

### 3 Investing Principles For the Stock Market Crash Ahead – Investing Losses, Investing Mistakes & Investing Probabilities

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#### Stocks and stock markets crash

Before investing, you must know that stocks can crash 70% anytime and 50% of individual stocks will likely deliver negative returns or below 2% while 75% will underperform the market. If you are not ready for that, better don't invest in stocks! It is that simple!

It is not about whether there is going to be a crash next, it is about what are you going to do when a crash comes and are you ready if stocks don't crash.

I have looked at research that shows how investors underperform the market by trying to time a stock market crash and about how difficult it is to time it. The key is that you see how does the possibility and magnitude of a crash fit your tolerance. Stocks can crash 70% anytime and stay down for decades - are you ready for that?

When it comes to individual stocks, the situation gets uglier. 30% of individual stocks will crash and actually deliver negative returns. Only 4% of stocks will do really great and compound! Can you handle the pain of investing in stocks?

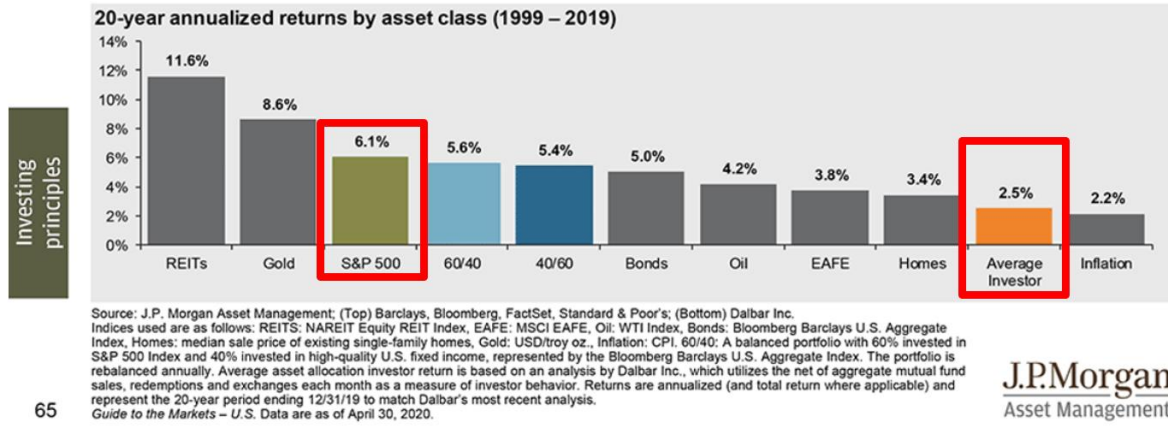
If you can't, I don't know, buy a house!

Whenever the stock market is crashing, I am reading many emotional comments. That is normal and naturally human. Whenever a stock crashes that I discussed, I read many comments of what an idiot I am. Both things are natural, but we have to stay rational. In this article I'll explain what investing is by discussing:

- How stocks markets can crash anytime, stay down for long and how it is up to you!
- How most stocks deliver poor returns and even if you get only 4 out of 10 right, you are a genius!
- How to approach investing from a probabilistic rational perspective.
- I'll add just a bit of good news to end it all.

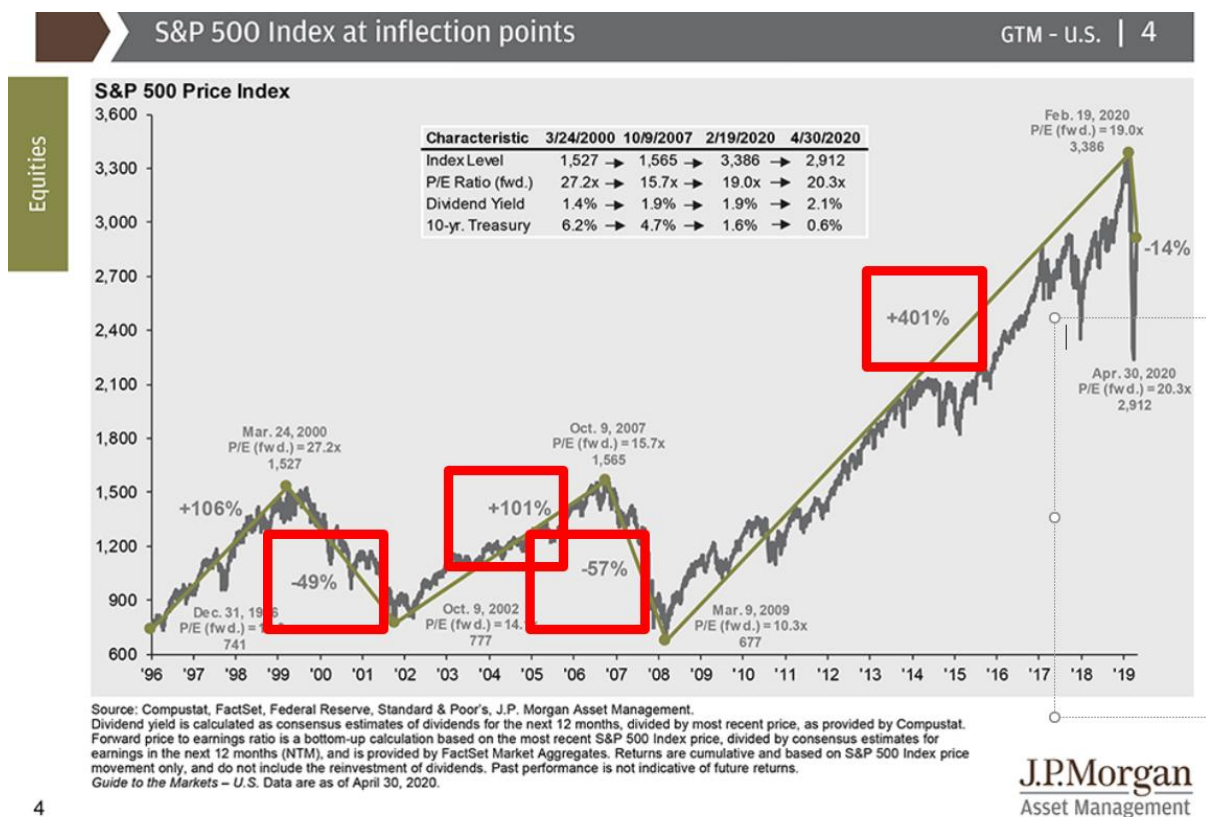
Stock market crashes, rationality and investing outcomes

