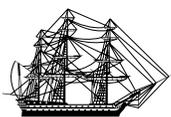


Learn about saving for college

Investor education



Vanguard[®]



Making an investment in the future

A child's college education can be one of the most important investments you'll ever make. With education costs rising faster than inflation, the financial burden can be significant, especially if you have more than one child.

Use this guide to learn about the many college savings options available. Then consult with your financial advisor to develop a savings plan that will help you meet your goals.

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How much will college cost?

As you begin to consider a child's college education, it's important to gain an understanding of just how much college costs.

No one can accurately predict what the price of college will be in 5, 10, 15, or 20 years. But it's helpful to at least have a ballpark figure as you look to the future. The chart below provides an estimate of what four years of college might cost based on national averages for the 2016–2017 academic year.

Estimated future cost of college

Years to college	Four years at an in-state public school	Four years at a private nonprofit school
1	\$90,924	\$205,330
2	\$95,471	\$215,597
3	\$100,245	\$226,377
4	\$105,257	\$237,696
5	\$110,520	\$249,581
6	\$116,046	\$262,060
7	\$121,848	\$275,163
8	\$127,940	\$288,921
9	\$134,337	\$303,367
10	\$141,054	\$318,535
11	\$148,107	\$334,462
12	\$155,512	\$351,185
13	\$163,288	\$368,744
14	\$171,452	\$387,181
15	\$180,025	\$406,540
16	\$189,026	\$426,867
17	\$198,477	\$448,210
18	\$208,401	\$470,621

Note: Estimated costs are Vanguard's projections in future dollars based on data for the 2016–2017 academic year provided by the College Board. The figures, which reflect a sample undergraduate budget that includes tuition, room, and board, assume a 5% inflation rate. Your actual costs will vary.

Look beyond the sticker price

Sky-high college tuition and fees get lots of publicity, but in reality, only about 15% of students attending public and private nonprofit four-year colleges pay more than \$36,000 a year for tuition and fees, according to surveys by the College Board, a nonprofit organization. What's more, most families don't pay the sticker prices that colleges advertise—just as most don't pay the sticker price for a car.

Consider these statistics:

- **Tuition and fees.** According to the College Board, one-half of full-time students at public and private nonprofit four-year colleges pay \$11,999 or less a year in tuition and fees.
- **Financial assistance.** Based on the most recent data available, the U.S. Department of Education reported that more than 70% of undergraduates received financial aid in 2011–2012.¹ The average amount of aid received was \$10,800.

The real cost of college

Focus on the amount your family is expected to pay, known as your expected family contribution (EFC). Calculated by the federal government or by colleges, EFC is meant to reflect the price you can reasonably afford, using your savings (not counting retirement accounts), income, and borrowing. It also factors in the size of your family and the number of family members in college.

In theory, a student's college-aid package would be based on the costs of the college minus the EFC. This assumption has a few drawbacks:

- In practice, not all colleges can make up the difference, leaving you and the student to find extra resources—additional loans, outside scholarship help, or even dipping into your retirement accounts or home equity.
- Your EFC could potentially be a substantial amount of money, reinforcing the importance of starting a disciplined savings program now

¹ David Radwin, Jennifer Wine, Peter Siegel, Michael Bryan, and Tracy Hunt-White, 2013. *2011–12 National Postsecondary Student Aid Study (NPSAS:12) Student Financial Aid Estimates for 2011–12*. Washington, D.C.: Institute of Education Sciences, National Center for Education Statistics, U.S. Department of Education (NCES 2013-165.)

to avoid relying heavily on loans later. The bottom line is: The sooner you start saving, the more your investments have the chance to grow.

- A long-term strategy of investing in programs that reduce, defer, or even eliminate taxes on investments for higher education can make college affordable.

Determining the owner of a college savings account is important because of federal financial-aid formulas that determine your EFC. Your financial advisor can help you calculate how much you might be expected to pay. You can also visit collegeboard.org and, in **Search**, type EFC calculator.

Don't give up on high-priced colleges

Don't rule out a college just because you feel its tuition is too high. Your EFC doesn't change—regardless of how much a college charges.

Let's say your EFC is \$10,000 a year, and the student has a choice between a school costing \$18,000 and one costing \$35,000. At the first school, you'd qualify for \$8,000 ($\$18,000 - \$10,000$) in aid; at the second, \$25,000 ($\$35,000 - \$10,000$). So your actual cost could be the same at both colleges—if both meet your full financial need.

In addition, some of the most expensive colleges have the biggest endowments and, therefore, more resources to draw on to offer grants, which don't have to be repaid. And just as students compete to get into college, colleges also compete for the best students by offering attractive aid packages.

Some colleges, however, can't provide all the aid a student qualifies for, or may only be able to offer loans. When researching schools, find ones that meet the student's academic and professional goals, then look carefully at the amount and type of aid offered. You may find that the more expensive school is just as affordable as the lower-priced school.

It's a smart idea to start saving now

Some parents don't bother saving for college because they assume there will be plenty of financial aid when the time comes. Or they don't save because they have other priorities. In either case, they risk taking on a hefty amount of debt to pay for college.

