Booklet on Provident Fund Scheme for Workers in the Public Services

Investment Basics

Investment Basics

Content

1. Understanding Your Needs 4

2. Setting Your Investment Goals 10

3. Balancing Risk and Return 13

4. Determining Your Investment Strategy 18

5. Investment Fund 26

6. Frequently Asked Questions 29

7. Investment Education Web Links 31

8. Risk Profiling Questionnaire 32

9. Glossary 36

October, 2024

Foreword

The Provident Fund Scheme for Workers in the Public Services (the "Scheme") is a defined contribution scheme with investment choices for members. As a Scheme member, you will have full involvement in the investment of your retirement benefits – by building your own investment portfolio.

Unlike other investments, investing for retirement can have a very long time horizon. The objective is to be able to accumulate enough assets for a lifestyle that suits your individual needs after retirement. Hence, having a clear understanding of your investment strategy and ensuring its implementation is the key to success in retirement investments.

This investment basics booklet is written to help you formulate your own customised retirement investment strategy. You will be guided through some of the general principles in this booklet covering:

1. **Understanding Your Needs**
   Outlines some of the basic thought process in planning for retirement investment.

2. **Setting Your Investment Goals**
   Summarises the key consideration to help you to set the investment goals for retirement saving.

3. **Balancing Risk and Return**
   Helps you understand the concept of risk and return of different asset classes.

4. **Determining Your Investment Strategy**
   Provides various strategies to assist you achieve your investment goals taking into account of your risk tolerance.

5. **Investment Fund**
   Include the investment fund arrangement and its advantage for investors.

6. **Frequently Asked Questions**
   Provides answers to some of the most frequently asked questions.

7. **Investment Education Web Link**
   Gives a few websites, which you are encouraged to visit should you wish to gain better understanding of retirement investment.

8. **Risk Profiling Questionnaire**
   Assists you in assessing your personal risk tolerance such that you can formulate a suitable investment strategy.

9. **Glossary**
   Explains some of the specific terminologies in relation to retirement investment.

Remember, although MACAO SAR has put in place the Scheme for your retirement, it is your responsibility to make sure that your investments work towards achieving your goals. Please spend some time reading this booklet such that you are well equipped to plan your retirement wisely.

1. Understanding Your Needs

The most important step in formulating your investment strategy is to know what you want. In other words, what you are trying to achieve. We have included in this section a few questions, which are crucial to your retirement planning.

At the end of this Section, you are encouraged to write down your personal information in relation to your own needs such that you can well plan your investment and help you to understand the information disclosed in this booklet.

How long will you invest?

When will you retire? Will it be in the next 5 years or are you just 29 and retirement is just a blur on the horizon?

Your investment time horizon is the length of time your savings will be invested until you need to access the money and is an important factor to consider when developing the investment strategy that is best for you. The longer the time horizon you have, the more flexibility you will have in setting your return targets. It is because you will have a longer time span for capital accumulation in order to meet your post-retirement spending needs.

Assuming you do not re-invest your retirement benefits post retirement age, your investment horizon will be:

Your Normal Retirement Age – Your Current Age

Please note that this is an unique investment horizon in that your investment horizon is not necessarily the same as the others'.

How much money will you need for your retirement?

How much money do you think you will need when you retire? What kind of lifestyle do you want during retirement years? Do you want to travel around the world, buy a retirement home, or perhaps set up your business? Be realistic.

At the very least, you will need to have enough to pay for your normal day-to-day living expenses during retirement. A general formula to estimate the lump sum amount you will need to support your post retirement needs is:

Your Monthly Income x 60% x 12 x Life Span Post Retirement *

* *This formula aims to assess how much money you need at retirement to maintain your expenditure.*

60% shown represents the proportion of your monthly income, which is required for supporting your living expense during retirement. It is a commonly adopted percentage to evaluate the possible amount you will need. This proportion could be higher or lower dependent on your own situation.

According to the latest census, the average life expectancy nowadays is approximately 80 years. Assuming your retirement age is 65, therefore your estimated life span post retirement will be 15 years, i.e., 80 years less 65 years.

Example:

Mr. Chan is now 29 years old. He is earning $15,000 per month. What is his estimated amount of savings required for retirement?

Answer: $15,000 x 60% x 12 x 15 = $1,620,000

Please note that the above is an approximation and assumes Mr. Chan does not have to pay off mortgages, tax, nor support any dependent post retirement. The above example shows that an average person would need a significant amount of savings in order to support his retirement living. However, do not be shocked. You can achieve this through careful planning of your retirement investments.

As your profile changes over time, for example, your monthly income would rise due to promotion and salary increase; or your life expectancy might increase due to a healthier life you are maintaining. You are encouraged to re-calculate the estimated amount needed on a regular basis, say every 5 years.

How much money could you save in the Scheme?

