



BERJAYA BUSINESS SCHOOL

FINAL EXAMINATION

Student ID (in Figures) :

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Student ID (in Words) : _____

Subject Code & Name : **FIN5104 Applied Corporate Finance & Economics**
 Semester & Year : May - August 2016
 Lecturer/Examiner : Leon Siew Lin
 Duration : 3 Hours

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 2 parts:
 - PART A (40 marks) : Answer ONE (1) problem based calculation question. Answers are to be written in the Answer Booklet provided.
 - PART B (60 marks) : Answer all ONE (1) case study. Answers are to be written in the Answer Booklet.
2. Candidates are not allowed to bring any unauthorized materials except writing equipment into the Examination Hall. Electronic dictionaries are strictly prohibited.
3. This question paper must be submitted along with all used and/or unused rough papers and/or graph paper (if any). Candidates are NOT allowed to take any examination materials out of the examination hall.
4. Only ballpoint pens are allowed to be used in answering the questions, with the exception of multiple choice questions, where 2B pencils are to be used.

WARNING: The University Examination Board (UEB) of BERJAYA University College of Hospitality regards cheating as a most serious offence and will not hesitate to mete out the appropriate punitive actions according to the severity of the offence committed, and in accordance with the clauses stipulated in the Students' Handbook, up to and including expulsion from BERJAYA University College of Hospitality.

Total Number of pages = 7 (Including the cover page)

PART A : **Problem Based Calculation Question.**
INSTRUCTION(S) : Answer **ALL** question. Write your answers in the Answer Booklet(s) provided. (40 marks)

Pacific Products Sdn. Bhd. is a manufacturing company. Based on recent market survey and research conducted by Pacific Product Sdn. Bhd., they are considering to introduction a new product, Alpha. In order to manufacture the new product, the company will have to make an investment in buying a new machine. This is considered a new project for the company. After going through all the information provided by the suppliers, the company has gathered the following information relevant to the project:

- Initial fixed capital outlay: \$120,000
- Initial working capital outlay: \$9,800
- Life of the project: 5 years
- Capital recovery at project end: fixed \$18,000; working \$7,200
- Sales units forecast: 50,000 units in year one, growing at 6.00 % per annum thereafter
- Unit selling price: \$2.75
- Unit production cost: \$1.28
- Annual fixed overhead cost: \$35,000
- Annual tax rate of depreciation claimable: 20% per annum
- Annual income tax rate: 38%
- Required rate of return: 9 % per annum

Required: Evaluate the above investment project. Calculate the different valuation method in evaluating the return of the above investment.

- (a) Calculate an NPV for the project under the given base-case scenario. (8 marks)
- (b) Perform sensitivity analyses on the following variables: initial fixed capital outlay, unit selling price, annual sales growth rate, unit production cost. (6 marks)
- (c) By the use of Present Value Tables and the graph paper provided, calculate the IRR and break-even points for unit production cost and the required rate of return. (8 marks)
- (d) Based on the above calculation and analysis, advice the management on making the correct decision to product the new product Alpha, and make appropriate investment recommendations. (10 marks)
- (e) Compare and contrast sensitivity and break-even analyses with other risk analysis methods such as the risk adjusted discount rate and the certainty equivalent approach. Describe how each of these methods might influence management decision-making. (8 marks)

(Total marks: 40 marks)

END OF PART A

Should United Kingdom (UK) Stay or Should United Kingdom (UK) Go? The economic consequences of leaving the European Union (EU).

Unlike during the Great Depression of the 1930s, governments today have mostly resisted the temptation to erect new trade barriers following the global financial crisis of 2008-09. As a consequence, although world trade fell during the recession, it quickly recovered and it has helped to sustain growth in the struggling global economy.

