Pension Allocation under the New Global Marco-economic Background

After the Global Financial Crisis, the global economy has shown the features of low growth, low interest rates, high debt, and high risks. The COVID-19 epidemic makes matters worse, and the accumulation of global economic and financial risks has accelerated. Under the new macroeconomic background, the allocation of the second and the third pillars of pensions in developed countries faces the challenges of lower long-term yields and increased volatility, showing new trends such as increased proportion of high-risk asset allocation and increased personal participation in investment decision-making. China's pension assets are composed of the national social security funds and the three-pillar pensions, with the theoretical assets exceeding 13 trillion yuan. The allocation of the pension assets is featured with significant increase in investment professionalism and marketization, high-degree investment restrictions, and relatively large difference in investment return. Faced with the challenges of declining returns in the real economy, insufficient adaptability of the capital market, and over-concentration of investment decision-making, it is necessary to continuously relax the restrictions on investment fields and proportion, promote the healthy development of the stock market, improve the capacity of pension management institutions, and increase the choice and decision-making powers of pension participants in order to further optimize the allocation of pensions.

1. The global economy and finance has shown the features of low growth, low interest rates, high debt, and high risks under the COVID-19 epidemic

(1) Insufficient momentum for global economic growth

Structural problems have lowered the economic growth potential. The first problem is the acceleration of population aging, causing the slowdown of labor supply and the continuous increase of population dependency. The global population dependency ratio reached 13.9% in 2019, an increase of 2.5 percentage points from 2008; the population dependency ratios of the U.S. and EU exceeded 20% and 30% respectively, and those of emerging economies such as China and India are also rising rapidly. Second, the global labor productivity growth rate has experienced a broad and significant decline due to factors such as the age structure of the population, the continuous increase in the proportion of the service industry, and the slowdown in global trade and foreign direct investment growth to suppress technology diffusion. According to the World Bank, the growth rate of global labor productivity fell from a peak of 2.8% in 2007 to a trough of 1.4% in 2016. Although there was a slight recovery in 2018, it was still below 2%. The decline in developing countries has been even more pronounced. Third, affected by factors such as the rapid rise in asset prices and the unbalanced impact of technological innovation on the labor market, the global income and wealth distribution pattern has continued to deteriorate, and the aggregate demand has been suppressed. According to the report of the World Inequality Lab, the income growth of the Top 1% accounted for 27% of the total increase from 1980 to 2016, while the

Bottom 50% accounted for only 12%. This trend continues after 2016. Fourth, emerging economies are gradually becoming the center of global growth, but the lagging of the adjustment of the international economic governance structure restricts their growth potential, thereby dragging down global growth.

The regional support momentum for economic growth is insufficient. In the United States, although the US has achieved the longest lasting economic expansion before the epidemic, the growth rate of Total Factor Productivity (TFP) has slowed down due to the sluggish growth in R&D investment and the shrinking of manufacturing industry. The average growth rate of TFP of the US from 2010 to 2019 was 0.8%, 0.3 percentage points lower than the average growth rate from 1990 to 2007. Meanwhile, the long-term low interest rate requires the monetary authority a return to normal monetary policy, which will also affect the process of its economic recovery in the near and medium term. In Europe, the Euro zone is already in a hyper-aged society, with insufficient R&D investment, rigid labor market, and unrecovered TFP. The contradiction between unified monetary policy and independent fiscal policies has also restricted the macro-control measures and efficiency of the Europe. The economic growth in emerging economies has seen a decline, with diverged growth prospects and increased volatility. In India, the economic growth potential and the constraints coexist, and the slowness of structural reforms has dragged down the release of the potentials; resource-based emerging economies with single economic structure such as Brazil and Russia are greatly affected by weak global demand and commodity price fluctuations; risks in

fragile emerging economies such as Argentina and Turkey continue to accumulate.

New challenges after the epidemic have lowered global economic growth expectations. The COVID-19 epidemic has not only aggravated the existing global structural problems, but also brought new challenges such as accelerated adjustment of the global industrial chain and supply chain. After 2010, affected by factors such as weak economic recovery and trade protectionism, the growth rate of global trade has slowed down significantly. Under the impact of the epidemic, major countries have promoted returning of industries to strengthen its economic sovereignty, and are increasingly inclined to build a complete, safe and stable industrial chain, with the adjustment direction of regionalization and peripheralization of industrial chain and supply chain. The efficiency of global division of labor has decreased, the technological spillover effect is weakened, and the catch-up process of emerging economies is blocked. In addition, the global low-carbon transition may accelerate, which will have an impact on the current global development model. The development of emerging economies will face greater challenges, and global inequality may further intensify.

