



SECURITIES AND  
FUTURES COMMISSION  
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# Personal Financial Planning

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# Why is Financial Planning Important?

- **Understand what you need in the future**
- **Specify how much do you need and when do you need it**
  - E.g. taking inflation into consideration
  - E.g. opportunity cost
- **Understand your situation**
  - Financial situation
  - Risk profile
- **Set up a plan and follow through**
- **Review the performance of your portfolio from time to time**
- **As the market conditions change and you enter different stages in life, adjust your portfolio or reset your life goals**



# The Financial Planning Process

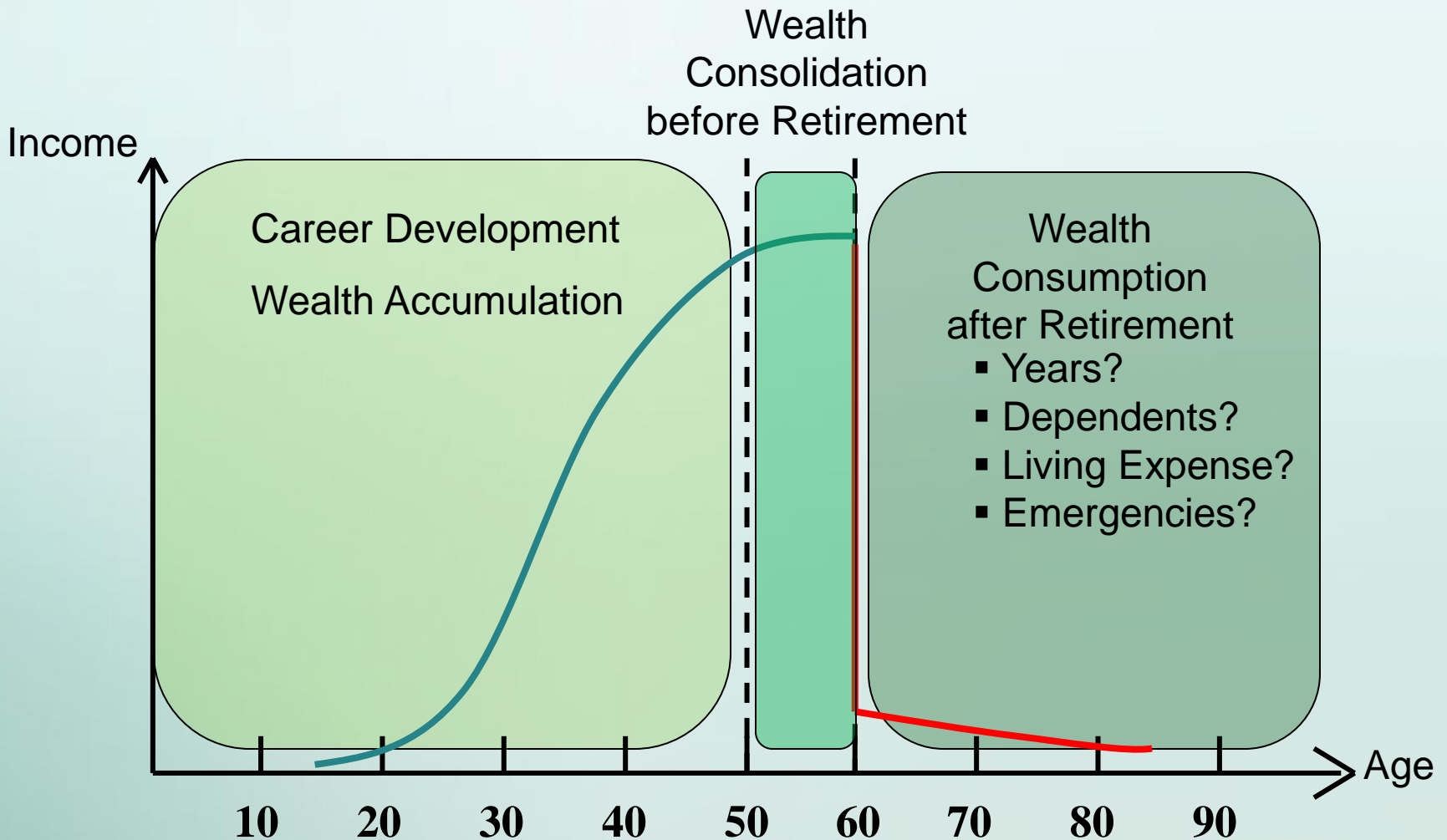


# Step 1: Set Your Goal(s)

- **Plan according to your situation**
  - Age
  - Income
  - Marital status
  - Family conditions
  - No. of dependents
  - Other constraints



# Typical Life Cycle of Personal Income



# Life Cycle Investing

## ■ Student

### Life situation

- Age: 20
- Marital status: single
- # dependents: 0
- Income: unstable (part-time)

### Goals

- Pay off Grant Loan in 5 years
- 1-week trip in Japan

## ■ Young working individual

### Life situation

- Age: 26
- Marital status: single
- # dependents: 0
- Income: stable

### Goals

- Buy an apartment in 5 years
- Getting married in 3 years



# Life Cycle Investing

## ■ Married with children

### Life situation

- Age: 32
- Marital status: married
- # dependents: 2 children
- Income: stable

### Goals

- Save for children's college tuition fee
- Save for retirement

## ■ Pre-retirement

### Life situation

- Age: 55
- Marital status: married
- # dependents: 1 spouse
- Income: stable

### Goals

- Preserve capital for retirement
- Leave an estate



# Specify Your Goals

- **How much do you need?**
  - Bare minimum or best of everything?
  - Is it practical and realistic?
  
