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Behavioral characteristics affecting household portfolio selection in Japan

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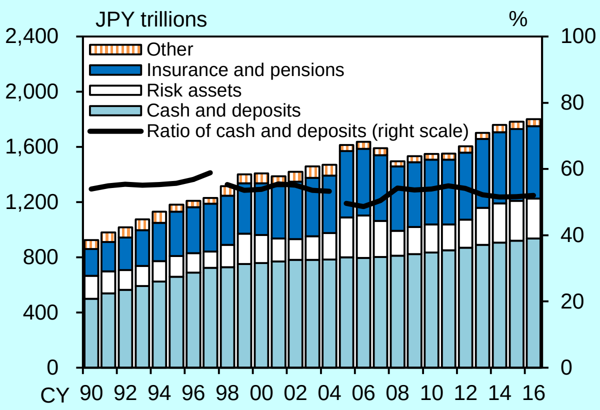
In Japan, cash and deposits continue to make up the vast majority of households' financial assets. Since the 2000s, the percentage of households holding risk assets as investment/savings-oriented financial assets has been growing moderately. Nonetheless, households holding no risk assets still account for the majority. While the securities business industry and academics have identified a number of factors impeding household investment in risk assets, the aim of this report is to re-examine household behavior that prevents a move away from a concentration on cash and deposits. Understanding household behavior, such as households' reluctance to hold risk assets and insufficient planning for the future, holds important lessons for future changes in households' portfolio choices, for the debate on institutional reforms and the provision of products, and for the course of financial education.

Introduction

Looking at the composition of financial assets held by the household sector in Japan, cash and deposits together account for more than 50 percent of total assets (Chart 1). The share of cash and deposits is higher than in the United States and the euro area, where it is 14 percent and 34 percent respectively (as of the end of 2016). Various steps have been taken in Japan as part of the financial deregulation since the 1990s to encourage households to invest in risk assets, including institutional reforms and the revision of product offerings. These initiatives seem to have increased the investor base, but so far there has been no major change in the share of cash and deposits.

This gives rise to the question whether such concentration of household assets in cash and deposits is rational for households. Generally speaking, portfolio selection across safe and risk assets is a difficult issue. While optimal portfolio allocation is affected by individuals' age, from a theoretical perspective it is not uniquely determined. While some argue that the young, who will be able to earn labor income over a long period, should hold more risk assets, others argue the opposite, namely that the young should hold more safe assets in order to ensure they have the necessary funds to support themselves in old age.[1]

[Chart 1] Composition of households' financial assets



Notes: 1. There are breaks in the data in 1998 and 2005 due to a revision of standards.
2. Risk assets consist of stocks, investment trusts, and bonds.
Source: Bank of Japan, "Flow of Funds."

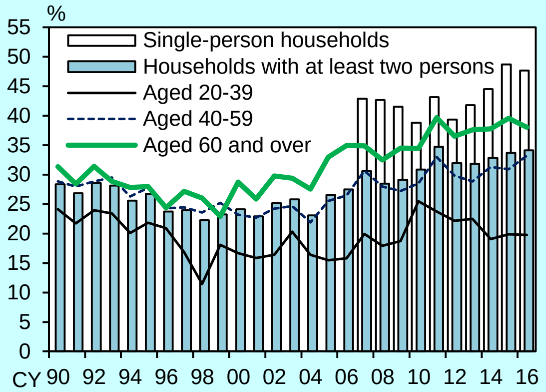
This report provides a description of the current situation of household portfolio selection in Japan using the *Opinion Survey on Households' Financial Activities.* Conducted annually since 1963 by the Central Council for Financial Services Information, the survey examines 8,000 randomly sampled households with at least two persons. Since 2007, the survey also includes 2,500 single-person households. The survey asks respondents about the purpose of their financial asset holdings, the motivations for their asset choices, and the components of savings-type assets (financial assets excluding cash and liquid deposits for settlement purposes), and contains both quantitative and qualitative information. The aim of this report is to contribute to the long-standing debate on household portfolio selection by re-examining why Japanese households are cautious about investing in risk assets.

