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U.S. Pension Finance and Its Implications for China: Institutional Design, Market Innovation, and Inclusive Development

Benshuai Zhang*

Liaoning University of International Business and Economics, Dalian, Liaoning, China

****Author to whom correspondence should be addressed.***

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Abstract: Against the backdrop of population aging and the increasing demand for long-term retirement security, this paper examines the development of pension finance in the United States and explores its implications for China. Through institutional analysis, comparative analysis, and policy review, the paper focuses on the interaction among Social Security, employer-sponsored defined contribution plans represented by 401(k) plans, individual retirement accounts (IRAs), tax incentives, fiduciary regulation, automatic enrollment, life-cycle investing, and housing-based retirement finance. The analysis finds that the U.S. pension-finance framework has formed a relatively mature multi-source retirement-income structure in which public insurance provides a basic income floor while occupational and individual accounts mobilize long-term household savings and connect retirement wealth with capital markets. Automatic enrollment and default investment arrangements reduce the behavioral barriers to long-term saving, while ERISA-based fiduciary and disclosure requirements strengthen the institutional protection of pension assets. At the same time, the U.S. experience also reveals important limitations, including unequal access to employer plans, substantial differences in retirement wealth across households, exposure to market risk under defined contribution arrangements, and the complexity of tax-preferred accounts. For China, the key lesson is not to reproduce the U.S. model mechanically, but to improve the coordination of the three-pillar pension system, strengthen incentives and default mechanisms for the third pillar, improve fiduciary and information-disclosure rules, expand suitable long-term investment products, and enhance accessibility for low- and middle-income groups. These measures can help transform pension finance from a predominantly savings-oriented system into a more diversified, market-connected, and inclusive retirement security framework.

Keywords: U.S. pension finance; Social Security; 401(k); Individual retirement accounts; Third pillar; Retirement investment; China

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1. Introduction

Population aging is reshaping the relationship among household saving, financial markets, public finance, and social security. China has entered a period in which the scale of the older population is large, and the demand for retirement-income security is becoming increasingly diversified. According to the National Bureau of Statistics, at the end of 2025, China had 323.38 million people aged 60 and above, accounting for 23.0% of the total population, while the population aged 65 and above reached 223.65 million, or 15.9% of the total population [1]. At the same time, China's personal pension system has moved from pilot implementation to nationwide implementation since December 15, 2024, creating a new institutional basis for the development of the third pillar [2]. The United States provides a useful international case because its retirement-finance system has developed through the coexistence of public Social Security, employer-sponsored retirement plans, and individually owned retirement accounts. Rather than relying on a single source of retirement income, the U.S. system combines public insurance with tax-preferred saving and capital-market investment. Federal Reserve survey evidence shows that in 2024, 67% of U.S. adults had at least one asset specifically designated for retirement income, including 61% with a tax-preferred retirement account and 29% with an employer defined-benefit pension [3]. Existing research has shown that the evolution of U.S. retirement saving is closely associated with the expansion of defined contribution plans. Poterba, Rauh, Venti, and Wise argue that private retirement accounts have become an important complement to Social Security and that the rise of defined contribution plans has materially changed the accumulation of retirement wealth [4]. Behavioral research further indicates that institutional design affects participation: Madrian and Shea find that automatic enrollment substantially increases 401(k) participation and that participants often retain default contribution rates and investment allocations [5]. These findings suggest that pension finance is not simply a question of providing financial products; it is also a question of designing institutions that reduce behavioral and informational barriers to long-term saving.

Based on this background, this paper systematically examines the U.S. pension-finance framework from four dimensions: institutional structure, financial-product innovation, market investment and behavioral mechanisms, and regulatory protection. It then discusses the differences between the U.S. and Chinese institutional environments and proposes policy implications for China's pension-finance development (**Table 1**). The purpose is to identify transferable mechanisms rather than advocate a direct transplantation of the U.S. model.

Table 1. Main components of U.S. pension finance and possible Chinese reference points

Dimension	U.S. practice	Main function	Potential reference for China
Public pillar	Social Security (OASDI)	Basic retirement income and social insurance	Strengthen basic protection and actuarial sustainability
Occupational pillar	401(k), 403(b), employer plans	Employer-linked long-term saving and investment	Improve enterprise participation and portability
Individual pillar	Traditional/Roth IRA and other tax-preferred accounts	Voluntary retirement accumulation	Improve third-pillar incentives and product choice
Behavioral design	Automatic enrollment, default options, auto-escalation	Reduce inertia and participation costs	Explore suitable default contribution/ investment mechanisms
Regulation	ERISA fiduciary, disclosure and participant protections	Protect assets and reduce conflicts of interest	Strengthen fiduciary standards, fees and disclosure
Housing finance	FHA-insured HECM reverse mortgage	Convert part of housing wealth into liquidity	Develop cautiously with consumer protection and local conditions

2. The development logic of U.S. pension finance

2.1. Public pension as the basic income floor

The U.S. Social Security program is a public social-insurance system that provides monthly benefits to retired workers, their families, and survivors, while the Disability Insurance component provides benefits to disabled workers and their families. The 2026 Trustees Report continues to monitor the financial operations and long-term actuarial status of the Old-Age and Survivors Insurance and Disability Insurance trust funds [6]. The existence of Social Security is important for understanding U.S. pension finance because private retirement accounts are not designed to replace public social insurance completely. Instead, the public program establishes a basic income floor, while private pension wealth supplements it.

