

### M3A22 PROBLEMS 1. 16.10.2015

In all Applied Mathematics, it is important to have a reasonable grasp of the subject area to which mathematics is to be applied. Here in Ch. I, this is economic and financial – with inescapable political overtones. Accordingly, the questions below do not have definitive answers. They are put to encourage you to think about underlying issues, and to do a little digging in the Internet. The corresponding Solutions 1 consist largely of edited extracts from Wikipedia.

Q1. The two most influential economists of the last century were Keynes and (according to taste) one of Hayek and Friedman. Give brief accounts of their work, and of their influence on policy.

Q2. Compare the bailing-out of LTCC in 1998 with the decision to allow Lehman Brothers to go bankrupt in 2008. Do you have a view of what policy should be here?

Q3. Briefly review the history of the euro. Do you have a view on the future viability of the euro? on whether or not the UK should join the eurozone? on the impact of euro membership on the economic crisis in Greece?

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Some further current issues to ponder:

Q4. Interest rates are at historic lows – near zero – and have been for years, since the Crash. Central banks (Fed, Bank of England, etc.) regularly discuss whether/when/how much to raise them. Negative interest rates have been suggested. This is crucial in the bond (money) markets – and in the real economy. Do you have a view?

Q5. Quantitative easing (QE) is widely credited with having helped the world economy to cope with the Crash – and with stoking a new asset price bubble (the bursting of the last one precipitated the Crash). Do you have a view?

Q6. The Chinese economy has undergone difficulties recently. Consider (a) the implications for the world/US/UK/EU economies, (b) what policy in PRC should/will/might be.