

Projected Fiscal Risk Reduction in Enterprise Employee Pension Insurance and Market Demand Space for the Third Pillar under Demand-Side Security Level in China's Jiangxi Province

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Abstract: Against the backdrop of deepening population aging and mounting fiscal pressure on the enterprise employee pension insurance system, this study takes Jiangxi Province as the research sample. Employing a tri-level analytical framework of “demand–supply–satisfaction” security, and utilizing the cohort component method, pension actuarial models, and the ARIMA model, this study estimates both the fiscal risk mitigation effects from reducing the supply-side security level and the market demand space for the third pillar in Jiangxi from 2025 to 2050. The findings reveal that if the supply-side security level is adjusted downward to the demand-side security level, the percentage reduction in fiscal risk would decline from 13.81% in 2025 to 2.29% in 2050. This indicates that such a measure yields a notable mitigation effect only over the next 5–10 years, and is unlikely to serve as a fundamental institutional solution to deep population aging in the medium to long term. Over the same period, the continuous expansion in the number of insured retirees drives steady growth in the market demand space for the third pillar. When the relative share of the third pillar increases from 1/2 to 2/3, the market demand space is projected to reach approximately CNY 470 billion by 2050, demonstrating substantial development potential. This paper proposes two policy recommendations: on the one hand, grasp the window for supply-side adjustment while simultaneously establishing a long-term mechanism; on the other hand, accelerate the institutional improvement and product innovation of the third pillar to form an effective supplement to the first pillar.

Keywords: Pension Insurance, Fiscal Risk Reduction, Third Pillar, Demand Space, Jiangxi Province.

1. INTRODUCTION

Against the backdrop of deepening population aging, the imbalance between revenue and expenditure of China's basic enterprise employee pension insurance fund has been intensifying. The pressure on fiscal guarantees and the associated potential risks have continued to accumulate, making this a critical challenge for the social security system in the new era. Jiangxi Province, as a populous province in central China, has witnessed a sustained increase in the number of insured retirees in the enterprise pension insurance scheme in recent years. The current fund deficit has gradually expanded, and the scale of fiscal subsidies has risen year by year. Consequently, the prevention and control of fiscal risks in the pension field is of urgent practical significance and has strong regional representativeness.

Existing literature mainly focuses on actuarial balance and parametric reform effects with respect to the fiscal burden and sustainability of pension insurance, with most studies conducted at the national level or in economically developed provinces. Quantitative research specifically targeting the fiscal risks of enterprise pension insurance in Jiangxi Province remains scarce. Moreover, few studies have adopted a theoretical perspective of hierarchical security levels to systematically clarify the intrinsic logical relationships among the basic pension floor, the actual institutional supply, and the goal of decent old-age living. Nor have they evaluated the mechanism linking “reasonable adjustment of supply levels,

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precise reduction of fiscal risks, and orderly release of third-pillar demand". To fill this shortage, this study takes Jiangxi Province as its research sample, integrates the hierarchical security-level analytical framework into the analysis of pension fiscal risks and multi-tier system development, and conducts systematic empirical estimation and path analysis.

From a theoretical perspective, pension security levels can be divided into three dimensions. The per capita demand-side security level is the baseline standard for maintaining the basic living of retirees, constituting the statutory benefit benchmark of the pension insurance system. The per capita supply-side security level is the actual per capita benefit provided by the current basic enterprise pension insurance system, influenced by benefit adjustment mechanisms and economic development levels, and is generally higher than the basic demand baseline. The per capita satisfaction security level is the desirable standard that ensures consumption smoothing before and after retirement and supports a "decent retirement", representing a higher-level aspiration of pension provision. These three levels form a progressive relationship: demand-side < supply-side < satisfaction-side. This hierarchy provides a clear logical clue for pension system reform and multi-tier development. On the one hand, under the premise of safeguarding the livelihood bottom line, adjusting the per capita supply-side security level downward to the per capita demand-side security level can directly reduce pension expenditure, alleviate the rigid pressure of fiscal subsidies, and achieve effective fiscal risk reduction. On the other hand, the gap between the supply level of basic pension and the satisfaction level naturally constitutes the market space for the second and third pillars. Among them, the third pillar, with its broad coverage and flexible institutional features, serves as the core support for filling the gap and meeting diversified pension needs.

Following this theoretical logic, this study constructs population projection models, pension actuarial models, and a fiscal risk estimation framework to quantitatively assess the extent of fiscal risk reduction after lowering the supply-side security level of Jiangxi's enterprise pension insurance from 2025 to 2050, and to measure the market demand space for the third pillar under the goal of achieving the satisfaction security level. The findings are expected to provide a scientific decision-making basis and empirical support for Jiangxi Province to coordinate the sustainable development of the pension system, fiscal risk prevention, and the construction of a multi-tier pension security system.