But there is major concern over the direction of UK trade policy, stemming from uncertainty surrounding its future relationship with the European Union (EU). The Conservatives are committed to holding an 'in-or-out' referendum on membership by 2017. Labour and the Liberal Democrats have opposed this, but UKIP would take the UK out immediately. While the political consequences of leaving the EU (so-called 'Brexit') are much debated, less attention is given to the economic consequences. How would Brexit affect the UK economy and the income of UK citizens?

Quantifying the precise effects of leaving the EU is difficult, but the evidence suggests that Brexit would harm the UK economy – primarily by reducing trade with EU countries. Leaving the EU would also prevent the UK from benefiting from future free trade agreements (FTAs) negotiated by the EU, such as the Transatlantic Trade and Investment Partnership (TTIP) currently being negotiated with the United States.

Jumping off the trade train

Predicting the likely effects of Brexit is difficult. Leaving the EU would influence the UK economy in many ways. Trade, foreign direct investment (FDI), immigration and economic regulations would all be affected. There is also substantial uncertainty over what form the UK's relationship with the EU would take following Brexit. Given the unavoidable policy uncertainty, most analyses of Brexit consider a range of possibilities reflecting different future policies.

The best understood channel through which Brexit would affect the UK economy is via changes in UK trade. EU membership has reduced trade barriers between the UK and EU countries, leading to increased trade. When the UK joined the European Economic Community in 1973, just over 30% of UK exports went to the EU. By 2008, over 50% of UK exports went to EU countries.

Consumers benefit from reductions in trade barriers that reduce the price of imported goods and services. Businesses benefit from new export opportunities that lead to higher sales and profits. Workers benefit from trade that allows the UK to specialise in industries where it has a comparative advantage. All these channels raise efficiency and therefore income.

We use a quantitative model of the global economy to estimate how leaving the EU would affect the UK economy through changes in trade. The model takes account of trade in 35 sectors (including

intermediates) among the 40 major countries of the world. We analyse two scenarios for how leaving the EU would affect trade costs:

- An optimistic scenario, in which the UK continues to have an FTA with the EU (much like Switzerland and Norway currently do through the European Free Trade Association, EFTA).
- A pessimistic scenario, in which the UK is not able to negotiate such favourable terms and there are larger increases in trade costs.

We also account for fiscal transfers between the UK and the EU. The UK transfers some resources to the EU, mainly to subsidise agriculture and poorer member states. Ignoring transition costs and any direct or indirect benefit to the UK from these fiscal transfers, leaving the EU would bring home the equivalent of about 0.53% of national income (HM Treasury, 2013). This is the main potential benefit of Brexit.

But non-EU members like Norway and Switzerland pay to be part of the European single market. On a per capita basis, Norway's financial contribution to the EU is 83% of the UK's payment and Switzerland's contribution is 41% as large. Therefore, if the UK were to adopt the Norwegian or Swiss models after leaving the EU, the fiscal benefits of Brexit would be substantially less than 0.53%.

There are three main reasons why trade costs may increase after Brexit:

- Higher tariff barriers between the UK and the EU.
- Higher non-tariff barriers to trade (arising from different regulations, border controls, etc.) between the UK and the EU.
- Non-participation in future steps the EU takes towards deeper integration and the reduction of non-tariff barriers.
- In the pessimistic scenario, we assume that MFN2 tariffs on goods apply to UK-EU trade.

This seems reasonable immediately following withdrawal, but in the medium term, the UK may be able to negotiate an FTA with the EU. Hence, in the optimistic scenario, we assume that tariffs continue to be zero. Another important source of trade costs lies in non-tariff barriers related to regulations and other legal obstacles that affect trade in both goods and services. In the pessimistic scenario, we assume that the UK faces two thirds of the reducible non-tariff barriers faced by the United States when trading with EU countries. In the optimistic scenario, we assume that the UK faces one quarter of the reducible non-tariff barriers.

Finally, over a period of time, intra-EU trade costs have been falling approximately 40% faster than trade costs between other OECD countries. In the event of Brexit, the UK would not benefit from future reductions in non-tariff barriers within the EU. In the pessimistic scenario, we assume that intra-EU non-tariff barriers continue to fall 40% faster than in the rest of the world over the next decade, leading to a cumulative fall in trade costs of 10%.

