BSc (Hons) Economics
BSc (Hons) Economics and Politics
BSc (Hons) Economics and International Development

Department of Economics

ES30089 – Economics of Banking

Problem sets

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Instructions

These three problem sets are representative of coursework questions. In the coursework problems A would be worth 35 marks and problems B 10 marks each. The coursework will consist of two questions in the style of problems A and three questions in the style of problems B, with at least one question from each part of this unit. As problems A are allocated more marks than problems B, it is expected that problems A are answered in much more detail than problems B.

In preparation for the seminars students are required to work through these problems and sketch out a solution they can present and discuss during the seminar. Good solutions will apply the theory from class and discuss the validity of the model assumptions. It is not sufficient to merely describe the applicable model without significant reference to its validity in the context of the question.

Seminar schedule

Week 3	Problem set I, Questions 1 and 2
Week 5	Problem set II, Questions 1 and 3
Week 8	Problem set II, Questions 2, 4 and 5
Week 10	Problem set III, Questions 1 and 2
Week 11	Problem set IV, Questions 1, 2 and 3

Submission of seminar questions

Students are invited to submit in groups of 3-5 students two problem sets. It is the students' choice which seminar questions to submit, but they must be submitted at the beginning of the seminar in which they are discussed. Comments are normally returned within one semester week, but no marks or indications of marks are given.

Problem set I

Problems A

Question 1

The banking system in Anglia is dominated by 3 large banks. The government seeks to increase consumer choice and competition by breaking these banks up. It is suggested that a total of 8 banks are established. When proposing these measures the government of Anglia expressed hope that bank customers would benefit from lower loans rates and higher interest on deposits, in addition to better services offered. Five years after this move by the government, a study finds that while services of the banks have improved, e.g. opening hours of branches are longer and banks offer a wider variety of products than before, loan and deposit rates have actually moved further apart than prior to the break-up of the banks. A survey of customers nevertheless found a higher degree of satisfaction with their banks than before.

How do you explain this finding?

Problems B

Question 2

Low deposits rates in the recent recession lead depositors to search for investments with higher returns, this lead to the establishment of a number of peer-to-peer lending websites in which investors directly provide loans to individual borrowers. An amount invested is split up and spread over a larger number of borrowers and each borrower receives a loan from multiple lenders; early repayments of these loans or withdrawal of the loan by the lender are not possible and usually no facilities to trade loans exist. The success of these websites has resulted in a significant reduction in deposits with banks as the returns are significantly higher. The central bank publicly asked the government to intervene to limit the growth of this market as it puts the functioning of the entire banking system into question.

Why does the central bank ask for this intervention?

Problem set II

Problems A

Question 1

A new production technology has been developed that is so far unproven on a large scale. Many companies in the industry have shown interest in using this new technology rather than an established and well understood technology, but no one has publicly declared whether they will use this technology. The benefits of using the new technology are significant cost reductions, but initial evidence suggests that it may result in faulty products which could bankrupt a company. Firms operating in this industry observe that since this technology became available they face significant obstacles in obtaining loans, even if they are willing to pay higher interest rates than demanded by the banks.

How can you explain this observation? Would offering collateral alleviate the situation?

Question 2

The publicly listed company Marcus Oil Services has a wholly owned subsidiary that is legally independent. Due to an accident in one of its oil fields this subsidiary has incurred substantial losses and without fresh capital from its parent company will not be able to serve the bonds it has issued over the last 10 years. The parent company considers whether it would be advantageous to file for bankruptcy of this subsidiary and thereby avoid having to repay the bonds. As the CFO of Marcus Oil Services you are asked to deliver a brief report to the board discussing the advantages and disadvantages of the options.

What would your report be?

Problems B

Question 3

A bank specializes in student loans and offers two specifications; one in which parents can offer a guarantee to repay the loan if the student is not able to do so and one in which parents are not involved. It is observed that those not providing the guarantee have a higher default rate than those providing the guarantee.

