

Divergent Impacts of Mental Accounting on Retirement Investment Decisions: A Comparative Analysis in Eastern and Western Market Contexts

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Abstract: This paper reviews the literature to compare the impact of mental accounting on retirement investment in Eastern and Western markets, revealing how cultural values, institutional design, and behavioral economics interact to shape distinct investment behaviors. The study finds that Eastern markets, influenced by collectivist cultures, tend to favor low-risk instruments such as savings and real estate. While this approach ensures short-term security, it often lacks sufficient long-term returns. In contrast, Western markets, driven by individualistic values, encourage diversified investment strategies, including stocks and mutual funds. However, these strategies are exposed to higher volatility and market risks. By applying mental accounting theory, this paper proposes culturally adaptive optimization strategies to balance risk and return, enhancing retirement investment efficiency across different market contexts. The findings offer valuable insights for policymakers, financial institutions, and product designers, suggesting that a hybrid approach integrating the strengths of both market paradigms may help improve long-term retirement security.

Keywords: Mental Accounting, Retirement Investment, East-West Market Comparison, Behavioral Economics

1. Introduction

As the global aging process accelerates, retirement investment has become a central issue in personal financial planning. Retirement investment is influenced not only by economic environments and institutional arrangements but also significantly driven by investors' psychological factors [1]. In this context, mental accounting theory, proposed by Richard Thaler, offers a unique perspective for analyzing individual retirement investment behaviors. This theory emphasizes that individuals tend to categorize their funds into distinct accounts during financial decision-making, assigning non-fungible characteristics to them. This cognitive mechanism significantly impacts risk preferences, fund allocation, and saving behaviors [2]. In the realm of retirement investment, the role of mental accounting is particularly pronounced, investors may view pension savings as separate from other investments, adopting different risk preferences and investment strategies [3]. This investor behavior exhibits certain differences between Eastern and Western markets, which have notable distinctions in the construction of pension systems and investment behavior orientations [4]. In Eastern markets, such as China, the pension system has long relied on family intergenerational support and government-led basic pension insurance,

emphasizing savings priority and risk aversion. Conversely, Western developed countries, represented by the United States, primarily adopt market-based pension plans, encouraging individuals to achieve wealth appreciation through diversified investments, with a stronger willingness to bear risks. Meanwhile, differences in cultural values further exacerbate the divergence in mental accounting, leading to markedly different characteristics in residents' choices of pension products, risk tolerance, and investment horizon preferences.

Existing literature has explored the relationship between mental accounting and retirement investment. For instance, Liu discovered that Chinese individuals' pension insurance contribution behaviors are significantly influenced by the "income source segregation" effect of mental accounting [5]. Wang and Gao pointed out that financial institutions can design pension financial products that better meet local needs through the mental accounting framework [3]. Lusardi and Mitchell confirmed the effectiveness of the "goal-driven" mechanism of mental accounting in Western pension systems [6]. However, most existing studies focus on a single cultural or market environment, lacking systematic discussion on the differences between Eastern and Western markets. Especially in the field of retirement investment, the operation modes of mental accounting under different cultural backgrounds may diverge due to variations in social structures, institutional arrangements, and values—a disparity that has not been fully revealed.

This paper aims to explore how mental accounting influences retirement investment behaviors in different market environments and to compare the differences between Eastern and Western markets in this field. By reviewing relevant literature and theories, we analyze the core mechanisms of mental accounting in retirement investment and discuss its performance characteristics under different market backgrounds. By comparing the operational modes of mental accounting in Eastern and Western markets, this paper not only helps to understand investors' behavioral biases but also provides recommendations for policymakers and financial institutions to better promote the sustainable development of pension finance.

2. Concepts and Theoretical Foundations

2.1. Concepts and Theories Related to Mental Accounting

Mental Accounting is a core concept in behavioral economics, first introduced by Richard Thaler in 1985. This theory posits that individuals do not treat all funds as a completely interchangeable whole when making economic decisions. Instead, they categorize money into different "accounts" based on factors such as source, intended use, or psychological classification, assigning varying values and risk preferences to each account [2]. This irrational categorization mechanism significantly influences individuals' consumption, saving, and investment behaviors, particularly in long-term financial planning. Mental accounting has three main characteristics: non-fungibility, goal orientation, and emotional attachment.