Expansion of the investor base

Households' portfolio selection can be divided into two separate decisions: (i) whether or not to hold risk assets; and (ii) if the household decides to hold risk assets, how much risk assets to hold. Let us start with the former selection.

Looking at households with at least two persons and holding savings-type financial assets for investment/savings purposes, the share of households holding some risk assets (stocks, investment trusts, and/or bonds) has been rising moderately (Chart 2).[2] By age group, the share of such households has not only continued to increase among households with family members aged 60 or over that are the most active in terms of investing in risk assets, but has also risen among households with family members in the 40-59 age group, i.e., households that are building up assets. This trend is particularly pronounced since the first half of the 2000s, when the instability of Japan's domestic financial system was resolved.

[Chart 2] Share of households holding risk assets

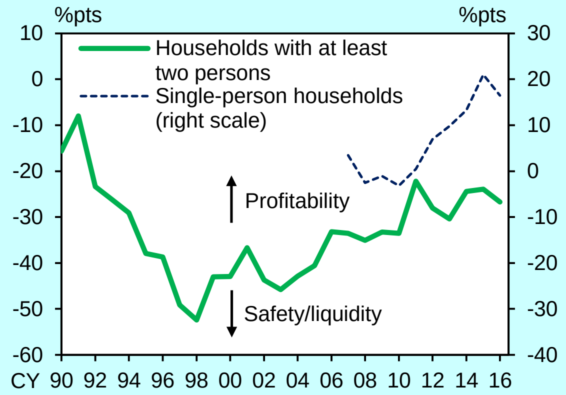


Notes: 1. The lines are for households with at least two persons.
2. Of households holding savings-type assets.
Source: Central Council for Financial Services Information.

Changes in asset selection criteria

One of the reasons for the expanding investor base is changes in the selection criteria for financial assets. When Japan's financial system became increasingly unstable in the late 1990s, households placed greater emphasis on safety/liquidity than profitability when selecting financial assets (Chart 3). Subsequently, as uncertainty regarding the financial system receded and with the low interest rate environment persisting, the trend toward emphasis on safety/liquidity came to a halt and households started paying more attention to profitability.

[Chart 3] Selection criteria for financial assets



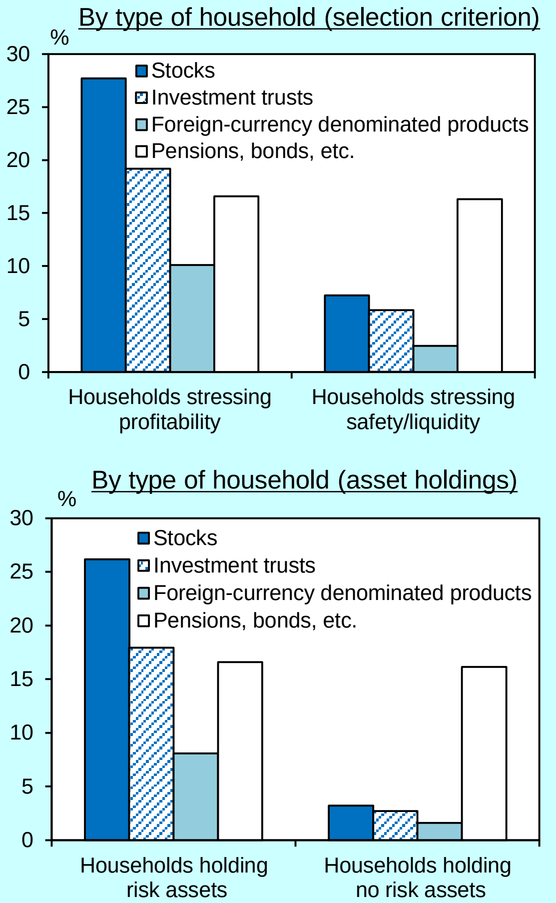
Notes: 1. The lines show the difference between the share of households stressing profitability and those stressing safety/liquidity.
2. Of households holding risk assets.
Source: Central Council for Financial Services Information.

