Østfold University College

SOLUTION TO THE EXAMINATION

Course Code: SFB12614	**Course:** International Finance (10 ECTS)
Date: May 6, 2019	**Duration of Exam:** 4 hours
Permitted Sources: English —mother tongue dictionary Mother tongue —English dictionary Calculators	**Lecturer:** Mehtap Aldogan Eklund

Guidelines for Grading:
The total points available in this exam are 100 points.

A - Excellent - An excellent performance, clearly outstanding. The candidate demonstrates excellent judgment and a high degree of independent thinking.
B - Very good - A very good performance. The candidate demonstrates sound judgment and a very good degree of independent thinking.
C - Good - A good performance in most areas. The candidate demonstrates a reasonable degree of judgment and independent thinking in the most important areas.
D - Satisfactory - A satisfactory performance, but with significant shortcomings. The candidate demonstrates a limited degree of judgment and independent thinking.
E - Sufficient - A performance that meets the minimum criteria, but not more. The candidate demonstrates a very limited degree of judgment and independent thinking.
F - Fail - A performance that does not meet the minimum academic criteria. The candidate demonstrates an absence of both judgment and independent thinking.

Lower Range in %	Higher Range in %	HIOF Grading	
80	100	A	Excellent
70	79	B	Very Good
60	69	C	Good
50	59	D	Satisfactory
40	49	E	Sufficient
Below 40		F	Fail

SECTION 1: OPEN RESPONSE QUESTIONS [total: 70 points]

In this section, you have *open response* questions; then you should type your answer, explanations in detail. You have to show all your calculations if it requires computation. **You have to reply to all questions**. The suggested time to answer the questions is 140 minutes, approximately for each question 20 minutes.

Question 1 [*10 points*]**:** Alison Blue is very keen in following the price changes in exchange rates, she buys Financial Times and follow up the daily price changes between Euro and USD dollar. She noted that in May 2017, the exchange rate was USD/EUR 0.90, and in June 2017,

it changed to USD/EUR 0.82. Could you please help Alison find the percentage of change (%) in the value of Euro?

Question1- Solution:

In May, 2017 (Beginning): USD/EUR 0.90 → it means 1 USD=0.90 EUR

In June 2017 (Ending): USD/EUR 0.82 → it means 1 USD=0.82 EUR (so, USD depreciated, EUR appreciated). Then, the result should be positive.

The quotation is USD/EUR 0.90, the foreign currency (EUR) is price currency, so **indirect quotation.** Then, formula of percentage of change is [(Beginning-Ending)/Ending] *100

=[(0.90-0.82)/0.82] *100 = **9.75% , Euro is appreciated 9.75 percent**

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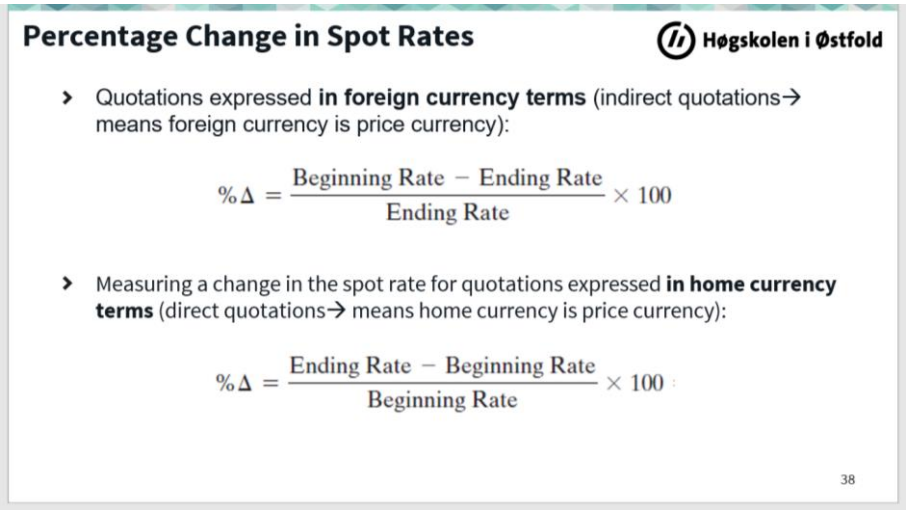


Question 2 [Total 10 points]**:**

Q2.1 [3 points, each blank is 1 point]: **Fill in the blanks**

The speculator believes that Swiss Franc (CHF) will rise in value versus US Dollar by the end of the year. Then, the speculator that has (1)_____ a futures contract on (2) _____, so he has taken a (3)_____ position.

