

OPINION

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Assessing Income and Asset Adequacy for Korea's Elderly Households: Implications and Policy Challenges

Contrary to intuitive expectations, elderly households in Korea exhibit a disproportionately greater reduction in consumption relative to their income decline while preserving their asset holdings. This trend can be attributed to insufficient retirement assets, difficulties in generating stable post-retirement cash flows, and rising longevity risks. Based on the analysis of Korean household panel data, the elderly households remain heavily dependent on labor and transfer income, despite a gradual diversification of income sources. Moreover, the majority of their wealth is concentrated in real estate, limiting the effective use of financial assets, such as pensions.

When assessing the adequacy of income and asset holdings among Korean elderly households, about 46% lack sufficient income to meet their minimum living expenses after retirement. Even if total household assets were fully annuitized, only 74% of elderly households could sustain their current consumption levels, and only 35% could do so using financial assets alone. This finding underscores the urgent need for effective liquidation strategies for physical assets. Despite Korea's high labor force participation of older workers, the country continues to record a high elderly poverty rate, reflecting a shortage of retirement income sources.

The substantial decline in consumption among Korean elderly may be closely linked to the way households have accumulated their assets. With population aging expected to accelerate further, consistent policy efforts are needed to enhance the quality of life for the elderly and optimize household asset structures. In this regard, the reverse mortgage program should be refined and actively promoted to ensure

* All opinions expressed in this paper represent the author's personal views and thus should not be interpreted as Korea Capital Market Institute's official position.

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its sustainability. On top of that, elderly households and pre-retirees should be encouraged to access a broader range of financial investment products and services to expand the utilization of their financial assets. Lastly, it is crucial to strongly support retirement asset accumulation among younger and middle-aged cohorts through regulatory reforms, ensuring that the current working-age population secures sufficient pension assets for the future.

According to the life-cycle hypothesis, households allocate resources between consumption and savings under income constraints over their lifetimes to maximize the marginal utility of wealth. In theory, the elderly finance their consumption using the assets accumulated during their working years. However, an analysis of how income, consumption, savings, and assets change across different age groups in Korea reveals a marked pattern that differs from intuitive expectations.¹⁾ Specifically, although income declines with the progression of individuals to older ages, older people tend to reduce consumption more significantly compared to the decline in income, enabling them to continue to save. Consequently, older individuals tend to maintain their accumulated assets rather than fully decumulating them.

Several factors may contribute to this phenomenon, such as inadequate retirement assets among Korean seniors. Also, even among those with sufficient asset holdings, inefficient asset structures may hinder effective retirement income generation. Additionally, increasing longevity risk resulting from rising life expectancy may incentivize elderly households to sustain savings as a safeguard against future financial uncertainty. Against this backdrop, this article assesses the adequacy of income and asset levels among elderly households in Korea using household panel data, and examines financial problems faced by the elderly from a household finance perspective. Based on these findings, policy directions will be proposed to enhance the quality of life of the elderly and to streamline the household asset structures.

1) Kim, J.C., Kim, M.K. and Jung, H.C., September 11, 2024, Aging, household asset size, and elderly consumption: impacts and challenges, Korea Capital Market Institute Conference.

Income and asset composition of elderly households in Korea

This article analyzes the adequacy of income and asset levels among elderly households with a household head aged 65 or older in Korea, based on the data from the National Survey of Tax and Benefit (NaSTaB). To ensure an appropriate sample, the analysis focuses exclusively on single-person households and two-person households consisting of a married couple within this age group.²⁾ Household total income is composed of labor and business income, transfer income, pension income, and property income.³⁾ Meanwhile, total household assets are categorized into financial assets,⁴⁾ rent deposit, residential housing, other real estate, and other assets.