Households emphasizing profitability have a stronger risk appetite than other households. Of households that put emphasis on profitability when selecting financial assets, 61 percent hold risk assets compared to only 28 percent of households putting emphasis on safety/liquidity. Households putting emphasis on profitability have a relatively strong interest in various financial products including stocks and investment trusts and play a leading role in investment in risk assets by the household sector (see upper panel of Chart 4). By contrast, households putting emphasis on safety/liquidity have little interest in risk assets and prefer financial products with principal guarantee or yield protection.

Accumulation of investment experience

Meanwhile, households have continued to gain investment experience. As a result of a series of risk events such as the instability of the financial system in the late 1990s, the "breaking the buck" of a money management fund in 2001, and the global financial crisis in the late 2000s, the number of households that have experienced a loss of principal as a result of a fall in market prices is on an increasing trend and now makes up more than 30 percent of households holding savings-type assets. Once households have started investing in risk assets, they seldom withdraw from such investments, even if market prices fall and leave them with unrealized losses. Many households even plan to accumulate risk assets (see lower panel of Chart 4). Therefore, the increase in the number of households with investment experience has also contributed to the stable investor base.

[Chart 4] Financial products that households intend to hold or acquire more of

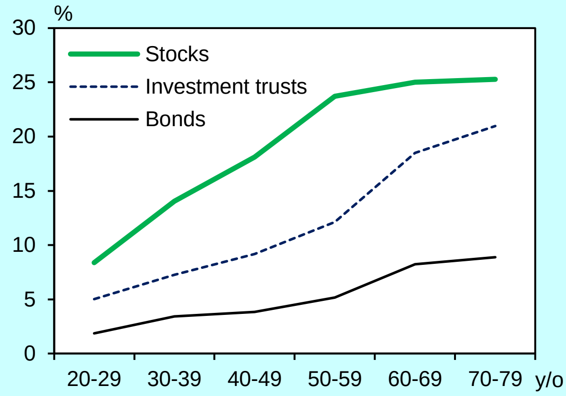


Notes: 1. The charts show the share of households that intend to hold or acquire more of the indicated financial products within 1-2 years. Multiple choices were allowed.
2. As of 2016.
Source: Central Council for Financial Services Information.

The expansion of the investor base due to an emphasis on profitability and the accumulation of investment experience is more pronounced among single-person households (Charts 2 and 3). Single-person households have greater risk appetite than households with at least two persons, and in particular single younger households tend to put greater emphasis on profitability in selecting financial products. The number of single-person households has been on an increasing trend in recent years, and this has also contributed to the expansion of the investor base.

That said, households holding no risk assets at all still make up the majority. The share of households holding risk assets is only 34 percent among households with at least two persons and 48 percent among single-person households, although both shares have been increasing. However, the share of households holding stocks -- the most widely held risk asset -- is less 30 percent, while the share of households holding investment trusts is only around 20 percent (Chart 5). Thus, in terms of the first issue with regard to portfolio selection, namely the decision whether to hold risk assets or not, more than half of all households in Japan do not hold any risk assets, even though economic theory suggests that holding a certain level of risk assets would be desirable.[3] This suggests that there must be certain behavioral characteristics at play in Japan leading households to avoid risk assets.

[Chart 5] Share of households holding risk assets by type of product



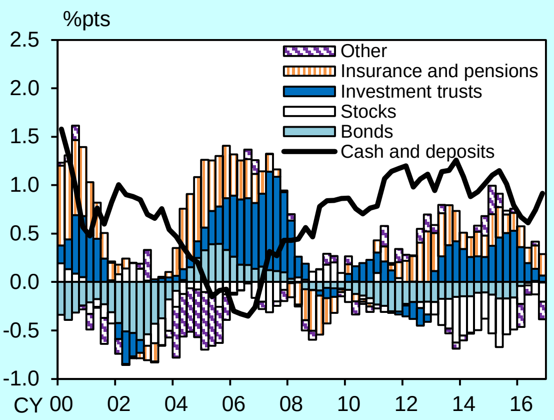
Note: The chart shows the average share for households in each of the cohorts. The cohorts are defined by dividing those born between 1937 and 1996 into 10-year intervals.
Source: Central Council for Financial Services Information.

