



Question 1

Explain the meaning of the maturity of a bond. Why might interest rates at different maturities differ? What is the yield curve?



Why might interest rates at different maturities differ?

This is due to something called the "term structure of interest rates"

The term structure of interest rates is the relationship between interest rates or bond yields and different terms or maturities.

The term structure of interest rates is also known as a **yield curve**, and it plays a central role in an economy. The term structure reflects expectations of market participants about future changes in interest rates and their assessment of monetary policy conditions.

What is the Yield curve?

A yield curve is a line that plots the interest rates, at a set point in time, of bonds having equal credit quality but differing maturity dates.

The shape of the yield curve gives an idea of future interest rate changes and economic activity.

There are three main types of yield curve shapes: normal, inverted and flat (or humped).

What might a downward-sloping yield curve imply about expected future short term rates?

An inverted or down-sloped yield curve suggests yields on longer-term bonds may continue to fall, corresponding to periods of economic recession. When investors expect longer-maturity bond yields to become even lower in the future, many would purchase longer-maturity bonds to lock in yields before they decrease further. The increasing onset of demand for longer-maturity bonds and the lack of demand for shorter-term securities lead to higher prices but lower yields on longer-maturity bonds, and lower prices but higher yields on shorter-term securities, further inverting a down-sloped yield curve.

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Explain why a downward-sloping yield curve may indicate that the economy is expected to grow slower. What would a steep downward sloping yield curve imply about future inflation?

Historically, inversions of the yield curve have preceded many of the U.S. recessions. Due to this historical correlation, the yield curve is often seen as an accurate forecast of the turning points of the business cycle.

A recent example is when the U.S. Treasury yield curve inverted in 2000 just before the U.S. equity markets collapsed. An inverse yield curve predicts lower interest rates in the future as longer-term bonds are being demanded, sending the yields down. A steep downwards sloping yield curve would imply the interest rate will be lower in the future and therefore inflation would be increasing.

How would your answers differ if the curve was flat? If upward-sloping?

A flat yield curve is observed when all maturities have similar yields. A flat curve sends signals of uncertainty in the economy. This mixed signal can revert to a normal curve or could later result into an inverted curve.

The yield curve has usually been "normal" meaning that yields rise as maturity lengthens (i.e., the slope of the yield curve is positive). This positive slope reflects investor expectations for the economy to grow in the future and, importantly, for this growth to be associated with a greater expectation that inflation will rise in the future rather than fall.