10.70711/frim.v3i8.6948

Analysis of the Current Situation and Countermeasures for Aging Finance in the Guangdong-Hong Kong-Macao Greater Bay Area

Mei Ge

City University of Macau

Abstract: As one of China's most economically vibrant and open regions, the Greater Bay Area (GBA) has seen its GDP surpass that of the New York and San Francisco Bay Areas, ranking among the top globally. However, with the accelerating aging population (the proportion of people aged 65 and above reaching 13.6%), aging finance has become a crucial tool to address pension challenges and achieve sustainable development.

This paper analyzes the current state of aging finance in the GBA. The nine mainland cities have established a system centered on pension finance, elderly care service finance, and elderly care industry finance, while Hong Kong and Macao rely on multi-pillar pension systems and market-oriented investment strategies. Additionally, the paper explores how the GBA enhances financial practices—such as economic security for the elderly, service accessibility, and resource allocation—through diversified financial products, cross-border collaboration, technology empowerment, and industrial integration. Nevertheless, aging finance in the GBA still faces four major challenges: insufficient policy and regulatory coordination, an imperfect pension system, structural imbalances in financial products, and uneven distribution of elderly care resources.

To address these issues, this paper proposes five strategic recommendations: improving the policy and regulatory framework by establishing cross-border coordination mechanisms and legal details; promoting product and service innovation by developing differentiated, fintech-enabled financial products; strengthening cross-border cooperation to facilitate capital flows and harmonize service standards; fostering market development and investor education to raise awareness of retirement planning; and optimizing the development environment by enhancing infrastructure and industrial integration. Through these measures, the GBA can build a multi-tiered, cross-regional aging finance ecosystem, providing financial support to tackle aging challenges while driving high-quality regional economic development.

Keywords: Greater Bay Area; Aging Finance; Pension System; Financial Innovation

Introduction

The Guangdong-Hong Kong-Macao Greater Bay Area (referred to as the "Greater Bay Area") consists of a "9+2" city cluster. As one of the most open and economically dynamic regions in China, its economic strength and development potential are exhibits significant. According to the "*Blue Book*: Annual Report on Guangdong-Hong Kong-Macao Greater Bay Area Construction (2024)" shows that by the end of 2023, the Greater Bay Area, covering 56, 000 square kilometers, had accommodated over 440, 000 newly permanent residents. Its total GDP exceeded 14 trillion RMB, accounting for approximately 11% of the national economy. On the global stage, the Greater Bay Area's GDP reached 14 trillion RMB (approximately 1.92 trillion USD), surpassing the New York Bay Area (1.8 trillion USD) and the San Francisco Bay Area (1.38 trillion USD). Along with the Tokyo Bay Area, it ranks first in the world in terms of total GDP [1].

From the perspectives of economic and resident wealth, the Greater Bay Area has emerged as one of the wealthiest regions in China. By the end of 2023, the per capita GDP of the Greater Bay Area reached 162, 000 RMB. Among these, the per capita GDP of the nine cities in Guangdong stood at 140, 000 RMB, while the per capita GDP of Hong Kong and Macao was significantly higher at 360, 000 RMB and 500, 000 RMB, respectively[2]. With the highly internationalized Special Administrative Regions of Hong Kong and Macao, along with economically powerful cities such as Guangzhou and Shenzhen, the Greater Bay Area has established a complete industrial chain and innovation ecosystem. It has also accumulated substantial resident wealth, laying a solid foundation for the innovative development of aging finance.

However, despite the rapid development of the Greater Bay Area, it also faces the significant challenge of population aging. By the end of 2024, the total population of the Greater Bay Area (including Hong Kong and Macao) is projected to be approximately 86.5 million, with the elderly population aged 65 and above expected to reach 11.8 million, accounting for 13.6% of the total population, which is close to the national average of 14.8%[3]. As the aging process continues to deepen, changes in the population structure will have a profound impact on various fields, including the Greater Bay Area's economic growth model and the provision of social public services. In this context, it is crucial to fully leverage the financial functions of capital flow and resource allocation, improve the aging financial security system, meet the diversified asset management needs of the elderly, and support the development of the elderly care industry. These actions will be key to addressing population aging and achieving sustainable development in the Greater Bay Area.

