

# Kangpan & Co.

Engineered Wealth Strategies

## 529 Strategic Assessment

September 8, 2025

Thank you for this opportunity to partner together on optimizing your 529 Plans using our proprietary assessment. Our key findings and recommendations are as follows:

1. Your expected total cost of college for your two children is an inflation-adjusted \$917,661
2. You are on track to have only 40.3% of your total college expenses funded via your 529 Plan
3. To get to your target of having 70% of your total college expenses funded you must increase your yearly contributions from \$3,000 to \$7,390 and then further increase that amount by the corresponding yearly rate of educational inflation (historically 3.9% a year)
4. This optimized contribution plan is expected to net you an additional \$13,451 in tax benefits vs. your current strategy

The rest of this document will describe our recommendations and analyses in more detail across three main sections:

- I. Educational Cost Estimates
- II. Funding Strategies
- III. Understanding Tradeoffs & Opportunity Costs

It is important to note two things before you review our analyses and recommendations in detail.

First, our findings are based on assumptions made today for a future that is many years into the future. Minor changes in the markets, the cost of education, your funding strategy, or other financial circumstances can have a significant impact on these projections. We recommend we revisit this analysis regularly in the years to come in order to ensure we keep our models and projects up to date.

Second, we are not licensed accountants. Any tax-related analyses and strategies herein should be further reviewed and incorporated into your ongoing tax planning and filings by your accountant.

Please let us know if you have any follow-up questions or comments as you review.

Best,

*Nathaniel Kangpan*

Nathaniel Kangpan  
Founder and Lead Advisor

## I: Educational Cost Estimates

The expected total future cost of college for Child 1 and Child 2 will be \$917,661 according to the assumptions below. The expected cost for Child 1 is \$441,285 while the expected cost for Child 2 is \$476,376. The difference is due to the additional two years of educational inflation between when Child 1 starts college and when Child 2 starts college. For our base scenario we have not assumed any college scholarships.

Model Assumptions:

- Average Total Yearly Cost of 4yr Private College Today<sup>1</sup> = \$58,628
- Inflation Rate<sup>2</sup> = 3.9%
- Years Until 4yr Private College for Child 1 = 15
- Years Until 4yr Private College for Child 2 = 17
- Scholarships = \$0

### References

1. <https://educationdata.org/average-cost-of-college>
2. Yearly increase in four year private college costs from 2000 to 2022 via <https://www.bestcolleges.com/research/college-tuition-inflation-statistics/>

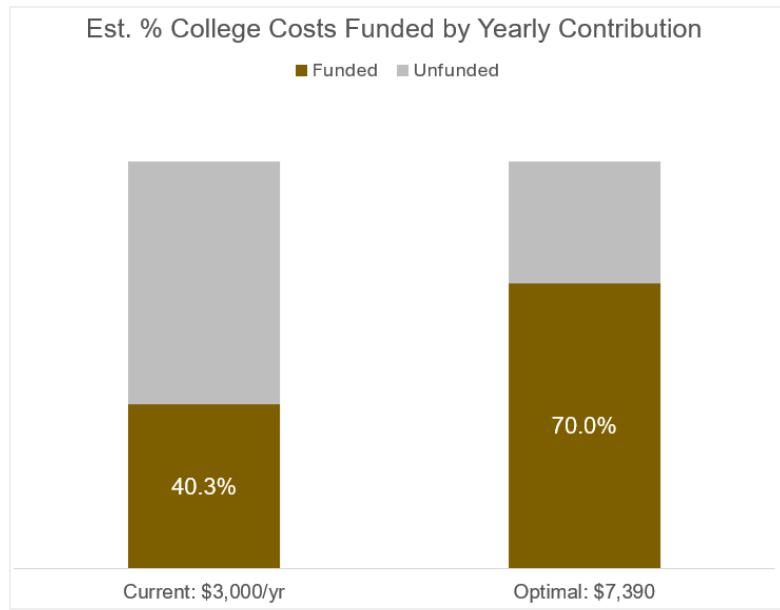
## II: Funding Strategies

You are currently on track to have 40.3% of your college costs funded via your 529 plans.

Model Assumptions:

- Total Value of 529 Plans Today = \$54,301
- Yearly Contribution Today = \$3,000
- Increase Yearly Contributions by Inflation = Yes
- Yearly Contribution Ending Year = 20
- Equity Allocation in 529 = 80%
- Yearly Equity Return = 9.0%
- Bond Allocation in 529 = 20%
- Yearly Bond Return = 4.0%

Based on our discussions you expressed a desire to target having 70% of total college costs funded by your 529 plans. This leaves some buffer for scholarships and loans while minimizing the risk of significant overfunding and associated opportunity costs (see *Section III: Tradeoffs & Opportunity Costs*). In order to reach this goal you must increase your yearly contributions to \$7,390 per year starting this year and then increasing each year by the yearly cost of educational inflation.