By enrolling into the Scheme, you are required to contribute a portion of your monthly income to the Scheme for the purpose of retirement saving, and MACAO SAR also makes contributions for you based on a percentage of your monthly income. It is important for you to estimate the amount that you could save in order to cover the expense required during retirement. A simple formula to estimate the lump sum amount to be saved until retirement is:

Your Monthly Income x Total Contribution Rates x 12 x Years Until Retirement *

* *This formula aims to assess how much money you can save until retirement with the assumptions of salary inflation being equal to investment returns and general inflation.*

Example:

Mr. Chan is now 29 years old. He just joins a government department of MACAO SAR and will be enrolled into the Scheme. Both MACAO SAR and Mr. Chan will contribute 14% and 7% of his monthly income to the Scheme respectively (assuming Mr. Chan will retire at age 65).

Estimated Future Savings = $15,000 x 21% x 12 x 36
= $1,360,800

Once you have estimated your future savings, you should compare this with the estimated expenses to gain a general idea whether your savings through the Scheme would be sufficient to cover the retirement expenses.

It is noted that Mr. Chan's estimated savings would not be able to cover the estimated expense. Thus, what should Mr. Chan do to cover the potential shortfall? As a matter of fact, Mr. Chan could take advantages of investing the contributions and try to maximize the potential return and cover the difference.

Please note that the estimation of the amount that you could save in the Scheme would vary subject to your monthly income. You should revisit the suggested approaches shown in Section 4 once every 5 years to assess whether you are on track in meeting your needs.

Your Own Profile

a) Your Age

b) Retirement Age

c) Years to Retirement (b) – (a)

d) Likely Lifespan Post Retirement

e) Current Monthly Income

f) Your Contribution Rate

g) MACAO SAR's Contribution Rate

h) Total Contribution Rate (f) + (g)

i) How much would you have accumulated?

(e) x (c) x (h) x 12

j) How much do you need at retirement?

(e) x (d) x 60% x 12

k) Estimated Surplus / Deficit (i) – (j)

Key Takeaways:

- Your investment horizon
  = Normal Retirement Age – Your Current Age
- Estimated post retirement spending needs
  = Your Monthly Income x 60% x 12 x Life Span Post Retirement
- Estimated future savings
  = Your Monthly Income x Total Contribution Rates x 12 x Years Until Retirement

2. Setting Your Investment Goals

The second step to planning your retirement investments is to set your investment goals, in other words, your return targets. Some common investment goals are:

- Capital Preservation – return on investments should exceed inflation rate.
- Capital Appreciation – return (taken into account of inflation rate) on investments should be positive, hence increase retirement savings over time.

Capital Preservation

It is very important for you to understand the importance of preserving the purchasing power of your retirement savings. Don't underestimate the effect of inflation because it can reduce the spending power of savings over time. $100 today will be worth less tomorrow and much less in a few years' time if inflation increases.

Do you still remember how much 1 bread cost 10 years ago?

If you still have the $3 you had 10 years ago, you will not be able to buy 1 bread now. Alternatively, if 10 years ago you had $6, you could have bought 2 breads, whereas now you can only buy 1. Retirement investments are generally long-term. Therefore it is important to consider the effect of inflation when choosing investments for retirement.

The investment goal, which addresses the inflation effect, is Capital Preservation – the return on your retirement investment should at least exceed inflation in order to preserve the purchasing power of your retirement savings.

In addition, when setting your investment return targets, not only should you be aiming for Capital Preservation (maintaining the purchasing power of your retirement savings against inflation), you should also be targeting Capital Appreciation.

Capital Appreciation

In the previous section, it is noted that there is possibility that your savings during pre-retirement might not be able to cover the estimated expenses during post retirement. The estimated shortfall can be compensated by investing in different asset classes, which can generate a higher return over a long term. The target of Capital Appreciation should not be simply the inflation, but to maximize the potential return.

Remember one of the key considerations you should understand is your investment horizon. If your investment horizon is long, say more than 10 years, you should establish your investment goals as Capital Appreciation. This is because by investing in higher-return potential asset classes, you do not have to worry about the inflation as higher-return asset classes generally outperform the inflation over a long term.

However if you have a short investment horizon and are only a few years from retirement, say less than 5 years, your focus should be on preserving your capital accumulated and trying to make sure the growth of capital during the remaining period would outperform the inflation.

Key Takeaways:

- Your investment goal must at least exceed inflation in order to maintain the purchasing power of your savings.
- If your investment horizon is long, say more than 10 years, your investment goal should be capital appreciation in order to maximize the growth of your retirement savings.
- Higher-potential-return asset classes should be able to outperform the inflation over a long term.

3. Balancing Risk and Return

Everyone would like to maximize his or her return. However, you should not forget about the risk associated with the return. Therefore when deciding on your investment goal and strategy, you should balance your return targets with the amount of risk that you can afford and are willing to take. There are several major types of risks in which you should fully understand before you make your investment. These risks are Investment Risk, Concentration Risk and Market Timing Risk.

