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The "Kill Threshold" Phenomenon and Household Financial Risk: A Questionnaire Survey of Families in Changzhou

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Abstract

This study examines the household risk implied by the "kill threshold" phenomenon through four dimensions: income continuity, fixed spending ratio, reserve coverage time, and external support strength. Based on a questionnaire survey and stress-scenario testing of 137 families in Changzhou, it finds that most households remain basically stable in daily life. However, structural differences become clear when sudden expenses and income interruption occur together. Households with shorter reserve coverage time, higher fixed spending ratios, and weaker support conditions are more likely to come under strain. The "kill threshold" is understood here as a structural critical state formed when household buffering space is gradually compressed.

Keywords: kill threshold; household risk; fixed spending ratio; reserve coverage; external support

1 Introduction

1.1 From the "Kill Threshold" Phenomenon to the Question of Household Risk

Originally, "kill threshold" was a gaming term. It referred to the critical point at which a character's health becomes low enough to be defeated by a single attack. In recent years, the term has been borrowed in public discussion to describe a household situation. A household may appear stable in daily life, but its living conditions may decline sharply after unemployment, serious illness, or a sudden large expense.

In both the United States and China, discussions around this phenomenon have repeatedly focused on several related issues: interrupted income, unexpected expenses, long-term financial burdens, and differences in available support. These factors rarely appear in isolation. They are intertwined within the financial situation of specific households. This raises a deeper question: is household risk determined only by income level, or does it depend more on the combination of several conditions?

1.2 Research Questions and Objectives

This study asks whether the "kill threshold" can be understood as a critical point in household financial risk. It marks a possible shift from a relatively sustainable financial

condition to one that becomes difficult to maintain. The study also asks whether this point has identifiable features in real households.

In this study, the term is used to describe a process in which household financial resilience is gradually consumed and vulnerability becomes more visible. When household expenses begin to exceed income, the household may need savings, borrowing, family support, or other resources to maintain its normal life. This indicates that its original financial balance has been disturbed. If these resources are limited, the household may move from a maintainable situation to a difficult one. It may then approach or cross the "kill threshold".

To address this question, the study reviews relevant materials and uses a questionnaire survey of families in Changzhou to examine the risk characteristics of different households.

2 Literature review

2.1. Income Interruption and Sudden Expenses as Realistic Tests

Public concern about income interruption, sudden expenses, long-term burdens, and support conditions cannot be assessed through individual cases alone. Public statistics and survey data provide a more comparable basis for observation. By reviewing materials from China and the United States, this study identifies several indicators that can be used to observe household risk under different social conditions.

Table 1.

2.1.1 Ways U.S. Adults Handle a $400 Emergency Expense

Method of response	Share	Observation and risk implication
Cash, savings, or credit card paid off at the next statement	63%	Basic liquidity is sufficient, and short-term buffering capacity exists.
Paying by credit card over time	15%	The shock is converted into debt, and future cash flow may be affected by repayment pressure.
Borrowing from relatives or friends	10%	The household relies on informal support networks.
Selling assets	7%	Existing assets are used, which may signal insufficient cash buffering.
Completely unable to pay	13%	The household faces very tight liquidity and clearly insufficient short-term buffering capacity.

Source: Board of Governors of the Federal Reserve System (2024).

In the United States, the Federal Reserve's *Survey of Household Economics and Decisionmaking* (SHED) includes a question about an immediate $400 emergency expense. Respondents are asked how they would deal with such an expense. According to the 2023 survey results, about 63% of adults said they could pay it immediately with cash or cash equivalents. The remaining roughly one-third would need to rely on methods such as paying by credit card over time, borrowing, or delaying bills. About 13% said they could not afford the expense at that time (Board of Governors of the Federal Reserve System, 2024). This $400 amount is not a major expense, but it can still show differences in short-term liquidity and immediate payment capacity.

