Miracle Growth?

Everyone touts the benefits of 529 college savings plans. But compared to the alternatives, are they really that extraordinary?

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How does a quarter million dollars or more sound for a college education? Scary? Well, if your clients' children or grandchildren are under age two, it could cost them that much to attend a private university. Many parents are only vaguely aware of the escalating costs of a college education. According to a College Board report, *Trends in College Pricing 2000*, college tuition inflation in the past decade averaged approximately six percent per year, while general price inflation averaged only three percent. For the 2000-2001 academic year, the average tuition, room and board charged by public (in-state) and private four-year colleges and universities was $8,470 and $22,541, respectively. Assuming a 6% college price inflation rate into the future, the average cost of a four-year education at a four-year private institution for a student enrolling eighteen years from now could well be over $280,000, and the average price of a four-year education at a four-year public higher education institution could be nearly $106,000.

For many parents, the cost of a college education is one of the most daunting financial burdens they will bear, outside of saving for retirement. It is important for them to begin saving as soon as possible. Fortunately, there are many savings vehicles available now that provide incentives to save for college, and the financial planning community is becoming well versed in the alternatives available to clients. That's not to say that the alternatives are simple to understand.

For example, the 1996 introduction of Section 529 college savings programs was intended to help families' savings keep pace with the price inflation of a college education. These programs offer tax incentives to those who participate, including the ability to have funds in 529 plans grow tax-deferred. The Economic Growth and Tax Reconciliation Act of 2001 makes 529 plan distributions exempt from federal tax, starting January 1, 2002. The government has also granted favorable tax treatment to other savings programs to encourage families to save for college. In particular, the new tax law expanded the annual contributions limits on the Education IRA starting in 2002. What works best for your clients will depend on their specific saving needs as well as consideration of their tax situation and investment preferences.

Providing sound advice entails investigating and assessing all available funding choices. This article provides several numeric simulations comparing Section 529 plans with other savings vehicles, and will show the impact of the new tax law on the results.

Other college savings options include state prepaid tuition programs, Education IRA, Classic and Roth IRAs, mutual fund and custodial accounts, and 401(k)/403(b) plans. Each of these savings alternatives has different features and requires careful examination. *(See Comparison chart on page 60.)*

While the primary objective of saving for college is having the means to pay for tuition and room and board, investment control, taxes, and other factors must also be considered. The bottom line is finding the most efficient method to cover the college costs that the client expects to incur. Note that there are also tuition tax credits that some can take advantage of when paying for college. These tax credits are relative to the total amount of tuition expenses paid by a taxpayer. Possible coordination with other savings plans must be managed so that there is no dual tax benefit for the same expenses. (*See "Getting Credit" below*.)

As an advisor, you can help clients in two vital general areas. First is assessing the anticipated cost of college, identifying what portion of the costs should become the targeted goal, and then

GETTING CREDIT

There are two tax credits intended to subsidize post-secondary education costs: the Hope Scholarship credit and the Lifetime Learning credit. The Hope credit equals 100% of the first $1,000 paid for college tuition and fees (not including room and board), plus 50% of the next $1,000. So the maximum credit is $1,500. However, the credit is phased out if your AGI exceeds $40,000, or $80,000 if you are married and file jointly. Phase-out is complete—which means no credit—at AGIs of $50,000 and $100,000, respectively. Also, one can only use the Hope credit for the first two years of college. There is no limit on the number of years you can claim the Lifetime credit, but it can't be used for a student already taking advantage of the Hope credit for the same year. The Lifetime credit equals 20% of out-of-pocket tuition and related expenses up to $5,000. So the maximum credit is $1,000. After 2002, the maximum amount of expenses you can take into account will increase to $10,000, which translates into a maximum credit of $2,000. The AGI phase-out rules for the Lifetime credit are the same as for the Hope credit. However, unlike the Hope credit, the Lifetime credit is calculated on a per-family, rather than a per-student, basis. This means that the maximum available credit does not vary with the number of students in the family. More information can be found in *IRS Publication 970: Tax Credits for Higher Education.*

determining the assets needed to fund the goal. Assumptions about the rate of inflation (for college costs) and the rate of return on savings must also be made. Second, it's necessary to decide which vehicle(s) to use—i.e., which savings plans, or combination of plans, best suits the individual client's needs.

Financial Aid, Anyone?