- **When do you need the money?**
  - Next year - 2011
  - Take inflation into consideration
  - Obligations (e.g. loan repayment) to be fulfilled beforehand





# Example 1 – Travel to Japan

- **Example:**

- Student planning a trip to Japan for a week

- Estimated cost = \$15,370

▪ Air ticket	\$ 6,000
▪ Travel insurance	\$ 370
▪ Accommodation	\$ 3,800
▪ Food	\$ 2,800
▪ Transportations	\$ 1,400
▪ Sightseeing entrance fees	\$ 1,000

- If inflation is 1.5% a year

- In 2010 you need \$15,370

- In 2011 you need  $\$15,370 \times (1 + 1.5\%)^1 = \$15,600$



# Example 1 – Save for Trip to Japan

- **How to come up with \$15,600 in 1 year?**
  - Current savings: \$6,000
  - How much I can save each month to cover the remaining amount?
  - What is the expected rate of return?
  - Have I set aside any money for emergency?



# Example 1 – Save for Trip to Japan

- Current savings: \$6,000
- Monthly savings: \$???

		Monthly Saving Amount					
		\$725	\$750	\$775	\$800	\$825	\$850
Rate of Return	2%	\$14,901.30	\$15,204.07	\$15,506.83	\$15,809.60	\$16,112.36	\$16,415.13
	3%	\$15,003.12	\$15,307.28	\$15,611.44	\$15,915.60	\$16,219.76	\$16,523.92
	4%	\$15,105.73	\$15,411.30	\$15,716.86	\$16,022.42	\$16,327.98	\$16,633.54
	5%	\$15,209.14	\$15,516.11	\$15,823.08	\$16,130.06	\$16,437.03	\$16,744.00
	6%	\$15,313.35	\$15,621.74	\$15,930.13	\$16,238.52	\$16,546.91	\$16,855.29
	7%	\$15,418.36	\$15,728.18	\$16,037.99	\$16,347.81	\$16,657.62	\$16,967.44
	8%	\$15,524.19	\$15,835.44	\$16,146.69	\$16,457.94	\$16,769.19	\$17,080.43
	9%	\$15,630.84	\$15,943.53	\$16,256.22	\$16,568.91	\$16,881.60	\$17,194.29



## Example 2 – Save for Retirement

- **Goal: Need to have sufficient fund upon retirement to support \$16,000 per month living**
- **Retiring at 55**
- **Duration of retirement: 25 years**
- **How much do I need to fulfil goal?**



# Example 2 – Save for Retirement

How much do you need for retirement?

If you want to have \$16,000 a month to cover your living expenses post-retirement

Formula

Assumptions: annual interest rate( $r$ ) 2.5%; for 25 years

Amount needed = projected monthly spending x 12 months x

$$\left[ \frac{1 - \frac{1}{(1 + r)^{\text{years}}}}{r} \right]$$

Amount needed = \$16,000 x 12 x  $[(1 - (1 / (1 + 2.5\%)^{25})) / 2.5\%]$

Amount needed = **\$3,537,480.27** (ready before retirement)



# Scenario A: Monthly Savings Started at Age of 25 ('\$000)

- Years of savings: 30 years

		Monthly Saving Amount					
		\$3	\$4	\$5	\$6	\$7	\$8
Rate of Return	2%	\$1,478.18	\$1,970.90	\$2,463.63	\$2,956.35	\$3,449.08	\$3,941.80
	3%	\$1,748.21	\$2,330.95	\$2,913.68	<b>\$3,496.42</b>	\$4,079.16	\$4,661.90
	4%	\$2,082.15	\$2,776.20	\$3,470.25	\$4,164.30	\$4,858.35	\$5,552.40
	5%	\$2,496.78	\$3,329.03	\$4,161.29	\$4,993.55	\$5,825.81	\$6,658.07
	6%	\$3,013.55	\$4,018.06	\$5,022.58	\$6,027.09	\$7,031.61	\$8,036.12
	7%	<b>\$3,659.91</b>	\$4,879.88	\$6,099.85	\$7,319.83	\$8,539.80	\$9,759.77



# Scenario B: Monthly Savings Started at Age of 30 ('\$000)

- Years of savings: 25 years

		Monthly Saving Amount					
		\$3	\$4	\$5	\$6	\$7	\$8
Rate of Return	2%	\$1,166.46	\$1,555.28	\$1,944.11	\$2,332.93	\$2,721.75	\$3,110.57
	3%	\$1,338.02	\$1,784.03	\$2,230.04	\$2,676.05	\$3,122.05	<b>\$3,568.06</b>
	4%	\$1,542.39	\$2,056.52	\$2,570.65	\$3,084.78	\$3,598.91	\$4,113.04
	5%	\$1,786.53	\$2,382.04	\$2,977.55	\$3,573.06	\$4,168.57	\$4,764.08
	6%	\$2,078.98	\$2,771.98	\$3,464.97	\$4,157.96	\$4,850.96	\$5,543.95
	7%	\$2,430.22	<b>\$3,240.29</b>	\$4,050.36	\$4,860.43	\$5,670.50	\$6,480.57

**Tip: Start planning for retirement early!**



# Rule of 72

- How many years does it take to double my principal (\$1,000)?
- Future value = Present Value x (1 + interest rate)<sup>years</sup>

$$\begin{aligned} \$2000 &= \$1000 \times (1 + 3\%)^{\text{years}} \\ \text{years} &= 23.45 \end{aligned}$$