Investment Risk

Investment risk is specific to the underlying asset and is generally taken to mean the fluctuation in value, or volatility of investment return. Equities, bonds and money market instruments are 3 common types of asset classes. Understanding their specific features will help you make investment decision when it comes to your retirement planning.

Equities

- Equities represent ownership in a corporation. When you buy a share issued by a corporation, you own a share of that company.
- As a shareholder, you share the company's profits, or losses, which are reflected in the value of your shares. You are entitled to receive the dividends as well.
- Appreciation or depreciation in the share value will bring you capital gain or capital loss. Share prices are volatile; they may go up or down.
- Equities generally involve a higher level of short-term volatility but have provided historically better long-term returns relative to bonds and money market instruments. Investors are therefore advised to employ a long-term perspective and hold onto shares through their ups and downs.
- In general, equities are expected to exceed inflation over long term.

Bonds

- Buying a bond means lending money to the issuers, usually a corporation or the government.
- Bond issuer pays a fixed rate of interest over a period of time in exchange for the use of money, and returns the investors' principal at a specified time, i.e. maturity date.
- Although bonds tend to be less volatile than equities, they tend to offer lower potential returns. When used in conjunction with equities, they offer an element of stability and diversification to a balanced portfolio (a portfolio which invests in a mixture of equities and bonds, the goal is to balance the risks associated with equities).
- The bond price is mainly driven by interest rate movement.
- In general, bonds are expected to exceed inflation over long term, but during a high inflation period, will lag behind inflation.

Money Market Instruments

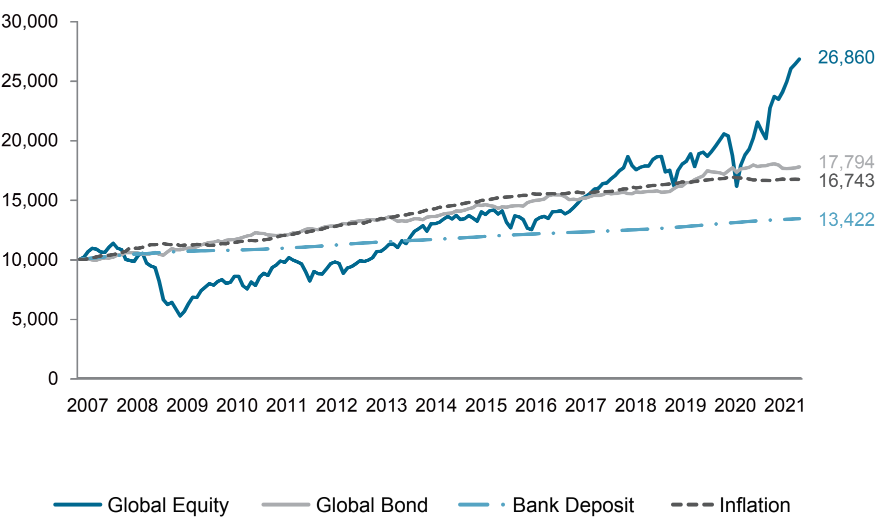
- Cash and short-term deposits provide some income and stability of underlying capital.
- Cash can be considered a safe method of investment, offering the lowest level of risk because it preserves nominal capital and prevents significant loss overnight.
- However, cash return may not keep pace with inflation over the long-term.
- The risk and return profiles for cash, bank deposit and other money market instruments are similar.

Historical Returns

The diagram below shows how an initial investment of $10,000 would have grown since 2007 if this has been invested in:

- Equities around the world,

- Bonds around the world, and
- Money market instruments.



You can see that over the long term, all 3 asset classes are able to generate positive income. Historically, equities are the most volatile asset and have returned the highest amount over the long term, but with more variability. In contrast, investment in money market instruments gives a more stable progression but returns the lowest amount.

If you are near retirement age, i.e. your investment horizon is short, you may not be able to afford a high level of variability. Investing most of your assets in equities will expose you to greater volatility, hence a higher possibility of losing a portion of your retirement savings. Just try to imagine how insecure you would be if you retired at the beginning of 2009 with most of your retirement savings invested in equities. On the other hand, bonds or money market instruments would be a more conservative choice.

Longer-term investors can afford to accept more day-to-day risk or

volatility as they can afford to ride through the ups and downs of the market in return for higher expected long-term capital appreciation.

In summary,

	Equities	Bonds	Money Market Instruments
Long-term investment return	High	Medium	Low
Short-term fluctuation	High	Medium	Low
Risk	High	Low to Medium	Low

Please note that past performance is not predictive of future performance. Generally, investors should be aware that the higher the potential return, the higher the levels of risk.

Concentration Risk

This is really the case of "not putting all your eggs in one basket" because if you do and you drop the basket, all your eggs will be broken! The same applies to investment. Say you had $100,000, investing this all in a single stock will prove a more risky strategy than say investing this in 100 stocks or more because if a specific sector performs poorly, your single stock holding might be more severely affected than an investment that is "diversified" across other companies and industries.