2. LITERATURE REVIEW

Research on the sustainability, fiscal burden, and fiscal risks of basic pension insurance has been conducted mainly from three perspectives: fund balance, fiscal burden estimation, and risk early warning. Early studies focused on systematic assessments of fund sustainability and the identification of influencing factors (Zhu *et al.*, 2025; Zheng, 2026), pointing out that the pension fund faces severe actuarial balance challenges amid accelerating population aging (Kou, 2026). With the implementation of the national pooling system, scholars have further examined the effects of the centralized revenue and expenditure model on fund sustainability and local government fiscal responsibilities (Pu and Chen, 2026). Actuarial models have been employed to quantify individual account deficits, fund gaps, and fiscal subsidy scales (Xue and Wu, 2024; Guo and Sun, 2024). In terms of risk response, the existing literature has evaluated the mitigation effects of parametric reforms, such as delayed retirement and comprehensive contribution rate reduction schemes, on fiscal pressure (Zeng and Nie, 2024; Chen *et al.*, 2025; Yang and Chen, 2021), providing a basis for establishing fiscal risk early warning mechanisms. However, most of these studies are conducted at the national level or from an inter-provincial comparative perspective, and empirical analyses specifically targeting the fiscal risks of enterprise pension insurance in Jiangxi Province remain scarce.

With respect to pension security levels, international scholars have long recognized the limitations of the traditional pension replacement rate indicator in measuring retirement adequacy, arguing that a single replacement rate cannot fully reflect multidimensional objectives such as consumption smoothing and poverty prevention (Chybalski and Marcinkiewicz, 2016; Alonso-Fernandez *et al.*, 2018), and have attempted to construct comprehensive adequacy indicators to refine the evaluation framework (Chia and Tsui, 2019). Domestic research has evolved from conceptual clarification to multidimensional estimation. Early literature systematically distinguished the conceptual differences among target replacement rate, cross replacement rate, lifetime replacement rate, and average replacement rate (Xu and Li, 2009; Xue *et al.*, 2020). Subsequent studies further extended the analysis to optimal replacement rate estimation, pension pressure assessment, and the nonlinear relationship between security levels and fund balances (Zhang *et al.*, 2013; Qi and Yang, 2020; Lin, 2013). Some scholars have also introduced early warning models or information entropy comprehensive evaluation methods to empirically measure regional security levels (Sun and Yong, 2008; Xue and Zhang, 2020). Nevertheless, most existing studies focus on the national level or individual developed provinces, and dedicated research on the security levels of enterprise pension insurance in Jiangxi Province remains insufficient.

3. MODEL SPECIFICATION AND PARAMETER SETTINGS

3.1 Model Specification

Following the research approach of Chen (2026), the per capita supply-side security level (PS_i) provided by the pension system is generally higher than the per capita demand-side security level (PD_i) for insured retirees. Against the backdrop of population aging, Jiangxi's basic enterprise employee pension insurance has already experienced a situation

where expenditure exceeds revenue, resulting in substantial fiscal subsidies and generating fiscal risks. Under such circumstances, adjusting the supply-side security level (PS_t) downward to the demand-side security level (PD_t)—while still maintaining the basic living standards of insured retirees—can significantly reduce pension expenditure, thereby decreasing fiscal subsidies, achieving fiscal risk reduction, and enhancing the sustainability of the basic enterprise employee pension insurance system. At the same time, this adjustment releases demand space for the second and third pillars among insured enterprise retirees.

Following the methodology of Yang and Chen (2021), fiscal risk reduction (FR_t) is measured as the ratio of the change in fiscal subsidies (ΔFS_t) for the basic enterprise employee pension insurance to the scale of general public budget revenue (GF_t):

$$FR_t = \frac{\Delta FS_t}{GF_t} \quad (1)$$

Where the general public budget revenue of Jiangxi Province (GF_t) is forecast using the ARIMA model based on historical data from the *Jiangxi Statistical Yearbook*.

As for the change in fiscal subsidies (ΔFS_t), given that Jiangxi's basic enterprise employee pension insurance already runs a deficit and requires fiscal subsidies, the change in fiscal subsidies is equivalent to the change in pension expenditure (ΔP_t). When the per capita supply-side security level is adjusted downward to the per capita demand-side security level, only pension expenditure decreases, while contribution revenue remains unaffected. Thus, the following relationship holds:

$$\Delta FS_t = \Delta P_t = (PS_t - PD_t) \times LR_t \quad (2)$$

Where LR_t is the number of insured retirees in Jiangxi's basic enterprise employee pension insurance in year t , which is projected using the cohort component method—the mainstream approach for population projection. The estimation of the demand-side security level (PD_t) follows the practices of Chen (2026), Xue *et al.*, (2023), and Li and Wang (2012), yielding the annual demand-side security level for Jiangxi over the projection period.

