The Magic of Compound Interest

UPDATE 6/27/22: I don't want to harp on cryptocurrency speculators. They've been through a lot lately and not much of it good. The news that Three Arrows Capital, a Singapore-based cryptocurrency hedge fund is at risk of defaulting on $675 million in loans must be pretty terrifying for the crypto market. During all their time speculating on the newest technological innovation, crypto investors ignored the one magical power available to them, compound interest. Now, investors in Three Arrows are at risk of losing everything. *Baystreet* reports on the firm's imminent collapse:

> *Singapore-based Three Arrows is one of the largest and most prominent cryptocurrency hedge funds. But it is facing a liquidity and solvency issue as billions of dollars have been wiped off the cryptocurrency market in recent weeks as prices for Bitcoin (BTC), Ethereum (ETH), and other digital assets have plunged.*
>
> *Voyager Digital (VOYG), a cryptocurrency brokerage firm, lent Three Arrows 15,250 Bitcoins and $350 million of the stablecoin USDC, totaling $675 million U.S. The entire loan is due to be paid back today (June 27).*
>
> *None of the loan has been repaid yet, Voyager said last week, adding that it may issue a "notice of default" if Three Arrows does not pay the money back.*
>
> *Voyager, which is listed on the Toronto Stock Exchange, has seen its shares fall 95% this year.*
>
> *Three Arrows Capital was established in 2012. The onset of a so-called "crypto winter" has hurt digital currencies and related companies across the board in recent weeks.*

Originally posted April 5, 2022.

Back in 1964, I began a lifelong mission as a disciple of compound interest investing. In those earliest days, home base was Clayton Securities at 147 Milk St. in Boston’s financial district.

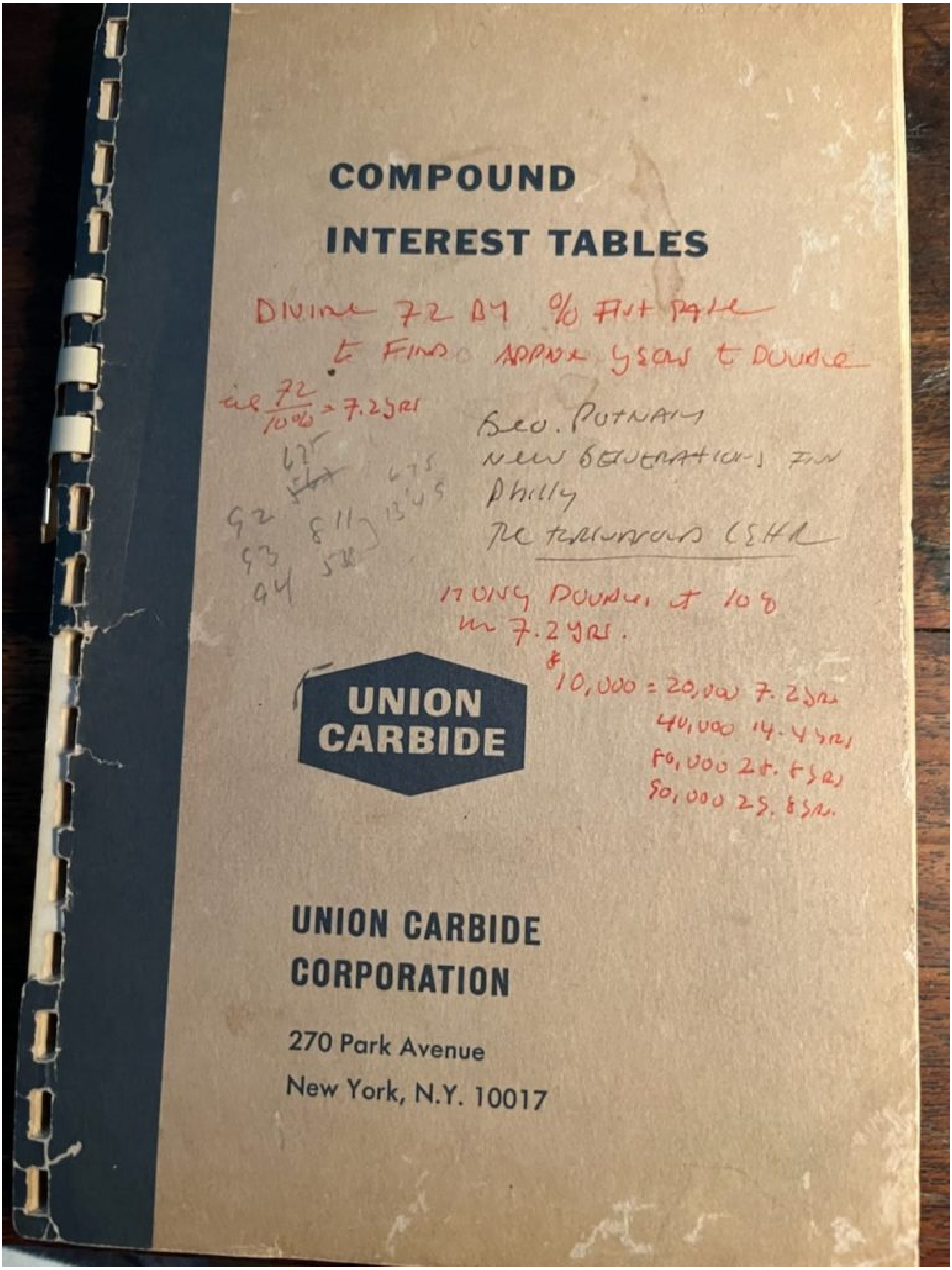
By 1971 I had gotten into institutional trading and research with Model, Roland & Co. on Federal Street. My first accounts were Fidelity Investments and Wellington Management.