1. Current Development of Aging Finance in the Greater Bay Area

Aging finance refers to "financial support for elderly care," encompassing the full range of financial activities aimed at the diverse elderly care needs of society's members and cope with the challenges posed by an aging population. Due to the differences in financial and legal systems between the nine mainland cities of the Greater Bay Area and the two Special Administrative Regions of Hong Kong and Macao, there are notable differences in aging finance, which are explained in detail as follows:

1.1 Current Status of Aging Finance in the Mainland Cities of the Greater Bay Area

With the continuous deepening of elderly care reform, the nine mainland cities in the Greater Bay Area have gradually formed an aging finance system centered around pension finance, elderly care service finance, and elderly care industry finance.

1.1.1 Pension Finance

Pension finance refers to a series of financial activities designed to reserve institutionalized pensions. The focus of these activities is on institutional pension assets, with the goal of both accumulating pension assets and achieving the maintaining and appreciation of these assets through institutional arrangements[4]. Currently, the nine mainland cities in the Greater Bay Area have established a pension finance system supported by three main pillars. The first pillar consists of basic elderly care insurance, initiated by the Ministry of Human Resources and Social Security. This system is funded through contributions from the government, enterprises, and individuals. It includes both urban employee basic elderly care insurance and rural -urban resident basic elderly care insurance. It aims to protect the basic living needs of most retired people and is mandatory. The second pillar involves occupational pensions, which are voluntarily initiated by enterprises and employers. These include enterprise annuities and occupational annuities. The contributions are shared between enterprises and employees, and the fund enjoys national tax exemptions and can be managed in the market. As a supplement to the first pillar, occupational annuities have become an important welfare system for enterprises to attract talent. The third pillar is made up of personal pensions, which are individually led. This includes saving annuity plans, commercial elderly care insurance, tax-deferred elderly care insurance, and public offering elderly care funds. This pillar serves as a supplementary elderly care system for informal employment groups[5].

1.1.2 Elderly Care Service Finance

Elderly care service finance refers to the financial services provided by financial institutions related to investment, wealth management, consumption, and other needs associated with the elderly care of social members, other than institutionalized pensions. Together with pension finance forms the economic security of the elderly care finance system[6]. Elderly care service finance consists mainly of two components: first, non-institutionalized elderly care wealth management services, which aim to maximize the elderly care returns over an individual's or family's entire lifecycle. Non-institutionalized elderly care and wealth management not only focuses on the practice of accumulating wealth but also explores innovative forms of elderly care asset management and consumption. Products include reverse mortgage elderly care insurance for the elderly from the insurance industry, elderly care trust products from the trust industry, and elderly care target funds from the fund industry. The second is convenience support for elderly care finance, which refers to the use of technology to streamline the channels for elderly care service financial information. The goal is to meet the diverse elderly care finance service needs of people across different age groups. Products include various innovative software and hardware facilities[7].

1.1.3 Elderly Care Industry Finance

Elderly care industry finance refers to the financial activities that use financial means to support the investment and financing of the elderly care industry. It utilizes capital to reorganize social resources with the goal of elderly care services. Expand the industry layout through corporate mergers and acquisitions, brand implantation and operation promotion, and finally obtain capital premium through corporate listing[8]. The industry involves many sectors, including manufacturing, tourism, real estate, healthcare, and there is a huge demand for investment and financing. At the same time, due to the typical characteristics of the elderly care industry, which generally involves large investment and long payback periods, there is a prominent issue of capital shortages, making it urgent for financial instruments to be introduced and supported.

1.2 The Current Situation of Aging Finance in Hong Kong and Macao

1.2.1 Aging Finance in Hong Kong

Hong Kong has developed a unique multi-pillar pension system, which differs from traditional models. The first pillar relies on the government's Comprehensive Social Security Assistance Scheme and the Public Welfare Fund Scheme. The former helps economically disadvantaged groups, while the latter provides cash support to eligible elderly individuals to secure their basic living needs through various allowances, such as the elderly allowance and the elderly living allowance. The second pillar is centered on the Mandatory Provident Fund Scheme, with an asset size of over HK$1.4 trillion at the end of 2023, covering three categories: trust plans, employer-sponsored schemes, and industry schemes, along with voluntary occupational retirement plans, which form a parallel or complementary relationship. Additionally, there are specific pension plans for certain civil servant groups. The third pillar consists of private voluntary retirement savings plans, which include the HKMC Annuity Plan, Reverse Mortgage Programme, Qualifying Annuity Premiums, Tax Deductible Voluntary Contributions and Silver Bonds. Among these, the tax-deductible voluntary contributions supplement the MPF System, and the investment options are similar to those in the MPF constituent funds[9].

Hong Kong's pension investment strategy reflects a combination of “government protection + market-driven + individual flexibility.” Public pensions rely on the government budget and do not engage in market-based investments. In contrast, the MPF System has a high equity allocation, followed by bonds, deposits, and cash. Participants can either select from six constituent funds and determine their own investment proportions or invest in mixed-asset funds based on preset investment strategies.