Sluggish growth of investment in risk assets

Next, let us consider the second selection problem: how much risk assets to hold. Total household financial assets have grown at an average annual rate of 0.9 percent since the beginning of the 2000s, with cash and deposits accounting for 0.7 percentage points and other assets for the remaining 0.2 percentage points (Chart 6). Cash and deposits have registered net inflows almost throughout the entire period. By contrast, flows into and out of all other assets have fluctuated much more because of volatile flows into and out of stocks and investment trusts. Partly as a result of the large outflows from stocks over the last few years, portfolio rebalancing from cash and deposits to other assets has been slow despite the expansion in the investor base mentioned earlier.

Several hypotheses have been proposed to explain this situation in Japan, such as the risk aversion of the Japanese, liquidity constraints due to illiquid real estate holdings, and insufficient financial education.[4] Each of these hypotheses captures certain characteristic of household portfolio selection in Japan, but no consensus on their relative explanatory power has been reached. The remainder of this report provides some possible reasons as to why investment in risk assets has remained sluggish, focusing on (i) the reluctance to invest in risk assets holdings; (ii) insufficient planning for the future; and (iii) changes in risk-taking activities.

[Chart 6] Flow of funds by financial product

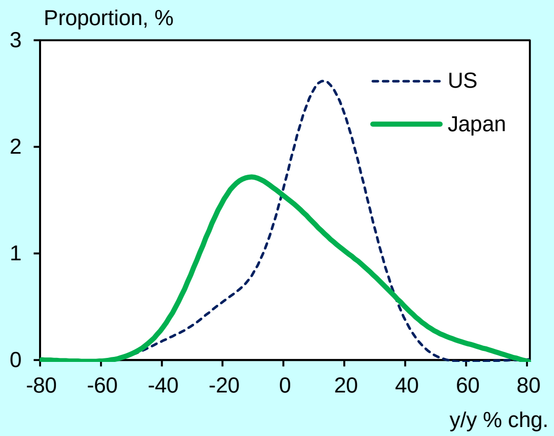


Note: The chart shows the flow of funds (on a book value basis) into and out of each type of financial product relative to total outstanding household financial assets (on a market value basis).
Source: Bank of Japan, "Flow of Funds."

Reluctance to invest in risk assets

As already highlighted in previous studies, one of the reasons for Japanese households' cautious investment behavior is the low profitability of stock investment in Japan. Looking at the performance of stock prices on a year-on-year basis, the TOPIX greatly underperforms the US S&P 500 (Chart 7). Over the past 20 years, the TOPIX, on average, was more likely to fall than to rise, which is in contrast to the S&P 500, which, on average, was more likely to rise.

[Chart 7] Japan-US comparison of changes in stock prices



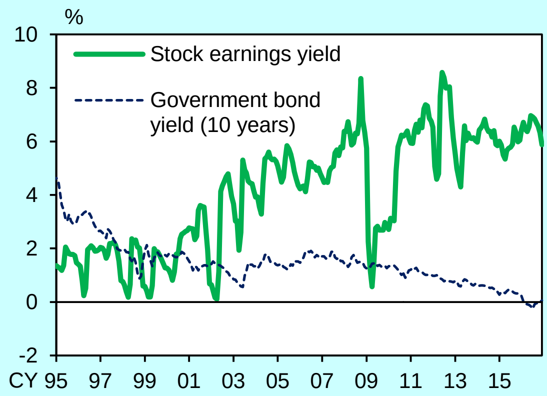
Notes: 1. The chart shows the distributions of the year-on-year changes in stock prices (after smoothing). The data are for the period 1995-2016.
2. The data for Japan are based on the prices of stocks in the TOPIX, while those for the United States are based on the prices of stocks in the S&P 500.
Source: Bloomberg.