Today, over 50 years have somehow flown by, and I am still doing business, a whole lot of it, daily with Fidelity (my family investment firm’s custodian) and Wellington (my own account’s largest positions).

Wellington, for its part, manages billions of dollars in client assets for Vanguard. In the late 80s and early 90s, my friends at Vanguard let me know that my newsletter was responsible for directing more assets Vanguard’s way than the rest of the newsletter industry combined.

Jack Bogle, the founder of Vanguard, was a friend of mine from Jack’s days at Wellington., Jack provided the key testimonial for my first book.

The focus and foundation for my five-decade adventure has been rooted in one little phrase: ***compound interest***. The accompanying photo is my tattered little Union Carbide spiral booklet.



In 1992, Debbie and I bought a little pink Conch cottage in Old

Town, Key West, just 90 miles from Cuba. Our son Matt has been our president since, and our daughter Becky is our chief financial officer. E.J. (Your Survival Guy), our son-in-law, after a valued internship with Fidelity, is director of client services.

I continue to research and write seven days a week on behalf of our firm's clients. Debbie and I still live in Key West, and we do a lot of our research in the 8th arrondissement of Paris. The six-hour time difference works to our favor in getting material to our editorial staff back in Newport, RI.

Thanks to one basic concept – *compound interest* – I have been able to comfortably and with astounding consistency plot the course for our ultra-conservative, balanced investment firm for over five decades.

You can bet that Debbie and I were pretty proud when our son Matt recently called to tell us that *Barron's* had informed him that he had been selected to Barron's Hall of Fame (2012-2022), while *CNBC* had just ranked our modest investment management firm #5 in America (2021) out of more than 14,800 registered investment companies. I guess when all is considered, there is a lot of good that be said about compound interest, consistency, and the value of the Prudent Man Rule. Disclosure

As they say, "It works for me."

Dick Young
Old Town Key West
5 April 2022
90 miles from Cuba

Marry Compound Interest, Divorce Market Timing

Update 2.22.2021: The Dow Jones Industrial Average Index closed at 31,494.32.

Originally posted August 3, 2018.

This week a long-time reader contacted me looking for some insight he could pass along to his children about the dangers of market timing. I've written on the topic many times over the years and wanted to share something he might find compelling. In April of 1996, I wrote about how three of Wall Street's bright minds had completely failed while attempting to make market timing predictions about the future of the Dow Jones Industrial Index. Back then my advice was—as it is now—marry compound interest, divorce market timing. I wrote:

> *Market timing is a bankrupt strategy whose time has never come. The following three market predictions will alarm you. (Keep in mind, the Dow is now over 5500!) (1) On 24 February 1995, from the head of a major Wall Street investment management firm, "We won't materially break 4000 until well into the next millennium." (2) On the same date, from the head of institutional equities at a major brokerage firm, "Dow 5000 is not going to happen in my lifetime." He's still alive as far as I know. (3) On 25 May 1995, from a well-known market cycles technician, "This high (Dow) represents a gift last-chance selling opportunity (Dow 4500) before the big bear growls at the Dow. We expect the largest decline in stock prices since 1990." Each of these forecasts was a disaster, of course, and cost followers of this advice a bundle in missed opportunity.*
>
> *I have never in 32 years of investing suffered so much as one*

> *significant loss—not one. This is because I invest for the long term keyed to harnessing the awesome power of compound interest. The key to Warren Buffett's long-term success has been buying easy-to-understand companies with unmatchable franchises and holding for the long term to allow the miracle of compound interest to do its work. If you marry compound interest and divorce market timing, you will find prosperity beyond your wildest dreams. If I can help you in only one way in your personal investing, it is to first and foremost harness the awesome power of compound interest through low-turnover, low-cost, long-term investing.*

By the end of 1996 the Dow was trading well above 6400 and has never fallen below 6000 again. The market timers' predictions were completely wrong. Building a strategy based on compound interest and regular streams of income in your portfolio was absolutely right.

Ken, I hope that helps, and thanks for all the years of loyalty. After over five decades I haven't changed my investing strategy, and I hope you won't either if you're investing along with me.

