Topic Overview	
Topic	BAFS Compulsory Part - Basics of Personal Financial Management C09: Personal Financial Management - Personal Investment Decisions
Level	S4
Duration	3 lessons (40 minutes per lesson)

Learning Objectives:

1. To understand the characteristics of financial products such as deposits, bonds and stocks;
2. To identify the risks of common financial products;
3. To understand the relationships between risks and returns of specific financial products; and
4. To apply the concepts of risk and return in making sound investment decisions.

Overview of Contents:

Lesson 1	Deposits (Part I)
Lesson 2	Deposits (Part II) and Bonds
Lesson 3	Stocks and Making Investment Decisions

Resources:

- Topic Overview and Teaching Plan
- PowerPoint Presentation
- Student Worksheet with Answer

Suggested Activities:

- Group Discussion
- Assignment
- Case Study

Lesson 1	
Theme	Deposits (Part I)
Duration	40 minutes

Expected Learning Outcomes:

Upon completion of this lesson, students will be able to:

1. Describe the features of the different types of deposit accounts;
2. Identify the financial risks of bank deposits;
3. Discuss the impact of inflation on investment; and
4. Discuss the opportunity cost of investing.

Teaching Sequence and Time Allocation:

Activities	Reference	Time Allocation
Part I: Introduction		
✧ Teacher begins the lesson with "Sophie's Choice" and asks the class for suggestions.	PPT #2-3	5 minutes
Part II: Content		
✧ Teacher summarises the different types of financial products that Sophie may use to keep the money given by her Grandpa. ✧ Teacher explains the features of different types of deposits, namely savings account, current account and fixed deposit, and shows the class the prevailing interest rates of the different types of deposits. ✧ **Activity 1 - Costs and Benefits of the Different Types of Deposits** ■ Students are required to write down the costs and benefits of different types of deposits. ■ Teacher invites volunteers to present their answers.	PPT#4 PPT#5-12 PPT#13 Student Worksheet p.1	10 minutes
✧ Teacher asks the class "Is it risk free to keep money in the bank?" and introduces the risks/cost factors involved in deposits, i.e. financial risk, inflation risk and opportunity cost. ✧ Teacher explains the financial risk of deposits. ✧ Teacher continues to explain the impact of inflation on	PPT#14-15 PPT#16-22	22 minutes

the purchasing power of money and highlights that inflation is an important factor to be considered when making deposits. ✧ Teacher explains the concept of opportunity cost of investments and how opportunity cost is measured.	PPT#23-24	
Part III: Conclusion		
✧ Teacher concludes the lesson by highlighting the key points learned.		3 minutes

Extended Learning Activity

(Applicable to more sophisticated classes)

Teacher asks students to identify the types of deposit accounts that banks in Hong Kong are offering apart from the current, savings and fixed deposit accounts through personal visit or internet. Share their findings with classmates in the next class.

(Hints for teachers: Apart from traditional deposit accounts, banks offer the different kinds of structured deposits where their returns are linked to the various investment assets such as foreign currencies, stock prices and indexes, etc.)

Lesson 2	
Theme	Deposits (Part II) and Bonds
Duration	40 minutes

Expected Learning Outcomes:

Upon completion of this lesson, students will be able to:

1. In terms of safety, reward, ease of getting cash and ease of opening an account, describe the characteristics of the different types of deposits;
2. Describe the nature and features of bonds;
3. Explain the major difference(s) between government and corporate bonds; and
4. In terms of safety, reward, ease of getting cash and ease of opening an account, describe the characteristics of the different types of bonds.

Teaching Sequence and Time Allocation:

Activities	Reference	Time Allocation
Part I: Introduction		
✧ Teacher begins the class by asking students if they believe that financial risks, inflation risks and opportunity costs are avoidable.	PPT#25	3 minutes
Part II: Content		
✧ Teacher introduces the Deposit Protection Scheme in Hong Kong and explains the financial risks of deposits that can be avoided. ✧ **Activity 2 - Rating Different Types of Deposits** ■ Students are required to rate the levels of safety, reward, ease of getting cash and ease of opening account for the different types of savings. ■ Teacher invites students to present their ratings.	PPT#26 PPT#27 Student Worksheet pp. 2-3	14 minutes
✧ Teacher introduces the nature and features of bonds. ✧ Teacher uses an example of bonds issued by Hong Kong Link 2004 Limited to illustrate the features of a bond. ✧ Teacher describes the nature and features of government bonds. ✧ Teacher describes the nature and features of corporate	PPT#28-31 PPT#32-36	18 minutes

bonds. ✧ Teacher compares the major differences between government bonds and corporate bonds.		
Part III: Conclusion		
✧ Teacher concludes the lesson by highlighting the key concepts learned. ✧ Teacher explains to the class the requirements of after class assignment.	PPT#37 Student Worksheet p. 4	5 minutes

Assignment – Following the Stock Market

Students are required to follow the stock market by recording the daily opening, highest, lowest and closing levels of the Hang Seng Index and a stock of their choice for a week. Price information is readily available in newspapers and the internet.

Lesson 3	
Theme	Stocks and Making Investment Decision
Duration	40 minutes

Expected Learning Outcomes:

Upon completion of this lesson, students will be able to:

1. Describe the nature and features of stocks;
2. In terms of safety, reward, ease of getting cash and ease of opening an account, describe the characteristics of the different types of stocks;
3. Identify the levels of risks and returns for financial products; and
4. Determine the appropriate financial products to match the goals and constraints of an investor.

Teaching Sequence and Time Allocation:

Activities	Reference	Time Allocation
Part I: Introduction		
✧ Teacher invites students to present their findings of the Hang Seng Index and stock price movement. ✧ Teacher compares the price movements of different stocks and how that short term stock price movement can be very volatile.	PPT#38	3 minutes
Part II: Content		
✧ Teacher explains the nature and features of stocks. ✧ Teacher concludes the discussion of stock by reviewing the safety, reward, ease of getting cash and ease of opening account of investing in stocks. ✧ **Activity 3 – The Risk and Return Pyramid** ■ Students are divided into groups of four to five. They are required to match the different types of financial products to the different levels of risks and returns in the Pyramid. ■ Teacher invites students to present their answers. ■ Teacher concludes the discussion and reinforces the students' understanding on the relationship between risks and returns of financial products.	PPT#39-42 PPT#43 Student Worksheet pp. 5-6 PPT#44-45	12 minutes

✧ **Activity 4 - Case Study** ■ Students remain in their group to study 5 mini-cases and recommend the most suitable investment options in each case. ■ Teacher invites students to present & justify their recommendations in each case.	PPT#46-52 Student Worksheet pp.7-12	20 minutes
Part III: Conclusion		
✧ Teacher concludes the session by reviewing the key points of investment decision.	PPT#53	5 minutes

BAFS Compulsory Part
Basics of Personal Financial Management

Topic C09:

Personal Financial Management

- Personal Investment Decision

Technology Education Section
Curriculum Development Institute
Education Bureau, HKSARG
April 2009

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Introduction

This session aims to enable students to develop fundamental knowledge of basic savings and investment instruments. Students will learn about the different types of deposits, bonds & stocks, risks & returns, and the characteristics of investment tools. Through case study, they will learn how to evaluate the alternatives for savings and investments.

