



UNIVERSITI SAINS MALAYSIA

Final Examination  
2016/2017 Academic Session

May/June 2017

**JFP 363E/JFP 463E – Security Investment and Portfolio Management**  
***[Pelaburan Sekuriti dan Pengurusan Portfolio]***

Duration : 3 hours  
*[Masa : 3 jam]*

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Please check that this examination paper consists **SIX (6)** pages of printed material before you begin the examination.

*[Sila pastikan bahawa kertas peperiksaan ini mengandungi **ENAM (6)** muka surat yang bercetak sebelum anda memulakan peperiksaan.]*

Answer **ALL** questions. You may answer either in Bahasa Malaysia or in English.

*[Jawab **SEMUA** soalan. Anda dibenarkan menjawab soalan sama ada dalam Bahasa Malaysia atau Bahasa Inggeris.]*

In the event of any discrepancies in the exam questions, the English version shall be used.

*[Sekiranya terdapat sebarang percanggahan pada soalan peperiksaan, versi bahasa Inggeris hendaklah diguna pakai.]*

Scientific calculator can be used for this examination.

*[Mesin kira saintifik boleh digunakan untuk peperiksaan ini.]*

The mark for each section is stated accordingly.

*[Markah bagi setiap bahagian adalah seperti yang tercatat.]*

**Answer ALL questions.**  
**Jawab SEMUA soalan.**

**QUESTION 1 (20 marks/markah)**

Read the excerpts and answer the following question.

*Baca petikan dibawah dan jawab soalan berikutnya.*

The Malaysian ringgit slipped to its lowest level in almost 19 years against the dollar on Tuesday, on persistent downward pressure after the U.S. Federal Reserve raised interest rates last week and signalled a faster pace of rate increases in 2017. The ringgit, touched a low of 4.4785 per U.S. dollar, according to Reuters data - its weakest level since January 1998, during the height of the Asian financial crisis. - Reuters

Source: <http://www.thestar.com.my/business/business-news/2016/12/20/ringgit-slumps-to-lowest-in-18-years/>

There is a concern that Malaysians are borrowing too much and not saving enough, according to a report by Khazanah Research Institute. While household debt growth has been moderating since 2010 (2015: 7.3% year-on-year), the ratio of household debt to gross domestic product remains high, at 89.1% in 2015 against 87.4% in 2014. According to the report, most household debt was undertaken to finance house purchases, where housing loans have expanded by 11% between 2014 and 2015. "There is a concern that many will not have saved enough for a 20-year retirement and are taking on too much debt," said Khazanah Research Institute managing director Datuk Charon Mokhzani. This could be exacerbated by another finding in the report, which showed that average life expectancy was now 77.4 years on average for women and 72.5 years for men, up from 65.5 and 61.6 respectively for both genders in 1970. In 2013, the last year for which estimates for total savings by households data was publically available, household savings stood at 1.4% of adjusted disposable income, and averaged at 1.6% for 2006–2013.

Source: <http://www.thestar.com.my/business/business-news/2016/08/30/khazanah-malaysians-borrowing-too-much/>

As an investment advisor, what will be your suggestions for an investor who wants to form an investment portfolio for his family. Explain your answer.

*Sebagai seorang penasihat pelaburan, apakah cadangan anda kepada seorang pelabur yang ingin membentuk satu portfolio pelaburan untuk keluarga beliau. Jelaskan jawapan anda*

**QUESTION 2 [20 marks]**

Refer to figure 1 and answer the following question.

