The Future of Japan's Mutual Fund Industry

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I. Introduction

Compared with other countries, Japan's market for mutual funds (normally referred to as investment trusts) is small relative to the size of its economy (Figure 1). Mutual funds as a fraction of household financial assets is in a rising trend in both the US and Germany, where it is now over 10%, versus only about 2 to 4% in Japan. This is a sizable difference (Figure 2).

Although small relative to other countries, Japan's investment trust market began growing around 2003 (Figure 3), probably owing to changes in market conditions, distribution channels, product innovation, and demographics. We consider each of these factors in the following section.

II. Factors behind the recent growth in Japan's mutual fund industry

1. Market conditions

We start by confirming the relationship between investment returns and the inflow of funds into investment trusts. Figure 4 shows the equity-deposit spread (return on equities minus the savings deposit interest rate)[1] over time. As shown in Figure 3, there was a large influx of funds into equity investment trusts in the late 1980s and again in the mid 2000s, periods during which total assets held in investment trusts grew and the equity-deposit spread remained high for several years. In the 1990s, however, there was an exodus of funds from equity investment trusts, and the equity-deposit spread remained largely negative during that period.[2] The inflow of funds into investment trusts is strongly influenced by prevailing share price and interest rate trends.

We attempt here to examine the quantitative impact that such market trends have on that inflow. As we explain later, however, the popularity in Japan of funds that invest in foreign currency-denominated assets makes it essential to include the impact of currency rate fluctuations as a market factor (Figure 5). We therefore estimate a

[1] Nakagawa and Katagiri (1999), which presents a detailed analysis of risk asset investment behavior in Japan's household sector, uses the equity-deposit spread as a proxy variable for the return on risk assets. In this section, we follow that paper and run an empirical analysis using the equity-deposit spread as a proxy for mutual fund returns.

[2] Funds flowed into money market funds and bond investment trusts in the late 1990s, with one likely reason being the relatively high rates of interest being paid at the time.

VAR model[3] with three variables: the equity-deposit spread, the month-on-month change in the nominal effective exchange rate, and the net inflow of funds into equity investment trusts. To evaluate the impact of the yen's depreciation since 2003, we use two estimation periods. The first estimation period is from February 2000 to April 2007, corresponding to the period after the IT bubble burst, and the second estimation period is April 2003 until April 2007, which was a period of yen depreciation and stock market strength.

Figure 6 shows the extent to which the net investment trust inflow reacts to an increase in the equity-deposit spread and a weakening of the yen. We see first that, for both estimation periods, investment trust inflows increase when the equity-deposit spread increases and the yen weakens. Second, we see that during the period of yen depreciation and share price appreciation that began in 2003 (the second estimation period), this inflow was more sensitive to yen weakness than it was to the equity-deposit spread.

Figure 7 shows the explanatory power of the three variables in regards to the variance of this net funds inflow. First, we see that the explanatory power of the combined effects of the equity-deposit spread and nominal exchange rates was about 40% after 4 months. In other words, about 40% of the short-term change in funds inflow was caused by market fluctuations.[4] Second, we see that the exchange rate had a greater impact in the second estimation period than it did in the first. Once the yen entered its depreciation phase, the impact of exchange rate changes on the investment trust inflow became stronger.

Regardless, this suggests the possibility that as the investment trust industry has grown over the past few years, a rising stock market and weakening yen have stimulated an inflow of funds into investment trusts. Conversely, there is a possibility that a falling stock market and strengthening yen would serve to suppress the inflow of funds.

2. Distribution channels

Distribution channels are also an important factor affecting the size of the market. We think that two regulatory changes affecting distribution channels have played a particularly important role in the market's recent growth.

The first was the regulatory change that allowed both banks and the post office to handle the sale of investment trusts. There has been a steady expansion of distribution channels, with the restriction on retails sales of investment trusts by the banks lifted in

[3] After running the Phillips-Perron (PP) Test on each variable, we found that the nominal effective exchange rate was a first difference stationary process (I(1) process) and that the rest were level stationary processes (I(0) process), at a significance level of 5%.The VAR lag order was determined based on the Akaike Information Criterion (AIC).

[4] Our results lead to a different opinion than existing literature that has analyzed the relationship between market changes and the inflow of funds into US mutual funds. For example, Remolona et al (1997) found that market changes had almost no impact on mutual fund inflows, while Warther (1995) found that a rising market led to fund outflows. Nevertheless, because the processing and estimation methods used on the net flow data in this paper differ from said literature, it is impossible to strictly compare the results.

December 1998,[5] and the post office launching investment trust sales in 2005. Figure 8 shows the total net assets within investment trusts by distribution channel.[6] The amount of assets brought in through the banks has grown substantially since the banks began retail sales in 1998.

The second regulatory change was the introduction of defined contribution pension plans. The number of people participating in defined contribution plans has steadily increased since their introduction in 2001 (Figure 9). According to the Ministry of Health, Labour and Welfare, investment trusts accounted for about 38% of all assets invested with defined contribution plans at the end of FY2006.[7] There is also empirical research showing the relationship in other countries between the introduction of defined contribution plans and growth in the mutual fund market (Khorana et al, 2005).