In terms of classification, mental accounts can be divided into three categories: income accounts (e.g., salaries, bonuses), expenditure accounts (e.g., daily expenses, medical costs), and savings and investment accounts (e.g., retirement savings, stock investments) [4]. In investment decision-making, mental accounting operates through mechanisms such as fund segmentation and risk preference (dividing funds into "safe accounts" and "risky accounts"), time bias and goal setting (associating with specific time-bound objectives), and loss aversion and framing effects (intensifying loss aversion, affecting risk tolerance) [7]. These mechanisms collectively shape individuals' financial behaviors, especially in long-term planning like retirement investments.

2.2. Concepts and Tools Related to Retirement Investment

Retirement investment refers to the financial planning and asset allocation activities undertaken by individuals or households to meet post-retirement living needs. Its core objective is to ensure a stable standard of living after retirement through long-term savings and investments. With the intensifying global aging trend, the importance of retirement investment has become increasingly prominent [8]. The primary tools for retirement investment can be categorized into four types: basic pension insurance, corporate annuities, personal savings and investments, and commercial pension insurance. These tools exhibit significant differences between Eastern and Western markets; for example, Eastern markets often rely more on personal savings and real estate, while Western markets emphasize corporate annuities and diversified investments. Retirement investment behaviors are influenced by multiple factors: economic factors such as income levels and asset scales; psychological factors including risk preferences and time preferences; and institutional and cultural factors encompassing social security systems and family support models [9].

2.3. Introduction and Comparison of Eastern and Western Markets

Eastern and Western markets exhibit significant differences in economic development stages and financial systems. Eastern markets, exemplified by China, are often at the emerging economy stage, with relatively underdeveloped financial markets. A government-led economic development model has shaped a bank-centric indirect financing system, where capital markets play a subordinate role in resource allocation. Individual investors generally lack professional financial knowledge and have low risk tolerance, leading to a defensive asset allocation centered on savings deposits. In contrast, Western markets, represented by the United States, have highly mature financial systems, establishing an ecological pattern where multi-level capital markets and diversified investment channels coexist. These markets offer a rich variety of financial products and diverse investment avenues. Individual investors tend to exhibit professionalization and instrumental rationality, favoring diversified investments to achieve wealth appreciation [10].

In terms of pension systems, Eastern markets primarily rely on government-led basic pension insurance, which often has a low replacement rate. At the same time, family intergenerational support remains a significant component of retirement planning, leading to weaker demand for market-based pension products. Individuals tend to rely on personal savings and real estate investments as retirement reserves, while the coverage rate of commercial pension insurance is relatively low [11]. In contrast, Western markets have established multi-pillar pension systems, including social security, employer-sponsored retirement plans, and individual retirement accounts, with a higher coverage rate of commercial pension insurance (See Fig. 1). Governments encourage individual participation in market-based retirement investments through policies such as tax incentives, prompting individuals to diversify their retirement reserves.

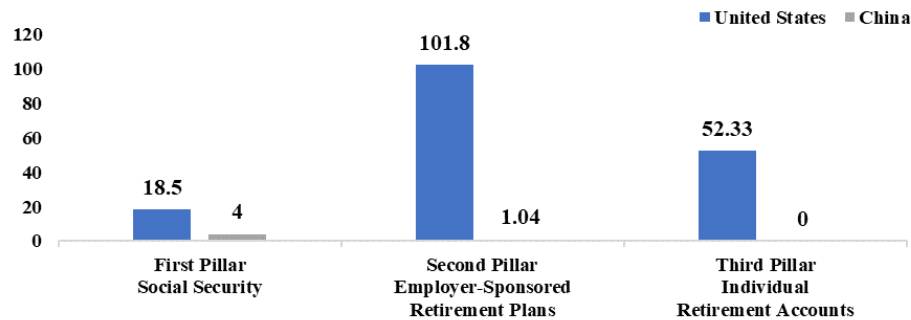


Figure 1: Comparison of the sources of retirement reserves between China and the United States (trillions of Yuan).