In China, there is no fully corresponding "$400 test" but income stability can still be observed through the structure of income sources. Changes in income sources make income continuity an important indicator. Two aspects can therefore be examined: the type and stability of income sources, and households' immediate responses under a sudden-expense scenario.

2.2. Expenditure Composition and the Proportion of Long-Term Burden

Long-term spending is persistent, and its share directly affects how much room a household has for adjustment. In American personal finance, the "50-30-20" principle divides income into necessities, discretionary spending, and savings. It suggests that necessities should be kept at about 50% of income (Warren & Tyagi, 2005). In the field of housing, the U.S. Department of Housing and Urban Development treats housing costs at 30% of income as a burden threshold and costs above 50% as a severe burden (U.S. Department of Housing and Urban Development, n.d.). These reference points help distinguish different levels of housing pressure.

In China, housing-related spending also occupies an important place in household consumption. Education and medical spending also take up a certain share of household budgets. During children's schooling stages or when illness occurs, these two categories may rise sharply within a short period. Compared with housing spending, they are not fully fixed. However, at particular stages, they may still occupy a substantial part of the household budget.

Household spending usually includes housing, education, medical care, food, and transportation. Housing spending is often fixed. Education tends to involve concentrated spending at specific stages, while medical spending is more uncertain. The relative weight of these items can be compared through their share of household income. Around these proportions, two measurable indicators can be formed: the position of fixed spending within income, and the share of housing, education, and medical care within the spending structure.

Table 2.

2.1.2 Major Household Spending Components and Reference Ratios in China and the United States

Category	U.S. reference	China situation	Structural difference
Housing burden	30% burden threshold; 50% severe burden threshold	Housing-related spending accounts for about 22%-25% of household consumption expenditure	The average level in China is below the HUD burden threshold, but differences among individual households may be substantial
Savings ratio	Recommended 20%	The household saving rate is relatively high	Chinese households often have longer risk-buffering time
Fixed spending structure	Higher out-of-pocket medical burden	Broad medical insurance coverage	The ways in which risk is triggered differ

Source: U.S. Department of Housing and Urban Development; National Bureau of Statistics of China.

This study refers to the 50-30-20 principle and classifies households with a fixed spending ratio of 70% or higher as the high fixed-spending group. This grouping is used in the later

analysis to identify households whose fixed spending leaves limited room for savings and discretionary spending.

2.3. Reserve Coverage and Cash Buffering Capacity

In addition to income sources and spending ratios, whether a household has reserves of a certain scale also affects how it responds to income interruption. In American financial planning advice, covering three to six months of basic living expenses is often used as a reference for emergency reserves. Both the Consumer Financial Protection Bureau and the Federal Reserve use whether a household has reserves covering three months of expenses as an indicator of financial resilience (Consumer Financial Protection Bureau, 2024; Board of Governors of the Federal Reserve System, 2024).

This advice uses "coverage time" as the unit of measurement. It means the length of time for which reserves can sustain living expenses. Federal Reserve reports show that about 59% of adults had enough reserves to cover three months of expenses in 2021. This proportion fell to about 54% in 2023 (Board of Governors of the Federal Reserve System, 2024). Nearly half of households still did not reach the three-month reference level.

In China, the household saving rate has long remained relatively high. However, different forms of savings have different levels of liquidity. When income is interrupted, the actual coverage time still depends on the amount of readily available funds.

Table 3.

2.1.3 Reference Ranges for Household Reserve Coverage Time

Coverage interval	Basis of reference	Meaning
Less than 1 month	Financial risk warnings and research discussions	Low liquidity
About 3 months	Federal Reserve survey measure	Common emergency-reserve reference
3-6 months	Financial-planning recommendation range	Relatively stable buffering level

Source: Consumer Financial Protection Bureau (2024); Board of Governors of the Federal Reserve System (2024).