Aside from sectors and industries, concentration risk can also apply to countries and types of investments, i.e. equities, bonds and money market instruments. One country or asset class performs poorly can be compensated by other countries or asset classes should you invest in various countries or a range of asset classes.

Market Timing Risk

Over a long period of time, different asset classes exhibit different characteristics and therefore you can have a rough idea where each asset class is heading. But no one can accurately tell you when the best time

to move among the asset classes is; not even the investment professionals.

When you switch your investment around the asset classes, there is always a risk that your investment might fall after your move. In this case, the more frequent you switch, the higher the risk. The larger the amount you switch, the higher the potential loss. Obviously, the reverse is also true. And it is simply impossible to predict the peak and trough of markets and take on such a risk.

You should only switch if your investment horizon or risk tolerance changes.

Key Takeaways:

- Types of Risks: Investment Risk, Concentration Risk, and Market Timing Risk
- Return Volatility: Equity > Bond > Money Market Instruments
- If you have a short investment horizon, you should invest more in less volatile assets such as bonds and money market instruments.
- If you have a long investment horizon, you should invest more in equities in order to maximize your return over the long run.
- You should make sure you should not invest in a single stock, asset class or country because of the concentration risk.
- You should not time the market and try to identify the peak and trough as investment professionals fail to do so.

4. Determining Your Investment Strategy

This section discusses how you should formulate your investment strategy for your retirement savings. In simple terms, it is about managing your risk exposure. First let's introduce the general concept of investment options.

Investment Options

Equities, bonds and money market instruments discussed in Section 3 are 3 common asset classes underlying different investment options. They enable you to construct your own portfolio most suitable to your personal risk tolerance. Investment options with these underlying asset classes typically correspond to the risk tolerance set out in the table below:

Asset Classes	Risk Tolerance
Equities	High
Bonds	Medium
Money Market Instruments	Low

Please note, however, that the above table only gives a general indication of the risk tolerance corresponding to each asset class only. In reality, the risk of particular investment options within some asset classes may vary quite considerably depending on the asset allocation. For example, in terms of geographic allocation, an equities investment option that invests globally (i.e. global equities) generally has lower risk than an equities investment option that invests solely in a single region (e.g. Asian equities), which in turn generally has lower risk than an equities investment option that invests solely in a single country / territory (e.g. China / Hong Kong equities). In addition, an equities investment option that invests mainly in developed markets also generally has lower risk than an equities investment option that invests exclusively in emerging markets. This distinction also applies to investment options in which the underlying asset class is bonds. Therefore, you should pay attention to the details (especially the risk) of the particular investment options offered in the Scheme.

By mixing the available investment options in different proportions, you can design your own investment strategy to match your own investment goals.

Investment Strategy

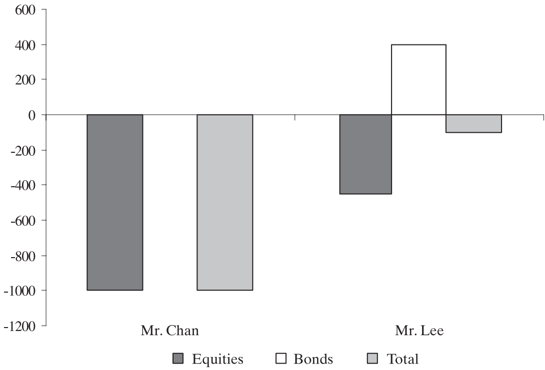
Investment strategy focuses on how you should invest and manage your risk exposure. In general, there are two approaches in which you can utilise in minimising your risk exposure during the process of retirement saving, and at the same time, generating steadily investment return on your portfolio.

Diversification

The concept of diversification is relatively simple and often practised in everyday life. The idea is not to "put all of your eggs in one basket". By investing in many different companies, countries and asset classes, an investor can reduce the overall level of risk by having some good performance and bad performance offsetting each other. **Diversification is a good method of reducing your portfolio's exposure to Investment Risk and Concentration Risk.**

Example:

Mr. Chan has $10,000 and invests the whole lump sum in equities. Mr. Lee has $10,000 as well. However, he invests $5,000 in equities and $5,000 in bonds. Suppose the equity market crashed and returned -10%, while the bond market performed relatively better and returned 8%. What will Mr. Chan's and Mr. Lee's portfolio return be at the end of the period?



Answer:

Return of Mr. Chan's portfolio:

$10,000 x (-10%) = -$1,000

Return of Mr. Lee's portfolio:

$5,000 x (-10%) + $5,000 x 8% = -$100

Mr. Chan invested all his money in the equity market and therefore lost $1,000 at the end of the year. On the other hand, due to diversification, Mr. Lee's portfolio only lost $100. It is because the positive return of the bond market offsets the negative return of the equity market in a great extent. Therefore you are strongly encouraged to diversify your investment by investing in various asset classes.

However, for those who have a long investment horizon, they are more able to bear this type of risk in return for higher long-term returns.