(2) The environment of global low-negative interest rate is difficult to reverse in the short term

The global interest rate level becomes lower as a trend. Before the Global Financial Crisis, the global interest rate level had dropped from 7.9% in 1990 to 4.3% in 2008. After the Global Financial Crisis, major economies have adopted loose monetary and fiscal policies, and global interest rates have further dropped to 2.4% in

2019. Interest rates in most countries are at historically low levels. The Euro zone and Japan have entered the negative interest rate range, while the United States, the United Kingdom, Canada and Australia are close to the zero lower bound of interest rate. For economies that have reached or are close to the zero lower bound, once the economy encounters a negative impact or a strengthened deflation expectation, zero or even negative interest rate policies may become policy options.

The environment of low negative interest rate is difficult to change in the short term. Firstly, the structural factor of global savings glut is difficult to change. Population aging, unequal income distribution and high savings rate in emerging markets have led to an increase in global savings. Meanwhile, the downward trend in global economic growth and the corresponding weakening of investment demand also lifted the savings rate. Secondly, there are greater uncertainties in the global economic recovery after the epidemic, and loose monetary policies may last for a long time. Finally, concerns about financial risk exposure and reliance on monetary policy have made interest rate easy to fall but difficult to rise. Judging from the experience of the normalization of US monetary policy after the Global Financial Crisis, the US federal fund has maintained the interest rate close to the zero lower bound for 7 years.

(3) The feature of global high debt is further intensified

Before the outbreak of the epidemic, the world was experiencing a fourth wave of debt (World Bank, 2020). The large-scale financial rescue plan to deal with the epidemic has led to further inflation of global debt. According to data from the Bank for

International Settlements, the total global non-financial sector debt in the second quarter of 2020 was US$209.8 trillion, an increase of US$14.1 trillion from the end of 2019, and nearly twice the size of the debt before the Global Financial Crisis. The global marcoeconomic leverage ratio reached 265.6%, an increase of 64.2 percentage points from the end of 2008, where the leverage ratio of advanced economies increased by 61.8 percentage points to 300.9%, and the leverage ratio of emerging economies increased by 102.9 percentage points to 209.8%. With the support of low negative interest rates, the possibility of a debt crisis in developed countries in the short term is not high. The macro leverage ratio will change according to the degree of economic recovery. The debt risks of non-financial corporate and government sector will continue to increase, and the debt risks of the household sector are expected to reduce. However, continued debt inflation will not only limit economic momentum, but also exacerbate economic and financial vulnerabilities and limit the policy space to deal with economic and financial risks.

(4) Significant increase in global financial risk points

The risks including the US stock market correction risk, the corporate debt default risk, and the public debt inflation risk are prominent. The large-scale fiscal and currency rescue plan has pushed the US stock market back to record highs. The price-earnings ratio has surpassed the peak before the Great Depression and the Global Financial Crisis, second only to that at Internet bubble period in 2000, and the divergence between the economy and the stock market has risen sharply. Once the recovery falls short of

expectations, U.S. stocks will face the risk of a correction and may trigger a large-scale financial turmoil. US corporate debt shall continue to accumulate in a low interest rate environment. The epidemic has severely impacted the solvency of enterprises and once the rating is downgraded, it will easily lead to the closure of refinancing channels and bond sales, triggering risks in the bond market. In addition, the epidemic relief and economic stimulus plans have promoted the continuous expansion of public debt, resulting in continuous accumulation of medium and long-term financial risks.

Sovereign debt risk is more prominent in Europe. The sovereign debt risks of some southern European countries remain high, which has constituted a severe hidden danger of systemic financial risks in Europe. In 2019, the public debt ratio (government debt/GDP) of southern European countries such as Greece, Italy, and Portugal has reached as high as 177%, 135% and 118%. Under the impact of the epidemic, Europe has experienced a deep recession, and many countries have launched huge fiscal rescue plans. The sovereign debt problem has generally deteriorated. The public debt levels of Greece, Italy, and Portugal jumped higher in 2020. Under the impact of low negative interest rate and the impact of the epidemic, banking risks in Europe are also increasing, and may be superimposed with sovereign debt risks. Debt defaults broke out in some countries in southern Europe in 2010, gradually spreading from peripheral countries to core countries, and infiltrating from government sector to the banking system, which eventually evolved into the European debt crisis and the Euro zone banking crisis.