The securities business industry has pointed out that the low performance of stock prices in the past has fostered investment behavior that is focused on short-term capital gains. According to the *National Survey on Securities Investment* conducted by the Japan Securities Dealers Association, the ratio of individual investors aiming at long-term investment to those aiming at short-term capital gains is 1:1 for stocks and 5:2 for investment trusts. The fact that investors aiming at short-term capital gains account for a large proportion of stock investment leads to active trading in the stock market, but it is unlikely to result in an accumulation of stockholdings among households.

The lack of a clear direction in Japan's stock market appears to be one reason why Japanese households are reluctant to invest in stocks. In fact, although, as mentioned earlier, an increasing number of households are putting greater emphasis on profitability, many still give precedence to safety/liquidity. Even among households holding risk assets, more than 30 percent place importance on capital guarantees when selecting financial products.

Such loss aversion is likely to lead households to leave the composition of financial assets they hold unchanged, which can be regarded as one of the reasons why household asset holdings have concentrated on cash and deposits for such a long time.[5] Since the start of this decade, the earnings yield of the TOPIX has been outperforming the yield on 10-year Japanese government bonds by more than 6 percentage points, meaning that loss-averse households reluctant to invest in stocks have been missing out on profit opportunities (Chart 8). Although it does not completely cancel out the risk of price fluctuations involved in holding risk assets, the

[Chart 8] Stock earnings yield and government bond yield



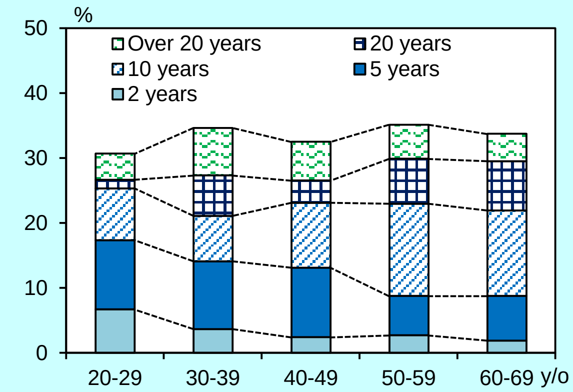
Note: Stock earnings yield = 1/PER. Monthly averaged.
Source: Bloomberg.

practice of investing through long-term regular investments, which has gained ground in recent years, may help to mitigate the reluctance to hold risk assets. In the long run, the dollar-cost investment method, in which the same amount of funds is invested every month, can hold the average purchase cost lower than investing through purchases in one lot. In addition, this investment method, which allows starting with a small amount of funds, is beneficial for households that cannot invest in risk assets because they do not have a lump sum available for investment.

Insufficient planning for the future

According to the life-cycle hypothesis, households save up when they work to maintain their living standard when they retire. In practice, almost 70 percent of households in Japan give "saving for retirement" and/or "saving for precautionary purposes" as reasons for holding financial assets. Nonetheless, even though it has increased by almost 5 percentage points since the beginning of the 2000s, the proportion of households that are planning for the future still remains at only 30 percent of the total. This suggests that more than half of all households do not have a concrete idea of how to finance their retirement (Chart 9).

[Chart 9] Financial planning horizon

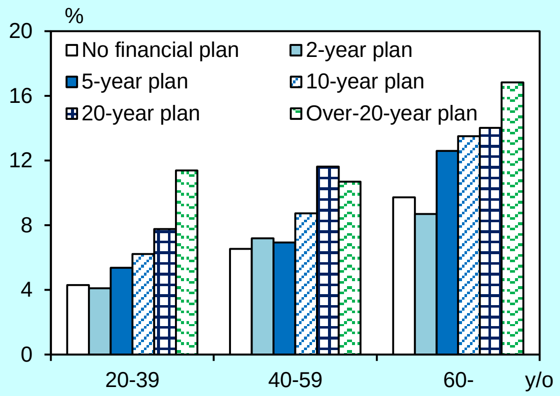


Notes: 1. The chart provides a breakdown of the financial planning horizon of households in each age bracket.
2. As of 2016.
Source: Central Council for Financial Services Information.