Duration

Three 40-minute lessons

Contents

Sophie's Choice

Sophie's grandpa has given her a gift of $50,000 but she is not allowed to spend the money immediately. She has to wait until she graduates from university in 2 years' time.

In the meanwhile, Sophia will have to put aside this money but she has no idea what to do and asks for your suggestions.

Lesson 1

Start the lesson with "Sophie's Choice".

Point out that Sophie cannot use the money now and has to put it aside for 2 years.

Sophie's Choice

What could and should Sophie do with the money given by her grandpa?

Ask the class "What should Sophie do with the money given by her grandpa?"

Students are expected to give different answers such as putting it in a savings account or fixed deposit, some students may also cite bonds, stocks or other investment vehicles.

What options does Sophie have in keeping the $50,000?

- Piggy bank
- Deposits
  - Savings account
  - Current account
  - Fixed deposit account
- Bonds
- Stocks

Summarise the answers of the students and list out the basic types of investment vehicles.

Savings Account

Does anyone have a savings account?

Ask the class if anyone has a savings account and ask students what they know about it.

Savings Account

- Banks give you a bank card and a passbook when you open a savings account with them. They will also send you statements periodically to advise you of your transactions.
- With an ATM card, you can access your money anytime you want.
- You receive interest payments periodically, e.g. every 6 months, from your bank but the interest rate is usually quite low.

Explain the features of a savings account. Traditionally, banks give customers a passbook for a savings account, thus it is also known as “Passbook Savings Account”. Now, many banks use bank cards or statements instead. If the account holder has an Automatic Teller Machine (ATM) card, money can be withdrawn through ATM anytime. But if the account holder does not have an ATM card, he/she can only withdraw his/her money when the bank is open. Transactions (e.g. transfer of money) can also be done through telephone (i.e. phone-banking) and internet (i.e. e-banking).

Indicative Savings Account Rates (as on 31 Dec. 2007)

Account Balance	Interest rate
Less than $5,000	0.00%
$5,000 to $9,999	0.25%
$10,000 to $149,999	1.25%
$150,000 or above	1.50%

Source: The Hong Kong and Shanghai Banking Corporation Limited

Show the class current indicative savings account interest rates (update as needed, source: www.hsbc.com.hk).

Point out that rates are different for the different savings amounts as banks need to recover their operation costs.

Current Account / Demand Deposit Account

- Bank issues a cheque book to you when you open a current account.
- Money can be withdrawn with a cheque which can be used to settle payment.
- In Hong Kong, current account usually receives no interest.

Explain the features of current account.

Why cheques are used to settle payment?

- A proof of payment
- Safe
- Convenient
- Flexible

Topic C09: Personal Investment Decision

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BAFS Compulsory Part Learning and Teaching Example

Explain to the class the advantages of using cheques to settle payment.

1. Cheques which have been drawn and cashed can be used as a legal proof of payment.
2. It is safer to pay large amounts of money by cheques than by cash. Crossed cheques are even safer.
3. It is more convenient to carry cheques than cash.
4. Cheques can be made out in any sums deemed necessarily; offering the flexibility to settle payment amounts as noted.

Fixed Deposit Account

BIZ Bank Limited
Central Branch
123 Da Vos Road, Central, Hong Kong

Fixed Deposit Receipt

Mr. Chan Tai Man
60 Hoi Tin Street
Kowloon

16th September 20x9

We confirm having received the following deposit from you:

Principal amount:	HK$100,000
Start date:	16 September 20x9
Maturity date:	16 December 20x9
Number of days:	91 days
Deposit rate:	3% p.a.
Interest payable:	HK$747.95

Topic C09: Personal Investment Decision

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BAFS Compulsory Part Learning and Teaching Example

Show the class an example of a fixed deposit.

(Note: interest is calculated as $100,000 x 0.03 x 91/365 = $747.95)

Fixed Deposit Account

- You deposit your money for a fixed period of time, e.g. from 1 week up to several years, and you can only take your money back at the end of the period.
- You would commonly receive a higher rate of interest than a savings account.
- Banks pay different rates of interest for different principal amounts and periods.
- Generally, the larger amount or the longer you save, the more interest you will get.

Explain the features of fixed deposit account.

Indicative HK$ Fixed Deposit Rates (as on 31 Dec. 2007)

Deposit Amount Term	Below $100,000	$100,000 to $499,000	$500,000 or Above
1 month	1.80%	1.85%	1.90%
2 months	1.90%	1.95%	2.00%
3 months	2.15%	2.20%	2.25%
6 months	2.40%	2.45%	2.50%
12 months	2.65%	2.75%	2.85%
24 months	2.95%	2.95%	2.95%
36 months	3.00%	3.00%	3.00%
48 months	3.00%	3.00%	3.00%
60 months	3.10%	3.10%	3.10%

Source: Bank of China (Hong Kong) Limited

Show the class current indicative fixed deposit interest rates (update as needed, source: www.bochk.com).

Highlight that banks pay higher interest rate for larger amount of principal.

Point out that rates are normally higher for longer term fixed deposits but it will take the depositor longer to get their money back (i.e. a trade-off between return and liquidity).

Activity 1: Costs and Benefits of Different Types of Deposits

What are the costs and benefits of putting $50,000 in a piggy bank, savings account, current account or fixed deposit?

Activity 1 :

Ask students to write down in the table on their Student Worksheet p.1 the costs and benefits of putting $50,000 in a piggy bank, savings account, current account or fixed deposit.