How can you explain this finding?

Question 4

Johnson & Merburg is a mid-ranking bank that engages extensively in trading derivatives with other banks and holds significant long and short positions in a range of derivatives. Their deposits are fully insured by an independent deposit insurance scheme. Due to a rogue trader they have amassed a significant loss that threatens their very survival. The central bank seeks other banks to take over Johnson & Merburg to avoid a collapse.

Why would the central bank seek to avoid the collapse of Johnson & Merburg?

Question 5

The deposit insurance scheme of a country has undergone an audit by the financial regulator and they found that since its introduction the loans banks have approved are more risky. In light of this experience the regulator considers to raise the contribution each bank has to make to the scheme from 1.3% of deposits to 1.6%.

Discuss the merits of this proposal. Put special emphasis on whether the underlying problem the regulator has found will be addressed adequately.

Problem set III

Problems A

Question 1

Congo plc is a leading online retailer having enjoyed growth rates of sales in excess of 20% p.a. over the last 15 years. Although profit margins are slim, the company has always beaten market expectations for their earnings growth. Until recently the company could rely on the considerable wealth of its founder family to finance the expansion of their business. At this point, however, the company seeks to invest a significant amount into a new product line of manufacturing high-end electronic devices, directly challenging a very well placed incumbent. Financial analysts are generally sceptical about the chances of Congo plc in conquering this market; the management, however, is convinced of its viability. The company finds it very difficult to secure bank loans for this investment at reasonable interest rates.

How can you explain this observation?

Problems B

Question 2

As the result of a prolonged deep recession, banks suffered significant losses on their loan portfolio that led to the collapse of a few smaller banks, who were subsequently bought by larger competitors. As a reaction to this development the central bank as the main regulator of the banking sector considers increasing the capital requirements for banks. On hearing about these plans, the government opposes this move on the grounds that it would unnecessarily put the beginning recovery of the economy at risk.

Discuss the merits and demerits of the proposal by the central bank and the objection by the government.

Problem set IV

Problems A

Question 1

Preston Corp. was a family-owned business that has recently gone public. The family owners sold 2m shares of their total holdings of 10m shares and issued an additional 1m shares to finance further investments into the business. The aim was to allocate approximately half of the shares to individual investors and the other half to institutional investors, mainly pension funds. Upon receiving subscriptions the lead underwriter suggested an offer price of 627p that was accepted by the board as this would allow to achieve the desired allocation of shares. The first quoted price in trading was 722p and trades occurred in the subsequent days in a narrow band of 710p to 739p with trading volumes averaging 300,000 shares per day. The general perception of the issue is that it was a resounding success. In a meeting a week after flotation the CEO and largest shareholder of Preston Corp. has a scheduled meeting with the lead underwriters for a debriefing on the listing. He arrives in a very foul mood and immediately accuses the lead underwriter of ripping him and the company off by forcing him to sell his shares at a large discount and causing him large losses to the benefits of the banks clients.

How would you respond as the lead underwriter?

Problems B

Question 2

Pear Ltd. is a family-owned electronics company that has decided to go public in approximately 6 months' time with the aim to issue shares to the value of £210m, comprising 34% of the company. Currently the board of the company considers the appointment of an investment bank as advisor. The CEO suggests not appointing an investment bank as the costs of doing so are very high and they do not actually offer anything the company could not do itself.

As the CFO of the company how would you advise the board?

Question 3

Penton plc has been listed on the stock exchange for some years and outperformed the market as well as all comparable companies in each year; there is consensus that its strong market position and product pipeline will allow it to maintain this position for some time into the future. With the growth in its market capitalization the company has over the last 3 years attracted the coverage of financial analysts. At a recent meeting with analysts they complained that while they get good coverage by analysts, the market reaction on the release of favourable reports is negligible while any small hint of a negative aspect in a report results in significant share price losses, albeit temporarily.

How will the analysts explain this situation?