That can be unfortunate, because the advantage to saving and investing is clear. Let's say a family sets aside \$1,200 a year—that's just \$100 a month—in a tax-free account such as a 529 college savings plan, for a total investment of

\$21,600 over 18 years. If this investment earns 6% a year, the family will have about \$39,000 at the end of 18 years—nearly twice the amount it invested.² But if it doesn't save and is forced to borrow \$39,000 over ten years at 5% interest, it would have to pay back about \$49,600 in principal and interest—more than double the \$21,600 it would have needed to raise the \$39,000 through investing. So saving even \$100 a month can really add up over time.

² This hypothetical example includes the reinvestment of interest, dividends, and capital gains distributions. The calculation assumes a \$100 initial investment and \$100 monthly contributions compounded monthly. It does not represent the performance of any particular investment. The final account balance does not reflect any taxes or penalties that may be due upon distribution.



What are my college savings options?

Years ago practically the only way to save for college was to set aside money in a taxable savings or investment account. Today there is an assortment of college savings options to choose from.

Many college savings options offer generous tax breaks, account flexibility, and other incentives. Some of the top choices include:

- Education savings accounts (ESAs—formerly Education IRAs).
- 529 college savings plans.
- Uniform Gifts to Minors Act/Uniform Transfers to Minors Act (UGMA/UTMA) accounts.
- Individual mutual funds.
- 529 prepaid tuition plans.
- U.S. savings bonds.

As with most things in life, planning is key to making sure that the student will have the funds to attend the college of his or her choice when the time comes. Not every option is right for every family, but at least one will be right for you. You may even contribute to more than one type of plan in

the same year. This will allow you to choose different plans for different children or simply to put away more for each child. Your financial advisor can help you evaluate each option before deciding which is best for you.

Education savings accounts

For those under age 18, ESAs allow a total contribution of \$2,000 a year from all sources. Although your contributions to an ESA are not tax-deductible, earnings grow federally tax-free. Generally, you can invest in all types of securities, except insurance policies.

You can withdraw money from the account tax-free for qualified education expenses—including tuition, room, board, books, and supplies—at private elementary and secondary schools as well as colleges and graduate schools.

Generally, you can open an ESA through most financial institutions and mutual fund companies.

All investing is subject to risk, including the possible loss of the money you invest.

Education savings account

Pros

Unlimited participation	Accounts are typically owned or controlled by the parent or legal guardian, but anyone, such as a grandparent, can contribute to the account as long as the donor meets the income restrictions (see below)—even if the parent or legal guardian has too much income to contribute to that account. Corporate donors do not face income restrictions.
Investment flexibility	Generally, you can invest in all types of securities, except insurance policies.
Ability to change beneficiary	Assets can be transferred to an ESA or 529 college savings plan for an eligible family member of the original beneficiary. This transfer is tax-free at the federal level.
Flexible, tax-free distributions	The account grows tax-free. Distributions are free of federal—and sometimes state—income tax when used to pay for qualified education expenses at any level—primary, secondary, college, or graduate school.
Minimal impact on federal financial aid	If a parent is the owner or the responsible individual for the account, the assets are assessed at the lower EFC parental rate of 5.64%. If the student owns the account, the assets are assessed at the higher EFC child rate of 20% unless the student is a dependent, then they are assessed at 5.64%.
Estate tax benefit	Generally, the account value is not included in the donor's estate for tax purposes.

Cons

Low contribution limit	Total annual contributions from all sources and to all accounts for the same beneficiary cannot exceed \$2,000.
No state income tax deductibility	Contributions cannot be deducted from state income tax.
Income restrictions	The amount a person can contribute is reduced and gradually phased out for modified adjusted gross incomes between \$95,000 and \$110,000 if single or between \$190,000 and \$220,000 if married and filing jointly.
Inflexible age limit	Contributions can be made only until the beneficiary reaches age 18, unless he or she is a beneficiary with special needs. Qualified tax-free and penalty-free distributions are available only for as long as the beneficiary is under age 30.
Investment risk	Most of the investment choices are not FDIC-insured or otherwise government-guaranteed and, depending on the investment, may be subject to market, interest rate, and other financial risks.
Potential expenses	Expenses depend on whatever underlying investments are used.
Penalty if not used for education	Earnings on distributions not used for education are taxed at the account donor's federal income tax rate and usually incur a 10% federal penalty tax.

529 college savings plans

Typically sponsored by individual states, 529 college savings plans are popular because they offer a good combination of high contribution limits, investment flexibility, and tax advantages.

No matter what your age or income, you can contribute money for a child. Your savings can be used to pay for qualified higher education expenses at any accredited institution of learning in the United States or abroad—even graduate school—that qualifies under federal guidelines.

Although each plan is different, generally you can invest after-tax money using one of two approaches:

- **Age-based options.** Your advisor may suggest that you invest in a series of customized investment portfolios that automatically adjust your assets over time to more conservative investments as the child nears college age. Generally, your option matches your risk tolerance. (See the chart on page 27 for examples.)

- **Individual portfolios.** With your financial advisor's help, you pick from the investment portfolios offered by the plan, adjusting the asset allocations as the child nears college age.