Suggested answers:

Piggy Bank

Costs - Earns no interest; may be stolen or lost

Benefits - Readily accessible

Savings Account

Costs – Low interest rate; limited withdrawing amount when taking cash from ATM

Benefits - Earns some interest; money is safe with the bank; able to get cash with ATM card at any time

Current Account

Costs - Earns no interest; not able to get cash on non-banking days

Benefits - Money is safe with the bank; can be used to settle payment by cheque (safe and convenient)

Fixed Deposit

Costs - Cannot take the money out before maturity or have to pay penalty interest if you want to do so

Benefits - Earns higher interest; money is safe with the bank

Think about it…

Is it risk free to keep money in bank?

Ask the class if they think depositing money in bank is risk free.

People generally think that it is risk free to put money in banks but in fact, it is not always true.

Teacher should inspire students to consider the potential costs and risks of keeping money in banks and introduce the concepts of financial and inflation risks and opportunity cost.

Risks and Cost of Deposits

- Financial risk
- Inflation risk
- Opportunity cost

Briefly explain to the class the risks and cost of deposits. There will be more elaboration in the following slides.

- Financial risk is the possibility of losing part or all of the principal saved or invested. For example, depositors are not able to get back all their money when a bank goes bankrupt or a stock investor has to sell his/her shares of stock at a price lower than his/her buying price.
- Inflation risk is the possibility that the return of a deposit or investment is lower than the inflation rate. For example, if the 1-year deposit rate is 3% and annual inflation rate is 5%, the depositor suffers a loss of purchasing power.
- Opportunity cost refers to cost of the best option forgone by a depositor or investor. For example, the opportunity cost of an investor buying a stock instead of putting his money in a 1-year fixed deposit that pays 3% interest is the 3% interest he foregoes.

Financial Risk of Deposits

- FINANCIAL RISK is the risk of a financial loss.
- For deposits, it is the possibility that you cannot get all or some of the money back from your bank account if the bank withholding the deposit fails.

Point out to the class that deposit amount in excess of $100,000 is not protected, thus depositors with deposits in excess of $100,000 could lose part of their principal if the bank goes down (Because the limit of the Deposit Protection Scheme is $100,000, see later for the discussion of the Scheme).

In addition, the Hong Kong SAR Government announced on 14 Oct 2008 for the use of the Exchange Fund to guarantee repayment of all customer full deposits held with all licensed banks, restricted licence banks and deposit-taking companies in Hong Kong following the principles of the Deposit Protection Scheme. The guarantee took immediate effect and will remain in force until the end of 2010.

*(**Remarks**:*

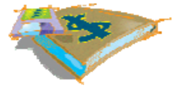
- *This kind of financial risk of deposits is known as default risk.*
- *Another type of financial risk is called market risk which is the possibility of financial losses due to unfavourable market performance.*
- *Explain to the class that most of the investment vehicles have financial risks. For example, when investing in a stock, there is a possibility that the stock price would fall. The financial risk of some investment products, such as futures and warrants can be very high where the investor could lose all or even more than the money initially invested.)*

Inflation Risk for Deposits

- INFLATION RISK (or purchasing power risk) is the risk that the value of deposits does not increase as rapidly as the increase in prices (i.e. interest rate < inflation rate).
- Inflation is a general rise in the price level.
- If the interest from a deposit does not compensate the increase in price, purchasing power is lost.

Explain to the class what inflation risk is.

Purchasing Power of Money

	Buy a product	**Deposit money in bank**
		
Now	**$10,000**	**$10,000**
	Price Increased 5%	3% interest received per year
1 year Later	**$10,500**	**$10,300**

Cannot buy the same product even with interest earned after 1 year!

Explain to the class that purchasing power of money is the quantity of goods and services that money can buy. Illustrate with the diagram when interest rate is lower than the inflation rate, the depositor will not be able to purchase the same product 1 year later even with the interest added (i.e. the principal plus interest).

For example, with the annual inflation rate at 5%, the product that costs $10,000 today will cost $10,500 1 year later. The bank paying 3% on the principle amount of $10,000 today will generate a total $10,300 only 1 year later (principle + interest). This will not be enough to buy the same product; implying a loss in purchasing power.

Inflation and Interest Rate

Average inflation and deposit rates in the past 20 years:

Year 1987 to 2006	Average Rate
Inflation Rate (Composite CPI)	4.22%
Savings Account Rate	2.97%
12 Months Deposit Rate	4.60%

Sources: Hong Kong Monetary Authority & Census and Statistics Department, HKSAR Government

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Show the class the average rates of savings account, 12 months fixed deposit and the inflation rate for the period from the beginning of 1987 to the end of 2006. Point out that the average rate of savings account was lower than the average inflation rate in the 20 years. The purchasing power of money kept in the banks was eroded by the high inflation rates during the past 20 years.

Inflation was rather severe in the 1980s and double-digit inflation rates were common. Inflation was staying at high single-digit level in the early 1990s until 1997. Hong Kong then experienced a period of deflation between 1998 to 2003 (when the inflation rates were negative). In 2007, inflation began to pick up again at the 2% level.

Inflation and Purchasing Power

- If price increases at an average of 4.22% per year, how much will a product sold at $1,000 at the beginning of Year 1 be selling at the end of Year 20?
- And by how much will the purchasing power of $1,000 decrease from the beginning of Year 1 to the end of Year 20?

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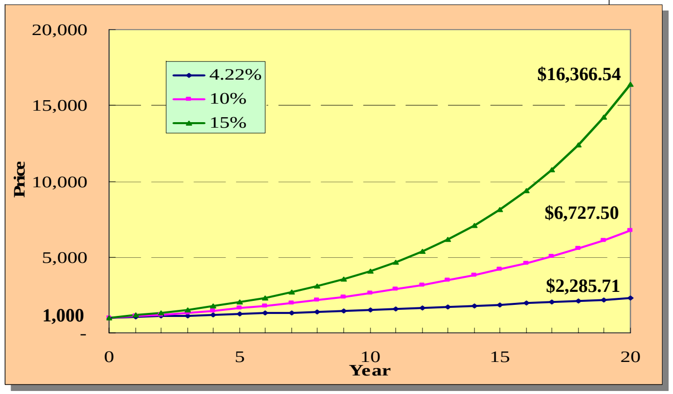
Ask the class to estimate and guess what will happen if inflation rate is 10 or 15%.

See next slide for the answers.

Price Level and Inflation



Show the chart and explain to the class that with an inflation rate of 4.22% (the blue line), the product would cost $2,285.71 at the end of Year 20.