Emotions don't keep you rational and can therefore lead to many mistakes that don't have to happen. I wish to share 3 investing principles that will help you avoid the mistakes the average investor made over the last 20 years. Mistakes that got him a return of just 2.5% per year while the S&P 500 achieved 6.6%.



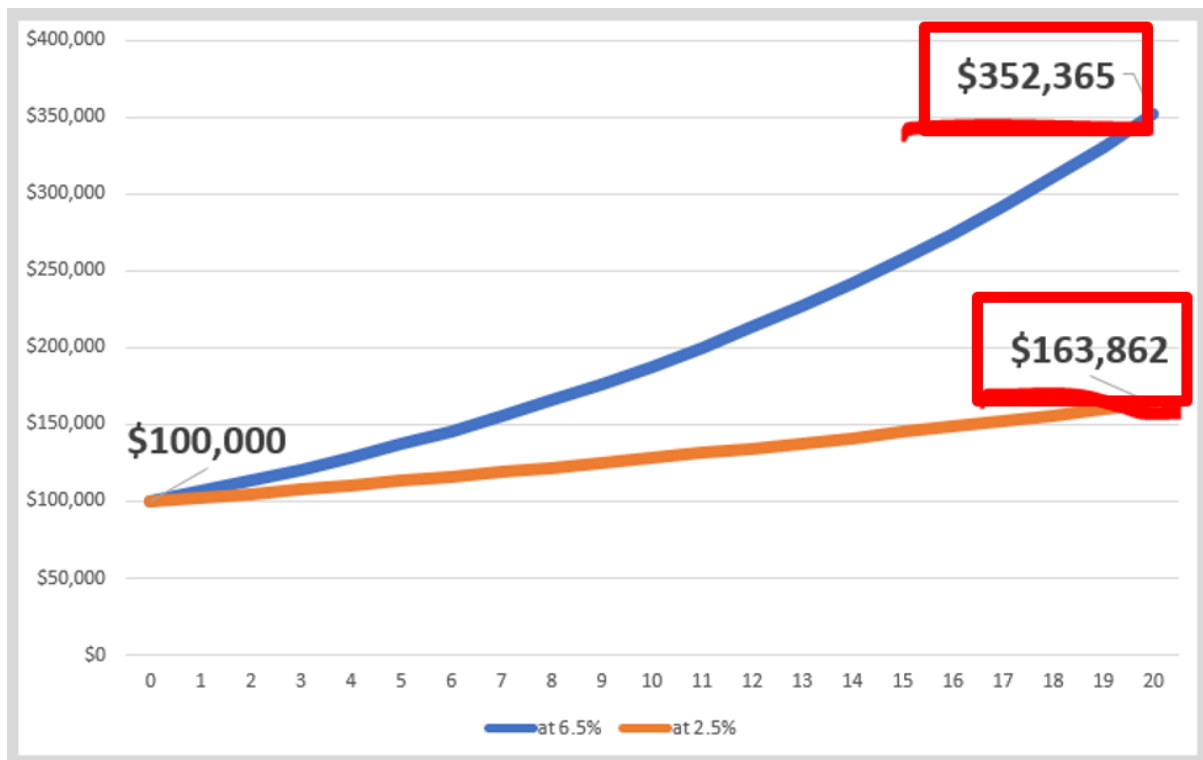
Average yearly investing returns per asset class - Source: [J.P.Morgan](https://www.jpmorgan.com)

Over the last 20 years, the market had two bear markets and two bull markets. The two bear markets were approximately 50% down and the latest bull market was one of the best in history.