Even among households that are planning for the future, only a few consider their retirement in their plans. The younger a household is, the shorter is the period it is planning for. Specifically, half of households in their 20s consider only the next 5 years or so. The period households plan for gradually lengthens the older the household. However, the average horizon of planning into the future of households in their 60s is no more than around 10 years, which is clearly too short given that the average life expectancy of those aged 65 is 21.9 years. The average life expectancy of those aged 65 has increased by 2.5 years over the last 20 years, and given that it may rise further in the future, households will need to plan further into the future.

The short horizon of planning into the future stems from differences in time preferences with regard to how much weight is given to events further into future. Specifically, households may give serious consideration to financial decisions concerning the immediate future such as a mortgage loan or child-rearing costs, but end up putting off thinking about the more distant future such as their retirement and pension and insurance receipts. Looking at the link between households' financial planning for the future and the composition of financial assets shows that in all age groups households that have made plans for the future are more likely to hold risk assets than other households (Chart 10). That tendency is more pronounced the longer a household is planning into the future. These patterns suggest that encouraging households to plan for the future and concretely envisage their retirement could be a first step in moving away from asset holdings concentrated in cash and deposits. The provision of financial simulators by many financial institutions to help households plan for the future would be one way to do so.

[Chart 10] Link between financial planning and holding of risk assets



Notes: 1. The chart shows the share of risk assets in total savings-type assets for each type of household.
2. Of households holding savings-type assets.
3. Figures are averages for 2010-2016.
Source: Central Council for Financial Services Information.

Change in risk-taking activities

In the past, traditional risk assets for households were stocks, investment trusts, and bonds. More recently, however, opportunities have been gradually increasing for households to take investment risks with other financial products. For example, in the field of life insurance, partly due to the persistent low-interest-rate environment, the lineup of foreign-currency denominated insurance products, which entail foreign exchange risk, and variable insurance products, the benefits of which vary depending on investment performance, has been increasing, replacing fixed-amount insurance products guaranteeing high yields. Likewise, in the field of pensions, defined benefit plans used to be the norm, but since the beginning of this year, defined contribution plans such as individual-type defined contribution pension plans (iDeCo) have started gaining ground.

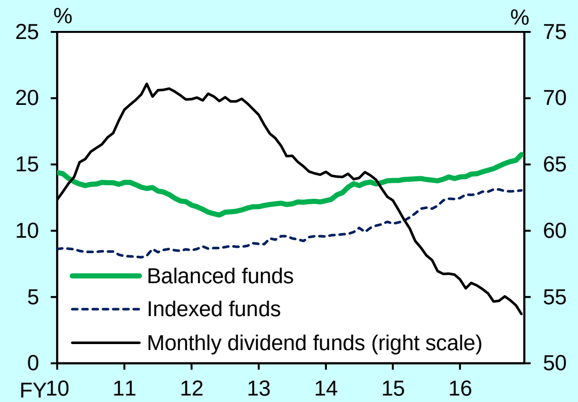
In the case of fixed-amount insurance products and defined benefit pensions, the benefits that households receive are guaranteed in advance. In contrast, in the case of variable insurance products and defined contribution pensions, the benefits policyholders will receive depend on investment performance, meaning that they directly take on investment risks. The spread of variable insurance products and defined contribution pensions implies that the channels through which households take risks are increasing. This increase in risk-taking channels, together with advances in financial literacy, is expected to encourage additional investment in risk assets by households. However, if households' risk appetite remains unchanged, the end result may be that holdings of stocks and other traditional risk assets are simply replaced, without more funds flowing into risk assets.

Furthermore, even among traditional risk assets, flows of funds that differ from previous patterns can start to be observed. Specifically, in the field of investment trusts, where, as mentioned earlier, the practice of long-term regular investments has started to spread, the number of investors aiming at long-term investments has been gradually increasing.[6] Since the amounts these investors invest on a monthly basis are small, the pace of inflows into investment trusts does not reach that observed during the mid-2000s, when monthly dividend investment trusts experienced a boom, but these inflows are stable and do not depend on financial market conditions (Chart 6).

