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Research Report

Pension Fund Systems & Capital Markets: International Experience and Prospects for China

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SUMMARY

The world is undergoing dramatic demographic change and ageing populations around the world are forcing governments to redesign their pension systems.

To ease fiscal pressures, pension systems across the world have in recent years shifted from a model solely supported by the government (single-pillar model) to a three-pillar model underpinned by the government, businesses and individuals.

Investment management for pension funds has become crucial to supporting a country's social security system. Investment management styles are changing, with asset allocation increasingly diversified and a larger proportion of investments being made abroad.

Mainland China requires an effective professional pension system to meet the needs of its large, ageing population and address the low level of pension savings currently in the system. It has by now established a three-pillar pension system supported by the government, enterprises and individuals.

However, challenges remain, including the growing gap between pension fund inflows and outflows, the limited scale of Mainland pension funds entrusted for investment and the relative underdevelopment of pension insurance products such as enterprise annuities.

To open up more diverse investment choices for pension funds, China's Ministry of Human Resources and Social Security expanded the investment scope of Mainland annuity funds at the end of 2020 to include investments in the Hong Kong market via Southbound Stock Connect.

Given the challenges faced by the Mainland pension system, and the growth of overseas investment allocation by pension funds across the world, the inclusion of Southbound Stock Connect for investment by a wider scope of Mainland pension funds would help them achieve their multiple goals of marketisation, diversification, risk mitigation and ensuring asset security, while also making Mainland pension funds an influential institutional investor in international capital markets.

1. MANAGING AGEING POPULATIONS AND DEVELOPING PENSION SYSTEMS — A CROSS-COUNTRY CASE STUDY

1.1 Pension systems in selected countries

The world's elderly population is growing. In 2019, the proportion of the world's population aged 65 and above increased to 9.1%, and is expected to reach 11.7% by 2030 and 15.9% by 2050[1].

Already in Europe and North America, one in four people is aged 65 or above, on average[2]. Because of ageing populations, falling birth rates, increasing average life expectancy and shrinking workforces worldwide, governments have prioritised pension system reform.

Accordingly, pension systems are adapting to meet the challenges posed by an ageing population with a worldwide shift from a solely government-supported model (single-pillar model) to a three-pillar model underpinned by the government, businesses and individuals.

In 1994, the World Bank introduced the concept of "three pillars," which includes public pension plans (first pillar), occupational pension insurance plans (second pillar) and personal savings plans (third pillar). This concept soon gained ground among researchers and policymakers and has become the most widely adopted for pension systems worldwide.

(1) The United States' pension fund system

The United States (US) has adopted a pension system based on the "three-pillar" model proposed by the World Bank, putting emphasis on the second and third pillars (employer and individual pension plans, respectively) while placing the government's social security programme (the first pillar) in a subsidiary position (see Figure 1).

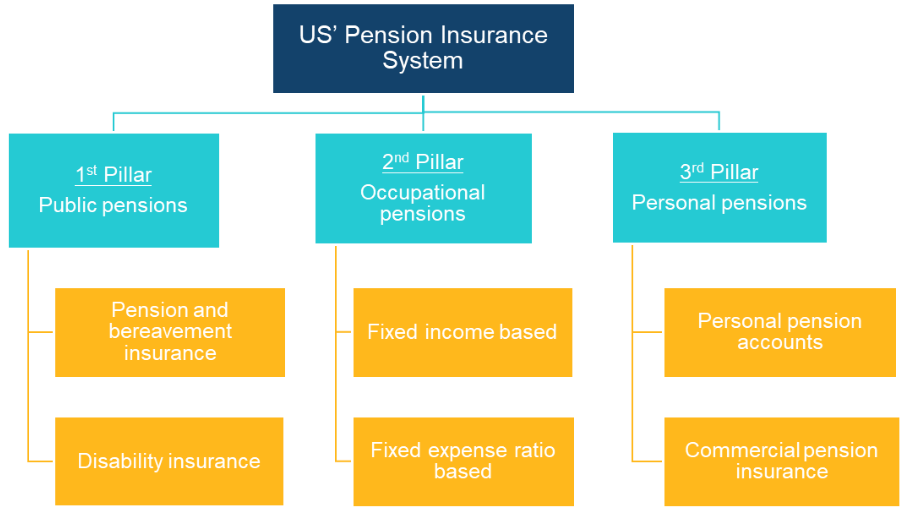
Apart from this, the US has also introduced other measures such as reverse mortgages and lifecycle funds. Reverse mortgages allow elderly homeowners to mortgage their residential property to financial institutions such as banks or insurance companies in return for reverse mortgage loans in the form of cash to cover property maintenance costs, daily expenses, long-term care and other expenses.

Lifecycle funds on the other hand invest in a number of underlying assets, the proportion of which will be adjusted from time to time towards the holder's retirement date. The advantage of these funds is that they allow flexible adjustment of the investment ratio in different targets in accordance with the expected maturity date decided by the investor so that changes could be made to the portfolio whenever appropriate, all under one single fund.

1 Source: *World Population Prospects 2019*, Department of Economic and Social Affairs, Population Division, United Nations.

2 Ditto.

Figure 1. Three-pillar pension fund system in the US



Source: Public information from various sources.

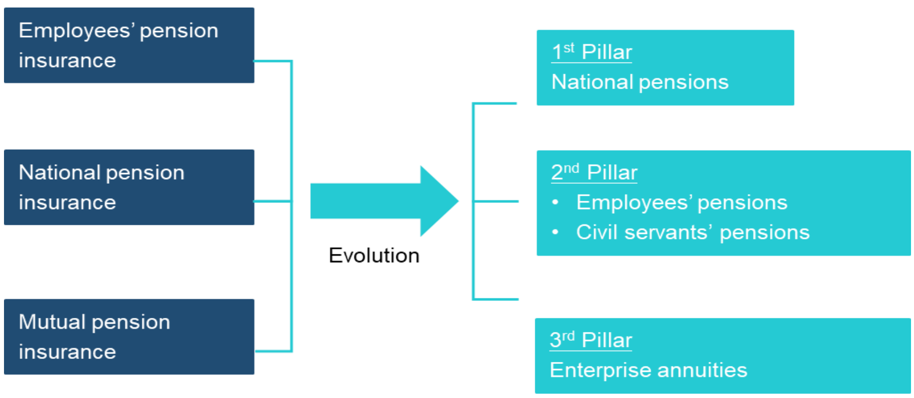
(2) Japan's pension fund system

Early Japanese pensions mainly consisted of employees' pension insurance, national pension insurance and mutual pension insurance. Employees' pension insurance is mainly for those employed by private enterprises; national pension insurance is provided to the self-employed, fishermen, scattered small enterprises and unemployed spouses of enterprise employees; and mutual pension insurance is supported and participated in by civil servants and public enterprises.

Later on, in view of the adoption of the three-pillar pension system in the US, Japan also gradually reformed its pension fund system to form a three-pillar one, of which the first pillar is the national pension, the second is employees' and civil servants' pension, and the third, enterprise annuities (see Figure 2).

Japan also has various pension models that serve to complement the existing pension system. These include long-term nursing care insurance, pension real estate and Continuing Care Retirement Community (CCRC). Under CCRC, a wide range of pension services as well as quality medical and comprehensive nursing services are provided to cater to the needs and lifestyles of elderly of different age groups. Pension real estate, on the other hand, provides a one-stop facility integrating entertainment and nursing care to accommodate the needs of the elderly.

Figure 2. Japan's pension fund system



Source: Public information from various sources.

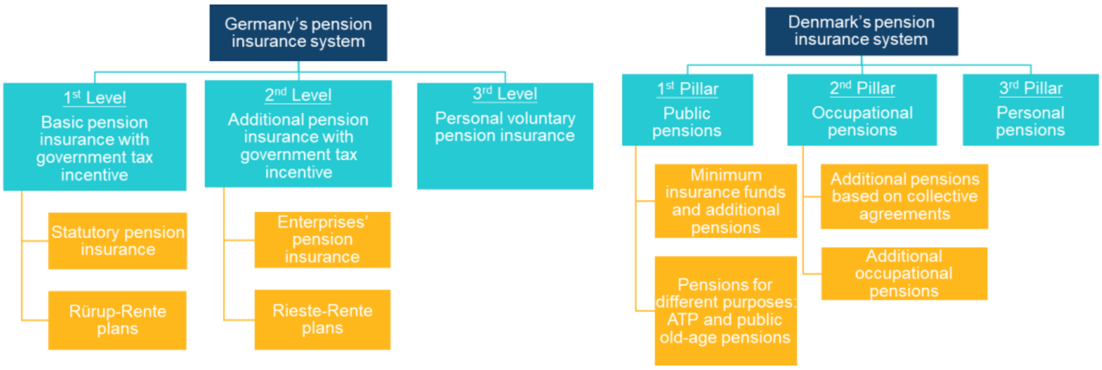
(3) Pension fund systems in Germany and Denmark

Germany's and Denmark's pension fund systems are also based on the "three-pillar" model, but the specific pensions and functions forming each pillar are different (see Figure 3).

Germany has three levels in its pension system — the first level is basic pension insurance and the second is additional pension insurance, both entitled to government tax incentives. The third level is private voluntary pension insurance which does not enjoy government subsidies.