All in all, the market went up 6.6% per year. How come the average investor got only 2.5% per year?

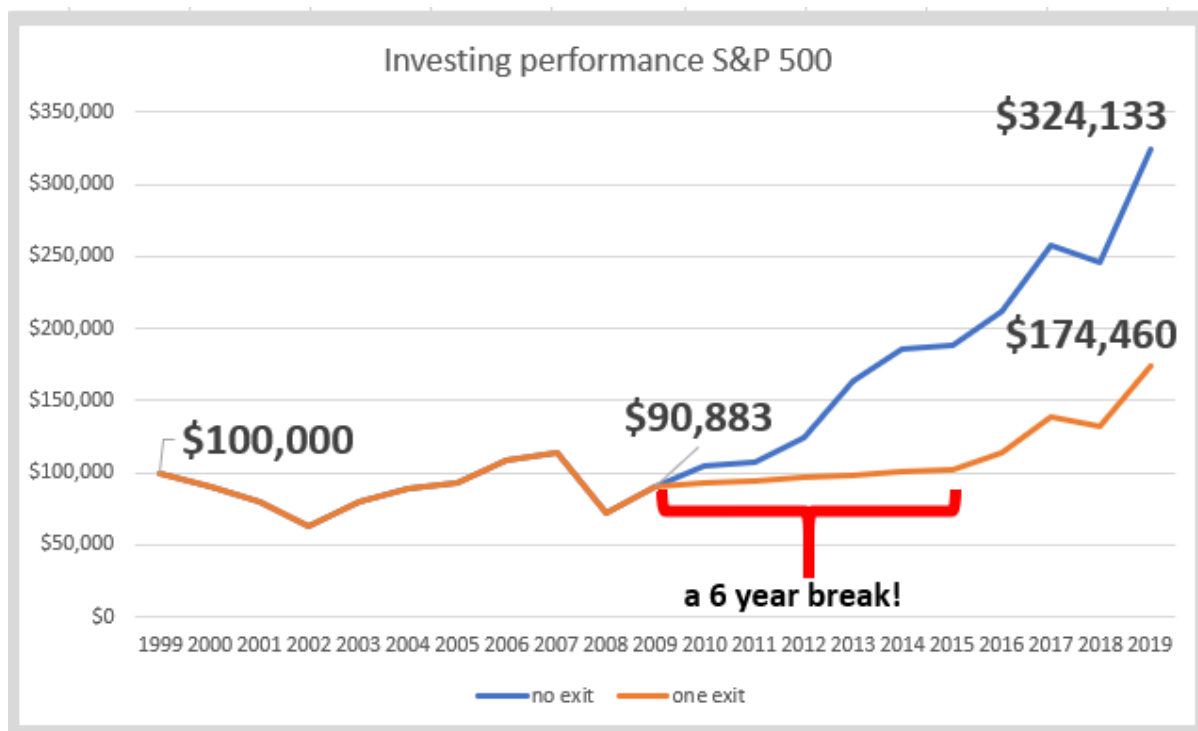
Let's say you have a \$100k portfolio, at 6.5% over 20 years it becomes \$352k while at 2.5% it reaches just \$163k. The difference is staggering and extremely significant.



The reason behind the underperformance is because most do the wrong thing at the wrong moment in time! This means buying too much in exuberance when stocks are high and selling in panic when it seems like the world is about to end. On a side note, it is funny how it seems the world is about to end every few years. The decision making is usually related to emotions and therefore we have to know what might happen and more importantly, know what will we do about it.

To paraphrase Ray Dalio: **Every asset class will likely go down 70% once or twice in our life time!**

This is such an important principle to understand before investing. From 2000 to 2002 and from 2007 to 2009, the market fell 50%. Many couldn't handle the volatility and sold in October 2008 or March 2009. When the situation stabilized, the double dip recession was off the table, they probably got back in around 2014. Unfortunately, the market timing experiment maybe saved their nerves, but it cost them more than 50% of the cumulative portfolio returns as shown in the chart below!



Even if somebody sold in 2005 and got back in in 2012, thus avoided the 2009 crash, the returns would still be below the market’s return. This shows how difficult it is to time the market in a profitable way.



Now, why would you time the market? Well, people time the market if their investment goals aren’t aligned with what investing in stocks can deliver.

If you are afraid your portfolio will go down more because the news is terrible, because you don't want to see your wealth evaporate, then you will likely sell at the wrong moment in time like many did.