Before we examine the advantages and disadvantages of a number of college savings alternatives, we'll take a moment to discuss the matter of financial aid and how it relates to college savings in general. Financial aid is intended to make up the difference between what a family can afford to pay and actual college costs. According to

COMPARISON OF LEADING METHODS OF SAVING FOR COLLEGE*

	1 SECTION 529 PLANS	2 SERIES EE & I SAVINGS BONDS	3 EDUCATION IRA	4 CLASSIC AND ROTH IRAs	5 BORROWING FROM 401(K)	6 UGMA/UTMA	7 MUTUAL FUNDS
Tax Benefits	Earnings federal and state income tax deferred and withdrawals are federal tax-free, if used for qualified higher education expenses.	Earnings state and local income tax exempt, federal income tax deferred. For qualified taxpayers, earnings fully or partially excludable from federal income tax, if used for qualified higher education expenses.	Earnings exempt from federal income tax, if used for qualified elementary, secondary, and higher education expenses.	Classic IRA may be tax-deductible and entire proceeds taxed at the owner's rate. Earnings on Roth IRA tax-exempt if taken out after the owner turns 59½.	No special tax benefits. Loan amount not subject to tax, unless owner defaults on loan.	When child is under 14, first $750 of unearned income is tax exempt, next $750 taxed at the child's rate, the rest at parents' rate. After child turns 14, all earnings taxed at the child's rate.	No special tax benefits. Earnings are taxed in the year realized.
Estate and Gift Tax Treatment	The value of the account is removed from the account owner's taxable estate.	The value of the account is included in the bond owner's taxable estate.	The value of the account is removed from the account owner's taxable estate.	The value of the account is included in the account owner's taxable estate.	The value of the account is included in the account owner's taxable estate.	The value of the account is included in the custodian's taxable estate if custodian dies before the funds are turned over to the child at age of majority (18 or 21).	The value of the account is included in the account owner's taxable estate.
How Much Can Be Invested?	Varies by state. Some states may allow account balance limits as high as $250,000/beneficiary.	Up to $30,000/ $15,000 per year for I/EE bonds.	Up to $2,000 per year per beneficiary (by 2008).	Up to $5,000 per year (by 2008).	The lesser of $50,000 or half of vested amount can be borrowed.	No limit.	No limit.
Qualified Expenses	Tuition, fees, books, supplies, room and board, and equipment.	Tuition and fees only.	Same as (1).	Same as (1).	Any expense.	Any expense.	Any expense.
Financial Aid Treatment	Savings plans: parent's assets; prepaid plans may reduce aid dollar-for-dollar.	Parents' assets if education expenses are for a child. Student's assets if education expenses are for oneself	Student's assets.	Not considered in the expected family contribution (EFC) calculation.	Same as (4).	Student's assets.	Parents' assets.
Who Makes Investment Decision?	State sponsor with input from program manager.	Guaranteed returns.	Owner.	Owner.	Owner.	Custodian before the child turns 18 or 21; after that, the child.	Owner.
Income Restriction	No.	No.	Yes.	Yes.	No.	No.	No.
Impact on Tax Credits	Yes.	Yes.	Yes.	No.	No.	No.	No.
Flexibility	Earnings on non-qualified withdrawals taxed at owner's rate plus a 10% penalty.	Can be redeemed after 6 months. A 3-month earnings penalty applies to redemption within 5 years of issuance.	Earnings on non-qualified withdrawals taxed at owner's rate. 10% penalty on earnings.	No penalty on early withdrawals if used for higher education expenses. For Roth IRAs, earnings of early withdrawals taxed at the owner's rate.	Money can be borrowed almost anytime for any purpose.	Money can be withdrawn anytime for the benefit of the child.	Money can be withdrawn any time for any purpose.

*Reflects 2001 tax law changes.

the College Board, nearly 60% of the students currently enrolled in colleges and universities are receiving some financial aid, and more than 60% of all financial aid is in the form of loans. Loans, of course, must be repaid. Similar to financing the purchase of a house, most families pay for college through a combination of savings, current income, and borrowing. This means that the more one saves, the less that individual will need to borrow, and the less that is needed from current income.

Does saving now hurt one's financial aid chances in the future? Despite what some financial experts say, saving pays, even when it comes to receiving financial aid. The Department of Education defines a student's financial need as the difference between Cost of Attendance (COA) and Expected Family Contribution (EFC). The EFC is the amount a student and his or her family are expected to pay "out of pocket" for college expenses. The EFC formulas assess about 6% of a parent's assets each year. That is, the formulas assume that 6% of parent's assets are available each year to help pay for college. However, if the assets are in the child's name, the EFC formulas assume 35% of the assets are available for college expenses. Also, in calculating a student's EFC, 50% of the student's income is considered available to help pay for college expenses. Therefore, when examining the savings options, it may be best to consider assets that are not held in the child's name. In general, families with greater savings will probably be in a better financial situation overall and may find they have more options in making college choices. Any savings is likely to impact a student's eligibility for need-based financial aid. Note that private schools may have their own rules for their institutional financial aid. Also, each state may have its own rules for its state aid and some states may give favorable financial aid treatment to funds in 529 plans.

