

2013 1 $^{\text {st }}$ Quarter Stock Market Commentary

LOSING INTEREST AS WE AGE
"As a group, lemmings may have a rotten image, but no individual lemming has ever received bad press"

- Warren Buffett

In late 18th century England, Judge Sir Francis Buller had a reputation as an arrogant jurist with a penchant for handing out harsh punishments. In 1782 he was reputed to have made a legal ruling which made him notorious. It was reported that Buller had decreed that English common law permitted a man to discipline his wife by beating her with a stick, provided the stick was no thicker than his thumb. This decision, which supposedly gave rise to the idiom "the rule of thumb," earned him the scorn of satirists and political cartoonists.

The Rule of Thumb was widely condemned in several feminist writings. For example, in the widely used textbook Domestic Violence Law, Professor Nancy K. D. Lemon wrote "The history of women's abuse began over 2,700 years ago in the year 753 BC . It was during the reign of Romulus of Rome that wife abuse was accepted and condoned under the Laws of Chastisement... The laws permitted a man to beat his wife with a rod or switch so long as its circumference was no greater than the girth of the base of the man's right thumb. The law became commonly know as 'The Rule of Thumb.' These laws established a tradition which was perpetuated in English Common Law in most of Europe."

Unfortunately, there are a few problems with this feminist narrative. First, Romulus of Rome never existed. In Roman mythology he was the son of Mars, nursed by a wolf. But more crucially, the phrase "rule of thumb" does not appear to have originated with any case involving wife beating. According to Edward Foss in his compendium, The Judges of England, 1870, "no substantial evidence has been found that he (Buller) ever expressed so ungallant an opinion." It is now widely regarded as a myth, even among feminist professors. The more likely origin of the phrase is with craftsmen who used their thumbs rather than rulers for measuring things, in much the same way that the height of horses was measured in "hands." It is simply an imprecise but convenient standard.

The consequences of misattributing the etymology of the phrase "Rule of Thumb" are few. For example, John M. Robinson, the Chief Diversity Officer of the United States Department of

State, listed it as one of several expressions, along with "holding down the fort" and "going Dutch," that would portray its user as sexist or racist. Despite the shoddy scholarship, he is still in his post. Of greater significance, though, is when financial rules of thumb themselves are misunderstood, since the consequences can then be fairly significant.

This rant was prompted after reading an article on the bankrate.com website entitled "8 Rules of Thumb for Savings \& Retirement." Number 4 on the list is a piece of advice which has been often repeated by Vanguard founder John Bogle and is used by most financial planners: "The percentage of your portfolio invested in bonds should equal your age." The spirit of this rule is clear. Investors should keep in mind that their portfolios need to change as they age, becoming more focused on avoiding risk in their investing than on higher growth. That's because older people have less time to recover from stock market shocks than younger people. But as we are about to see, given the current record low interest rate environment, the more prudent path for the average investor may be to own fewer bonds as they get older, rather than more.

There are two basic concepts that we need to explain before we can proceed. The first is the fact that bond prices move inversely to interest rates. If this concept is second nature to you, skip to the next paragraph. Otherwise, read on. A bond is basically a loan made by the purchaser of the bond to the issuer. It always has a stated interest rate and a fixed maturity. Thus a typical bond might be the XYZ Corp $5 \%$ due $4 / 15 / 2023$. This means that the buyer lends $\$ 1,000$ (the usual denomination for bonds) to XYZ Corp for a period of ten years. In exchange, he/she will receive $\$ 50 /$ year in interest $(5 \%$ of $\$ 1,000)$ until $4 / 15 / 2023$, at which point the principal will be returned. Suppose that a year after buying the bond, the bondholder has an emergency that requires him/her to sell the bond. Suppose, further, that interest rates have risen to $10 \%$ in the interim. It will be impossible to sell the bond for the original price, because any buyer would prefer to buy a new bond paying $\$ 100$ in interest. In order to induce someone to buy the old bond, the holder will have to discount it in price to make it an attractive alternative. Thus, when interest rates go up, bond prices go down.

But as interest rates rise, how much will bond prices drop? This is where we need our second concept, that of duration, probably the most commonly used measure of risk in bond investing. The computation of duration utilizes a bond's yield, coupon, and final maturity and produces a single number, usually expressed in years, that indicates how price-sensitive a bond or portfolio is to changes in interest rates. Duration is the approximate change in a security's price that will result from a one per cent change in current interest rates. For example, the price of a bond with an effective duration of two years will rise or fall two percent for every one percent decrease (or increase) in its yield, and the price of a ten-year duration bond will rise (fall) ten percent for a one percent decrease (increase) in its yield. It follows that the longer a bond's duration, the more sensitive its price is to changes in interest rates.