3. Product Innovation

We look next at innovation of products as one factor behind market growth. Figure 10, which plots the number of equity investment trust products against total net assets, shows a major change in the relationship between the two around 2004. Since 2004, total net assets have grown considerably faster than the number of products offered. As shown in Figure 11, this growth of total net assets was largely in balanced funds (paying monthly dividends) and funds of funds. Another notable characteristic of this period is the rising proportion of foreign currency-denominated assets (Figure 12). We further note the emergence of super funds larger than ¥1 trillion, which are mostly of these two types (Table 1).

This may be because balanced funds and funds of funds have met investor needs in two respects. The first is that they pay monthly dividends. Figure 13 shows the results of a survey on motivation for holding investment trusts. As we explain later, the main buyers of investment trusts are those aged 60 and up and those in their 40s and 50s. These generations are interested not only in price appreciation and safety, but also in the frequency and size of dividends. During this prolonged period of super low interest rates, the investment trusts that suited the needs of these investors have apparently been those that invest in overseas bonds with the potential for high yields, and monthly-dividend investment trusts, which offer a regular income stream.

The second way that these funds meet investor needs is the high degree of safety they offer. Table 2 compares the risk (standard deviation) of investment returns by type of fund. In 2006, balanced funds and funds of funds had relatively low risk (the average value shown in the table), which probably reflects the benefits of diversifying into multiple asset classes. Furthermore, the riskiness of balanced funds has been in a declining trend since 2001.

This suggests that recent growth in the investment trust market can probably be attributed to the offering of monthly dividends as demanded by investors, and to the

[5] Prior to this, one step taken to deregulate sales was a change made in December 1997 that allowed fund managers to rent space within bank branches and sell their funds from there.

[6] The amount of investment trusts sold over the Internet in Japan is quite small at this point, only ¥412.3 billion in FY2005 and ¥531.6 billion in FY2006 (based on asset value), according to the Japan Security Dealers Association (JSDA).

[7] In contrast, products with guaranteed principle account for roughly 60%.

fact that the risk-return characteristics of these funds now more closely match the risk tolerance of investors, as a result of the decline in the investment risk of balance funds.

4. Demographics

As suggested by the popularity of investment trusts that pay monthly dividends, there is a possibility that the aging of Japan's population is also fueling growth in the investment trust market. Figure 14, which compares the percentage of total savings invested in equities and equity investment trusts (risk assets) across age cohorts, makes clear that allocations to risk assets rise with age and that this trend became more pronounced in 2006.[8] Figure 15 shows the percentage of each age cohort with ownership in investment trusts, and indicates that the number of individuals in each age cohort who own investment trusts rises with age. One conceivable reason for the concentration of investment trust ownership in the older age cohorts is the change in the composition of household financial assets that occurs around the time of retirement. In Japan, it is common to use retirement payouts to pay back housing loans and other debt, and a household's net financial assets tends to increase after retirement. For those households that experience an increase in net financial assets, this appears to open the door for raising allocations to investment trusts and other risk assets.

Based on this, recent growth in investment trusts can probably be attributed to an increase in such investments by households aged 60 and up that have begun retirement. Furthermore, given that the population aged 60 and up will continue growing for the time being, we expect demographics to continue fueling growth in the investment trust industry. With this in mind, we explore quantitatively the extent to which demographic changes bring growth in investment trusts.

Our examination is based on a cohort analysis. Figure 16 shows the results of a cohort analysis, using the percentage allocation to equity investment trusts (equity investment trusts divided by total savings) by age cohort as the dependent variable. We can draw several conclusions from the analysis. First, the percentage of savings invested in investment trusts rises with age. That is, there is clearly an increase in allocations to investment trusts as people get older.[9] Second, younger generations born in 1971 and later tend to allocate a greater share of their savings to investments trusts than other generations. We think that this reflects a lower resistance to "new" financial products such as investment trusts among successively younger generations. Third, the parameter for the time effect shows an increase in the year 1990, probably because this coincided with the bubble era.

Using the estimation results from our cohort analysis to predict the future path of investment trusts, we estimate that investment trust assets will be 45% higher in 2010 than in 2000, and that they will continue to grow in future years (Figure 17). This

[8] For example, there was a large increase in allocation between 2000 and 2006 for the 60-69 and 70-and-over age cohorts.

[9] Figure 14 shows the same relationship. Nevertheless, the upward sloping relationship in the figure is a mixture of the age effect, the cohort effect, and the time effect, and thus is not a straightforward assessment of the change in investment allocation that accompanies aging. In contrast, the age effect in our cohort analysis simply shows the change in investment allocations that accompanies aging, albeit including estimation errors.

growth should mostly be attributable to age effects. Specifically, the age effect for equity investment trusts has increased with age. Because the number of seniors in Japan is growing, investment in equity investment trusts is also growing. Furthermore, because these demographic changes will continue for the time being, demographics should continue to support the investment trust market.