TABLE 1

ASSUMPTIONS

Annual Inflation:	3.0%
Real annual return on equities:	7.0%
Real annual return on bonds:	3.5%
Real annual return on money market:	2.0%

ASSET ALLOCATION/N.Y. STATE COLLEGE SAVINGS PROGRAM 2001

Beneficiary's Year of Birth	Projected Years to Enrollment	Equity Fund	Bond Fund	Money Market
2000-2001	18 years	75%	25%	0%
1998-1999	16-17 years	65%	35%	0%
1996-1997	14-15 years	60%	40%	0%
1994-1995	12-13 years	55%	45%	0%
1992-1993	10-11 years	50%	50%	0%
1990-1991	8-9 years	45%	55%	0%
1988-1989	6-7 years	40%	60%	0%
1986-1987	4-5 years	30%	70%	0%
1984-1985	2-3 years	20%	70%	10%
Pre-1984	1 year	15%	40%	45%

TABLE 2

Percent by which projected accumulation in a 529 savings plan exceeds rebalanced mutual funds.
Four hypothetical scenarios.

Scenario assumptions	Income tax bracket	18-year horizon	12-year horizon	6-year horizon
A				
529 plan expense ratio: 65 basis points	25% federal, 0.00% state	25.1%	15.2%	7.2%
Mutual funds expense ratio: 128 bps	25% federal, 6.85% state	28.7%	17.4%	8.4%
Mutual funds earnings distributed as 25% dividends and 75% long-term capital gains	35% federal, 6.85% state	34.2%	20.9%	10.2%
B				
529 plan expense ratio: 65 basis points	25% federal, 0.00% state	19.0%	11.6%	5.6%
Mutual funds expense ratio: 65 bps	25% federal, 6.85% state	22.9%	14.1%	6.9%
Mutual funds earnings distributed as 25% dividends and 75% long-term capital gains	35% federal, 6.85% state	28.7%	17.8%	8.9%
C				
529 plan expense ratio: 65 basis points	25% federal, 0.00% state	20.9%	13.1%	6.5%
Mutual funds expense ratio: 128 bps	25% federal, 6.85% state	24.3%	15.4%	7.7%
Mutual funds earnings distributed as 25% dividends and 25% long-term capital gains	35% federal, 6.85% state	29.7%	18.8%	9.5%
D				
529 plan expense ratio: 65 basis points	25% federal, 0.00% state	14.7%	9.5%	4.9%
Mutual funds expense ratio: 65 bps	25% federal, 6.85% state	18.4%	11.9%	6.2%
Mutual funds earnings distributed as 25% dividends and 25% long-term capital gains	35% federal, 6.85% state	24.1%	15.6%	8.2%

Note:
See Table 1 for a detailed description of the rate of return assumptions and asset allocation used in this table. The percentages shown are hypothetical numbers based on certain assumptions which may not reflect actual performance.

Considering the Alternatives

Simulations conducted by Jennifer Ma and Douglas Fore at TIAA-CREF Institute, a research and education entity that is part of the TIAA-CREF group, compared potential after-tax accumulations over a six-, 12-, and 18-year time horizon for Section 529 plans, mutual funds, Series I savings bonds, and Education IRAs. When comparing the 529 plan with mutual funds, the research assumes that the asset allocation strategy for both would be that of New York's College Savings Program Managed Allocation Option for 2001. This age-based allocation strategy is meant to be representative of age-based allocation strategies used in tuition savings plans across the nation. (New York's Managed Allocation Option allocation mix begins with a portfolio consisting of 75% equities and 25% bonds for a newborn. Rebalancing every two years, the portfolio will consist of 55% equities and 45% bonds when the child is six, and will drop to 40% equities and 60% bonds by the time he or she is 12.) Please note that the assumptions used for the simulations are described in the tables provided. *(See Table 1 above.)*

According to the simulations, accumulations in the Section 529 plan are consistently greater than those in comparably managed mutual funds employing the same asset allocation strategy. In addition, the advantage of saving through the 529 plan increases over time. Assuming identical annual contributions deposited at the start of each year, at a six-year time horizon the advantage of saving with the 529 plan varies between 4.9% and 10.2%, depending on the family's tax bracket. Twelve years away from college, the advantage ranges from 9.5% to 20.9%. When families have a full 18 years to save for college, the advantage extends from a low of 14.7% to a high of 34.2%. *(See Table 2, page 62.)*