So, the key principle here is that you have to be able to tolerate a 70% decline in the markets! If you can't, you better not be invested in stocks. This is the likely process:

- **Stocks down 10% - it is a correction, it will likely pass**
- **Stocks down 20% - ok, a recession, stocks will recover**
- **Stocks down 30% - hm, this is getting dangerous, what should I do, I can't risk my retirement**
- **Stocks down 40% - bad news, this will get worse, I better sell and protect what I have**
- **Stocks down 41% - market bottom and bull market ahead!**

By being ready to see your portfolio go down 70%, you can keep adding when stocks are cheaper instead of selling in panic. This would actually allow you to have a return that is higher than the market's return from an absolute wealth making perspective.

When can a crash happen and how long it might take for the recovery? Nobody knows! Stocks can recover in a few years or it might take decades!



The Dow – Courtesy of [Mohnish Pabrai](#)

It is also possible for stocks to deliver 0 returns over periods of 12 years or even 25 years! Keep that in mind when investing and based on how much you invest in stock!

I know that my portfolio can crash 50% or more at any given time. Even Warren Buffett's BRK stock crashed more than 40% on average ever 12 years since 1968.

## Berkshire's Performance vs. the S&amp;P 500

Year	Annual Percentage Change	
	in Per-Share Market Value of Berkshire	in S&P 500 with Dividends Included
1965	49.5	10.0
1966	(3.4)	(11.7)
1967	13.3	30.9
1968	77.8	11.0
1969	19.4	(8.4)
1970	(4.6)	3.9
1971	80.5	14.6
1972	8.1	18.9
1973	(2.5)	(14.8)
1974	(48.7)	(26.4)
1975	20.2	37.2
1976	129.3	23.6
1977	46.8	(7.4)
1978	14.5	6.4
1979	102.5	18.2
1980	32.8	32.3
1981	31.8	(5.0)
1982	38.4	21.4
1983	69.0	22.4
1984	(2.7)	6.1
1985	93.7	31.6
1986	14.2	18.6
1987	4.6	5.1
1989	84.6	31.7
1990	(23.1)	(3.1)
1991	22.7	11.7
1992	29.8	7.6
1993	38.9	10.1
1994	25.0	1.3
1995	57.4	37.6
1996	6.2	23.0
1997	34.9	33.4
1998	52.2	28.6
1999	(19.9)	21.0
2000	26.6	(0.1)
2001	6.5	(11.9)
2002	(3.8)	(22.1)
2003	15.8	28.7
2004	4.3	10.9
2005	0.8	4.9
2006	24.1	15.8
2007	28.7	5.5
2008	(31.8)	(37.0)
2010	21.4	15.1
2011	(4.7)	2.1
2012	16.8	16.0
2013	32.7	32.4
2014	27.0	13.7
2015	(12.5)	1.4
2017	21.9	21.8
2018	2.8	(4.4)
2019	11.0	31.5
Compounded Annual Gain – 1965-2019	20.3%	10.0%
Overall Gain – 1964-2019	2,744,062%	19,784%

Note: Data are for calendar years with these exceptions: 1965 and 1966, year ended 9/30; 1967, 15 months ended 12/31.

Yearly changes in BRK's market value – top tick to bottom tick changes were much bigger –  
Source: [Berkshire letter to shareholders](#)

Predicting crashes is too risky, therefore the only thing we can do is accept it as a possibility, or even better, a certainty, and when it happens make the correct decision. It also gives you a good perspective on how much money to invest in stocks. With all the money I have invested in stocks, I can easily tolerate a 50 to 70% decline. I know it will happen sometimes and I know that hedging against it is usually too expensive for me to do on a constant basis. So, I accept it and adjust my strategy to that.

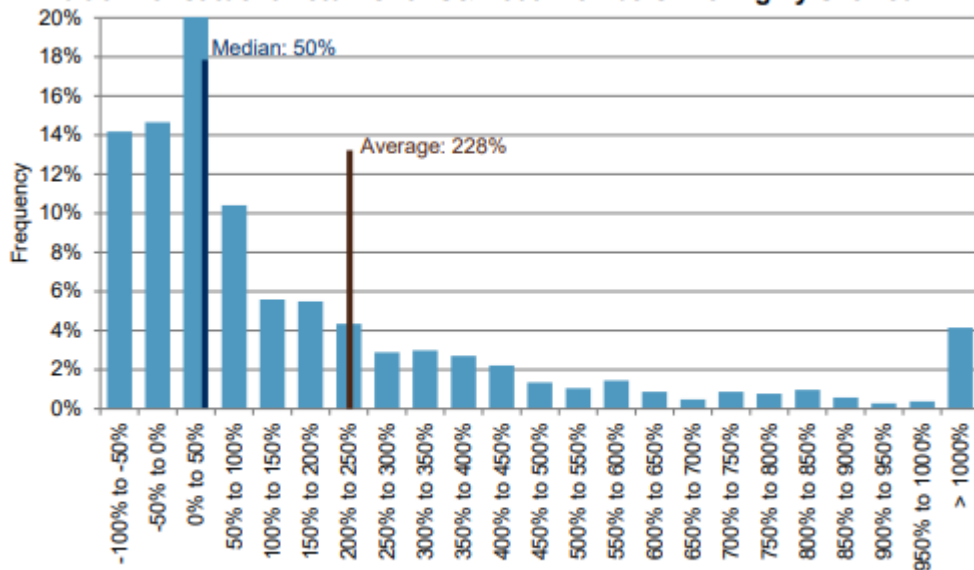
If you invest in individual stocks, the situation is even worse!