As the four factors outlined above suggest, recent growth in the investment trust market has been driven by both cyclical factors and structural factors. Our analysis does not, however, provide clear evidence as to whether it is the cyclical factors or the structural factors that have the stronger impact. If the stock market continues to weaken and the yen continues to strengthen, there is a possibility that the rate of growth in investment trusts will slow from the pace that has been set since 2003. We already saw signs of this in July 2007, when investment trust net assets actually declined in month-on-month terms. The sustainability of this growth may be largely dependent on whether or not the measures outlined in the following section are implemented.

III. Challenges for further advances

1. Reform of defined contribution pension plans

When considering that growth in the participation in 401(k) and IRA plans has been one factor behind the growth of the US mutual fund industry since the 1980s, it seems likely that growth in the investor base can be achieved through the use of defined contribution pension plans, which have just recently gained momentum in Japan. Nevertheless, Japan's rules are inferior to those of the US for purposes of expanding the investor base (Figure 18). First, there is a big difference in plan eligibility between Japan's individual defined contribution pensions and IRAs in the US. Government workers and housewives are eligible for IRA investment in the US, but are not allowed to enroll in Japan's individual defined contribution pensions. Second, there are big differences in the contribution amounts and contribution methods allowed for corporate defined contribution pensions. In addition to the maximum contribution amount being lower in Japan, there are also differences in contribution amounts depending on whether the individual is also enrolled in a defined benefit plan. Both the company and the employees are able to contribute to a 401(k) plan in the US, but employee contributions are not allowed in Japan. There have been calls from the business community to allow employee contributions, but the rules do not allow for them at present.[10]

For investment trusts to gain a more solid foothold within defined contribution plans, there are still issues remaining in regards to the handling of default products. The current regulations do not include any specific rules on the selection of default products, and it seems likely that the default products for nearly all defined

[10] A study group under the FSA's Financial System Council argues for the need to introduce a system of employee contributions (http://www.fsa.go.jp/singi/singi_kinyu/s_group/siryou/20070313.html). In addition, in a recent survey of corporations that offer defined contribution plans, 65% of the companies that responded said they would like to see the rules changed to allow for employee contributions.

contribution plans are products with guaranteed principle (time deposits).[11] According to a report from the Pension Fund Association (2006), only 33.5% of the companies that offer defined contribution plans provide ongoing education for plan participants, who typically do not revise their portfolios after the initial investment selection.[12] It appears that in Japan, a time deposit is automatically selected as the default investment upon enrollment, and in most cases there is no effort to revise asset allocations in step with the participant's life cycle; the funds are instead just left parked in time deposits. In view of the above, there is probably a need to make continuing education on defined contribution plans more readily available, and to consider, after gaining a better understanding of participant behavior, how to design the rules to ensure more suitable asset allocations.

2. Promoting competition

Maintaining a sound competitive environment is not only critical for investors but also essential for the development of the industry overall. A competitive environment must be assured for both the development and the sale of products. We examined below whether there are conditions within Japan's investment trust industry that may restrict competition.

(1) Industry structure: Dominated by the major financial groups

Some observers have argued that there has been suppression of competition even in the US mutual fund industry, which is thought to be more competitive than that of Japan. Specifically, Wallison and Litan (2007) argue that the arrangement allowing the board of directors to decide on the commissions paid to related parties is a barrier to competition in setting commissions. It is impossible to directly apply arguments made in the US, where most mutual funds are structured as corporations, to Japan, where investment trusts are primarily structured as contracts,[13] but there is a possibility that Japan's industry structure suppresses competition.

Table 3 shows the market shares of the top 20 investment companies in Japan as well as market shares in the US investment industry. In Japan, the top five companies control more than 60% of the market and the top 10 companies 80%, making Japan's market considerably more concentrated than that of the US. Table 4 shows the market shares of asset management companies by their major shareholder's industry segment. Independent asset management firms and foreign-capitalized asset management firms have low market shares, while asset management firms affiliated with the securities houses or the banks have high market shares. Table 5 classifies investment management firms by the major financial group that has an equity stake in the firm. As

[11] Contrast this with the US, where the Pension Protection Act enacted in August 2006 holds that default investments that meet certain requirements (including life cycle funds and balanced funds) can be treated as if there were investment instructions from the plan participant, effectively allowing mutual funds as default products.

[12] In the US, advances have been made in facilitating the creation of programs that are effective in raising 401(k) participation rates, based on studies of the behavior of 401(k) plan participants from a behavioral economics perspective (Thaler and Benartzi, 2004).

[13] See Figure 19 for an outline of Japan's contractual-type system.

a consequence of recent financial restructuring, it is not unusual for the major financial groups to have stakes in several asset management firms. Thus certain of the asset investment management firms affiliated with the major financial groups dominate the upper rungs of Japan's investment industry, while the foreign-capitalized and independent firms have a fairly small presence.