In general, the study found that the advantage of saving through a Section 529 plan versus a mutual fund increases as a household's tax bracket increases. Fees also matter. The fees that alternative programs charge as investment expenses have a greater effect on accumulations than the taxation of investment returns. This is surprising, but makes sense upon further scrutiny. In the scenarios where there is a difference in the fees charged, this difference is not trivial, amounting to two-thirds of a percentage point per year. This has a large impact on the total accumulation. Another important factor affecting total savings realized is the value of the state tax deduction, if any, associated with the Section 529 plan. For example, New York's College Saving Program allows New York taxpayers to deduct contributions of up to $5,000 per taxpayer for annual state income tax purposes. When one discounts the future value of this tax deduction, the relative advantage of the Section 529 plan increases by 50% or more. For families with 18 years until college, the advantage of the Section 529 plan can be as much as 43%. Even at the six-year time horizon, the advantage still ranges from 13.5% to 17.8%. *(See Table 3 at right.)*

The study's simulations also compared savings in a 529 plan versus savings through the Education IRA. Here we see that 529 plans do not necessarily outperform Education IRAs in all cases. The advantage of the 529 plan is evident if clients can take a state tax deduction or if expenses for the Education IRA are higher than those of the 529 plan. The potential state deduction of contributions to a 529 plan coupled with lower expenses results in a significant difference in the advantage of these plans over time. The future value of the state tax deduction is essential. For families with 18 years until college, the advantage of the Section 529 plan is as high as 13.6%. Even at the six-year time horizon, the advantage is as high as 8.9%. *(See Table 4 above.)*

Lastly, the researchers examined accumulated savings through a Section 529 plan, using the same managed allocation strategy of the New York plan, with savings using annual purchases of Series I bonds. The asset return assumptions for the Section 529 plan are identical to those used in the comparison with mutual funds. For the Series I bonds the inflation rate is assumed to be 3.0% and the real rate of return is assumed to be the current rate of 3.4%. The results show that Series

TABLE 3

Percent by which projected accumulation in 529 savings plan exceeds rebalanced mutual funds. Four hypothetical scenarios, reflecting state tax deduction for 529 plans.

Scenario assumptions	Income tax bracket	18-year horizon	12-year horizon	6-year horizon
A				
529 plan expense ratio: 65 basis points				
Mutual funds expense ratio: 128 bps	25% federal, 6.85% state	36.9%	25.3%	15.8%
Mutual funds earnings distributed as 25% dividends and 75% long-term capital gains	35% federal, 6.85% state	42.8%	29.0%	17.8%
B				
529 plan expense ratio: 65 basis points				
Mutual funds expense ratio: 65 bps	25% federal, 6.85% state	30.7%	21.7%	14.2%
Mutual funds earnings distributed as 25% dividends and 75% long-term capital gains	35% federal, 6.85% state	37.0%	25.7%	16.4%
C				
529 plan expense ratio: 65 basis points				
Mutual funds expense ratio: 128 bps	25% federal, 6.85% state	32.3%	23.1%	15.1%
Mutual funds earnings distributed as 25% dividends and 25% long-term capital gains	35% federal, 6.85% state	38.0%	26.7%	17.1%
D				
529 plan expense ratio: 65 basis points				
Mutual funds expense ratio: 65 bps	25% federal, 6.85% state	26.0%	19.4%	13.5%
Mutual funds earnings distributed as 25% dividends and 25% long-term capital gains	35% federal, 6.85% state	32.0%	23.3%	15.6%

Note:
1. See Table 1 for a detailed description of the rate of return assumptions and asset allocation used in this table. The percentages shown are hypothetical numbers based on certain assumptions which may not reflect actual performance. 2. The value of state tax deduction is calculated using a 6.5% annual gross interest rate.

TABLE 4

Percent by which projected accumulation in a 529 savings plan exceeds rebalanced Education Savings accounts. Four hypothetical scenarios.

Scenario assumptions	18-year horizon	12-year horizon	6-year horizon
Not reflecting the value of the state tax deduction for 529 plan			
A			
529 plan expense ratio: 65 basis points	6.8%	4.2%	2.0%
Education savings accounts expense ratio: 128 bps			
B			
529 plan expense ratio: 65 basis points	0.0%	0.0%	0.0%
Education savings accounts expense ratio: 65 bps			
Reflecting the value of the state tax deduction for 529 plan (based on a 6.85% state tax rate)			
C			
529 plan expense ratio: 65 basis points	13.6%	11.2%	8.9%
Education savings accounts expense ratio: 128 bps			
D			
529 plan expense ratio: 65 basis points	6.4%	6.7%	6.9%
Education savings accounts expense ratio: 65 bps			

Note:
See Table 1 for a detailed description of the rate of return assumptions and asset allocation used in this table. The percentages shown are hypothetical numbers based on certain assumptions which may not reflect actual performance. 2. The value of state tax deduction is calculated using a 6.5% annual gross interest rate.