Below is a chart showing your 529 plan values by year along with associated expected contributions, investment returns, and college costs following this revised strategy. Note, the figures below are shown in thousands and the years increment by five until 2040 when your first child begins college.

Year	2025	2030	2035	2040	2041	2042	2043	2044	2045
<i>529 Plan Starting Value</i>	54.3	130.1	252.1	444.2	389.8	327.6	144.4	0.0	0.0
<i>529 Plan Contributions</i>	7.4	8.9	10.8	13.1	13.6	14.2	14.7	15.3	15.9
<i>Investment Returns</i>	4.9	11.1	21.0	36.6	32.3	27.3	12.7	1.2	1.3
<i>College Costs</i>	0.0	0.0	0.0	104.1	108.1	224.7	233.5	121.3	126.0

### III: Understanding Tradeoffs & Opportunity Costs

In addition to helping you determine the optimal funding path for your 529 needs, we also wanted to help you understand the benefits and tradeoffs you are realizing as a result of your contribution plan along with a few scenarios to help inform your ongoing strategy.

#### Benefits | Tax Savings

One of the primary benefits of 529 Plans are the associated favorable tax treatments. For your family based in PA these are as follows:

- Within PA, up to \$38,000 a year of contributions can be deducted from your state taxes
- Funds grow without Federal taxes on capital gains, dividend, and interest

Based on tax assumptions below, your current scenario of contributing \$3,000 a year and adjusting for inflation each year would let you realize \$18,821 in total tax savings over the life of your 529 Plan assuming all your funds are used for college expenses.

The optimized scenario of contributing \$7,390 per year and adjusting for inflation each year will save you \$32,272 in taxes over the same timeframe. This is a difference of \$13,451.

*Model Assumptions:*

- Federal Income Tax Rate = 30%
- State Income Tax Rate = 3.07%
- Long Term Cap Gains Tax Rate = 20%
- Equity Dividend Tax Rate = 15%
- Bond Distribution Tax Rate = 25%
- % Portfolio Reallocated Yearly = 1.0%

Opportunity Costs

*Underfunding*

The portion that remains unfunded represents lost tax savings opportunities. With your optimized scenario, we are targeting 70% funding. That means \$275,236 of your expected \$917,661 college costs will not be funded by your 529 Plans. Assuming you are paying the remainder from taxable accounts (rather than scholarships), you would be missing out on an additional \$17,806 in tax benefits if you had been fully funded or \$64.69 for every \$1,000 you are underfunded.

*Overfunding*

Dollar per dollar, overfunding could represent a greater cost to your family than being underfunded. When funds in a 529 Plan are used for non-qualified expenses, the portion of the account that represents investment gains:

- Is taxed at your federal and state income tax rates
- Receives an additional 10% penalty

At your current combined state and federal taxable income rate of 33.07% plus a 10% penalty every dollar you are overfunded could represent \$430.70 in taxes and penalties for every \$1,000 remaining in your 529 Plans.



We do not feel you are currently at risk of being substantially overfunded. However, if you do end up overfunded or feel you are on track to be overfunded in the future, there are several steps you can take to reduce the potential consequences including:

- Rolling over up to \$35,000 into a Roth IRA designated for the beneficiary of the 529 Plan
- Using funds for qualified K-12 expenses
- Changing the beneficiary of the 529 Plan

There are other options available as well that we can discuss should you ever have the need to evaluate these alternative paths. This is not a recommendation to pursue any of these steps without speaking further to us or another qualified financial advisor as each of these options has additional considerations that need to be taken into account in order to be properly implemented.

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Additional Disclosures:

- Data utilized in this analysis has been obtained from sources believed to be reliable but is not guaranteed as to accuracy or completeness. There may be errors or omissions in the datasets we utilize or the methodologies we have followed. We reserve the right to restate or revise research methodology and findings in the future.
- This paper is not a standalone implementation guide and should not be followed without the continued advice and guidance of a licensed advisor.
- Past performance is not indicative of future results. Any results shown are hypothetical or backtested performance. Unlike actual performance records, hypothetical or backtested results do not represent actual trading or results for any specific individual. The modeled results may have under- or over-compensated for the impact, if any, of certain market factors, such as lack of liquidity and the deduction of any advisory fees, trading costs, or taxes. No representation is being made that any account will or is likely to achieve profits or losses similar to those shown. Investing involves risks including the permanent loss of capital.