Denmark's pension fund system consists of three pillars: public pensions, occupational pensions and personal pensions. Public pensions affords basic protection for Danish citizens' livelihoods; occupational pensions ensure adequate income when workers leave the labour market; and personal pensions fulfil the pensioners' specific needs for their post-retirement life (see Figure 3).

Figure 3. Germany's and Denmark's pension fund systems



Source: Public information from various sources[3].

1.2 Experience of major pension funds in the world

Pension fund investment management could significantly impact the sustainability of a country's social security. Pension funds, including basic pension funds, enterprise annuities, sovereign wealth funds, etc, differ in liquidity, risk appetite and asset allocation approaches.

Major pension funds across the world usually invest in capital markets to boost their investment returns for building up adequate reserves for future withdrawals. For example, in a market environment where bond yields are falling, asset allocation tends to be more diversified and focuses especially on areas with relatively higher returns at an acceptable level of risk, such as equity investments.

Pension funds tend to have a relatively more flexible asset allocation style, allowing them to switch to more cost-effective assets from time to time with a view to improving income. Against the backdrop of demographic change and ageing populations, an improvement in investment performance can better support fund withdrawals, and can also attract further investment flows.

[3] For a detailed introduction to the Rürup-Rente and Rieste-Rente plans, please refer to Ding Chun, Chen Xiangqi and Liu Dan, "Germany's pension insurance system: Arrangements, issues and reforms" (〈德國養老保險制度安排、問題與改革〉), the Centre for International Social Security Studies (CISS) at Chinese Academy of Social Sciences (CASS), 2019. For an introduction of ATP and public old-age pensions, please visit the website of the European Commission (https://ec.europa.eu/social/main.jsp?catId=1107&langId=en&intPageId=4494).

According to statistics compiled by the Organisation for Economic Co-operation and Development (OECD) on pension markets around the world[4], pension assets exceeded US$56 trillion worldwide at the end of 2021, most (over US$35 trillion) were accumulated in pension funds[5].

Among the OECD countries, the US had the largest pension market, with assets worth US$35.5 trillion, representing 65.6% of the OECD area total. The United Kingdom recorded the second largest amount (US$3.6 trillion, i.e. 6.6% of OECD area total), followed by Canada (US$3.1 trillion, 5.7%), the Netherlands (US$2.1 trillion, 3.9%), Australia (US$1.8 trillion, 3.3%), Japan (US$1.6 trillion, 2.9%) and Switzerland (US$1.3 trillion, 2.5%) .

Currently, mainstream global pension funds exhibit the following investment trends:

(1) Increasingly diversified asset allocation

Although the risk appetite of pension asset investments in different countries varies greatly, their pension portfolios all show a diversification trend. The reasons are threefold.

First, by including different asset types, the investment portfolio can better cater to the investment objectives and risk preferences of individuals at different stages of their life cycle and enable a quicker response to changes in the macroeconomic and investment environment by adjusting the investment ratio, thereby enhancing the sustainability of pension investments. This is also why pension funds are widely invested, not only in standardised assets such as cash assets, bonds and stocks, but also in alternative assets such as private equity funds, unlisted equities and real estate.

Second, due to falling risk-free interest rates and declining returns on fixed-income assets in developed countries, coupled with increased pressure on pension payments aggravated by population ageing, the demand for higher returns is mounting, pension funds need to allocate more of their assets to equity assets.

Third, since the return on alternative assets is not closely related to that on stocks, diversification will help optimise risk exposure and reduce the volatility of the asset portfolio.

Recent research[6] on asset allocation structures of seven major pension fund markets (referred to as “P7 countries” hereinafter[7]) found that equity allocations of pension funds in these markets shrank from 60% in 2000 to 43% in 2020; the allocation to bonds remained at around 30%; and the allocation to alternative assets increased tremendously from 7% in 2000 to 26% in 2020 (see Figure 4).

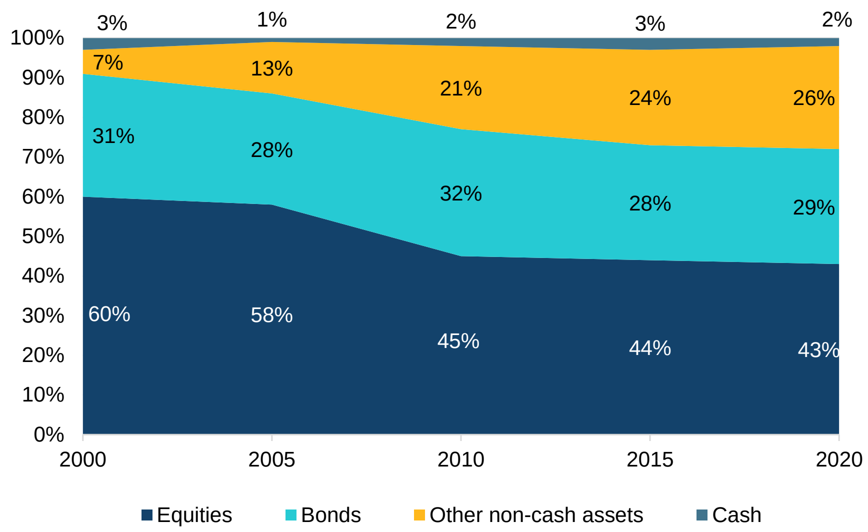
4 Source: OECD (2021), *Pension Markets in Focus 2021*.

5 Other pension vehicles used include pension insurance contracts sold by insurance companies and individual retirement accounts managed by banks and investment companies.

6 Source: Thinking Ahead Institute, *Global Pension Assets Study – 2021*.

7 P7 countries are Australia, Canada, Japan, United Kingdom, US, Netherlands and Switzerland.

Figure 4. Asset allocation of pension funds in P7 countries (2000 to 2020)



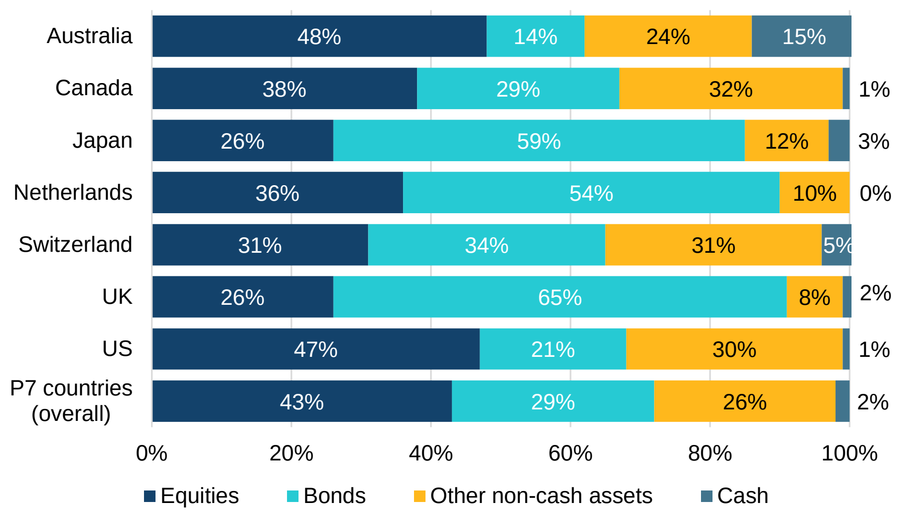
Note: Figures for 2020 are estimates.

Source: Thinking Ahead Institute, *Global Pension Assets Study – 2021*,.

Apart from the change in the overall pension asset allocation structure, allocation ratios also differ between regions. This is due to the impact on pension fund asset allocations as a result of differences in the external environment, stage of social development, pension systems, regulatory policies, assessments and incentive mechanisms across regions.

Among P7 countries, pension funds in Australia and the US have relatively higher investment risk tolerance, as reflected in their relatively high equity asset allocations — over 40% of assets under management (48% in the case of Australia); in contrast, Japan, the Netherlands and the United Kingdom (UK) are relatively more conservative in this regard, evidenced by bond allocations of over 50%, even close to 60% or more for Japan and the UK (see Figure 5).

Figure 5. Pension fund asset allocations of P7 countries (2020)



Note: Percentages may not add up to 100% due to rounding.

Source: Thinking Ahead Institute, *Global Pension Assets Study – 2021*.

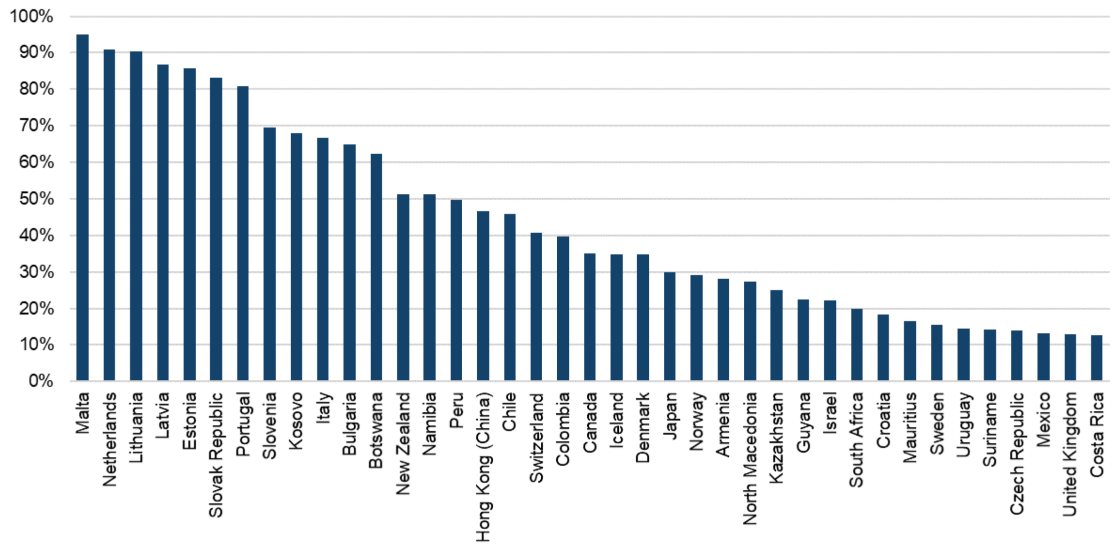
(2) Increasing proportion of pension assets invested abroad and in multiple markets

Pension funds may be subject to domestic asset constraints that prevent them from realising effective asset allocation and risk diversification. If allocations to equity are to be increased for achieving higher returns, the overall risk of the investment portfolio will also need to be better mitigated. In light of this, governments of various countries have increased the proportion of pension investments abroad to lower the overall risk of their investment portfolios.

