



## **Bonds, The Mission Statement**

Degrees of investment success have less to do with the performance of the financial markets and more to do with a failure to learn, define, implement, and enforce specific investment selection and management disciplines for each investment sector/category/type.

Without investment disciplines for all investments as a foundation for investment analysis, it is troubling to me as to how one can possibly analyze, distinguish, separate, evaluate, and then advise beyond statements such as the investment has done well in the past, has a five star rating, current yield is higher than the present investment, and the analyst said.

Implement a simple, straightforward discipline that seeks the "Correct Bond," the "Correct Quality," the "Correct Maturity," and "Competitive Yield" at a "Reasonable Cost."

My disciplines, rules and procedures for other investment types/classes may be found in the "Almost Perfect Stockbroker" and the "Almost Perfect Investor."

## **The Master Strategy, Optimum Solutions, Strategic Changes**

I prefer to treat bond selection and bond investment management as part of a game theory. "Game Theory" as defined in Webster's dictionary: "A mathematical theory that deals with strategies for maximizing gains and minimizing losses within prescribed constraints;" "A competitive activity involving skill and played according to a set of rules."

The game is not so much a game of chance, but rather a game of discipline. A game that evolves based on what is known today and what can be done today rather than depending on the correct anticipation of what lies ahead.

For those who wish to play a slightly more advanced bond game, the game can, in some ways, be played like a game of chess in that it depends on a little anticipation, some thinking several moves ahead, and the probable outcomes and implications of a chosen direction. However, unlike chess, if you follow the rules, you cannot end up in checkmate! The field of play, the players, the game rules, and the game strategies must be defined as in any game.

## **Bond Investment Selection & Management**

The investment selection and management discipline process used in the Bond Sector must have a primary goal of preservation and protection of capital, both market value prior to maturity and maturity value, while seeking competitive interest rates/yields.

Employ a bond portfolio management strategy that does not depend on the correct anticipation of the direction of interest rates to be successful.

Buy individual bonds. Develop a diversified (different bonds) and laddered maturities (different maturities) bond portfolio which is consistent with investor goals, market conditions, bond investment disciplines, and weighted with consideration for capital needs and income requirements.

Accept the average yield of the portfolio rather than emphasizing maturity extremes where capital can under perform in the shorter maturities or be exposed to unnecessary market risks in the longer maturities.

Recognize changes in the bond markets, understand the need to make changes in a bond portfolio prior to a bond's maturity, and be in a position to take advantage of bond market changes.

Implement a simple, straightforward investment selection and management discipline that seeks the "Correct Bond," the "Correct Quality," the "Correct Quantity," the "Correct Maturity," and "Competitive Yield" at a "Reasonable Cost."

"Correct" will be determined by the bond investment variables as chosen by the investor/advisor:

- When the investor will need the capital.
- The choice of debt instruments.
- The need and willingness for the investor to take market risk as defined by the bond quality ranges chosen.
- Bonds with higher coupons tend to fluctuate (duration) less than lower coupon bond prior to maturity.
- The degree of bond investment diversification.
- Bond maturity intervals within efficient bond maturity ranges.

And the bond market variables over which the investor/advisor has no control:

- The shape of the yield curve.
- The level and rate of change of the cost of living/inflation.
- Efficient bond maturity ranges.

### The Correct Bond

The "Correct Bond" selection discipline prioritizes a strict bond selection process over merely seeking the highest yield without proper consideration for investor needs and the structural integrity of a given debt instrument.

Invest only in pure debt instruments without enhancements and in bonds in which market value depends on only three investment variables; quality, maturity, and interest rate fluctuations.

Never seek higher yields while compromising the goals or the discipline.

Invest only in straight debt instruments, without enhancements and bonds in which market value depends on only three investment variables; quality, maturity and interest rate fluctuations. Avoid

CONSERVATIVE	AGGRESSIVE
<b>Tax Free Municipal Bonds:</b> <i>Value depends on the individual's tax bracket and the spreads between taxable and tax-free bonds</i>	<b>Open End Bond Mutual Funds:</b> <i>Most often Compromise Cost, Confusion, &amp; Masked risk.</i>
<b>Certificates of Deposit:</b> <i>A time and place</i>	<b>Convertible Bonds:</b> <i>Usually compromise</i>
<b>Money Market:</b> <i>The best choice for short term needs</i>	<b>Junk Bonds:</b> <i>Junk in, junk out.</i>
<b>Government Bills, Government Notes Government Bonds:</b> <i>The best of the best. But, not always the best to own.</i>	<b>CMOs, Ginnie Maes, Freddie Macs, Fannie Maes:</b> <i>"A clear and present danger."</i>
<b>Junk Bonds:</b> <i>Hidden value</i>	<b>Foreign Debt:</b> <i>Currency risk</i>
<b>Corporate Notes, Corporate Bonds:</b> <i>Often the better value</i>	<b>Preferred Stock:</b> <i>The worst of two worlds.</i>
<b>Zero Coupon Bonds:</b> <i>Special bonds for special situations</i>	<b>Unit Investment Trusts:</b> <i>There is almost always a better, smarter way.</i>
<b>Utilities:</b> <i>"Growth Bonds."</i>	<b>Closed End Bond Mutual Funds:</b> <i>There is a reason for the discount to NAV</i>

compromise such as bonds that seem to offer greater yields and which only mask greater investment risk. All things being equal, we will prefer the “conservative” bonds.