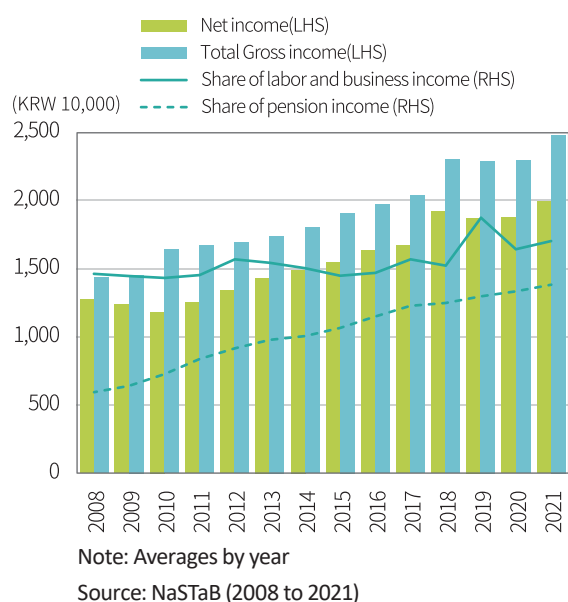
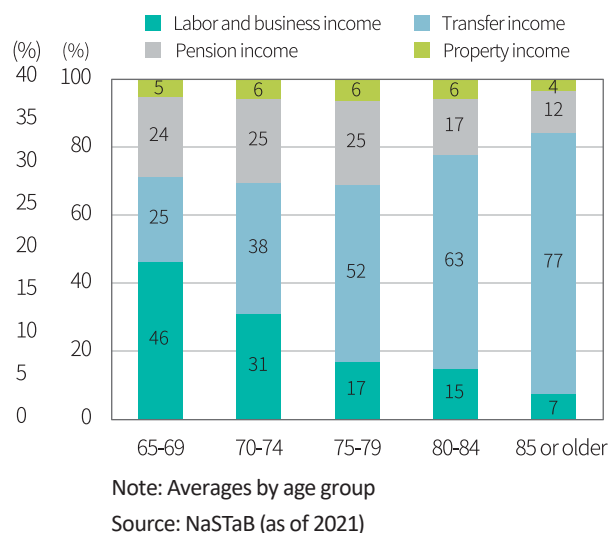
First, let's take a brief look at the characteristics of income changes and composition of elderly households in Korea. Figure 1 illustrates changes in their total income, net income, and the composition of major income sources from 2008 to 2021. Net income is calculated by subtracting non-living expenditures, such as taxes, from gross income, and all annual observations are converted to 2021 real values to adjust for inflation. One of the most striking features in Figure 1 is the significant rise in real income among elderly households over time, which can be attributed to the rapid growth of labor and business income as well as pension income.⁵⁾ In addition to the increase in income per elderly household, the share of both elderly households engaged in economic activities and those receiving pension benefits has climbed substantially. However, as shown in Figure 2, income composition in 2021 reveals that amid the declining share of major income sources, such as labor and pension income, as individuals age, elderly households continue to rely heavily on transfer income for their livelihood.

2) The sample of elderly households analyzed consists of a total of 3,600 households (1,327 single-person households and 2,273 two-person households) from 2008 to 2021. The sample of 2021, the most recent year, includes 916 single-person households and 1,322 two-person households.

3) Transfer income includes both private transfers and public transfers such as government subsidies, while pension income is comprised of public pension income, retirement pension and private pension benefits, and insurance income. Property income consists of rental income, interest, and dividends.

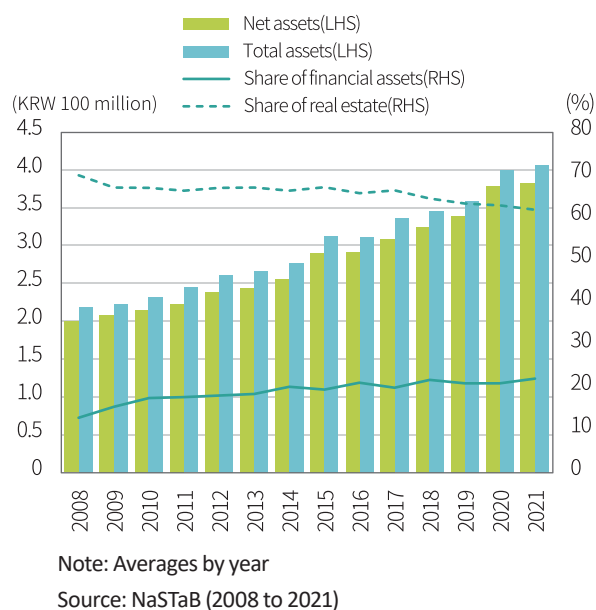
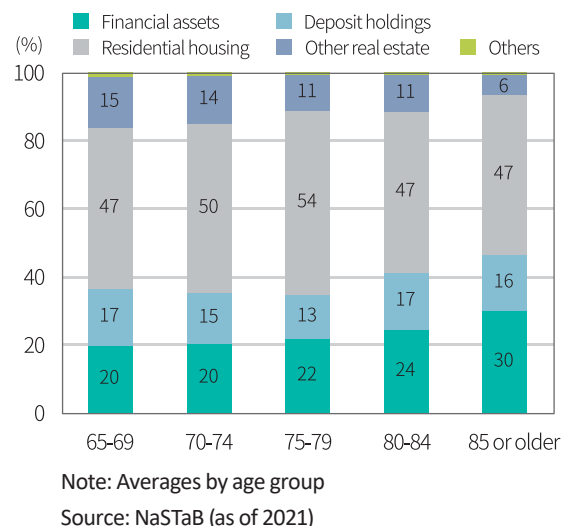
4) Financial assets include deposits and installment savings, stocks, bonds, funds, pensions, insurance, and other financial assets.