For the per capita supply-side security level (PS_t), this study adopts a more refined approach than the relatively coarse method used in Chen (2026). Specifically, this study employs the mainstream pension actuarial model to project pension expenditure for Jiangxi's basic enterprise employee pension insurance, drawing on the actuarial frameworks of Chen *et al.*, (2025) and Chen *et al.*, (2023). The detailed model specification is available in those references and is not repeated here.

The satisfaction security level (PM_t) is defined as the desirable standard that maintains the pre-retirement quality of life and enables a “decent retirement”. Following the International Labour Organization (ILO, 2018), this level aims to ensure a smooth transition in living standards and represents the highest-level aspiration for old-age security. Accordingly, the satisfaction security level (PM_t) is generally higher than the supply-side security level (PS_t), and naturally higher than the demand-side security level (PD_t).

Based on the above, the market demand space for the third pillar of pension insurance ($Space_t$) for insured enterprise retirees in Jiangxi is calculated as:

$$Space_t = (PM_t - PS_t) \times LR_t \times \beta \quad (3)$$

Where the satisfaction security level (PM_t) equals the replacement rate (R) multiplied by the average wage ($\bar{S}_t$). Following Xue *et al.*, (2023) and ILO (2018), the replacement rate R for achieving the satisfaction level is set at 0.7. The parameter β represents the proportion of the demand space allocated to the third pillar relative to the second and third pillars combined, in order for insured retirees to reach the satisfaction security level.

3.2 Parameter Settings

The projection period of this study is from 2025 to 2050. The number of insured retirees in Jiangxi's enterprise pension insurance (LR_t) for each year of the projection period is estimated using the cohort component method. Specifically, the insured population is divided into two categories: new entrants (age a) and other age groups (age $\geq a+1$). The former is estimated by multiplying the number of individuals aged a in the projected urban population of the province by the employment rate, pension coverage rate, and the proportion of enterprise insured employees among urban insured employees. The latter is obtained by multiplying the previous year's insured population by age and gender by the corresponding survival probability. The projection of Jiangxi's urban population distribution relies on parameters including

the initial population structure, fertility rates by age, sex ratio at birth, mortality risks, and the probability of rural-to-urban migration. These parameter values are sourced from the *Jiangxi Statistical Yearbook*, the United Nations' *World Population Prospects 2024*, the Far East pattern life table (covering mortality and survival rates) embedded in the PADIS-INT software, and historical statistics published by relevant government departments in Jiangxi Province.

Based on these projections, the estimated number of insured retirees in Jiangxi's enterprise pension insurance (LR_t) from 2025 to 2050 and its trend are presented in Figure 1.

