

# The Impact of Population Aging on Financial Market Structures and Policy Implications

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## I. Introduction

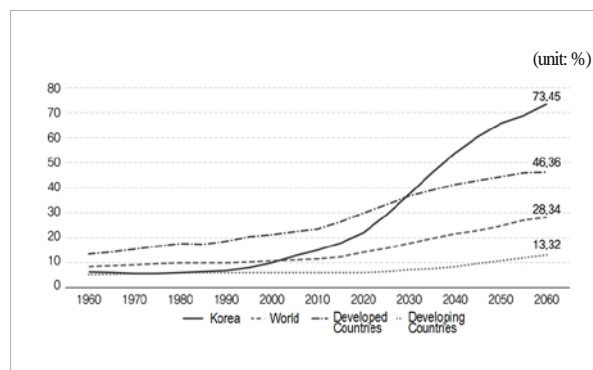
Korea is aging at a rapid pace, causing concern about the resulting socio-economic impacts. This study analyzes the expected changes in the financial markets and macroeconomic changes resulting from aging and seeks possible policy measures to mitigate the negative impacts of these changes. The estimated changes will be useful information for all market players to prepare for the future socio-economic changes.

aged people. More and more aged people are facing poverty and the suicide rate of the elderly in Korea is highest among OECD countries. Rent beneficiaries occupy just a part of the old population. The social security system does not guarantee a stable livelihood for old people. This problem will become more serious in the near future because the baby boom generation has started to retire recently. The aging problem will lead to low growth, low inflation and low investment throughout the whole Korean economy, making structural changes inevitable in the financial market.

## II. Trend and Characteristics of Korea's Aging

Even though Korea remains yet at the stage of an aging society according to criteria established by the UN, it is expected to become an aged society in 2017 and then a super-aged society in 2026, a mere nine years later. The aging of the Korean population is proceeding at an unprecedented pace. The fundamental reason for this fast pace of aging is the rapid drop in birth rate and growing life expectancy. However, Korea's socio-economic systems are not well prepared to absorb the shocks for

Figure 1. Changes in Ratio of Elderly Population (over 65)

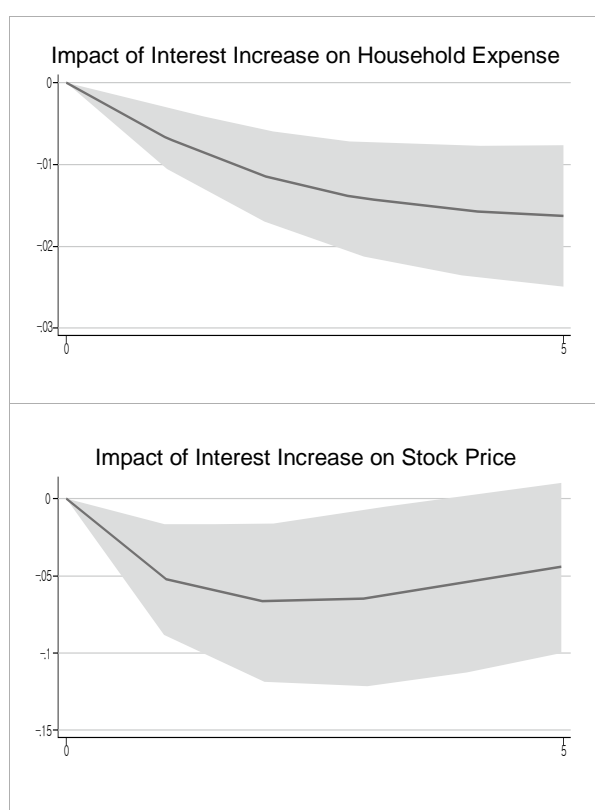


Source: United Nations (2014), Population Ageing and Development Database (accessed Aug. 8, 2016).

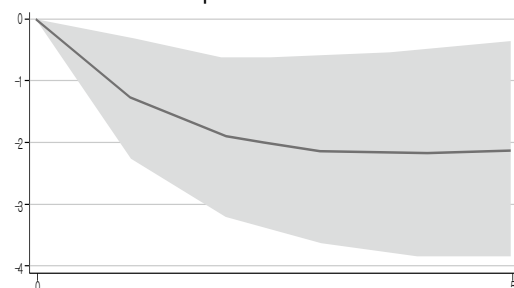
### III. Monetary Policy in the Age of Aging

The authors undertook empirical analysis to examine whether monetary policies can maintain their effectiveness even after aging has proceeded further. We performed a panel-VAR analysis using the OECD data for 25 member countries for 20 years, from 1995 to 2014. The empirical analysis showed that monetary policies lose their effectiveness considerably in an aged society. This result implies a possible change in the effectiveness of Korea's monetary policies, especially if the aging of Korea's population proceeds further.