The major financial groups also have a substantial presence as distribution channels for investment trusts. One reason for this is the extensive sales networks owned by the leading financial groups. Another reason is that the leading financial groups use their equity positions in the regional banks[14] to forge close partnerships with those regional banks, treating them effectively as members of their group. In Japan, both the formation and sale of investment trusts are concentrated in the major financial groups, resulting in less separation between the two functions than in the US.

(2) Preferential treatment for funds from within the group

There is concern over the possibility that this industry structure suppresses competition between providers. Specifically, there is a possibility that those major financial groups with their own asset management firms favor funds from those firms, without regard to commissions or performance. When the sales company selects an investment trust purely because it is managed by an affiliate, it inevitably limits investor choice.

Now that we have a sense of the problem, we empirically examine how widespread the practice is of giving priority to investment trusts managed within the group. To do so, we estimate the following logit model;

$$P \text{ (sales company i handle fund j)} = F_L \text{ (group variable, control variables)},$$

where F_L is the cumulative logistic distribution function.

The dependent variable is 1 if the sales company handles the fund (includes it in its retail lineup) and 0 if it does not. The group variable is the percentage stake in the sales company that is owned by the financial group to which the asset management firm belongs (Figure 20). The larger the group variable, the deeper the capital ties between the sales company and the asset management firm's affiliated financial group. If the investment management firm does not belong to any financial group, the group variable is taken as 0. The estimated parameter of the group variable that is a significantly positive signifies that the sales company favors investment trusts from within the group.

As control variables, we use commission variables, size variables, performance variables, and a variable for the number of years since the fund was established.[15] For the commission variables, we use the sales company's total commissions (sales

[14] There are also examples in which the major financial group sends an employee to the regional bank to serve as a member of the bank's board of directors.

[15] In deciding on which variables to select, we referenced Elton et al.(2004), Choi et al.(2006), Guercio and Tkac.(2001), Zhao.(2005), and Bergstresser et al.(2006).

commissions + sales company's portion of trust fees), trust fees (trust company's portion), and trust fees (asset management firm's portion), as well as the cross term for the sales company's total commissions and the dummy variable for the independent and foreign-capitalized asset management firms. If the parameter for this cross term is significantly positive, it indicates that when the sales company handles a fund of an independent or foreign-capitalized investment management firm, it tends to prefer a fund that charges high commissions. For the size variable, we use net assets under management and market share within the same category; for the performance variables, we use both the number of stars from Morningstar and the Sharpe ratio (for the past one year and the past three years).

Table 6 shows our estimation results for the logit model. In almost every case, irrespective of industry type, we found that the group variables were significantly positive.[16] Accordingly, assuming equal commissions, asset size, and other factors, sales companies tend to choose funds managed by firms within the group over funds from outside the group. For the major banks, the estimated parameter for the sales company's total commissions was significantly negative, while the coefficient for the cross term was significantly positive. This indicates that the major banks tend to handle investment trusts with higher fees when the assets are managed by independent and foreign-capitalized firms. In the case of the regional banks and securities firms, meanwhile, the estimated parameter for the cross term was insignificant. These findings suggest the possibility that fund retailers engage in behavior that suppresses competition between providers.

Although Japan's investment trust market has been moving toward a more open architecture[17] in recent years, some of the major banks have been increasing their reliance on funds managed by affiliates. In view of the potential harm from these incestuous deals, there is probably a need to keep a close eye on whether the trend toward consolidation within group accelerates.

3. Other

Investor education probably merits some attention. Investment trusts paying a monthly dividend, a fund category that has seen rapid growth in the last several years, provide a monthly cash flow, but at a substantial sacrifice of long-term investment returns. There are lingering doubts as to whether the investors who buy these products really understand this trade-off. Maybe what Japan needs is a public-private partnership capable of implementing an investor education program that is considerably more effective, and modeled after investor education programs in other countries.

Furthermore, given the large number of small-scale funds that comprise Japan's investment trust market, there is also room to consider fund mergers. Table 7 shows

[16] This paper only reports the estimation results from a sample including a balanced fund and a fund of funds, but the group variables for other fund categories (domestic equity, index-linked) were significantly positive overall.

[17] For example, Nomura Group affiliate JOINVEST Securities handles many investment trusts from outside of the Nomura group, and the Nikko Cordial Group's Cordial Communications launched a fund supermarket business in October 2006.

the number of funds by investment style and by size of net assets. The figures show that those investment trusts with net assets below ¥1 billion account for between 15% and slightly over 30% of the total number of investment trusts, with this percentage varying depending on investment style. Investment performance can suffer as a result of less flexibility in making investments, if the size of net assets becomes too small. If the smaller, poorly performing investment trusts attract all the attention, there is a possibility that investors will lose interest in investment trusts. Although it is also important that the asset management companies themselves rethink what their optimal size is, it seems that one good way to improve investment performance and reduce fees would be to implement measures[18] that encourage the smaller investment trusts to get bigger.