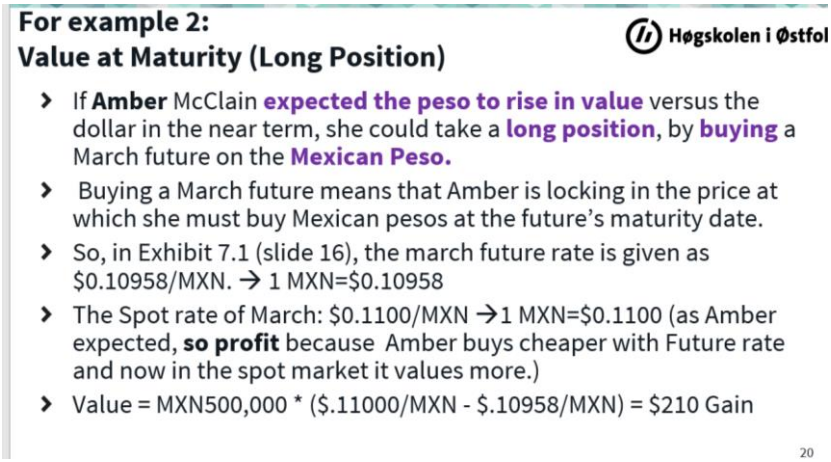
To fill in the blanks in (1) – Select one right answer: A) Bought B) Sold

To fill in the blanks in (2) – Select one right answer: A) USD Dollar $ B) Swiss Franc CHF

To fill in the blanks in (3) – Select one right answer: A) Short B) Long

Q2.1- Solution : [3 points, each blank is 1 point]: **Fill in the blanks**

The speculator believes that Swiss Franc (CHF) will rise in value versus US Dollar by the end of the year. Then, the speculator that has _bought__ a futures contract on _Swiss Franc (CHF)__, so he has taken a __long__ position.



Q2.2 [7 points]: The speculator sells five British pound futures contract for $2.00/£. The maturity of the futures contract is May 2017. Each pound futures contract is for an amount of £62,500, and the spot rate at the maturity is $2.25/£. What is the value of her position at maturity?

Q2.2- Solution:

-The speculator **sells** five British pound **futures contract** for $2.00/£. → sell foreign currency future contract, means **Short position and $2.00/£ is the future settle rate**.

Value at Maturity (Short Position)= -Notional principal * (Spot-Future)

Value at maturity= - (5*£62,500)* ($2.25/£. - $2.00/£) = -£312'500 * 0.25 = **-$78'125, Loss $78'125.**

- **If they get right answer as - $78'125 (Loss $78'125), then they get full 7 points.**

Various Wrong answers and their grading points:

- If they found **-£78'125** or **$78'125**, just **give 5 points**.
- If they forgot to multiply with 5 contracts, and found it as **-$15'625** then just **give 4 points**

- (£62,500)* ($2.25/£. - $2.00/£) = -£312'500 * 0.25 = - $15'625

- If they found it as **$15'625** then just **give 3 points**
  (£62,500)* ($2.25/£. - $2.00/£) = -£312'500 * 0.25 = $15'625

- If they found it as **£15'625 or -£15'625** then just **give 2 points**

Question 3 [*10 points*]**:** There is a 'trade dilemma' in international trade. The trade dilemma can be described as follows: The importer (buyer) prefers to pay after the goods received. On the other hand, exporter (seller) prefers that importer (buyer) first pay for the goods, and then exporter ships the goods after being paid.
Consider that importer is an 'unaffiliated unknown party'. In other words, importer and exporter have no historical business relationship.