Reserve coverage time is therefore a measurable dimension in this study. Three months is used as a reference point for basic emergency reserves. It helps observe a household's risk-buffering capacity when income is interrupted.

2.4. Support Networks and Institutional Conditions

Beyond income, spending, and reserves, whether a household can obtain external support when risk occurs also affects the stability of its daily life. Support usually comes from two sources: public institutional protection and support within the family.

In the United States, health insurance coverage has remained at a relatively high level, and unemployment insurance provides partial wage replacement within a defined benefit period (U.S. Census Bureau, 2024; U.S. Department of Labor, n.d.). In China, basic medical insurance has broad coverage, and the number of people enrolled in unemployment insurance is also large. However, benefit levels are related to local policy and individual contribution records (National Healthcare Security Administration, 2025; Ministry of

Human Resources and Social Security of the People's Republic of China, 2025). Institutional protection does not eliminate risk, but it affects the part of a shock that must be borne directly by the household.

In addition to institutional protection, support within the family is also an important source of risk response. In the United States, the formation of multigenerational households is often related to financial reasons (Pew Research Center, 2022). In China, intrafamily transfers, co-residence, and intergenerational support are more common. The existence of institutional protection and family support means that shocks are not always borne entirely by a single household. Differences in the extent and strength of available support therefore form a realistic dimension for observing household risk-bearing capacity.

Table 4.

2.1.4 Institutional Protection and Family Support in China and the United States

Indicator	United States	China
Health insurance coverage	About 92%	Above 95%
Unemployment insurance replacement	About 40%-50%	Usually below 60%
Multigenerational household support	About 18%	About 25%-30%

Source: U.S. Census Bureau; U.S. Department of Labor; Pew Research Center; National Healthcare Security Administration; Ministry of Human Resources and Social Security of the People's Republic of China; National Bureau of Statistics of China and related statistical materials.

2.5. A Four-Dimensional Observational Framework

The comparison of Chinese and American materials shows that the "kill threshold" discussion extends beyond income level. It involves several conditions related to household risk. First, whether income remains stable or is interrupted forms the starting point of risk activation. Second, the fixed spending ratio, especially long-term burdens such as housing, affects the size of a household's room for adjustment. Third, reserve coverage time affects how long a household can continue after income is interrupted. Finally, institutional protection and family support form the external support condition when shocks occur.

These four dimensions do not operate independently. Income continuity and fixed spending ratio jointly shape cash-flow pressure. Reserve coverage time affects the household's endurance when risk continues. Institutional protection and family support may reduce the part of the shock that must be borne directly by the household.

On the basis of this review, these conditions can be translated into measurable dimensions: income continuity, fixed spending ratio, reserve coverage time, and external support strength. Building survey questions around these dimensions makes it possible to identify structural differences in household risk within a concrete sample.

3 Methodology

3.1. Research Sample and Data Sources

This study focuses on families in Changzhou and collects data through an anonymous online questionnaire. The questionnaire was mainly distributed through classmates, relatives, and friends. Parents or other household members were invited to complete it. During distribution, brief explanations were provided online or in person when respondents had questions about the items. The opening page of the questionnaire explained the research purpose and privacy protection principles. Participation was voluntary, and the questionnaire did not collect names, contact information, or other personally identifiable information. The questionnaire mainly used range-based and percentage-based items. It did not ask respondents to provide exact income or expenditure amounts, to reduce response pressure and protect household privacy.

A total of 151 questionnaires were collected. Since no item could be left blank, data screening focused on response time and logical consistency. The first round checked response time and removed questionnaires completed too quickly for normal reading and response. The second round checked logical consistency and removed questionnaires with clearly contradictory answers across related items. After screening, 137 valid responses remained.

The valid sample covers local registered households, newly settled households, and long-term residents without local household registration. It also includes households with different types of main income sources, such as government agencies, public institutions, state-owned enterprises, flexible employment, self-employment, and corporate white-collar employment. This study uses convenience sampling. The sample mainly came from household networks accessible to the researcher, and it may lean toward families that attach relatively high importance to children’s education. Therefore, this study focuses on observing risk differences within this relatively stable household sample.