IV. Conclusion

The key question is whether the growth that Japan's investment trust market has delivered since 2003 is as sustainable as the growth in the US mutual fund industry that began in the 1980s. Clearly this recent growth in investment trusts has been helped along not only by yen depreciation and strong stock market, but also by structural factors such as demographic changes, innovations of products, broader distribution channels, and growing participations in defined contribution pension plans.

However, it is impossible to ignore the impact that markets can have on the inflow of funds into investment trusts. This can probably be attributed to mutual fund investors focusing on short-term rather than long-term returns. From the perspective of industrial organization theory, as well, there is cause for concern that investors' choices will be narrowed, and that innovations in product development will be suppressed, as incestuous transactions within the leading financial groups become the norm.

With this in mind, the key points that determine whether growth in the investment trust market can be sustained can probably be summarized as follows. First concerns the changes that are made to the rules governing defined contribution pension plans, including those determining enrollment eligibility and investment selection. Both a broadening of eligibility and an increase in maximum contributions are changes that are likely to support growth in the investment trust industry. Second is whether the investment trust industry is able to assure healthy competition. If the trend toward consolidation within groups goes too far, there is a risk that the principles of competition will fail to function adequately, which would have an unfavorable impact on investors. Avoiding such a situation and (indirectly) creating greater competition among providers may require a fuller disclosure of each fund's investment results and risks, thereby easing the information asymmetries between investors on one side and asset management firms and fund retailers on the other. In addition to this, we think that greater efforts forward investor education, along with rules changes to facilitate

[18] Japan's rules on investment trust mergers are not yet fully developed (see Nomura, 2007). Jayaraman et al (2002) found that fund mergers in US led to better investment performance and lower fees.

the consolidation of investment trusts, can have a positive impact on the development of Japan's investment trust industry.

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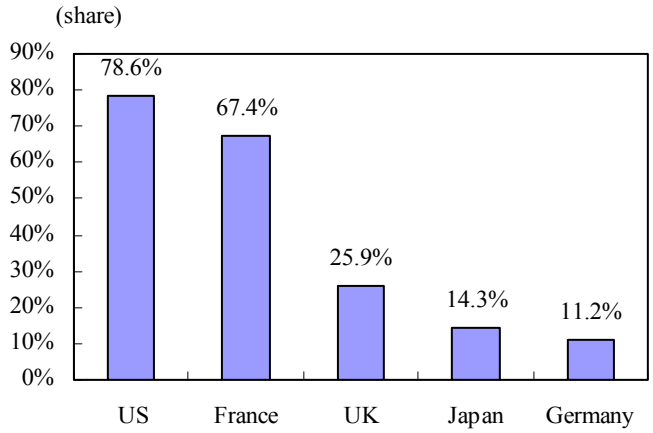
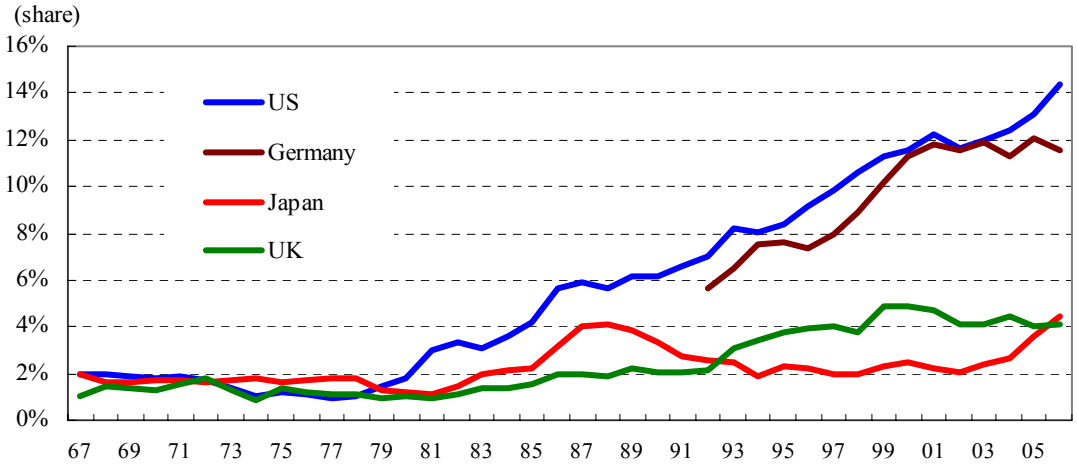
Figure 1: Mutual fund net assets as percentage of nominal GDP



