

**The Meaning of Interest Rates**  
ECON 4673  
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**Problems**

1. Do bondholders fare better when the yield to maturity increases or when it decreases? Why?
2. When is the current yield a good approximation of the yield to maturity?
3. If interest rates decline, which would you rather be holding, long-term bonds or short-term bonds? Why? Which type of bond has the greater interest-rate risk?
4. If the interest rate is 10%, what is the present value of a security that pays you \$1,100 next year, \$1,210 the year after, and \$1,331 the year after that?
5. State the Fisher equation. If expected inflation falls and the nominal interest rate is stuck at zero, briefly explain how the real interest rate responds.
6. What is the yield to maturity on a simple loan for \$1 million that requires a repayment of \$2 million in five years' time?
7. What is the price of a perpetuity that has a coupon of \$50 per year and a yield to maturity of 2.5%? If the yield to maturity doubles, what will happen to the perpetuity's price?
8. A \$1,000-face-value bond has a 10% coupon rate, its current price is \$960, and its price is expected to increase to \$980 next year. Calculate the current yield, the expected rate of capital gain, and the expected rate of return.