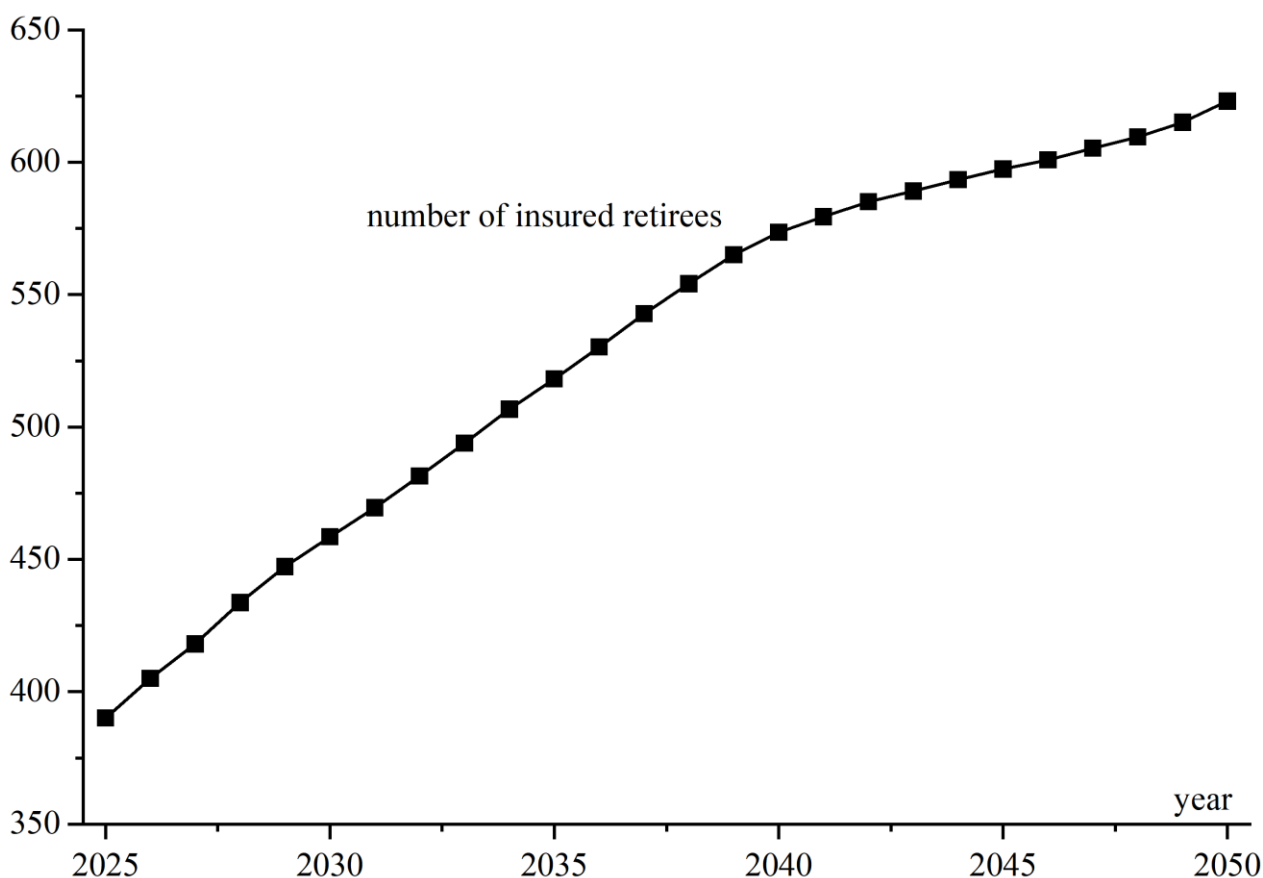


Figure 1: Number of Insured Retirees in Jiangxi Province, 2025–2050 (in 10,000 persons)

Figure 1 depicts the evolution of the insured retiree population in Jiangxi from 2025 to 2050. The number of insured retirees increases steadily from 3,900,422 in 2025 to 6,229,714 in 2050, with an average annual increase of approximately 93,172 persons. The overall trend exhibits continuous growth with a gradually decelerating rate, characteristic of nonlinear expansion. From 2025 to 2040, the curve shows a steeper slope, indicating a rapid expansion phase of the insured retiree population. After 2040, the curve flattens somewhat; while the absolute number continues to rise, the annual increment narrows. Although the growth pressure from population aging moderates to some extent, the total insured retiree population remains on an upward trajectory at a high level. This suggests that over the next two decades, the benefit recipient base of Jiangxi's pension system will continue to expand, exerting sustained pressure on pension expenditure and posing real challenges to the fiscal sustainability of the basic enterprise employee pension insurance fund in Jiangxi Province.

Other parameter settings. The parameters involved in the actuarial model for projecting the revenue and expenditure of Jiangxi's enterprise pension insurance—such as the notional interest rate of individual accounts, the pension transition coefficient, insured age, retirement age, and ultimate age—follow the practices of Chen *et al.*, (2025) and Chen *et al.*, (2023).

For the initial average wage and its growth rate in the projection for Jiangxi Province, the initial total average wage of urban employed persons (i.e., the average wage) is obtained from data published by the provincial Department of Human Resources and Social Security. Following the settings of Song *et al.*, (2015) and Yan and Liu (2015), the average wage growth rate is set at 5.5% for 2024–2025, and then declines by 0.5 percentage points every five years thereafter. Based on this, the average wage ($\bar{S}_t$) for each year of the projection period is derived.

4. RESULTS ANALYSIS

4.1 Fiscal Risk Reduction

Following the pension actuarial models of Chen *et al.*, (2025) and Chen *et al.*, (2023), and incorporating the parameter settings described above, the per capita supply-side security level (PS_t) provided by Jiangxi's basic enterprise employee pension insurance system to insured retirees over the projection period 2025–2050 is calculated and presented in Table 1.

Table 1: Per capita supply-side security level in Jiangxi province (in CNY)

year	PS	year	PS	year	PS
2025	31596	2034	40163	2043	54123
2026	32324	2035	41429	2044	56196
2027	33063	2036	42778	2045	58368
2028	33912	2037	44177	2046	60673
2029	34789	2038	45665	2047	63188
2030	35746	2039	47230	2048	65793
2031	36746	2040	48781	2049	68628
2032	37798	2041	50423	2050	71685
2033	38953	2042	52232		

As shown in Table 1, the per capita supply-side security level (PS_t) in Jiangxi's enterprise pension insurance increases steadily from CNY 31,596 in 2025 to CNY 71,685 in 2050, with an average annual growth rate of approximately 3.36% and an average annual increase of CNY 1,603, exhibiting a steady upward trend over the projection period.