Avoid compromise such as "aggressive" bonds that seem to offer greater yields but mask greater investment risk.

Risk, marketability, income, return of principal, and quality are the primary selection criteria.

Each choice may appear to have all of these characteristics; however, be aware of the potential problems that go beyond their standard text book definitions. Insist on an instrument that will meet the plan's investment criteria.

The water might begin to muddy as one moves on to the “aggressive” income options and into other types of debt instruments.

With greater yields, investors will often settle for investment compromise such as greater market risks, and financial instrument variables that are not often understood prior to investment. Keep your priorities in order: first choose the best instrument, the highest quality, the lowest risk, and the optimum bond maturity. Then purchase the bond and accept the income!

Do not compromise to chase yield!

Leveraging, borrowing against, margining bonds, and the use of enhancements such as options are absolutely out of the question.

### Illustration

Assume an investor has a total of \$110,000 in principal, of which \$10,000 will be needed in 4 years, and the balance of \$100,000 of the principal will not be needed for 20 years.

As each variable for bond selection and management is added, the bond portfolio "field of play" will be narrowed until the optimum bond portfolio, consistent with investor need and bond market conditions, is created.

### The Correct Quality

The investor/advisor must select the bond quality ranges that are consistent first with each investor's risk tolerances and secondly with the investor's need for income.

Risk tolerances must have priority over the need for income because it is better to accept a lower income than to lower bond quality to increase income. The increase in income will never offset the investment agony of a more conservative investor who should be in more conservative bonds.

### Moody's and Standard & Poor's

Moody's and Standard & Poor's		
Investment Grade	Aaa	AAA
Bonds	Aa	AA
	A	A
	Baa	BBB
Speculative Grade	Ba	BB
Bonds	B	B
	Caa	CCC
	Ca	CC
	C	C

Moody's and Standard & Poor's are independent companies that evaluate the investment quality of bonds. Quality ranges from AAA insured to AA, A, Baa all the way down to C, D, and non-rated.

Typically bonds rated AAA to Baa are considered investment grade and would generally be considered suitable for conservative investors.

Each rating service provides you with a scale to evaluate the risk of a bond. You do not need to do it.

The highest rating suggests there is very little real risk that the principal and interest will not be paid. The lowest rating says there is a much higher relative risk about the timely payment of principal and interest; *the higher the risk the higher the yield.*

Keep in mind that, though it is true the lower the quality the bond the greater the yield, the increase in yield may not justify the added risk.

Furthermore, bond rating services are terrible at anticipating bond qualities and their associated ratings.

A change in a bond's rating will come only after the fact of a change in the circumstances of a company's or agency's bond and a market adjustment in the price of the bond.

### The Correct Quality Continued

Building a bond portfolio with the "Correct" bond characteristics can best be explained by first drawing a rectangle on a sheet of paper which will be the initial bond portfolio "field of play."

**YOU CHOOSE:** The investor/advisor must first choose the range of bond qualities that are suitable for the investor.



For this example the lowest acceptable bond quality in this illustration is Baa.

A horizontal line is drawn at the theoretical constraint of Baa.

The blue area between AAA and Baa is the new more narrowly defined bond portfolio "field of play."

No bonds will be considered outside of this range.

### The Correct Quantity

It is essential that bond investment be broadly diversified; the lower the quality the greater the diversification. As there is always a wide selection of bond investments, there is no justification for concentration of bond investments. If something should go wrong, which is rare, there is no reason to

risk the complete loss of capital or the disruption in market value of capital prior to maturity by having capital invested in a few bonds.

As a general rule, have no more than 5% of capital invested in a single bond.

Insured bonds may be the exception.