**Figure 2. The Impact of Monetary Policy in a Young Society (whole period)**

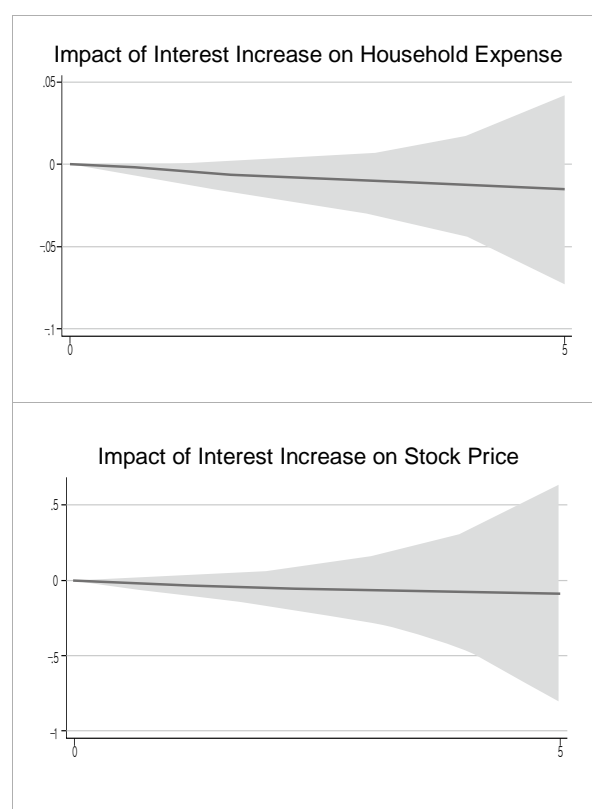


**Impact of Interest Increase on Household Debt over Disposable Income**

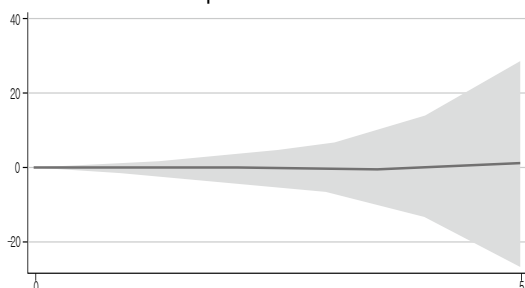


Note: Shaded area indicates 95% confidence interval.  
Source: Authors' calculation

**Figure 3. The Impact of Monetary Policy in a High-Aged Society (whole period)**



Impact of Interest Increase on Household Debt over Disposable Income



Shade indicates 95% confidence interval,  
Source: Authors' calculation

As of yet aging has not progressed significantly in Korea. However, the Bank of Korea should restructure its monetary policies in the long term, considering the change of policy effectiveness according to the progress of aging. The government may utilize fiscal policies to a more intensive extent to respond to cyclical depression while it sets monetary policies to manage the financial market and inflation pressure. For instance, if the government employs monetary policies to control cyclical changes, it would have to apply greater and faster interest rate changes than before to achieve the same effect. Research on the relation between aging and monetary policy has only begun to receive attention recently. However, it may become one of the main research topics in the near future due to its importance. Further and more detailed studies will be needed to allow adjustment of monetary policies in an aged society.

## IV. Relation between Aging and the Financial Market

This paper reviews the theories regarding the relation between aging and the financial market and undertakes case studies with Japan, Germany and the U.S. In addition to a theoretical re-

view, the countries' money flow charts and international investment position tables were analyzed to discover the impacts of aging on the financial market. Japan has shown macroeconomic and financial changes very close to theoretical predictions. However, Germany is not showing considerable changes in its financial market due to active labor market reforms. The U.S. as well does not reveal the characteristics of an aged society because aging in the U.S. is still at an initial stage and the financial market functions as a global market rather than a domestic market. Even though the countries show different levels of change, they all have introduced some policy measures focused on aging. Examples of successful policies include the Japanese current account policies and NISA, German labor market reform and competition policies, and the U.S.' introduction of annuities such as its 401(k) plan.

## V. Policy Implications

The authors draw policy implications based on the analyses above. The recommended policy directions are as follows:

First, explore new roles for monetary policies.

Second, use labor market approaches and financial market approaches together to respond to aging.

Third, employ strategies using the income account to maintain current account balance. **KIEP**