Miss This Investing Concept to Your Everlasting Sorrow

Lack of patience, more than anything else, hamstrings investors in their pursuit of profits. I wrote in July 2004 that impatiently trading in and out of equities with no eye toward compound interest will bring investors everlasting sorrow.

> ***Compound Interest and You***

Here's a compound interest story that should help you and your spouse. Let's assume a hypothetical $10,000 investment with a 7% annual return for 20 years. Investor A draws the 7% ($700) each year for living expenses. At the end of 20 years, the original $10,000 in capital remains in place, and $14,000 in simple interest has been drawn for living expenses. The end value in capital and interest drawn is $24,000. Now let's assume hypothetical Investor B invests the same $10,000 at the same 7%, but draws nothing and simply let's the money compound for 20 years. Well, $10,000 compounded at 7% for 20 years has an end value of $38,696. You will see that $14,696 ($28,696 – $14,000) represents interest on interest. Over half of the long-term total return for Investor B reflects interest on interest. Unfortunately, compound interest is not a concept that is well understood by most investors.

To their everlasting sorrow, most investors not only lack a basic knowledge of compound interest, but also lack patience and dividend/interest religion. Many are greedy, trade way too often, and are in debt. For the record, I have no debt. I buy for cash. I have never employed margin and tend to own the investments I make for a long, long time.

Retired and soon to be retired investors should place their confidence in the unmatched power of compound interest.

How Pennies Can Win the War

Back in January of 1987, Ronald Reagan gave a State of the Union address in which he lamented the brutal war being waged by the Soviet Union on the people of Afghanistan. Behind the scenes though, Reagan was operating what has become popularly known as

"Charlie Wilson's War."

Reagan and his supporters in Congress, including Charlie Wilson, were sending Stinger missiles to the Afghans fighting against the Soviets. Those missiles cost pennies on the dollar compared to the Soviet MI-24 Hind gunships they were used to target with a lethal 79% successful kill rate.

The mere pennies the U.S. was spending on the war against the Soviets really added up. The massive cost of the war was a major contributing factor to the eventual breakup of the USSR.

The same month Reagan gave his address, I was writing to subscribers to encourage them to realize the value of their hard-earned pennies.

That month I wrote:

> *I've told you about the vital importance of dividends and compound interest. At a 10% return, money doubles in only seven years. One member of the highly successful Rothschild family referred to compound interest as the eighth wonder of the world.*
>
> *I'll always remember Bob Rose's historic note in The Wall Street Journal a while back. Bob wrote, "Early in the last century, an English astronomer, Francis Baily, figured that a British penny invested at an annual compound interest of 5% at the birth of Christ would have yielded enough gold by 1810 to fill 357 million earths."*

When put into terms of earths worth of gold, it is easy to see the value of compounding. All the mined gold in the world today would fit into a 68-foot cube. The idea of 357 million earths volume of gold is incomprehensible, but it makes the point Baily was getting at. A small investment can generate a powerful return.

At the end of his speech, Reagan told the American people “my fellow citizens, America isn’t finished. Her best days have just begun.” It was true. American went on to win the Cold War, becoming the undisputed most powerful nation on earth. It all started with an investment of what seemed like pennies in Afghanistan.

If you harvest the power of compound interest, your best investing days have just begun as well.

The Most Important Thing in Investing

Back in 2006 I was celebrating 20 years of writing *Intelligence Report*. Debbie and I were in Vermont, and had just visited Vermont’s Authentic Designs to purchase lighting fixtures. The shop uses 150 year-old machines to manufacture colonial and early American lighting fixtures. There, on one of the machines for all the craftsmen to see was taped a sign that read “Simple is Sophisticated.”

After reading that taped up sign in Vermont all those years ago, I adopted “Simple is Sophisticated,” as a personal mantra to keep me focused on the essential elements of my investment strategy. The most fundamental of these, and the one I have employed to the greatest benefit to myself, and hopefully to you if you have been a subscriber or client, is compound interest. Below you will read the story of how I have employed compound interest to the benefit of my grandchildren, and how you can do the same. I wrote back in May of 2006:

> ***Rich as Croesus***

I want you to begin on your quest for sophistication through simplicity by focusing laser-like on compound interest. Here is an amazing story. I call it my grandchildren's "rich as Croesus" strategy. (Croesus was the last king of Lydia from 560–547 B.C.)

When each of my four grandchildren was born, I opened accounts for them at Vanguard's TaxManaged Growth & Income fund. Each year, I deposit $10,000 (and yes, I know you can now give away $11,000/year tax-free). The money is invested with little in the way of long-term tax implications. Let me show you how compound interest works its magic.

Gettin' Rich Slowly

If you invest for a compounded rate of return of 10%, it's easy to think that your long-term return would be twice the return gained by investing at 5%. That is not the case–not by a long shot. Let's take a long-term look here, for that is my intention with my grandchildren. Investing $10,000 at 5% for 50 years gives them $115,000–a staggering sum, to be sure. But at 10%, $10,000 grows to a mind-boggling $1,174,000 (that's million). Double the growth rate to 20% (admittedly unrealistic, but useful in this example), your $10,000 would become a stratospheric $91 million (over 77 times the return). And you thought you understood compound interest?