5) From 2008 to 2021, the average total income of elderly households increased by 73%. By income source, labor and business income rose by 151%, pension income by 131%, property income by 19%, and transfer income by 11%.

Figure 1. Changes in elderly household income**Figure 2. Income composition of elderly households**

The composition and evolution of asset holdings among elderly households can be summarized as follows. As illustrated in Figure 3, the average asset holdings of elderly households have increased over time, primarily driven by sustained savings and asset price appreciation, particularly in real estate. More than 60% of these household assets are concentrated in physical assets, such as real estate, while financial assets accounted for approximately 22% of total assets in 2021. The increase in the share of financial assets stems primarily from growth in deposits. However, the share of financial investment products, such as stocks, funds, and pension assets, remains substantially low.⁶⁾ Notably, the elderly tend to reduce their holdings of non-residential property as they age, while increasing their share of financial assets (see Figure 4). Despite this growth of financial assets, over 97% of them are held in deposit savings accounts. The overall asset composition suggests that elderly households in Korea are likely to face the lack of useful retirement income streams, such as pension benefits, underscoring the need for the effective annuitization of accumulated assets.

6) In the 2021 household sample analyzed, deposits and savings accounted for 97% of elderly households' financial assets, while financial investment assets, encompassing stocks, bonds, funds, pensions, and insurance, took up less than 3% on average.

Figure 3. Changes in elderly household assets**Figure 4. Asset composition of elderly households**

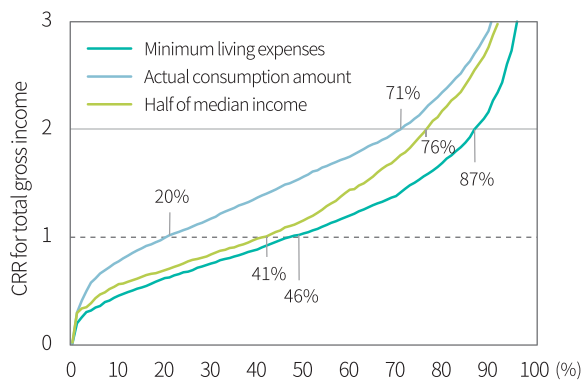
Adequacy of income and asset holdings of elderly households in Korea

A key factor contributing to the significant reduction in compensation among elderly households may be insufficient cash inflows. To examine this, the consumption replacement ratio (CRR) is calculated for each elderly household. The CRR is a metric that represents how many times a household's income can cover its consumption expenditure, calculated as the ratio of household income to consumption expenditures. Figure 5 presents the distribution of CRRs for gross income of elderly households based on benchmark consumption levels. When using the minimum living expenses reported by households in the NaSTaB survey as a benchmark, approximately 46% of elderly households have a CRR below 1, suggesting that nearly half of elderly households have the total income that falls short of their self-reported minimum living expenses. Furthermore, nearly 41% of elderly households have a gross income below 50% of the median income,⁷⁾ the threshold commonly used to define relative poverty. Notably, the CRR distribution based on actual household consumption is positioned farthest to the left in Figure 5, implying that the older population's actual spending is significantly lower than their minimum living expenses or half of the median income.

7) According to Statistics Korea, the monthly median income in 2021 is KRW 1.83 million for single-person households and KRW 3.09 million for two-person households.

