



SECURITIES AND  
FUTURES COMMISSION  
證券及期貨事務監察委員會

# Financial Planning Teach-and-Learn Workshop

**June 2012**

**External Relations**

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- **Why is financial planning important?**
- **Basic of financial planning**
- **The financial planning process**
- **Class activity**
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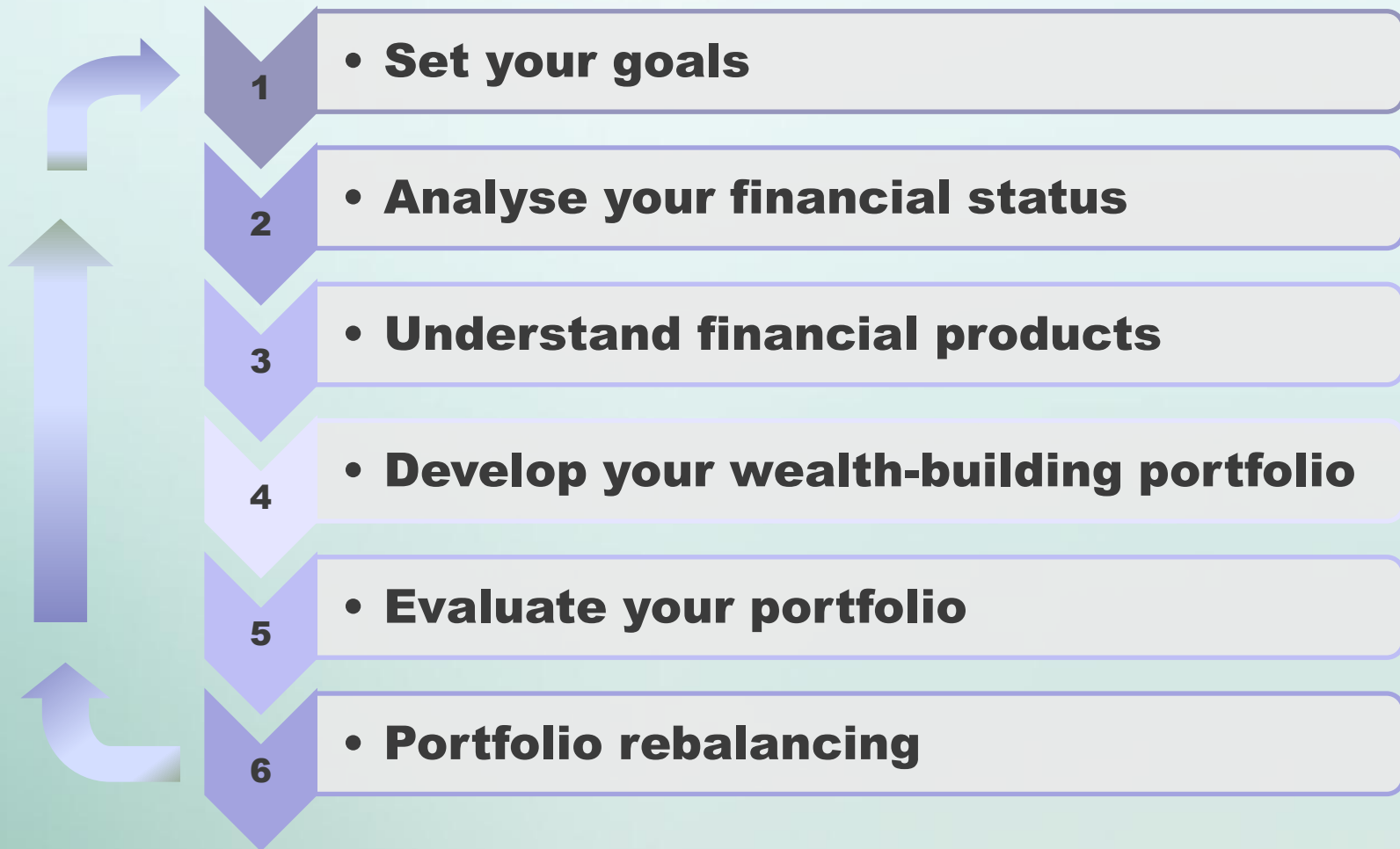