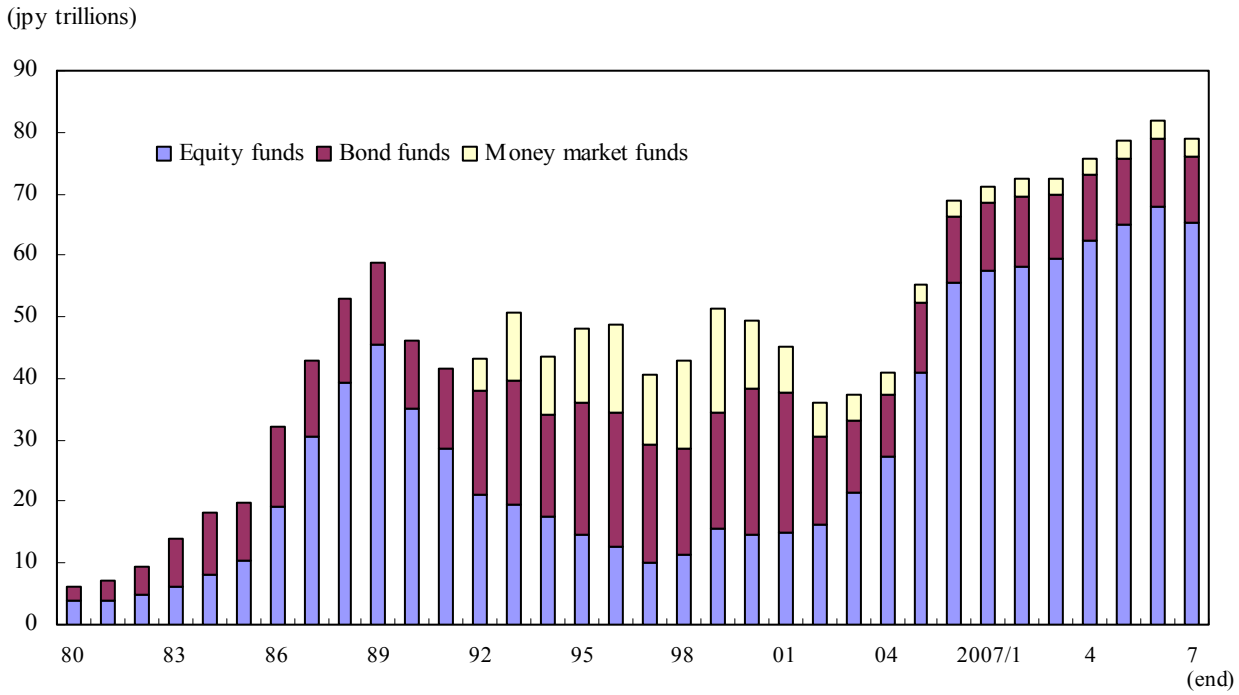
Notes: 1. Figure for Japan is fund assets in March 2007 as percentage of 2006 nominal GDP.
2. US data is as of end-2006. France, UK, and Germany data is as of end-2005.
Source: Nomura Institute of Capital Markets Research, based on data from the Investment Company Institute (ICI), the respective central governments, and Bloomberg.

Figure 2: Mutual funds' share of household financial assets



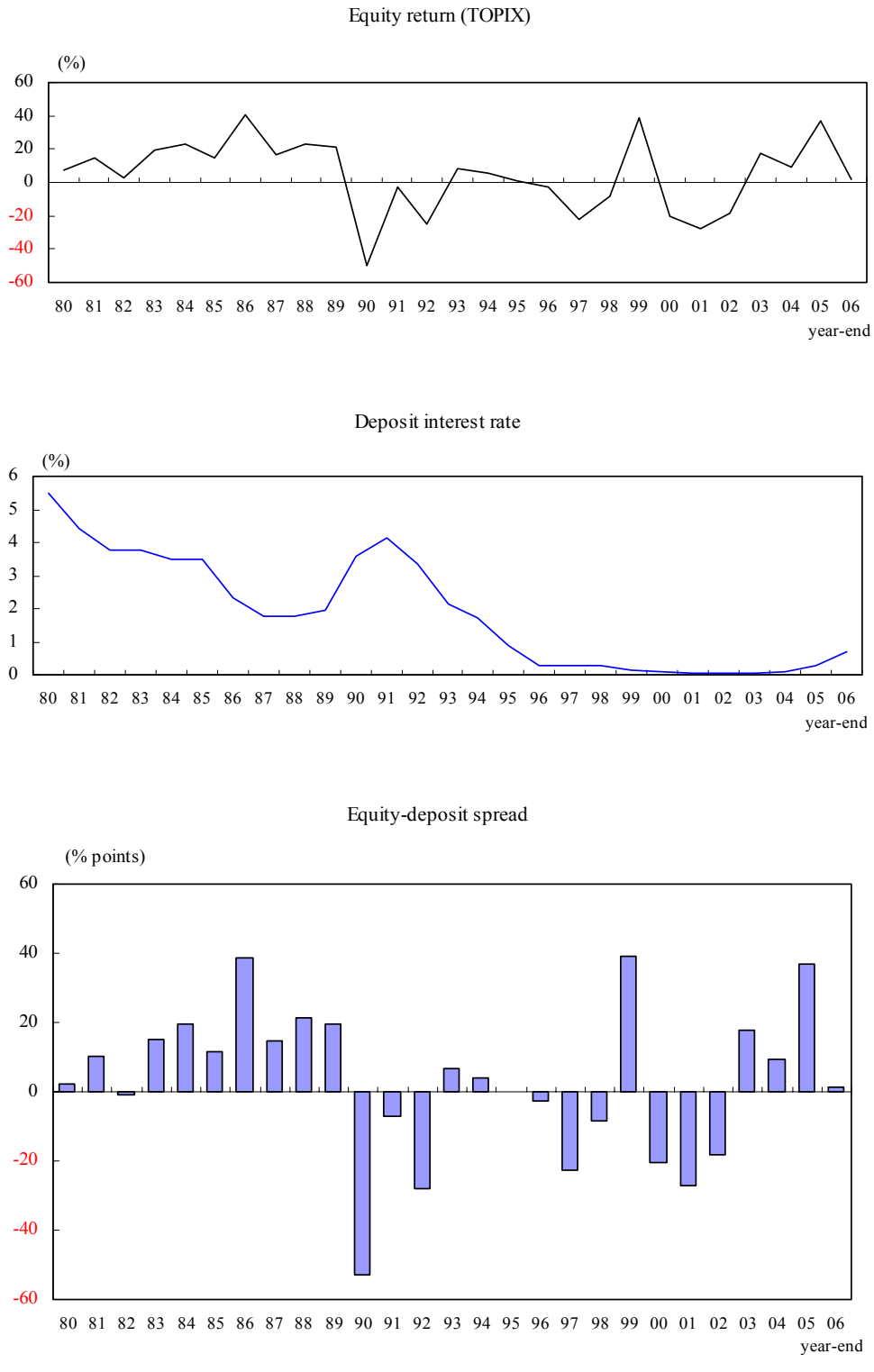
Note: Japan's figures are fiscal year-end, other countries are calendar year-end.
Source: Nomura Institute of Capital Markets Research, based on data from respective countries