According to OECD's Global Pension Statistics[8], on average, the share of assets invested abroad by reporting countries[9] rose from 28.6% in 2010 to 34.8% in 2020, whereas the share of assets invested in foreign currencies decreased slightly from 22.6% in 2010 to 21.9% in 2020.

In 2020, the share of pension assets invested abroad by Japan, Canada, Switzerland and New Zealand reached 30.0%, 35.1%, 40.7% and 51.3% respectively. Countries with a considerable portion of their pension assets invested in foreign currencies include Austria, Switzerland and the Netherlands, with respective ratios of 26.8%, 37.6% and 51.7% (see Figure 6 and Figure 7).

Figure 6. Share of pension assets invested abroad by selected countries (2020 or latest year available)

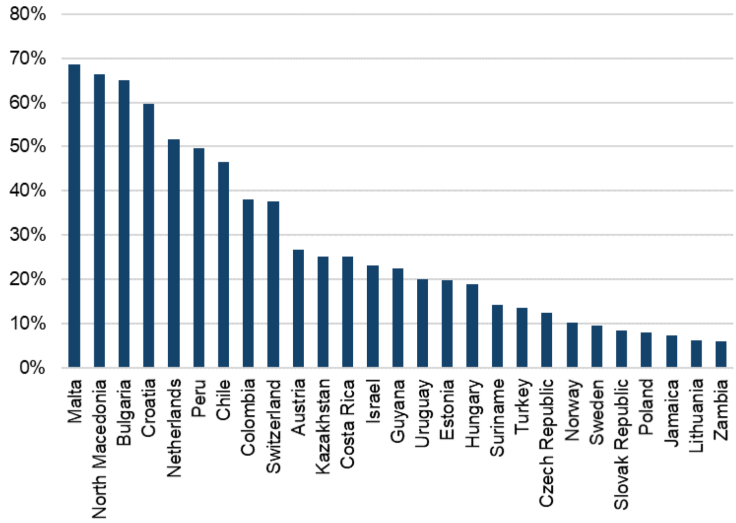


Source: Statistical annex to OECD (2021), *Pension Markets in Focus 2021*.

[8] Source: Statistical annex to OECD (2021), *Pension Markets in Focus 2021*.

[9] Reporting countries for data in 2020 comprised 27 selected OECD countries and 16 other selected jurisdictions.

Figure 7 Share of pension assets invested in foreign currencies by selected countries (2020 or latest year available)



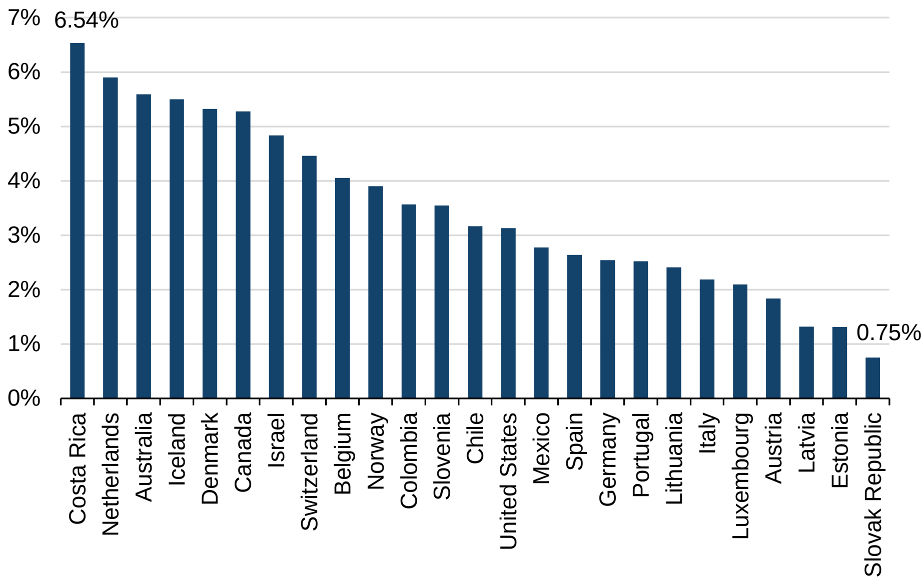
Source: Statistical annex to OECD (2021), *Pension Markets in Focus 2021*.

(3) The rate of return becoming a key determinant for investment decisions

When low interest rates prevail globally, pension funds look for assets which are more robust and profitable. As long-term funds, they do not ask for liquidity but long-term assets that can help achieve higher returns.

According to OECD's Global Pension Statistics, the top 20 major countries' retirement savings plans had an average annualised real investment rate of return of 3.99% during the 10-year period from 2010 to 2020. Among them, Costa Rica, the Netherlands and Australia had the highest annualised real rates of return — 6.54%, 5.90% and 5.59% respectively, over the same period (see Figure 8).

Figure 8. Real rate of return on pension funds by country (10-year annualised rate of return from 2010 to 2020)



Source: Statistical annex to OECD (2021), *Pension Markets in Focus 2021*.

2. LEADING PENSION FUNDS IN THE WORLD

Pension funds in major countries have now become pivotal institutional investors in international capital markets, playing an important role in optimising the allocation of financial resources, improving asset pricing, and promoting market development.

2.1 Norway's Government Pension Fund Global

Norway's Government Pension Fund Global (GPFG) initially focused on fixed-income investments, with investment made solely in government bonds at the early stage of its formation.

To improve returns, in 1998 it began diversifying its investments so that 40% was invested in equities while 60% was invested in fixed-income assets.

After 2009, equity investments gradually became dominant and in 2011, real estate investment was introduced as part of the asset portfolio, supplementing traditional fixed-income assets in view of the low interest rate environment. Table 1 demonstrates how GPFG has changed its fixed income investment strategy over the years.

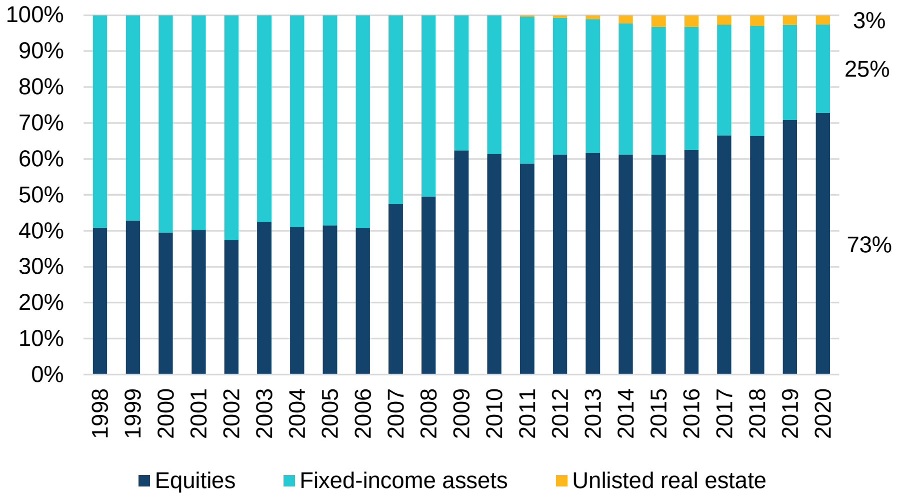
Table 1. Norway GPGF's changing investment strategy (up to end-2020)

Time	Adjustment of investment strategy in fixed-income assets
At formation	All funds invested in extremely low-risk government bonds
1998	60% of funds allocated to fixed-income assets
2001	Investments in Asian (mainly Japan) and Oceanian markets gradually reduced; allocations to US and European government bonds increased
2002	Corporate bonds and asset-securitised products included as investment options
2009	Allocations to fixed-income assets reduced to 40%; allocations to European government bonds and credit bonds gradually reduced
2012	Allocations to fixed-income assets reduced to 39.3%; allocations to government bonds in emerging markets increased
2013-2018	Allocations to fixed-income assets gradually reduced to 30%

Source: Official website of Norges Bank Investment Management.

At the end of 2020, 73% of GPFG's portfolio was invested in equities, nearly 25% in fixed-income investments and 2% in unlisted real estate (see Figure 9).