Individual stocks crash even more – investing outcomes

When you own the market, you own a bit of everything, but when you own individual stocks, there is where the fun begins.

If we take a look at the distribution of returns from 1997 to 2017 for all the constituents of the S&P 500, the actual median return was just 50%, that is just 2% annualized. The average total return was 228% and that is just because a few companies delivered staggering returns.

**Exhibit 6: Constituent Returns for S&P 500 Members Are Highly Skewed**



Source: S&P Dow Jones Indices LLC, FactSet. Data from Dec. 31, 1997, to Dec. 29, 2017. Past performance is no guarantee of future results. Chart is provided for illustrative purposes.

Many losers, few winners – Source: [Spindices](#)

14% of stocks delivered negative returns between 50% and 100%, 15% between negative 50% and 0% while 20% delivered returns between 0% and positive 50%. Thus, 50% of S&P 500 stocks delivered returns below 2% per year.

On top of the 50% that delivered very poor returns, another 26% didn't beat the market over 20 years, thus a total of 76% of stocks don't beat the market.

If you invest in individual stocks, 7.6 out of 10 investments are likely to be losers. That is something crucial to comprehend when investing in stocks!

The thing is that the 24% likely winners will cover for all the losers. So, if you are an investor, you have to be happy if you have less than 7.6 losers out of 10 investments!

If you get 4 right and have 6 losers, you are a great investor, if you get 5 right, you are at Warren Buffett levels and if you get 6 right, you will go down in history as the best investor that ever lived.

According to research by Hendrik Bessembinder with his [Journal of Financial Economics](#) [article](#) on stocks and Treasuries performance, only 4% of the stocks since 1926 explain all the

positive returns the stock market delivered since then. The other 96% of stocks performed as Treasury bills.




## Journal of Financial Economics

Volume 129, Issue 3, September 2018, Pages 440-457



# Do stocks outperform Treasury bills? ☆

Hendrik Bessembinder 

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<https://doi.org/10.1016/j.jfineco.2018.06.004>

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## Abstract

The majority of common stocks that have appeared in the Center for Research in Security Prices (CRSP) database since 1926 have lifetime buy-and-hold returns less than one-month Treasuries. **When stated in terms of lifetime dollar wealth creation, the best-performing 4% of listed companies explain the net gain for the entire US stock market since 1926, as other stocks collectively matched Treasury bills.** These results highlight the important role of positive **skewness** in the distribution of individual **stock returns**, attributable to skewness in monthly returns and to the effects of compounding. The results help to explain why poorly diversified active strategies most often underperform market averages.

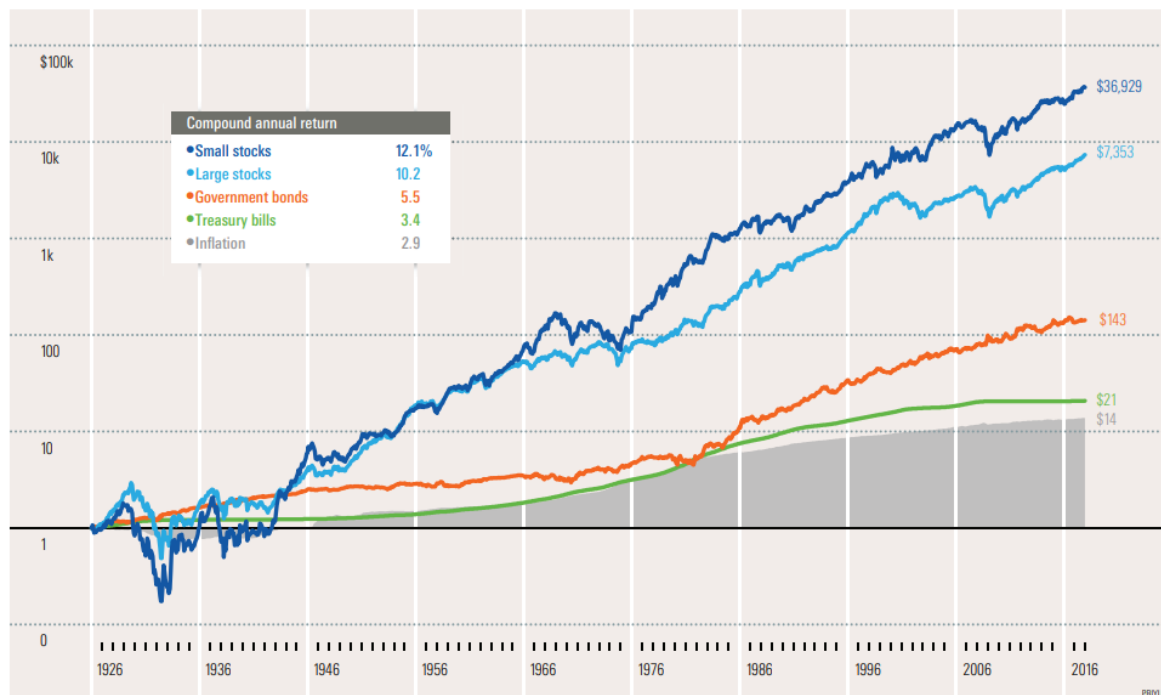
Source: [Science direct](#)