Your earnings will vary based on the portfolios you select and on market performance.

Although most plans are state-administered, enrollment is often through an investment provider chosen by the state. Some plans also allow you to enroll through a bank or broker, but in using providers such as these, you may incur added fees and sales commissions. Some plans offer the opportunity to add to your college savings with Upromise® rewards, a free service that helps you earn money for college by returning to your plan a percentage of what you spend with hundreds of America's leading companies. Your financial advisor can help you select a plan that fits your needs.

To find out which 529 college savings plans are offered by each state, visit collegesavings.org.

529 college savings plans

Pros

Unlimited participation	Anyone can own an account for a beneficiary.
No income restrictions	You can invest in a plan no matter how much you earn.
Flexible age limit	Most plans allow you to contribute for a beneficiary of any age. Only a few plans have age restrictions.
High contribution limit	Contributions can be made for a beneficiary until total assets for that beneficiary reach from \$235,000 to \$520,000, depending on the sponsoring state.
State income tax deductibility	Contributions to your state's plan may be eligible for a total or partial deduction on your state income tax.
Investment flexibility	Generally, you can choose between two types of investments: age-based options and individual portfolios. You can exchange among investments in the plan twice each calendar year or whenever you change beneficiaries, which is not limited. You can also change investments if you roll over your beneficiary's assets to another state plan, but rollovers are limited to once every 12 months.
Ability to change beneficiary	The account can be transferred at any time to a different beneficiary who is an eligible family member of the original beneficiary.
Tax-free distributions	The account grows tax-free. Distributions are free of federal and most state income taxes if used to pay for qualified higher education expenses. (Earnings on nonqualified distributions may be subject to federal income tax and a 10% federal penalty tax, as well as state and local income taxes. The availability of tax or other benefits may be contingent on meeting other requirements.)
Minimal impact on federal financial aid	If a parent or dependent student is the account owner, the assets are assessed at the lower EFC parental rate of 5.64%. If a student who is not a dependent owns the account, the assets are assessed at the higher EFC child rate of 20%. If a third party owns the account, the assets have no effect on the EFC until the year after they are disbursed, when they are counted as untaxed income to the student.
Accelerated gift-tax benefit	You can contribute up to \$70,000 (five times the normal exclusion of \$14,000 per year) for each beneficiary without incurring the federal gift tax, so long as you don't make any other contributions or gifts to that beneficiary during that year or the following four years. Married persons filing jointly can contribute up to \$140,000 without being subject to the gift tax.*
Estate tax benefit	Generally, the account value is not included in the donor's estate for tax purposes.*

Cons

Potentially high expenses	Some plans charge high fees, including broker commissions and enrollment, annual maintenance, transfer, and advisor fees.
Investment risk	Plans are not FDIC-insured or otherwise government-guaranteed and, depending on the investment, may be subject to market, interest rate, and other financial risks.
Penalty if not used for higher education	Earnings on distributions not used for higher education are taxed as ordinary income at the recipient's federal income tax rate and usually incur a 10% federal penalty tax.

*If you choose to take advantage of the accelerated gift-tax benefit and you die within five years, a prorated portion of the contribution may be subject to the estate tax. For more information, consult your tax advisor or estate planning attorney.

UGMA/UTMA accounts

UGMA/UTMA accounts offer a convenient way to contribute to an account that can be used to pay for college.³ Contributions are irrevocable—ownership can't be changed or transferred to another beneficiary.

These accounts are established for a minor but are administered by a custodian who can use the assets only for the child's benefit. The beneficiary takes control of the account when he or she reaches the age of majority (generally age 18 or 21) according to the laws of the state in which the account is established.

In general, states offer only one of these account types—primarily the UTMA—so consult your financial advisor to learn which type your state provides and to review the guidelines for determining the age at which the beneficiary takes control of the account. You can open an account through most mutual fund companies, banks, and brokerages.

Caveat about transfers

If you're the custodian of an UGMA/UTMA account, you may elect to transfer all or a portion of those assets to a 529 college savings plan account. You should be aware that the UGMA/UTMA rules of the state in which the account was established will continue to apply to those assets and to any future contributions to the 529 account.

In most situations, it's best to either leave the funds in the UGMA/UTMA account or open separate 529 accounts: one funded with UGMA/UTMA assets and another funded with cash contributions.

³ The recipient of the gift will have to pay taxes on earnings depending on his or her age and the amount of earnings, and the donor is subject to federal gift-tax rules.

UGMA/UTMA accounts

Pros

Unlimited participation	Anyone can contribute for a beneficiary.
No income restrictions	You can invest in an account no matter how much you earn.
No contribution limit	There is no limit on the amount that can be contributed.
Accelerated gift-tax benefit	You can contribute up to \$70,000 (five times the normal exclusion of \$14,000 per year) for each beneficiary without incurring the federal gift tax, so long as you don't make any other contributions or gifts to that beneficiary during that year or the following four years. Married persons filing jointly can contribute up to \$140,000 without being subject to the gift tax.*
Investment flexibility	You can choose from a wide selection of marketable securities and bank products.
No penalty if not used for higher education	The custodian can use the account assets for any purpose that benefits the child.
Not taxable to donor	Any income or capital gains generated by an UGMA/UTMA account are taxed to the beneficiary, not to the donor.