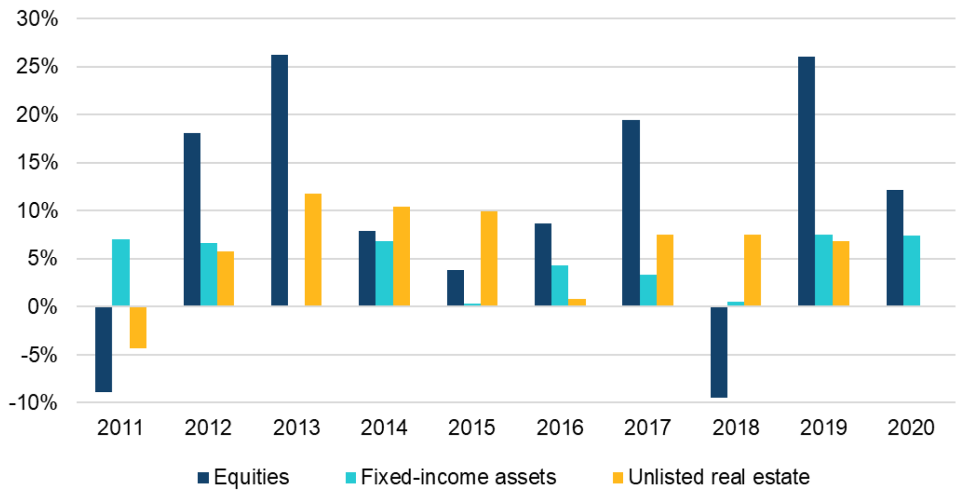
Figure 9. Year-end asset allocations of Norway's GPFG (1998 – 2020)



Note: Numbers may not add up to 100% due to rounding.
Source: Official website of GPFG, data accessed on 29 July 2021.

In terms of the return contributed by these assets, the return from equity assets was more volatile but higher in the long run, reflecting its nature of high risk and high return. Real estate investments, on the other hand, were less volatile with satisfactory long-term returns, though slightly lower than those of equity investments. Fixed-income investments had more stable but lower returns (see Figure 10).

Figure 10. Rate of return of Norway's GPFG over the years by asset type (2011-2020)



Source: Official website of GPFG, data accessed on 29 July 2021.

2.2 Japan's Government Pension Investment Fund

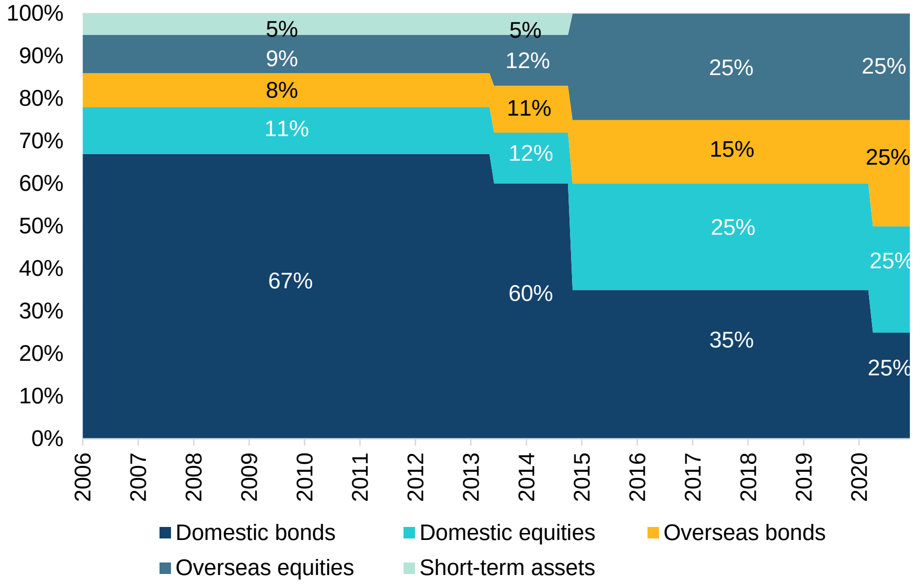
When the Government Pension Investment Fund (GPIF) was first rolled out in Japan, its investment approach was more conservative, with domestic bonds being its main investment target. Its investments in domestic bonds were still high at 60% at the end of fiscal year (FY) 2012[10].

[10] Each fiscal year is from April 1 of a calendar year to March 30 of the following calendar year. FY2012 is the period from 1 April of 2011 to 31 March of 2012.

This high concentration of investment in domestic bonds posed relatively high systemic risks. To curb such risks, starting from FY2013, GPIF gradually adjusted its asset allocation targets to slash the allocation ratio of domestic bonds and increase that of domestic equities, overseas bonds and overseas equities.

At the end of 2020, the target allocation ratios of domestic bonds, domestic equities, overseas bonds and overseas equities were all 25% (deviation within a prescribed range is allowed) (see Figure 11).

Figure 11. GPIF's target asset allocation (FY2006 – FY2020)



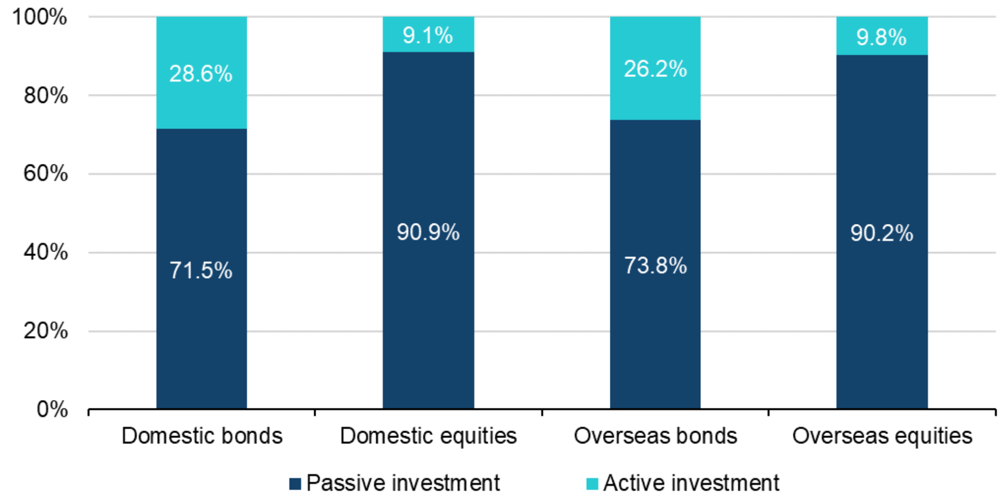
Source: Official website of GPIF, data accessed on 29 July 2021.

GPIF adopts a combined active and passive investment approach. Given GPIF's large fund size, adopting a passive index-tracking investment style would be a more balanced approach.

For passive investments in overseas equities, GPIF mainly tracks MSCI ACWI (MSCI - All Country World Index) and for passive investments in overseas bonds, it mainly tracks FTSE WGBI (FTSE - World Government Bond Index).

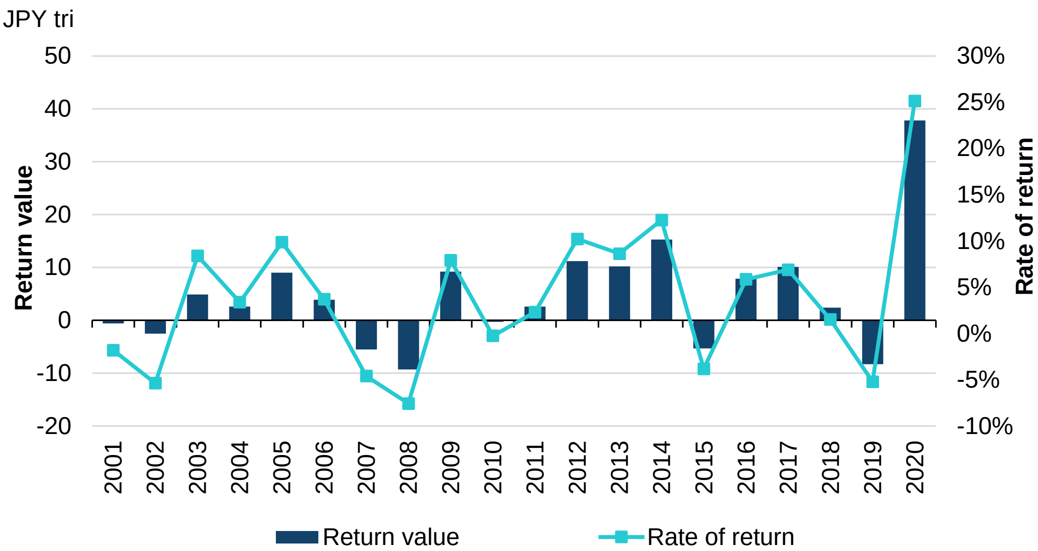
Under this allocation target and investment strategy, in FY2019, the ratio of passive investments in GPIF's overseas bonds and overseas equities reached 73.8% and 90.2%, respectively; the average annual rate of return on investments from FY2001 to FY2020 was 3.88% (see Figures 12 and 13).

Figure 12. GPIF's proportion of active and passive investments in major asset types (FY2019)



Source: Official website of GPIF, data accessed on 29 July 2021.