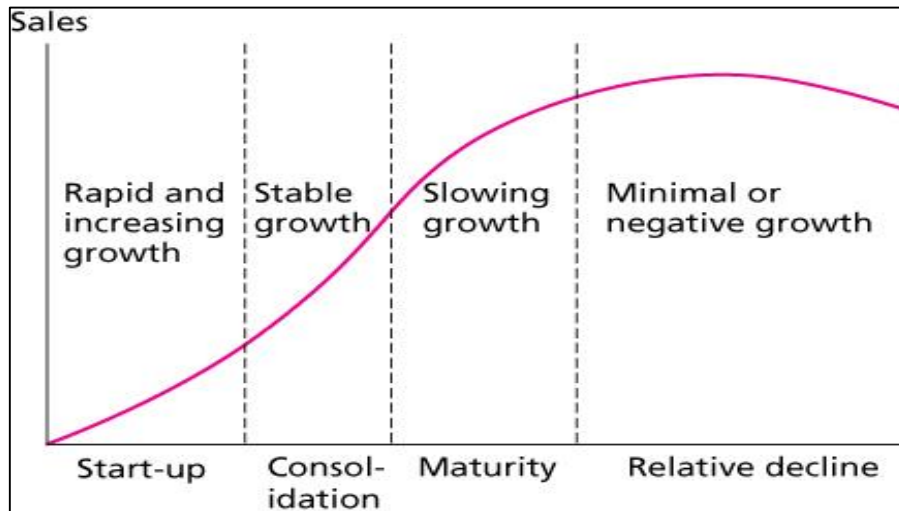
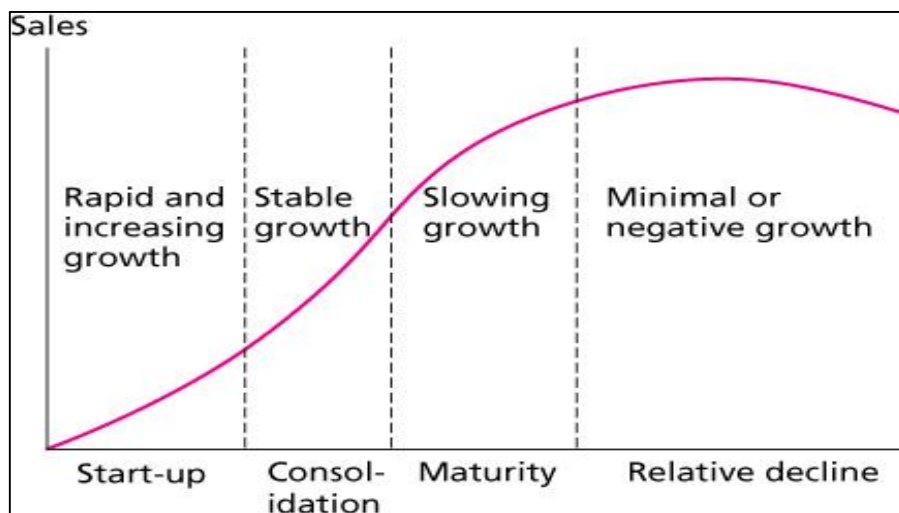


Figure 1. The Industry Life Cycle

Explain the stages of the industry life cycle, their inherited risks and investment outlook for potential investors for each of the stage. Provide examples to support your answers.

**SOALAN 2 [20 markah]**

Rujuk gambarajah 1 dan jawab soalan yang berikut.



Gambarajah 1. Kitaran Hayat Industri

Terangkan setiap peringkat kitaran hayat industri, risiko yang terlibat dan peluang pelaburan yang wujud untuk bakal pelabur. Berikan contoh untuk menyokong jawapan anda.

**QUESTION 3 [20 marks]**

- (a) Consumer product stocks currently provide an expected rate of return of 16%. JB73, a large consumer product company will pay a year-end dividend of \$5 per share.
- (i) If the stock is selling at RM50 per share, what must be the market's expectation of the growth rate of JB73 dividends?  
(6 marks)
- (ii) If dividend growth forecasts for JB73 are revised downward to 2% per year, what will happen to the price of its stock?  
(4 marks)
- (b) Assume that Bella Company's dividends are trending upwards at a stable growth rate (g). If  $g = 0.05$  and the most recently paid dividend was RM3.81.
- (i) Calculate the expected future dividends for the next 3 years.  
(6 marks)
- (ii) If the market capitalization rate for Bella Company is 12%, what is the intrinsic value ( $V_0$ ) of a share of its stock?  
(4 marks)

**SOALAN 3 [20 markah]**

- (a) Saham barangan pengguna memberikan pulangan dijangka sebanyak 16%. JB73 iaitu sebuah syarikat barangan pengguna yang besar akan membayar dividen hujung tahun sebanyak RM5 se saham.
- (i) Jika saham JB73 berharga RM50 se saham, apakah jangkaan pasaran terhadap kadar pertumbuhan dividen JB73?  
(6 markah)
- (ii) Jika unjuran pertumbuhan dividen JB73 dijangka turun ke 2% setahun, berapakah pula harga sahamnya?  
(4 markah)
- (b) Andaikan dividen Syarikat Bella mempunyai kadar pertumbuhan menaik yang stabil (g). Jika  $g = 0.05$  dan bayaran dividen terkini adalah RM3.81.
- (i) Kirakan dividen yang dijangka untuk 3 tahun akan datang.  
(6 markah)
- (ii) Jika kadar pemodalanan pasaran Syarikat Bella adalah 12%, kirakan nilai intrinsik se saham.  
(4 markah)