Cons

Inability to change beneficiary	Once established, an UGMA/UTMA account is irrevocable—ownership cannot be changed or transferred to another beneficiary.
Beneficiary gains control of assets	Upon reaching the age of majority, the beneficiary can use the assets for any purpose—educational or otherwise.
Investment risk	Most of the investment choices are not FDIC-insured or otherwise government-guaranteed and, depending on the investment, may be subject to market, interest rate, and other financial risks.
Taxable distributions	Contributions are not tax-deductible, and distributions are taxable—except for the first \$1,050 of investment income received in a single year for beneficiaries under age 18, beneficiaries who are age 18 but whose earned income is less than half their support, or those who are ages 19 to 23 who are full-time students and whose earned income is less than half their support. Investment income between \$1,050 and \$2,100 is taxed at the child's tax rate, and investment income greater than \$2,100 is taxed at the parent's(s') tax rate.
Significant impact on federal financial aid	The account is treated as the child's asset for purposes of federal financial aid and is assessed at the higher EFC child's rate of 20%.
Impact on estate tax	Assets are excluded from the donor's estate until the beneficiary has reached the age of majority.
Inflexible age limit	Account must be set up while the beneficiary is a minor, as defined by state law.
Potential expenses	Expenses depend on whatever underlying investments are used.
No state income tax deductibility	Contributions cannot be deducted from state income tax.

*If you choose to take advantage of the accelerated gift-tax benefit and you die within five years, a prorated portion of the contribution may be subject to the estate tax. For more information, consult your tax advisor or estate planning attorney.

Individual mutual funds

When used for college savings, mutual funds offer great flexibility. You can save as much as you want and take distributions whenever you want. And your mutual fund assets will have minimal impact on the student's eligibility for federal financial aid.

Of course, you will have to pay taxes on any taxable distributions the fund makes and on any capital appreciation when you sell fund shares. Because of this, many investors choose tax-managed funds, i.e., funds that are managed to minimize taxes. Your financial advisor can help you decide the best course.

It is possible that tax-managed funds will not meet their objective of being tax-efficient.



Individual mutual funds

Pros

Investment flexibility	Choose from a wide variety of stock, bond, balanced, and short-term investments.
Unlimited participation	Anyone can purchase a mutual fund, though some funds may require a substantial minimum amount to open an account.
No penalty if not used for higher education	Account assets can be used for any purpose.
Ability to change beneficiary	There are no restrictions.
No income restrictions	You can invest no matter how much you earn.
No contribution limit	There is no limit on the amount that can be contributed.
Minimal impact on federal financial aid	If a parent is the account owner, the assets are assessed at the lower EFC parental rate of 5.64%. If the student owns the account, the assets are assessed at the higher EFC child rate of 20%. If a third party owns the account, the assets have no effect on the EFC until the year after they are disbursed, when they are counted as untaxed income to the student.
Flexible age limit	No restrictions on the age of the beneficiary.

Cons

No special tax treatment for higher education savers	Earnings and capital gains are taxed at the owner's marginal rate. Consider using tax-exempt, index, and tax-managed mutual funds to potentially help minimize the impact of income taxes on the funds' returns.
Impact on estate tax	Assets are included in the owner's estate.
No state income tax deductibility	Investments cannot be deducted from state income tax.
Investment risk	Mutual funds are not FDIC-insured or otherwise government-guaranteed and may be subject to market risk. Investments in bond funds are subject to interest rate, credit, and inflation risk.
Potentially high expenses	Some funds charge high fees, including broker commissions and maintenance, advisor, and other fees.

Although the income from a tax-exempt fund is exempt from federal tax, you may owe taxes on any capital gains realized through the fund's trading or through your own redemption of shares. For some investors, a portion of the fund's income may be subject to state and local taxes, as well as to the federal Alternative Minimum Tax.



529 prepaid tuition plans

Sponsored by the states—and one particular plan, which is sponsored by a group of independent colleges and universities across the United States—529 prepaid tuition plans allow you to lock in tuition rates for future education costs.

Using after-tax money, you purchase education contracts (for a specified number of semesters or years of tuition) or units (for a fixed percentage of tuition) for future use. You can contribute in a single lump sum or in installments.

When the student is ready to enroll in college, you can redeem the contracts or units to pay for qualified higher education expenses (generally, tuition and fees only). Like 529 college savings plans, the increased value of prepaid tuition plans is exempt from federal income tax if used to pay for qualified higher education expenses. Many states offer tax-deductible contributions for residents.