Calculated as $1,000 x (1 + 4.22%)^{20} = $2,285.71.

If inflation rate is 10%, it will cost $6,727.50. Calculated as $1,000 x (1+10%)^{20} = $6,727.50.

If inflation rate is 15%, it will cost $16,366.54, a striking price increase of 15 times. Calculated as $1,000 x (1+15%)^{20} = $16,366.54.

Effect of Inflation on Purchasing Power on Money

Inflation Rate	Purchasing power of $1,000 after 20 years	Percentage change
0%	$1,000	0%
4.22%	$437.50	- 56.25%
10%	$148.64	- 85.14%
15%	$61.10	- 93.89%
20%	$26.08	- 97.39%

From another angle, show the class the decrease of purchasing power as a result of inflation.

For 4.22% inflation rate, money would lose over 56% of its purchasing power in 20 years.

If inflation rate is 10%, the money will lose over 85% of its purchasing power in 20 years.

If inflation rate is 15%, the money will lose about 94% of its purchasing power in 20 years.

If inflation rate is 20%, the money will lose over 97% of its purchasing power in 20 years.

Conclude the discussion on inflation risk and stress that saving money in bank has inflation risk. Therefore, the impact of inflation must be considered when making deposits or investment decisions.

Opportunity Cost in Investment

- OPPORTUNITY COST in investment is the potential gain from another investment option that is necessarily passed up.
- If you put your money in a fixed deposit term, you have to forgo the possible gain from making other deposits or investments on the same amount of money.

Teacher explains to the class the concept of opportunity cost, i.e. when putting money in a fixed deposit, one passes up the opportunity to gain from other deposits or investments, that is the opportunity cost in investment.

Opportunity Cost in Investment

- What is the opportunity cost of keeping your money:
  - In piggy bank against current account?
  - In current account against savings account?
  - In savings account against fixed deposit?

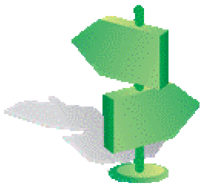
Suggested answers to the questions:

- Both keeping money in piggy bank and in current account earn no interest, but one loses the convenience of using cheques for payments.
- Keeping money in current account will have to forgo the gain that can be earned from savings account.
- Keeping money in savings account will have to forgo the gain that can be earned from fixed deposit.

End of Lesson 1

Think about it …

When making a deposit, which of the 3 risks/costs, (i.e. financial risk, inflation risk and opportunity cost) can be avoided?



Lesson 2

Ask students which of the 3 risks/costs can be avoided.

Explain to the class that financial risk can be partially avoided due to the Deposit Protection Scheme (see next slide for further discussion), but the inflation risk and opportunity cost cannot be avoided. Inflation is unpredictable and there is always opportunity cost in making a choice among different deposits or investments.

Deposit Protection

- Eligible deposits held with licensed banks in Hong Kong are protected under the Deposit Protection Scheme (DPS).
- The Scheme will pay depositors a compensation of up to a limit of HK$100,000 if the bank withholding eligible deposits fails.
- So, if the deposit amount is less than or equal to HK$100,000, depositors will not lose any of their money.
- On 14 Oct 2008, the Hong Kong SAR Government announced the use of the Exchange Fund to guarantee repayment of all customer full deposits held with all licensed banks, restricted licence banks and deposit-taking companies in Hong Kong following the principles of the Deposit Protection Scheme. The guarantee took immediate effect and will remain in force until the end of 2010.

Describe the Deposit Protection Scheme (DPS) in Hong Kong.

The DPS, operated by the Hong Kong Deposit Protection Board, was launched on 25 September 2006. The objective of the Scheme is to help strengthen public confidence in the banking system and contribute to the maintenance of financial stability. Under the Scheme, eligible deposits held with licensed banks in Hong Kong are protected up to a limit of $100,000. Thus, depositors with deposits less than $100,000 would not suffer a financial loss even if their bank goes bankrupt.

Teacher should point out that some deposits, e.g. time deposits with a maturity periods of 5+ years and structured deposits, are not protected by the DPS.

Teacher should also point out that the Hong Kong SAR Government announced on 14 Oct 2008 for the use of the Exchange Fund to guarantee repayment of all customer full deposits held with all licensed banks, restricted licence banks and deposit-taking companies in Hong Kong following the principles of the Deposit Protection Scheme. The guarantee took immediate effect and will remain in force until the end of 2010.

For further information, please go to www.dps.org.hk.

Activity 2: Rating Different Types of Deposits

Evaluate the different types of deposits in terms of:

(1) Safety

(2) Reward

(3) Ease of Getting Cash

(4) Ease of Opening Account

Activity 2 :

Ask students to rate different types of deposits on Student Worksheet pp.2-3 based on four criteria:

(1) Safety; (2) Reward; (3) Ease of getting cash; and (4) Ease of opening account, with three levels, namely, low, moderate and high. Invite volunteers to present their answers afterward.

Suggested answers:

<u>Under Your Mattress</u>

Safety (Moderate); Reward Low (actually no reward); Ease of Getting Cash (High); Ease of Opening Account (Not Applicable) (actually not needed)

<u>Current Account</u>

Safety (High); Reward (Low) (actually no reward); Ease of Getting Cash (High); Ease of Opening Account (Moderate)

<u>Savings Account</u>

Safety (High); Reward (Low); Ease of Getting Cash (High) (with ATM); Ease of Opening Account (Moderate)

<u>Fixed Deposit Account</u>

Safety (High); Reward (Moderate) (better than savings account) ; Ease of Getting Cash (Moderate) (have to wait till maturity); Ease of Opening Account (Moderate)

*(**Remark**: Other reasonable answers with justification are also acceptable.)*

Bonds

- Bonds are debt securities, or IOUs, that organisations issue for borrowing money from individual and institutional investors.
- Bondholders (lenders) receive coupons, i.e. interests periodically and receive the principal amount at the maturity of the bonds.
- Maturity can range from 1 to 30 years (can be even longer).
- Interest paid is usually higher than those of fixed deposits.

Explain to the class that bonds are debt securities, or IOUs (I-Owe-You's), that organisations issue when they borrow money from the public (institutional and individual investors). Also explain to them the features, including denomination, interest rate and maturity, of bonds.