Figure 13. GPIF's annual return value and rate of return (FY2001 – FY2020)



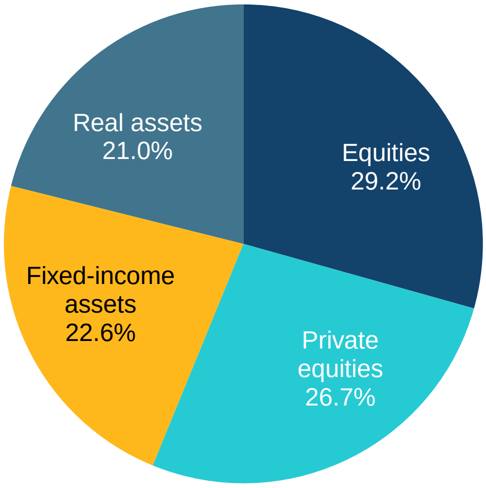
Source: Official website of GPIF, data accessed on 29 July 2021.

2.3 Canada Pension Plan

The Canada Pension Plan Investment Board (CPPIB) is responsible for the investment management of the Canada Pension Plan (CPP). To diversify and manage risk, CPPIB classifies assets into four major categories, namely public market securities, private equity (PE), real assets and fixed-income assets.

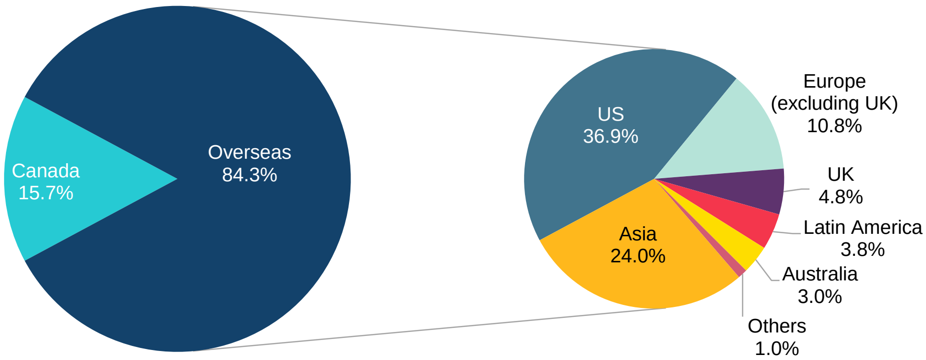
In terms of specific asset allocation, equity, PE, fixed income and real assets accounted for 29.2%, 26.7%, 22.6% and 21.0%, respectively, at the end of March 2021 (see Figure 14). Geographically, overseas and domestic assets accounted for 84.3% and 15.7%, respectively, at the end of March 2021 (see Figure 15).

Figure 14. CPP's asset allocation (31 Mar 2021)



Source: CPPIB, *2021 Annual Report*.

Figure 15. Regional distribution of CPP assets (31 Mar 2021)

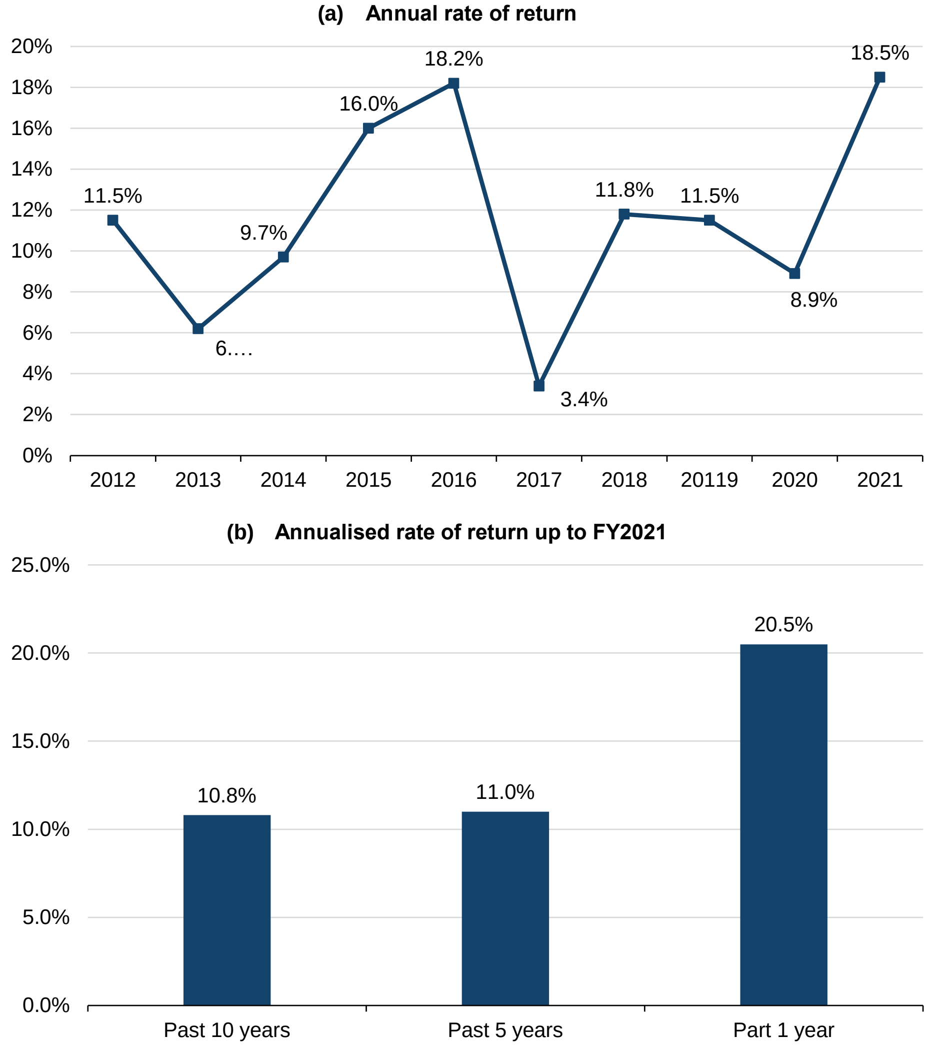


Source: CPPIB, *2021 Annual Report*.

With this asset allocation, the rate of return on investments in FY2021[11] reached 18.5% and 10-year annualised return hit 10.8% (see Figure 16).

[11] Each fiscal year is from 1 April of a calendar year to 31 March of the following calendar year. FY2021 is the period from 1 April 2020 to 31 March 2021.

Figure 16. Return on CPP's investment (FY2012 – FY2021)



Source: CPPIB, *2021 Annual Report*.

2.4 AustralianSuper

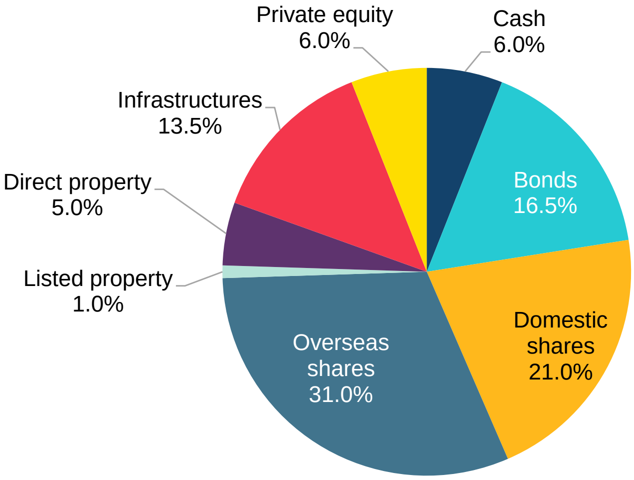
Among second-pillar pension schemes in the world, AustralianSuper is a highly-rated and well-developed pension system with a relatively long history.

In its asset allocation arrangement as of the second quarter of 2021, equities had the highest share of 52% — 31% in overseas equities and 21% in Australian shares; bonds accounted for 16.5%. Apart from equities, bonds and cash, alternative assets such as PE and infrastructure constituted 25.5% (see Figure 17). The rate of return on investments in FY2021[12] was 20.4%, whereas the 5-year annualised rate of return was 10.4%[13].

12 FY2021 is the period from July 1 2020 to June 30 2021.

13 Source: Website of AustraliaSuper, viewed on 29 July 2021.

Figure 17. Asset allocation of AustralianSuper (end of 2021Q2)



Source, "PreMixed option asset allocation", webpage on AustraliaSuper's website, data accessed on 29 July 2021.

2.5 Hong Kong's Mandatory Provident Fund schemes

Hong Kong's population is undergoing rapid ageing. Statistics showed that the proportion of persons in the population aged 65 and over reached 17% in 2016 and is projected to reach 37% by 2066[14].

In 1995, the Hong Kong Special Administrative Region Government enacted the Mandatory Provident Fund Schemes Ordinance to lay down the framework of the Mandatory Provident Fund (MPF) system.

The Ordinance stipulates that, except for exempt persons, all employees and self-employed persons aged 18 to 64 are required to join a registered MPF scheme. In accordance with the World Bank's recommended multi-pillar retirement protection system, the MPF system is the second pillar of Hong Kong's retirement protection system, forming an important part complementary to the other pillars. With the implementation of the MPF system, around 85%[15] of the workforce in Hong Kong is covered under the retirement schemes.

In operation, the Mandatory Provident Fund Schemes Authority (MPFA) as the regulatory body is responsible for regulating and supervising the operation of MPF schemes, putting in place MPF investment regulations and guidelines as well as imposing general restrictions on MPF investment activities. Day-to-day operations and investment management are conducted entirely by the private sector.