- A quick rule of thumb

$$\frac{72}{\text{Annual rate of return in percent}}$$

- In our example,

$$\frac{72}{3} \approx 24 \text{ years}$$





# Calculators

- **Calculator on Retirement Needs**
- [http://www.mpfa.org.hk/english/mpf\\_edu/mpf\\_edu\\_cal/mpf\\_edu\\_cal\\_crn/mpf\\_edu\\_cal\\_crn.html](http://www.mpfa.org.hk/english/mpf_edu/mpf_edu_cal/mpf_edu_cal_crn/mpf_edu_cal_crn.html)
- **University Cost and Debt Calculator**
- <http://www.getsmarteraboutmoney.ca/tools-and-calculators/>



# Learning and Teaching Activities

- **Teachers can refer to BAFS Learning & Teaching Resource Kit C07 Time Value of Money for the illustrations of different calculations**



# The Financial Planning Process

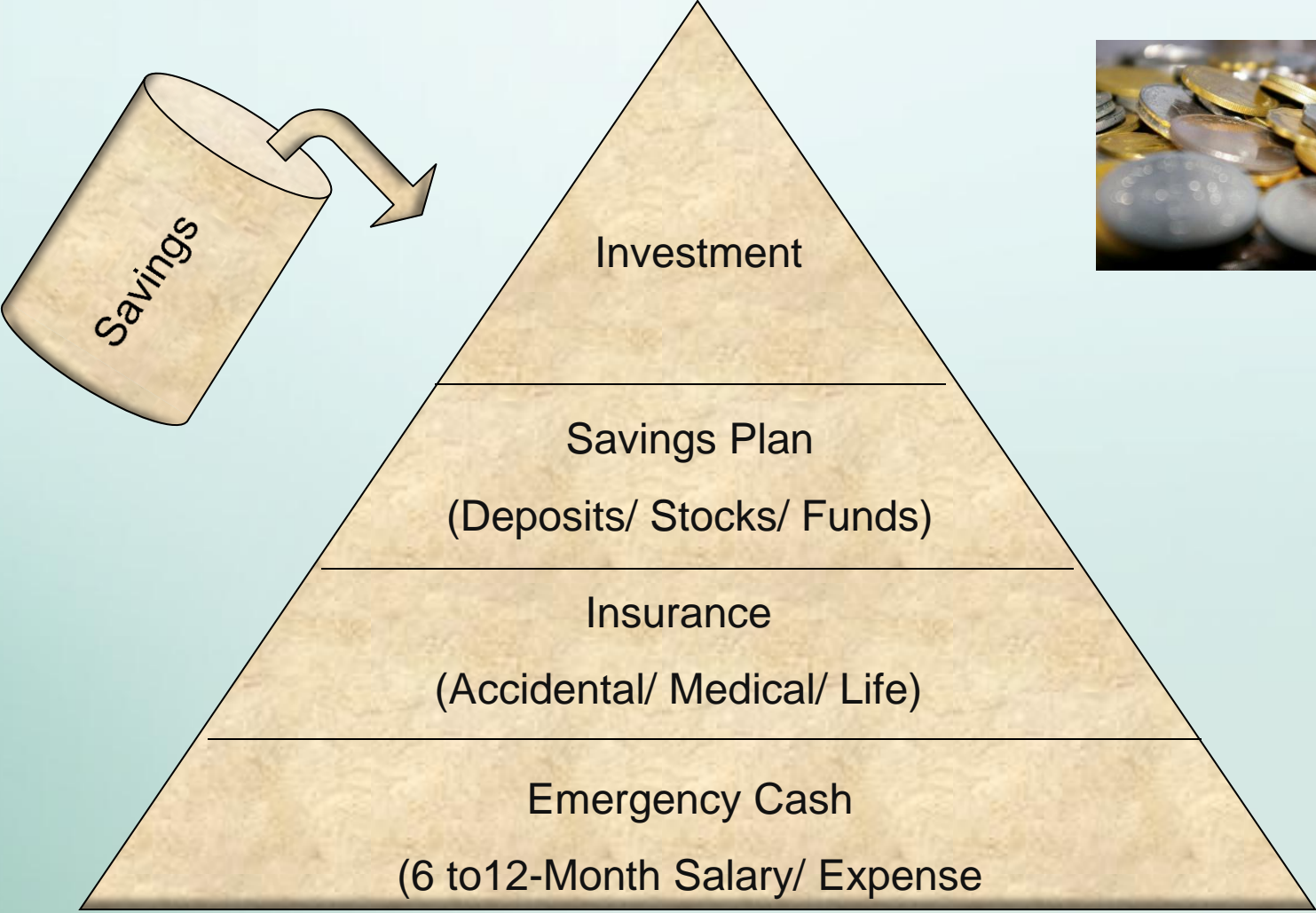


## Step 2: Analyze your Financial Status

- **The Pyramid of Wealth Management**
- **Net assets analysis**
- **Cash flow analysis**
- **Risk analysis**



# The Pyramid of Wealth Management



# Net Asset Analysis

- **Total Assets - Total Liabilities = Net Assets**
- **Would you be able to repay your outstanding debts?**
- **Manage your liabilities**
  - Credit cards
    - Interest calculation
    - Pay off balance
    - Avoid too many credit cards
    - Avoid using another card to cover the outstanding balance



# An Example - Net Asset Analysis

## Total Asset

Savings from summer job \$5,000

Savings from red pocket \$1,000

## Total Liabilities

\$0

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## NET ASSET

**\$6,000**



# Cash Flow Analysis

- **Income – Expense = Cash Flow (save and/or invest the remaining)**
- **Emergency Cash: 6 to 12-month expense**
- **Comfortable level?**