You and Counterbalancing

As noted, a 20% annual return year after year is unrealistic. But you can achieve really terrific success, most conservatively, by counterbalancing your portfolio with fixed-income and common stocks. …

In 1989, the editors of Fortune published an article headed, "A Low Risk Path to Profits" profiling Loews Corp. money manager Joseph Rosenberg. Fortune noted that J.R. believed so

> *fervently in the awesome power of compound interest that he carried a compound interest table in his pocket at all times. Sayeth J.R., "It is the most important thing in investing." As the article noted, it's foolish to undermine the power of compounding by taking big risks that kick you out of the game.*

As Rosenberg noted then, compound interest "is the most important thing in investing." If you want to succeed as an investor for your family, your grandchildren, or yourself, stay focused on the simple, yet sophisticated strategies that really make a difference.

Dividends are Vital. The Reason Why Is Compound Interest

Why are dividends important? Because they allow the power of compound interest to work for you. I was speaking with a client yesterday who is in the process of helping his children establish Roth IRAs. I told him it's amazing how just getting in the game can do wonders for one's financial well-being: Imagine what this will look like in 50-years. Remember, just the process of starting an investment puts you or a loved one light years ahead of those bogged down and doing nothing at all.

Take a look below at the power of compound interest. An investor who makes eight annual contributions starting at age 25 and then makes no more will end up at age 64 with $227,390 at an assumed growth rate of 9%. Meanwhile, another investor who skips those eight contributions early in life and begins investing later at

33 and makes annual contributions each year until age 64 will end up with only $214,560 that year (assuming the same 9% growth rate). That’s the power of compounding.

Originally posted March 24, 2017.

THE POWER OF COMPOUND INTEREST

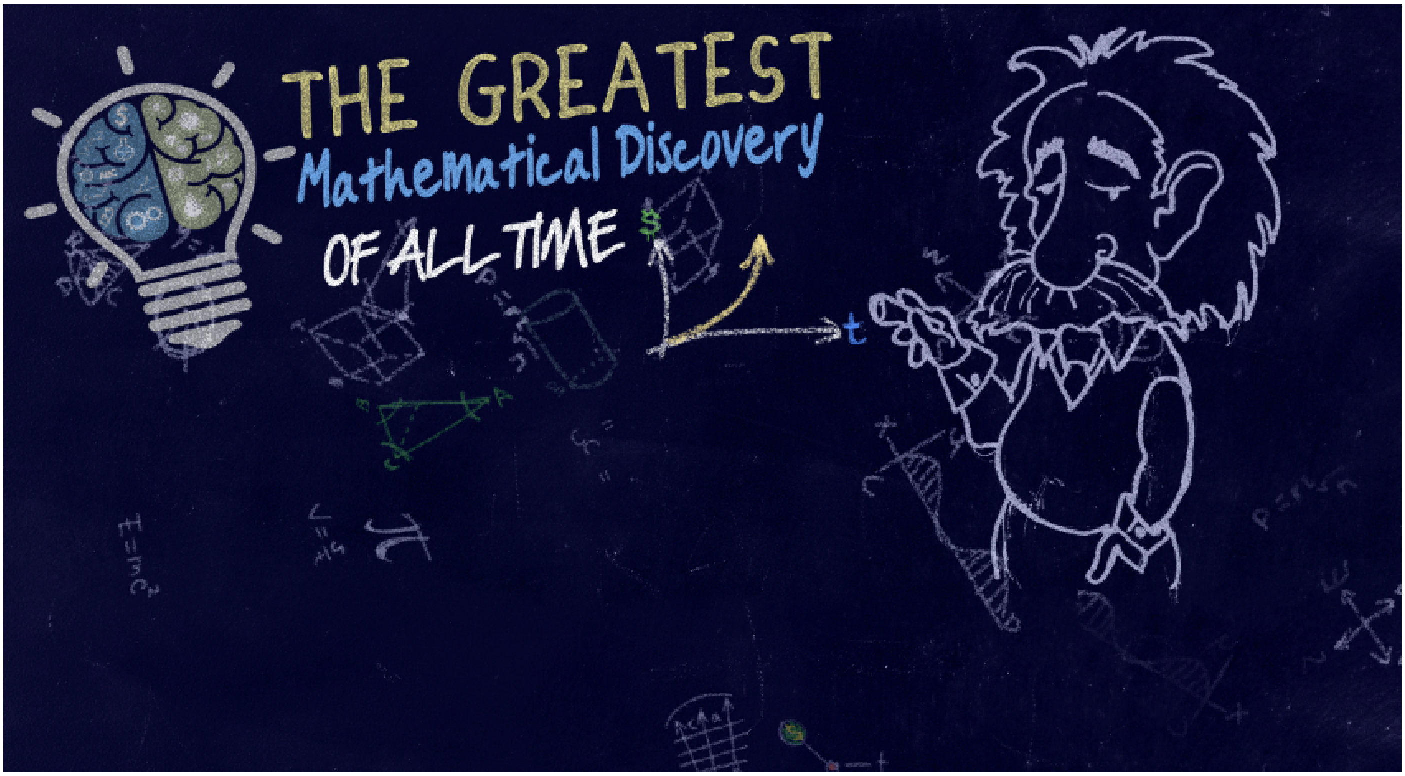
Get A Head Start To Retirement!