This division of functions has two implications. First, retirement finance must be evaluated together with social insurance rather than solely from the perspective of investment returns. Second, the existence of a basic public benefit allows private pension finance to focus more strongly on consumption smoothing, wealth accumulation, and individualized retirement planning. For China, the institutional lesson is to clarify the respective functions of the basic pension, enterprise or occupational pensions, and personal pensions instead of treating the third pillar as an isolated financial-product market.

2.2. Tax preferences as a saving incentive

Tax preference is another core component of U.S. pension finance. Traditional retirement accounts generally provide tax advantages associated with contributions and the timing of taxation, while Roth arrangements use a different tax treatment. Employer-sponsored plans such as 401(k) also operate within statutory contribution limits. For 2026, the IRS reports a basic elective-deferral limit of $24,500 for 401(k) and certain other plans, with additional catch-up contributions available to eligible older participants [7]. The economic function of these incentives is to make long-term retirement saving more attractive than immediate consumption or unrestricted saving. However, tax preferences can also generate distributional differences because the value of a deduction or tax deferral depends on income, tax status, and participation. Therefore, a direct transfer of the U.S. tax-incentive structure to China would not necessarily produce the same results. China's policy should consider the relatively wide differences in income, tax liability, employment form, and financial literacy across households.

3. Major features of U.S. pension financial innovation

3.1. Automatic enrollment and default investment

One of the most influential innovations in U.S. retirement-plan design is the use of automatic enrollment and default investment options. Madrian and Shea's empirical study found that automatic enrollment significantly increased 401(k) participation and that many automatically enrolled employees remained with the default contribution rate and investment allocation. This result demonstrates that pension participation is affected not only by prices and expected returns but also by behavioral inertia and the cost of making financial decisions. The policy significance is substantial. Traditional voluntary pension systems require individuals to make repeated active decisions: whether to join, how much to contribute, which fund to select, and when to rebalance. Automatic mechanisms simplify these decisions while preserving the possibility of opting out or changing allocations. The U.S. experience therefore suggests that a pension system can use carefully designed defaults to make long-term saving the path of least resistance without eliminating individual

choice. China has already recognized the potential role of default investment services. The 2024 nationwide personal-pension implementation notice encourages financial institutions, subject to law and regulation, to explore default investment services based on factors such as age and risk preference while protecting participants' right to know and choose. This creates a direct policy connection between U.S. behavioral design and China's emerging third-pillar framework.

3.2 Employer matching and the connection between employment and retirement saving

Employer contributions are another important feature of U.S. retirement plans. Matching contributions can transform retirement saving into a joint commitment by employees and employers. Research using Health and Retirement Study data finds that employer matching affects 401(k) participation and saving behavior [8]. The mechanism is straightforward: employees receive an additional economic incentive to contribute, while employers use retirement benefits as part of compensation and workforce management.

For China, the main reference point is not necessarily to reproduce the exact U.S. matching formula. Instead, it is to explore institutional mechanisms through which employers can share responsibility for employees' long-term retirement security. For small and micro enterprises, standardized low-cost occupational pension platforms, simplified administration, and pooled service providers may be more feasible than complex firm-level plans.

3.3. Fiduciary regulation and information disclosure

The Employee Retirement Income Security Act of 1974 (ERISA) establishes minimum standards for many private-sector retirement and health plans. The U.S. Department of Labor states that ERISA imposes fiduciary responsibilities on those who manage or control plan assets and requires protections concerning information, claims procedures, and participants' rights [9]. Fiduciaries must act in the interest of participants and beneficiaries, exercise prudence, diversify investments, and avoid prohibited conflicts of interest [9]. This regulatory architecture is particularly relevant to pension finance because participants generally cannot evaluate investment managers, fees, conflicts, and product structures as professional investors do. A market-based pension system therefore requires a parallel system of institutional trust. Without credible fiduciary standards and information disclosure, financial innovation may increase complexity without increasing retirement security.

3.4. Housing wealth and reverse mortgage finance

The United States has also developed financial mechanisms that can convert part of household housing wealth into retirement liquidity. The Federal Housing Administration's Home Equity Conversion Mortgage (HECM) is a federally insured reverse-mortgage program for eligible older homeowners. HUD explains that HECM can allow borrowers to withdraw part of their home equity for living expenses and other permitted uses while remaining in their homes, subject to program requirements [10].

Housing-based retirement finance can broaden the sources of retirement income, but it also involves substantial risks related to property values, interest rates, fees, inheritance expectations, and consumer understanding. China's housing market, family structure, inheritance preferences, and financial regulation differ from those of the United States. Therefore, reverse mortgages should be treated as a specialized supplementary tool, not as a universal solution to retirement-income pressure.