Reasons for these developments are changing attitudes of both households and securities firms. On the one hand, households are starting to attach importance to total returns, which take into consideration not only short-term dividends but also medium- to long-term capital gains. On the other hand, securities firms are changing their business strategies from encouraging clients to frequently switch from one product to another to encouraging them to build up their assets. In terms of the institutional framework, the Nippon Individual Savings Account (NISA), which was introduced in 2014, provides tax incentives for small investments involving regular investment.[7]

As a result, the share of monthly-dividend funds, which had been popular due to their high dividend yields and used to account for the majority of the amount outstanding of investment trusts, peaked in fiscal 2010 and is rapidly shrinking (Chart 11). Instead, the share of indexed funds is increasing. In addition, funds are also flowing into balanced funds, although their share in the amount outstanding is still small. Even among investment trusts, indexed funds and balanced funds are particularly suited to risk diversification and many of these funds are positioned as entry products for loss-averse households to start investing in risk assets.[8] The series of changes in households' risk-taking activities described here are noteworthy not only from the perspective of household portfolio selection, but also from the perspective of the flow of risk funds within the financial system. For instance, the inflow of household funds linked to regular investment may partly offset fund flows that potentially amplify stock market fluctuations. Such flows therefore could have a stabilizing influence on the market when the market is declining.[9]

[Chart 11] Stock investment trusts by investment type



Note: The chart shows the shares in the total amount outstanding of open-ended investment trusts (excluding ETFs).
Source: The Investment Trusts Association, Japan.

Concluding remarks

This report examined the current situation of households' investment in financial assets in Japan, where growth of investment in risk assets has been sluggish and there has been little change in the concentration on cash and deposits. The status quo bias for holding cash and deposits, which stems from the reluctance to invest in risk assets and insufficient planning for the future, is a key feature for understanding the patterns of Japanese households' investment in financial assets. Understanding households' investment behavior, including factors not examined in this report, holds important lessons for gauging future changes in households' portfolio choices. It also provides an important perspective to the debate on institutional reforms and the provision of products, and to the course of financial education.[10]

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* Currently at the Financial Markets Department.

[1] On household portfolio selection, see the following paper:
H. Fujiki, N. Hirakata, and E. Shioji [2012], "Aging and household stockholdings: evidence from Japanese household survey data," IMES Discussion Paper Series, No.12-E-17.

[2] Meanwhile, the share of households not holding savings-type assets (i.e., households holding only settlement-type assets such as cash and liquid deposits) has risen from about 25 percent in 1990 to slightly below 40 percent in 2016.

[3] The fact that even though from a theoretical perspective it would be desirable for households to hold some risk assets, in practice a majority of households hold no risk assets is called the "stockholding puzzle." For details see the paper in footnote 1.

[4] For studies on these issues, see the paper in footnote 1 and the following:
K. Aoki, A. Michaelides, and K. Nikolov [2016], "Household portfolios in a secular stagnation world: evidence from Japan," Bank of Japan Working Paper Series, No.16-E-4.

[5] In behavioral economics, loss aversion is defined by an S-shaped utility function, which is more sensitive to investment losses than gains. A well-known corollary is that loss aversion results in a status quo bias, since individuals prefer no action to other options.

[6] On changes in the environment surrounding individual investors, see the following report:

K. Kunishima, J. Shino, and K. Imakubo [2016], "A new trend in Japan's asset management business toward a shift from saving to investment," Bank of Japan Review Series, No.16-E-10.

[7] The NISA system was introduced in 2014, followed by the Junior NISA in 2016. In addition, an installment-type NISA is under consideration to be introduced in 2018.

[8] On the potential impact of the investment behavior of investment trusts on corporate governance and stock-price formation, see the report in footnote 6.

[9] See the following report:

Bank of Japan [2016], *Financial System Report*, October 2016.

[10] For initiatives in the field of financial education, see the website of the Central Council for Financial Services Information, www.shiruporuto.jp/e.

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