529 prepaid tuition plans

Pros

No income restrictions	You can invest in a plan no matter how much you earn.
Contribution certainty	By buying prepaid tuition contracts or units, you lock in future tuition costs. The purchase price depends on the age of the beneficiary and the type of payment (lump sum or installment).
State income tax deductibility	If you invest in your home state's plan, you may be able to deduct some or all of your contributions on your state income tax return.
Ability to change beneficiary	The account can be transferred at any time to a beneficiary who is an eligible family member of the original beneficiary.
Tax-free distributions	The account's value grows tax-free. Distributions are free from federal income tax if used to pay for qualified higher education expenses; however, many plans do not include room and board as allowable expenses. Distributions may also be free from state income tax, depending on your state's laws.
Minimal impact on federal financial aid	Plans are treated as an asset of the account owner equal to the refund value. If a parent or dependent student is the account owner, its value is assessed at the lower EFC parental rate of 5.64%. If a student who is not a dependent owns the account, the value is assessed at the higher EFC child rate of 20%. Qualified distributions from parent- or student-owned accounts are not counted as income. If a third party owns the account, the account's value has no effect on the EFC until the year after a distribution, when it is counted as untaxed income to the student.
Accelerated gift-tax benefit	You can contribute up to \$70,000 (five times the normal exclusion of \$14,000 per year) for each beneficiary without incurring the federal gift tax, so long as you don't make any other contributions or gifts to that beneficiary during that year or the following four years. Married persons filing jointly can contribute up to \$140,000 without being subject to gift tax.*
Estate tax benefit	Generally, the account value is not included in the donor's estate for tax purposes.*

Cons

Limited participation	Most plans require the owner and beneficiary to be residents of the state that offers the plan.
Inflexible age limit	Many plans include a time limit for distributions based on the date the beneficiary is likely to graduate from high school or enter college.
Limited contributions	Contribution limits vary and are set by the states.
Investment risk	Most plans are not government-guaranteed. A number have closed enrollments.
Potentially high expenses	Some plans charge high fees, including broker commissions and enrollment, transfer, and advisor fees.
Penalty if not used for higher education	The increased value of distributions not used for higher education is taxed at the recipient's federal income tax rate and may incur a 10% federal penalty tax.

*If you choose to take advantage of the accelerated gift-tax benefit and you die within five years, a prorated portion of the contribution may be subject to the estate tax. For more information, consult your tax advisor or estate planning attorney.

U.S. savings bonds

Two types of savings bonds—Series EE and Series I—offer special incentives to college savers.

Series EE bonds can be bought only electronically at [treasurydirect.gov](https://www.treasurydirect.gov) at face value and earn a fixed interest rate over 30 years. Series I bonds are the same except their interest rate has two parts: a fixed rate and a variable rate that's adjusted twice a year for inflation. Paper I bonds can still be purchased with IRS income tax refunds.

For both types of bonds, the principal is guaranteed and the interest earned may be completely or partially excluded from federal income tax when used to pay for qualified higher education expenses of a dependent. Also, the accrual amount is exempt from state and local income taxes, even if you decide not to use the money for education expenses.

You can purchase Series EE and electronic I savings bonds in increments of a penny from \$25 to \$10,000 (e.g., you could buy a bond for \$50.23).

The federal income tax exclusion

To qualify for the federal income tax exclusion on the earnings on savings bonds used for higher education, you as the bond owner must use the proceeds to pay for the qualified higher education expenses of yourself, your spouse, or an individual you can legally claim as a dependent on your tax return. If you are a grandparent or friend of the beneficiary, you generally will be unable to claim the exclusion. For more information, refer to IRS Publication 970, *Tax Benefits for Education*, or talk to your financial advisor.

Series EE and Series I U.S. savings bonds

Pros

Unlimited participation	Anyone can purchase bonds for a beneficiary.
No income restrictions	You can buy U.S. savings bonds no matter how much you earn.
Low investment risk	The bonds are government-guaranteed.
No fees or expenses	There is no cost to purchase the bonds.
High contribution limit	Individuals can purchase up to \$10,000 (\$20,000 if married and filing jointly) of each type of bond a year. An additional \$5,000 in paper I bonds can be purchased with IRS income tax refunds.
Ability to change beneficiary	You can change the beneficiary at any time for any reason.
Tax-free distributions	Earnings grow tax-deferred and are exempt from state and local income tax. Distributions may be free of federal income tax if used to pay for qualified higher education expenses for a dependent, but see "Tax-free distribution restrictions" below.
Flexible age limit	No restrictions on the age of the beneficiary, but see "Tax-free distribution restrictions" below for age requirement for the purchaser of savings bonds.
No penalty if not used for higher education	You can redeem the bonds for any reason from 1 to 30 years after purchase.
Minimal impact on federal financial aid	If a parent is the bond owner, the assets are assessed at the lower EFC parental rate of 5.64%. If the student owns the bond, the assets are assessed at the higher EFC child rate of 20%. If a third party owns the assets, the value has no effect on the EFC until the year after a distribution, when it is counted as untaxed income to the student.

Cons

No investment flexibility	Series EE and Series I U.S. savings bonds only.
Tax-free distribution restrictions	For distributions to be exempt from federal income tax, you must have been at least 24 years old when you bought the bond and the proceeds must be used for qualified higher education expenses for yourself, your spouse, or another dependent. Exempt distributions are reduced and gradually phased out for modified adjusted gross income for 2016 of between \$77,550 and \$92,550 if single, or between \$116,300 and \$146,300 if married and filing jointly. Also, unlike other savings options, books and room and board aren't considered to be qualified higher education expenses.
Impact on estate tax	Assets are included in the owner's estate.
Early-redemption penalty	You can redeem the bonds a year after purchase. However, you will forfeit three months of interest if you redeem the bonds within five years of their purchase.
No state income tax deductibility	Contributions cannot be deducted from state income tax.