The difference is again staggering! \$1 dollar invested in the market would now be measured in thousands for owning stocks, while it would be just \$21 dollars for owning Treasury bills or the 96% of stocks that didn't do well.



Ibbotson® S&amp;P®

Stocks, Bonds, Bills, and Inflation 1926–2017



Past performance is no guarantee of future results. Hypothetical value of \$1 invested at the beginning of 1926. Assumes reinvestment of income and no transaction costs or taxes. This is for illustrative purposes only and not indicative of any investment. An investment cannot be made directly in an index. ©2018 Morningstar, Inc. All Rights Reserved.

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Comparative returns – stocks, bonds and inflation - Source: [Morningstar](https://www.morningstar.com)

Morale of the story – when investing, you’ll make many mistakes, the trick is to water the flowers and not the weeds. So, don’t feel bad if 6 out of 10 stocks in your portfolio are losers, stick to the winners, that is where you will get your returns.

Accepting mistakes is a must – simply put it into a statistical framework. That is also what I do that allows me to survive all the comments of how big an idiot I am when a stock that I discuss or own goes down significantly. I can guarantee you I’ll make many mistakes, if I can get 5 out of 10 right, that will deliver an amazing return!

I have another example from Europe using Eurostoxx 50 index between 2004 and 2020. The average annual return was 4.8% and, in this case on a smaller sample and shorter period with only one crash, 50% of stocks underperformed. Still, with 5 out of 10 mistakes, you would still do good! Keep in mind this is a 15-year period, the longer the period, the larger the discrepancy between winners and losers.

**Table 1. Shareholder return. December 2004-April 30, 2020***Source of the raw data: Datastream*

	Until 30april2020	Annualized return	Total return		Until 30april2020	Annualized return	Total return
1	ASML HOLDING	23,3%	2393%	32	CRH (DUB)	6,0%	146%
2	KERING	16,6%	950%	33	SIEMENS	5,4%	125%
3	DEUTSCHE BOERSE	16,4%	931%	34	VIVENDI	4,6%	100%
4	LVMH	15,7%	840%	35	DEUTSCHE TELEKOM	4,1%	85%
5	ADIDAS	15,1%	765%	36	AXA	4,0%	82%
6	VOLKSWAGEN	14,0%	647%	37	TOTAL	3,9%	80%
7	SAFRAN	13,8%	630%	38	ROYAL D. SHELL	3,5%	69%
8	INDITEX	13,6%	611%	39	DAIMLER	3,1%	60%
9	L'OREAL	12,7%	525%	40	RWE	1,5%	26%
10	FRESENIUS	12,2%	486%	41	ORANGE	1,1%	18%
11	KONINKLIJKE AHOLD	12,0%	470%	42	ENI	1,0%	16%
12	ENDESA	12,0%	469%	43	BNP PARIBAS	0,1%	1%
13	SCHNEIDER EL.	11,6%	437%	44	SAINT GOBAIN	-0,2%	-2%
14	VINCI	11,5%	427%	45	GENERALI	-0,3%	-4%
15	AIR LQE	10,8%	382%	46	LAFARGEHOLCIM	-0,3%	-5%
16	ESSILOR LUXOTTICA	10,7%	378%	47	REPSOL YPF	-0,3%	-5%
17	UNILEVER	10,7%	376%	48	INTESA SANPAOLO	-0,8%	-12%
18	MUENCHENER R.	10,3%	351%	49	CARREFOUR	-2,6%	-33%
19	SAP	9,7%	312%	50	TELEFONICA	-2,7%	-35%
20	BAYER	9,6%	307%	51	CREDIT AGRICOLE	-2,9%	-37%
21	IBERDROLA	9,5%	304%	52	SANTANDER	-3,5%	-42%
22	AIRBUS	8,3%	240%	53	NOKIA	-4,4%	-50%
23	PHILIPS	8,0%	226%	54	BBVA	-4,8%	-53%
24	ALLIANZ	7,8%	216%	55	RENAULT	-5,0%	-54%
25	BASF	7,7%	211%	56	ING GROEP	-5,0%	-55%
26	ANHEUSER-BUSCH	7,6%	209%	57	AEGON	-5,4%	-57%
27	DANONE	7,1%	186%	58	SOCIETE GENERALE	-6,4%	-64%
28	DEUTSCHE POST	7,1%	185%	59	AGEAS (EX-FORTIS)	-7,1%	-68%
29	SANOFI	6,6%	166%	60	TELECOM ITALIA	-10,2%	-81%
30	ENEL	6,2%	151%	61	DEUTSCHE BANK	-10,4%	-81%
31	BMW	6,1%	148%	62	UNICREDIT	-14,9%	-92%
					Average	4,8%	240%