In that case, how can you solve this 'trade dilemma' in international trade finance to help exporter and importer trade internationally by avoiding the risk of non-completion or counter-party risk?

Please support your answer by explaining and discussing it in detail.

Question 3- Solution: *[Total 10 points]*

The solution to the 'trade dilemma' in the international trade finance is the **letter of credit** (L/C or Commercial letter of Credit). *[5 points out of 10 is for naming the solution as 'Letter of Credit']*

Suggested explanation *[5 points out of 10 is for the brief explanation of the answer]*:

The fundamental dilemma of being unwilling to trust a stranger in a foreign land is solved by using a **highly respected bank as intermediary.** In other words, the **importer obtains the bank's promise to pay on its behalf,** knowing that the exporter will trust the bank. The bank's promise to pay is called a letter of credit (L/C).

- Definition: A letter of credit (L/C) is a **bank's promise to pay issued by a bank at the request of an importer** (the applicant/buyer), in which the bank promises to pay an exporter (the beneficiary of the letter) upon presentation of documents specified in the L/C.

- Advantage: An L/C **reduces the risk of non-completion**, because the bank agrees to pay against documents rather than actual merchandise.

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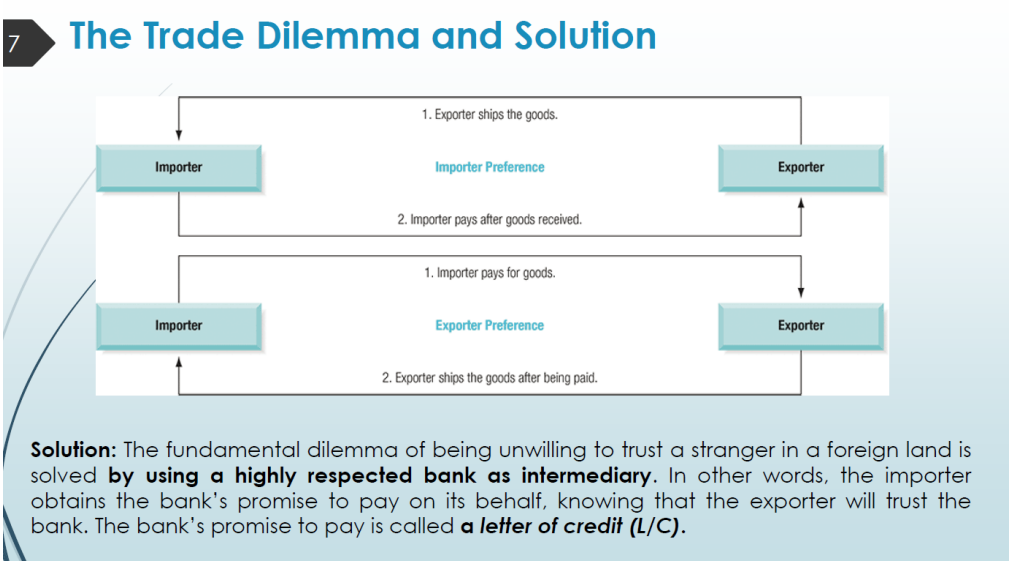

Question 4 [total *9 points*]**:** Use the table below to answer the following questions below.

The table below indicates April 10, 2016, British Pound (£) Option Prices (cents per pound, 61,000 pound contracts)

		Calls-Last				**Puts-Last**		
Option&Underlying	Exercise Price	May	June	July		May	June	July
1444	1430	0.90	1.38	1.40		0.60	1.06	1.60

Q4.1 [2 points]**: What was the closing price of the British pound on April 9, 2016 (**USD Dollar Price per British Pound)**?**

Answer: $____/£

Question 4.1- Solution:

Solution: 1 $ = 100 Cents

? $ = 1444 Cents

_____

= (1444*1)/100= **$14.44/£** **or also be nice and accept 1444 cents as a right answer ;)**

Q4.2 [3 points, each blank is 1 point]**: Fill in the blanks**

The strike price of _____ giving the purchaser the right of buy pounds in July has a cost per pound of _____ for total price of_____.