Comparing college savings options

	Education savings account	529 college savings plan	UGMA/UTMA accounts
What you can do	Invest tax-free to pay for qualified expenses at any education level.	Invest tax-free for qualified higher education expenses.	Invest on behalf of a minor for any purpose.
Able to change beneficiaries?	Yes, with qualifications.	Yes, with qualifications.	No.
Controlled by	Parent or legal guardian of the beneficiary.	Account owner.	Custodian, until child reaches age of majority.
Federal financial-aid implications (percentage of account value that counts against financial aid each year)*	Parent or dependent student as owner: 5.64%. Student who is not a dependent as owner: 20%.	Parent or dependent student as owner: 5.64%. Another individual as owner: 0%, but treated as untaxed income to the student in the year after it's disbursed. Student who is not a dependent as owner: 20%.	Student considered owner: 20%.
Contributions state tax-deductible?	No.	Varies by state.	No.
State tax on earnings?	Varies by state.	Varies by state.	Generally, yes. Rate depends on child's age.
Federal tax on earnings portion of distributions?	No, if used for qualified education expenses.	No, if used for qualified higher education expenses.	Generally, yes. Rate depends on child's age.
Penalties for nonqualified distributions?	Federal income tax liability and usually a 10% penalty tax. State penalties vary.	Federal income tax liability and usually a 10% penalty tax. State penalties vary.	No.
Income limitations?	Yes (see page 9 for details).	No.	No.
Maximum contribution per beneficiary	\$2,000 per year.	Up to \$520,000, depending on state, but note that federal gift-tax rules apply.	None, but note that federal gift-tax rules apply.
Investment choices	Any noninsurance securities.	Portfolios consisting of a variety of securities.	UGMA: Mutual funds and securities. UTMA: Mutual funds, securities, real estate, patents, and paintings.
Estate planning consequences	Account values are generally excluded.	Contributions are generally removed from the donor's estate.**	Contributions are generally removed from the donor's estate unless the donor is the custodian.

*Educational institutions may apply different formulas to determine eligibility for financial aid. Thus, an asset not counted at the federal level may still be considered by the school.

**If you choose to take advantage of the accelerated gift-tax benefit available with 529 plans and you die within five years of making the gift, a prorated portion of the contribution will be subject to the estate tax. If you contribute up to \$70,000 (\$140,000 for married couples), you may prorate your gift over five years, provided you do not make any additional gifts during that time frame. You must file IRS Form 709, *United States Gift (and Generation-Skipping Transfer) Tax Return*, by the tax deadline of the year following your contribution. For more information, consult your tax advisor or estate planning attorney.

Individual mutual funds	529 prepaid tuition plans	Series EE and Series I U.S. savings bonds
Invest on behalf of a minor for any purpose.	Prepay all or part of tuition and fees, and sometimes room and board. Varies by state.	Earn returns that are guaranteed, though conservative for any purpose, but tuition and fees are the only expenses that qualify for tax breaks, which are subject to certain restrictions.
Yes.	Yes, with qualifications.	Yes.
Account owner.	Account owner.	Bond owner, who must be at least 24 at the time of the purchase to qualify for tax breaks.
Parent as owner: 5.64%. Student as owner: 20%. Another individual as owner: 0%, but treated as untaxed income to the student in the year after it's distributed.	Treated as an asset of the account owner equal to the refund value (parent or dependent student as owner is 5.64%; student who is not a dependent as owner is 20%; and another individual as owner is 0%). The value of qualified distributions are not counted as income except from third parties, when they are counted as untaxed income to the student in the year after they are made.	Parent as owner: 5.64%. Student as owner: 20%. Another individual as owner: 0%, but treated as untaxed income to the student in the year after it's distributed.
No.	Varies by state.	No.
Yes.	Varies by state.	No.
Yes.	No, if used for qualified higher education expenses.	No, if used for qualified higher education expenses, but there are restrictions.
No.	Federal income tax liability and usually a 10% penalty tax. State penalties vary.	No, but earnings not used for tuition or fees are subject to federal income tax, and three months of interest is forfeited if the bond is redeemed within the first five years.
No.	No.	No, but tax breaks on earnings used for qualified higher education expenses are reduced and then phased out at certain income thresholds.
None.	Varies by state and participating school, but note that federal gift-tax rules apply.	Individuals: \$10,000 per bond type per year. Married couples filing jointly: \$20,000 per bond type per year. An additional \$5,000 in paper I bonds can be purchased with IRS income tax refunds.
Mutual funds, including tax-exempt, index, and tax-managed funds.	Tuition units or contracts.	Series I and Series EE bonds.
Account remains in owner's estate.	Account values are generally excluded.**	Bond remains in owner's estate.

How will I pay for a child's college education?

