The Advanced Teachings of Mrs. Langerhorn: 04
Doubling -- The Rule of 72 -- Waves and Tides

By Klarise Yahya, Commercial Loan Broker

You can use the Rule of 72 to estimate the number of years it will take to double your money at a given yield. Simply divide your yield into the “magic number” of 72, and the answer is the number of years required to double your money. For example, if you could get a compounded 10% per year return, it will take 7.2 years to double your money (72 divided by 7). If you could get 18% per year, your money would double every four years (72 divided by 18)

Alternatively, you can use the Rule of 72 to estimate the yield required to double your money if you know how many years you want to take doing it. If you wish to double your money in eight years, you would need to earn a compounded 9% (72 divided by 8). If you required your money to double every three years, you would need to earn 24% (72 divided by 3).

Ready to play? Assume you are 20 years old and hope to retire at 65. You have inherited $25,000, but you expect you’ll need at least $1,500,000 before you can comfortably retire. At what yield must your $25,000 compound in order to reach your hoped for $1,500,000 in 45 years?

Step 1: Using your fingers, compute how many times your capital has to double to reach the required amount. Well, in one doubling it will turn into $50,000 (stick up one finger). In two doublings it will become $100,000 (second finger). Then $200,000 (third finger), $400,000 (fourth finger), $800,000 (fifth finger), and on the next doubling your portfolio will become worth $1,600,000 (sixth finger). Is that close enough?

Step 2: You have 45 years (expected retirement age minus present age) to accomplish six (fingers) doublings. If you divide 45 by 6, you find you’ll have to double your money every 7 ½ years.

Step 3: Take the “magic number” of 72 out of your purse and divide it by 7 ½ (then number of years for each doubling). You can expect to turn $25,000 into $1,600,000 in 45 years if you can compound your investment at 9.6%

Remarkable, isn’t it? Now let’s play another game. Instead of seeking the yield, let’s try to determine the time required for a given amount of money to become a substantially larger sum. Hypothetically, let’s say you have $5,000 and want it to grow to $40,000 so you can get larger implants. You are a Certificate of Deposit girl and have your money in a perpetual C.D. compounding at 6%. When should you begin shopping for bigger clothes?

Step 1: Fingers! How many times must your $5,000 double to reach $40,000? Three fingers, huh?

Step 2: You’ve locked in a 6% yield. How many years does it take to double your money at six percent? Pull out the old Rule of 72, and divide by 6. Your money doubles every 12 years.

Step 3: Three fingers times 12 years? You can start shopping in 36 years.

Wait! That's too long! You want to get your operation before gravity has too much an effect. You estimate the longest you can wait is 12 years. What is the required yield to turn $5,000 into $40,000 in twelve years?

Step 1: We already know it will take three fingers to turn $5,000 into $40,000. Go to Step 02.
Step 2: If you need to double your money three times in 12 years, then you'll have to double every four years.
Step 3: Pulling out the Ol' Rule 72 again, we find that you'll have to earn 18% (compounded) to double your money every four years.

Obviously, we are approaching a problem. No reputable institution offers a guaranteed 18% return. It looks like the only way we'll be able to improve our social skills is if we let our money be invested by Uncle Gustov. He has this new way of playing the ponies that he says is foolproof.

The interesting thing here is that we've managed to rub across two core principles. First, if you can let your money compound long enough, you don't need risky returns; secondly, above market returns (Uncle Gustov) probably involves above market risk.

Put the Rule of 72 away for a moment, and let's move on to diversification.

When you have a single nest egg (i.e., a sole stream of income), and something happens to that egg you have suffered a disastrous 100% loss. If you had ten streams of income, and one egg broke, you would incur a 10% loss. With 20 streams of income, you would have a 5% loss. A 5% loss is not a catastrophe; it is a rounding error. You obviously see the safety factor in having many different streams of income. It is called diversification, and done properly it reduces the chance of disaster.

I know that people far more intelligent than me say that diversification can increase the overall return on a portfolio, but I've never been convinced. It seems to me that if you have equal money in ten guaranteed investments, netting you $10 - $9 - $8 - $7- $6 - $5 - $4 - $3 - $2 - $1 per year, diversification will net you $5.50 (average) per year per investment. If you put all your money into any of the $6, $7, $8, $9 or $10 per year investments, you would have a greater stream if income than if you were diversified. The reason to be diversified is not for greater return but rather to reduce portfolio risk.

If I were going to argue – and I don't – that diversification yields greater returns, I would probably employ the formula Safety + Risk = 1. This means that if you reduce Risk, you automatically increase Safety because the sum of Safety and Risk always has to be 1. Alternatively, if you reduce safety, your risk goes up. The people that propose that the reason for diversification is to improve your returns probably argue that your return improves as your risk of loss is reduced. And that, of course, is true but when taken to excess it's easy to reach a point of diminishing returns where your money will not grow, in the time available, to a useful amount.

I don't think that diversification necessarily yields greater returns, but I do think that putting equal amounts of money into a selection of investments should reduce the overall risk of your portfolio, which the S + R = 1 formula suggests will enhance safety. Diversification can be accomplished in many ways, only some of which are useful. *Buying collectibles and calling them "investments" does not improve diversification*. Remember that gold is not an investment, and neither are antiques.