# An Example - Cash Flow Analysis

## Monthly income

Part-time Job	\$1,000
Allowance	\$2,000
<b>TOTAL INCOME</b>	<b>\$3,000</b>

## Monthly expenses

Food	
Breakfast	(\$200)
Lunch	(\$800)
Snacks	(\$250)
Transportation	(\$250)
Entertainment	(\$500)
<b>TOTAL EXPENSE</b>	<b>(\$ 2,000)</b>

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**MONTHLY SAVINGS** \$ 1,000



# Prepare a Personal Budget

- **Record your incomes and expenses**
- **Analyze your expenses**
  - Fixed expenses, variable expenses and discretionary expenses
  - Needs vs. Wants
  - Surplus vs. Deficit
- **Formulate your personal budget**
  - Follow through with discipline
  - Save a pre-determined amount
  - NOT save what's left after expenses



# Calculators

- **Make a budget**
- <http://www.sorted.org.nz/>
  
- **Budget planner**
- <http://www.fido.gov.au/fido/fido.nsf/byheadline/Budget+planner?openDocument>



# Learning and Teaching Activities

- **Teachers can refer to BAFS Learning & Teaching Resource Kit C10 Personal Financial Management (Activity 3 and 4 - A case study of Wong's family) for budgets preparation**



# Risk Analysis

- **How are Cash Flows and Net Assets affected by events such as: accidents, sicknesses and market changes?**
- **Adopt appropriate protective measures (e.g. emergency cash, insurance etc.)**
- **Save for emergencies?**



# Understanding Risk Profiles

- **Your risk profile may be determined by a number of factors:**
  - Attitude towards risks
  - Age
  - Income stability
  - Number of dependents...
- **Many tests available to determine your risk profile**  
<http://www.sorted.org.nz/calculators/risk-recommender/>



# Understanding Risk Profiles

- [www.sorted.org.nz](http://www.sorted.org.nz)
- **Low Risk investor:** You should definitely favor lower risk investment. Make sure any long-term savings money is well spread over the different kinds of investments (cash, property and shares) with a higher proportion of cash (savings and fixed interest) than property and shares.
- **Medium Risk investor:** You will probably be comfortable in having your long-term savings in medium risk investments. A well balanced fund with around 50% in shares and property. (Note – the property element can be obtained through shares in property companies).
- **High Risk investor:** Your circumstances suggest that you could have a significant proportion of your savings in higher risk shares. However, diversification in any share portfolio is still important.