**QUESTION 4 [20 marks]**

James is considering an investment option of Waikiki Corporation. He has been given the following information:

Risk free rate of return is 9%

The expected rate of return on the market portfolio is 14%

Waikiki stock has a beta coefficient of 1.4

Dividend payout ratio is 40% with the latest earnings announced were RM12 per share.

Dividends were just paid and are expected to be paid annually. James expects that Waikiki will earn an ROE (return on equity) of 22% per year on all reinvested earnings forever.

- (a) What is the intrinsic value ( $V_0$ ) of a share of Waikiki stock?  
(10 marks)
- (b) If the market price of a share is currently RM280, and James expects the market price to be equal to the intrinsic value one year from now, what is James's expected one-year holding period return (HPR) on Waikiki stock?  
(10 marks)

**SOALAN 4 [20 markah]**

*James sedang menimbangkan satu cadangan pelaburan Waikiki Corporation. Beliau mempunyai maklumat berikut:*

*Kadar faedah tanpa risiko 9%*

*Kadar faedah pasaran dijangka untuk portfolio 14%*

*Saham Waikiki mempunyai beta sebanyak 1.4*

*Nisbah bayaran dividen ialah 40% dan pendapatan mutakhir yang diumumkan ialah RM12 sesaham*

*Dividen terkini telah dibayar dan dijangka akan dibayar setiap tahun. James juga menjangkakan bahawa Waikiki akan mempunyai ROE sebanyak 22% ke atas semua pendapatan yang dilaburkan semula secara berterusan.*

- (a) *Apakah nilai intrinsik ( $V_0$ ) satu saham Waikiki Corporation?*  
(10 markah)
- (b) *Jika kini harga pasaran sesaham ialah RM280, dan James menjangkakan bahawa harga pasaran sama dengan nilai intrinsik setahun dari sekarang, apakah nilai jangkaan pulangan pegangan setahun (HPR) untuk saham Waikiki tersebut?*  
(10 markah)

**QUESTION 5 [20 marks]**

Carol manages a risky portfolio with an expected rate of return of 18% and a standard deviation of 28%. The T-bill rate is 8%.

- (a) Carol's client chooses to invest 80% of a portfolio in her fund and 20% in a T-bill money market fund. What is the expected return and standard deviation of the client's portfolio?

(5 marks)

- (b) Suppose Carol's risky portfolio includes the following investments in the given proportion:

Stock A	27%
Stock B	33%
Stock C	40%

What are the investment proportions of her client's overall portfolio, including the position in T-bills?

(10 marks)

- (c) What is the reward-to-volatility ratio (Sharpe ratio,  $S$ ) of Carol's risky portfolio and her client's overall portfolio?

(5 marks)

**SOALAN 5 [20 markah]**

Carol menguruskan satu portfolio berisiko yang mempunyai jangkaan pulangan sebanyak 18% dan sisihan piawai sebanyak 28%. Kadar T-bil ialah 8%.

- (i) Pelanggan Carol memilih untuk melabur 80% daripada portfolionya dalam dana tersebut dan 20% lagi di pasaran wang T-bil (Bil Perbendaharaan). Apakah jangkaan pulangan dan sisihan piawai portfolio pelanggan tersebut?

(5 markah)

- (ii) Katakan portfolio berisiko yang diuruskan oleh Carol mengandungi pelaburan berikut dengan nisbah:

Stok A	27%
Stok B	33%
Stok C	40%

Apakah nisbah keseluruhan pelaburan pelanggan Carol, termasuk pelaburannya di dalam T-bil?

(10 markah)

- (iii) Apakah nisbah ganjaran-volatiliti (nisbah Sharpe,  $S$ ) bagi portfolio berisiko Carol dan portfolio keseluruhan pelanggannya?

(5 markah)