# Why is Financial Planning Important?

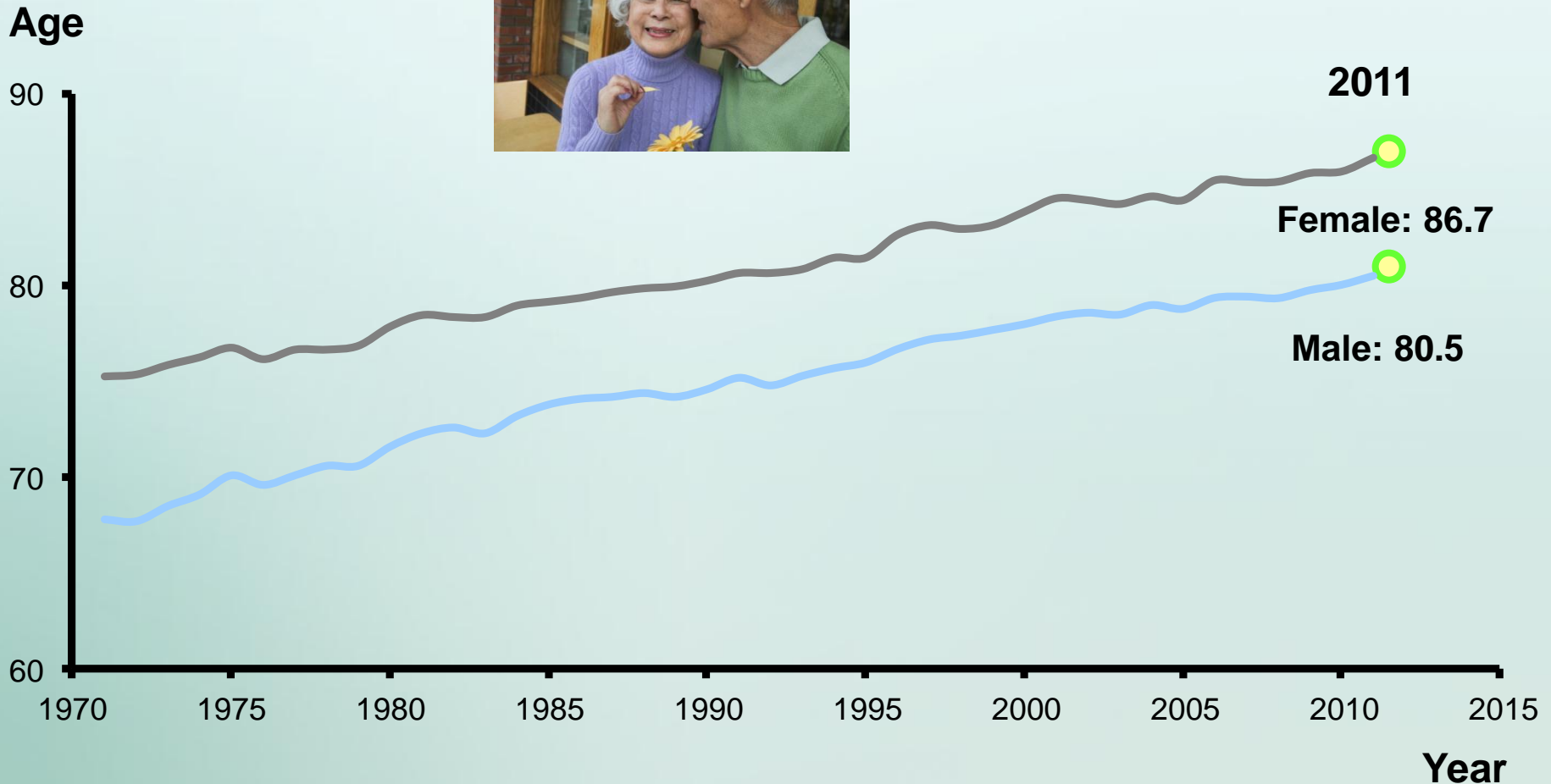
- **Understand what you need in the future**
- **Specify how much do you need and when do you need it**
  - E.g. taking inflation into consideration
  - E.g. opportunity cost
- **Understand your situation**
  - Financial situation
  - Risk profile
- **Set up a plan and follow through**
- **Review portfolio**
- **Reset your life goals if necessary**



# The Financial Planning Process



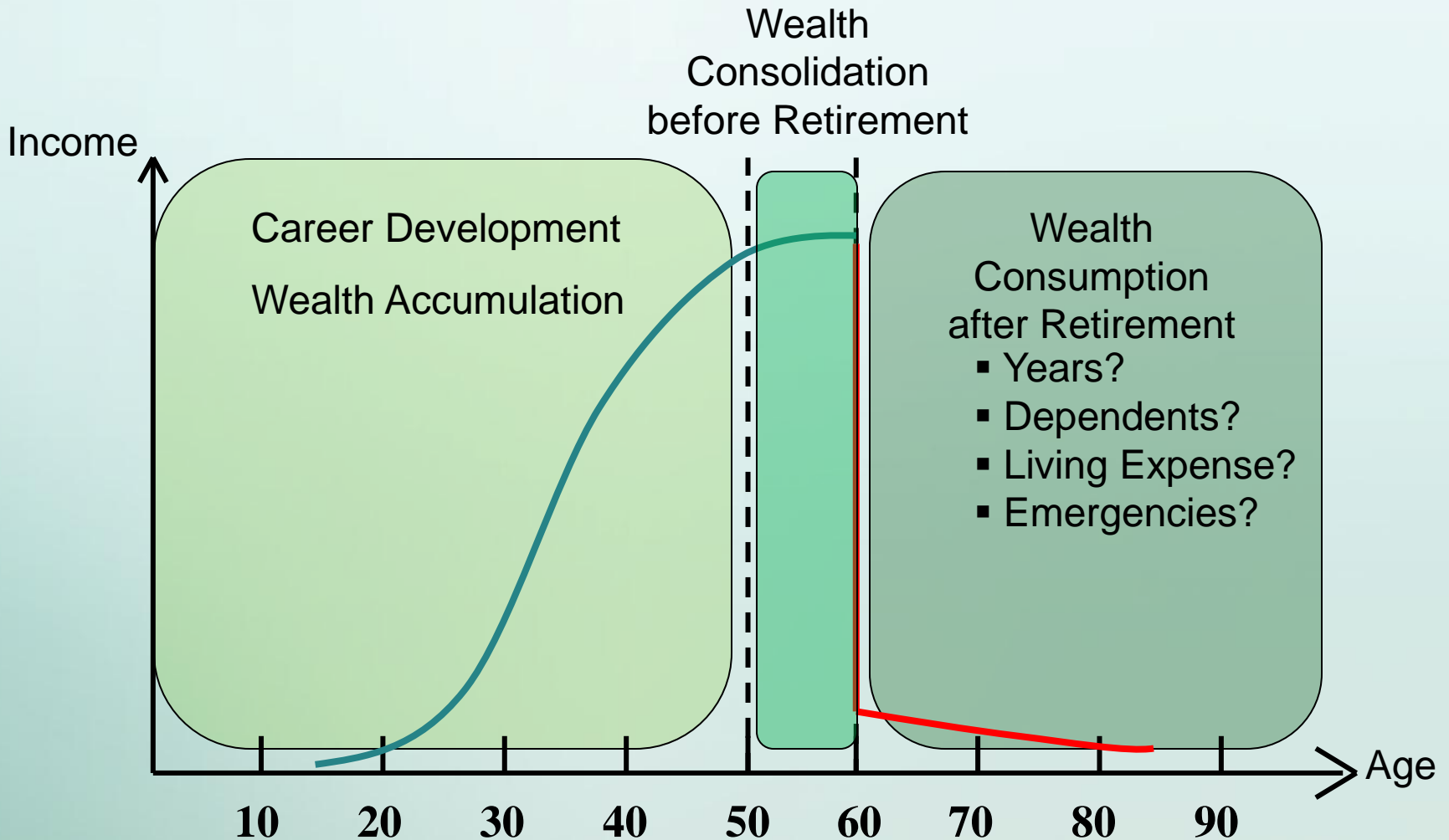
# Life Expectancy – Post-retirement Years



Source: Hong Kong Census and Statistics Department

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

# Typical Life Cycle of Personal Income



# Step 1: Set Your Goal(s)

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



# Goals Throughout Life Cycle

## ■ Student

### Life situation

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

### Goals

- Pay off Non-means-tested 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





# Goals Throughout Life Cycle

## ■ A single mother

### Life situation

- Age: 32
- Marital status: divorced
- # 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