Figure 3: Net assets of Investment Trusts in Japan



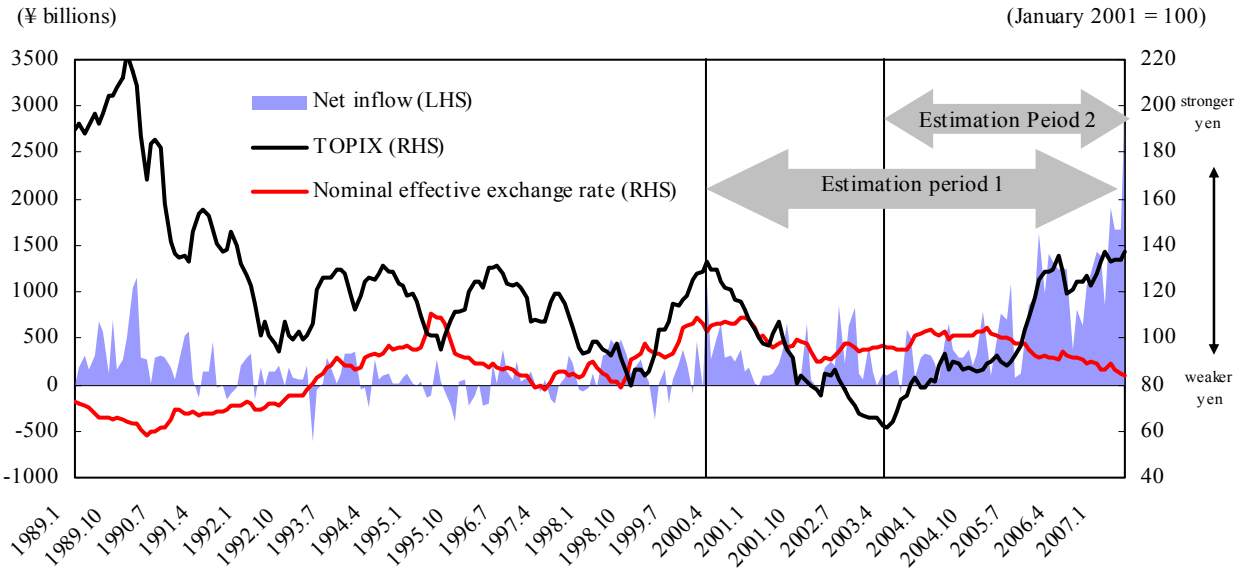
Source: The Investment Trusts Association, Japan