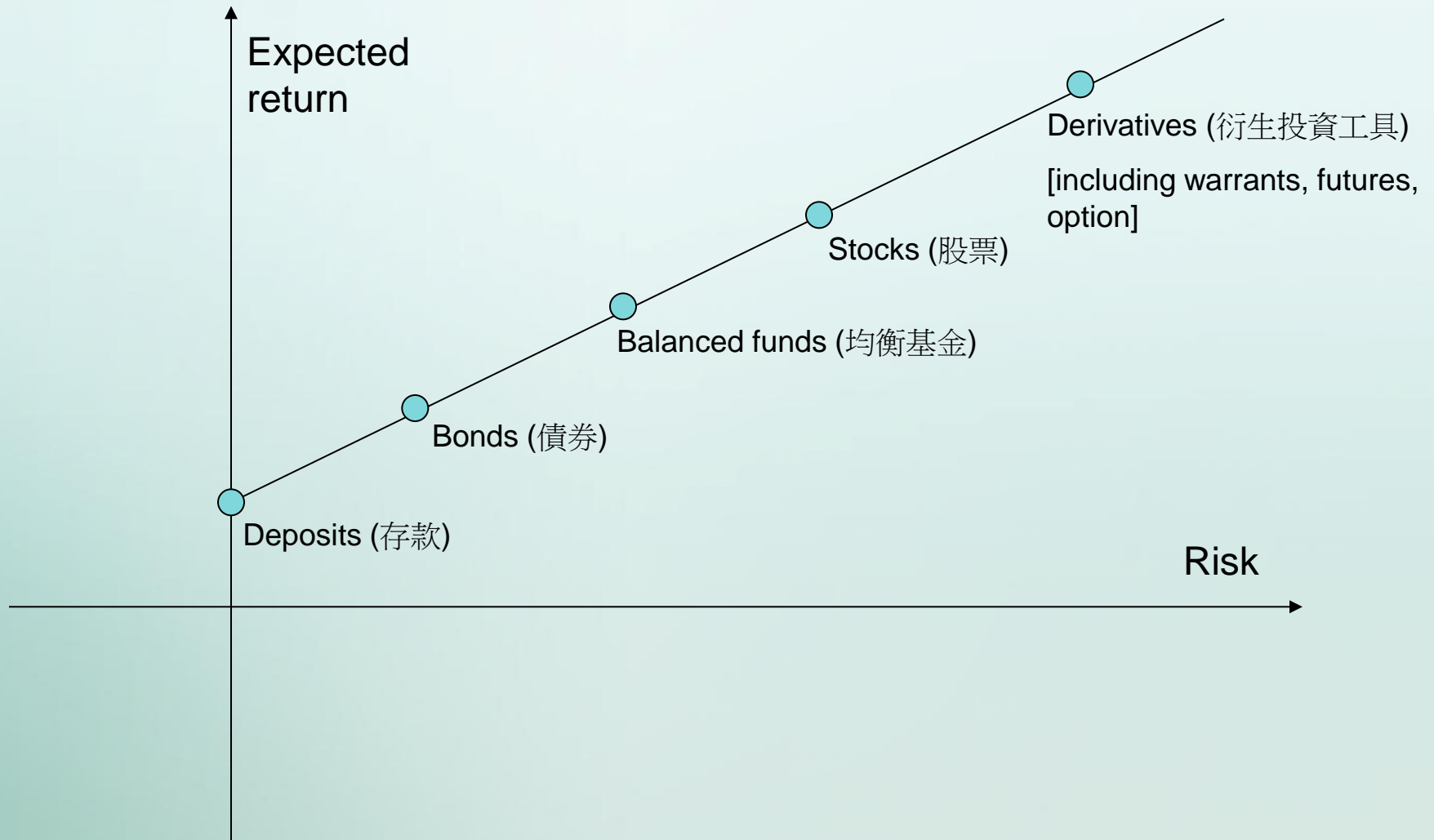


# The Financial Planning Process





# Step 3: Understand Financial Products



# Learning and Teaching Activities

- **Teachers can refer to BAFS Learning & Teaching Resource Kit C09 Personal Investment Decisions (Activity 3) for details about risk and return pyramid**



# Deposits

- **Features**

- Considered low risk
- Deposit money with a bank or a deposit-taking company
- May receive interest payment (if any)
- Account types
  - Savings Account
  - Current Account
  - Fixed Deposit

- **Risks**

- Inflation risk
- Interest rate risk
- Default risk
  - Deposit Protection Scheme



# Bonds

- **Features**

- Considered low/medium risk
- A debt instrument
- The issuer's credit rating and the bond yield are usually inversely related
- Coupon rate could be fixed, floating or zero
- Terminologies
  - Issuer
  - Principal
  - Coupon rate
  - Term



# Bonds

- **Investment Risks**
  - Default risk
  - Interest rate risk
  - Exchange rate risk
  - Liquidity risk



# Types of Bonds

- **Government bonds**
  - Issued by the government
  - E.g. Exchange Fund Notes issued by the Hong Kong Monetary Authority
- **Corporate bonds**
  - Issued by listed companies or their subsidiaries



# Different Types of Bonds

	Government Bonds	High Yield Bonds
Default risk	Normally the lowest	Relatively high, depending on the credit quality of the issuer
Credit rating	Normally the highest	Normally the lowest
Return	Normally the lowest	High Yield



# Investing in Bonds

- **Information on bonds**
  - [www.cmu.org.hk](http://www.cmu.org.hk)
- **Buying and Selling Bonds**
  - Initial public offer (IPO)
  - Secondary market
    - Listed bonds
    - Unlisted bonds: Over-The-Counter (OTC) market





# Stocks

## ■ Features

- Considered medium/high risk
- Securities issued by a listed company
- Representing part of the ownership of the listed company
- May receive dividends (if any)

## ■ Risks

- Market risk
- Business risk
- Liquidity risk
- Default risk



# Different Types of Stocks

	Blue Chip	2nd/3rd Tiered Stocks or GEM stocks
Return	Relatively Steady	Higher price fluctuations and volatile returns
Risks	Normally lower	Normally higher
Initial investment	Normally higher	Normally lower



# Investing in Stocks

- **Information on stocks**
  - [www.hkex.com.hk](http://www.hkex.com.hk)
- **Buying and Selling stocks**
  - Initial public offer (IPO)
  - Secondary market



# Funds

- **Features**

- Pools investors' money together
- Invests in a variety of products and markets
- Various investment methods, e.g. lump sum or savings plan

- **Fees**

- Involves various fees (e.g. subscription, redemption, switching, management etc )
- Ask about the fees beforehand