# Class Activity 1

- **Ask students to list out goals in a specific life situation**
- **Evaluate goals**
  - Financial-related?
  - Practical and realistic?
  - Long term vs Short term
- **Students have to select one of the goals and work out how much will they need to attain the goal**
  - How much do you need if you wish to fulfill the goal today?
  - When do you need the money?
  - Take inflation into consideration



## Example 1 – Study Tour to UK

- Keith planning to join a summer study tour to UK next year
- Estimated cost = \$15,000
  - Tour Fee \$ 12,000  
(Air ticket, transportations, accommodation, food, sightseeing entrance fee and travel insurance)
  - Souvenirs and gifts \$ 2,000
  - Misc. spending \$ 1,000
- If inflation is 4% a year
  - In 2012 you need \$15,000
  - In 2013 you need  $\$15,000 \times (1 + 4\%)^1 = \$15,600$



# Example 1 – Future Value of an Annuity

- **How to come up with \$15,600 in 1 year?**
  - Current savings: \$6,000
  - How much can I 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 – Future Value of an Annuity

- 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 – Monthly Expense after Retirement

- **Expected monthly spending when you retired today: \$10,000**
- **What is the future value of this \$10,000 when you retired?**
- **When is your expected retiring age?**
- **How old are you?**
- **What is the inflation rate?**



## Example 2 – Future Value of an Annuity

- **Assumption: Retiring at 55**
- **Current age and years towards retirement:**
  - Age 20→35 years towards retirement
  - Age 30→25 years towards retirement
  - Age 40→15 years towards retirement

		Current Age		
		20	30	40
Inflation Rate	1%	<b>\$14,188</b>	<b>\$12,839</b>	<b>\$11,618</b>
	3%	<b>\$28,539</b>	<b>\$21,150</b>	<b>\$15,674</b>
	5%	<b>\$57,337</b>	<b>\$34,813</b>	<b>\$21,137</b>



## Example 3 – 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 this goal?**





# Example 3 – 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	\$3,568.06
	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	\$3,240.29	\$4,050.36	\$4,860.43	\$5,670.50	\$6,480.57

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



# Rule of 72

- How many years does it take to double my principal (\$10,000)?
- $\text{Future value} = \text{Present Value} \times (1 + \text{interest rate})^{\text{years}}$

$$\begin{aligned} \$20,000 &= \$10,000 \times (1 + 6\%)^{\text{years}} \\ \text{years} &= 11.9 \end{aligned}$$

- A quick rule of thumb

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

- In our example,

$$\frac{72}{6} \approx 12 \text{ years}$$



## Example 4 – Be a Millionaire

- When can my savings reach \$1,000,000?
- Assumption: Compounds the savings monthly at a fixed annual yield

		Monthly Saving Amount		
		\$3,000	\$5,000	\$8,000
Rate of Return	0%	Year 27	Year 17	Year 11
	5%	Year 17	Year 12	Year 8
	10%	Year 13	Year 9	Year 7
	20%	Year 9	Year 7	Year 5