The risks of debt crises and currency crises in emerging

economies cannot be ignored. The resource dependence feature of many emerging economies has not been fundamentally changed after the Global Financial Crisis. The "double deficits" of current account and public finance, as well as high debt and high foreign debt, exacerbate economic and financial vulnerabilities. After the outbreak of the epidemic, the risks in emerging economies are further increased due to global trade decline, commodity price fluctuations, and international capital outflows. At the same time, low negative interest rate in developed countries caused a large-scale increase in external debt in emerging economies. By the end of 2019, the total external debt of emerging and developing economies other than China has reached US$8.5 trillion, increased from US$4.6 trillion in 2009. After 2014, the external debt of emerging and developing economies other than China accounted for more than 40% of the GDP, exceeding the international warning line of 20%. The epidemic has severely impacted emerging and developing economies. According to International Monetary Fund, about half of low-income countries and several emerging market economies are already facing or at high risk of debt crises. After the outbreak of the epidemic, debt crisis and currency crisis may break out in some fragile and resource-dependent countries as the economic recovery of these countries is affected by the spillover of the monetary policies of developed economies.

2. Pension systems in developed countries and their allocation trends under the new global marcoeconomic background

(1) Balanced development of three pillars, with asset

allocation focusing on the second and the third pillars

The three pillars of developed countries feature a balanced development based on specialization and coordination. The first pillar mostly plays the role of managing personal longevity risks, providing residents with basic pension benefits for life, and assuming redistribution and social stabilizer functions by setting differentiated replacement rates for different income levels. The first pillar of most countries adopts the pay-as-you-go system/defined benefit approach to ensure that all residents receive adequate old-age protection. The second pillar is mainly to provide residents with pension income commensurate with their income level, and to help residents make financial arrangements for pensions. Companies usually set up pension accounts for employees, share payment responsibilities with employees, and use long-term accumulated funds and investment income to cover residents' pension expenditures. Different from the first pillar, the second pillar often adopts the fund accumulation system/ defined contribution approach, but there are also a considerable number of countries that allow companies to adopt the fund accumulation system + fixed treatment method for reasons such as attracting employees. The third pillar mainly refers to more personalized products with pension features such as annuity, fund or survival insurance which are related to the investor’s age and are completely purchased by the investors themselves. The third pillar is almost the same as other financial investment products. The important reason for its popularity is the design of the system to avoid personal income tax. Pension investment in developed countries is mainly on the second and the

third pillars. The first pillar is for the management and utilization of surplus funds. Life-cycle asset management and personalized asset allocation are realized through personalized investment on the second and the third pillars.

(2) Decentralized investment decision-making power with fewer investment restrictions

In developed countries, the second pillar is often an employer-funded pension fund established by the enterprise separately. The pension fund can be established by the enterprise but independent of the financial and operation of the enterprise, or it can be established by the financial institutions. These pensions usually provide different investment plans according to the participants' age or retirement date and risk preference, which makes it easier to meet the participants' risk preference. After the participants select the investment plan, these pension funds construct investment funds that meet various income levels and risk preferences, and adopt different investment strategies and asset portfolios, thereby reducing various risks that may be caused by the concentration of investment decisions. Since each participant can independently choose an investment plan with known risks according to his/her own risk preference and risk bearing ability, and it is professionally managed by the pension fund management institution, the risk of the pension insurance fund can be controlled within the predetermined risk range, and the participants can be responsible for their own profits and losses under the conditions of known expected returns and risks. That's one primary reason why developed countries rarely limit the scope of investment in the second pillar. Participants are responsible

for their own profits and losses and there are fewer limits on the scope of investment, so that pension management institutions can better carry out various financial innovations, thereby forming a virtuous circle of continuous maturity of capital market and development of pension funds.

