Supervision 6
Money and Interest Rates

Short questions (250 words max)

1. Explain how an increase in the minimum reserve requirement is likely to affect the interbank rate, the monetary base and the money multiplier.

2. Suppose a gilt and an index-linked gilt maturing in 2055 on the same date have a coupon rate of 4.25% and 1.25%, and a redemption yield of 3.40% and -0.06%, respectively. Compute break-even inflation (up to three decimals). Provide an estimate of expected inflation and the risk-free real interest rate in each case if it is known that (i) the inflation measure used for index-linked gilts is biased and overstates actual inflation by one percent point, and (ii) the index-linked gilt is less liquid and has a liquidity premium of 50 basis points. [cf Tripos 2013]

Problems

3 Using the asset market model of supply and demand in the bond market, show graphically and explain intuitively the effect on current UK gilt prices and yields in each of the following cases:

(a) Financial markets expect a future decrease in UK gilt prices (e.g. due to greater government financing needs in the future).

(b) The adoption of inflation targeting by the Bank of England reduces inflation expectations.

(c) Financial turmoil abroad leads to a reduction of liquidity in foreign bond markets.

4 Suppose the Bank of England’s repo rate is 4.5% and the financial pages in the newspaper contain the following information: [Tripos 2006]

<table>
<thead>
<tr>
<th>UK GILTS</th>
<th>Interest yield</th>
<th>Redemption yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tr 7\textsuperscript{1}2pc ‘06</td>
<td>7.32</td>
<td>4.31</td>
</tr>
<tr>
<td>Tr 4\textsuperscript{3}4pc ‘10</td>
<td>4.65</td>
<td>4.22</td>
</tr>
<tr>
<td>Tr 8pc ‘15</td>
<td>6.09</td>
<td>4.09</td>
</tr>
<tr>
<td>Tr 4\textsuperscript{1}4pc ‘55</td>
<td>3.76</td>
<td>3.68</td>
</tr>
</tbody>
</table>

(a) Compute the price of the 7\textsuperscript{1}2pc ‘06 Treasury gilt per £100 face value. Explain how this gilt price is likely to be affected if the Bank of England reduced the repo rate by 25 basis points.
(b) Draw the yield curve. Provide at least two reasons why the yield curve could have that shape.

(c) Assuming the expectations theory of the term structure holds, estimate the 5-year interest rate in 2010. Explain why there may be a term premium that increases with the term to maturity and how that would affect the estimate.

Essay (1000 words max)

5 The slope of the yield curve is a good indicator of future economic activity. Discuss. [Tripos 2002]

Main readings


Supplementary references