**Funds offered to the Hong Kong public  
must be authorized by the SFC**



# Funds

- **Types**

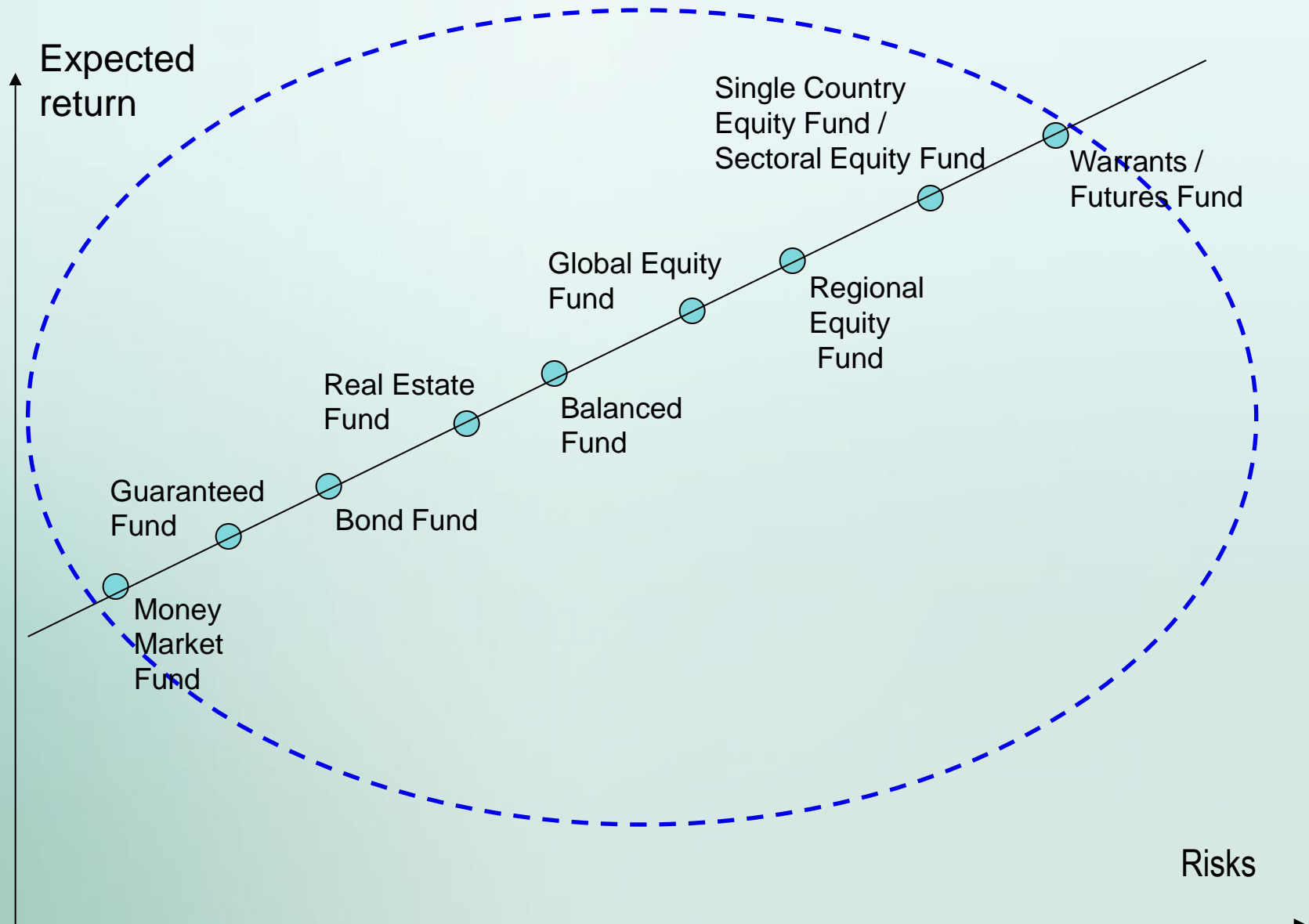
- Equity fund
- Balanced fund
- Sector fund
- Bond fund
- Hedge fund etc

- **Risks**

- Depends on the types of funds, for example:
  - Funds that concentrate in a certain type of asset or industry
  - Funds that invest in derivative products



# Different Types of Fund



The above information is for discussion and reference only and should not be treated as investment advice.



# Investing in Funds

	Listed Funds	Unlisted Funds
Trading channel	Traded like stocks on the Stock Exchange of Hong Kong	Subscription and redemption
Fund prices	Determined by supply and demand	Calculated by Net Asset Value (NAV)
Liquidity	Higher	Lower



# Investing in Funds

- **Unlisted Funds**

- Subscription and redemption
- Price is determined by Net Asset Value (NAV)
- Lower liquidity

- **Listed Funds**

- Traded like stocks on the Stock Exchange of Hong Kong
- Price is determined by supply and demand
- Higher liquidity





# Exchange Traded Funds

## ■ Features

- Listed on the Stock Exchange of Hong Kong
- Targets to track & replicate an index on equities, debts etc
- Index tracking strategies:
  - Adopt full replication (全面模擬) – portfolio copying the composition of the underlying index; OR
  - Adopt representative sampling (代表性抽樣) – investing in a portfolio of securities having a high correlation with the underlying index, but not exactly the same as those in the index; OR
  - Adopt synthetic replication (合成模擬) - using financial derivative instruments to replicate the index performance



# Exchange Traded Funds

## ■ Risks

- Tracking error
  - Disparity between the performance of the ETF (NAV) & that of the underlying index
- Credit/counterparty risk – for synthetic ETFs
  - Subject to the credit risk of the counterparties of financial derivative instruments, mostly index-linked structured notes
  - If the issuer of the financial derivative instrument defaults, investors could lose the entire invested capital, & trading of a ETF on the exchange could be suspended
- Trading at a discount/premium to NAV
  - Trading price determined by the supply & demand of the market
- Liquidity risk
  - Listing/trading on the SEHK does not guarantee a liquid market



# Learning and Teaching Activities

- **Teachers can refer to BAFS Learning & Teaching Resource Kit C09 Personal Investment Decisions (Activity 4) for cases concerning how individuals or families used their savings**



# The Financial Planning Process



# Step 4: Develop your Wealth-building Portfolio

- **Risks are unavoidable**
- **Diversification**
  - Investment vehicles perform differently under different market conditions (stock vs bond)
  - Invest in different assets (stock; currency & commodity)
  - Invest in different markets and currencies (e.g. regional or global investment through funds; foreign currency deposits)
  - Investment distribution affected by risk profile (e.g. conservative → % of cash in portfolio higher; aggressive % of stock in portfolio higher)
- **Don't put all the eggs in one basket**