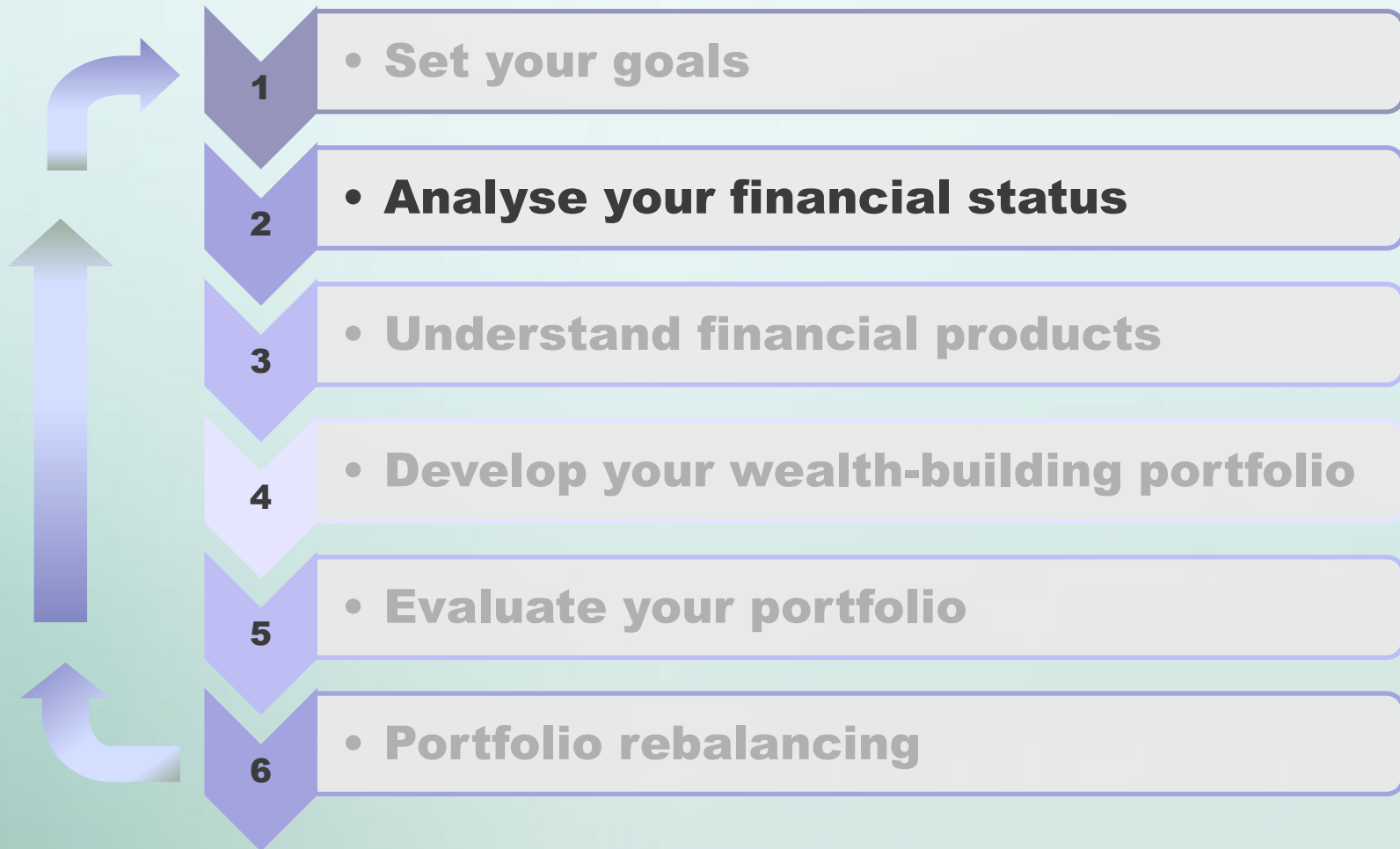


# Calculators

- **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/>
- **Savings Calculator**  
[http://www.moneyadvice.service.org.uk/yourmoney/interactive/savings\\_calculator.aspx](http://www.moneyadvice.service.org.uk/yourmoney/interactive/savings_calculator.aspx)



# The Financial Planning Process



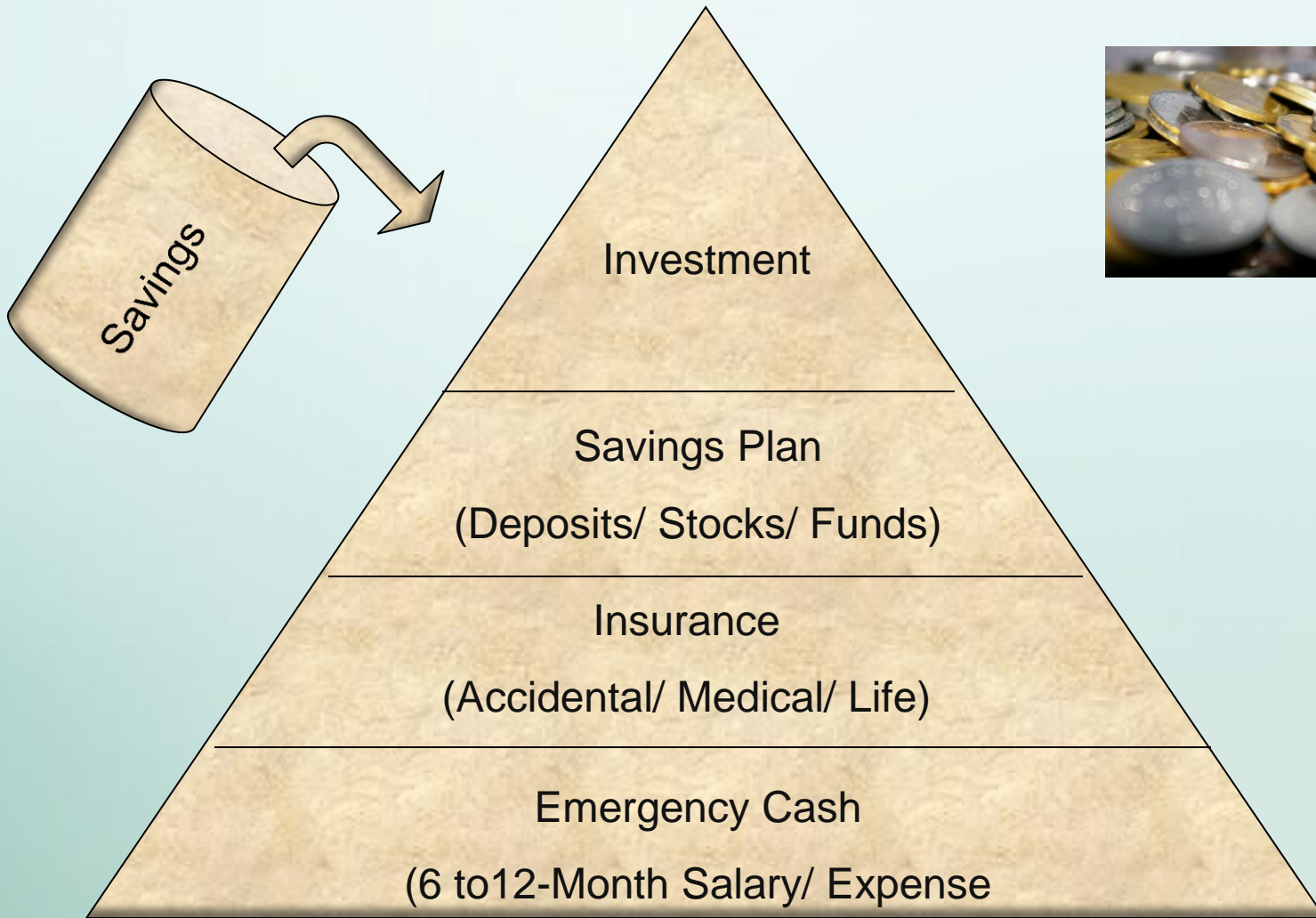
# Step 2: Analyze your Financial Status

- **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
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Savings from red pocket	\$1,000
-------------------------	---------

<b>Total Liabilities: Credit Card</b>	<b>(\$1,500)</b>
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<b>NET ASSET</b>	<b>\$4,500</b>
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# Cash Flow Analysis

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



# 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



## Class Activity 2

**“My savings” by Mavis, 8 Jun 2012 (Fri)  
(a secondary school student aged 17)**

**I don't have any savings at all because my money cannot even cover my expense.**

**My parents give me \$300 a week as pocket money. I also work 3 hours a week every Sunday morning as teaching assistant at an art studio, for \$60 an hour.**

**Last Saturday night, I went to karaoke box with my friends. This costed me around \$230. I took taxi back to home afterwards, which was about \$50. On the next day, following my work at studio, I went yum cha with my colleagues, which spent me \$100. I got up late on Monday and so I took taxi to school (\$35). Everyday, I have lunch in school and a lunch set with soft drink is \$25. On Wednesday, I borrowed \$200 from my sister since I need to buy a reference book (\$120).**

**I will return this sum of money to her once I received pocket money from my parents tomorrow.**



## Class Activity 2

- **Evaluate the spending habit of Mavis.**
- **Is there any expense(s) that can be lowered?**
- **Is there any alternative(s) to non-compulsory expenses?**
- **Prepare an alternative budget for Mavis which will allow her to make the most of her money.**