Question 4.2- Solution:

Solution→ giving the purchaser the right of buy pounds in **July→** means call option for july

Fill in the blanks: The strike price of ___**1430**_ gi**ving the purchaser the right of** pounds in **July** has a cost per pound of **____1.40 cents_or __$0.014__** for total price of_____**$854**___.

Total Price:

61,000 pound contracts

Call option July: 1.40 cents = $0.014/£, so

=61,000* 0.014 = **$854 Or give half points (0.5 points) if total price is calculated as $85,400**

Q4.3 [4 points]: A buyer of a put option for December 2017 has been informed that the option on Mexican Peso has a strike price of $10/Peso and a cost of $0.05. The spot rate in December is $12/Peso. What is the profit or loss for the buyer of a put option?

Question 4.3- Solution:

Put Option, Profit or Loss for a buyer= Strike Price- (Spot Rate + Premium)

= 10 - (12+ 0.05)= 10 – 12.05 = **-2.05 , loss of $2.05/Peso**

Question 5 [**total 2 points**]: **Fill in the blanks**
Jack is walking down in New York City and is planning his next trip to Spain. He decides to visit the forex dealer to convert the US Dollar to Euro. He states that "**it costs him 0.90 euros per dollar**". Please disclose the foreign exchange rate between the Euro and US Dollar according to the following terms of currency quotations.

Based on European Term:_____

Based on American Term:_____

Based on Direct Quote: _____

Based on Indirect Quote: _____

Question 5- Solution: total 2 points, each 0.5 point

it costs him 0.90 euros per dollar → means €0.90= $1 or €0.90/$

Based on European Term:_ $/ € 0.90 or USD/EUR 0.90____

Based on American Term:_ €/$ 1.11 or EUR/USD 1.11 _____

Based on Direct Quote: __:_€/$ 1.11 or EUR/USD 1.11 _____

Based on Indirect Quote: ___$/ € 0.90 or USD/EUR 0.90_____

Source:

European Terms vs American Terms Quotation:

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European terms	American terms
Foreign currency price of one dollar (USD)	U.S. dollar price of one euro (EUR)
USD/EUR 0.8214 or USD 1.00 = EUR 0.8214	EUR/USD 1.2174 or EUR 1.00 = USD 1.2174
USD is the base or unit currency *EUR is the quote or price currency*	*EUR is the base or unit currency* *USD is the quote or price currency*

$$\frac{1}{\text{EUR } 0.8214 / \text{USD}} = \text{USD } 1.2714 / \text{EUR}$$

Direct and Indirect Quote:

Høgskolen i Østfold

- Foreign exchange quotes are at times described as either ***direct*** or ***indirect***.
- In this pair of definitions, the home or base country of the currencies being discussed is critical. The form of the quote depends on what the speaker regards as "home."
- A ***direct* quote** is a **home currency price** of a unit of foreign currency
  = **the price** of a foreign currency **in domestic currency** unit
  = Foreign Currency/**Home currency**
  Price Currency

An ***indirect* quote** is a **foreign currency price** of a unit of home currency.
= **the price** of domestic currency **in foreign currency** units.

Question 6 [total *10 points*]**:** What are the differences between forfaiting and factoring? Please fill in the blanks in the table below [*5 points*] and explain your answers in a paragraph *[5 points*].

	Forfaiting	**Factoring**
Type:		
Maturity:		
Financed:		
Secondary Market:		
Types of Trade:		
Letter of Credit (L/C):		

Question 6- Solution: *Total 10 points*

Table fill out as below: *[5 points out of 10*].