Dollar-Cost Averaging

Don't try to "time" the market, i.e. buying low and selling high, even the professionals have trouble doing this!

Dollar-Cost Averaging is a systematic approach to investing, which takes the guesswork out of deciding when to invest. When you invest a set amount of money on a regular basis, you buy shares over a period of time. As a result, the price of the shares will be averaged out regardless the market is up or down. The dollar-cost averaging strategy must be used over a long period of time in order to reap its full benefit. **Dollar-cost Averaging is a good method of minimising the Market Timing Risk**.

Example:

Period	Price / Share	Amount Invested	Shares Purchased
1	$18	$1,000	55
2	$ 9	$1,000	111
3	$15	$1,000	66
4	$ 7	$1,000	142
5	$20	$1,000	50
6	$25	$1,000	40
TOTAL		**$6,000**	**464**

Shares Purchased = Amount Invested ÷ Price per Share

Average Cost Per Share: $6,000 ÷ 464 = **$12.9**

Average Price Per Share: $(18+9+15+7+20+25) ÷ 6 = **$15.7**

It can be noted that the average cost per share is lower than the average price per share. The value of your investment at the end of the 6th period (at a price of $25) is:

464 x $25 = $11,600

Compared to the amount invested ($6,000), your investments appreciated by $5,600 ($11,600 - $6,000), representing a gain of 93.3% over the period. On the other hand, if you have invested the $6,000 at the beginning of period 1, you would have only gained 38.9% at the end of period 6.

As both you and MACAO SAR contribute to the Scheme on a monthly basis, Dollar-cost Averaging is automatically being used.

I know nothing about investment. How do I choose?

It is not recommended that you invest all your retirement savings in one type of asset.

A list of typical combinations of bonds and equities is shown below.

Typical Combinations	Investment Objectives	Asset Allocation	Risk Profile
Combination 1	To achieve long-term capital appreciation through investments in equities.	Bonds 10% Equities 90%	High
Combination 2	To achieve above-average capital appreciation over the long-term through investments in equities combined with a 30% strategic exposure to bonds.	Bonds 30% Equities 70%	Medium to High
Combination 3	To achieve long-term capital growth through investing equally in equities and bonds.	Equities 50% Bonds 50%	Medium
Combination 4	To preserve stability of capital over the long-term through investments through either 100% bonds or bonds whilst seeking to enhance returns through limited exposure to equities.	Equities 30% Bonds 70%	Low to Medium

If you are near retirement or you cannot tolerate risk, you may choose to invest in the money market instruments. However, please note that while the money market instruments belong to the lowest risk category, they offer the least potential returns as well.

Typical Combinations	Investment Objectives	Asset Allocation	Risk Profile
Money Market Instruments	To provide returns above cash, consistent with the preservation of capital with minimal interest rate risk.	Money Market Instruments 100%	Low

In general, the investment risk you can take varies with your time to retirement. The further you are away from retirement, the higher your ability to bear risk and the more aggressive the investment strategy is. The closer you are to retire, the lower your ability to bear risk.

Investment for retirement can have a very long time horizon. You should not change your strategy due to short-term market fluctuations. You should only change your investment strategy if your risk tolerance has changed, which happens as your investment horizon shortens over time. The table below summarised a suggested general strategy for different groups of individuals with different investment horizon. **Please use it as a reference only.**

Following this approach, as you are approaching retirement, you will be gradually switching to a lower risk profile investment strategy.

Years to Retirement	Investment Strategy	Risk
15+	Combination 1	High
11 – 15	Combination 2	Medium to High
6 – 10	Combination 3	Medium
3 – 5	Combination 4 or Bonds 100%	Low to Medium
2 or less	Money Market Instruments 100%	Low

A Risk Profiling Questionnaire has been included in Section 8 to help you establish the type of investor you are and give an indication of your investment goals and horizon, and identify the portfolio mix that is most suitable for your long-term requirements.

Monitoring

Deciding on your investment strategy is not the end of your retirement planning. It is very important to monitor the performance of your retirement savings because you are responsible for your own retirement. Retirement investments should have a long-term focus. Therefore, the most ideal frequency is to review your investment performance on an annual basis.

When you review your investment strategy, pay attention to whether the strategy is adequate for your updated risk tolerance. You should also take into account your own personal investments / savings when deciding on the suitable strategy for your retirement savings. For instance, if the majority of your personal investments involves equities, you may want to avoid investing too much in equities in your retirement investments in order to diversify the concentration risk that you are exposed to.

Post Retirement Investing

After you save for many years and you are about to retire on a permanent basis. Does it mean that you do not have to invest any more? As a matter of fact, the investing process should continue even though you are a retiree.

Remember in Section 1, the average life expectancy is getting longer nowadays. On average, a retiree would have more than 15 years to live during retirement. An important risk you will be exposed to is inflation. Your ultimate investment goal during retirement years should be to maintain your purchasing power, i.e., Capital Preservation. Therefore, you are strongly encouraged to "re-invest" your accumulated savings but in a more conservative manner, such that your purchasing power can be maintained, in other words, try to exceed the inflation.