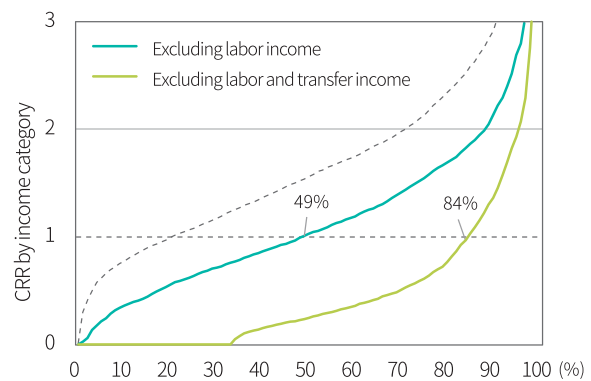
Figure 6 depicts the distribution of actual CRRs across different income categories for elderly households. If labor and business income is excluded, meaning seniors do not engage in economic activities, approximately 49% of elderly households would lack sufficient income to cover their actual consumption. If transfer income is also excluded, this proportion rises sharply to 84%. Although both average income levels and the proportion of pension income have increased among elderly households, labor and business income and transfer income still constitute a substantial share of the total elderly household income. This explains why many seniors remain in the workforce to maintain a minimum standard of living. These findings align with a paradox observed in OECD statistics. Although Korea has the highest labor force participation rate of older workers across OECD member states,⁸⁾ it also records the highest elderly poverty rate (OECD, 2023).⁹⁾

Figure 5. CRR distribution for total gross income of elderly households



Source: NaSTaB (as of 2021)

Figure 6. Distribution of actual CRRs by income range of elderly households



Note: The dotted line represents the CRR distribution for total gross income

Source: NaSTaB (as of 2021)

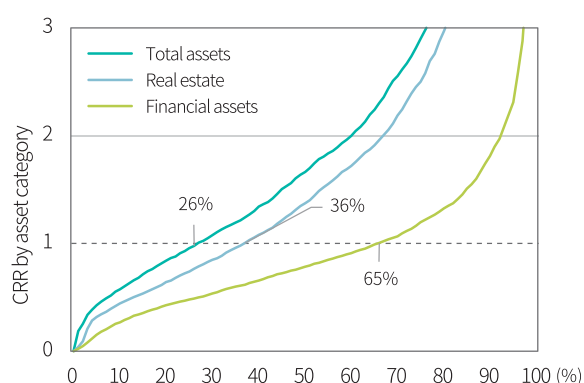
Meanwhile, if elderly households lack reliable retirement income sources, such as pension or property income – both of which are close to permanent income - they could liquidate asset holdings to finance consumption over their remaining lifetimes. To evaluate this possibility, it is necessary to assess the adequacy of asset holdings among elderly households in Korea.

8) See OECD Labour Force Statistics by year.

9) According to OECD statistics, Korea's elderly income poverty rate stands at 40.4%, closely similar to the estimate from this article (approximately 41%). This figure is more than twice the OECD average (14.2%) (OECD, 2023, *Pensions at a Glance 2023*).

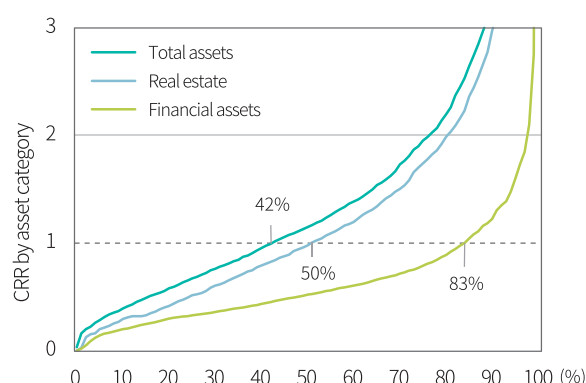
Building on methodologies used in previous studies,¹⁰⁾ this analysis estimates each household's CRR for annuitized wealth, defined as the potential annuitized value of net assets held by elderly households.¹¹⁾ To simplify the assessment, the adequacy of asset holdings is evaluated using two benchmarks for future household consumption: (1) actual household consumption expenditures at the time of evaluation; and (2) the self-reported minimum living expenses of each household.

Figure 7. CRR for annuitized assets of elderly households: Sustaining actual spending levels



Note: Based on net assets after deducting liabilities
Source: NaStaB (as of 2021)

Figure 8. CRR for annuitized assets of elderly households: Covering minimum living expenses



Note: Based on net assets after deducting liabilities
Source: NaStaB (as of 2021)

Figure 7 illustrates the CRR distribution for the annuitized value of net assets held by elderly households, assuming that they maintain their current consumption levels until all members pass away. The findings indicate that if elderly households fully annuitize their total assets, 74% can sustain their current consumption levels. However, if only real estate or financial assets are annuitized, this proportion declines to 64% and 35%, respectively. These results suggest that a significant portion of physical assets and residential property would need to be annuitized to support post-retirement consumption, and only about one-third of elderly households can sustain future consumption using their financial assets alone. Notably, only 58% of elderly households hold sufficient assets to meet their minimum living expenses, implying that a

10) Haveman, R., Holden, K., Wolfe, B., Sherlund, S., 2006, Do newly retired workers in the United States have sufficient resources to maintain well-being? *Economic Inquiry* 44, 249-264; Love, D.A., Smith, P.A., McNair, L.C., 2007, Do households have enough wealth for retirement? Working Paper.