In the optimistic scenario, we assume that intra-EU barriers fall only 20% faster than in the rest of the world, leading to a total fall in trade costs of only 5.7%. Our analysis takes into account the effects of Brexit on both trade with the EU and trade with the rest of the world. It is sometimes argued that Brexit would allow the UK to increase trade with fast-growing economies such as China and India. In practice, changes in trade with the rest of the world are unlikely to be large. Being part of the EU does not restrict

UK companies' ability to trade with the rest of the world. And the size of the EU economy gives it a stronger bargaining position in trade negotiations than the UK would have on its own. Moreover, as our nearest neighbour, Europe is the UK's natural trade partner. 2 Most Favoured Nation Status (MFN) is the highest level of tariffs allowed between members of the World Trade Organization.

The results of our analysis. In the optimistic scenario, there is an overall welfare loss of 1.13%, which is driven by current and future changes in non-tariff barriers. Non-tariff barriers play a particularly important role in restricting trade in service industries such as finance and accounting, an area where the UK is a major exporter. In the pessimistic scenario, the overall loss swells to 3.09%, with most of the impact coming from non-tariff barriers (2.55%). The costs of reduced trade far outweigh the fiscal savings. In cash terms, the loss is £50 billion in the pessimistic scenario and a still substantial £18 billion in the optimistic scenario.

An alternative way to evaluate the consequences of Brexit is to use the results of simple, less theory-based empirical studies of the effects of EU membership. Baier et al (2008) find that after controlling for other determinants of bilateral trade, EU member states trade substantially more with other EU countries than they do with members of EFTA. Their estimates imply that, if the UK leaves the EU and joins EFTA, its trade with countries in the EU will fall by about a quarter. Combining this with estimates that a 1% decline in trade reduces income by between 0.5% and 0.75% (Feyrer, 2009) implies that leaving the EU and joining EFTA will reduce UK income by at least 2.2% in the optimistic scenario and between 6.3% and 9.5% in the pessimistic one. These estimates are much higher than the costs obtained from the static trade model, which suggests that the dynamic gains from trade may be important. To put these numbers in perspective, during the 2008-09 global financial crisis the UK's GDP fell by around 7%.

The bottom line is that the costs of Brexit are likely to be at least double the losses obtained in the static analysis shown in Table 1. Hence, even under the most optimistic assumptions, we would expect a 2.2% fall in consumption per capita; under pessimistic assumptions, the fall could be as large as 6.3% to 9.5%.

Missing the next trade train?

The EU is currently negotiating a major new FTA with the United States (the TTIP) – as well as an 'economic partnership agreement' (EPA) with Japan. If the UK leaves the EU, it will not benefit from these and other free trade agreements negotiated by the EU in future. Over the past two decades, the EU has negotiated a number of FTAs containing traditional tariff reductions as well as additional liberalisation measures linked to non-tariff barriers, services trade, government procurement and the protection of intellectual property rights. Economic theory predicts that FTAs lower trade barriers on imported goods, leading to consumer welfare gains from increases in product variety, higher quality products and lower prices for existing products.

CEP researchers (Breinlich et al, 2015) have quantified the impact of recent EU FTAs on consumers in the UK and the EU12 (the 12 member states of the EU prior to the 1995 enlargement – Belgium, the Netherlands, Luxembourg, France, Germany, Italy, the UK, Ireland, Denmark, Greece, Portugal and Spain). Their methodology consists of two steps.