I bonds significantly underperform the Section 529 plan when households are not able to receive the tax exclusion on interest from the bonds (from 6.8% to 26.7%). And the relative advantage of the Section 529 plan ranges from 14% to 35% when the value of the state income tax deduction is taken into account. Only when the time horizon is short, and when households are able to take advantage of the tax exclusion on interest, does the simulation show Series I bonds modestly outperforming the Section 529 plan, by an average of less than 1%. *(See Table 5 at right.)*

It should be noted that with Series EE and I bonds, the bond owner must be at least 24 years of age when the bonds are purchased and the modified gross income of the bond owner must be below a certain level when the bonds are redeemed. For the 2001 tax year, the tax benefits phase out between $83,650 and $113,650 for joint filers. For single taxpayers, the phase-out range is between $55,750 and $70,750. Because the income restriction applies to the income level of the bond owner at the time of the redemption (which may be many years into the future), some bond owners may not be able to take advantage of the favorable federal tax treatment because their income at the time of the redemption may be higher than the limit.

TABLE 5

Percent by which projected accumulation in 529 savings plan exceeds Series I bonds.

Scenario assumptions	18-year horizon	12-year horizon	6-year horizon
A			
Interest on Series I bonds excluded from taxation	5.7%	1.5%	-0.7%
B			
Interest on Series I bonds subject to federal tax of 35%	26.7%	15.5%	6.8%
C			
Interest on Series I bonds excluded from taxation Value of state tax deduction added to 529 plan accumulation	12.6%	8.4%	6.2%
D			
Interest on Series I bonds subject to federal tax of 35% Value of state tax deduction added to 529 plan accumulation	35.0%	23.3%	14.2%

Note:
1. See Table 1 for a detailed description of the rate of return assumptions and asset allocation used in this table. The percentages shown are hypothetical numbers based on certain assumptions which may not reflect actual performance. 2. The value of state tax deduction is calculated using a 6.5% annual gross interest rate. 3. The nominal interest rate used for the Series I bonds is 6.5%.

And the Winner Is...

The simulations show that saving for college using Section 529 plans is advantageous relative to mutual funds, Series I bonds, and Education IRAs in general. The advantage is most pronounced for clients saving on behalf of young children who are many years away from college. Additionally, Section 529 plans are particularly attractive for clients in higher tax brackets and for those who are able to take advantage of state income tax deductions for contributions to such plans. Education IRAs do have some attractive features, such as the advantages of investment control and potentially lower fees. I bonds are also attractive, especially to middle-income families who can take advantage of the interest income being fully or partially excluded from federal income tax. However, probably the most powerful attraction and advantage of the Section 529 plans over other funding vehicles is the ability (beginning in 2002) to have distributions exempt from federal income tax.

Probably the most powerful advantage of the Section 529 plans is the ability (beginning in 2002) to have distributions be exempt from federal income tax

How big a deal is this? Let's consider this example: The parents of a new baby girl contribute $5,000 each year in a 529 plan over the next 18 years and it earns 8% annually. Under the old tax law, they would have $185,397 after paying 15% federal income tax on earnings. However, under the new tax law, starting in 2002 they would have approximately $202,000 for college, since income from the 529 plan will not be subject to federal taxation. The amount of saving in federal income tax, approximately $17,000, is not trivial.

Of course, it's necessary that the advisor consider other factors when designing strategies to save for college, including the client's tolerance for risk, the degree of control he or she desires to have over investment decisions, and the potential financial aid impact of the option(s). Whether or not 529 plans and other savings options are worthwhile in the face of their sometimes-negative implications for financial aid eligibility—the saving versus borrowing dilemma—will depend upon a client's specific circumstances.

Regardless of circumstances, a college education is an important investment in a child's future earnings potential. According to the College Board, bachelor's degree recipients earn, on average, 80% more than those with only a high school diploma. Clients who are in the position to accumulate the necessary funds to send their progeny to more costly private universities want you to tell them how to do this in the smartest way possible. As for clients with limited financial means or little time, they want the same thing. By knowing what, when, and how to do it, you can make a huge difference in the lives of your clients and their children. IA

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