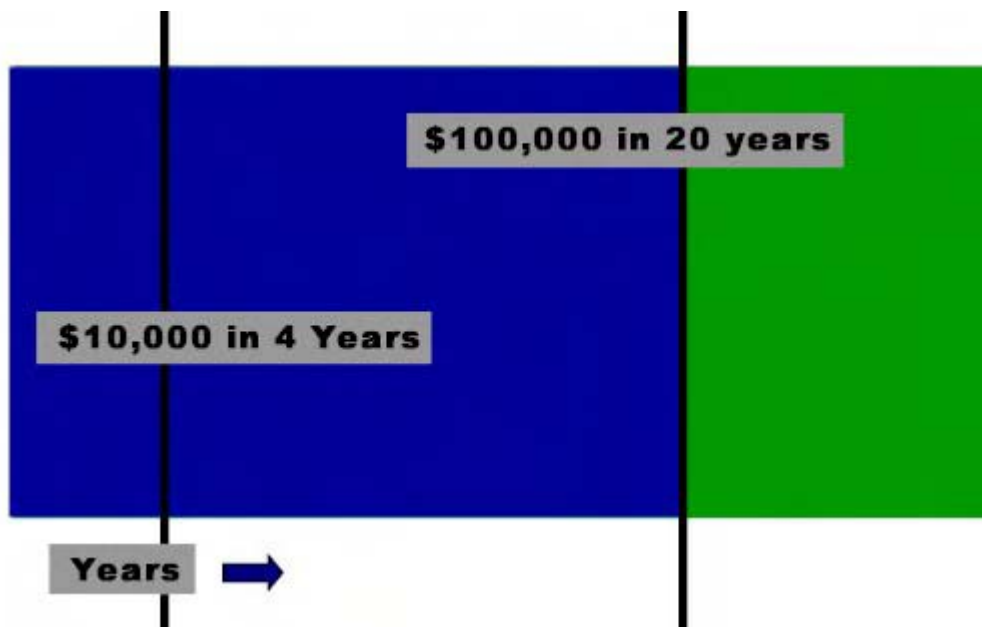
Remember, preservation and protection of market value and maturity value of bond capital is foremost for most bond investors.

Why concentrate bond capital when diversification and the greater protection it offers is just as easy to do.

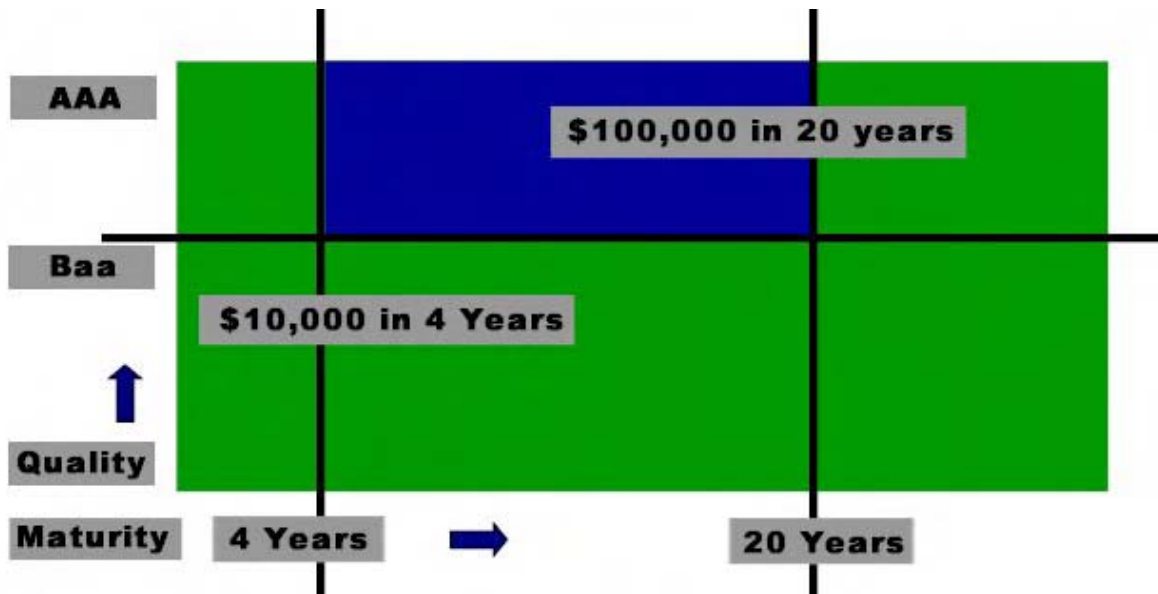
### **The Correct Bond Maturity**

Select bonds that have maturities which coincide with the time periods in which the investor will need bond principal and with optimum points on the yield; maximum income and minimum market risk.

The range of bond maturity options primarily will depend on when you will need a return of principal. **YOU CHOOSE.**



As stated for this illustration, a total of \$110,000 in principal, \$10,000 will be needed in 4 years and the balance of \$100,000 of the principal will not be needed for 20 years. We will work within the 4-year to 20-year time frame and focus on the yield curve within that time frame.



We overlay the Quality and Maturity investment parameters to determine the boundaries of the bond game field of play or rather, the profile of your ideal bond portfolio model.

Current holdings outside of these boundaries must be liquidated (quality too low or maturities too long) and acquisitions must be made within your defined model.

With the groundwork complete, we now have a blueprint for building your personal bond portfolio.