First, international trade data are used to compute measures of variety, quality and quality adjusted prices available to consumers. Then it is estimated how these measures are affected by trade

liberalisation resulting from FTAs entered into by the EU. The main finding is that trade agreements negotiated by the EU provided UK and EU12 consumers with access to better quality products and lower quality-adjusted prices for imported products. On average, trade agreements the EU has entered into over the past two decades have increased the quality of UK imports from its FTA partners by 26% and lowered the quality-adjusted price of imports by 19%. For the EU12, quality increased by 28% and quality-adjusted prices decreased by 11%. Overall, consumer prices fell by 0.5% for UK consumers as a result of FTAs with trade partners that are not EU member states, saving UK consumers £5.3 billion per year.

Based on this historical experience, we estimate that the TTIP agreement with the United States would lower prices by 0.4% and the EPA with Japan would lower prices by 0.2%. Together, these agreements would save UK households £6.3 billion. Foreign direct investment, immigration and regulation The UK received the most FDI of any European country in 2011, and of all the countries in the world, only the United States has a higher stock of inward FDI (House of Commons, 2013). Part of the attraction of the UK for foreign companies is as an export platform to the rest of the EU, so if the UK is outside the trading bloc, this position is likely to be threatened (HM Treasury, 2010; Barrell and Pain, 1998). This matters because foreign multinationals tend to be high productivity firms and they bring new technologies and management skills with them (Bloom et al, 2012). There is also some evidence of positive productivity spillovers from FDI undertaken in the UK (Haskel et al, 2002). Indeed, given the large sunk costs involved in FDI, the uncertainty generated by the possibility of an in-or-out referendum may have a negative impact on investment in the run-up to the vote (see Bloom et al, 2007, on the importance of uncertainty for investment).

Outside the EU, the UK could restrict immigration from the rest of the EU, while UK citizens would be likely to face reciprocal restrictions on their ability to live and work in EU countries. Economically, migration acts much like trade, as people tend to move to countries where they can be more productive and earn higher incomes, increasing total welfare. Restricting this mobility will, just like restricting trade, reduce overall UK welfare. Di Giovanni et al (2012) find that the maximum size of such effects would be a loss of 1.5% of income. A counter-argument used to support restrictions on labour mobility is that immigration from the EU has harmed UK-born workers in terms of jobs, wages and access to public services. But there is no compelling evidence that these negative effects exist (as shown in CEP's Election Analysis of immigration and the UK labour market).

As a member of the EU, the UK is able to influence the rules and regulations governing the EU single market. Even if the UK maintained full access to the single market following Brexit, it would be in the same situation as Switzerland: UK exports would have to obey EU regulations, but the UK would not have a seat at the table when the rules of the single market were decided. The UK will continue to remain outside the Eurozone. As the UK is one of the Eurozone's major trading partners, downturns in the Eurozone will have negative effects on the UK economy, but by maintaining an independent monetary policy, the UK can insulate itself from the worst effects of a Eurozone meltdown. Whether or not Brexit occurs will not affect the UK's ability to stay out of the Eurozone and run its own monetary policy.

Corporate Financing Issues

At the sametime, the scrutiny the financial services industry is under has never been greater with increasing aggressive action against banks, insurers and funds and now individuals.

The hard numbers illustrate the increased clampdown. In the two and a half years to 30 September 2014, the FCA and FSA imposed more than £1 billion in fines – some £680 million more than in the entire decade before.

With that in mind, the sector is under huge pressure to prove it can successfully mitigate risks, uncover past misconduct and improve resilience – or pay the price. With public opinion still broadly mistrustful of financial services, 2015 is a crunch year for many firms in handling financial crime.

(Source: <http://blogs.lse.ac.uk/brexitvote/2015/10/22> and grantthornton.co.uk/insights/six-issues-facing-the-financial-services-industry-in-2015)

Required:

Based on the case study:

- (a) Assess the financial and economic impacts of UK leaving EU. (20 marks)
- (b) Based on your assessment in part (a), give your recommendations and comments on how UK will overcome the coming financial and economically challenges. (25 marks)
- (c) Discuss and evaluation how UK will have to overcome the challenges in the corporate financing sector. (15 marks)

(Total marks: 60 marks)

END OF EXAM PAPER