(3) Continuous innovation in response to the environment of low interest rate and high debt

Since the Global Financial Crisis in 2008, developed countries have adjusted their pension insurance investment strategies in stages and increased their investment in bonds, alternative investments and emerging market countries to further diversify risks and achieve high returns. As interest rates continue to fall, various countries continue to take measures to respond to market changes in a low interest rate environment to manage risks and increase yields. For example, as the risks of stocks and derivative securities continue to increase, countries have reduced their investment shares in the stock market. For another example, with the decline in bond returns, some countries with higher bond investment proportions have gradually reduced the proportions, while some countries with lower bond investment proportions have increased their bond holdings to reduce risk exposure and to ensure that more higher-risk and higher-yield assets are allocated while keeping the overall risk unchanged. Other measures include increasing the proportion of securities investment in higher-yielding developed countries and emerging market countries, and increasing investment in unlisted equity or alternative assets.

(4) Improvement of personal participation in investment

decision-making to reduce the decision-making risk of pension management institutions

In the context of low negative interest rates increasing asset risks and differentiating asset returns, various countries have increased the participation of pension participants. Some countries have introduced more types of investment portfolios to construct various kinds of investment options such as target date funds and target risk funds to enrich the choices of participants. Some countries have gradually shifted from focusing on institutional investment in the beginning to introducing more participants in decision-making, and even allowing them to participate in investment decision-making to a certain extent, to better meet the risk appetite and diversified investment needs of the participants. While improving the transparency of pension investment and the risk perception of the participants, the decision-making risk is transferred from the pension management institutions to the participants themselves.

3. Current situation of pension allocation in China and current challenges

(1) Basic features of the pension allocation in China

The pension system of China adopts a "1+3" structure. "1" is the social security fund, which is the national social security reserve fund composed of central fiscal budget appropriations, state-owned capital transfers, fund investment income and funds raised by other methods approved by the State Council. "3" is the pensions corresponding to the three pillars, with the basic pension insurance fund as the first pillar, the enterprise annuity and occupational annuity as the second pillar, and the commercial pension insurance

(including the personal tax deferred type), pension target fund and the wealth management products of the bank on pension as the third pillar. Pension allocation of China presents the following five features.

First, the scale of configurable pension assets is growing rapidly. By the end of 2019, the theoretical configurable scale of China's pension funds has grown to around 13-15 trillion yuan. Among them, the asset scale of the national social security fund (including the central subsidy funds to make up for the empty personal accounts and the entrusted funds of basic pension insurance funds for enterprise employees in Shandong Province) was 2.6 trillion yuan, the accumulated balance of the basic pension insurance fund was 6.3 trillion yuan, and the actual operating asset of the enterprise annuity was 1.8 trillion yuan, an increase of 17.6%, 8.1%, and 22.0% respectively from the end of 2018. The growth rate was higher than that of the investment income of these three types of assets and the nominal GDP over the same period. The amount of occupational annuities has exceeded 700 billion yuan. There are no official statistics on the third-pillar pension assets and the estimated scale is between 2-4 trillion yuan according to most of the research institutions.

Second, there are widespread restrictions on the scope of investment and the fixed investment proportion. There are relatively few investment restrictions on the national social security fund and commercial pension insurance, both of which can be invested in overseas assets, with the upper limit of the investment ratio of 20% and 15% respectively; the upper limit of the proportion of equity

assets of the national social security fund is 40%, and the upper limit of the proportion of equity assets of commercial pension insurance was adjusted from 30% to 45% in July 2020. The restrictions on investment of enterprise annuities and occupational annuities are relatively strict. Enterprise annuities and occupational annuities cannot be invested in overseas assets in and before 2020, and the upper limit of equity assets is 30%. Overseas investment restriction was relaxed from 2021 to allow equity pension products or public offering of fund to be invested in underlying stocks of the Stock Connect, with the upper limit of 20%; and the upper limit of the proportion of equity assets was relaxed to 40%. The restrictions on the investment of the basic pension insurance fund are the most stringent. Foreign assets cannot be invested yet, and the upper limit of the proportion of equity assets is 30%. Compared with the United States and the United Kingdom, there are more investment restrictions on the second and third pillar pensions but fewer investment restrictions on the first pillar pension in China. As to the second and the third pillar pensions, the United States and the United Kingdom have almost no restrictions on the scope and proportion of the investment, except for some private pensions that have special restrictions on investment. However, the first pillar pensions of these countries can only be invested in bank deposits and high-credit debt securities, and are prohibited to be invested in the stock market and other assets with higher risk and lower liquidity, while China's basic pension insurance fund can be invested in stocks, funds, national major projects and key corporate equity, etc. This is related to the adoption of the pay-as-you-go system/defined benefit approach, the

small fund balance of the first pillar pension, and higher requirements on liquidity but less requirements on value-adding in the United States and the United Kingdom.