For most people, financing a child's college education involves a combination of loans, grants, scholarships, work-study programs, personal savings, and possibly gifts from others. Keep in mind that, although you likely won't have to foot the entire bill yourself, a carefully considered savings plan is one of the best ways to help finance a child's education.

Loans

Numerous low-interest options are available for parents and students, including federal, state, and private loans, both subsidized and unsubsidized. Creditworthy parents, for example, can borrow up to the full cost of their children's college education through the Direct PLUS Loans Program.

But while loans help spread out the cost of college, and the interest may be deductible on federal income tax returns, relying mainly on loans can result in considerable debt for you and your student.

Grants and scholarships

Grants and scholarships,⁴ known as merit aid, are usually awarded for financial need; for outstanding academic, athletic, or artistic merit; or for a particular field of study. They're the preferred source of college funding because they don't have to be repaid.

While scholarships probably won't cover the whole bill, between the 2013–2014 academic year and the 2014–2015 academic year, grants increased from

⁴ If the beneficiary receives a grant or scholarship, you may withdraw money from a 529 account for noneducational purposes up to the amount of the grant or scholarship without incurring a 10% federal tax penalty. However, the earnings portion of the distribution is subject to applicable state and federal income taxes.



49% to 57% of all student financial aid. The average grant per full-time undergraduate student was more than \$8,000 in 2016–2017, according to the College Board.

Even so, every bit helps. Search databases such as finaid.org, college-scholarships.com, collegenet.com, and ed.gov to see if your student qualifies for any scholarships. Also, contact organizations you and your student belong to, as well as your student’s high school guidance counselor, for potential sources of merit aid.

Work-study programs

Once in college, many students help pay for tuition and living expenses by working part-time through the Federal Work-Study Program or through a college’s own employment program. These programs typically provide jobs for students with financial need. A student can generally apply for work-study assistance when applying for federal financial aid. The total award depends on when the student applies, level of need, skills required for the job, and funding level of the school.

Personal savings—your safest bet for financing college

Among the best ways to help children have the funds they'll need for college is through savings earmarked for education. Even investors who save small amounts can benefit from a systematic, long-term investment program. That's because the sooner you start to save, the longer the power of compounding has to work for you. The availability of tax-advantaged college savings options makes any delay in saving a missed opportunity for your money to grow. Any amount you save will lighten the burden in years to come.

Contributions from family and friends

Sometimes family and friends want to contribute to a child's higher education. With some limitations, all of the choices available to a student or parent are available to others.

For example, a family member or friend can contribute to a 529 college savings plan established by a parent (check with the plan to determine if contributions from individuals other than the account owner are allowed). The contribution can be substantial—up to \$520,000, depending on the state, while the effect on federal financial aid to the student can be modest—a decrease of 5.64%. And for the sake of federal gift-tax liability, any gift up to \$70,000 (\$140,000 for married couples) is prorated over five years, so

the giver incurs no gift or generation-skipping transfer tax, provided the giver makes no other gifts to the student during that five-year period.

Key financial issues

In formulating your college savings strategy, consider two key issues:

- **Taxes.** The more you pay in taxes, the less you'll have for college, so avoid choosing an investment that generates high taxes. Fortunately, every family today has the option to invest most or all its college savings in tax-free investments or in other vehicles that keep taxes down.

Because college investments can have many implications for federal and state income taxes, estate and inheritance taxes, gift taxes, and the generation-skipping transfer tax, consult your financial advisor or a tax advisor.

- **Account ownership.** As mentioned previously, the designated owner of a college savings account is important in the federal financial-aid formulas that are used to determine the EFC. Essentially, the formulas assume that a student should pay proportionately more than the parents toward a college education.

To determine the federal financial-aid implications of a particular college savings option, refer to the chart on pages 20 and 21.

On the other hand, if financial aid isn't a possibility, account ownership is no longer such a big factor. You may be more concerned about who controls how the money is invested and how it's spent. Some points to consider include whether the investment is taxable and whether you're eligible to contribute to a particular type of savings plan.

Account ownership

College investments can be owned by a parent, a child, or a family or nonfamily member. Who owns these assets and the earnings they produce can affect the amount of aid the student receives. Here's how account ownership is determined for federal financial-aid and tax purposes:

- **Student assets.** Custodial accounts established under UGMA/UTMA are considered the student's assets. Assets transferred from an UGMA/UTMA account to a 529 college savings plan remain the student's property. In addition, transferring assets from an UGMA/UTMA account requires that you sell the assets, so any profits could be taxable.

- **Parental assets.** A 529 college savings or prepaid tuition plan, an education savings account funded by a parent, or U.S. savings bonds are considered the parent's asset even if they name the student as beneficiary. Parents' nonretirement mutual fund accounts are also counted as parental assets.

A parent's retirement assets—Roth and traditional IRAs and employer-sponsored retirement plans—are not counted in federal financial-aid calculations. However, distributions from traditional and Roth IRAs are considered untaxed income in calculating the following year's EFC.