Key Takeaways:

- Diversification can mitigate the Investment Risk and Concentration Risk.
- Dollar-cost Averaging can minimize the Market Timing Risk.
- A mixture of investment options with different underlying asset classes can serve to best suit your needs.
- "Re-invest" your retirement benefits to beat the inflation during the retirement period and maintaining your purchasing power.

5. Investment Fund

General Concept

The general concept of investment fund (unit trust, or mutual fund as sometimes called in the US) is that a number of small investors can combine their monies, thereby achieving the investment strategy of a much larger investor and having access to a well-diversified portfolio of various asset classes. This helps to reduce costs, and provides sufficient size to achieve international diversification. As a single investor it would not be possible to achieve these benefits.

Your ownership of investment fund is expressed in terms of the number of "units" or "shares" you hold. Generally speaking, the three ways to make money from an investment fund are:

(1) Income is earned from "dividends on stocks" and / or "interest on bonds".

(2) If the fund sells stock / bond that has increased in price, the fund has a capital gain.

(3) If stock / bond holdings increase in price but are not sold by the fund manager, the fund's units / shares increase in price. You can sell your units / shares for a profit.

Advantages

There are several main advantages in investing into investment fund:

Diversification

One rule of investing that both large and small investors should follow is asset diversification. From a risk management perspective, diversification involves the mixing of investments within a portfolio. By purchasing investment fund, you are provided with the immediate benefit of instant diversification and asset allocation without the large

amounts of cash needed to create individual portfolios.

Economies of Scale

The easiest way to understand economies of scale is by thinking about volume discounts: in many stores the more of one product you buy, the cheaper that product becomes. This occurs also in the purchase and sale of stocks / bonds. If you buy only one stock / bond at a time, the transaction fees will be relatively large.

Liquidity

Another advantage of investment fund is the ability to get in and out with relative ease. You can sell investment funds at any time as they are as liquid as regular stocks / bonds.

Professional Management

When you buy an investment fund, you are also choosing a professional money manager. This manager will use the money that you invest to buy and sell stocks or bonds that he or she has carefully researched. Therefore, rather than having to research thoroughly every investment before you decide to buy or sell, you have an investment fund's money manager to handle it for you.

Fees

There are in general 3 major types of fees when investing in investment funds:

- Front-end fee
- Management fee
- Administration fee

These fees are generally expressed as a percentage. In some cases, investment funds may waive the front-end fee.

Calculation of Price

The price of an investment fund generally refers to the net asset value of a single unit / share of the investment fund. It is calculated based on the value of the underlying assets of the investment fund minus its liabilities (including charges and fees), divided by the number of units / shares outstanding. The net asset value per unit / share is normally calculated at the end of a business day.

6. Frequently Asked Questions

I am only 29, relatively conservative in investing as I do not have much experience. Should I invest into the money market instruments?

If you wish to retire at age 65, you should not invest your retirement savings into conservative options such as money market instruments. Let's give you an example:

Assuming you contribute $1,000 into the Scheme on a monthly basis and you would retire when you reach age 65. Your investment horizon is thus 36 years.

Let's assume you invest all of your contributions and balances into the money market instruments and assume your investment return is 3% per annum. Under another scenario, assume you invest your contributions and balances into global equities and global bonds and the assumed return is 6% per annum. At the time of age 65, your accumulated balances under either scenario would be:

- Investment Return of 3.0% per annum: $780,000
- Investment Return of 6.0% per annum: $1,500,000

You note that the difference between these two scenarios is $720,000 which is a significant amount of differences should you invest into conservative option throughout the whole investment horizon. Therefore you are strongly encouraged to understand your investment horizon and risk tolerance to formulate your own investment strategy.

What happens to the monthly contributions to the Scheme?

Contributions made by you and MACAO SAR will be invested according to your instructions to your selected investment options. The following example explains the mechanism:

Contributions (including the MACAO SAR's and your contributions):	$1,500
Unit / Share price when you bought:	$15 per unit / share
Number of units / shares you bought:	= $1,500 ÷ $15 = 100 units / shares

The value of your investment changes according to its unit / share price:

Unit / Share price at a later date (say, 3 months later):	$17.5 per unit / share
Number of units / shares you hold:	100 units / shares
Your units / shares are now worth:	= 100 x $17.5 = $1,750

What if the investment management organization goes bankrupt? What would happen to my money?

Within the investment fund structure, assets are separated from the investment management organization's assets. The investment management organization is responsible for making professional investment decisions, but it does not hold any of your money.

A custodian is responsible for the handling of investment transactions and the safekeeping of the assets of the investment fund. In order not to be mixed with the custodian's own assets, the custodian will keep the assets of the investment fund in nominee accounts.

Therefore, your investments will not be affected should the investment management organization or the custodian go bankrupt.