3.2. Questionnaire Structure and Variable Design

The questionnaire is organized around four dimensions: income continuity, fixed spending ratio, reserve coverage time, and external support strength. The items are divided into four modules: basic household profile, spending structure and safety buffer, stress-scenario judgment, and support conditions and institutional protection.

Income continuity is mainly observed through respondents’ judgments about recent household income stability and their confidence in income stability over the next one to two years. The fixed spending ratio (FSR) estimates the share of household income spent on housing, education, and other long-term fixed expenses. It is calculated from the response ranges for these expense items. Reserve coverage time is measured by how many months of basic living expenses could be covered by readily available cash or demand deposits. External support strength is classified into strong, moderate, and weak according to the degree of help a household could obtain under extreme financial difficulty.

3.3. Stress Scenarios and Analytical Methods

To observe household responses under shocks of different intensity, the questionnaire includes three stress scenarios. The first is a sudden expense of RMB 3,000, used to observe short-term liquidity. The second is an RMB 20,000 expense combined with one month of income interruption, used to observe cash-flow pressure under a medium-intensity shock.

The third is an RMB 50,000 expense, used to observe the response boundary under a larger-scale risk.

This study mainly uses descriptive statistics and grouped comparison. Descriptive statistics present the sample structure and the distribution of key variables, while grouped comparison shows how different households responded under the stress scenarios. In the analysis, "under strain or in difficulty" is treated as a state in which obvious financial pressure has already appeared, and this grouping is used to identify the risk positions of different households.

3.4. Research Boundaries

This study is based on 137 valid responses from Changzhou. It is suitable for observing preliminary differences within a local household sample, but it should not be directly generalized to a wider region. The questionnaire uses response ranges and subjective judgment items, which improve response feasibility but also make some variables approximate. The grouping standards, such as FSR ≥ 70% and reserve coverage time below three months, are analytical choices based on existing reference materials. Changing the cutoff values may affect the classification of some households. Therefore, the results are mainly used to observe the direction and concentration of risk differences within the sample.

4 Results and Discussion

4.1. Basic Characteristics of the Sample

The Changzhou sample was generally stable but internally differentiated. Most households reported very stable income or only minor income fluctuation. In the sample, 92.7% fell into these two income-stability categories, 83.2% had fixed spending ratios below 70%, 72.3% had reserves covering at least three months, and 76.6% had moderate or strong intergenerational support. These results suggest that most households still had a basic capacity to maintain daily life under everyday conditions.

However, buffering capacity was uneven within the sample. Households with fixed spending ratios at or above 70% accounted for 16.8%, and 27.7% had reserves of less than three months. Some households also had weaker support conditions. This shows that risk stratification already existed within a generally stable sample. Some households had relatively sufficient buffering space, while others were more likely to come under strain when a shock occurred.