Shareholder returns of Euro Stoxx 50 companies: 2004 – 2020 Source: [Fernandez](#)

If you are investing in individual stocks, you must know that 5 out of 10 will likely be ugly, some, probably 2 out of 10 will lead to losses higher than 50% and only a few will give you returns higher than 15% per year, likely less than 5% of the stocks you own over 20 years, and less than 10% of the stocks that you own over 10 years. It is simple maths, the good thing is that the losses are limited to 100% and unlimited on the upside.

However, also keep in mind that behaviourally we hate losing 2.5 times as much as we love winning – so investing will not be a pleasure walk on your nerves and this is also where all the hate comments on my loser picks come from.

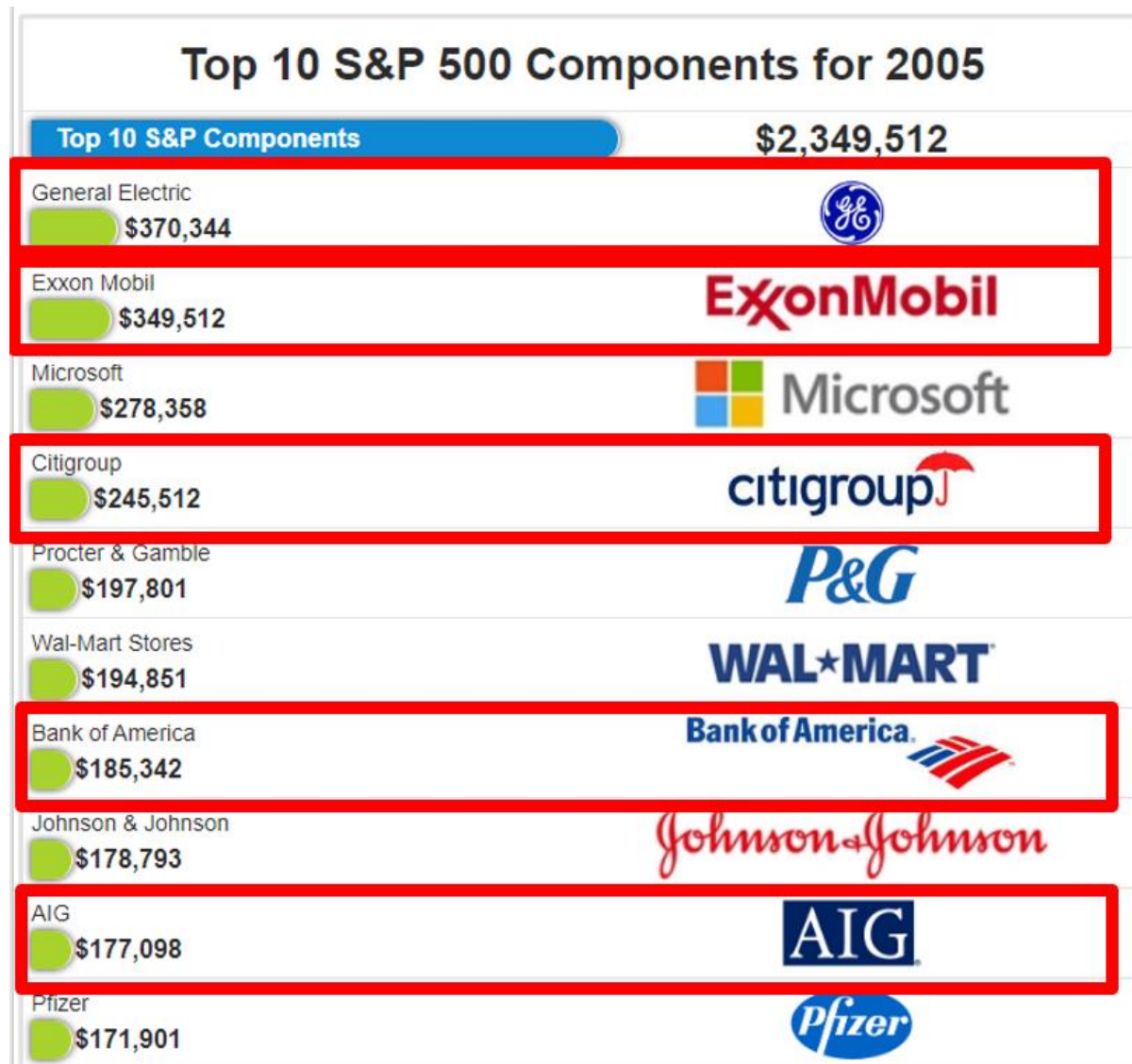
### Quality and size don't really make a difference

Now, you might think that by investing in only the best companies in the world might lead to better outcomes. If you invest in emerging markets it is logical things can get bad very often,

but if you focus on quality, like then top 10 positions of the S&P 500, then the odds should be in your favour, right?

