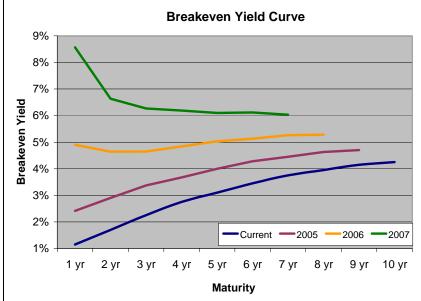
## SURFING THE "ROLL" HOW BOND LADDERS WORK SO WELL





## "THE ROLL"

A. Buy a ladder that includes a 10 yr bond Today 10 yr. 4.25% 4.25%

B. In one year, the 10 yr. bond becomes a 9 yr. bond still with the same interest rate of 4.25%; yet if rates don't change, the market rate is lower
1 Yr Later 9 yr. 4.25% 4.15%

C. So the total return will be the interest payment, plus the increase in the bond price

Interest Received 4.25%
Bond Increase 0.74%
Total Return 4.99%

D. This happens to every bond in the ladder every year until the bond nears maturity; near maturity, the bond's premium begins to return to the original face value

## "THE BREAKEVEN YIELD CURVE"

E. Since the portfolio appreciates from the "Roll" and with bond yields being higher than money market rates, this analysis assesses how much rates would have to rise for a bond investor today to lose money over the next few years; the aggregate results are presented in the graph on the upper right side of this page. For example, a 10 yr. bond purchased today at 4.25% would be a 7 yr. bond in 2007; the 7 yr. rate would have to exceed 6% for the investor to be worse off.

F. For example, let's consider one of the bonds in the portfolio, the 10 yr. bond presented on the left under "The Roll." The graph above does this for all of the bonds.

If the investor buys the bond instead of waiting for rising rates, they will receive:

	CASH
Buy 10 yr. Bond for \$1,000	\$ 42.50
If Left In Money Market @ 1%	10.00
Extra Return	\$ 32.50

The extra return is the amount the bond could fall in price due to rising rates and the investor would still breakeven compared to waiting for rising interest rates.

Breakeven Price	\$967.50
Breakeven Market Rate	4.70%

ASSUMPTIONS: A normally positive slope to the yield curve; interest rates are assumed to not change to illustrate and isolate this effect; interest paid annually