These market differences directly influence retirement investment behaviors. In Eastern markets, retirement funds are often allocated to “family accounts” or “responsibility accounts”, leading individuals to prefer low-risk, principal-protected investments, they are highly risk averse, primarily relying on savings and real estate. Conversely, in Western markets, retirement funds are typically allocated to “self-security accounts”, with investors exhibiting higher risk tolerance and a preference for high-risk, high-return products, resulting in more market-oriented retirement reserves [12]. Cultural factors also play a crucial role; Eastern societies emphasize family intergenerational support, weakening the demand for market-based pension products, while Western societies promote individual autonomy in retirement investments through policy incentives, fostering the development of commercial pension insurance and capital markets.

3. Comparison of Mental Accounting Manifestations and Impacts in Retirement Investment

3.1. Fund Segmentation and Risk Preference

In Eastern markets, exemplified by China, mental accounting significantly influences the segmentation of retirement funds and risk preferences, reflecting distinct cultural and institutional characteristics. Chinese households tend to categorize retirement funds into “family responsibility accounts” or “safety savings accounts”, rather than fully individualized investment accounts [4]. Existing research based on mental accounting theory has found that Chinese residents generally view real estate as the core asset for retirement reserves, believing it possesses both residential and wealth-preserving attributes. This choice is closely related to the “rigid expenditure account” characteristic of mental accounting. Additionally, influenced by Confucian culture, retirement funds are often seen as an extension of intergenerational support, leading individuals to prefer low-risk, less liquid savings instruments (such as bank deposits or government bonds) to mitigate the impact of market fluctuations on the overall financial security of the family [13]. However, this conservative strategy may result in insufficient long-term returns, especially in the context of an aging population, making it challenging to cope with inflation and rising medical expenses.

In Western markets, exemplified by the United States, mental accounting influences the segmentation of retirement funds and risk preferences, reflecting a strong individualistic orientation and market-driven characteristics. For instance, participants in U.S. 401(k) plans often allocate their investments into “safety layers” (such as bonds) and “growth layers” (such as stocks) to align with varying risk tolerances throughout different life stages [14]. Behavioral finance research indicates that when retirement investments are designated as “long-term growth accounts”, individuals are more inclined to accept short-term volatility. Moreover, Western culture’s emphasis on

individualism and self-reliance leads to retirement funds being categorized into “self-insurance accounts”, with wealth accumulation pursued through higher-risk assets [15]. For example, U.S. residents typically allocate over 50% of their 401(k) accounts to equities (See Figure 2). However, this strategy can also introduce vulnerabilities in retirement savings; during the 2008 financial crisis, many near-retirees experienced substantial declines in their account values, highlighting the complex relationship between mental accounting classifications and market risk.

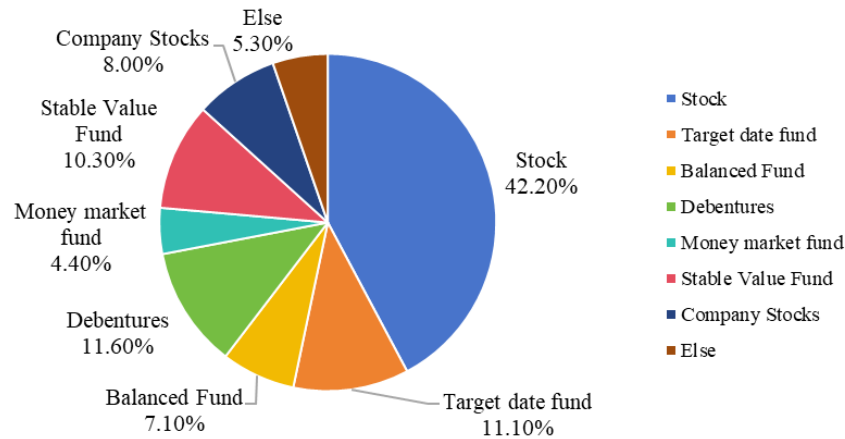


Figure 2: U.S. 401(k) Asset Allocation Structure.

3.2. Temporal Bias and Goal Setting

In Eastern markets, exemplified by China, temporal biases within mental accounting manifest as an overemphasis on short-term financial objectives and insufficient long-term retirement planning. Influenced by traditional cultural values such as “living within one’s means” and intergenerational support, Chinese families often consider retirement savings as part of the family account rather than individualized long-term investment goals. Consequently, Chinese residents prefer securing retirement reserves through purchasing real estate or maintaining savings deposits, which provide immediate, tangible security but may lack substantial long-term appreciation potential [4]. From a behavioral economics perspective, this temporal bias also leads to “myopic decision-making”. For instance, although younger individuals recognize the importance of retirement planning, the perceived remoteness of retirement often results in procrastination of actual planning activities. As illustrated in Fig. 3, less than 10% of Chinese individuals born in the 1990s have established retirement plans, highlighting the challenge individuals face in bridging the gap between temporal preferences and goal setting.

