



## Numeracy Nugget #1 – Critical Thinking, Who Needs It?

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‘You can’t do just ONE thing.’ That bit of wisdom has now fastened itself in the heads of most thinking people in the land as they puzzle over everything from global warming to letting their teenager stay out past midnight. Every decision we act on sets in motion large and small ripples in life’s spider web of interconnections. We want to do what is good and just, but quickly discover that there is no one common set of criteria to cover ‘good’ and ‘just’ even if we were all Lutherans or whatever.

But our political leaders, advertisers, and most of the media treat us as if we were single outcome imbeciles. The hyped solution to every issue is cast in terms of an easy answer to a simple question – ‘You do want (better schools) or (safer streets) or (cleaner air) or (world peace) or (longer life) or (lower taxes) or ... , don’t you?’ We are seldom approached with something like ‘To get safer streets in our town requires lowering the speed limits with stop signs and traffic lights which may well give rise to more traffic congestion, greater air pollution, and higher noise levels. It’s not an easy trade-off folks, so come to the meeting and let’s find out what part goes up when we try to push another part down. We can then make a better decision.’

They treat us like single outcome imbeciles because in the large that, unfortunately, is what we have become. Over the last twenty-five years the federal government has documented the declining intellectual acumen of our workforce and has found us to be, to a high degree, functionally illiterate and almost totally innumerate. Literacy is the group of skills used primarily for communicating our thoughts; numeracy involves math related concepts that enable critical thinking to formulate our own thoughts and understand what other people are thinking. And here we’re talking about skills for every intelligent citizen, not just for the ‘specialists’ and ‘experts’. Thomas Jefferson summed it all up with the high hard one, ‘A nation ignorant and free, that never was and never shall be’.

These Numeracy Nuggets will be a SESF community service to dispense and discuss numeracy tools in a format that is, hopefully, interesting and entertaining. This starts as an occasional series that, depending on feedback, may evolve into a regular feature on the SESF website with more contributors than yours truly. Now for a little numeracy nugget that may turn out to be a bombshell for some folks planning for retirement or a child’s college education. Most of us are familiar with the impact of inflation on savings and investment. We are told almost daily that the real appreciation of a 10% annual yield on an investment, when inflation is 4%, actually turns out to be  $10\% - 4\% = 6\%$ , right? Wrong. The 6% is an approximation that can devastate you if you are planning on taking out the money in five or ten years. And no one, including many financial advisors, makes this very clear.

Let’s continue this simple example. Recall, it is the buying power of your investment at a future time that is important. If you invest \$1,000 today at 10%, common wisdom says that a year from now you should expect to have \$60 more buying power in today’s dollars given 4% inflation. It turns out you will actually have only \$57.70 more buying power. You say that’s close enough for government work, but wait. Figure out your investment and inflation that now compounds for five years and you would expect a \$393.80 increase in your buying power. Not so – it’s only \$323.70 or 17.8% less than your well laid plan. And for a ten year horizon you would expect \$1,113.50 more buying power and really get \$752.20, or a 32.45% (almost a third) shortfall. We can all move the decimal point a couple of places to the right and see what this miscalculation will do for a \$100,000 nest egg – and we have still to throw in Uncle Sam’s share. As you might expect, with higher returns and inflation rates the problem gets worse.

Next time I’ll give you the two correct formulas to put into your financial planning spreadsheet. If you can’t wait, then ask a financial advisor ;- ) or email SESF with your questions and comments.