxpayer's income and state of residence. A high income taxpayer in New York (where state and local income taxes add up to 10 percent to the tax bill) could have an effective income tax rate approaching 50 percent, while a lower income taxpayer in a state without an income tax might have an effective combined state and federal income tax rate of 40 percent, 35 percent or even lower.

Likelihood of Estate Tax Repeal

If estate tax repeal does go into effect, most of the transfer tax benefits would drop out of the analysis, leaving only the income tax benefit of tax-free growth. There would still be some benefit to using section 2503(e) because the gift tax would continue to exist. The only way to quantify the benefits of the section 2503(e) strategy would then be to do an expected return analysis. The expected benefit (return) from using the section 2503(e) strategy would simply be the benefit of using the strategy multiplied by the likelihood that the estate and gift tax will continue. Thus, if the benefit of section 2503(e) were $337,163 and assuming there was a 60 percent chance that the repeal would never go into effect, the expected return from using the section 2503(e) strategy would be $202,298 (.6 x $337,163).

Longevity of Taxpayer

A related issue is whether the taxpayer (donor) lives long enough to make the section 2503(e) transfer. If the taxpayer died before the beneficiary entered school, the benefit of 2503(e) would be lost. On the other hand, if the taxpayer used section 529 to make a $55,000 transfer and did not live for at least five years, a *pro rata* portion of the annual exclusion amount would be lost by a gross estate inclusion.

Investment Options Inside the Plan

Until recently, this was a very important issue. Investment options inside a section 529 plan were

severely limited and outside investments often offered much higher expected returns. Many states now have very flexible investment choices. Moreover, even if the taxpayer lives in a state that provides only a few very conservative investment choices, taxpayers may generally invest in a plan from another state. If the pre-tax rate of return inside the plan is significantly lower than the expected return outside the plan, this must be taken into account in comparing the section 529 and section 2503(e) alternatives.

Discounts Available

If a taxpayer plans to make leveraged gifts, the size of the discount will significantly impact the wealth transferred to a beneficiary. In this regard, it is axiomatic that an increase in the size of the discount will yield larger benefits.

Chart 1 shows the amount of the annual exclusion gifts and the amount the beneficiary would end up with—using the assumptions in Example 4, prior to adding in the 2503(e) benefit—given various other discount rates.

Time Horizon

It should also be noted that the longer the time horizon, the more favorable the section 529 alternative would be compared with the discounted gifting strategy. The longer the time horizon, the greater the tax-free compounding that can take place.

A Better Choice

While section 529 plans cover books, fees, supplies, equipment and room and board in addition to tuition, section 2503(e) can be used to make only tuition payments. This suggests that it may be a good idea to use both section 529 plans and section 2503(e) transfers. A taxpayer could contribute the amount needed to cover expenses other than future tuition payments to a section 529 plan and take advantage of the tax-free growth inside the plan. Tuition could later be paid using section 2503(e) transfers. This strategy would enable the taxpayer to have the best of both worlds.

Chart 1

Discount Rate	Annual Exclusion	Amount to B
15%	$12,941	$143,862
25%	$14,667	$163,044
40%	$18,333	$203,805
55%	$24,444	$271,740

Conclusion

From an economic perspective, taxpayers with substantial wealth would often be better off continuing to make annual exclusion gifts of discounted assets and using a section 529 plan only for nontuition expenses. Unfortunately, which alternative is best in any given case is very much dependent on the facts. This article provides a basic model for performing the economic analysis, identifies the relevant independent variables, and leaves it to the probate practitioner to apply the model to the fact situation.

ENDNOTES

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