Following the calculation procedure of Chen (2026) and based on data from the *Jiangxi Statistical Yearbook*, the per capita demand-side security level for the initial year is obtained. With an average annual growth rate of 5.00% for the per capita demand-side security level, the annual values PD_t for 2025–2050 are derived and presented in Table 2.

Table 2: Per capita demand-side security level in Jiangxi province (in CNY)

year	PD	year	PD	year	PD
2025	20515	2034	31829	2043	49383
2026	21541	2035	33421	2044	51853
2027	22618	2036	35092	2045	54446
2028	23749	2037	36848	2046	57169
2029	24937	2038	38690	2047	60029
2030	26184	2039	40625	2048	63031
2031	27494	2040	42657	2049	66183
2032	28869	2041	44791	2050	69493
2033	30313	2042	47031		

Table 2 shows that the per capita demand-side security level (PD_t) in Jiangxi's enterprise pension insurance increases steadily from CNY 20,515 in 2025 to CNY 69,493 in 2050, with an average annual increase of CNY 1,959, demonstrating rapid growth over the projection period.

A comparison of the levels and trends of the per capita supply-side security level and the per capita demand-side security level in Jiangxi from 2025 to 2050 is presented in Figure 2.

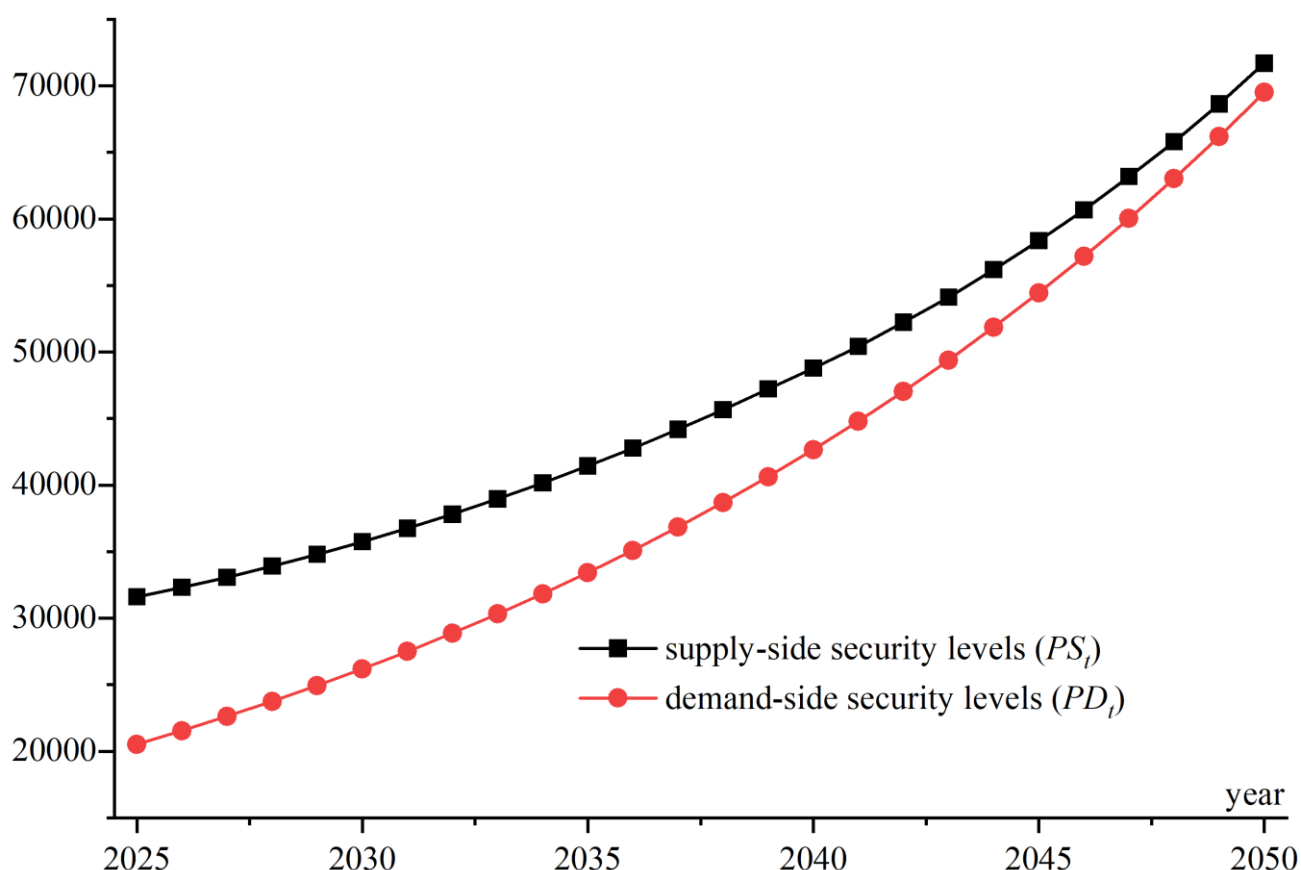


Figure 2: Comparison of per capita supply-side and demand-side security levels in Jiangxi province (in CNY)

