

Some people say there's no such thing as a free lunch. But in the world of investing there's something that comes pretty close, it's called diversification. Diversification reduces the volatility, that is the ups and downs of your portfolio, without reducing the expected return.

Let's look at a simple example. Suppose that you had \$20,000 and you were offered an investment that with equal likelihood would either pay you \$45,000 at the end of one year, that is your original \$20,000 plus a profit of \$25,000. Or you would get back zero. You would lose everything. So at the end of the year a coin gets flipped. Tails. If it's heads you make \$45,000 minus \$20,000, that's a profit of \$25,000, or a return of 125%. Unfortunately, this time it was tails. So you've got a loss of 100%. On average you'd make either 125% or negative 100%. That's an average return of 12 and 1/2%, not too bad. But you've got a one out of two chance of losing everything.

So if that \$20,000 were all of their wealth, most people wouldn't take that investment. Now, let's say you're offered 20 investments of \$1,000 each that are each equally likely to pay either \$2,250, that's your original \$1,000 plus a profit of \$1,250. Or you're going to lose the entire \$1,000. So if all 20 coins came up heads you'd get the same payoff as in the first example, \$45,000. And if all 20 came up tails, you'd lose everything. But this bet also works out to an average of 12 and 1/2% return. But the chance you would actually lose money is about one in four. The chance that you would lose more than half your money is less than 1%. And what about the chance of losing all your money? It's about one in a million, not bad. Of course, with one investment of \$20,000 and one flip of the coin, you had a 50% percent chance of making \$25,000 profit. With 20 investments of \$1,000 you're going to need 20 heads to make a \$25,000 profit. Yeah, that also has a one in a million chance.

So you've all but eliminated the chance of a huge loss, while all but eliminating the chance of a huge gain. And you've kept the average return the same. You've diversified. This is pretty much how diversification works in an investment portfolio as well. You make a lot of small bets. Some payoff, some don't. There's one important difference though. While each coin toss is independent of other coin tosses, the performances of stocks and other securities depend both on independent and common factors. The most important common factor is the economy. While in any year some stocks are going to do well and some are going to do poorly, a weakening economy means that most stocks are going to do poorly. While a stronger economy means that most are going to do well.

You can diversify away the risks specific to each company but you can't diversify away broad economic risk. Now there are mathematical tools for creating diversified portfolios. Using these tools one can create a pretty well diversified portfolio with as few as 25 or 30 stocks. However, there's an easier way to diversify, simply by a broad market index fund. This could be the S&P 500 fund, that holds 500 of the largest US companies, representing about 75% of all stocks by value. Or you could buy an all markets

equity index fund. It owns all the stocks. I recommend you buy either an open end mutual fund or an exchange traded fund, often called an ETF.

It really doesn't matter much which you buy as long as the index it tracks is broad and the management fees are low. The most common form of under diversification in retirement accounts is to own too much of your own company's stock. My advice is sell your own company stock. I know it's a great company and it may do well. And so you may end up wishing you hadn't sold. But even so, you'll still have a good job and you'll probably be given more stock. However, if things don't go so well and your company fails, you don't want to be out of both a job and holding a portfolio of worthless stock.

A couple of years ago, I was talking about diversification to a group of investors. A guy raised his hand and pointed out that Bill Gates didn't get to be as rich as he is today by diversifying. And you know, that's true. And if you hold a well diversified portfolio of low cost index funds, you will never be as rich as Bill Gates. Of course, if you don't hold a well diversified portfolio you're also never going to get to be as rich as Bill Gates. But you could end up as poor as the Enron employees who had all of their retirement savings in the Enron stock when the company went belly up. These people lost both their jobs and their life savings. That's not going to happen to you if you diversify.

The basic insight is this. If you own a portfolio with lots of stocks or lots of bonds in it, the phone is likely to ring. And when it rings you'll pick up and someone will say, IBM is down. But will you care? Hell no. Why not? Because you own a well diversified portfolio and IBM can go to hell for all you care. That's the meaning of diversification.