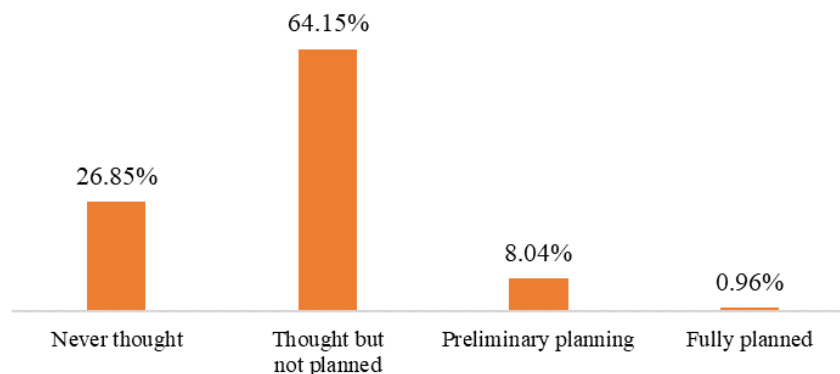


Figure 3: Post-90s retirement planning in China.

In Western markets, exemplified by the United States, temporal biases in mental accounting are characterized by systematic planning for long-term goals, though there may be an overreliance on default options, potentially neglecting the need for dynamic adjustments. The U.S. 401(k) plan utilizes Qualified Default Investment Alternatives (QDIAs) to automatically allocate funds into target-date funds, which gradually reduce equity exposure as the retirement date approaches, thereby simplifying individuals' long-term decision-making processes [14]. Additionally, the Pension Protection Act encourages retirement savings by linking them with wage accounts through tax incentives and automatic enrollment mechanisms (See Figure 4), effectively integrating retirement funds into a “future self-account”, thus mitigating immediate consumption impulses [16]. However, this strategy has limitations; during the 2008 financial crisis, many individuals nearing retirement experienced significant declines in their account values due to high-risk asset allocations, exposing the vulnerabilities of static goal setting amid market volatility.

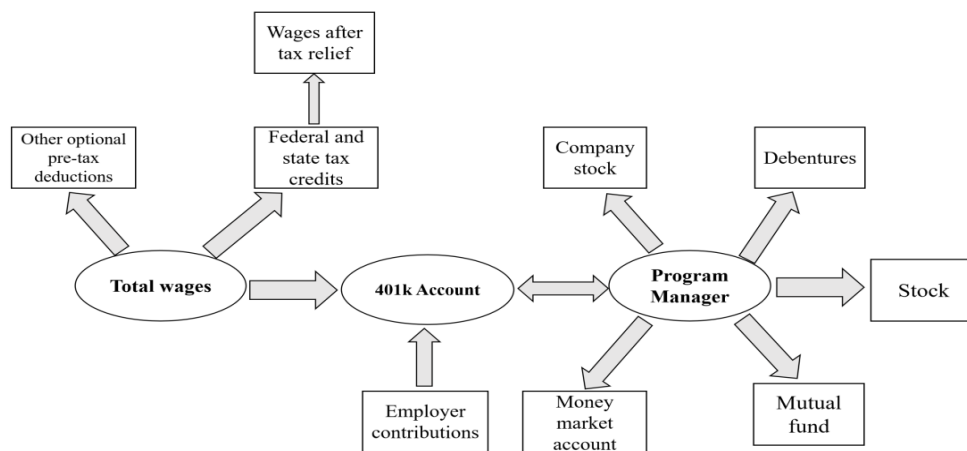


Figure 4: U.S. 401k Plan Operating Model.