Currently, recently issued ten-year United States Treasury bonds have a yield and a coupon of roughly $2 \%$ and a duration of slightly more than 9 years. But if you own a 30 year United States Treasury bond that was issued 20 years ago with an $8 \%$ coupon, it will have the same yield-to maturity of $2 \%$, but that bond has a duration slightly above 7 years. The point is that duration is longer when bond coupons are low, and right now they are the lowest they have ever been.

The long bond, a thirty-year U.S. Treasury, has a yield to maturity of $3.10 \%$ and a duration of nearly 20 years. This means that if long-term interest rates should rise one percent, bond holders will suffer a decline equal to roughly six years of interest payments.

These concepts should be of more than casual interest to the average investor. Stung by the bursting of the technology bubble in 2000, and the collapse of stock prices in the aftermath of the 2008 financial crisis, individuals massively embraced the bond market as a safe haven to avoid the volatility of equities. After all, bonds have been in a bull market since 1981. The average bond fund has had a positive return in every year but two over the past 31 years. Long-term U.S. treasury bonds have produced a $10.1 \%$ annual rate of return over that period. In keeping with their historical pattern of chasing past performance, individuals have poured almost a trillion dollars into bond funds since 2008. But these gains were achieved because interest rates dropped from $15 \%$ in 1981 to just over $3 \%$ currently. Given today's low interest rates, it is mathematically impossible for history to repeat itself. To quote former hedge fund manager Andy Kessler, "You can't fall off the floor."

In fact, it is almost certain that investors buying bond funds today will experience substantial losses. In the chart below we show nominal (that is, not adjusted for inflation) interest rates on long-term treasury bonds. Since 1953 the data represent the ten-year bond. The average yield

since 1962 has been $6.66 \%$ (and roughly $5 \%$ for over one hundred years). A rise in rates to the average would produce a loss of principal in excess of $35 \%$ for investors holding ten-year bonds, and $70 \%$ for holders of the thirty-year. Such a move is far from impossible. A glance at the chart from 1940 through 1982 shows that yields rose steadily, and bond prices fell, for over forty years. Goldman Sachs dubbed bonds issued during that period as "certificates of confiscation."

The warning flags are flying. Bill Gross, who runs the world's largest bond fund for PIMCO, recently wrote to clients that the bull market for bonds is ending and stocks are more attractive. Goldman Sachs has warned of rising risks in the bond market. James Grant, author of the wellregarded Grant's Interest Rate Observer, said he takes very seriously the possibility that interest rates will move up swiftly when the bond market does start to unravel. "I could see a very quick and violent-and tradable-upward move in rates," he said. "There's no shortage of poetic signs and portents." Merrill Lynch, in a similar vein, has called for the "Great Rotation" out of bonds and into stocks. Most interestingly, FINRA, the Financial Industry Regulatory Agency, the nongovernmental agency that regulates member brokerage firms and exchanges, issued an alert in February that "outstanding bonds, particularly those with a low interest rate and high duration, may experience significant price drops." This is a startling pronouncement for an organization whose charter calls for it to make sure the financial services industry operates fairly and honestly. It does not typically make market forecasts.

This Great Rotation may already have begun. In January, rates ticked up across the spectrum of maturities. The ten year U.S. treasury fell more than $2 \%$ in price as rates rose from $1.62 \%$ to $2.00 \%$, wiping out more than a full year of interest. The loss on the thirty year was greater, as the price fell by $4.5 \%$, about a year and a half's worth of interest. The entire U.S. bond market is over $\$ 30$ trillion, so the potential for catastrophic losses is huge.

We began this piece by talking about rules of thumb, in general, and more specifically the rule that an investor's percentage allocation to the bond market should equal his/her age. The intent of this rule of thumb is to encourage individuals to get more conservative as they age. This is still philosophically correct. But mechanically increasing exposure to bonds, ignoring the artificially depressed interest rate environment, is simply not consistent with conservative investing. The Fed's historically unprecedented move to drive down interest rates across the yield curve has made bonds the riskiest asset class. Conservative investors with enough wealth to live on principal for the rest of their lives can simply buy short term treasury bills earning essentially zero, and watch their wealth erode year-by-year from withdrawals and inflation. For everyone else, the inconvenient truth is that owning more stocks is likely to be the best way to avoid the punishing bursting of the biggest bubble in history.

