This year's robust stock-market advance has done a lot to bolster investors' psyches. Too bad many people's portfolios still haven't recovered from last year.

The average diversified U.S.-stock fund has gained 21% so far in 2009, according to Lipper Inc., and plenty of individual funds are up twice as much. But in most cases those returns haven't brought people's stock-fund holdings back to their values at the start of 2008, let alone their higher values at the stock-market peak, in October 2007.

The culprit is what money manager and newsletter editor Daniel Wiener calls "the tyranny of the mathematics of loss": When you suffer a very large loss, you need a gigantic gain to get back to where you started.

If an investment declines 10%, it takes about an 11% gain to break even (assuming you don't pump in additional dollars). If the drop is 20%, you need a 25% gain to recover. A fall of one-third requires a rebound of 50%. And if your investment falls by half, "you need a double," or a 100% return, says Mr. Wiener, the New York-based editor of the Independent Adviser for Vanguard Investors. The recovery percentages grow exponentially because you have so few dollars working for you after a big loss.

Last year, the average diversified U.S.-stock fund was down 37.5%—requiring a 60% advance to break even—and plenty of funds were down 50% or more. Investors looking at this year's performance listings should know that some big gainers are volatile funds that were big losers last year; thus, investors' holdings may still be worth far less than they were in late 2007.