3.3. Loss Aversion and Framing Effects

In Eastern markets, exemplified by China, loss aversion and framing effects significantly influence retirement investment behaviors. Investors commonly exhibit a pronounced loss aversion tendency, meaning they are more sensitive to potential losses than they are satisfied with equivalent gains [17]. Consequently, Chinese households prefer low-risk financial products like bank deposits, government bonds, and annuity insurance to avoid potential capital losses. This preference aligns with the “safety account” characteristic in mental accounting, where retirement funds are strictly confined to low-risk categories to ensure principal security. Framing effects further reinforce this behavior; when retirement investments are framed as “securing retirement life” rather than “wealth appreciation”, individuals are more inclined to choose low-risk products. Additionally, the “family responsibility” framework in Eastern cultures exacerbates loss aversion, as retirement funds are often viewed as family assets rather than individual financial goals, limiting the selection of high-risk assets [3]. However, this conservative approach may lead to insufficient long-term returns. Statistics indicate that in Chinese household financial asset allocations, high-risk financial products account for less than 15%, while deposits and cash savings still exceed 50% (see Figure 5).

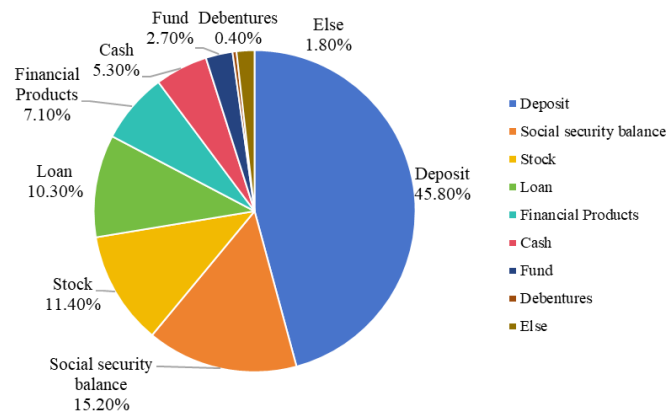


Figure 5: Structure of financial asset allocation of Chinese households.

In Western markets, exemplified by the United States, loss aversion and framing effects influence retirement investment behaviors differently. Although Western investors also exhibit loss aversion, they generally have a higher risk tolerance and prefer to diversify investments to mitigate risks. Framing effects are systematically applied through institutional designs; for example, the U.S. Pension Protection Act links retirement savings with wage accounts, encouraging individuals to categorize funds into a “future self-account” thereby reducing immediate consumption impulses [16]. However, overreliance on high-risk assets can render retirement savings vulnerable. In recent years, relevant institutions have proposed “dynamic rebalancing” strategies, encouraging adjustments to asset allocations based on market conditions to mitigate the negative impacts of loss aversion and framing effects.

3.4. Comparative Analysis

The impact of mental accounting on retirement investment shows significant differences in Eastern and Western markets, mainly stemming from the interaction of cultural values, institutional design and behavioral characteristics. In Eastern markets, exemplified by China, collectivist cultures emphasize family responsibility and intergenerational support, leading individuals to categorize retirement funds into “family responsibility accounts” or “safety savings accounts”. This categorization results in a preference for low-risk instruments, such as real estate and savings deposits, to avoid principal loss [5]. This strong loss aversion tendency aligns with the “rigid expenditure” characteristic of mental accounting but may lead to insufficient long-term returns, making it challenging to cope with inflation and rising medical expenses amid an aging population [17]. In contrast, Western markets, exemplified by the United States, are influenced by individualistic cultures that promote the formation of “self-insurance accounts”. Retirement investments are directed towards wealth appreciation through diversified financial instruments, including stocks and mutual funds. Although Western investors also exhibit loss aversion, they generally possess a higher risk tolerance. Through institutional designs, such as 401(k) plans and default investment options, simplify long-term decision-making processes. However, an overreliance on high-risk assets can render retirement savings vulnerable. Regarding institutional designs, Eastern markets predominantly rely on government-led basic pension insurance with low replacement rates, heavily depending on family intergenerational support [14]. In contrast, Western markets implement multi-pillar systems and policies that encourage long-term investments. Concerning time preferences, Eastern markets exhibit “short-sighted biases”, with younger populations delaying retirement planning. Conversely, Western markets utilize target-date funds

and other default options to reinforce long-term goal anchoring, although this approach may overlook the need for flexibility [18].