To be an investment, it has to have a stream of income.

Here are some ways you can diversify: you can sell that rental condo and buy a fourplex. In this way you have reduced the chances of one vacancy resulting in a 100% loss of rent to 25%.

Or, you could buy two or three different buildings. Then, if one is swallowed by a sink-hole, you still have the others. You could buy buildings in different cities, so if one city imposes rent control the values of your other buildings wouldn't be hurt. You could invest half your money in different kinds of income properties (apartments, office, refrigerated warehouses, etc.) and half in blue chip stocks. You could buy stocks in big companies, medium companies, and small companies. You could buy domestic or foreign stocks.

Ok, let's not dip that tea bag too many more times. I hope we've established that there are an awful lot of different streams of income one might buy. That, of course, doesn't mean that every purchase is equally desirable. Later on, we'll try to develop some filters so you might have an improved chance of selecting the better investments.

There is a concept you may wish to keep in mind when selecting investments. My husband used to call it the "Wave vs. Tide" approach. First, he said, you had to recognize that most investors often did not do as well as they told their wives they would.

The reason, he would explain, was that the financial ocean has both waves and tides. Waves are surface phenomena, they are simply investment fads. They seem to come from nowhere, reach a peak, and quickly collapse. How many times can you remember a hot stock that everybody seemed to be buying … suddenly collapse?

Investment television programs, magazines and internet pundits constantly surf the latest investment waves. *They do that because their job is not to teach us how to invest.* Their job is to fill the hour / pages / website with something new. They know that if they don't provide new "stuff", their audience will vote with their feet and go elsewhere. So what should be a trustworthy source of sound investment advice quickly devolves into the ephemera of the latest financial fad. Folks that chase these things are known as "momentum" investors. Momentum investors buy stocks (or buildings) simply because they are going up, often without economic reason. They hope to bail out before the collapse, leaving someone else to pay the piper.

Tides are not as obvious, but are far more telling in the long run. A classic example of a financial tide is found in the interest rate cycle. An investor should have recognized the long term decrease in interest rates between 1981 and 2003 *as it was happening*. Good heavens! The Federal Reserve announced what it was doing! The financial press continually headlined that the Fed was reducing rates (yes, sometimes Tides are reported as Waves, or vice versa, and you must learn to tell them apart). Many investors did very well during the long decline in interest rates.

As an example, if you stumbled into a 10 unit apartment building when rates were 16% (and this was very easy to do, as there were lots of sellers and not many buyers at that rate!), all you had to do was to hold the building as interest rates made their 10 point (plus) slide – you didn't even have to increase rents – and the value of your building rose from $243,000 to $1,200,000 (personal files). That's a Tidal Event. It's a market-wide phenomenon.

But if you increased the net income from your building only 5% per year *as rates continued their decline*, the building you paid $243,000 for in 1981 would in 2003 be worth $1,600,000 (personal files).

When your building appreciated due to the decrease in interest rates, you just floated along on the tide. *When* *you* *caused your net income to increase* you weren't floating anymore, you were rowing. When the tide is favorable and you row, you get where you're going faster. When the tide ebbs, you have to row just to stay even.

Note that we don't have individual control over a Tidal Event. We can try to recognize and profit from it when it happens, but we cannot individually control it.

We can, however, cushion its impact on our portfolio. We can choose whether or not to accumulate investments with increasing income streams. We can buy income properties and improve their income / expense ratios. We can adjust the types of income (dividend, return-on-equity, free cash flow yield, etc.) earned from our stock portfolio by the filters we employ in our selection process.

Clearly, Tidal Events have a distant event horizon. We can ride the bull when declining interest rates benefit us, but we still have to invest even when the bear returns and interest rates begin their inevitable rise. Understand there will certainly be in-course adjustments to interest rates whether the long term trend is up or down. Don't be ambushed by these minor Waves. Watch the Tide.

If interest rates are in a long term decline, we prosper from holding almost any stream of income (Remember the teeter-totter? If rates go down, the value of a stream of income goes up). If, however, interest rates are in a long term uptrend, we benefit only by purchasing streams of income that are likely to increase. That means we must limit our portfolio to income properties and well chosen stocks.

Here are the bullet points …

- **Use the Rule of 72 to find the yield or the time required to double your money in a given time period.**

- **Use Fingers plus the Rule of 72 to quickly estimate how long it will take for you to grow your portfolio into (insert amount here) at a given interest rate.**

- **S + R = 1**

- **Proper diversification is for safety.**

- **Know the difference between Waves and Tides.**

- **Not every investment is equally desirable. Develop some filters to help you select the best investments for you.**

Klarise Yahya is a Commercial Loan Broker. If you are thinking of refinancing or purchasing five units or more – it's probably happened, but not to me or anybody I know – anywhere in the U.S.A., ***Klarise Yahya*** *can help.* ***Find out how much you can borrow!*** *For a complimentary mortgage analysis, please call her at* ***(818) 500-9966.***