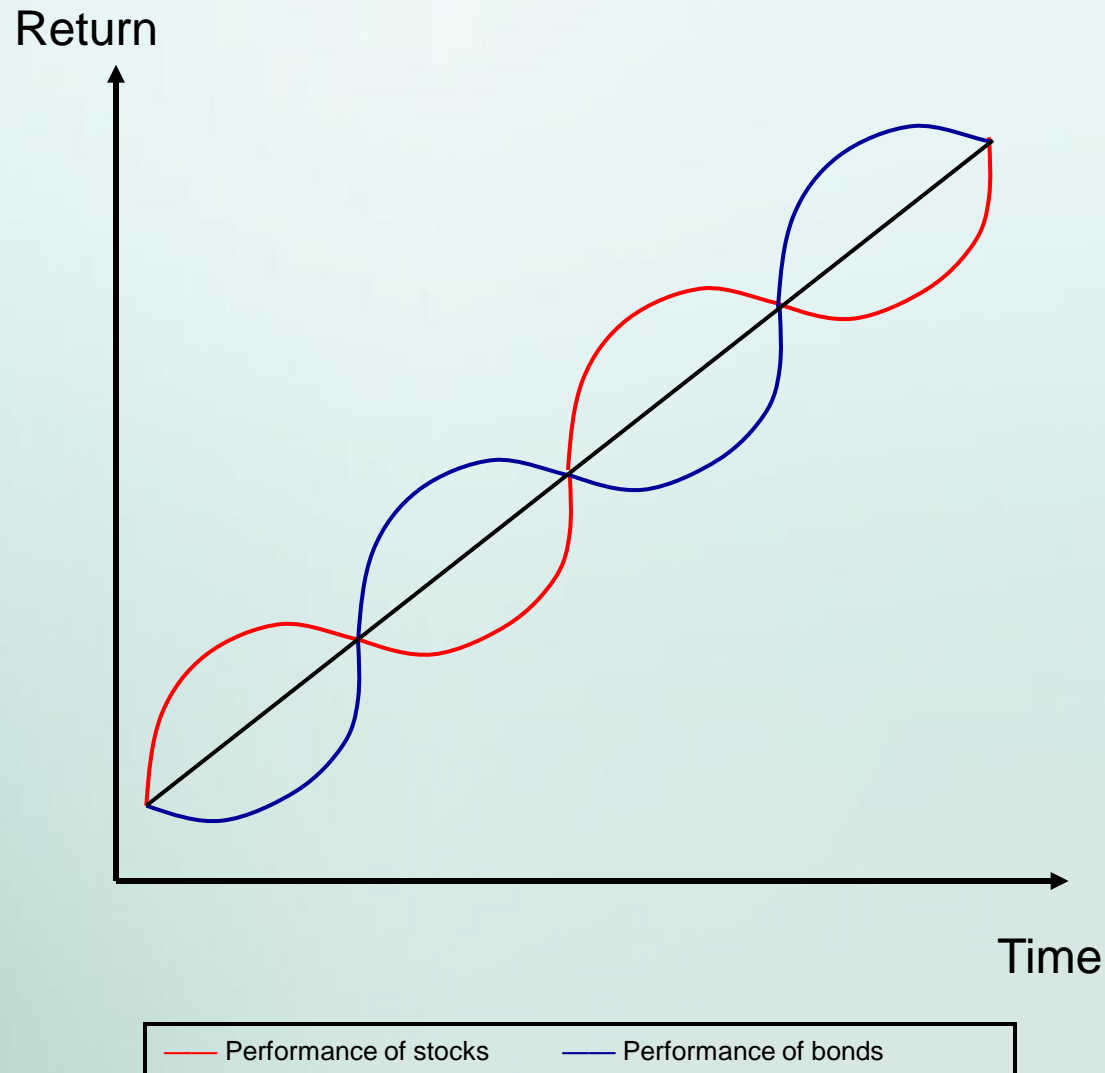


# Asset Allocation

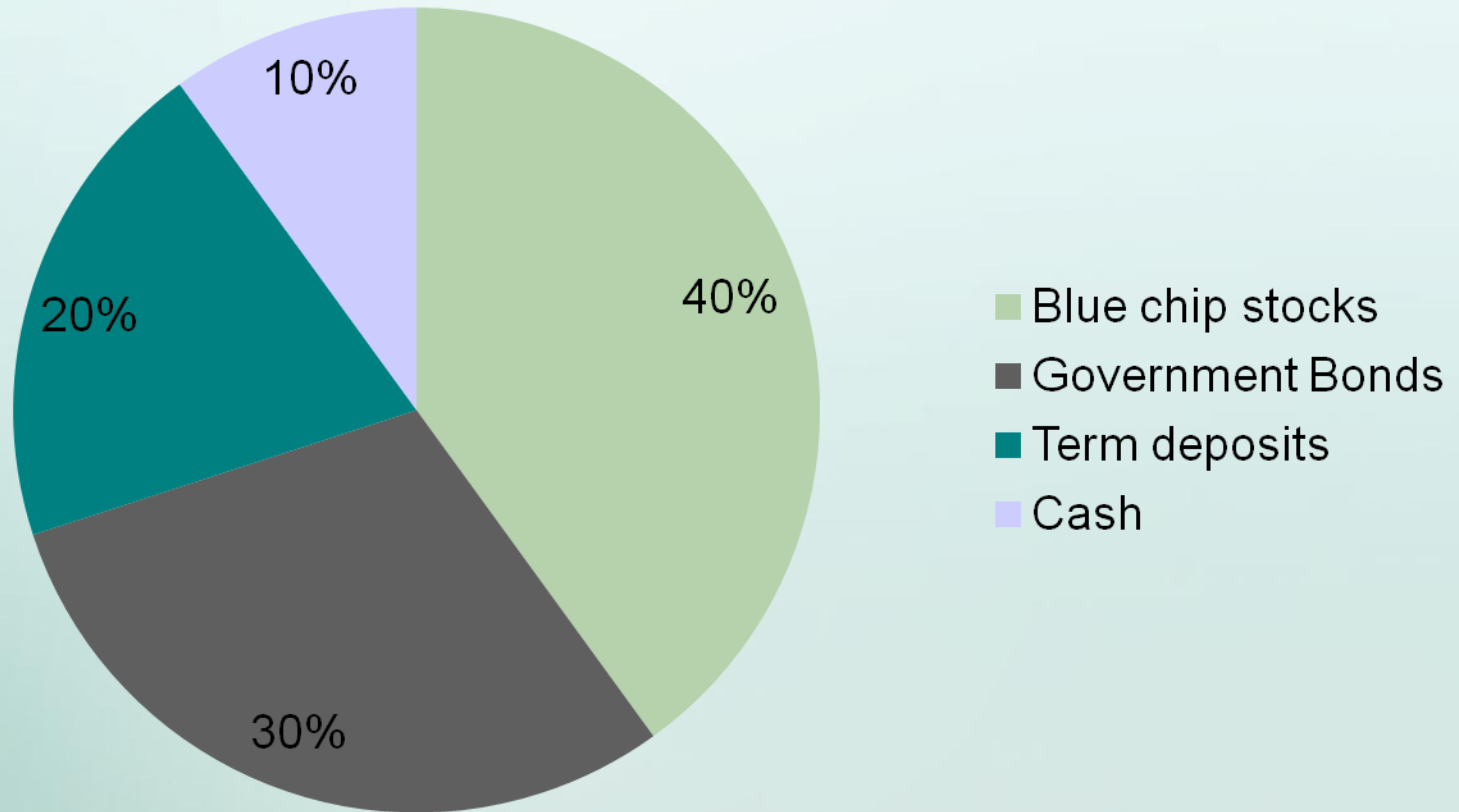
- **Take a holistic approach when you analyse the impacts of each asset on the return and risks of your portfolio**
  - Ideally, your portfolio should include assets which perform differently under different market conditions, i.e. assets with negative correlation of their returns, so as to reduce the volatility of the overall returns.
- **A balanced portfolio provides relatively steady return as compared to single asset portfolio**