In addition, the investment management organization and the custodian are both governed by applicable laws and regulatory authorities.

7. Investment Education Web Links

The Scheme is new to you and should you wish to obtain a better understanding of retirement investing, you may visit the websites listed below.

- **Hong Kong Investment Funds Association**

  https://www.hkifa.org.hk

- **The Hong Kong Retirement Scheme Association**

  https://www.hkrsa.org.hk

- **Mandatory Provident Fund Schemes Authority**

  https://www.mpfa.org.hk

- **Hong Kong Trustees' Association**

  http://www.hktrustees.com

8. Risk Profiling Questionnaire

This questionnaire has been designed to give you some indication of what type of investor you are.

Direction: *Answer each of the following questions by choosing the most appropriate description from a list of 3. Circle the score in the bracket ( ) indicated in each of your choices. Add all 6 scores together to get a grand total and refer the number to the explanation section following for conclusion.*

1. How old are you?

A. 60 – 65	*(100)*
B. 40 – 59	*(75)*
C. 20 – 39	*(50)*

2. How long before you retire?

A. Less than 5 years	*(100)*
B. 5 – 15 years	*(75)*
C. 16 – 30 years	*(50)*

3. Which of the following best describe your investment approach?

A. Unwilling to bear any loss.	*(70)*
B. Willing to accept up to approximately 10% annual loss in the expectation of obtaining a beter return.	*(50)*
C. Willing to accept over 10% annual loss in the expectation of obtaining a higher return.	*(35)*

4. Do you expect your income to increase over the next 5 years?

A. No (i.e. retirement or change to part time work)	*(35)*
B. In line with inflation	*(25)*
C. Above inflation (i.e. promotion and/or pay rises)	*(15)*

5. What level of additional personal savings (shares, investment funds, and property) do you expect to have on retirement?

A. Minimal (less than 1 year's annual salary)	*(35)*
B. Some (1 to 5 years' annual salary)	*(25)*
C. Significant (over 5 years' annual salary)	*(15)*

6. How would you best describe your annual financial commitments (excluding day to day living costs, but including items such as school fees, housing loans etc.) in the first 5 years of retirement?

A. Significant (more than 50% of 1 year's annual salary)	*(35)*
B. Some (25% to 50% of 1 year's annual salary)	*(25)*
C. Minimal (less than 25% of 1 year's annual salary)	*(15)*

Total Score	______

Results of the Risk Profiling Questionnaire

Total Scores	Your Risk Tolerance	Guide to Investments
336 – 375	Capital Preservation ■ Avoid markets that go up and down in price ■ Prefer safety over the opportunity to earn a high return	Very low risk investment, e.g. Money Market Instruments
296 – 335	Conservative ■ Accept short-term fluctuations in return for long or medium term capital growth	A diversified mix of equities and bonds, tilt to capital preservation, e.g. Combination 4 or Bonds
256 – 295	Moderately Conservative ■ Comfortable with medium-term risk in exchange for greater potential return	A diversified but more balanced mix of equities and bonds, e.g. Combination 3
216 – 255	Balanced ■ Willing to accept greater risk to get greater potential return	A diversified mix of equities and bonds with bias on equities, e.g. Combination 2

180 – 215	**Aggressive** ■ Comfortable taking a high degree of risk in the hope of getting a far greater return in the future	90% or more of your money in a diversified portfolio of equities, e.g. Combination 1

Please refer to P.22 and P.23 for the detail of the various combinations of portfolios.

It should be noted that defining investment strategy is not a one-off activity that once completed needs no further attention. Instead, you should be revisiting your investment strategy regularly as your needs and circumstances change as time elapses.

9. Glossary

Annual Return
The average annual profit or loss realized by an investment at the end of a specified calendar period.

Asset Allocation
The percentage distribution of a portfolio in different asset classes, such as equities, bonds and money market instruments.

Bid-offer Spread
The difference between the fund's buy and sell price.

Bond
A certificate of debt issued by companies, governments, etc, usually paying interest at regular intervals up to the time of repayment of the original capital and traded in a market. A bond holder is a creditor of the issuer although bonds may be either secured against assets of the issuer or unsecured.

Bond Fund
An investment fund that invests in debt securities issued normally by corporations and government. Bond funds generally emphasize on regular income stream.

Cash
Currency and coins on hand, bank balances, and negotiable money orders and checks.

Custodian
An independent organization, usually a bank or trust company, that is responsible for the handling of investment transactions and the safekeeping of the investor’s assets.

Daily Valuation
The calculation of the latest market value of a fund's underlying assets on each business day.

Defined Benefit Scheme

A retirement scheme in which the rules specify the benefits to be paid in terms of the member's salary and service.

Defined Contribution Scheme

A retirement scheme in which the benefits are directly determined by the value of contributions paid in respect of each member. The rate of contribution is therefore normally specified in the rules of the scheme.

Dollar-cost Averaging

Investing equal amounts of money at regular intervals over time. This technique ensures that an investor buys fewer units / shares when prices are high and more units / shares when prices are low. Historically, this has proven to reduce the overall cost of the investment.