# Calculators

- **Budget tools:**  
[http://www.moneyadvice.service.org.uk/yourmoney/interactive/budget\\_planner.aspx](http://www.moneyadvice.service.org.uk/yourmoney/interactive/budget_planner.aspx)
- **Budget planner**  
<http://www.fido.gov.au/fido/fido.nsf/byheadline/Budget+planner?openDocument>





# 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, etc

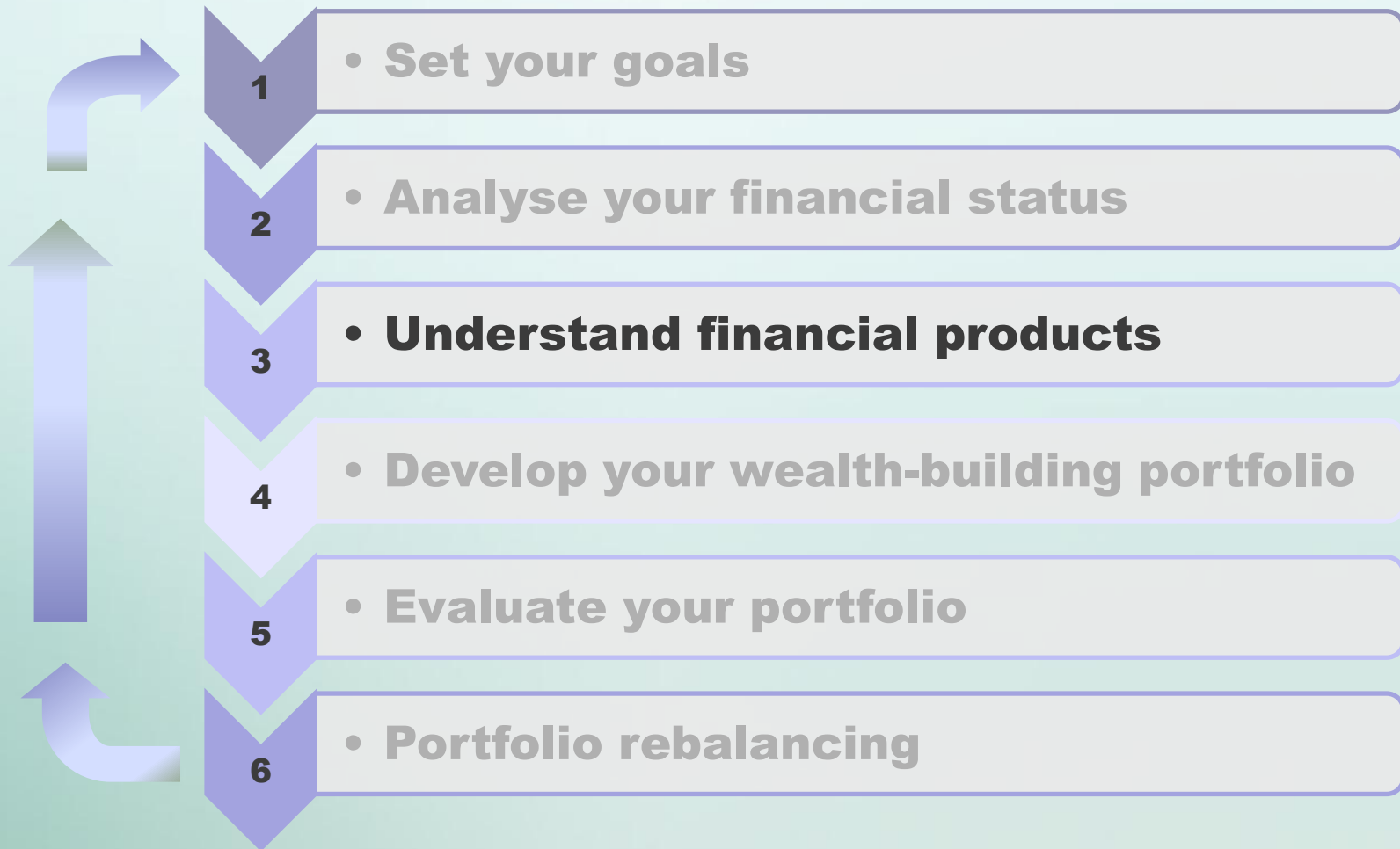


# Personal Money Health Check

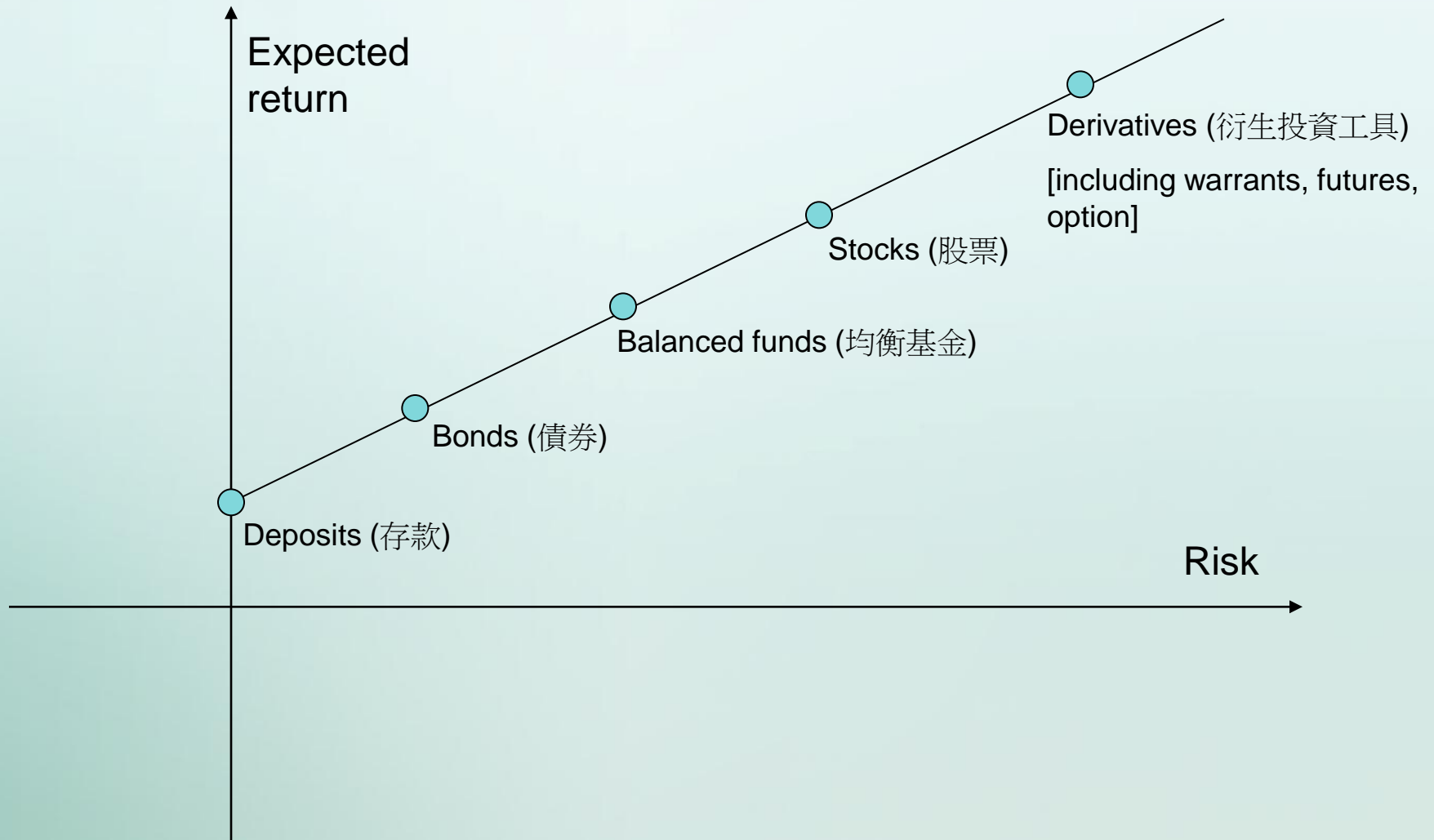
- Know your attitudes towards managing your money
- Consider personal situation including age, employment status and living conditions
- Take plans in saving, insurance, investment and retirement into account
- E.g. UK – The Money Advice Service  
<https://healthcheck.moneyadviceservice.org.uk/?>



# The Financial Planning Process



# Step 3: Understand Financial Products



# 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





# Common 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



# 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)
  - [www.hkexnews.hk](http://www.hkexnews.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