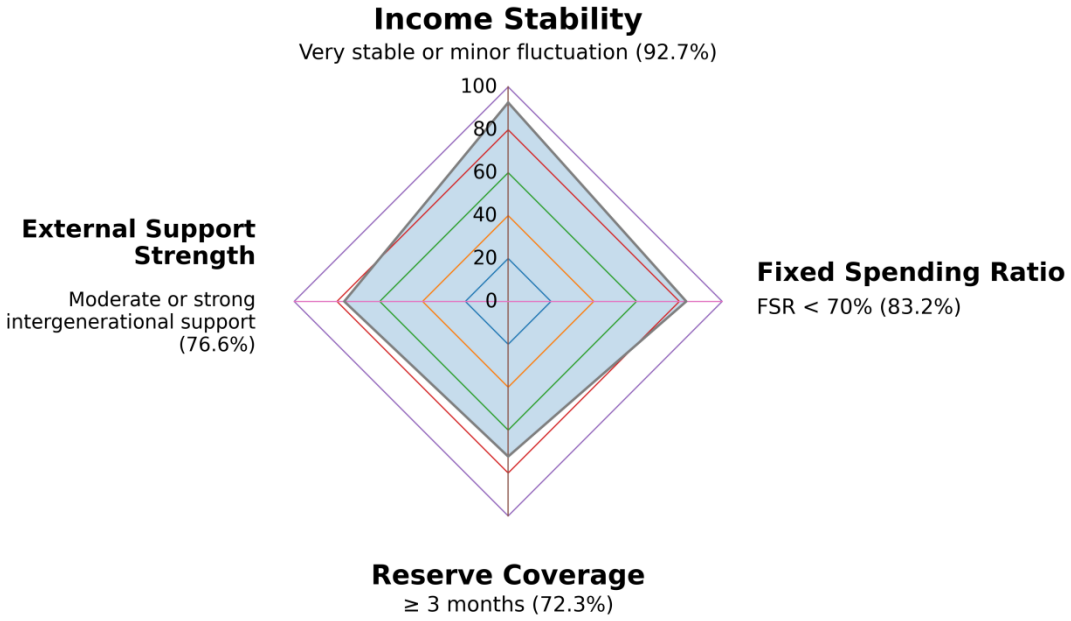

Figure 1.

4.1.1 Four-Dimensional Financial Structure Profile of Sample Households in Changzhou

4.2. Distribution of the Four Core Variables

Fixed spending ratio and reserve coverage time showed the clearest early differences. These differences became more visible when income continuity was compared with spending and reserves.

The stratification of spending structure can be seen from the comparison between HSR, ESR, and FSR. The housing spending ratio (HSR) was only one part of the structure. After the education spending ratio (ESR) and other fixed expenses were included, the fixed spending ratio (FSR) was noticeably higher than HSR alone. Compared with a single spending item, FSR better reflected a household's financial position before a shock occurred. Some households did not appear to have a particularly heavy housing burden, but when several fixed expenses occupied income at the same time, their room for adjustment had already narrowed.

Reserve coverage time showed a similar pattern. Most households had some buffer, but the length of reserve coverage differed across households. Households with longer reserve coverage time were more likely to maintain stability in daily life. Households with shorter reserve coverage time might not immediately appear to be in difficulty, but their ability to bear pressure was already weaker. Support conditions further widened these differences. Under similar income and spending conditions, stronger support placed households in a safer position than weaker support.

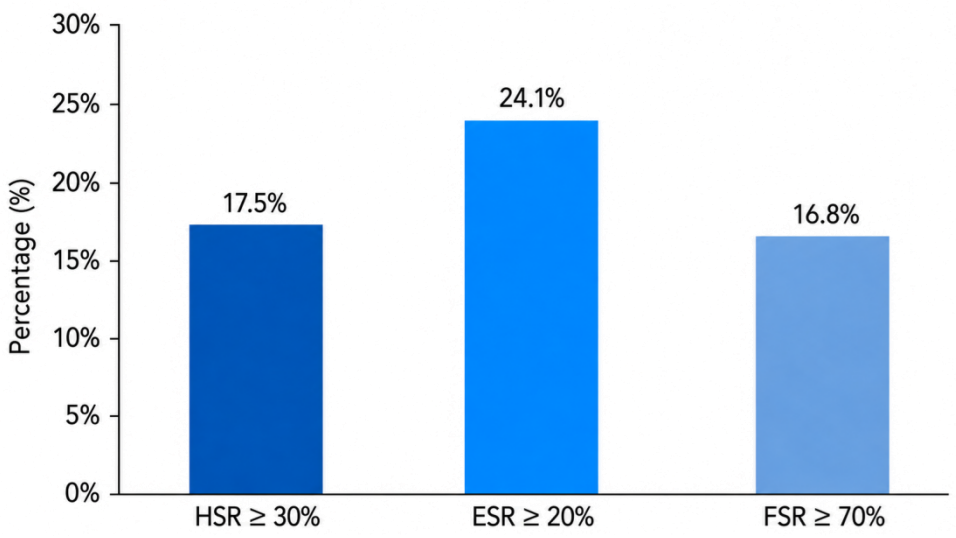

Figure 2.