1.2.2 Aging Finance in Macao

The Aging system in Macao is structured around a dual-tier pension system. The first tier is the social security system, which provides eligible residents with basic elderly care benefits resembling a lifetime annuity, offering monthly pension payments. The second tier, the Central Provident Fund system, has been implemented on a non-compulsory since 2018. This system allows employers to voluntarily establish the plans, with employees choosing to participate. Contributions are based on the basic salary, with a contribution rate set at 5%. Additionally, the review report on the non-compulsory central provident fund system, compiled by the Macao Social Security Fund in 2021, recommends transitioning the current voluntary scheme to a compulsory one by 2026 or 2028[10].

In terms of pension management, the Macao SAR government actively encourages fund management entities to enrich the type of retirement fund products, providing residents with more choices with varying risk levels. The number of retirement funds has increased from 39 in 2018 to 42. These funds are strictly regulated by the Monetary Authority of Macao, which oversees management regulations and supervises the operation of management entities and retirement funds. Regarding the allocation of elderly care resources, the SAR government has invested substantial resources to integrate the two tiers of the system, allowing residents to utilize elderly care resources flexibly. For example, the first tier provides basic protection, while the second tier allows for one-time withdrawals, meeting diverse elderly care needs.

In general, both Hong Kong and Macao’s aging finance systems are continuously developing and improving. Hong Kong’s multi-pillar Aging system is relatively mature, while Macao’s aging security system is gradually advancing. The Central Provident Fund system is transitioning from non-compulsory to compulsory and is expected to make further progress in the aging finance field in the future.

2. Development and Practice of Aging Finance in the Greater Bay Area

The development of aging finance in the Greater Bay Area has made significant progress over the past few years, with achievements in three main areas:

2.1 Strengthening the economic security foundation and improving pension stability

The diversification of financial products has expanded the channels for pension accumulation. The Greater Bay Area has continually enhanced its offering of elderly care -related financial products, such as wealth management, specialized commercial insurance, and targeted savings. By the end of 2024, the number of personal pension accounts in Guangdong exceeded 18 million, with a total of 16 billion RMB accumulated for 122, 000 individuals, thereby building a multi-layered economic reserve system for the elderly. Moreover, cross-border aging financial cooperation has been strengthened, facilitating more efficient fund allocation[11]. With the policy collaboration among Guangdong, Hong Kong, and Macao, projects such as the "Residential Care Services Scheme in Guangdong" in Hong Kong have been expanded, accelerating the "cross-border elderly care " process for Hong Kong and Macao residents. This not only reduces the cost of capital allocation for elderly residents from Hong Kong and Macao but also enables them to access the abundant elderly care resources in the mainland of the Greater Bay Area, allows for more economical investments to access higher-quality elderly care services.

2.2 Promote the upgrading of financial services and enhance convenience for the elderly

In terms of age-friendly service transformation, cities across the Greater Bay Area have taken actively action. Taking Shenzhen as an example, the first batch of 684 "Smart Elderly Assistance E-Station" outlets has been completed, along with the barrier-free transformation of 1, 517 business outlets. Additionally, the aging-friendly upgrades of mobile banking and internet banking have been promoted. Over 1.1 million "Yinian Cards" have been issued, covering 90% of the elderly in Shenzhen, enabling convenient services such as automatic application for elderly subsidies and online authentication [12]. In the area of technological empowerment, the extensive application of financial technology has significantly enhanced service experiences. Through big data, the financial needs and risk preferences of the elderly are accurately analyzed to customize personalized elderly care financial products for them. With the help of artificial intelligence customer service systems, elderly individuals can access financial consulting services at any time, and perform online operations for pension management, product purchases, and other services.

2.3 Deepen industrial integration and innovation, and enrich the supply of elderly care services

In the field of integrated medical and elderly care development, collaboration between the financial sector and the healthcare and elderly care industries has been continuously strengthened. Eight insurance institutions have invested in 21 elderly community projects in Guangdong, with a total investment of 24.352 billion RMB. This has strongly promoted the practice of the medical and elderly care integration model, providing elderly individuals with comprehensive services that combine medical care, rehabilitation, and long-term care, thus meeting their diverse needs for health management, disease treatment, and daily care [13]. In terms of optimizing services at elderly care institutions, financial institutions have supported the enhancement of these facilities through financing assistance. For example, the People's Bank of China Foshan Branch guided financial institutions to utilize the inclusive special re-lending policy, providing an 8.5 million RMB preferential interest loan to Shunde District and Tai'an Nursing Center. This support enabled the purchase of medical equipment and made age-friendly modifications, while also successfully integrating these services into Hong Kong's "Residential Care Services Scheme in Guangdong", further enhancing cross-border elderly care services[14].