# Risk Diversifying – Having the Right Portfolio



# Medium Risk Portfolio: An Example





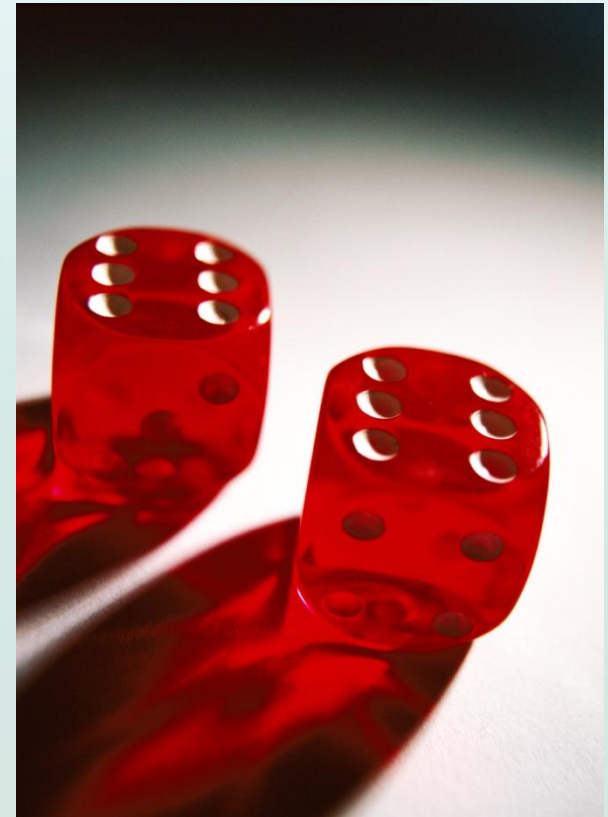
# Investment vs. Speculation

## ■ Investment

- Achieve your investment goals
- Longer term
- Analyzing investments
- Invest with discipline
- Value appreciation
- Steady income stream

## ■ Speculation

- Making quick profits (or losses)
- Shorter term
- Follow the trend
- Bet on price fluctuations



# The Financial Planning Process



# Step 5: Evaluate your Portfolio

**Starting balance** \$ 50,000

Add

– Interest income \$ 200

– Dividend income \$ 200

– Asset appreciation \$ 5,000

Minus

– Asset value depreciation (\$ 1,000)

– Investment fees and charges (\$ 200)

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**Closing Balance** \$ 54,200

**Investment return**

$$\frac{\text{Closing Balance}}{\text{Starting Balance}} - 1 = 8.4\%$$



# Step 5: Evaluate your Portfolio

- **Regular (e.g. annual) review of portfolio performance**
  - Volatility of return → the greater the volatility, the higher the risks
- **Analysis of portfolio performance**
  - Actual > expected performance – identify the driving forces
  - Actual < expected performance – identify the reasons for lagging behind



# The Financial Planning Process



# Step 6: Portfolio Rebalancing

- **Financial Planning is an on-going process**
- **Closely monitor market trends**
- **Regularly review your investment needs**
- **If they appear to change conspicuously or the performance of your portfolio deviates from your goal, consider rebalancing your portfolio**
  - Change the weighting of different assets (Reweighting)
  - Choose another investment product in each asset class (Switching)



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- Trading Listed Renminbi-Denominated Securities >
- What is a Synthetic Exchange Traded Fund? >

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## Renminbi Products

The renminbi's uptrend may have sparked interest in renminbi products, but retail investors should find out more about the products' features, trading process and risks before investing.

**Find out more**

Renminbi Products | InvestEd Intelligence | InvestEd iPhone App

### Latest Activity

- > Activities Calendar
- > Investor Education Seminars
- > "Equity-linked Investments" booklet (2011 edition)

### Video

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- > Inside the SFC
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