It is evident that throughout the entire projection period, the per capita supply-side security level (PS_t) consistently exceeds the per capita demand-side security level (PD_t), with both levels increasing over time. However, the per capita demand-side security level (PD_t) exhibits an average annual growth rate of 5.00% and an average annual increase of CNY 1,959, compared to 3.36% and CNY 1,603 for the per capita supply-side security level (PS_t). Thus, the demand-side security level grows notably faster than the supply-side security level, gradually narrowing the gap between the two. In other words, the per capita demand-side security level is rapidly catching up with the per capita supply-side security level.

Based on historical data on Jiangxi's general public budget revenue from 2000 to 2024, sourced from the *Jiangxi Statistical Yearbook*, the ARIMA (1,1,0) model is applied for fitting and forecasting. The projected general public budget revenue for Jiangxi over the projection period is presented in Table 3.

Table 3: Projected general public budget revenue of Jiangxi province, 2025–2050 (in CNY 100 million)

year	GF	year	GF	year	GF
2025	3130.17	2034	4119.37	2043	5156.82
2026	3220.38	2035	4234.62	2044	5272.10
2027	3323.58	2036	4349.88	2045	5387.38
2028	3433.04	2037	4465.15	2046	5502.66
2029	3545.51	2038	4580.43	2047	5617.94
2030	3659.44	2039	4695.71	2048	5733.22
2031	3774.07	2040	4810.98	2049	5848.50
2032	3889.04	2041	4926.26	2050	5963.78
2033	4004.16	2042	5041.54		

As shown in Table 3, Jiangxi's general public budget revenue (GF_t) increases gradually from CNY 313.017 billion in 2025 to CNY 596.378 billion in 2050, with an average annual increase of CNY 11.334 billion.

Based on the model specification constructed above, together with the derived results for the per capita supply-side security level (PS_t), per capita demand-side security level (PD_t), number of insured retirees (LR_t), and general public budget revenue (GF_t), the degree of fiscal risk reduction in Jiangxi's enterprise pension insurance—assuming the supply-

side security level is adjusted downward to the per capita demand-side security level—is calculated and presented in Table 4.

Table 4: Percentage reduction in fiscal risk for Jiangxi's enterprise pension insurance, 2025–2050 (Unit: %)

year	FR	year	FR	year	FR
2025	13.81	2034	10.25	2043	5.42
2026	13.56	2035	9.80	2044	4.89
2027	13.14	2036	9.37	2045	4.35
2028	12.84	2037	8.91	2046	3.83
2029	12.43	2038	8.44	2047	3.40
2030	11.98	2039	7.95	2048	2.94
2031	11.51	2040	7.30	2049	2.57
2032	11.05	2041	6.62	2050	2.29
2033	10.66	2042	6.04		

The results in Table 4 show that if the supply-side security level of Jiangxi's enterprise pension insurance is adjusted downward to the per capita demand-side security level, the percentage reduction in fiscal risk (FR_t) exhibits a sustained and monotonic decline over the projection period, from 13.81% in 2025 to 2.29% in 2050—a cumulative decrease of 11.52 percentage points, or 83.4%, with an average annual decline of approximately 0.46 percentage points. This trend indicates that the policy space for mitigating fiscal risk by compressing the supply-side security level narrows rapidly over time.

In terms of phase-specific patterns, the decline of FR_t follows an asymmetric trajectory characterized by a “slow–rapid–moderate” sequence. From 2025 to 2035, the decline is relatively moderate, with an average annual decrease of about 0.40 percentage points. From 2035 to 2045, the decline accelerates into a rapid downward phase, with the average annual decrease widening to approximately 0.53 percentage points. After 2045, the rate of decline slows somewhat, but the absolute level has already fallen below 5%. At key thresholds, FR_t drops below 10% in 2035, falls below 5% in 2044, and reaches less than 2.5% by 2050. These findings suggest that in the short term (over the next 5–10 years), lowering the supply-side security level still yields a relatively significant positive effect on mitigating fiscal risk in Jiangxi's enterprise pension insurance. However, in the medium to long term, the favorable effect of this adjustment on fiscal risk reduction rapidly diminishes, making it unlikely to serve as a fundamental institutional arrangement for coping with pension fiscal pressure under deep population aging. This implies that while Jiangxi Province seizes the window for supply-side adjustment, it should simultaneously advance other complementary measures—such as expanding coverage, enhancing fund value preservation and appreciation, and optimizing fiscal input structures—to avoid the favorable effect of this supply-side adjustment approaching exhaustion around 2050.