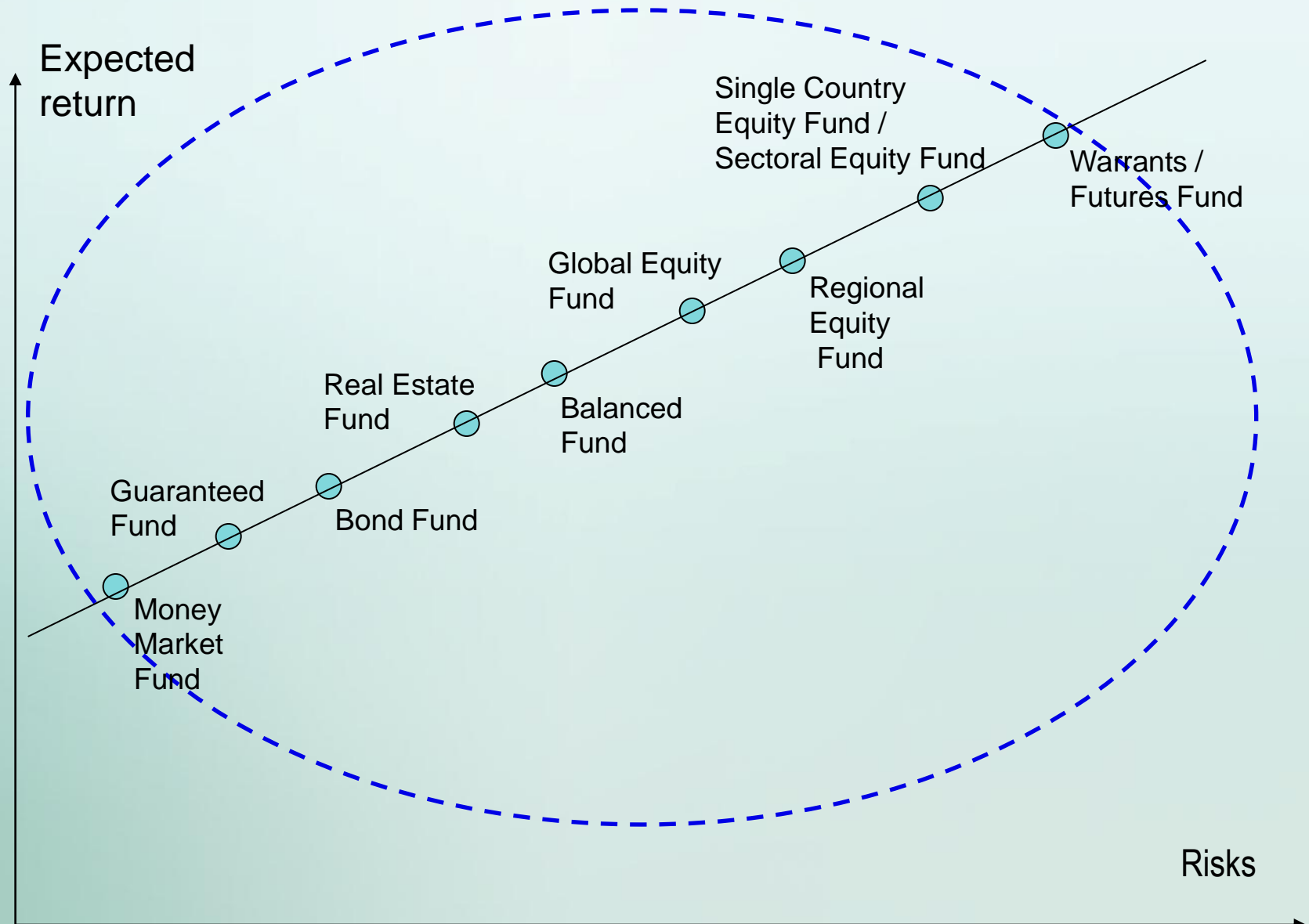
- **Fees**

- 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**



# 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**

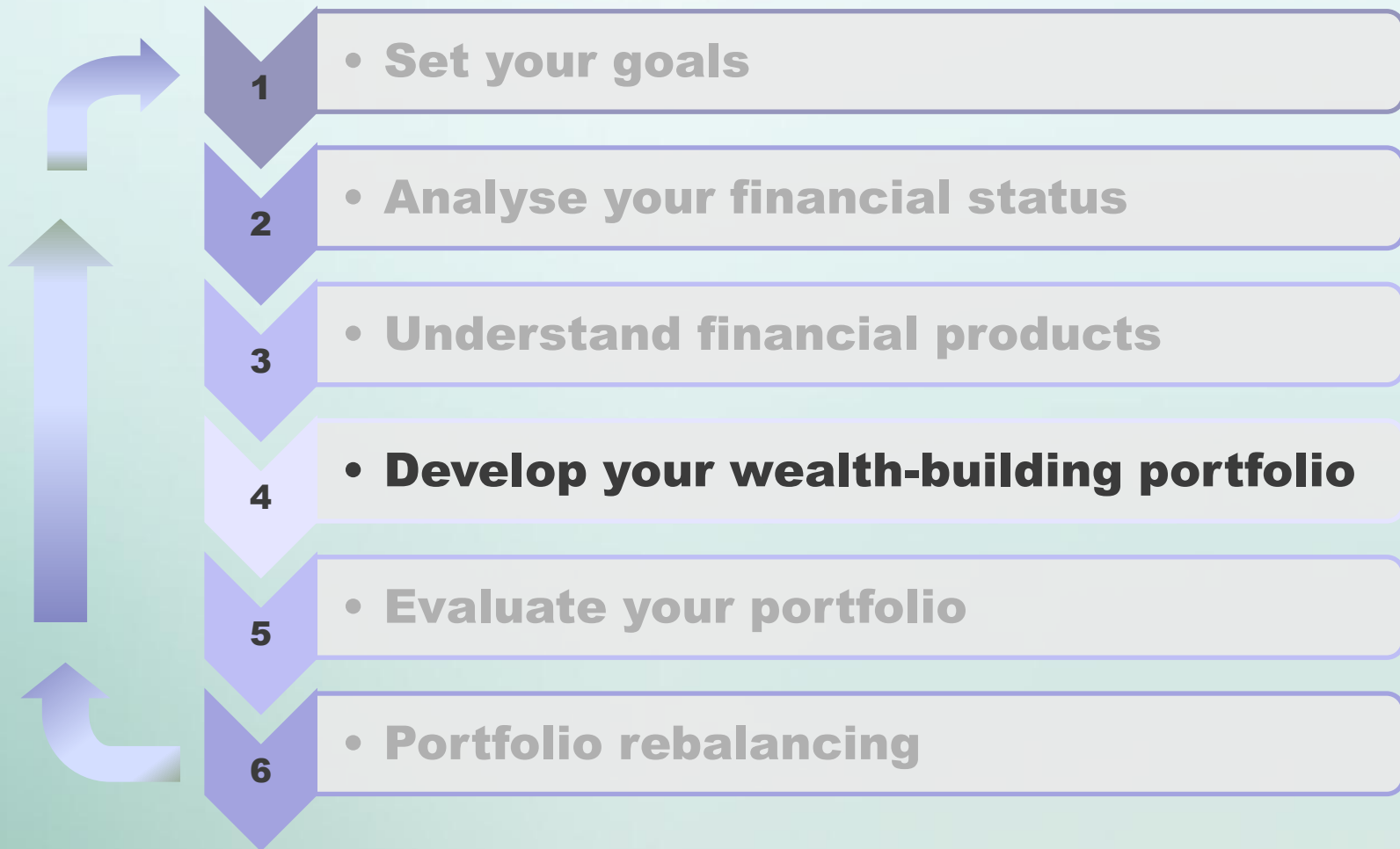
- Subscription and redemption
- Price is determined by Net Asset Value (NAV)
- Lower liquidity