Assumed growth rate of 9%.

HYPOTHETICAL INVESTOR #1			HYPOTHETICAL INVESTOR #2		
AGE	ANNUAL CONTRIBUTION	YEAR-END ACCOUNT BALANCE	AGE	ANNUAL CONTRIBUTION	YEAR-END ACCOUNT BALANCE
25	$1,200	$1,308	25	$0	$0
26	$1,200	$2,734	26	$0	$0
27	$1,200	$4,288	27	$0	$0
28	$1,200	$5,982	28	$0	$0
29	$1,200	$7,828	29	$0	$0
30	$1,200	$9,841	30	$0	$0
31	$1,200	$12,034	31	$0	$0
32	$1,200	$14,425	32	$0	$0
33	$0	$15,724	33	$1200	$1,308
34	$0	$17,139	34	$1200	$2,734
35	$0	$18,681	35	$1200	$4,288
36	$0	$20,362	36	$1200	$5,982
37	$0	$22,195	37	$1200	$7,828
38	$0	$24,193	38	$1200	$9,841
39	$0	$26,370	39	$1200	$12,034
40	$0	$28,743	40	$1200	$14,425
41	$0	$31,330	41	$1200	$17,032
42	$0	$34,150	42	$1200	$19,872
43	$0	$37,223	43	$1200	$22,969
44	$0	$40,573	44	$1200	$26,344
45	$0	$44,225	45	$1200	$30,023
46	$0	$48,205	46	$1200	$34,033
47	$0	$52,544	47	$1200	$38,404
48	$0	$57,273	48	$1200	$43,168
49	$0	$62,427	49	$1200	$48,362
50	$0	$68,046	50	$1200	$54,022
51	$0	$74,170	51	$1200	$60,192
52	$0	$80,845	52	$1200	$66,917
53	$0	$88,121	53	$1200	$74,248
54	$0	$96,052	54	$1200	$82,238
55	$0	$104,697	55	$1200	$90,948
56	$0	$114,119	56	$1200	$100,441
57	$0	$124,390	57	$1200	$110,789
58	$0	$135,585	58	$1200	$122,068
59	$0	$147,788	59	$1200	$134,362
60	$0	$161,089	60	$1200	$147,762
61	$0	$175,587	61	$1200	$162,369
62	$0	$191,389	62	$1200	$178,290
63	$0	$208,615	63	$1200	$195,644
64	$0	$227,390	64	$1200	$214,560

	Investor #1	Investor #2
TOTAL CONTRIBUTIONS:	**$ 9,600**	**$ 38,400**
TOTAL EARNINGS:	**$ 217,790**	**$ 176,160**
FINAL ACCOUNT BALANCE:	**$ 227,390**	**$ 214,560**

The Power of a Compound Interest Table



Compound interest was described as the greatest mathematical discovery of all time by Albert Einstein. Compound interest “Tis the stone that will turn all of your lead into gold,” according to Benjamin Franklin. The late great Richard Russell explained compound interest as the royal road to riches. Below I’ll explain this powerful investment tool and show you how to read a compound interest table.

Compound interest is the heart and soul of investing. Investors lacking a solid grounding in compounding are more likely to suffer from a wandering eye. They can be inclined to favor Hail Mary tactics in their investment portfolios, where the goal of every buy is score big and fast (think options and cash burning startups). The downsides of such an approach are 1.) it rarely works and 2.) loads of volatility. In contrast, investors who truly understand and appreciate the awesome power of compound interest recognize that the combination of time and modest return is a better path to investment prosperity.

Compound Interest Table Still Best

It may surprise you, but in an industry with massive computing power, where algorithmic trading and quantitative models are now prolific, the best way to truly master the awesome power of compounding is still to study an old fashioned compound interest table.

A compound interest table gives you a sense of just how powerful compounding can be at varying rates of return and over varying time horizons. Sure, you can use a calculator or an Excel spreadsheet to find the future value of an investment, but that single data point doesn’t do compound interest justice. Studying the array of compounding factors and how they increase with respect to time and rate of return leaves an indelible mark on one’s mind.

To emphasize the power of compounding, we have included a compound interest table below.

Reading a Compound Interest Table

Move down each column on the compound interest table to see the effect of time on the multiplier. Move across each row on the compound interest table to see the effects of changing the rate of return. Take a look at the row that starts with the 20-year time-horizon. Now move across to the 5% annual rate of return column. Note the compounding factor of 2.65. If you invested $10,000 at a 5% interest rate for 20 years you would have $26,500.