[14] Source: Hong Kong Monthly Digest of Statistics, published on the website of HKSAR Census and Statistics Department, October 2017.

[15] Source: "Why MPF?", webpage on the website of MPFA, last revised on 6 May 2021, viewed on 10 August 2022.

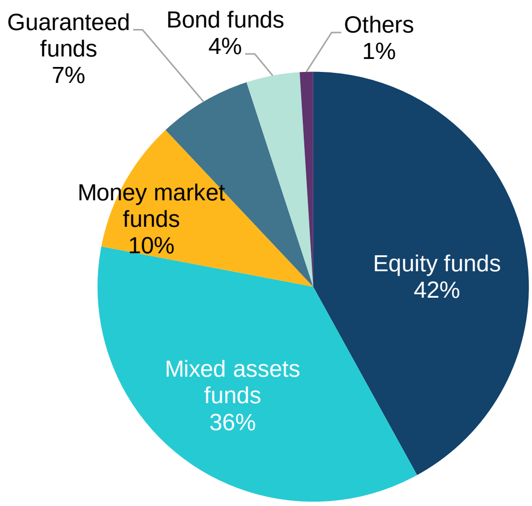
An MPF is characterised as a personal asset and not involving redistribution of wealth. Members of the scheme can make different choices to invest in different markets and assets according to their personal needs.

According to the latest arrangements of MPFA, the Shanghai Stock Exchange, the Shenzhen Stock Exchange, the Indonesia Stock Exchange and the Warsaw Stock Exchange in Poland have been included in the list of approved stock exchanges[16]. As a result, MPF fund investments in the above markets are no longer subject to the upper limit of 10% of the fund's net asset value.

This will provide greater flexibility for investment managers to make investments, allowing them to invest in markets outside Hong Kong, including Mainland A shares, to diversify investment risks and grasp investment opportunities in different regions for achieving better returns. The product variety of MPF schemes is also rather diverse, covering different fund types, such as index tracking funds, real estate investment trusts (REITs) and gold exchange-traded funds (ETFs).

Among assets of MPF schemes, equity funds and mixed assets funds received the highest share of allocations — 42% and 36%, respectively, as at the end of 2020, followed by money market funds and guaranteed funds (10% and 7%, respectively), whereas bond funds accounted for only 4% (see Figure 18). Through diversified investment, the total asset size of MPF schemes reached HK$1.14 trillion as at the end of 2020, of which about HK$410 billion (36%) was the net investment return after fees. Since the implementation of the system in 1995, the average annualised return up to the end of 2020 reached 4.8%, outperforming the inflation rate of 1.8% over the same period[17].

Figure 18. Asset allocation of MPF schemes (31 Dec 2020)



Source: *MPF Schemes Statistical Digest*, December 2020.

16 The arrangement has come into effect after being gazetted on 13 November 2020, increasing the total number of approved exchanges to 44 as of November 2020 (source: "Review on 20 years of MPF investment" (〈細看積金投資 20 年〉), *MPFA blog* on the website of MPFA, 18 February 2021.

17 Source: "MPF well suits the Hong Kong society" (〈強積金切合香港社會〉), *MPFA blog* on the website of MPFA, 18 February 2021.

3. MAINLAND CHINA'S PENSION SYSTEM

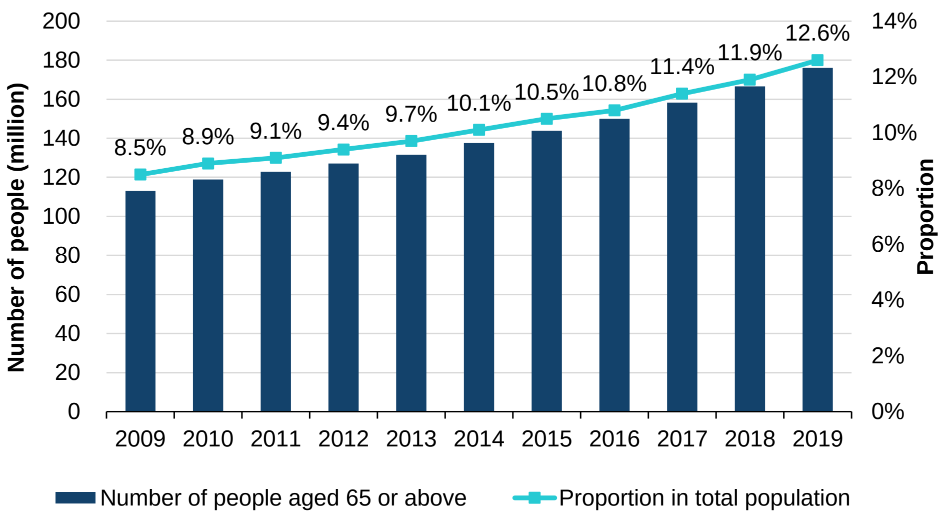
3.1 Mainland China's ageing population trend

The huge number and growing proportion of elderly people in the population combined with low levels of pension savings are posing a major challenge to the Chinese government.

Data shows that Mainland China has seen a continuous rise in the number and proportion of people aged 65 and above since 2009. From 2009 to 2019, the total number of people aged 65 and above in Mainland China rose from 110 million to 176 million, with its proportion in the total population increased from 8.5% to 12.6% (see Figure 19).

The rapid shrinking of the labour force and continuous upsurge in the number of elderly people will impose a sizeable fiscal burden. To alleviate this burden, an effective and professional pension system is indispensable.

Figure 19. The number and proportion of China's elderly population (2009 to 2019)



Source: Wind.

3.2 Development of the three-pillar pension system

Since the rollout of the basic pension system in the 1990s, Mainland China has built a three-pillar pension system supported by the government, businesses and individuals[18].

The three-pillar system emphasises the respective responsibilities and different functional roles of the government, businesses and individuals to better cope with the ageing problem and to alleviate the burden of public pension funds. It also highlights the importance of increasing investment revenue for the purpose of promoting personal pension responsibility and boosting the development of the capital market.

Having said that, Mainland China's current pension system is still facing major challenges in terms of asset risk diversification, long-term value preservation and appreciation, and promotion of pension market management.

[18] The first pillar comprises government-run basic pension insurance plans and their reserve funds; the second pillar are additional pensions, including enterprise annuities and occupational annuities; the third pillar are commercial pension insurance plans, comprising mainly personal savings pension insurance.

First, the ageing population has led to a widening gap between social security funds inflows and outflows, demanding bigger fiscal subsidies.

In Mainland China, as the ageing population issue intensifies, coupled with the increasing population with long life expectancy, it is increasingly difficult for the first pillar to make ends meet and the difficulty of fulfilling pension payment obligations has become increasingly apparent.

Since 2013, the first pillar (basic pension funds) has seen a widening gap between inflows and outflows where the insurance premiums charged cannot cover the withdrawals for the year. Fiscal subsidies from the government therefore have become one of the important sources of income of social insurance funds.

The Centre for International Social Security Studies (CISS) at the Chinese Academy of Social Sciences (CASS) pointed out in the *China Pension Actuarial Report 2019-2050* released in 2019 that “China’s pension system has made huge strides, manifested in the enlarged scope and amount of premiums obtained in the past five years; yet as the problem of population ageing worsens, pension withdrawals also soar, posing a potential threat to its financial sustainability”.

In light of this, in the State Council’s Government Work Report in 2019, it was proposed to “promote the setup of a multi-level pension system” as a way to ensure the sustainable development of pension insurance. To achieve this, the reform and innovation of pension assets’ investment management approach will be necessary for increasing the funding capability of pensions, so as to achieve reasonable growth of the funds to forestall future payments risks.

Second, the actual proportion of basic pension funds for entrusted investment remains limited.

As of 2020, basic pension funds, as the first pillar, had an outstanding balance of RMB 5.8 trillion[19], but the actual size of basic pension funds allocated for investment was far below their outstanding balance.

Since 2016, the National Council of Social Security Fund (NCSSF) was entrusted to be solely in charge of managing the balance of local basic pension insurance funds. However, by the end of 2018, the funds actually transmitted by local governments as entrusted capital for investment amounted only to RMB 605 billion[20].

In 2020, all provinces have started to implement the entrustment of the investment of basic pension funds. At the end of 2020, the size of entrusted investment contracts amounted to RMB 1.24 trillion, with the amount received being RMB 1.05 trillion, constituting only about 17% of the basic pension insurance fund balance of that year[21].

Third, there is much room for the development of enterprise annuities and related kinds of pension insurance fund.

The second pillar consists of two parts, namely enterprise annuities and occupational annuities. Enterprise annuities open to voluntary participation by employees. Although their

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19 Source: MOHRSS, “Statistical Bulletin on Human Resources and Social Security Development in 2020” (〈2020 年度人力資源和社會保障事業發展統計公報〉).