3. Challenges in Aging Finance in the Greater Bay Area

In recent years, elderly care finance services in the Greater Bay Area have developed rapidly, accumulating substantial experience in industry practices and regional exploration. However, from the perspective of actual business scale and coverage, there remains a considerable gap between the current status of the elderly care financial market and its anticipated objectives. At the same time, as the population structure undergoes profound adjustments, the aging process in the Greater Bay Area is accelerating, and the degree of aging is intensifying. Consequently, the demand for elderly care security, asset management, and elderly services is becoming increasingly pronounced. In this context, aging finance has emerged as a national strategic focus. Its development is not only crucial for the well-being of citizens but also for the sustainable development of the regional economy. A comprehensive analysis of the existing issues in the Greater Bay Area's aging finance, coupled with the accurate identification of development bottlenecks, holds significant practical and strategic value for advancing the aging finance system, improving the quality of regional elderly care services, and effectively addressing the aging crisis.

3.1 Lack of coordination in policies and regulations

The Guangdong-Hong Kong-Macao Greater Bay Area consists of three regions with distinct legal and financial systems, resulting in significant difference in policies and regulations. This difference has become a core obstacle to the integrated development of aging finance. On the one hand, institutional barriers make it difficult to implement unified aging financial products. Cross-border financial asset allocation faces investment restrictions, income volatility, and high conversion costs, along with a lack of effective mechanisms for protecting investors' rights. On the other hand, in key areas such as cross-border data flow and mutual recognition of elderly care service qualifications, there is no unified standard, which directly limits the efficiency and quality of cross-border aging financial services.

3.2 The pension system is incomplete

The pension system in the Greater Bay Area exhibits structural weaknesses. The development of the third pillar is slow, and the personal pension system remains insufficiently developed. Furthermore, residents exhibit limited awareness of planning, and a lack of initiative in participating. At the same time, there are significant differences between domestic and foreign financial markets, particularly in terms of institutional rules and openness. The mechanism for cross-border connectivity remains underdeveloped, restricting residents' ability to allocate aging financial products across borders, resulting in high transaction costs and difficulties in achieving optimal asset allocation.

3.3 Structural imbalance in the supply of financial products

Currently, there is a mismatch between the supply of aging financial products in the Greater Bay Area and the diverse needs of the population. Although the variety of products is gradually expanding, there is a significant shortage of innovative and comprehensive products, with traditional products, such as bank wealth management and insurance annuities, still dominating. Some complex products have unattractive yields, failing to stimulate market activity and unable to meet the personalized investment needs of individuals with varying income levels and risk preferences.

3.4 The allocation of elderly care service resources is imbalanced

In the Greater Bay Area, a significant mismatch exists between the supply and demand for elderly care services, demonstrating a structural imbalance. As the needs of the elderly population shift towards more diverse areas, such as daily care, healthcare, cultural and entertainment activities, and emotional support, existing elderly care service resources are struggling to meet these demands in terms of quantity, quality, and distribution. The uneven distribution of resources is further exacerbated by disparities in economic development, infrastructure progress, and the stage of elderly care industry development across regions, leading to an inability to satisfy the urgent demand for high-quality and diverse elderly care services.

4. Research on Development Strategies for Aging Finance in the Greater Bay Area

By analyzing the shortcomings in the development practices of aging finance in the Greater Bay Area, this article proposes the following strategic recommendations for its development.

4.1 Improve the policy, legislation, and system

Policy coordination and system innovation are the foundational guarantees for the development of aging finance in the Greater Bay Area. First, Guangdong, Hong Kong, and Macao should establish a regularized policy coordination mechanism to address issues such as the lack of uniform financial supervision standards and cross-border policy barriers, promoting mutual recognition and connectivity of financial products and services, and reducing cross-border investment costs. Second, accelerate the improvement of relevant laws and regulations, formulate detailed implementation rules for key areas such as cross-border data flow, the establishment of elderly care institutions, and handling cross-border financial disputes. These rules should clarify the rights and obligations of governments, financial institutions, and investors, providing a solid legal foundation for the healthy development of the aging finance market.