Most of the initial investor/advisor controllable bond portfolio variables have now been selected and the investor/advisor selected variables of bond quality and maturity are graphically represented:

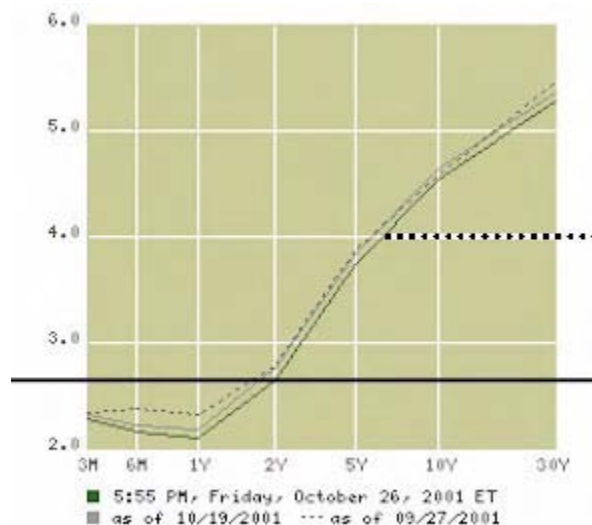
- When the investor will need the capital; 4 years and 20 years.
- The choice of debt instruments; conservative.
- The need and willingness for the investor to take market risk as defined by the bond quality ranges chosen; AAA to Baa.

### The Yield Curve & Cost of Living/Inflation

The bond portfolio "field of play" must be further defined and narrowed by taking into consideration the shape of the yield curve and the cost of living/inflation rate.

### Treasury Yield Curve

The yield curve graphically illustrates different levels of interest rates for different maturities as shown above by a Treasury Yield Curve.



- Typically, the longer the maturity, the greater the yield. Therefore, without any capital need constraints, extend maturities as long as one is getting paid more to do so.
- In this case maturities to 30 years can be considered because interest rates are generally rising out to thirty years.

- If the yield curve were to "flatten" as arbitrarily selected for illustration purposes as represented by the horizontal dotted line at 4% from after five years to thirty years, maturities of no greater than five years should be considered because more interest is not being paid for investing in bonds with maturities greater than a little more than five years.

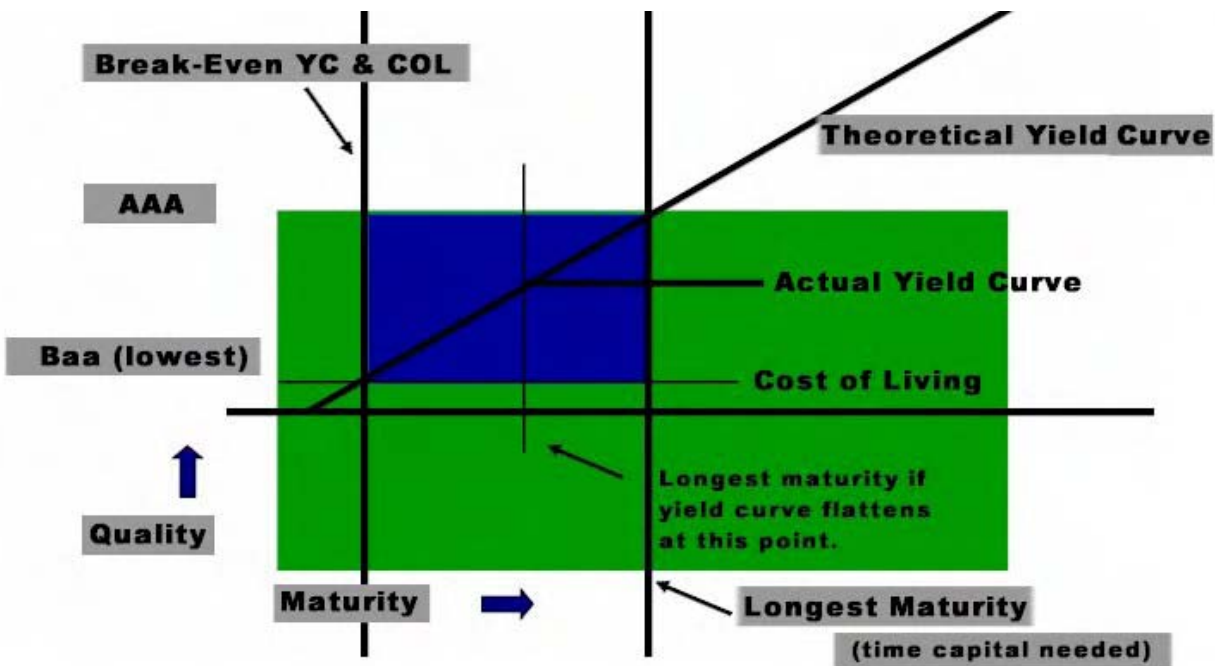
The cost of living/inflation rate is represented and arbitrarily selected for illustration purposes by the horizontal black line between 2% and 3%.

- Bonds that yield less than the cost of living/inflation rate (2 years and less) should not generally be considered for investment as capital would not be kept competitive because after tax yield is less than the cost of living/inflation rate.
- The exception might be if capital to be invested in bonds were needed during the first 2 year period.

### Competitive Yield

Seek after tax yields that are greater than the rate of inflation/cost of living without compromising the need to protect the market value of a bond prior to maturity.

The following illustration combines the yield curve and the cost of living to further define the general boundaries suitable for bond investment based on the two bond market investment variables.



At first glance, the blue area would seem to be the appropriate boundaries for bond investment.