Third, the level of professionalism and marketization of investment has improved significantly. By the end of 2019, the scale of the first and second pillar pensions and the national social security fund managed by fund companies has reached 2.4 trillion yuan, accounting for approximately 21.2%, an increase of 4.6 percentage points from the end of 2018. Entrusted investment has dominated the national social security fund, with the scale of entrusted investment assets amounted to 1.59 trillion yuan by the end of 2019, accounting for 60.40% of the total assets of the social security fund, exceeding 50% for 5 consecutive years, and an increase of 4.8 percentage points from the level at the end of 2018. The proportion of entrusted investment of the basic pension insurance fund has also increased significantly. By the end of 2019, the equity of the basic pension insurance fund entrusted to the national social security fund has reached 988.6 billion yuan, which was 15.7% of the accumulated balance of the basic pension insurance fund in the same period, an increase of 5.0 and 10.1 percentage points respectively compared with the proportion at the end of 2018 and 2017.

Fourth, the overall participation in the stock market is relatively low. Compared with developed countries, the participation of Chinese pension funds in the stock market has the feature of "two significantly lower". The proportion of pension investment in the stock market of China is significantly lower than that of developed countries. In 2017, the average investment ratio of the five largest

pension countries in the world, including the United States, the United Kingdom, Japan, Australia and Canada, was more than 40% (Chen Xiangjing, 2018), which has exceeded the upper limit of the investment ratio of most pension funds in China, and significantly exceeded the actual proportion of pension funds invested in stocks. The share of the market value of stocks held by the pension funds of China in the total size of the stock market is significantly lower than that of developed countries. According to estimates by Zheng Bingwen (2020), market capital of pension funds in 2019 only accounted for 1.37% of the stock market capitalization, which is significantly lower than the average level of 24.51% in OECD countries. On the whole, China's pension fund allocation structure is a reflection of the indirect financing financial structure, and has not yet played an obvious role in promoting the adjustment of the financial structure.

Fifth, the return on investment varies greatly. The national social security fund has the highest return rate, with the investment return rate of 14.06% in 2019, and the average return rate of 8.14% since the establishment. The return rate of enterprise annuity is the second, with the investment return rate of 8.30% in 2019, and the average return rate of 7.07% since the establishment. The basic pension insurance fund has the lowest return rate. Although the average annual return rate of the basic pension insurance fund entrusted to the national social security fund to manage from 2017 to 2019 has reached 5.6%, the overall return rate of the basic pension insurance fund is still low since the basic pension insurance fund managed by each province is mainly invested in bank deposits.

According to preliminary estimates, the return rate of the basic pension insurance fund from 2017 to 2019 is 2.0%, which is lower than the average annual increase of the consumer price index of 2.2% in the same period. Occupational annuities are still in the pilot stage, the pension target fund and tax-deferred commercial pension insurance are small in scale, and their yields are not yet comparable.

(2) Current challenges facing China's pension allocation

First, the return rate on the real economy has fallen and investment risks have continued to rise. The return rate of real economy is the basis of the return rate of the pension. Although China still has higher nominal and real interest rates than Western countries, the return rate of investment in real economy has shown a trend of decline in the context of the transition of economic growth stages. At the same time, return rate of real economy is also challenged by the restructuring of the global supply chain and the rising costs. The decline in the return rate of the real economy will have a pull-down effect on the long-term return rate of pension investment.

Second, the contradiction between the demand for pension funds marketization and the imperfection of the capital market is prominent. In the long run, the return rate on equity assets is significantly higher than that of non-equity assets. In order to increase the long-term investment yield of pension funds and enhance the self-balancing ability of the pension system, it is necessary to increase the proportion of pension funds invested in the stock market and seek capital dividends from the healthy development of the stock market. However, the development of

China's stock market is still relatively lagging, the basic system still needs to be further improved, the overall quality of listed companies needs to be improved, the proportion of institutional investors is relatively low, the stock market is volatile, and there is still a gap from needs of the longevity risk management of residential departments, governments and insurance companies.