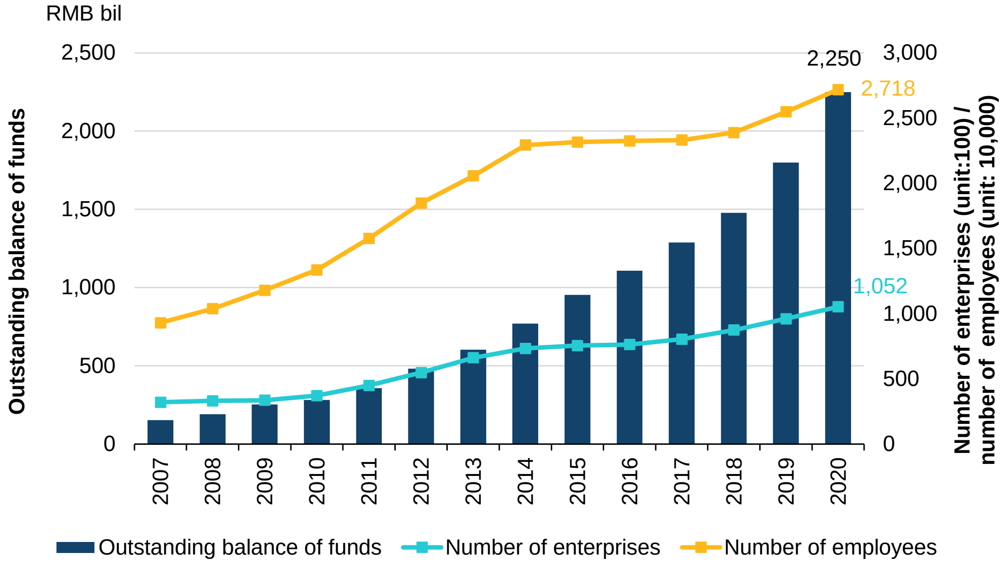
20 Source: Gao Qingbo (高慶波), “Basic Pension Insurance Fund Investment: Size, Constraints and Government Choices” (〈基本養老保險基金投資：規模、約束與政府選擇〉) Working Paper WP No.114-20201012, Centre for International Social Security Studies at the Chinese Academy of Social Sciences.

21 Source: “The outstanding balance of social security funds is 6.13 trillion yuan” (〈社保基金累計結餘 6.13 萬億元〉), *People's Daily,* published on the Central Government’s website, 2 February 2021.

overall size and coverage rate are lower than those of basic pension insurance, they are gaining momentum.

At the end of 2020, a total of about 105,200 enterprises have established enterprise annuities, with 27.17 million participating employees and achieving an outstanding fund balance of RMB 2.25 trillion (see Figure 20). Occupational annuities cover more than 41 million people, with an outstanding balance of over RMB 1.6 trillion[22], making it a key component of a sound multi-level pension fund system.

Figure 20. Outstanding balance of funds and number of participating companies of enterprise annuities and number of employees covered (2007 – 2020)



Source: MOHRSS, "Summary data on enterprise annuity funds in the nation, 2020" (〈2020 年度全國企業年金基金業務資料摘要〉)

Enterprise annuities are mainly invested in fixed-income assets. From 2014 to 2020, fixed-income asset investments accounted for 80% on average of their total net asset value, whereas equity investments accounted for just 9.3%[23] (see Figure 21 for each year's asset allocation ratio).

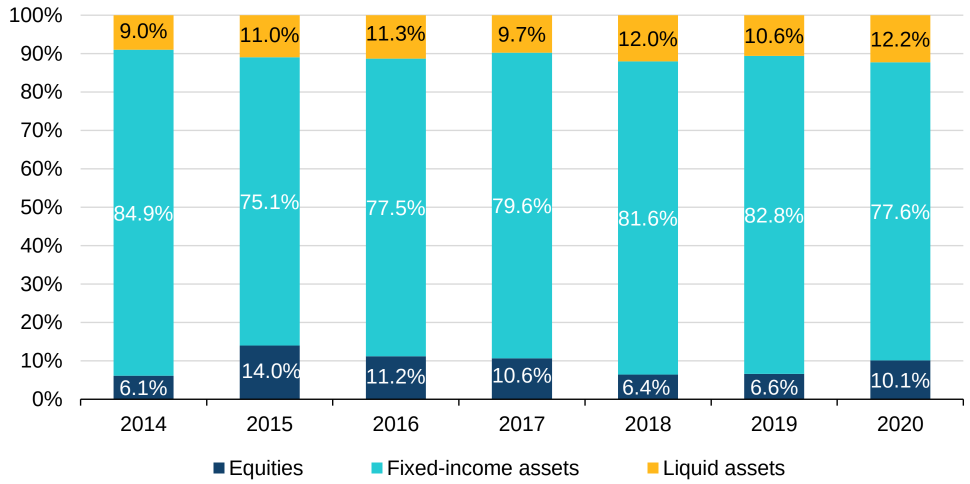
Being invested mainly in fixed-income assets, enterprise annuities' rate of return is relatively stable. During 2007 to 2020, the average rate of return of enterprise annuities was 7.7%, with negative returns seen only in 2008 and 2011 (see Figure 22), and the overall volatility was small. In comparison, the social security funds (SSFs) operated by NCSSF recorded an average rate of return of 9.8% for the same period, outperforming enterprise annuities.

Such difference in return was mainly attributable to the different investment scopes of the two kinds of fund. For example, in respect of the restrictions on the proportion of equity investments, the proportion of investment in securities investment funds and stocks allowed for SSFs is capped at 40%, whereas the cap applied to enterprise annuities had been 30%.

[22] Source: Speech by Tang Jisong (唐霽松), Vice President of the China Social Insurance Association, at the 2nd Social Security Management Forum on 23 October 2021.

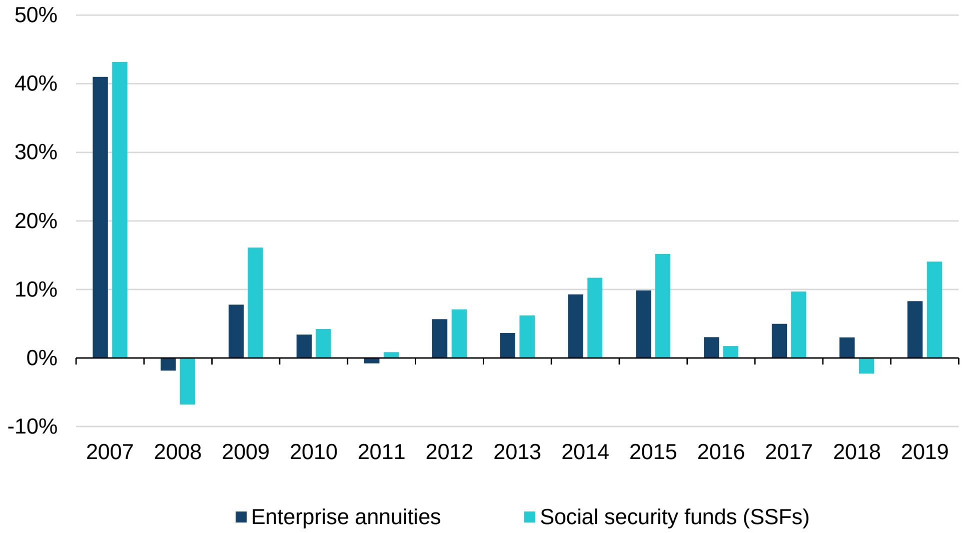
[23] Source: MOHRSS, "Summary data on enterprise annuity funds in the nation" (〈全國企業年金基金業務資料摘要〉), for each year.

Figure 21. Asset allocation of enterprise annuities (2014 – 2020)



Source: MOHRSS, "Summary data on enterprise annuity funds in the nation" (〈全國企業年金基金業務資料摘要〉), for each year.

Figure 22. Rate of return of enterprise annuities and SSFs over the years (2007 – 2020)



Source: MOHRSS, "Summary data on enterprise annuity funds in the nation, 2020" (〈2020 年度全國企業年金基金業務資料摘要〉); NCSSF, "Social security fund income statements" (社保基金歷年收益情況表).

With the issuance by MOHRSS of the *Notice on the Adjustment of the Investment Scope of Annuity Funds* (《關於調整年金基金投資範圍的通知》) (No. 95 of 2020) on 30 December 2020, and the subsequent amendments to the various policies related to annuity funds (including enterprise annuities and occupational annuities), the scope of investment of annuity funds and the ratio of equity investments have been adjusted.

Accordingly, the upper limit of equity investment ratio has been increased to 40% to align with the ratio applied to social security funds. At the same time, annuity funds have also been allowed to invest, through stock-based pension products or publicly-offered securities investment funds, in eligible stocks under Southbound Stock Connect. Their eligible scope of investment has also been expanded to include treasury bond futures, asset-backed securities and interbank certificates of deposit, etc.

The new policies will provide annuity funds with a larger variety of investment channels and investable market scope, allowing more flexible and diversified asset allocation. The increase in the ratio of equity asset investment will potentially improve the rate of return, creating a new scene in the development of enterprise annuity fund management market.