The actual area is smaller because bond maturities longer than the intercepts of the theoretical yield curve, the actual yield curve, and the vertical line at that intercept do not offer increased yield; therefore, the correct bond portfolio "field of play" would have minimum maturities where short-term bond yields equal the cost of living/inflation and the longer term bond yields would have maximum maturities at the point where the yield curve "flattens."

Staying within these boundaries will insure competitive yield and the correct bond market maturities; capital earning income above the cost of living and taxes and avoiding bond maturities where capital is not compensated for the market risk of extended maturities.

## Reasonable Cost

Bond mutual funds are never needed. There is always a better, smarter way.

Bond mutual funds are never at a reasonable cost when compared to the costs that will be incurred by buying individual bonds. \$5.00 per bond commission should be the average cost.

Furthermore, bond mutual funds, in order to compete for investor capital, will violate responsible bond investment disciplines and use speculative investment strategies in an effort to increase advertised yield.

If a fee-based advisor is to be used to build and manage a bond portfolio, ongoing management fees should be very small; less than 1/2%.

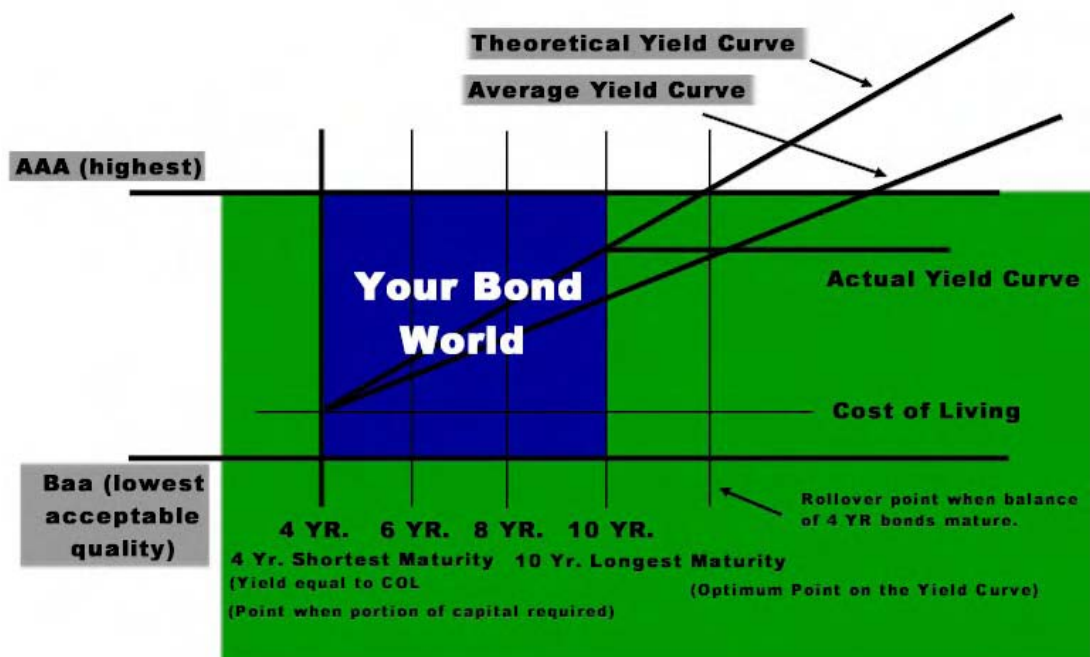
It is always smarter to build and manage a bond portfolio made up of individual bonds that is very specifically designed to meet the very specific needs of the investor rather than invest capital in a bond mutual fund that will meet some of the general needs of many investors.

Follow the bond selection and management discipline to be explained below. It is easy to do, you will have what you need, you will know exactly what you have and why, and you will understand exactly what can and will happen.

## Your Bond World

The final step in creating a bond portfolio is to overlay/combine the bond portfolio "fields of play" as defined by the chosen investor/advisor bond investment variables of the "Correct Bond," the "Correct Quality," the "Correct Quantity," and the "Correct (investor selected) Maturity"

with the "Competitive Yield" and "Correct (market defined) Maturity" realities of the bond market as determined by the bond market investment variables of the yield curve and the cost of living/inflation.



- As stated in the example, an investor has \$110,000 to invest into bonds. \$10,000 will be needed in four years. The balance of capital to be invested in bonds of \$100,000 will not be needed for twenty years.
- The investor/advisor quality range selected is AAA to Baa.
- Four years will be the shortest maturity for two reasons. \$10,000 will be needed at that time and this also happens to be the point where bond/note yields and the cost of living are at a break-even point.
- If \$10,000 were not needed in four years, four year maturities would still be the shortest bond maturity point to be considered for building a laddered maturities bond portfolio so as to obtain a satisfactory average yield for the bond portfolio throughout it's life without assuming undue risk of major fluctuation of the market value of the bond portfolio should interest rates change (rise).
- Taking into consideration the actual shape of the yield curve and the cost of living, the best maturities would range from 4 years when \$10,000 will be needed out to a maximum maturity of 10 years; **the optimum points on the yield curve**, the most efficient use of capital, the point at which increased bond maturities do not receive increased income.
- Buy 4, 6, 8, and 10 year bond maturities (laddering) for example. Each maturity period should receive the same amount of capital which will insure a competitive average yield throughout the life of the portfolio.
  - No bonds beyond 10 years in this case, even though the balance is not needed for 20 years, because you are not getting paid any more to buy 20 year maturities than you are for 10 year maturities!
- As the earliest bonds mature go out beyond the last maturity and, based on the shape of the yield curve at that time, the correct bond maturity investment decision will be easy. If the yield curve is still flat, as it is in the illustration, then buy more of the 10 year maturities type bonds initially purchased. If the yield curve should have the shape of the Theoretical Yield Curve at that time, rollover the matured bond capital into extended bond maturities as long as yields increase but not beyond the time the bond capital is needed.