Third, decisions and options on pension investment are too concentrated. The first-pillar pension of China is strongly featured with defined income and life-long benefits, which has put tremendous pressure on the government who assumes the fallback responsibility in an environment of population aging and interest rate declining. When the first pillar is invested in the capital market to make long-term investments in order to provide a stable and high return to the pension insurance system, the social security institution with fallback responsibility will assume the responsibility on the investments. Since the investment of the first pillar is a unified investment authorized by the government to relevant institutions, the inherent diversified risks of the capital market are concentrated in the national social security fund by the unified investment activities, which will generate more prominent concentration risks. Similarly, individual options are not considered on the enterprise annuity/occupational annuity of the second pillar and the annuity establishment unit makes unified decision-making and unified portfolio management. The various heterogeneous risk appetites and risk tolerance of different residents are eliminated by the unified investment plan, which means that the investment risk of pension funds has not been effectively diversified, and pension fund

management cannot meet the needs of the residents to cope with the life cycle and their demand for personalized financial management for pensions.

4. Adapt to the current situation and optimize the allocation of pensions in China

Optimizing the allocation of pensions plays a very important role in enhancing the ability of pensions to maintain and increase their value and enhance the sustainability of the pension system. It can also play a role in promoting the development of the capital market, optimizing the financial structure, and better serving the real economy.

Efforts shall be made to optimize the investment plan of the first pillar to improve the personalized choices of residents. According to the residents' age and risk preference, a variety of investment plans with different strategies and capital allocation schemes are subdivided for participants to choose from. With reference to the pension target fund method, participants are provided with investment options with certain target date fund features or target risk features on the basis of guaranteeing basic investment returns, so as to diversify risks to a certain extent. Efforts shall also be made to increase the proportion of the basic pension insurance fund entrusted to the national social security fund to invest.

Vigorously develop the second and the third pillars, and provide risk-diversified and personalized pension plans. Pilot exploration companies shall provide DB-type enterprise annuities and promote coordinated development of employee stock ownership and

corporate annuities to enhance the attractiveness of the second pillar. Relax the restrictions on investment scope and investment proportions to make investment more flexible and have the feature of life cycle management. Promote the establishment of the second pillar among leading enterprises in the modern service industry, encourage enterprises to use enterprise annuities and occupational annuities as signals of their long-term employment commitments to employees, enhance the sense of belonging of employees to the enterprise, and future encourage more enterprises to establish enterprise annuities. Vigorously develop personal annuity products, especially to increase the tax incentives for tax-deferred pension insurance. Improve the life cycle risk matching of enterprise annuity and personal annuity products to meet the diversified investment needs of the participants.

Relax the restrictions on alternative investment and overseas investment orderly and enhance the vitality of long-term investment. Orderly relax restrictions on the investment proportion of pension assets to equity assets, infrastructure, real estate, and major strategic projects. Actively support pension funds to be invested in pension care, health care, life technology and other related fields. Explore the establishment of a risk control and valuation system suitable for developing countries, and future explore investment in high-quality projects with higher returns and lower risks in the Belt and Road countries.

Promote the standardized and healthy development of the stock market. Efforts will be made to promote the improvement of the quality of listed companies, strengthen and improve capital market

supervision and law enforcement, and severely crack down on illegal and criminal activities on securities in accordance with the law. Improve the long-term capital market entry mechanism, increase the proportion of institutional investors in the stock market, and reduce the short-term behaviors and volatility of the stock market.

Strengthen the establishment and management of pension assets institutions and improve the performance of asset management. Taking the development of enterprise annuities and occupational annuities as an opportunity, accelerate the construction and development of pension asset management institutions. Accelerate the establishment of a screening system for external managers of pension assets to establish a more open manager selection process, further reduce the concentration of the pension asset management market, and further diversify risks while ensuring benefits. Open pension asset management to foreign capital, and give full play to foreign institutions with experience and advantages in pension asset management and investment on the basis of strengthening supervision, to improve the development level of the pension asset management industry. Focus on strengthening the long-term assessment of pension management institutions to improve the incentive and restraint mechanism, promote the long-term investment behavior and continue to increase the proportion of equity investment. Establish and improve a market-based compensation mechanism that is compatible with pensions.