	Factoring	**Forfaiting**
Type:	Recourse or non-recourse	Only non-recourse
Maturity:	Short term maturity (up to a year)	Mid or Long term Maturity
Financed:	Financed up to 80-90%	100%
Secondary Market:	No	Yes (it can be sold to investor from forfeiter)
Types of Trade:	Both domestic and foreign trade	Only for foreign trade
Letter of Credit (L/C):	No L/C involved	L/C may be involved

Explanation *[5 points out of 10*]: We expect that students will explain each item in the table above briefly.

Question 7 *[Total 10 points: Each difference with explanation is 2 points*]**:** What are the five main differences between Foreign Currency *Future Contracts* and Foreign Currency *Forward Contracts*? Please name the differences and explain them.

Question 7- Solution: ***[Total 10 points: Each difference with explanation is 2 points]***

Students should *name and explain* any of the five differences below between future and forward contracts.

- **Foreign currency futures contracts differ from forward contracts** in a number of important ways:
  - Futures are standardized in terms of size while forwards can be customized
  - Futures have fixed maturities while forwards can have any maturity (both typically have maturities of one year or less)
  - Trading on futures occurs on organized exchanges while forwards are traded between individuals and banks
  - Futures have an initial margin that is market to market on a daily basis while only a bank relationship is needed for a forward
  - Futures are rarely delivered upon (settled) while forwards are normally delivered upon (settled)

Question 8 [Total *11 points*]**:** Exchange rate determination is complex.

Q8.1 [total 5 points, the naming of each factor is 0.5 point and explaining it 0.5 points]**:** There are various factors (determinants) having an impact on the Exchange rates. Could you please *name five factors* influencing the exchange rate and *shortly mention how they are affecting it*.

Question 8.1- Solution: 6 The Factors (determinants) having impact on the Exchange Rates: 5 of the following factors should be named. [naming of each factor is 0.5 point→0.5*5= total 2.5 points]

1. Inflation Rate

2. Interest Rate
3. Current Account Deficit
4. Public Debt
5. Terms of Trade
6. Political Stability and Economic Performance

- ***Shortly mention how they are effecting it*:** [explanation of each factor is 0.5 point→0.5*5= total 2.5 points]:

1. Inflation Rate: **The higher Inflation rate → has a negative (-) impact on the domestic currency (decrease the value of the currency/depreciated / devalued currency).**

2. Interest Rate: **The higher Interest rate (%)→ is the appreciated currency**/value increase in the domestic currency versus foreign currency.

3. Current Account Deficit: **→ has a negative (-) impact on the domestic currency (decrease the value of the currency/depreciated / devalued currency).**

4. Public Debt: **→ has a negative (-) impact on the domestic currency (decrease the value of the currency/depreciated / devalued currency).**

5. Terms of Trade: The **higher demand** on the countries products→ **then the stronger currency** (demand increase in the countries goods, so increased demanded domestic currency, so in increased the value of the domestic currency). *Increasing trade* **has a positive (+) impact on the currency.**
6. Political Stability and Economic Performance: Political Instability and Bad economic Performance (Economic Stagnation/shrinking economy)→ **has a negative (-) impact on the domestic currency (decrease the value of the currency/depreciated / devalued currency)**

Q8.2 [total 6 points, the naming of each factor is 1 point and explaining it 1 point]**:** Explain the **three major theoretical approaches** (school of thoughts) **to exchange rate determination**. *Please name* of each theoretical approach and shortly *describe it by mentioning* the key determinants of foreign exchange rates for each theoretical approach.

Question 8.2- Solution: [total 6 points]

-Names: The three school of thoughts (major theoretical approaches) are as follows [total 3 points out of 6]:

1. Parity Conditions or Purchasing Power Parity (PPP)
2. Theory of (Flow) Balance of Payments (BOP)
3. Theory of Monetary Approach / Theory of Asset Market Approach (Relative Price of Bonds or Portfolio Balance Approach)

-Determinants of each theoretical approaches are as seen on the following chart **or** the definition below [total 3 points out of 6]:

- **The theory of purchasing power parity (PPP)** *states that* the ***long-run equilibrium exchange rate is determined by the ratio of domestic prices relative to foreign prices***.
- **Theory of (Flow) Balance of Payments (BOP):** The basic balance of payments approach argues that the equilibrium exchange rate is found when **the net inflow** (outflow) of foreign exchange arising from current account activities matches **the net outflow** (inflow) of foreign exchange arising from financial account activities.
- **Theory of Asset Market Approach**: The asset market approach argues that exchange rates are determined *by the supply and demand for a wide variety of financial assets.*
  - Shifts in the supply and demand for financial assets alter exchange rates.
  - Changes in monetary and fiscal policy alter expected returns and perceived relative risks of financial assets, which in turn alter exchange rates.