4. MAINLAND'S PENSION FUNDS TO OPTIMISE RESOURCE ALLOCATION IN DOMESTIC AND OVERSEAS MARKETS THROUGH SOUTHBOUND STOCK CONNECT

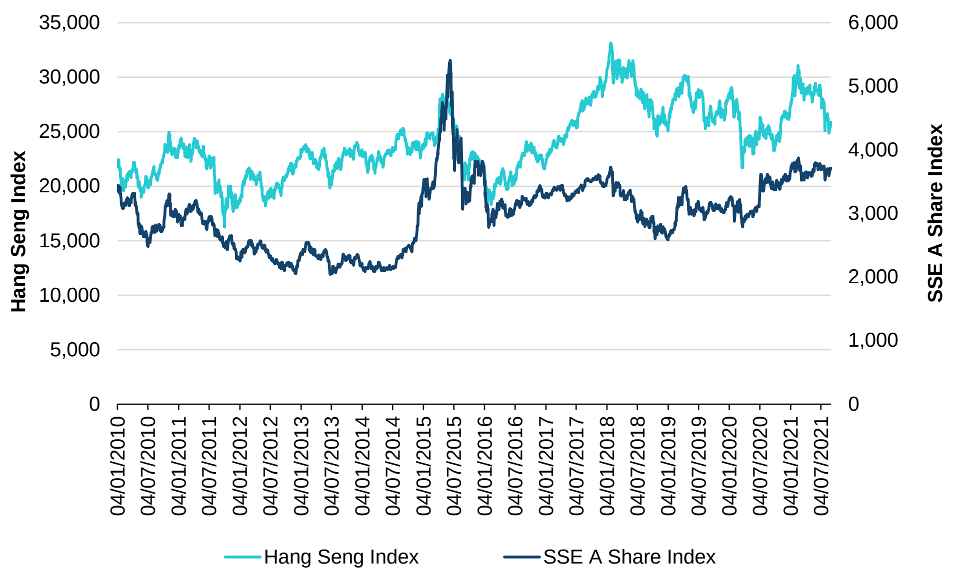
4.1 The diversified Hong Kong stock market

At present, the available set of eligible sectors for investment through Southbound Stock Connect covers various sectors, including technology, education, finance, real estate and biomedicine. Many of these investment targets are unique to Mainland investors. Apart from large-scale Chinese financial, energy, communications and real estate companies, there are leading technology companies emerging in the fast-developing global information technology industry and China-concept stocks which are secondary listed in Hong Kong.

In addition, Southbound Stock Connect covers many traditional Hong Kong enterprises, which can facilitate pension investors' optimisation of asset allocation by making full use of the domestic and overseas markets for cross-market investments, providing them with a wide range of leading companies in the markets as investment targets.

Moreover, the trend of the Hong Kong stock market does not fully align with that of the A-share market (see Figure 23) and the returns from these two markets also differ, implying that investing in both markets can expand the breadth of portfolio management and help smoothing out the fluctuations of returns caused by investing only in one single market, thereby achieving risk diversification.

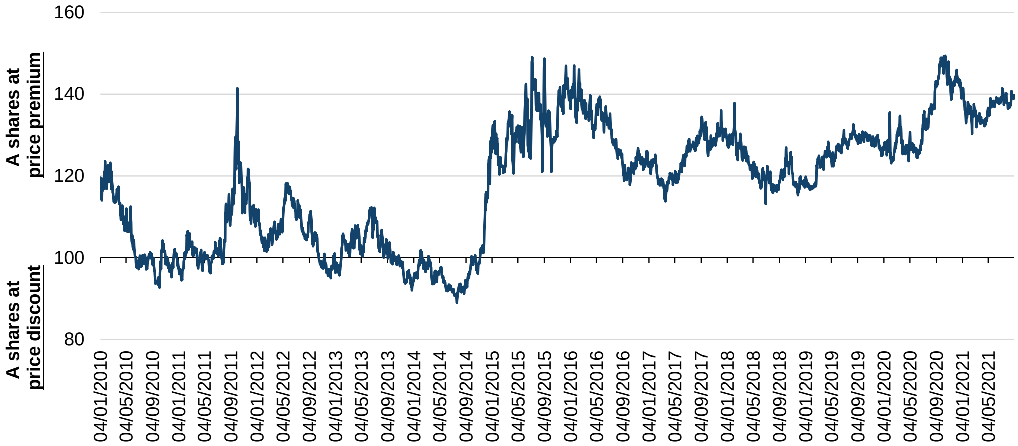
Figure 23. Daily closings of A-share and H-share indices (2010 to end-Aug 2021)



Source: Wind.

From the perspective of valuation, taking A+H companies (i.e. companies with both H shares listed in Hong Kong and A shares listed in the Mainland) as an example, H shares are usually traded at a discount over A shares (see Figure 24). Hong Kong stocks can provide a better margin of safety[24] for pension funds and provide access to assets with the same quality at a lower cost.

Figure 24. Daily closings of Hang Seng Stock Connect China AH Premium Index (2010 to end-Aug 2021)



Note: This index tracks the average price difference of A shares over H shares for A+H companies, which are eligible for Northbound and Southbound trading under the Stock Connect scheme. When the index value is over 100, it means A shares are trading at a premium over H shares, otherwise it means A shares are trading at a discount over H shares.

Source: Wind.

The reform of Hong Kong's listing regime in 2018 accelerated the formation of a new-economy ecosystem for Hong Kong stocks. In particular, HKEX's Listing Rules were amended in 2018 to allow the listing of issuers from emerging and innovative industries with a weighted voting right structure as well as pre-revenue biotech issuers.

Since then, funds raised by new-economy companies has contributed a rapidly growing share in the total fund-raising amount in Hong Kong's initial public offering (IPO) market, jumping from 15% in 2016 and 35% in 2017 before the rollout of the new Listing Rules to 63% in 2020[25].

In 2021, there were 59 newly listings of new-economy companies in Hong Kong, raising HK$291 billion and accounting for 88% of IPO funds raised during the year; at the end of that year, the total number of listed new-economy companies in Hong Kong hit 198, accounting for more than 20% of the total market capitalisation in Hong Kong[26]. The turnover value of stocks of new-economy companies constituted 21% in 2020 and 22.5% in 2022 (up to September) of the total market turnover value[27]. These statistics show that "new-economy" sectors have gradually assumed a leading role in the Hong Kong market in place of "old-economy" sectors.

A new secondary listing channel has also been established under the listing regime reform in 2018 to attract eligible China-concept stocks listed on overseas exchanges (especially the New York Stock Exchange or NASDAQ) to return to Hong Kong for listing. Reportedly, by 13 July 2022, 23 China-concept companies have returned to Hong Kong through secondary

[24] "Margin of safety" refers to the difference between the market price of a stock and its intrinsic value. The larger the difference (market price higher than the intrinsic value), the higher the margin of safety.

[25] Source: HKEX.

[26] Source: HKEX.

[27] Source: HKEX.

listing or dual primary listing, accounting for 14% of the total market capitalisation of Hong Kong stocks [28], further contributing to the diversity of equity assets in the Hong Kong market.

4.2 The Hong Kong market has gradually become an overseas asset allocation centre for Mainland funds

At the end of 2021, the total value of Hong Kong stocks held by Mainland residents through Southbound Stock Connect was about HK$2.25 trillion, accounting for 5.21% of the total market capitalisation of Hong Kong stocks[29].

Mainland insurance funds, which adopt the principles of "prudence and security", obtained permission from the China Insurance Regulatory Commission[30] in 2016 and 2017 to invest in eligible stocks under Southbound Stock Connect. Alongside, the SSFs have also started investing in Hong Kong stocks in 2017.

Since the issuance of a notice by MOHRSS to incorporate "Hong Kong market investments" into the investment scope of Mainland annuity funds (see Section 3.2 above), Mainland annuity funds are allowed to invest in eligible stocks covered by Southbound Stock Connect through stock-based pension products or publicly-offered securities investment funds.

At the end of January 2021, the first batch of five Southbound Stock Connect pension products introduced by five managers of Mainland annuities were approved for issuance. In April 2021, several other similar pension products were approved.

As more experience is gained through the participation of enterprise/occupational annuity funds (being the second pillar) in Southbound Stock Connect, the Mainland pension system may learn from the investment experience of overseas pension funds and consider including Southbound Stock Connect in the investment scope of the basic pension funds (the first pillar) as well. Not only will this help achieve the multiple goals of marketisation, diversification, mitigation of systemic risks and ensuring asset security, but also make Mainland pension funds an influential institutional investor in the international capital market.

5. CONCLUSION

As typical long-term funds, pension funds follow a market-oriented investment and management approach that focuses on the steady growth of value.

During the current dual-circulation development period when China is undergoing economic restructuring and refocusing mainly on domestic demand, the increasing weighting of financial assets in China would stimulate consumption and create wealth effects.

Moreover, a market-oriented investment management approach for pension funds would also stabilise and help develop the capital market. Firstly, the pursuit of value investing by investment management institutions of pension funds would help weaken the "herd effect" in the market, thereby reducing market volatility. Secondly, as long-term funds with long holding periods of core assets and relatively less frequent trading, pension funds can reduce the probability of large fluctuations in the market. Thirdly, the market-oriented investment management approach of pension funds can also diversify investment styles in the market and

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28 Source: "Homecoming listing of China-concept stocks in Hong Kong"〈中概股回歸 —— 至今佔港股市值 14% 〉, *Yahoo Finance*, 26 July 2022.

29 Source: HKEX.

30 It merged with China Banking Regulatory Commission in 2018 to become China Banking and Insurance Regulatory Commission.

improve the investment management mechanism of pension funds by increasing its flexibility, so as to prepare for future changes in the market environment.

In view of its ageing population, Mainland China may draw experience from other countries in the investment management of public pension funds, with a view to enhance the investment management capabilities of Mainland pension funds. In addition, the inclusion of Southbound Stock Connect for investment by a wider scope of Mainland pension funds would help them achieve their multiple goals of marketisation, diversification, risk mitigation and ensuring asset security, while also making Mainland pension funds an influential institutional investor in international capital markets.

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