4.2 Projection of Market Demand Space for the Third Pillar

Following the research approach of Zhu and Shi (2022), this study sets the ratio of the spatial development scale between the third pillar and the second pillar to gradually increase from 1:1 to 2:1, with a step size of 0.1. That is, the ratios are sequentially 1:1, 1.1:1, 1.2:1, 1.3:1, ..., 2:1. After conversion, the corresponding values of β (representing the ratio of the demand space allocated to the third pillar relative to the second and third pillars combined) are 0.5000, 0.5238, 0.5455, 0.5652, 0.5833, 0.6000, 0.6154, 0.6296, 0.6429, 0.6552, and 0.6667, respectively. Based on the model specification (Equation 3) and the parameter settings described above, the market demand space for the third pillar of pension insurance for insured retirees in Jiangxi's basic enterprise employee pension insurance over the projection period is estimated, with results presented in Figure 3.

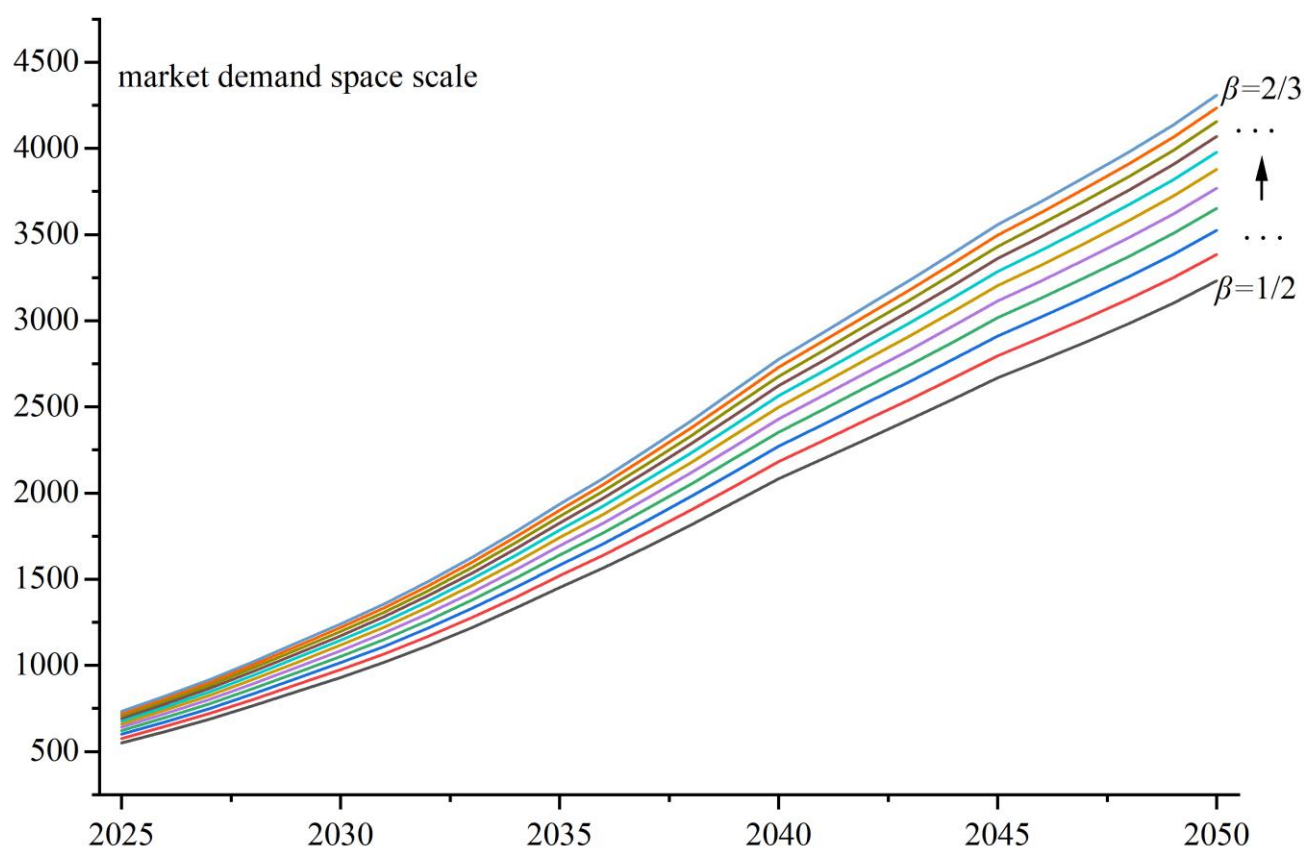


Figure 3: Market demand space for the third pillar in Jiangxi province, 2025–2050 (in CNY 100 million)