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ounding factor of 6.73. That same $10,000 at a 10% compounded annual return wo uld be worth $67,300 after 20 years. The return doubled, but your ending weal th more than doubled. Now double the return again. At a 20% annual rate of return

$10,000 then becomes a whopping $383,400 after 20 years. The returned double d again, but you're your ending wealth would have increased by a factor of almo

st
6!

That is profound! And that is the awesome power of compound interest.

For an expanded printer-friendly version of our compound interest table that can be handed out to the kids and/or grand kids click here for a compound interest table.

Compound Interest Table

Future Value of $1 at the end of n periods: FVIF k,i = (1+i) n where n= number of periods, i = rate of return

wdt_ID	Period	5%	7%	10%	16%	20%
1	1	1.0500	1.0700	1.1000	1.1600	1.2000
2	2	1.1000	1.1400	1.2100	1.3500	1.4400
3	3	1.1600	1.2300	1.3300	1.5600	1.7300
4	4	1.2200	1.3100	1.4600	1.8100	2.0700
5	5	1.2800	1.4000	1.6100	2.1000	2.4900
6	6	1.3400	1.5000	1.7700	2.4400	2.9900
7	7	1.4100	1.6100	1.9500	2.8300	3.5800
8	8	1.4800	1.7200	2.1400	3.2800	4.3000
9	9	1.5500	1.8400	2.3600	3.8000	5.1600
10	10	1.6300	1.9700	2.5900	4.4100	6.1900

The Power of Compound Interest

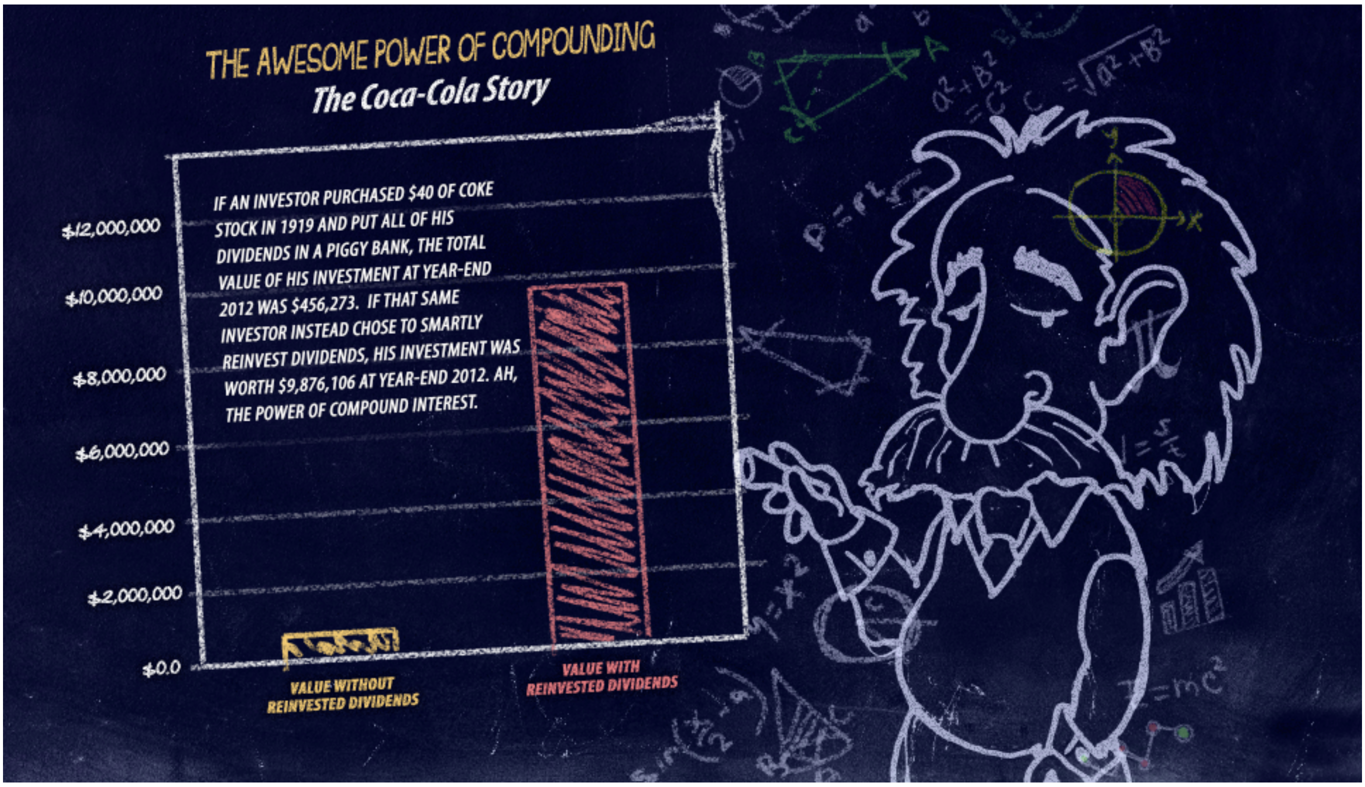


Image Credits: ©Steve Schneider – Youngresearch.com

Making money with your money is a no-brainer. Take a look at the difference in returns between two $40 investments in Coca-Cola in 1919. One had dividends put into a piggy bank. The other had dividends reinvested. Without reinvesting, the initial $40 investment grew to $456,273 by 2012. With dividends reinvested, the value increased to $9,876,106. That's a difference of over 2060%. That's the power of compound interest.