To ignore the bond investment selection and management boundaries as determined by the investor and as set by the bond market conditions can be fatal:

- Arbitrarily investing all bond capital in the longest bond maturity available beyond when capital is needed, even with a greater yield, can expose bond capital to a significant decline in market value should interest rates rise (causing a decline in the market value of bonds) at the time when capital is needed.
- Arbitrarily investing all bond capital only to the time capital is needed, rather than "laddering" bond maturities up to the longest maturity, limits the opportunity to change bond maturities (shorter to longer) should interest rates subsequently rise at the initial maximum maturity where the yield curve "flattens."

### **Buying and Selling Bonds Prior to Bond Maturity**

For those who wish to play a slightly more advanced bond game, this game can, in some ways, be played like a game of chess in that it must depend on anticipation (thinking several moves ahead) and the probable outcomes and implications of a chosen direction.

There are many reasons and opportunities to buy and sell bonds, "swap" bonds, prior to maturity.

Rather than go through the standard tax bond swap, the following represents another type of bond swap opportunity.

When interest rates change in one time period of the yield curve or should the entire shape of the yield curve change in general, it is possible to take advantage of that change by "managing the yield curve" and by adjusting bond portfolio maturities by moving to new optimum points on the yield curve to ensure the most efficient use of capital (the best average yield) consistent with any interest rate change and to have the opportunity to increase both the number of bonds held and the bond portfolio income with the same initial capital over time.

The rule of this bond swap game is that anytime a bond can be sold to increase either the face amount, the number of bonds held and/or increase the income the bond swap should be made.

The rule **does not mean** that a swap can be made simply by lowering bond quality or extending bond maturity to increase face amount and/or income.

This aspect of the bond selection and management discipline assumes (correctly) that there are interest rate cycles of highs and lows and that over time the yield curve will always return to a "normal" shape; possible different overall interest rate levels but the longer the maturity the greater the yield.

### **The Moment Of Truth**

This is the precise moment when you can get into trouble. The investment parameters have been set. The rules of the bond portfolio game have been set. They are immediately broken. Emotions and false hope lead to the wrong investment decisions. Starting with capital and ignoring the bond management discipline, thinking and logic are clouded by the siren's song of the apparent higher yields offered by investment packages such as mutual funds. The investment dilution and added risks with commissions, engineered financial instruments, "second team" bonds, administrative fees, ongoing management fees, extended maturities, lower bond qualities, derivatives, enhancements and who knows what else can only lead to trouble.

Stick to the plan!

### **The Rules of the Game**

The problems are not bonds, interest rates, markets, or business cycles. The problem is that "Buy, hold, and forget" as a bond portfolio selection and management process does not work. This bond strategy is not a trading strategy. Trading is buying and selling based on the correct anticipation of daily price movement; something no one can do over time. We make changes, strategic changes, based on values and rules; relative bond values, risk assessment, market conditions, the plan, and investor goals. Bonds held or about to be purchased, will be changed if and only if a lateral move, a "zero sum" move, will reduce risk to income or principal, **or** if we can improve any of the following:

- The quality of the bonds in the portfolio
- The face amount of the bonds in the portfolio
- The income from the bonds in the portfolio
- The maturity of the bonds in the portfolio
- The class of bonds in the portfolio
- The tax savings on the bond portfolio
- Reduce market price risk moving from high or low coupon bonds, depending on interest rate fluctuations
- Protect profit

**If and when market conditions change, we will sell a bond and buy another if the same capital will buy a bond that will clearly better serve the client.**

## For example:

You own \$100,000 of a 6% General Obligation bonds maturing in 2015 callable in 1997 (*as chosen by the issuer*) at \$1,020/per bond, AA rated.

We will sell this bond and buy another bond with the same capital if we can:

- **Improve Quality:** AA to AAA
- **Increase Face Amount:** With the same dollars \$100,000 to \$105,000
- **Increase Income:** \$6,000 to \$6,200
- **Improve Maturity:** 2015 to 2005 based on the shape of yield curve, same income less time risk.
- **Tax Savings:** The most popular, but not necessarily the best reason to trade bonds;
  - Tax "swaps.
  - "Most often done at the end of each calendar year.
- **Improve Income:** Yield spread between government bonds and tax free bonds is such that you would be significantly better off in government bonds over municipal bonds or visa versa.
- **Protect Profit:** Move in on maturity on a flat yield curve to an optimum point to preserve bond capital gains after interest rates have fallen or to align the portfolio with **YOUR BOND WORLD**. The graph on the following page is limited because we use a static representation to explain a dynamic situation, the phenomena of a general "across the boards" lowering of interest rates over time at all maturities and a flattening of the new lower yield curve providing essentially the same yields for both intermediate and long term maturities. 5% and 10% interest rates are used for illustration purposes only. Real interest rate spreads will typically be much less. The problem and the opportunity are real.