Equity

Ownership interest in a company giving entitlement to a share in its profits once all creditors and any other prior charges have been met. The equity capital of a company, normally in the form of ordinary shares, has voting rights attached allowing the shareholder to influence the management of the company.

Equity Fund

An investment fund that invests in local and/or overseas stocks. The objective is primarily to seek capital growth.

Front-end Fee

A sales commission charged at the time of purchase and paid to the distributors.

Fund Manager

The person or persons responsible for making investment decisions of an investment fund.

Index Fund

A passively managed investment fund that seeks to mirror the performance of a particular market index.

Lifestyle Funds

An investment fund featuring an asset mix determined by risk tolerance and return that is appropriate for an individual investor. Factors that determine this mix include the investor's age, the risk tolerance, the investment's purpose and the length of time until the principal will be withdrawn.

Long-term

A long period of time, as for a bond (e.g. 10 or more years) or for a buy and hold investment strategy.

Management Fee

The amount an investment fund pays to its fund manager for the work of overseeing the fund's holdings. Normally charged daily to the fund and reflected in the fund's net asset value.

Money Market Fund

A fund that invests primarily in relatively low-risk and short-term securities. Money market funds normally limit the average maturity of their portfolios to 90 days or less.

Mutual Fund

An open-ended fund operated by an investment company which raises money from shareholders and invests in a group of assets, in accordance with a stated set of objectives. Also known as unit trust in Hong Kong

Offer Price

The sales price of a fund which equals the net asset value plus a front end fee, if any.

Open-end Fund

An investment fund that has an unlimited number of units / shares available for purchase.

Portfolio

A group of securities, including different asset classes, held or owned for investment purposes by an individual or institutional investor.

Redemption
Investors sell an investment fund.

Redemption Fee
A sales fee charged by some investment funds when an investor sells his/her investments in the fund.

Redemption Price/Bid Price
The price at which an investment fund's units / shares are redeemed, or bought back, by the fund, determined by deducting a redemption fee from the net asset value (NAV) per unit / share.

Reinvestment
Use of dividend distribution to buy additional securities. Many investment funds offer the automatic dividend reinvestment option to investors.

Return
The total rate of return is to account for increase or decrease in asset value including capital gain and income (dividend and interest) from an investment over a period of time, usually expressed as a percentage.

Risk
Risk is regarded as the uncertainty associated with investment, i.e., being unable to guarantee the future return, volatility of return and insecurity of an investment. The greater the volatility, the greater the risk. Risk can be defined as the variability of returns, which is measured by the standard deviation of returns over a given period.

Risk Tolerance
An investor's ability to endure declines in the prices of investments while waiting for them to increase in value.

Risk-adjusted Return
A measure of how much risk a fund takes to make its returns, usually given as a number or a rating. The more return per unit of risk, the better.

Short-term
Usually 1 year or less, often used to refer to bonds or loans. Opposite of long-term.

Specialist Fund
An investment fund investing primarily in the securities of a particular industry, sector, type of security or geographic region. Due to the lack of diversification, specialist funds are of higher risk but offer potentially higher reward than most other types of investment funds.

Switching
The change of the allocation of the Totality of Monthly Contributions and/or the Totality of Account Balances of a member's investment portfolio.

Time Horizon
The amount of time, usually expressed in years, that an investor expects to hold an investment.

Trustee
A company/person who holds assets in the form of a trust for another company/person and is responsible for the well being of the assets.

Unit
A unit of ownership in a unit trust (or a share in a mutual fund).

Volatility
Volatility is the variability of returns, which is measured by standard deviation reflecting the "dispersion" of a set of returns around the average (mean).

CONTACT US

Visit ● Reception & Enquiry - Members on G/F, Edifício de Escritórios do Governo (ZAPE)

Phone ● (853) 2835 6556

Mail ● President of the Board of Directors of the Pension Fund
Avenida da Amizade, n.º 1101A,
Edifício de Escritórios do Governo (ZAPE),
2.º andar, Macau
or P. O. Box 1344

Fax ● (853) 2859 4391

Website ● www.fp.gov.mo

E-mail ● fp@fp.gov.mo
(enquiries, suggestions, complaints or objections)

Office hours:

Monday to Thursday, 9:00 am to 6:15 pm (no lunch break)
Friday, 9:00 am to 6:00 pm (no lunch break)

Provident Fund Scheme for Workers in the Public Services

Performance Pledge

Types of Service		Performance Duration (working days)
Enrollment in the Provident Fund Scheme		5
Payment of accrued benefits	Involves the liquidation of the investment funds	14
	Applies for the liquidation of the Bank Deposit Portfolio only	8
Emission of declaration of accrued benefits for the purpose of "inventário judicial"		2
Issuance of Medical Services Card to former Provident Fund Scheme members		5

Note: The performance duration is counted from the following day after submission of all necessary documents.