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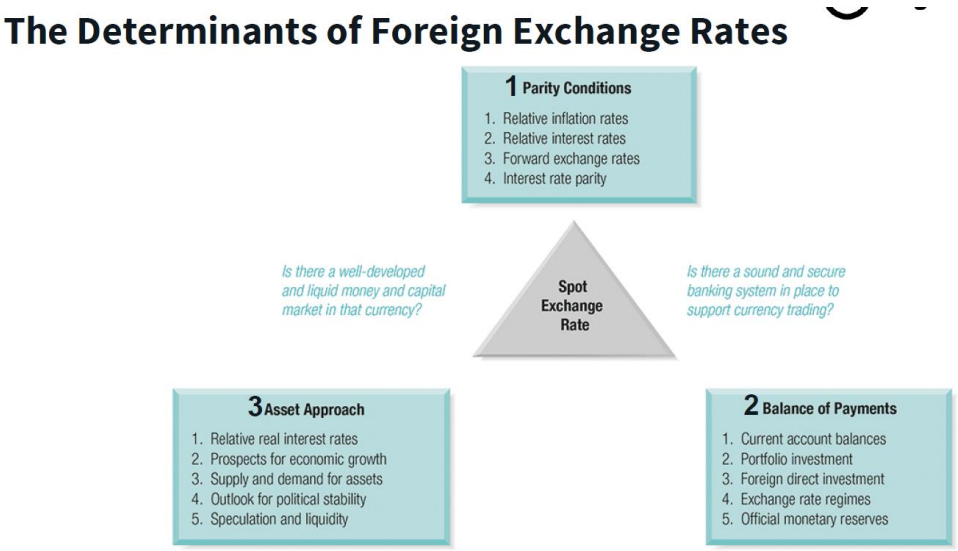

SECTION 2: MULTIPLE CHOICES [total: 28 points]

[*Each question is 2 points*]**:** In this section, you have *multiple choice questions*. Then, please **select one correct answer for each question** from the provided four multiple choices from A to D. You have to show all your calculations if it requires computation. **You have to reply to all questions**. The suggested time to answer the questions in section 2 is between 50 to 60 minutes.

Question 9: Spanish Enterprises, the currency speculator, sells two June futures contracts for 125,000 Euros (€) at the settlement price (June futures settle price) of $0.1500/Euro. What is the value of its position at maturity if the ending spot rate is $0.2000/€?

A) Profit of $12,500

B) Profit of $15,200
C) Loss of $12,500
D) Profit of $ 15,200
Show your calculation:

Question 9- Solution:

Assumptions	**Solution: Values**
Number of Euros per futures contract	**125,000**
Number of contracts	**2.00**
Buy or sell the Euro futures?	**Sell**
Ending spot rate ($/Euro)	**$0.20000**
June futures settle price ($/Euro)	**$0.15000**
Spot - Futures	**$0.05000**
Value of total position at maturity (US$)	**($12,500.00)**
Value = - Notional x (Spot - Futures) x 2	

Question 10: The risk is defined as "the uncertainty about outcomes or events, especially regarding the future". Total risk is made up of Systematic and Unsystematic risks. Which one of synonym terms of risks below is mainly in the scope of the International Finance?
A) Firm-Specific risk,
B) Diversifiable risk
C) Non-Eliminated risk
D) Residual or Idiosyncratic risk

Question 10- Solution:

International finance mainly covers the risk cannot be eliminated - it can only be re-distributed to others.

