



How to Build Wealth in Your 401(k)

THE TRAMPOLINE EFFECT

The trampoline effect is the accelerated growth in a consistent saver's portfolio over the 12 months prior to achieving their wealth target if investing in a diversified stock portfolio. *The trampoline effect* applies whether one's wealth target is to save 4, 8, 12, 24 or more times salary. One's portfolio trampolines or increases in value approximately 30% in the 12 months prior to achieving a wealth target. For example, if one's wealth target is to save 10 times salary and the annual salary is \$13, the wealth target is \$130. *The trampoline effect* tells us that on average, the portfolio was worth \$100 just 12 months ago.

The trampoline effect argues, at a minimum, for a 100% allocation of one's retirement plan portfolio to a diversified low cost stock index fund as the sole investment alternative within one's retirement plan. Because stock index funds are tax efficient, *the trampoline effect* is a viable savings approach with non-retirement plan assets as well. Select momentum strategies can provide even better results than the single allocation to a diversified low cost stock index fund if the participant so chooses and the plan options permit it. Furthermore, risk minimization techniques such as the implementation of a 12-month moving average crossover trading system matches the benefits of *the trampoline effect* with approximately half the risk as measured by maximum drawdown as well as percentage loss of salary.

The trampoline effect argues for this 100% allocation at all times until one reaches the individual's desired wealth target. **Specifically it means investments such as Target Dated Funds or the inclusion of fixed income asset classes are inferior alternatives until one reaches their wealth target.** It also argues against diversification and rebalancing while on your wealth journey assuming reaching your wealth target the fastest way possible is your wealth goal.

The trampoline effect works because of the volatility of the stock market. **While volatility is the enemy of a stock portfolio that distributes**

income, it is the best friend of a portfolio accumulating capital. A study of the period from 1900 through 2015 using Total Return US Stock Market data obtained from the database provided by Professor Robert Schiller shows the compounded annual growth rate for the 116 year period studied at 9.63%.

The trampoline effect assumes that a consistent saver or plan participant starts with no money and wants to reach a wealth target based on a multiple of their inflation-adjusted salary. This saver invests 10% of their salary every month into just one investment and it mimics the returns in the Schiller database. We tested for periods where the saver starts their wealth journey in 1900, then in 1901, then in 1902, then in 1903, etc. What we found is remarkable. We found that on average, the consistent saver reached an arbitrary wealth target faster than if they were to have achieved a guaranteed 9.63% return every year. This is not intuitive. This means, given a choice, participants should elect a volatile return vs. the same guaranteed return. **Furthermore, they reached their wealth target significantly faster than the participant that invested in Target Dated Funds or employed a diversified and rebalanced 60% stock and 40% bond allocation.**

The trampoline effect is not well known. It's power lies in letting the individual saver or plan participant set sail on their wealth journey with the knowledge that at some far off date, they will reach their wealth target in the midst of a stock market bull market and will be able to cash out or reduce risk at an opportune time if they so desire. The goal of saving money today is to convert it to income later. This means the saver must have a target, plan or goal and once they reach that target, they can decide to continue or reduce risk. *The trampoline effect* has no usefulness unless one combines it with a target. The sooner one reaches the wealth target the better and the method with the fastest way possible, though not in every instance, is through a 100% allocation to a diversified portfolio of stocks. **Low cost stock index funds are readily available in most employer sponsored retirement plans and should be considered.**

The trampoline effect is a powerful weapon because it lets the participant "time the market." They don't "time it" in the traditional sense of trading into and out of stocks. They "time it" based on their long-term goals and target wealth levels. The hope is once a person reaches their wealth target, they might and many will consider a once in a generational shift to reduce risk and thus implement some level of diversification or other risk

reduction techniques. As participants travel on their wealth journey, they will know today that they will be able to one day, “time the stock market before it times them.”

The following table shows the results of the most common investment strategies within most employer sponsored retirement plans, *the trampoline effect* and other options.

THE TRAMPOLINE EFFECT VS. ALTERNATIVE STRATEGIES TO ACHIEVE A WEALTH TARGET

(The wealth target is eight times one’s salary)

DESCRIPTION — SAVE 10% OUT OF EVERY PAYCHECK	MONTHS REQUIRED TO ACHIEVE AN 8 TIMES SALARY WEALTH TARGET	PERCENTAGE GROWTH IN CAPITAL IN THE 12 MONTHS PRIOR TO ACHIEVING AN 8 TIMES SALARY WEALTH TARGET
<i>The Trampoline Effect</i> — A 100% allocation to a diversified portfolio of stocks until the wealth target is achieved	254	28.94%
Target Dated Funds — Glide Path Strategy	290	16.97%
60/40 Rebalanced — Risk Based Strategy	306	17.66%
Guaranteed Annual Return of 9.63%	269	9.63%
12 Month Moving Average	254	27.93%
Random Number	264	28.09%

The table has significant implications for retirement plan sponsors as well as participants.

If a participant starts with no money, the fastest way to reach a wealth target is to embrace *the trampoline effect* by contributing all of your savings into a diversified portfolio of stocks. Once you have taken the plunge, there is no need to pay attention or incur ill-advised fees for the next 15 years or so because it takes time to achieve a realistic salary wealth target. **Simply stated, retirement plan sponsors have a duty to explain the implications of checking one box versus another in their retirement plan options.**

As the table clearly shows, on average, *the trampoline effect* achieves the wealth target in 254 months. This is much sooner than an investment in a Target Dated Fund or in a traditional 60/40 diversified and rebalanced portfolio. Please note, the study assumes no fees for any option. If the significant incremental fees associated with Target Dated Funds and traditional 60/40 portfolios were included *the trampoline effect* shines even brighter.

The table also examines a comparison of *the trampoline effect* to three other potential options. In the first, we examine a hypothetical fixed rate of 9.63% and see that on average it takes longer to achieve a wealth target at a fixed rate of 9.63% than with the same variable rate. The reason is due to *the trampoline effect*. A fixed return grows at 9.63% every year so it can only grow at 9.63% in the 12 months prior to achieving a wealth target. However, a variable rate grows at 28.94% in the last 12 months. The second comparison is to a basic trading model where the participant owns a diversified portfolio of stocks only when the price of that portfolio is trading above its 12-month moving average. This is the superior investment because the investor achieves the wealth target with a lower standard deviation and approximately half the maximum drawdown or percentage loss of salary vs. the “always in” strategy. In addition, we see it also takes advantage of *the trampoline effect* because it averages 27.93% in the last 12 months. Lastly, we looked at a random sample. This is to determine if *the trampoline effect* is robust. An often-cited criticism of studies such as this is associated with serial correlation or the belief that price at time t affects price at time $t+1$. While we believe serial correlation exists and is the basis of momentum investing, we tested to see what happens with a random sample. As shown, *the trampoline effect* is robust. Capital grew at 28.09% in the 12 months prior to achieving the wealth target---serial correlation does not matter.

The assumptions made to test for Target Dated Funds assumed a 25-year horizon. We assumed an initial allocation of 90% to stocks in years 0 through 5, followed by an 82% allocation in years 5-10, a 75% allocation in years 10-15, a 66% allocation in years 15-20, a 60% allocation in years 20-25 and a 50% allocation thereafter. The credited rate of return was 3% annualized when not invested in stocks for both the Target Dated Funds as well as for the 60/40 portfolio. The 12 month moving average trading system assumed a 0% interest rate when “out” of stocks.

If you want further information, feel free to contact us at **Financial Tales**. We would be glad to share our insights and details of the study.