Macroeconomics, Part IIA
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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]

UK GILTS	Interest yield	Redemption yield
Tr $7^{1}{}_{2}$pc '06	7.32	4.31
Tr $4^{3}{}_{4}$pc '10	4.65	4.22
Tr 8pc '15	6.09	4.09
Tr $4^{1}{}_{4}$pc '55	3.76	3.68

(a) Compute the price of the $7^{1}{}_{2}$pc '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

- Mishkin, Matthews and Giuliodori (2013), *The Economics of Money, Banking and Financial Markets*, European edition, chapters 1, 3-6, 10, 14-15, 19.

Supplementary references

- Blanchard and Johnson (2014), *Macroeconomics*, 6th global edition, chapters 4, 14-15.
- Bofinger (2001), *Monetary Policy: Goals, Institutions, Strategies and Instruments*, appendix 8.1-8.4.
- Clews, Salmon and Weeken (2010), "The Bank's money market framework", *Bank of England Quarterly Bulletin* (Q4).
- Engstrom and Sharpe (2018), "The Near-Term Forward Yield Spread as a Leading Indicator: A Less Distorted Mirror", Finance and Economics Discussion Series 2018-055, Board of Governors of the Federal Reserve System, https://doi.org/10.17016/FEDS.2018.055
- Estrella and Mishkin (1996), "The Yield Curve as a Predictor of U.S. Recessions", Federal Reserve Bank of New York, *Current Issues in Economics and Finance* 2(7)
- Estrella and Trubin (2006), "The Yield Curve as a Leading Indicator: Some Practical Issues", *Current Issues in Economics and Finance* 12(5)
- Haldane and Read (1999), "Monetary Policy and the Yield Curve", *Bank of England Quarterly Bulletin*, May.
- Howells & Bain (2008), *The Economics of Money, Banking and Finance: A European Text*, chapter 16.
- Hubbard & O'Brien (2011), *Money, Banking, and the Financial System*, chapters 3-5.
- McLeay, Radia and Thomas (2014), "Money Creation in the Modern Economy", *Bank of England Quarterly Bulletin* 2014Q1.
- Peacock (2004), "Deriving a market-based measure of interest rate expectations", *Bank of England Quarterly Bulletin* (Summer)