4.2 Promote Innovation in Aging Financial Products and Services

Product innovation is the core path to meeting the diverse elderly care needs. On the one hand, financial institutions should be encouraged to develop differentiated products: introducing tax-advantaged products, such as personal pension accounts that allow for individual income tax deductions; and establishing a "universal + customized" dual-track model that covers groups with different income levels and risk preferences. On the other hand, relying on financial technology to empower service upgrades: creating digital platforms to provide online services such as account management, investment consulting, and insurance claims; utilizing artificial intelligence and big data technology to offer personalized elderly care planning and asset allocation solutions. Additionally, exploring integrated models such as "insurance + elderly care communities" and "insurance + health management" to construct a full-chain elderly care service system.

4.3 Strengthening Cross-Border Aging Finance Cooperation

Cross-border collaboration is a unique advantage for aging finance in the Greater Bay Area. In terms of capital flow, it is important to deepen the financial market connectivity between Guangdong, Hong Kong, and Macao, expand the scale of cross-border wealth management services, relax restrictions on Hong Kong and Macao residents' participation in the mainland's individual pension system, and facilitate mainland residents' investment in aging financial products from Hong Kong and Macao. In terms of service integration, establish a unified elderly care service standard and a cross-border medical settlement mechanism, promote high-quality elderly care institutions from Hong Kong and Macao to set up branches in the mainland, realize the cross-regional sharing of elderly care service resources and creating an integrated elderly care service network in the Greater Bay Area.

4.4 Strengthening Aging Finance Market Development and Investor Education

Market development and capacity building are key to the sustainable growth of the industry. On the one hand, it is essential to support financial institutions in establishing specialized aging finance agencies, enhance professional talent training, and attract social capital to participate, creating a diversified market competition landscape. On the other hand, a multi-level investor education system should be established: designing differentiated educational content for various age groups and cultural backgrounds and promoting aging finance knowledge through a combination of online and offline methods. This will raise residents' awareness of planning and improve their ability to identify risks, guiding them towards rational investment.

4.5 Optimizing the Development Environment for Aging Finance

Optimizing the environment is a crucial support for the coordinated development of industry. In terms of infrastructure, it is important to increase investments in elderly care institutions, healthcare facilities, transportation networks, and other basic infrastructure to improve the living conditions for the elderly. At the same time, financial infrastructure should be upgraded to enhance services such as payment clearing, credit rating, and information disclosure. In terms of industrial integration, promote the deep integration of elderly care finance with industries such as culture and tourism, education, and healthcare. Develop innovative models such as cross-border migratory bird-style elderly care and silver-hair tourism routes. Organize the Guangdong-Hong Kong-Macao elderly consumer festival, foster new growth points in the silver economy, and achieve coordinated development between aging finance and the real economy.

References

[1][2]Zhang, X. P. (2024). A Review of Research on Elderly Care Services in the Guangdong-Hong Kong-Macao Greater Bay Area. Social Science Frontiers, 13(5), 1-7.

[3] Guangdong Provincial Bureau of Statistics. (2024). Statistical Communiqué of Guangdong Province on the 2023 National Economic and Social Development.

[4] Zheng, B. W. (2023). "The Three-Pillar Pension Reform in China and Its Interaction with Capital Markets." Economic Research Journal, 58(4), 112-128.

[5] Zhongyi Gong, Mei Ge, 2024, Does Fiscal Expenditure Contribute to Increasing Fertility Intentions of Rural Households? Finance Research Letters, 63(C), 1-8.

[6] Ekerdt, D. J. (2020). "The Business of Ageing: Financialization and the Elderly". Ageing & Society, 40(8), 1773-1795.

[7][8]Sun, B., & Dong, K. Y. (2022). "Elderly Care Finance in China: Connotation, Challenges, and Pathways." Insurance Studies, (5), 3-15.

[9] Census and Statistics Department, Hong Kong Special Administrative Region Government. (2024). Hong Kong's Economic Situation in 2023 and Gross Domestic Product.

[10] Statistics and Census Service, Macao Special Administrative Region Government. (2024). Macao Economic Report 2023.

[11][12]Department of Human Resources and Social Security of Guangdong Province. (2025). 2024 Guangdong Provincial Individual Pension System Operation Report.

[13] Chen, X., & Wang, Y. "Integrated Care for the Elderly: How Financial Institutions Bridge Medical and Nursing Gaps in China". *Health Policy and Planning*, (2025). 40(3), 321-335.

[14] Research Bureau of the People's Bank of China. (2024). "The Effectiveness of Structural Monetary Policy Tools in the Elderly Care Sector—An Analysis Based on Guangdong's Inclusive Elderly Care Relending Data." *China Finance*, (15), 34-37.