- **Other assets.** Grandparents, other relatives, and friends can hold the same 529 plan account assets, mutual funds, and U.S. savings bonds that parents hold (but do not get tax benefits for the earnings on U.S. savings bonds unless they can claim the student as a dependent). But those assets do not get counted in federal financial-aid calculations since they are not owned by the student or a parent. However, distributions are considered untaxed income to the student in calculating the following year's EFC.

Paying for college can become quite complicated, so consult with your financial advisor to determine the most effective course of action.

How should I structure my investment mix?

Your financial advisor will help you determine an investment mix that's right for your situation and will help you develop a plan for adjusting your mix to reduce risk over time.

Choosing an asset allocation

Unlike retirement horizons, your college savings horizon is short and fixed, because you'll likely need to withdraw all the assets during the years the student attends college. Your financial advisor will structure your investment mix among stocks, bonds, and short-term reserves based on the amount of time before you'll need to start taking distributions and your personal investment temperament.

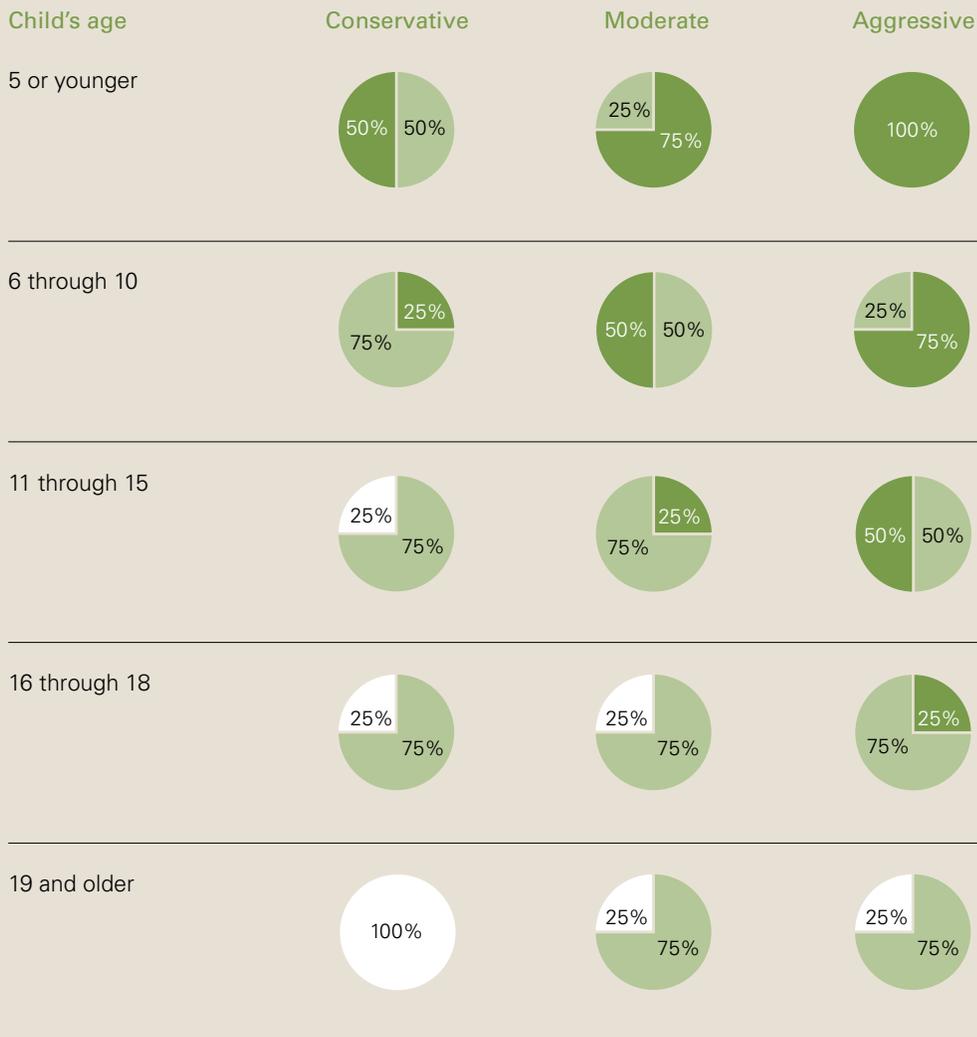
The chart on the next page gives examples of the kinds of investment mixes your financial advisor may recommend.

You may apply these allocations to the individual securities, mutual funds, or investment portfolios available through the college savings option you choose.

Because most individuals don't have the knowledge, time, or desire to manage a portfolio of individual securities, Vanguard suggests that you apply these allocations to college savings investments in mutual funds. If you choose an age-based option—such as those available through many 529 college savings plans—your investments will be automatically reallocated for you.

These asset allocations apply to your college investment portfolio in total. If you already have assets set aside for college and want to invest future contributions in one or more of the college savings options described in this booklet, you should ensure that your overall allocation matches the one that you determine is best for you.

Suggested asset allocations for college savings, by investment temperament



Note: Investments in stock and bond markets are subject to risk. You can lose money by investing.

■ Stocks ■ Bonds ■ Short-term reserves



Work with your financial advisor to develop a college savings plan that's right for you. The sooner you start, the less you may need to put away, because your assets will have more time to grow.







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