11) For details on the calculation methodology, see Kim, J.C. et al. (Sep. 11, 2024).

considerable portion of households may struggle to maintain adequate consumption levels even if they annuitize their assets. It should be further noted that the annuitized wealth-based CRRs estimated in this article do not account for factors such as potential inheritance or annuitization costs, suggesting that actual asset holdings of elderly households may be even lower than the true adequacy level.

Policy challenges for enhancing well-being and optimizing household asset structures for the elderly

The slowdown in consumption among elderly households may stem from insufficient pension income and the structure of asset accumulation. Even if population aging progresses further, a rapid asset decumulation among elderly households is unlikely in the near future. However, if younger and middle-aged cohorts follow the footsteps of their predecessors, Korea may face declining economic vitality driven by weaker consumption and reduced productivity stemming from inefficient capital allocation. As of December 2024, Korea has officially become a super-aged society, where over 20% of the total population is aged 65 and older.¹²⁾ Given record-low fertility rates and rising life expectancy, the share of the older population is expected to continue growing. According to the UN World Population Prospects, Korea's old-age dependency ratio is projected to surpass that of all advanced economies within the next 25 years.¹³⁾ These drastic demographic changes will have profound implications not only for individuals but also for the national economy and society as a whole, requiring a comprehensive policy response to optimize household capital allocation and improve elderly well-being over the medium to long term.

First, it is necessary to improve and expand Korea's reverse mortgage program. As this article highlights, elderly households' consumption is highly sensitive to permanent income sources, such as pension income, and can be partially covered through the annuitization of their physical assets. Reverse mortgages can play a critical role in diversifying post-retirement income sources for elderly households. However, the current participation in Korea's reverse

12) Ministry of the Interior and Safety, December 26, 2024, Korea's population aged 65 and older surpasses 20% of the total population, officially entering a super-aged society.

13) Statistics Korea (2023), Future Population Projections: 2022-2072; United Nations (UN), 2022, *World Population Prospects*.

mortgage program remains extremely low, with an enrollment rate of just 1%.¹⁴⁾ To enhance the program's participation, a thorough analysis is required to identify and address barriers to participation. Additionally, it is essential to enhance liquidity in reverse mortgage plans to mitigate risk and ensure long-term sustainability of the program.¹⁵⁾

Second, the utilization of financial assets should be enhanced among older and pre-retirement households. Korean households' strong preference for real estate is unlikely to dwindle significantly through policy intervention. However, excessive concentration of household wealth in illiquid physical assets may reduce the marginal productivity of capital. Despite a surge in new investors entering capital markets following the Covid-19 pandemic, the financial assets of elderly households remain heavily tied up in savings and deposits, restricting access to appropriate financial investment products. To address this, policymakers should implement measures to promote mid-to-low risk products that accommodate the elderly's needs and expand tailored financial education and support programs to improve their access to a diverse range of financial products and services. At the same time, it is also necessary to diversify immediate annuity products and reduce associated costs to facilitate stable financial asset management.

Finally, younger and middle-aged generations should be encouraged to build retirement assets. Retirement pension plans and private annuities should play a pivotal role in steadily channeling household wealth into capital markets. A key factor behind the lack of permanent income sources among the current elderly households has been the underused private annuities beyond the public pension system. To secure sufficient retirement income sources for the future elderly, tax incentives should be expanded for contributions to private annuities.¹⁶⁾ Additionally, it is also essential to establish a regulatory framework for effectively managing the retirement assets of the working-age population by improving investment returns on accumulated pension assets and enhancing default investment options in retirement pension schemes.

14) Choi, K.J., Baek, I.G. and Kang, D.H., May 2023, Strategies for facilitating reverse mortgages in response to a super-aged society and expected effects, a research paper commissioned by the Presidential Committee on Aging Society and Population Policy.

15) Hwang, H.Y. and Noh, S.H., September 11, 2024, Transition to an aging economy: enhancing the role of the financial investment industry, Korea Capital Market Institute Conference.

16) Kim, K.L. and Hwang, S.W., 2024, Analysis of pension taxation and directions for improvement, Korea Capital Market Institute Survey Papers 24-01.