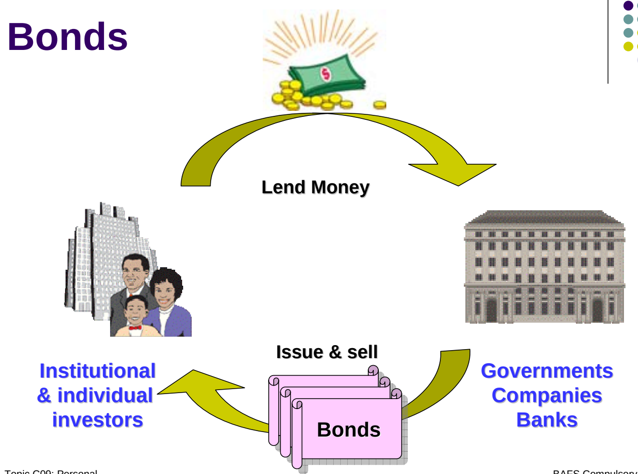
See next slide for more information.

Bonds

- Bonds in Hong Kong have different denomination or face value ranging from HK$50,000 to HK$1,000,000.
- Bonds may be sold to other people before maturity but there is no guarantee that you can sell them at a price higher or at the amount you have invested.
- Some bond issuers may fail to pay interest or repay principal.

Explain to the class that bonds may be sold before maturity in the secondary market but investors could lose money if they have to sell at a price that is lower than that they bought them (when interest rates have gone higher). Also, point out that some bond issuers may fail to pay interest or repay principal. In such case, the bondholders may have to wait for the liquidation of the issuer to claim on the remaining assets. Bondholders could lose substantial parts, if not all of their principal. This is one of the financial risks faced by bonds investors, known as default risks.

Bonds



Use the diagram to explain to the class how the bond market works.

When an organisation, such as the government, a company or a bank, wants to borrow money through the bond market, it will issue and sell bonds to institutional and individual investors. Investors who buy the bonds are lending money to the organisation. Bondholders will receive periodic interest payments from the organisation and the principal repayment paid at the maturity of the bonds.

Bonds
– An Example

Issuer	Hong Kong Link 2004 Limited
Denomination	HK$50,000
Coupon (%)	4.28
Maturity	9 May 2011
Coupon frequency	Quarterly
Credit rating	Aa3 (Moody's); AA- (S&P)
Security	Secured by toll revenues from 5 tunnels and Lantau Link

Use the bonds issued by Hong Kong Link 2004 Limited as an example to introduce the features of bonds.

The bonds were issued in May 2004 by Hong Kong Link 2004 Limited which is wholly owned by the Hong Kong Government. The denomination of the bonds is $50,000. The coupon, i.e. interest of the bonds, is 4.28% per annum. For each bond, the bondholder will receive total coupons amounting to $2,140 ($50,000 x 4.28%) a year. Coupons are paid four times a year. On 9 May 2011, the maturity date, Hong Kong Link 2004 Limited will repay the principal back to bondholders. The bonds are backed by the toll revenues from 5 tunnels (Aberdeen, Cross Habour, Lion Rock, Shing Mun and Tseung Kwan O Tunnels) and one bridge, Lantau Link. Bonds are very safe and of very high credit quality. They have obtained the double-A ratings from Moody's and Standard and Poors (S&P), the two most influential rating agencies in the world. [The best credit rating a bond can have is Aaa (Moody's) or AAA (S&P)].

More information is available at: www.hklink2004.com.hk.

Government Bonds

- Government bonds are debt securities, or IOUs, issued by the government when it borrows money from the public.
- People who buy the bonds are lenders of the government.
- The government pays interest periodically and repays the principal at maturity.
- People normally do not worry about the government failing to pay them back.

Explain to the class that governments of many countries have issued bonds to borrow money from the public. In Hong Kong, one type of bonds issued by the Hong Kong Government is called Exchange Fund Notes. (Please visit Hong Kong Monetary Authority website www.info.gov.hk/hkma/ for more information)

Point out that the default risk (i.e. the risk of not getting back the principal) of government bonds is normally very low. For some government bonds, like the U.S. Treasury Notes and Bonds, people may consider them to have no default risk.

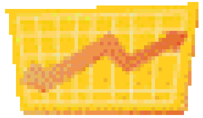
Corporate Bonds

- Corporate bonds are debt securities, or IOUs, issued by corporations when they borrow money from the public.
- It is not as safe as government securities or other types of savings.
- You could lose part/all your money if the company goes bankrupt.
- But you get a better interest return than government bond of the same maturity.

Explain the characteristics of corporate bonds to the class.

Corporate Bonds

- Depending on the market condition, it may not be easy to sell corporate bonds as the corporations need cash.
- For HK$ bonds, the denomination ranges from $50,000 to $1,000,000.
- Lower denominations are seen in foreign currencies, e.g. USD and RMB bonds.



Continue to explain the characteristics of corporate bonds.
The corporate bonds market, especially companies in the retail sector in Hong Kong is not very active. For this reason, it could be difficult for investors to sell off their bonds or receive a fair price on their investment.

US$ corporate bonds and Renminbi bonds offer denomination of US$1,000 and RMB20,000 respectively.

Corporate Bond Example

Issuer	Hutchison International Finance
Denomination	US$1,000
Coupon (%)	7.50
Maturity	1 August 2027
Coupon frequency	Semi-annually
Credit rating	A3 (Moody's); A- (S&P)

Use the US$ bonds issued by Hutchison International Finance as an example to illustrate the features of corporate bonds.

The bonds were issued by Hutchison International Finance which is a wholly-owned subsidiary of Hutchison Whampoa Limited. The denomination of the bonds is US$1,000. The coupon is 7.50% per annum. For each bond of $1,000, bondholder will receive total coupons amounting to US$75 ($1,000 x 7.5%) a year. Coupons are paid semi-annually.

On 1 August 2027, the maturity date, the company will repay the principal to its bondholders. This bond is more risky than bonds issued by the Hong Kong Government. Their credit ratings are A3 from Moody's and A- from Standard and Poor's (S&P) which are lower than the ratings of Exchange Fund Notes issued by the Hong Kong Government.

More information about these bonds are available at www.cmu.org.hk.

Government versus Corporate Bonds

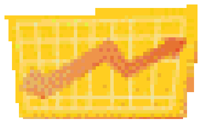
	Government Bonds	Corporate Bonds
Risk	Normally the lowest	• Varies, depending on the credit quality of the issuer • Normally higher than government bonds
Return	Normally the lowest	Normally higher than government bonds

Compare government bonds with corporate bonds in terms of risk and return.