- **Listed Funds**

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



# 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 (aggressive vs conservative)
  
- **Don't put all the eggs in one basket**

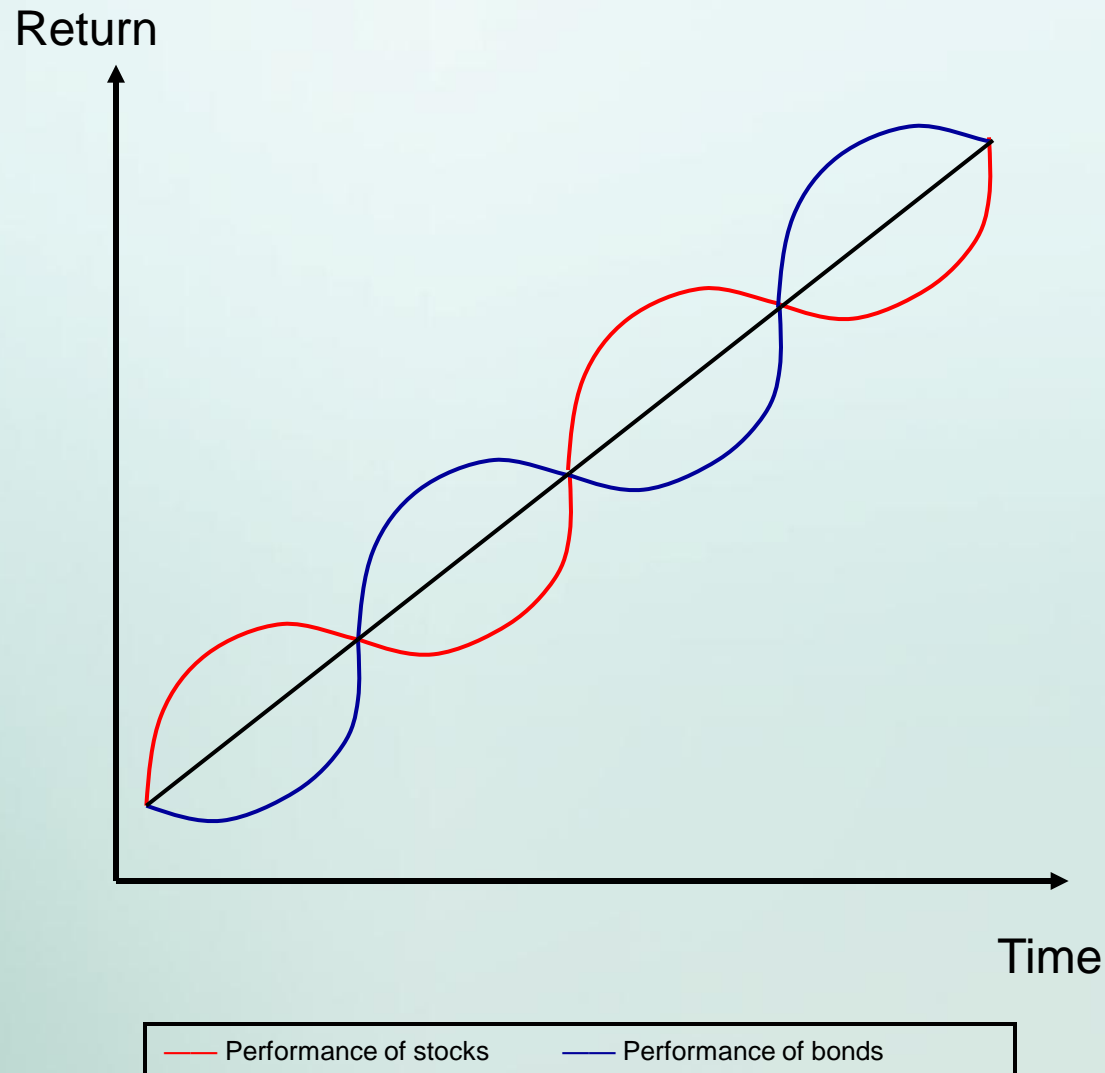


# Asset Allocation

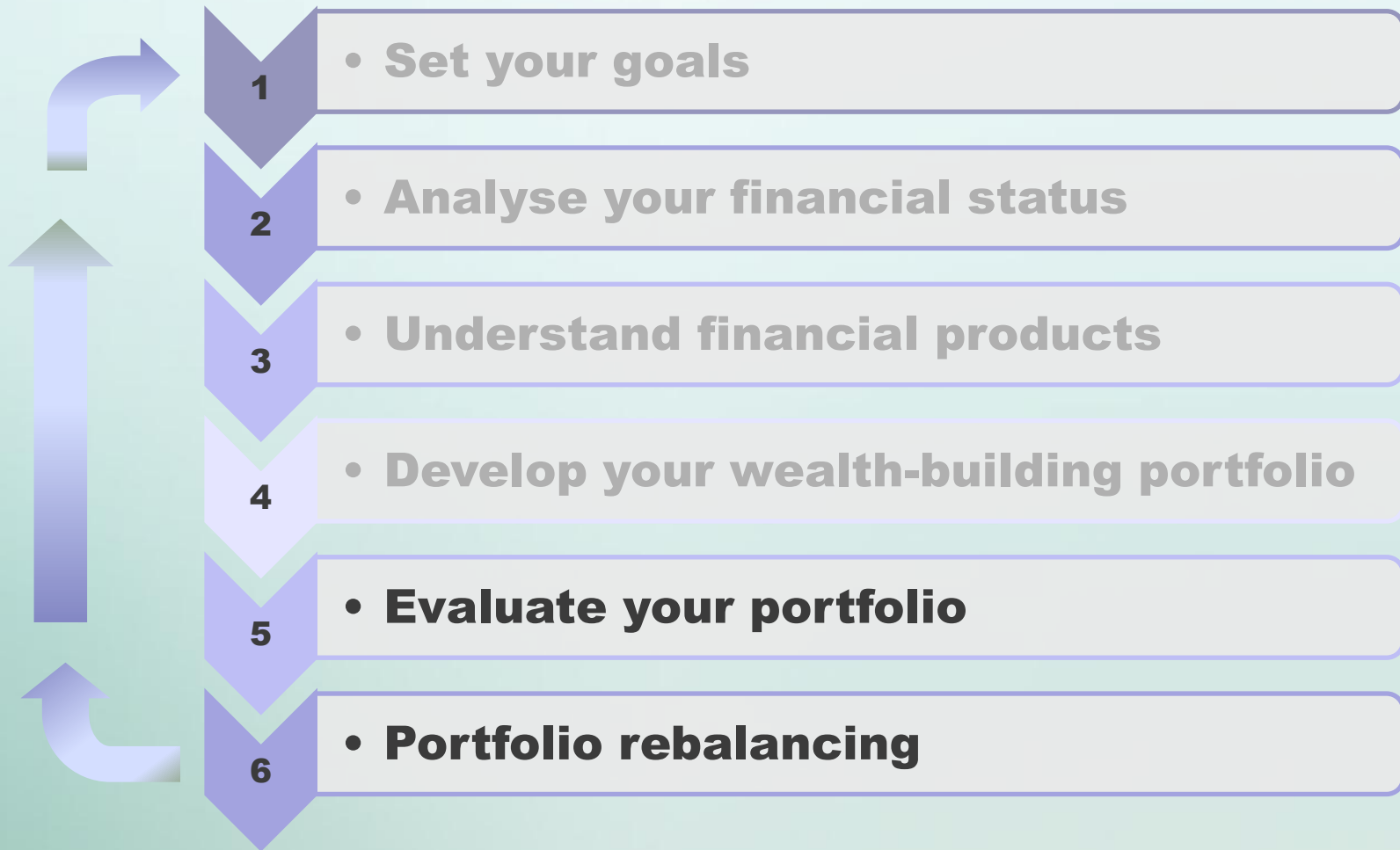
- **Take a holistic approach**
  - Ideally, your portfolio should include assets which perform differently under different market conditions, i.e. assets with negative correlation of their returns, so as to reduce the volatility of the overall returns.
- **A balanced portfolio provides relatively steady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



# Risk Diversifying – Having a Balanced Portfolio



# The Financial Planning Process



# Step 5: Evaluate your Portfolio

Invest in bonds, stocks and set aside some cash

<b>Starting balance</b>	\$ 50,000
Add	
— Interest income	\$ 500
— Dividend income	\$ 300
— Asset value appreciation	\$ 2000
Minus	
— Asset value depreciation	(\$ 700)
— Investment fees and charges	(\$ 200)
<hr/> <b>Closing Balance</b>	\$ 51,900

**Investment return = 3.8%**



# 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





# 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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