4.1.2 Share of Changzhou Households Above HSR, ESR, and FSR Thresholds

4.3. Overall Responses Under the Three Stress Scenarios

Once the stress scenarios were applied, the static differences described above became more visible. The RMB 3,000 scenario identified only a small group of households with weaker short-term liquidity. When RMB 20,000 was combined with one month of income interruption, the number of households under strain rose sharply. Under the RMB 50,000 scenario, the number of households under strain was lower than in the combined-shock scenario, but this scenario exposed the most severe response: 4 households stated that they were unable to cope at all.

The three scenarios therefore identified different levels of household pressure. The RMB 3,000 scenario first screened out households with weaker short-term liquidity. The RMB 20,000 scenario combined with income interruption quickly widened the structural differences that already existed among households. The RMB 50,000 scenario further exposed the positions closest to the boundary. Households with smaller buffering space entered strain more quickly when the shock became stronger.

Table 5.

4.1.3 Overall Household Strain Under the Three Stress Scenarios

Stress scenario	Households under strain	Percentage
Sudden expense of RMB 3,000	12	8.8%
RMB 20,000 expense + one month of income interruption	39	28.5%
Sudden expense of RMB 50,000	29	21.2%
Of which: unable to cope	4	2.9%

4.4. Group Differences and Structural Positions

The grouped results show the clearest differences in reserve coverage time and fixed spending ratio. For households with reserves covering less than three months, the under-strain rates in the three stress scenarios were 28.9%, 63.2%, and 52.6%, respectively. For households with reserves covering three months or more, the corresponding rates were only 1.0%, 15.2%, and 9.1%. This gap shows that reserve coverage time was directly related to how long a household could continue after income was disturbed.

Households with high fixed spending ratios showed a similar pattern. For households with FSR at or above 70%, the under-strain rate was 63.6% under the RMB 20,000 plus income-interruption scenario and 43.5% under the RMB 50,000 scenario. Across the three stress scenarios, 60.9% of this group showed strain in at least one scenario. A high fixed spending ratio may not appear as visible difficulty in ordinary times, but when income is interrupted, the already limited room for adjustment is quickly consumed.

Support conditions also affected household risk positions, although the differences were smaller than those linked to reserves and FSR. The combined under-strain rates for households with strong, moderate, and weak support were 22.9%, 42.9%, and 46.9%, respectively. Weaker support meant that more of the shock had to be absorbed by the household itself.

The overlap of reserves below three months, FSR at or above 70%, and weak intergenerational support involved 5 households, or 3.6% of the sample. This overlap was different from the 4 households that could not cope at all under the RMB 50,000 scenario, and it reflected another structural risk position. Read alongside the stress-scenario results, it suggests that serious household risk was concentrated where limited reserves, high fixed spending, weak support, and direct shock pressure appeared at the same time.

4.5. The Structural Basis of Risk and the Critical Mechanism

Household risk in the sample was shaped by several conditions working together. The fixed spending ratio formed a long-term constraint on household financial operation. As this ratio increased, the household had less room for adjustment. Income continuity affected how sensitive the household financial structure became when a shock appeared. When income fluctuated or was interrupted, a household with already high fixed spending became more vulnerable. At the same time, reserve coverage time and support conditions played a buffering role and could delay the accumulation of pressure.