A, B, and D are related to Sigma (firm specific, diversifiable) risk, so C is only related to Beta (Macro, un-diversifiable, non-eliminated) risk. The right answer is Non-Eliminated risk.

Source:

Definition of Risk

Høgskolen i Østfold

The risk is defined as "the uncertainty about outcomes or events, especially regarding the future" (Bloom & Milkovich, 1998; S R Gray & Cannella, 1997).

Beta (β):

Systematic Risk
- Uncontrollable by an organisation
- Macro in nature

- Interest Rate Risk
- Market Risk
- * Purchasing Power / Inflationary Risk

* Note: In context of types of risk in finance, purchasing power risk and inflationary risk are same.

Sigma (σ):

Unsystematic Risk
- Controllable by an organisation
- Micro in nature

- * Business Risk / Liquidity Risk
- ** Financial Risk / Credit Risk
- Operational Risk

* Note: In context of types of risk in finance, business risk and liquidity risk are same.
** Note: In context of types of risk in finance, financial risk and credit risk are same.

10

ypes of Risks

Høgskolen i Østfold

- The fundamental principle of Capital Asset Pricing Model (CAPM) breaks down the total risk into two categories: Beta (β) and Sigma (σ).
- **Sigma**, is the firm-specific, unsystematic, diversifiable, residual, or idiosyncratic risk. "Unsystematic risk is associated with random outcomes generated by events or behaviors unique to the firm and it can be eliminated by proper diversification" (Weston et al., 1996).
- **Beta** is the un-diversifiable or systematic risk. "This part of the risk cannot be eliminated by diversification because it is related to market or economic factors that systematically affect most firms" (Weston, Besley, & Bringham, 1996).
- "Beta is an index reflecting how volatile the company's stock is in relation to the market. **A Beta (β) above 1 (one) indicates a stock higher volatility than market"** (Weston et al., 1996). "Negative Beta is also possible for the stock that tends to go down when the market goes up, and vice versa" (Markowitz, 1958).

Question 11: The Hong Kong dollar has long been pegged to the U.S. dollar at HK$7.20/$. When the Chinese yuan was changed in July 2006 against the U.S. dollar from Yuan 8.38/$ to Yuan 9.11/$. After the change in July 2016, what is the cross currency rate of HK$ per Yuan and how did the value of the Hong Kong dollar change against the yuan?

A) Yuan 1.16/HK$, as a result of the revaluation of the Chinese yuan, the Hong Kong dollar (HK$) has *increased* in value against the Chinese yuan.

B) Yuan 1.16/HK$, as a result of the revaluation of the Chinese yuan, the Hong Kong dollar (HK$) has *decreased* in value against the Chinese yuan.

C) Yuan 1.27/HK$, as a result of the revaluation of the Chinese yuan, the Hong Kong dollar (HK$) has *increased* in value against the Chinese yuan.

D) Yuan 1.27/HK$, as a result of the revaluation of the Chinese yuan, the Hong Kong dollar (HK$) has *decreased* in value against the Chinese yuan.

Show your calculation:

Question 11- Solution:

Solution:

1$=	7.2	HK$			
1$=	8.38	Yuan	Before		
1$=	**9.11**	Yuan	After		
Before	8.38	Yuan	=	7.2	HK$
	?	Yuan		1	HK$

1 HK$= 1.16 Yuan

After

9.11	Yuan	=	7.2	HK$
?	Yuan		1	HK$

Answer:

1 HK$= 1.27 Yuan

As a result of the revaluation of the Chinese yuan, the Hong Kong dollar **has increased in value against the Chinese yuan.**

Question 12: Which of the following is NOT a technique used by governments or central banks to impact domestic currency valuation?
A) Indirect Intervention
B) Direct Intervention
C) Indirect control over the management of the government
D) Capital Controls

Source: [Chapter 9- Currency Market Intervention –Methods of Intervention by the Central Bank]

Question 13: The Dealer makes money on currency exchanges quotes. _____ is the price (exchange rate) in one currency at which a dealer will buy another currency. _____ is the price (exchange rate) at which a dealer will sell the other currency.