A Sleep Well(esley) at Night Fund


Image Credits: © VadimGuzhva – Adobestock.com

You can be sure that 90% of what you read about retirement investing is either (A) not very helpful or (B) confusing. Yet there are some simple solutions and tools to use that are helpful and easy to understand. One of them is a fund to which I recently made a sizable contribution. But first let's look at the dismal reality of the 401(k), which most baby boomers will depend on in retirement.

Your 401(k) isn't worth as much as you think it is. That's because at age 70½ you need to begin making annual withdrawals based on an IRS life expectancy table and pay taxes at your ordinary income rate, not at the lower capital gains rate. What's more, there's a good chance you'll live longer than the IRS life expectancy, ensuring that your entire balance will have been subjected to income taxes well before you die. Isn't that uplifting?

How about giving your money to the government today? That’s what you’ll do by converting to a Roth IRA. If you’re in your prime earning years, you’ll pay taxes at your highest tax bracket. What’s scarier is that after conversion, some investors may think it’s time to get even more aggressive since they’ll never owe taxes on the gains. This is retirement money we’re talking about. You’re no longer a teenager. If you lose it, you don’t have forever to make it back.

You should begin investing for retirement the day you’re born. Most investors start way too late. It’s up to parents and grandparents to get involved with educating children about money. Help them start today. Don’t let them grow up believing the way to riches is playing poker on ESPN.

You need to save until it hurts. How about refinancing to a 15-year mortgage? Or if that isn’t an option due to high closing costs or being too far underwater on your existing 30-year, how about making larger payments? The real-estate market as a supplement to your retirement left the station in 2008.

In 1968, it wasn’t out of the realm of possibilities to be able to buy your home for an amount equivalent to your annual income. Nowadays, in Newport, Rhode Island, for example, even after the crash, it’s difficult to find a home for sale for less than $300,000. If you earn $50,000 per year, that’s six times your income. Why not consider renting and see if you can handle the monthly payments before locking yourself into something you may not be able to afford?

Here’s my number one recommendation for do-it-yourself investors. Keep your investments simple: buy two or three mutual funds and call it a day. Don’t listen to your stockbroker. They’re salesmen, and very good ones at that, but they’re not investors. They may be nice people, but they don’t know how to build your wealth.

I recently bought the Vanguard Wellesley fund for my family because it embodies what investing is all about. It is a balanced fund with roughly 60% in bonds and 40% in equities. It was down only 9.8% in 2008, compared to a loss of 38% in the S&P 500. Investing math is simple: if you lose 9.8%, you only need a gain of 10.9% to get back to square one, whereas if you lose 38%, you need a gain of 61.3%.

At the core of Wellesley is compound interest. Anyone who knows anything about investing understands the importance of compound interest. Warren Buffet’s right-hand man, Charlie Munger, sings its praises, and Albert Einstein referred to it as the Eighth Wonder of the World. If you compound $10,000 at 6% for a year, you’ll have $10,600; compound that at 6% and at the end of year two you’ll have $11,236, and after 60 years it will be $300,000. Do this for a loved one and he or she will *never* forget you.

So where are we today in terms of valuations for bonds and stocks? Add the yield on the three-month T-bill and the Dow Jones Industrial Average yield to find out. Historically, retirees could purchase T-bills with a yield somewhere between 5% and 6% and forget about stocks. They could be comfortable in retirement with the risk-free rate of return and the full-faith-and-credit pledge of the U.S. government. And historically, the Dow yielded between 3% and 4%.