Risk stratification was not fixed. It became sharper when high fixed spending, income interruption, insufficient reserve coverage, and weak support appeared together. When the fixed spending ratio was high, income interruption lasted beyond reserve coverage, and support conditions could not provide enough additional help, the household entered a stage with very limited buffering space. At this point, even a moderate shock could trigger structural imbalance. The shock was only the trigger. Before it arrived, the household had already had very little room left for adjustment.

The “kill threshold” can therefore be understood as the point at which a household’s financial structure shifts from stability to imbalance. It is not a fixed amount of money. It is a turning point formed when several conditions approach their limits at the same time. As a household approaches this point, the likelihood of strain rises. Once it crosses this point, the risk of serious difficulty increases significantly.

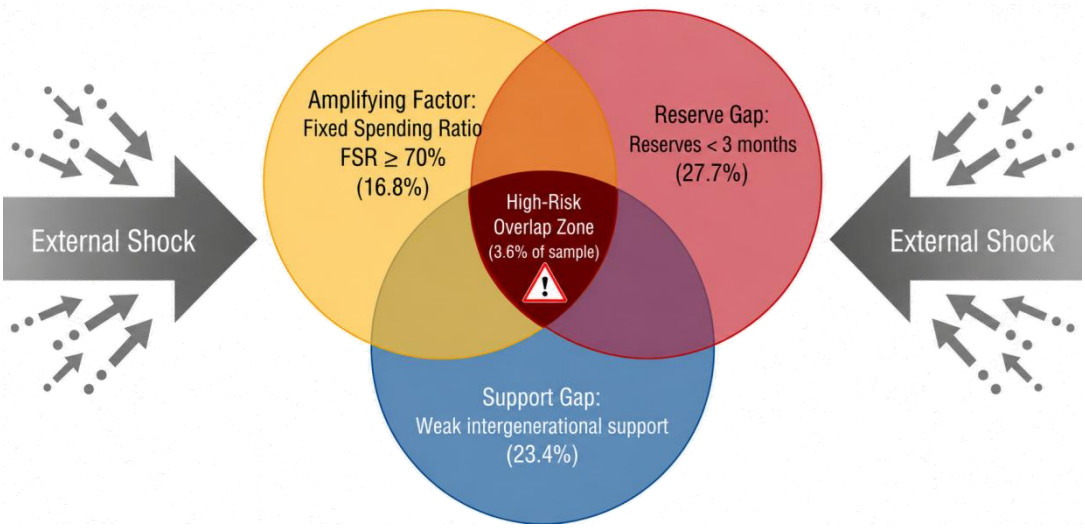

Figure 3.

4.1.4 Overlap of Key Household Risk Factors

4.6. The Bucket Model and Structural Expression

The bucket model is used here as a simple way to describe household risk. Household income is treated as continuous inflow. Fixed spending ratio is treated as the speed of regular outflow. Reserve coverage time corresponds to the effective capacity of the bucket. External support strength is treated as an additional supply channel. When fixed spending remains high for a long time, even stable income may not raise the water level very much. When reserve coverage time is short, the household becomes more sensitive to shocks. When external support is weak, the shock is more likely to be borne directly by the household itself.