Government bonds are normally the least risky and generates the lowest return compared to corporate bonds. The risk of different corporate bonds vary due to the financial status of the issuers. Corporate bonds normally have a higher default risk than government bonds and thus their returns are higher than government bonds of comparable maturity.

Assignment –
Following the Stock Market

From newspapers or the internet, check out the daily opening, highest, lowest and closing levels of the Hang Seng Index and a stock you like in the coming week.



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Assignment :

Ask students to record in their Student Worksheet (p.4) the opening, highest, lowest and closing levels of the Hang Seng Index and a stock they like in the coming week.

The purpose of the assignment is to let students be aware of stock market movements and how stock prices fluctuate dramatically over a short period. This prepares the students for the discussion of stocks in the next lesson.

Stock price information is widely available on newspapers, magazines or the internet, one of the popular websites for checking stock prices is YAHOO! FINANCE (http://hk.finance.yahoo.com/).

End of Lesson 2

Assignment –
Following the Stock Market

What have you observed from the movement of the stock market?

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Lesson 3

Invite students to tell the class which stocks they have followed.

Compare the price movements of different stocks and introduce the volatile nature of stock market.

Stocks

- Stocks are securities issued by a company representing part of the ownership of the company.
- Companies may pay part of the companies' profits to their shareholders in the form of cash dividends, but this is not guaranteed.
- They could also issue share dividends (bonus shares) to shareholders, based on the number of shares owned.

Explain to the class the nature and features of stocks.

Explain the concept of "return on investments" to the students (i.e. dividends and the difference between the buying and selling prices of stocks are not guaranteed and subject to big variations.) A stock of high returns can change dramatically due to market performances (i.e. a stock paying high returns can drop in its value and its dividend payments during market crashes). For example, Hang Seng Index dropped from a high of 31,958 points on 30 October 2007 to a low of 25,862 points on 22 November 2007, losing nearly 20% in 3 weeks. PCCW lost over 90% of its value after the technology bubble burst in year 2000 (Note: use updated examples if needed). Thus, the financial risk of investing in stock is very high.

Stocks

- Your reward depends on the prices you pay for your stocks and the dividends you receive. This return may be much higher than that from your deposits.
- Buying stocks is a more risky option than putting your money in deposits or bonds.
- Stock prices can fluctuate greatly to prices much lower than your stock cost.

Explain to the class that based on historical data, the average long-term returns from investing in stocks are much better than those from deposits and bonds. For example, between 1987 to 2006, the average yearly total return of Hang Seng Index is over 18% and the average 12-month deposit rate is only 4.6%.

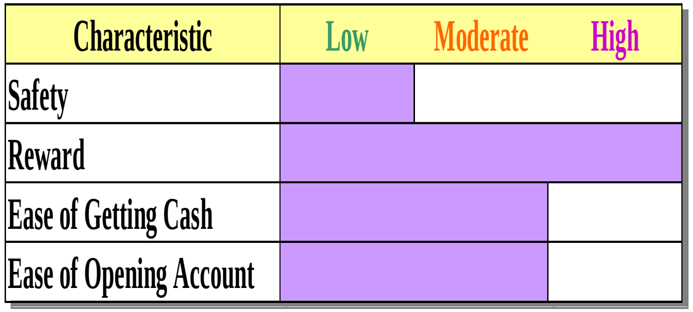
Introduce the concept of trade-off between risk and return. Explain that an investor will have to bear higher risks to gain greater returns.

Stocks

- The stocks of larger companies, e.g. blue chip stocks, normally can be sold in the market more easily than those of smaller ones.
- The amount of money you pay for buying stocks depends on the stock price and number of shares in board lots you want to buy.

Explain to the class that some stocks are more liquid, i.e. more easy to buy and sell, than others. Blue chip stocks refer to stocks of those Hang Seng Index constituents. Stocks in Hong Kong are generally traded in board lots. The amount of money needed to buy one lot of shares depends on the share price and the lot size, e.g. lot size of HSBC stock is 400 shares.

Characteristics of Investing in Stocks



The chart indicates that investing in stocks, safety is low, reward is high, converting stock into cash and opening a stock account are moderately easy.

Conclude the discussion of stocks by reviewing the characteristics of investing in stocks in terms of the 4 criteria:

1. The risk of investing in stocks is high, that means safety is low.
2. Over the long run, reward from investing in stocks is much better than those from deposits or bonds.
3. Whether it is easy to sell a stock for cash depends on the market interest.
4. It is quite easy to open a stock account. Many banks and brokerage houses offers securities trading services in Hong Kong. Any person who is 18 or above with valid Hong Kong Identity Card or passport with proof of a mailing address can open a stock account in these institutions. The process of obtaining the account take no longer than 1-hour.

Activity 3: The Risk and Return Pyramid

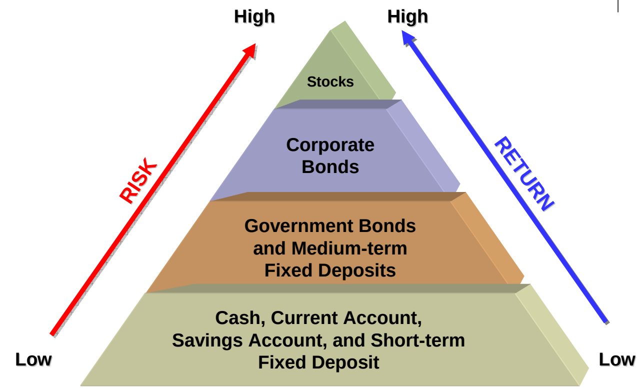
- Form groups of four to five people
- Discuss how to match the different types of financial products in the Risk and Return Pyramid.

Activity 3 :

Refer to the Student Worksheet pp. 5-6, ask the students to form groups of four to five and based on the criteria of safety (or risk) and reward (or return), match the financial products in the risk and return pyramid.

Suggested answer is shown on the following slide.

Risk and Return Pyramid



Review the concept of the trade-off between risk and return.

The least risky investment alternatives include keeping cash and different short-term deposits with bank and their returns are also the lowest.

Government bonds and medium-term fixed deposits are slightly more risky and their returns are also slightly higher when comparing with short-term deposits.

Corporate bonds are more risky than government bonds as corporations have higher chances of bankruptcy than the government. Returns from corporate bonds are generally higher than comparable government bonds.

Stocks are the most risky investment but in the long run, return from investing in stocks is also better than the other investment alternatives.