4. Advantages and limitations of the U.S. pension-finance system

4.1. Advantages

First, the U.S. system has diversified the sources of retirement income. Social Security, employer plans, individual retirement accounts, housing wealth, and other household assets can jointly contribute to retirement consumption. Federal Reserve data show that retirement accounts and pensions are widely held, although coverage is not universal. This diversified structure can reduce the dependence of retirees on a single income source. Second, the U.S. system has developed strong links between pension saving and capital markets. Long-term retirement assets can be invested over extended horizons, allowing households to participate in economic growth while providing institutional investors with patient capital. OECD statistics also show the substantial scale of U.S. pension-plan assets relative to GDP [11]. Third, behavioral mechanisms have become an important part of pension design. Automatic enrollment and default investment arrangements recognize that individuals may postpone complex financial decisions. This approach can increase participation without eliminating individual choice. Fourth, fiduciary regulation creates an institutional foundation for market-oriented pension finance. ERISA's requirements concerning fiduciary conduct, diversification, reasonable expenses, disclosure, and participant rights help reduce conflicts between financial intermediaries and pension savers.

4.2. Limitations and risks

The first limitation is unequal access. The U.S. Department of Labor has identified employer-plan access and participation as important barriers, especially among workers in small firms and nontraditional employment. Its review of retirement-plan models notes that many employers, particularly small employers, do not offer retirement plans and that some eligible workers do not participate because of inertia or ineligibility [12]. The second limitation is unequal retirement wealth. The ability to accumulate assets depends on lifetime earnings, employment continuity, contribution capacity, employer benefits, investment returns, and financial knowledge. A pension-finance system that relies heavily on individual accumulation can therefore reproduce labor-market and income inequalities unless a strong public pillar and targeted redistribution are maintained.

The third limitation is market risk. In DC plans, participants bear more of the investment risk than under traditional DB arrangements. A major market downturn near retirement can reduce accumulated wealth. This makes life-cycle asset allocation, default funds, diversified investment, and annuitization or other longevity-risk management mechanisms important. The fourth limitation is institutional complexity. The U.S. system contains multiple account types, tax rules, contribution limits, employer arrangements, and investment choices. Complexity can itself become a barrier for households with limited financial literacy. Thus, financial innovation should not be equated with increasing the number of products; it should also improve usability, comparability, and decision support.

5. Implications of U.S. pension finance for China

5.1. Improve the coordination of the three-pillar system

The first implication is to strengthen the functional coordination of the three pillars. China's basic pension should continue to provide the fundamental social-security function, while enterprise and occupational arrangements should expand supplementary retirement protection and the personal pension should become a more effective long-term accumulation mechanism. The U.S. experience indicates that private pension

finance works most effectively when it complements rather than replaces public social insurance. China's personal pension system has already entered nationwide implementation. The 2024 policy permits workers participating in basic urban employee or urban-rural resident pension insurance to participate, and it expanded the product universe to include, among others, government bonds, specified pension savings, and index funds. This provides a foundation for a broader third-pillar market. The next step should be to improve participation quality rather than simply increasing account-opening numbers.

5.2. Optimize tax incentives and contribution mechanisms

China's current personal-pension tax policy provides a tax-deferred arrangement: contributions can be deducted within an annual limit, investment income is temporarily not taxed during the accumulation stage, and withdrawals are taxed separately at 3% under the current policy [13]. The U.S. experience suggests that tax incentives can be useful, but their effectiveness depends on participation, contribution capacity, product attractiveness, and the distribution of tax benefits. A more differentiated incentive framework could therefore be considered. For households with limited tax liability, a pure deduction-based incentive may have weaker marginal value. China could study combinations of deductions, tax credits, matching incentives, or targeted subsidies while maintaining fiscal sustainability. The objective should be to increase actual long-term retirement accumulation rather than simply increase the number of accounts.

6. Conclusion

The U.S. experience demonstrates that pension finance is a system rather than a single financial product. Its basic architecture combines public Social Security with employer-sponsored retirement plans and individually owned tax-preferred accounts. Automatic enrollment, employer contributions, life-cycle investment, capital-market participation, fiduciary regulation, and housing-based finance further expand the range of tools available for retirement planning. At the same time, the U.S. system also reveals the risks of relying excessively on individual accumulation, including unequal coverage, unequal retirement wealth, market risk, and institutional complexity.

For China, the most relevant lesson is therefore institutional rather than mechanical. The development of personal pension finance should be embedded in a coordinated three-pillar system, supported by appropriate tax incentives, low-cost investment products, default mechanisms, transparent information, and strong consumer and fiduciary protection. China's nationwide personal pension implementation in December 2024 provides an institutional starting point, while the country's rapidly aging population makes the improvement of retirement-income security increasingly important. Future development should place greater emphasis on participation quality, inclusiveness, portability, and long-term investment performance. China can draw on the U.S. experience in behavioral pension design, employer participation, fiduciary regulation, and capital-market integration, while adapting these mechanisms to China's labor market, tax system, household balance sheets, housing structure, and social-security institutions. Such a path can help develop pension finance into a more inclusive and sustainable component of China's silver economy.

Disclosure statement

The author declares no conflict of interest.

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