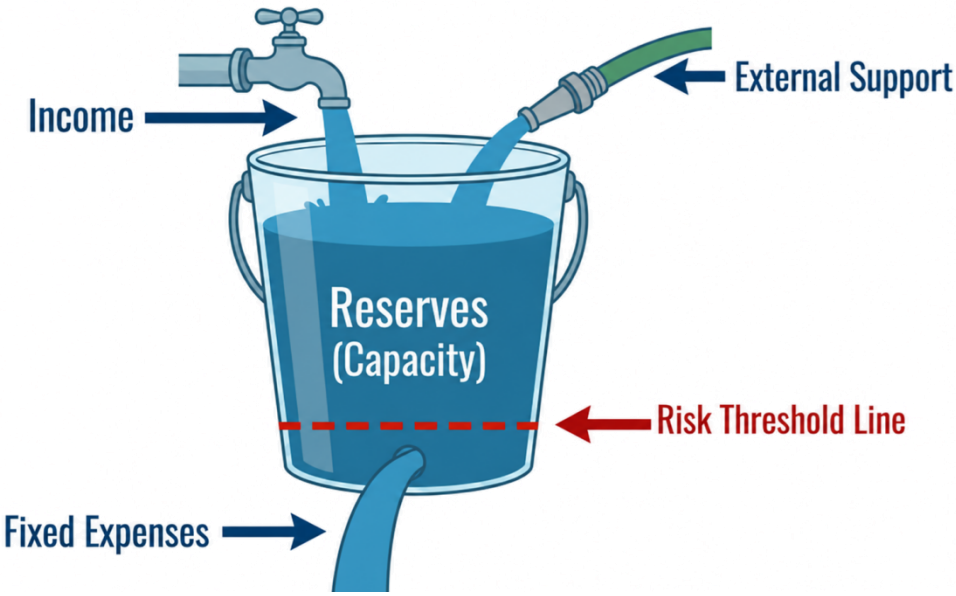

Figure 4.

4.1.5 Bucket Model of Household Risk Structure

On this basis, household risk can be summarized through a simplified structural expression:

$$R = \frac{S \times F}{C \times E} \quad (1)$$

In this expression, R represents risk intensity, S represents the scale of the shock, F represents the fixed spending ratio, C represents cash buffering capacity, and E represents external support strength. S×F forms the amplifying side of risk, while C×E forms the buffering side. When R<1, the buffering side is stronger than the amplifying side overall. When R=1, the two sides are roughly balanced. When R>1, the amplifying side exceeds buffering capacity, and the household is more likely to enter imbalance or serious difficulty.

This expression is used as an explanatory framework rather than a precise calculation tool.

5 Conclusion

5.1. Main Conclusions

This study examined the household risk implied by the "kill threshold" phenomenon by combining a review of relevant materials, a questionnaire survey, and stress-scenario testing. Through the Changzhou sample, it provided a preliminary view of how household financial structure is shaped by income continuity, fixed spending ratio, reserve coverage time, and external support strength.

The main finding is that everyday stability does not necessarily mean strong shock resistance. In this sample, many households could maintain normal life under ordinary conditions, but their differences became clear when sudden expenses and income interruption occurred together. The decisive difference was whether the household still had enough room to absorb pressure after fixed spending, reserve coverage time, and support conditions were taken into account.

Therefore, the "kill threshold" is better understood as a structural critical state in household financial risk. It gradually emerges when income continuity, fixed spending ratio, reserve coverage time, and external support conditions interact and push household buffering capacity toward its limit.

5.2. Research Implications

Using the "kill threshold" as an entry point, this study turns an online expression into a research perspective for observing household risk. It shifts attention from visible difficulty to the buffering space within everyday financial structure, and further to the financial resilience of households under sudden shocks.

Risk does not necessarily form only when a shock occurs. It may already exist within everyday financial structure. Sudden expenses or income interruption can enlarge these hidden differences and turn them into visible strain. Understanding household risk therefore requires attention to the shock itself and to the buffering capacity that a household already has or lacks before the shock arrives.

5.3. Limitations and Future Directions

The conclusions of this study should be understood as exploratory findings from a local sample. The sample was concentrated in Changzhou and collected through convenience sampling. The questionnaire used response ranges and judgment-based items. This made it easier for respondents to answer, but some variables remained approximate. The study

was also cross-sectional. It captured differences among households at one point in time, but it could not show how household financial structure changes over time.

Future research can proceed in two directions. First, a larger sample could be used to compare different cities and household types. This would help test whether similar patterns appear under different social and regional conditions. Second, follow-up surveys or interviews could be used to analyze how households adjust spending, use reserves, and seek support before and after risk events. Such work would help explain how household risk forms, develops, and changes.

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