Is the Stock Market a Zero-Sum Game?

Every investor eventually asks the question: is the stock market just a sophisticated form of gambling? When I buy a stock and it goes up, did that gain come from someone else's pocket? Is every winner offset by a loser?

The question matters more than most people realize. If markets are truly zero-sum, then investment success is purely a matter of taking from others. But if they're not, perhaps there's something more constructive going on. The answer turns out to be nuanced.

First, Some Definitions

A zero-sum game is one where the total gains and losses across all participants add up to zero. Poker is the classic example. When you win $100 at the poker table, that money came directly from the other players—the pile of chips never grows, it just moves around. For every winner, there must be a loser of equal magnitude.

The simplest way to think about it: imagine a pizza with eight slices shared among friends. If you take five slices, everyone else can only share three. Your gain is their loss. The pizza doesn't grow because you're hungrier.

So is the stock market like a poker game? Is it like a pizza? The academic debate on this question is more interesting than you might expect.

The Case That It's Not Zero-Sum

Unlike a poker game, the stock market represents ownership in real businesses that create value over time. When you buy shares of a company, you own a piece of an enterprise that develops products, serves customers, earns profits, and—if managed well—grows. The economy expands. Productivity increases. Innovation creates entirely new sources of value that didn't exist before.

This is the crucial difference: the stock market is not a closed system. It's connected to the real economy, which grows over time. From 1926 through 2024, the U.S. stock market has delivered roughly 10% annualized returns. That wealth wasn't simply transferred from losers to winners—much of it was genuinely created as businesses produced goods and services that people valued.

Joanne Hill made this point elegantly in a 2006 paper in the *Journal of Portfolio Management*. She argued that the "alpha pie"—the pool of excess returns available to investors—is not fixed. Global economic growth continuously expands aggregate wealth. The market, in this view, is an open system where value creation occurs, not a closed system where gains and losses must net to zero.

So far, so good. The stock market, considered as a whole over long periods, is positive-sum. Everyone can get richer together. This is genuinely good news.

But Here's the Catch

While the market as a whole grows, the competition to *beat* the market is indeed zero-sum. This is where most investors go wrong, and it's worth understanding the arithmetic carefully.

In 1991, Nobel laureate William Sharpe published a short paper called "The Arithmetic of Active Management" that should be required reading for every investor. His argument is so simple it's almost embarrassing, yet its implications are routinely ignored.

Sharpe's insight was this: before costs, the return on the average actively managed dollar must equal the return on the average passively managed dollar. Why? Because both groups, in aggregate, hold the entire market. If passive investors earn the market return by definition, then active investors—as a group—must also earn the market return.

This means that in aggregate, every dollar of outperformance must be funded by a dollar of underperformance elsewhere—making active management zero-sum before costs, and negative-sum after.

So is the stock market a zero-sum game? The market grows, and all investors can share in that growth. But the attempt to beat it is zero-sum before costs and negative-sum after—a game the average active investor is mathematically guaranteed to lose.

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References

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