4. Recommendations

To optimize retirement investment behaviors, Eastern and Western markets should adopt differentiated strategies that align with their respective cultural backgrounds and institutional characteristics (see Table 1). In Eastern markets, policy measures should expand the scope of tax incentives for the third pillar of the pension system (such as tax-deferred commercial pension insurance) to enhance replacement rates. Additionally, introducing loss compensation mechanisms and designing “principal-protected floating return” hybrid products can help balance security and return needs, mitigating loss aversion tendencies [16]. In terms of financial education, Eastern markets can utilize visualization tools to enhance the concreteness of long-term goals and integrate traditional cultural elements by introducing “family joint accounts” allowing family members to co-plan retirement funds and alleviating the conflict between family responsibility and individual savings. For Western markets, default investment options could incorporate “dynamic rebalancing” mechanisms to adjust asset allocation based on market conditions, and volatility buffer mechanisms could be introduced to mitigate the impact of market fluctuations. Furthermore, leveraging artificial intelligence for personalized risk alerts can enhance investors’ proactive management awareness. In response to diverse immigrant backgrounds, Western markets should offer multilingual and culturally adapted retirement planning services. Regarding cross-market collaboration, Eastern markets could incorporate the “automatic contribution + default investment” model while integrating it with family joint accounts to optimize institutional design, whereas Western markets could explore the integration of real assets and financial instruments to enhance liquidity protection for retirement assets [15]. Implementing these strategies can provide solutions that are both culturally adaptive and institutionally innovative to address the global challenges posed by aging populations.

Table 1: Differences and Recommendations for Retirement Investment Mental Accounts in Eastern and Western Markets

	Eastern Market	Western Market	Recommendations
Cultural Values	Collectivism, family responsibility accounts dominant	Individualism, self-insurance accounts dominant	Eastern: Strengthen family joint accounts; Western: Balance personal responsibility and social support
Loss Aversion	Strong	Weak	Eastern: Introduce loss compensation mechanisms; Western: Introduce volatility buffering mechanisms
Risk Preference	Low risk	High risk	Eastern: Develop hybrid products; Western: Implement dynamic rebalancing mechanisms
Time Preference	Short-term decision-making, delayed planning	Long-term goal anchoring	Eastern: Use visualization tools and education; Western: Enhance flexibility through intelligent investment advisory
Institutional Design	Government-led, family support model	Multi-pillar system, tax incentives	Eastern: Increase third-pillar contribution limits; Western: Optimize crisis response mechanisms

5. Conclusion

This study compares the impact of mental accounting on retirement investments in Eastern and Western markets, revealing how the complex interplay of cultural values, institutional design, and behavioral economics shapes differentiated retirement investment behaviors. In Eastern markets, collectivist cultures and a focus on family responsibilities often categorize retirement funds into “family accounts” or “safe savings accounts”, relying on low-risk instruments (such as real estate and savings deposits). While this approach ensures short-term security, it faces challenges of inadequate long-term returns and inflationary pressures. Conversely, in Western markets, individualistic cultures and market-oriented systems drive retirement funds toward “self-insurance accounts”, seeking wealth appreciation through diversified financial instruments (such as stocks and mutual funds). However, an overreliance on high-risk assets may exacerbate the vulnerability of retirement savings. The “non-fungibility” and “loss aversion” characteristics of mental accounting manifest as conservative strategies and risk preferences in Eastern and Western contexts, respectively, while temporal biases, through “myopic decision-making” and “long-term goal anchoring”, further differentiate retirement planning behaviors between the two regions.

Although this paper provides a preliminary analytical framework for cross-cultural comparison, it primarily focuses on case studies from China and the United States, which may not fully represent the characteristics of the entire Eastern and Western markets. Additionally, the research relies mainly on secondary data and literature analysis, making it challenging to quantify the independent effects of related factors. Future research could delve deeper in the following directions: first, conducting cross-cultural controlled experiments to quantify the impact of cultural values on mental accounting classifications, such as comparing the dynamic changes in retirement investment behaviors among immigrant groups in their countries of origin and destination; second, leveraging artificial intelligence and big data technologies to develop personalized retirement planning tools, such as dynamically matching users’ risk preferences with their life cycle stages through algorithms to optimize asset allocation strategies; third, constructing macroeconomic models that incorporate mental accounting factors to predict the long-term effects of various policy tools (such as tax incentives and default investment mechanisms) on the supply and demand of retirement funds in aging societies. Moreover, policy practices should balance institutional innovation with cultural adaptability, promoting the standardization and localization of retirement financial products and services through global cooperation and experience sharing, thereby providing more resilient solutions to address the challenges of aging populations.

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