From 2025 to 2050, the market demand space for the third pillar corresponding to insured retirees in Jiangxi's enterprise pension insurance exhibits sustained and steady growth over time. The continuous expansion of the insured retiree population due to population aging constitutes the core foundation driving this upward demand. The parameter β is positively associated with the market demand space over the same period. As β increases stepwise from $1/2$ to $2/3$, the demand curve shifts upward layer by layer with a uniform distribution. By 2050, the market demand space expands from approximately CNY 320 billion to about CNY 470 billion, representing an increase of 46.9%. This indicates that the market demand space for the third pillar of individual pension accounts in Jiangxi Province will expand rapidly over the next 25 years, driven by the sustained growth in the number of insured retirees. Moreover, an increase in the relative share of the third pillar will further amplify this market space significantly. These findings suggest that the third pillar of pension insurance in Jiangxi Province holds substantial development potential, and there is an urgent need to accelerate institutional improvement and product innovation to match the enormous future market demand.

5. CONCLUSION AND POLICY IMPLICATIONS

This study constructs a measurement model for fiscal risk reduction and the market demand space for the third pillar in Jiangxi's basic enterprise employee pension insurance. Using the cohort component method, it projects the number of insured retirees in Jiangxi from 2025 to 2050. It further employs pension actuarial models and the ARIMA model to estimate the per capita supply-side security level and general public budget revenue, respectively, and evaluates the fiscal risk mitigation effects of lowering the supply-side security level to the demand-side security level, as well as the development potential of the third pillar.

The results show that if the supply-side security level is adjusted downward to the demand-side security level, the percentage reduction in fiscal risk for Jiangxi's basic enterprise employee pension insurance exhibits a sustained and monotonic decline, from 13.81% in 2025 to 2.29% in 2050—a cumulative decrease of 11.52 percentage points. This indicates that the favorable effect of compressing the supply side to mitigate fiscal risk narrows rapidly over time. While such a measure still yields a relatively significant effect in the short term (over the next 5–10 years), it is unlikely to serve as a fundamental institutional solution to deep population aging in the medium to long term. At the same time, the expansion of the insured retiree population drives steady growth in the market demand space for the third pillar, and this demand is positively associated with the relative share parameter β . As β increases stepwise from $1/2$ to $2/3$, the market demand space in 2050 expands from approximately CNY 320 billion to about CNY 470 billion, an increase of 46.9%. This suggests that the demand space for the third pillar in Jiangxi's pension system is substantial and holds significant development potential.

Based on the above findings, two policy implications are proposed. First, seize the short-term window for supply-side adjustment while simultaneously establishing long-term mechanisms to address deep population aging. The results indicate that the percentage reduction in fiscal risk from lowering the supply-side security level to the demand-side security level declines steadily from 13.81% in 2025 to 2.29% in 2050, a decrease of 83.4%, and enters a rapid downward phase after 2035. This suggests that over the next 5–10 years, moderately compressing the supply side to mitigate fiscal risk still offers notable policy space. Jiangxi Province should grasp this reform window and prudently implement a reasonable downward adjustment of the supply-side security level to alleviate current fiscal subsidy pressure. However, it must be clearly recognized that the medium- to long-term fiscal relief effect of this measure is rapidly diminishing, making it unlikely to serve as a fundamental institutional arrangement for coping with deep population aging. Thus, while utilizing supply-side adjustments to buy time for reform, it is imperative to simultaneously advance complementary long-term mechanisms—such as expanding coverage, enhancing fund value preservation and appreciation, and optimizing fiscal input structures—to prevent the policy dividend of this adjustment from approaching exhaustion around 2050.

Second, accelerate institutional improvement and product innovation for the third pillar to fully unleash the development potential of the multi-tiered pension system. The results show that as the number of insured retirees expands steadily from approximately 3.90 million in 2025 to about 6.23 million in 2050, the market demand space for the third pillar in Jiangxi Province will grow steadily. Moreover, when the relative share of the third pillar β increases stepwise from 1/2 to 2/3, the market demand space in 2050 expands from approximately CNY 320 billion to about CNY 470 billion, an increase of 46.9%, indicating enormous development potential. This implies that against the backdrop of shrinking space on the basic pension supply side, the third pillar is well positioned to become an important institutional supplement for filling the protection gap and meeting the “decent retirement” needs of insured retirees. Accordingly, it is recommended that Jiangxi Province accelerate the top-level design and product innovation of the individual pension system, enhance the relative share of the third pillar in the multi-tiered pension system through policy incentives such as tax preferences and contribution subsidies, and actively cultivate the individual pension market to match the enormous future demand, thereby forming an effective supplement and synergistic support for the first pillar.

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