Risk and Return

Performance of MPF Funds (From 1-April-2001 to 31-March-2006)				
Fund Categories	Annualised Return	Minimum Monthly Return	Maximum Monthly Return	Standard Deviation
Equity Fund	6.61%	-11.06%	8.35%	4.34%
Bond Fund	3.06%	-2.76%	3.00%	1.20%
Money Market Fund	0.6%	-0.05%	0.45%	0.09%

Source: Mandatory Provident Fund Schemes Authority

The table shows the performance of selected types of funds under the Mandatory Provident Fund Schemes for the five year period starting 1 April 2001 to 31 March 2006.

Teacher may use this as an illustration of the risk and return of different types of investment products, i.e. equities, bonds and short-term deposits.

Among the three types of funds, the annualised return of equity fund is the highest. But the risk, as measured by standard deviation of returns (a popular measure of risk, the higher the standard deviation, the higher the risk) or the range of monthly returns, is also the highest.

Bond fund is less risky than equity fund and the annualised return is less than half of that of equity fund.

The risk and return of money market fund, investing mainly in short-term debt securities and deposits are the lowest.

For further information or updates, please visit www.mpfa.org.hk.

Activity 4: Case Study

- We have 5 cases concerning how individuals or families might use their savings.
- Each of them has $100,000 to save or invest and they are facing different alternatives.
- Amongst your group, discuss, advise and justify your recommendations.

Activity 4 :

Ask the class to remain in groups and study the cases in the Student Worksheet pp.7-12.

Hints to the Case Study

Refresh yourselves with the characteristics of deposits, bonds and stocks discussed earlier and consider the following factors:

- What purpose do the savings serve?
- Decide whether safety is an important factor in each case and whether losses are bearable?
- Can the investment be easily converted into cash when needed?

Explain to the class the factors to be considered when studying the cases.

Case 1

Andy earns $20,000 a month as an officer in a bank. He is 28 years old and single. He lives with his parents who are 73 and 67 years old. He plans to use the $100,000 for emergencies and may need to help pay for his parents' medical expenses.

Which of the following investment options best suits him?

A. Savings Account
B. 3-year corporate bonds
C. Stocks

Invite one group of students to present their recommendation and justification.

Suggested answer: A. Savings Account

Simply because Andy needs the money for emergency, he should look at the option that offers him low risk and the ease of converting it into cash. In this case, a savings account meets these objectives.

Note: In all cases, other options are acceptable if students can provide reasonable answers with justification.

Case 2

Brenda earns $50,000 a month as an executive of an advertising agency. She is 46 years old and divorced with no child. She is interested in investing the $100,000 for her eventual retirement at the age of 60.

Which of the following investment options best suits her?

A. 1-year fixed deposit
B. 5-year corporate bonds
C. Stocks

Invite one group of students to present their recommendation and justification.

Suggested answer: C. Stocks

Brenda earns a relatively high income and is investing for retirement. She would not need the money before her retirement (14 years later). For this reason, she can put her money into the stock market to earn returns.

Case 3

Carol is 30 years old and earns $18,000 as a civil servant. She is getting married soon and rents an apartment. She plans to use the $100,000 as part of her down payment on her new flat in a few years.

Which of the following investment options best suits her?

A. Savings account
B. 3-year government bonds
C. Stocks

Invite one group of students to present their recommendation and justification.

Suggested answer: B. 3-year Government bonds

Carol would only need the money when she buys an apartment in a few years, so she does not need quick access to the cash. However, she would not want to lose the money because she wants to buy an apartment. 3-year Government bonds would be safe enough and yet gives her a better return than savings deposit.

Case 4

David and Eva, both 36 years old, are owners of a trading firm and are making $150,000 a month from their business. They are quite well off and have accumulated some wealth. They want to set aside $100,000 as part of the university fund for their 6-year old son.

Which of the following investment options best suits them?

A. 5-year fixed deposit
B. 10-year corporate bonds
C. Stocks

Invite one group of students to present their recommendation and justification.

Suggested answer: C. Stocks

David and Eva are wealthy and they can absorb higher risks. Their son will be going to university in 12 years' time, so they wouldn't need immediate access to this money for awhile. They should consider investing it in the stocks to gain possible higher returns.

Case 5

Frankie is 29 years old and works as an architect with a monthly income of $28,000. His wife, Gigi, aged 26 with a part-time job. They are planning to have a baby in 3 years' time and want to move into a larger apartment. The $100,000 will be used for these purposes.

Which of the following investment options best suits them?

A. Savings account
B. 3-year government bonds
C. Stocks

Invite one group of students to present their recommendation and justification.

Suggested answer: B. 3-year Government bonds

Frankie and Gigi would not want to lose their $100,000 as they plan to have a baby and move to a larger apartment. They need the money in 3 years time, so the 3-year Government bonds, although having a lower expected return than stocks, better suit their objectives.

Conclusion

- There are risks and opportunity costs to every investment.
- There is also a trade-off between risks and returns.
- Investment choices should match
  (i) objectives;
  (ii) ability to bear risk;
  (iii) the ease of converting cash in time;
  (iv) the length of the investment period.

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Conclude the session by reviewing the following key points:

1. There are risks, i.e. financial and inflation risks, as well as opportunity cost to every investment;
2. There is a trade-off between risk and return, if you want higher reward, you have to bear higher risk, but high risk does not guarantee high return;
3. Investment choice should match with objectives of the investor, the ability to bear risk, the need to access to cash and the length of investment period.

The End

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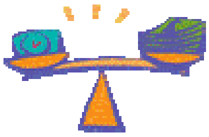
End of Lesson 3

BAFS Compulsory Part - Basics of Personal Financial Management

Topic C09: Personal Financial Management - Personal Investment Decisions



Activity 1: Costs and Benefits of Different Types of Deposits

Write down in the table the costs and benefits of different types of deposits.

	Costs	**Benefits**
Piggy Bank 		
Current Account 		
Savings Account 		
Fixed Deposit 		

Activity 2: Rating Different Types of Deposits

Rate the different types of deposits according to the following criteria:

1. **Safety**: Are you sure you can get back all the money deposited?
2. **Reward**: How much interest could you get from the deposit?
3. **Ease of Getting Cash**: Is it easy to convert your money into cash?
4. **Ease of Opening Account**: Is it a lot of trouble to open an account for your deposit?