The true test of the individual and bond portfolio management is to sell longer maturities and to move to the optimum point on the yield curve, at shorter maturities when interest rates are at the lower end of their cycle and/or when the spread between short and long maturities is narrow.

This move raises the question, why should one who has higher yields, bond capital gains, and longer maturities sacrifice yield, pay capital gains taxes and shorten maturities? The answer is that the primary objective must always be to have minimum exposure of principal to market fluctuations prior to maturity and to maintain a competitive yield based on current economic conditions. Remember, one need only keep the yield competitive: above the cost of living and taxes. It is inadvisable to reach for higher yields in a low inflation environment in an effort to maintain old income levels with major exposure of principal to price decline prior to maturity should interest rates begin to rise. The balance of both competitive income and minimum exposure of capital to price fluctuations can only be achieved by a willingness to move along the yield curve as conditions change. Specifically, one must avoid exposure to the risks of the interest rate environment of the 50's, 60's, 70's and 80's where in an environment of rising rates bond yields lagged inflation and principal was at a major discount prior to maturity.

We have no control over the time the interest rate cycle will take. *We simply agree to try to be at the optimum point on the yield curve; least risk to principal with maximum income.* When the yield curve resumes a more normal configuration, more interest for longer maturities, we will consider moving back out on the yield curve to increase any combination of income and face amount.

**The Point:** We want to emphasize being on the defense under these conditions.

Why own long-term bonds when intermediate or short-term bonds yield nearly the same?

**Note:** the following illustration uses extreme changes in interest rates that are real, though rare, and were used for illustration purposes only.

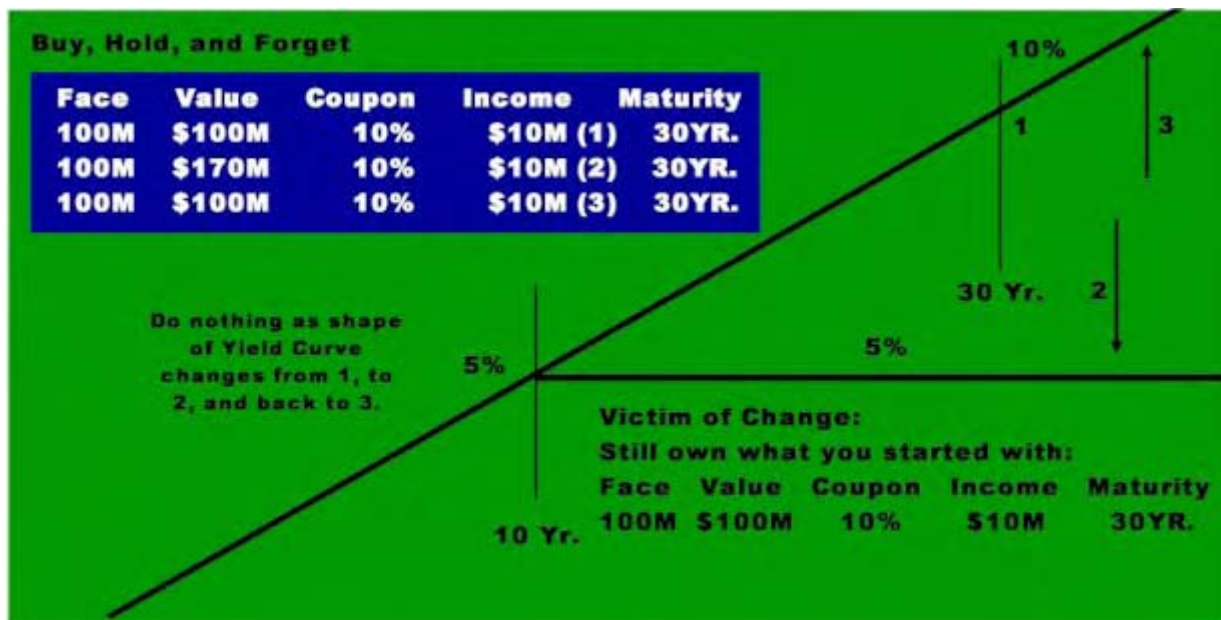
Be clear that the degree in swings in interest rates for different maturities is not as important the rule that one must always move in from any maturities that rest on the flat portion of the yield curve to the shortest maturity on the flat portion of the yield curve; in the illustration below -10 yr., 5%; be alert, and when it happens, no matter how small, act.

### "Buy Hold, & Forget," Not Competitive

The purpose of this exercise is to make the investor/advisor aware of bond market changes and how it is possible to capitalize on those changes.

