

Active Portfolio Management

Active bond managers use economic forecasts about inflation and growth to predict interest rate movements and based on this they develop their strategies, the text refers to this as “*interest rate anticipation*” strategies.

Selling a bond that the manager feels will perform poorly based on their expectation of interest rate movements and buying another bond that the manager feels will perform well is generally referred to as a “*rate anticipation swap*”.

Bottom Line:

- If you expect interest rates to fall, you will sell your short term (low duration) bonds and buy longer term (higher duration) bonds.
- If you expect interest rates to rise, you will buy short term (low duration) bonds and sell your longer term (higher duration) bonds.

The text talks about “*horizon analysis*” and using a technique called “*riding the yield curve*” to enhance the return of a portfolio over a given period of time.

Riding the yield curve is technique used to enhance portfolio returns over a specific time horizon. To do this the manager buys a bond that has a longer maturity than the investment horizon and assuming interest rates do not change over the horizon, the manager can sell the bond at a higher value realizing a capital gain to enhance returns.

Now remember, success in this strategy is based on the assumption that rates, or the yield curve in general, does not change and it is upward sloping!!

Bottom Line:

Lucky for us this is a paper based exam and we will be given all the assumptions - so read the question carefully and just follow the directions!

Example:

A manager has a two year investment horizon. The manager has a choice to invest in a 2 year, 6.5% bond yielding 7% or a 3 year 6.5% bond yielding 8%. If the manager believes that interest rates will not change over the two year horizon, formulate a strategy that will augment returns by “riding the yield curve”.

Solution:

Note: I think the math I am about to do for you goes WAY beyond the scope of the exam, but I think it can help you to understand the concept more easily... I say this because the example in the text just drops in the end numbers for you to consider and students are asking me “where did they come from” or “how did they get that”...so here's how they do it:

If the manager buys the 2 year bond and interest rates do not change over the 2 year horizon, the total realized return will be equal to the yield to maturity, which is 7%

If the manager buys the 3 year bond in anticipation of riding the yield curve, the total realized return over the 2 years will be:

Initial cost of the bond:

$FV = 100, N = 2 \times 2 = 4, PMT = 6.5/2 = 3.25, I = 8/2 = 4,$ solve $PV = 96.068$

Future value of the coupons and reinvestment income at the end of year 2:

$PV = 0, N = 2 \times 2 = 4, PMT = 6.5/2 = 3.25, I = 8/2 = 4,$ solve for $FV = 13.8$

Bond value at the end of year 2:

$FV = 100, N = 1 \times 2 = 2, PMT = 3.25, I = 8/2 = 4,$ solve for $PV = 98.585$

Realized return (equal to the geometric annualized return):

$$R = \left(\frac{98.585 + 13.8}{96.068} \right)^{1/4} - 1 = 0.03999 \times 2 = 0.07999 \text{ or } 7.999\%$$

The manager picked up an extra 1% by riding the yield curve!

Box Trades

First off, make sure you know the term “*swap*” just means trade and a “*bond swap*” is just two trades done at the same time. The first trade is a purchase of a bond and the second trade is a sale of a bond.

The goal of a bond swap is to increase the overall return for a bond portfolio.

The trading decision in this simple case is based on the current spread vs. the historical average spread. If the current spread is much different than the historical average spread, then a trading opportunity exists.

Trading rules:

- If the current spread is wider than the historical average spread, sell the lower yielding bond and buy the higher yielding bond.
- If the current spread is narrower than the historical average spread, sell the higher yielding bond and buy the lower yielding bond.

Bond Swap Example:

A Portfolio Manager knows the average historical spread between the 6 year Johnson Corp. bonds and the 6 year Government of Canada bonds is 90 basis points.

- a) If the current spread between these two bonds is 120 basis points, what trading decision would the Portfolio Manager make?

- b) If the current spread between these two bonds is 89 basis points, what trading decision would the Portfolio Manager make?

- c) If the current spread between these two bonds is 52 basis points, what trading decision would the Portfolio Manager make?