Shade the area on the table accordingly. For example, if XXX Account is very safe (high safety), pays little interest (low reward), moderately difficult to be withdrawn (moderately ease of getting cash) and is difficult to open an account (low in ease of opening account), the table would look like:

XXX Account

	Low	Moderate	High
Safety			
Reward			
Ease of Getting Cash			
Ease of Opening Account			

If the money is put……

1. Under Your Mattress			
	Low	Moderate	High
Safety			
Reward			
Ease of Getting Cash			
Ease of Opening Account			

2. In the Current Account			
	Low	Moderate	High
Safety			
Reward			
Ease of Getting Cash			
Ease of Opening Account			

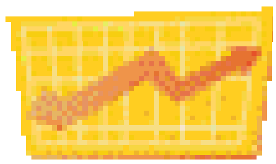
3. In the Savings Account			
	Low	Moderate	High
Safety			
Reward			
Ease of Getting Cash			
Ease of Opening Account			

4. In the Fixed Deposit Account			
	Low	Moderate	High
Safety			
Reward			
Ease of Getting Cash			
Ease of Opening Account			

Assignment - Following the Stock Market

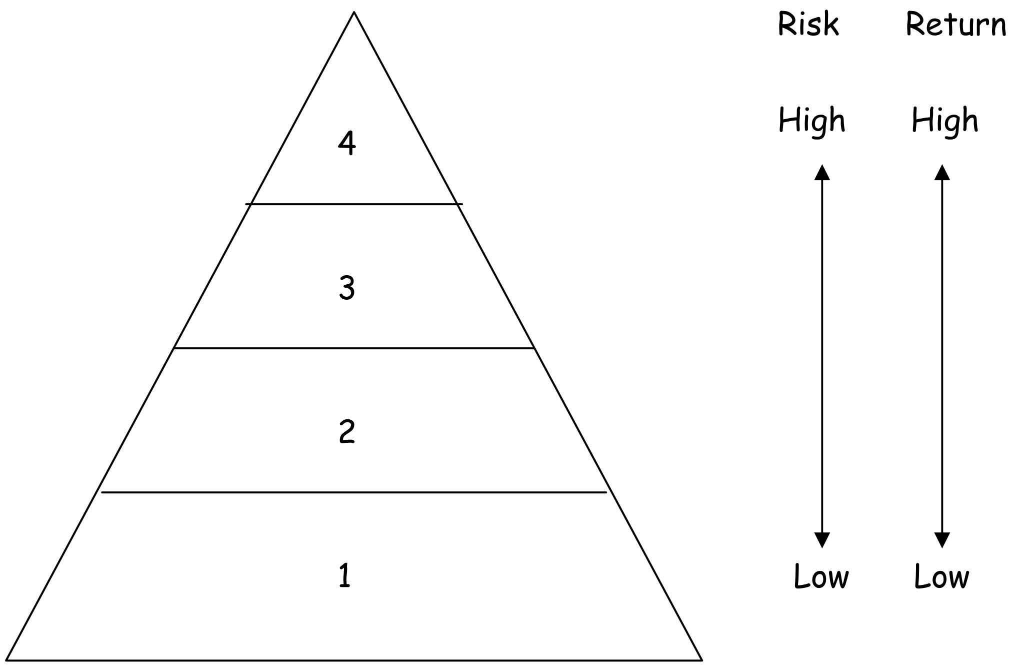
From newspapers or the internet, record the daily opening, highest, lowest and closing levels of the Hang Seng Index and a stock of your choice in the coming week.

Date	Hang Seng Index				Stock:			
	Open	High	Low	Close	Open	High	Low	Close



Activity 3: The Risk and Return Pyramid

Based on the risk (or safety) and return (i.e. reward) factors, assign the following financial products to different areas of the pyramid.



<u>Risk and Return Categories:</u>

Category 1: Lowest Risk and Lowest or No Return
Category 2: Low Risk and Low Return
Category 3: Moderate Risk and Moderate Return
Category 4: High Risk and High Return

Financial Products:	Category
1. Cash	______________
2. Current Account	______________
3. Savings Account	______________
4. Short-term (shorter than 1 year) Fixed Deposit	______________
5. Medium-term (1 to 5 years) Fixed Deposit	______________
6. Government Bonds	______________
7. Corporate Bonds	______________
8. Stocks	______________

Activity 4: Case Study

Form groups of four to five.

You are given 5 cases concerning how individuals or families might use their savings. Each of them has $100,000 to save or invest and they are facing different alternatives. Amongst your group, discuss, advise and justify your recommendations.

Hints:
Before recommending your investment options, refresh yourselves with the characteristics of different types of deposits and investment products discussed earlier:

- What purpose do the savings serve?
- Decide whether safety is an important factor in each case and whether losses are bearable?
- Can the investment be easily converted into cash when needed?

Try to match the characteristics of the alternatives to their purposes, needs and requirements for the best answer.

Case 1

Andy earns $20,000 a month as an officer in a bank. He is 28 years old and single. He lives with his parents who are 73 and 67 years old. He plans to use the $100,000 for emergencies and may need to help pay for his parents' medical expenses.

He has the following three choices:

A. Savings Account
B. 3-year corporate bonds
C. Stocks

Which alternative do you recommend and why?

Case 2

Brenda earns $50,000 a month as an executive of an advertising agency. She is 46 years old and divorced with no child. She is interested in investing the $100,000 for her eventual retirement at the age of 60.

She has the following three choices:

A. 1-year fixed deposit
B. 5-year corporate bonds
C. Stocks

Which alternative do you recommend and why?

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Case 3

Carol is 30 years old and earns $18,000 as a civil servant. She is getting married soon and rents an apartment. She plans to use the $100,000 as part of her down payment on her new flat in a few years.

She has the following three options:

A. Savings account
B. 3-year Government bonds
C. Stocks

Which alternative do you recommend and why?

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Case 4

David and Eva, both 36 years old, are owners of a trading firm and are making $150,000 a month from their business. They are quite well off and have accumulated some wealth. They want to set aside $100,000 as part of the university fund for their 6-year old son.

They are facing the following 3 alternatives:

A. 5-year fixed deposit
B. 10-year corporate bonds
C. Stocks

Which alternative do you recommend and why?

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Case 5

Frankie is 29 years old and works as an architect with a monthly income of $28,000. His wife, Gigi, aged 26 with a part-time job. They are planning to have a baby in 3 years' time and want to move into a larger apartment. The $100,000 will be used for these purposes.

They are facing the following 3 alternatives:

A. Savings account
B. 3-year Government bonds
C. Stocks

Which alternative do you recommend and why?

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