The following illustration uses extreme changes in interest rates that are real, though rare, and were used for illustration purposes only.

Changes in the actual bond markets are much less dramatic and much less frequent. But, it should not be concluded that this type of bond swap opportunity seldom occurs.



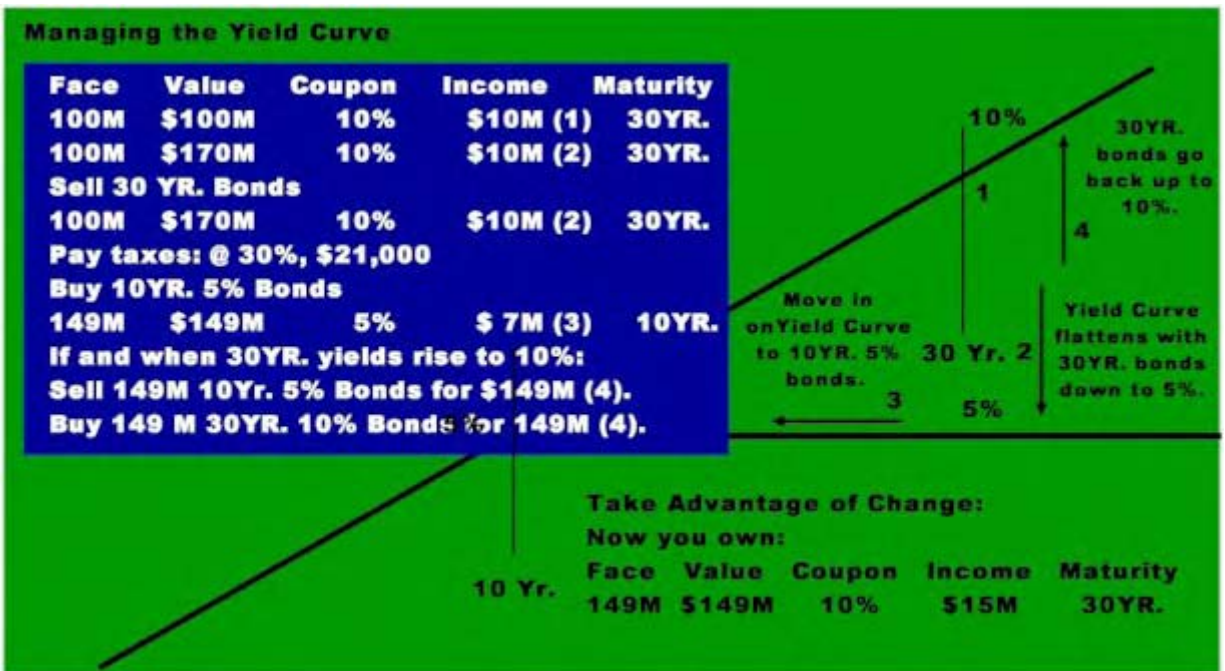
Be clear that the degree in swings in interest rates for different maturities is not as important the rule that one must always move in from any maturities that rest on the flat portion of the yield curve to the shortest maturity on the flat portion of the yield curve; in the illustration below -10 yr., 5%; be alert, and when it happens, no matter how small, act.

The following illustrations are for this exercise only:

1. \$100,000 face amount of 30-year bonds at a cost of \$100,000 with 10% interest and \$10,000 income annually.
2. Interest rates fall from 10% (1) to 5% (2) on 30-year bonds.
3. Do not sell even though the market value of the bonds rise to about \$170,000.
4. "Buy, hold and forget" even though interest rates may go back up to 10% for 30-year bonds (3) or until the bond matures at par; \$100,000.
5. Settle for the new interest rates at that time when capital will be reinvested at the prevailing rate.
6. Capital gains opportunities and increased income possibilities are lost.

### Managing the Yield Curve

1. \$100,000 face amount of 30-year bonds at a cost of \$100,000 with 10% interest and \$10,000 income annually.
2. Interest rates fall from 10% to 5% on 30-year bonds.
3. The market value of the bonds rise to about \$170,000 and a yield to maturity of 5%.
4. Sell the 30-year bonds at a profit of \$70,000.
5. Pay the taxes (assume 30% or \$21,000).
6. Reinvest the proceeds of \$149,000 in 149 10 year, 5% bonds.
7. Income drops from \$10,000 a year to \$7,000 a year.
8. If and when (they will) 20 year yields rise back to 10% sell 149 10 year, 5% bonds for \$149,000 and buy 149 30 year, 10% bonds for \$149,900.
9. A bond capital gain of \$49,000 is preserved and income is \$14,900 up from the initial income of \$10,000 and up from the latest yield of \$7,000.
10. Repeat the cycle again over time as market conditions present the opportunity.



We are not always at the extremes of interest rate highs and interest rate lows. Even in the usual gray of day-to-day it is essential that the bond investor be aware of the interest cycles and general financial market cycles to better manage a bond portfolio.

Occasional, responsible transactions are consistent with keeping money competitive.