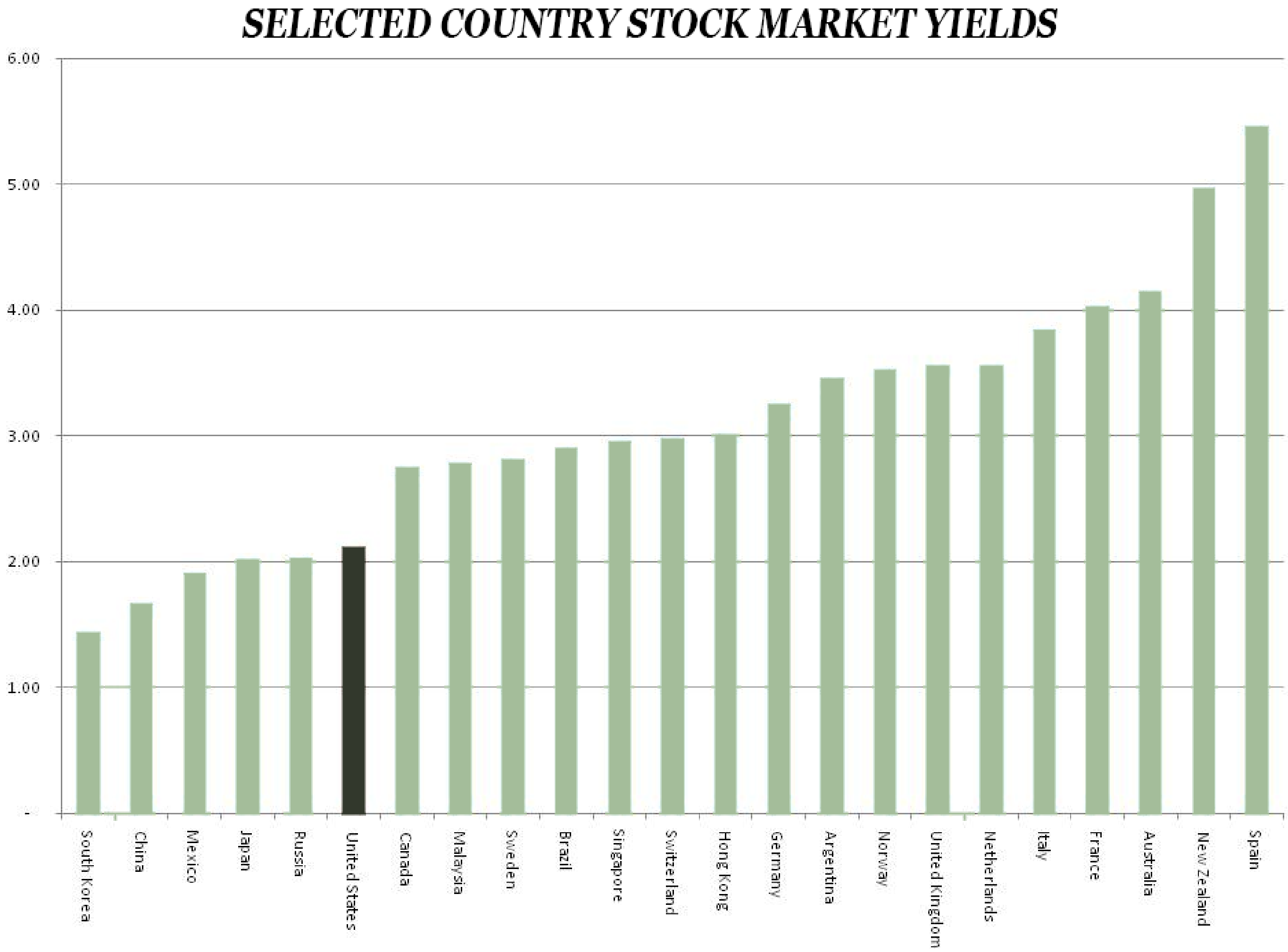
A solid number for the sum of the yields on T-bills and the Dow has been around 9%. Today, with T-bills yielding a pathetic 0.13% and the Dow yielding a measly (post-crash, mind you) 2.41%, you have a sum of 2.54%. Not good at all. Write this number on a stamp and put it on your fridge.

All you need is your postage stamp, the definition of compound interest on a three-by-five card, and the Vanguard Wellesley prospectus. Use the tools I outlined above, open an account for yourself, your kids or your grandkids, and your family will be on the right path to retirement riches.

Need Yield?

Do you invest in stocks for income? Is your portfolio focused primarily on U.S. stocks? If so, you might consider diversifying globally. The dividend yield on the U.S. stock market is one of the lowest yields in the world. In the chart below, I show the yields of 23 of the world's major stock markets. The dividend yield on U.S. stocks is only 2.11%, compared to an average of 3.09% and a high of 5.45% in Spain. The U.S. is the sixth-lowest-yielding stock market in the group. If you invest in stocks for dividends or income, a global approach is advisable.

When you take a global approach to dividend investing it is possible to craft a portfolio that is better diversified across industries than a U.S.-only portfolio. Take the U.S. oil and gas industry as an example. Oil and gas production is a capital-intensive business. In the U.S., the independent oil and gas companies fund their capital expansion projects primarily with internally generated funds. After capital expenditures, there is often not much cash left for dividend payments. But in a country like Canada, there are oil and gas production companies that offer high dividend yields—in some cases yields north of 5%. How do the Canadian oil and gas companies pay such high dividends? Instead of funding capital expansion plans with internally generated funds, they tap the capital markets. For income-oriented investors, the strategy has appeal.



In *Young Research's Global Investment Strategy*, we advise high-yielding international stocks that you're unlikely to find in any other investment strategy report. We also cover special situations, global fixed-income markets, and commodities and currencies. If you are not now a subscriber, please join us.