Well, not so fast, if we take a look at the S&P 500 top 10 positions from 2005, just 15 years ago, we can see how the outcome numbers we discussed above apply to all sorts of stocks, even those of highest quality.

Out of the top 10 S&P 500 position at the end of 2005, 5 positions performed extremely bad.



Visual S&P 500 top positions – Source: [ETFDB](http://ETFDB)

GE is down almost 85%.

General Electric Company  
NYSE: GE

+ Follow

**5,70** USD **-0,090 (1,55%)** ↓  
 Closed: 15 May, 04:24 GMT-4 · Disclaimer  
 After hours 5,80 **+0,10 (1,75%)**

1 day 5 days 1 month 6 months YTD 1 year 5 years **Max**



Exxon is down much less and the dividends cover up for most of the losses, but still it heavily underperformed the index.

Exxon Mobil Corporation  
NYSE: XOM

+ Follow

**42,30** USD **+0,36 (0,86%)** ↑  
 Closed: 14 May, 19:59 GMT-4 · Disclaimer  
 After hours 42,61 **+0,31 (0,73%)**

1 day 5 days 1 month 6 months YTD 1 year 5 years **Max**



The banks were the worst performers, but the unpredictable happened with the financial crisis. However, we have to keep in mind that the unpredictable can happen anytime.

Citigroup Inc

NYSE: C

+ Follow

40,60 USD -1,75 (4,13%) ↓

Closed: 13 May, 17:57 GMT-4 · Disclaimer

After hours 40,67 +0,070 (0,17%)

1 day

5 days

1 month

6 months

YTD

1 year

5 years

Max



Therefore, when investing, one has to always keep in mind that stocks can crash 70% at any given moment and that 20% of individual stock positions will likely decline between 50% and 100% over the long-term.

[How to invest – the Buffett model!](#)

I firmly believe investing is personal, and each decision has to be made in relation to what you can handle. Investing is actually about finding asymmetric risk and reward opportunities in order to eliminate the potential losses and maximize the potential winners. At the 1989 shareholders meeting Warren Buffett said it like this:

***“Take the probability of loss times the amount of possible loss from the probability of gain times the amount of possible gain. That is what we’re trying to do. It’s imperfect, but that’s what it’s all about.”***

This means that we have to look at the probability of the outcome, the impact of it and then compare it with the probability of the positive outcome and the impact of it.

Also, given that investing is personal, I would also assess how the worst-case scenario affects you personally and what would your forced actions be in that scenario?

I’ve created a little table to explain what Buffett is saying, also discussing my guesses for where the S&P 500 could be in 10 years based on my current gut feelings, nothing more.

EVENT	PROBABILITY	OUTCOME	EXPECTED VALUE	VALUE	REASON
S&P 500 to 6,000 points	70%	2x	6000	4200	Inflationary pressures
S&P 500 to 3,000 points	20%	1x	3000	600	Valuation
S&P 500 to 1,500 points	10%	0.5X	1,500	150	Econ depression
<b>TOTALS</b>	<b>100%</b>			<b>4,950</b>	

My target for the S&P 500 is 4,950 points in 10 years. That would give you a return of 6.2% per year which is in line with the current valuations, inflation and business growth rates.

However, you have to keep in mind there is a possibility the index or any other investment goes down 50% and stays down for a while, like it was the case for long periods in the past. In that case, the only thing one can do is patiently accumulate.

I am just reading Ray Dalio's principles again and within his personal story he discusses how everybody was talking stocks in the 1960s because everybody was making money. Unfortunately, it took stocks 17 years to break even. Keep in mind that might happen again and it will likely happen sometime in your investing life cycle.



Warren Buffett accumulated during those times and the result is Berkshire as we now it now where huge wealth was created! Be ready to do that same if that scenario materializes!

To sum up:

- Stocks, or anything else for that matter, can crash 70% at any point in time – expect that is possible and adjust your strategies.
- If you get 4 out of 10 individual stocks right, you are a genius!
- It is all about probabilities and about how the worst-case scenario affects you!

I hope this helps you in determining how much to invest and how to invest. Investing for the long-term is the key here and watering the flowers, not the weeds will allow you to get to good return.

Keep in mind the volatility of it all, that will allow you to make rational decisions and actually take advantage of the market. Make the market your servant!

Crucial to understand before putting any money into investments:

- At any time, stocks can crash 70%
- 7.6 out of 10 investments held for the long-term will do badly

Thus, there will be lots of mistakes, there will be ugly situations. The key is to keep accumulating what has good chances to become something good and lead to positive eternal cash flows that will create new cash flows.