A) Ask rate, Offer rate
B) Buy rate, Bid rate
C) Bid rate, Offer Rate
D) Offer rate, Ask rate

Question 13- Solution:

Dealer will **buy** another currency → **Buy rate= Bid Rate**

Dealer will **sell** the other currency → **Sell Rate= Ask Rate= Offer Rate**

Question 14: The theory of _____ is one of the underlying principles driving the growth of global business, and it that suggests specialization by country can increase worldwide production.
A) Tequila Effect
B) Fischer Effect
C) Specialization
D) Comparative advantage

Question 15: Under _____ system, currencies are predominantly market-driven.
A) soft pegs
B) flexible arrangement
C) hard pegs
D) residual agreement

Question 16: The phase of the globalization process characterized by imports from foreign suppliers and exports to foreign buyers is called the:
A) international trade phase.
B) multinational trade phase.
C) transnational trade phrase
D) import-export trade phase.

Question 17: If the goal were to increase the value of a country's currency - to fight a depreciation of the domestic currency in exchange for foreign currency - the central bank would:
A) buy its own currency in exchange for foreign currency.
B) follow an expansive monetary policy.
C) drive real rates of interest down.
D) sell its own currency in exchange for foreign currency.

Source: [Chapter 9- Currency Market Intervention –Methods of Intervention by the Central Bank]

Question 18: In February 2017, the Peso changed in value from Peso 2.40/$ to Peso 2.00/$, thus, the Peso _____ against the U.S. dollar.
A) strengthened
B) weakened
C) remained neutral
D) all of the above

Question 18- Solution:

1 USD $ = 2.40 Peso

Then, 1 USD$= 2.00 Peso (now I give same 1 USD$, but I can get less Peso (2.0 instead of 2.40 Peso)→ USD$ is weakened, but **Peso is strengthened**.

Question 19: If the Exchange rate quotation is declared as **$0.25/TRL.** Then, which of the statements below (I to IV) are correctly explaining the declared quotation.

A) I, II, III are correctly explaining the exchange rate quotation of $0.25/TRL
B) II, III, IV are correctly explaining the exchange rate quotation of $0.25/TRL
C) I, III, IV are correctly explaining the exchange rate quotation of $0.25/TRL
D) I, II, III, IV are correctly explaining the exchange rate quotation of $0.25/TRL

I) 0.25 Turkish Lira per Dollar
II) 0.25 Dollar per Turkish Lira
III) TRL/$ 0.25
IV) $/TRL 4

Question 19- Solution:

$0.25/TRL means→ 1 TRL = $0.25 **→ $0.25 per Turkish Lira**
→ price currency is $ and unit currency is TRL**, so TRL/$ 0.25 = $/TRL 4**
4 = 1/0.25 means reciprocal of 0.25

Question 20: According to the terminology associated with changes in currency values, which of the following choices is the case when a currency's value relative to other currencies is changed by market forces of supply and demand (market drivers)?

A) depreciation and revaluation
B) devaluation and appreciation
C) devaluation and revaluation
D) depreciation and appreciation

Question 21: What is the right chronological order of the evolution of the global monetary systems:

A) Inter War Years→ The Gold Standard→Floating Exchange Rates→ Emerging Era
B) Inter War Years→ The Gold Standard→ Emerging Era→ Floating Exchange Rates
C) The Gold Standards→Inter War Years→Floating Exchange Rates→ Bretton Woods
D) The Gold Standards→Inter War Years→Bretton Woods→Floating Exchange Rates

Question 22: Which is NOT the individual benefits of foreign currency derivatives?

A) Make underlying markets more efficient
B) Minimize earnings volatility
C) Motivate the employees
D) Reduces Tax Liabilities

Question 22- Solution:

Not Employees, Only top management, such as CEOs, are getting incentives as a variable pay.

These incentives (derivatives) are their motivators since they are risk-averse in nature (agency theory assumption).