Figure 4: Equity return versus deposit interest rate



Source: Tokyo Stock Exchange and BIS International Financial Statistics

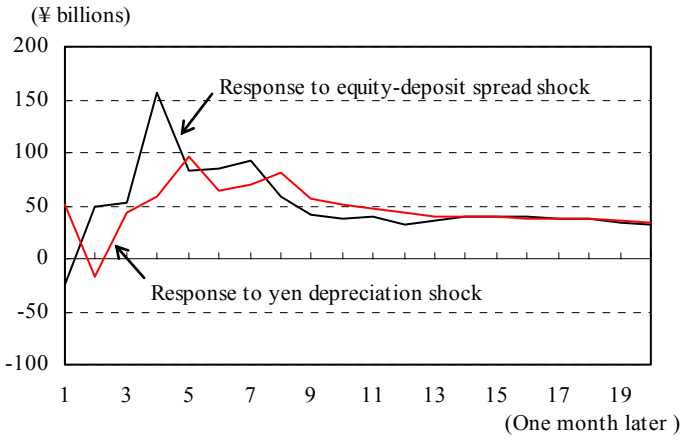
Figure 5: Net inflow of funds into open-ended equity investment trusts versus share price and Forex trends



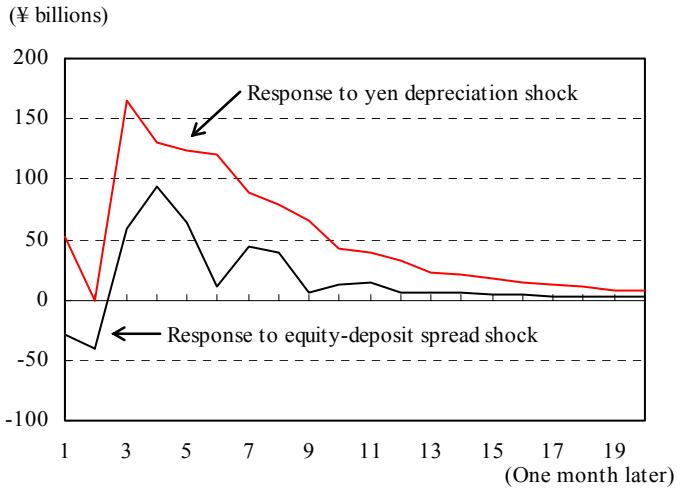
Note: Nominal effective exchange rate and TOPIX are on a scale with January 2000 = 100.
Source: Nomura Institute of Capital Markets Research, based on materials from the Investment Trusts Association Japan, the BOJ, and the Tokyo Stock Exchange.

Figure 6: Impulse response function of net inflows into equity investment trusts

Estimation period 1: February 2000 to April 2007



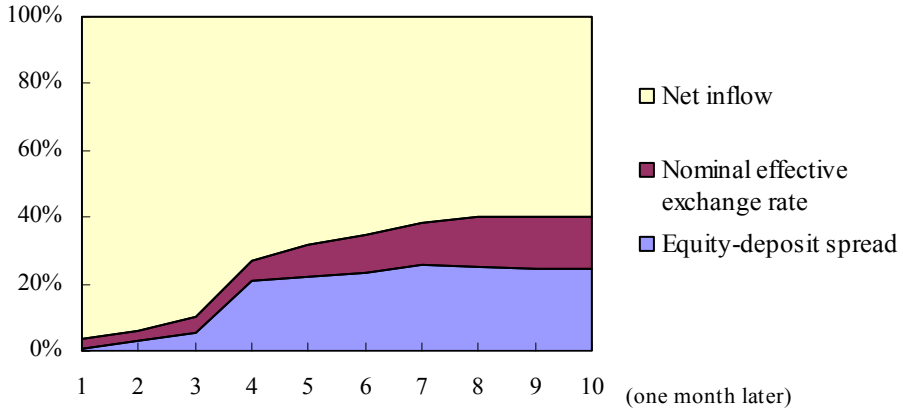
Estimation period 2: April 2003 to April 2007



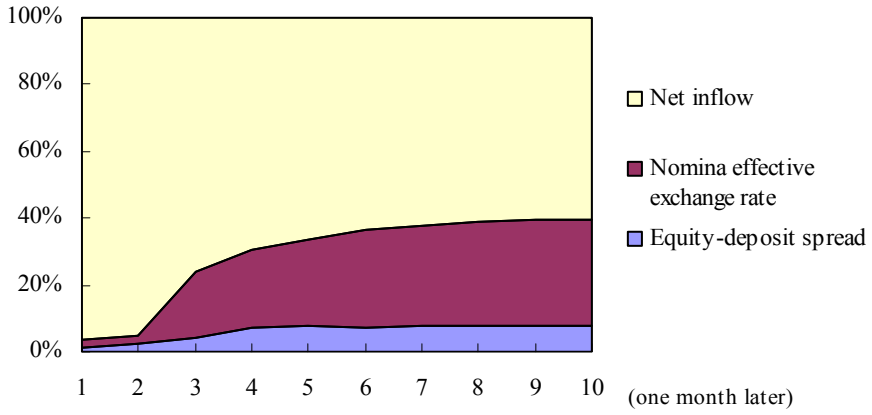
Note: We use a VAR model with three variables: the equity-deposit spread, the month-on-month change in the nominal effective exchange rate, and the net inflow of funds.
Source: Nomura Institute of Capital Markets Research

Figure 7: Variance decomposition analysis of net inflows into equity investment trusts

Estimation period 1: February 2000 to April 2007

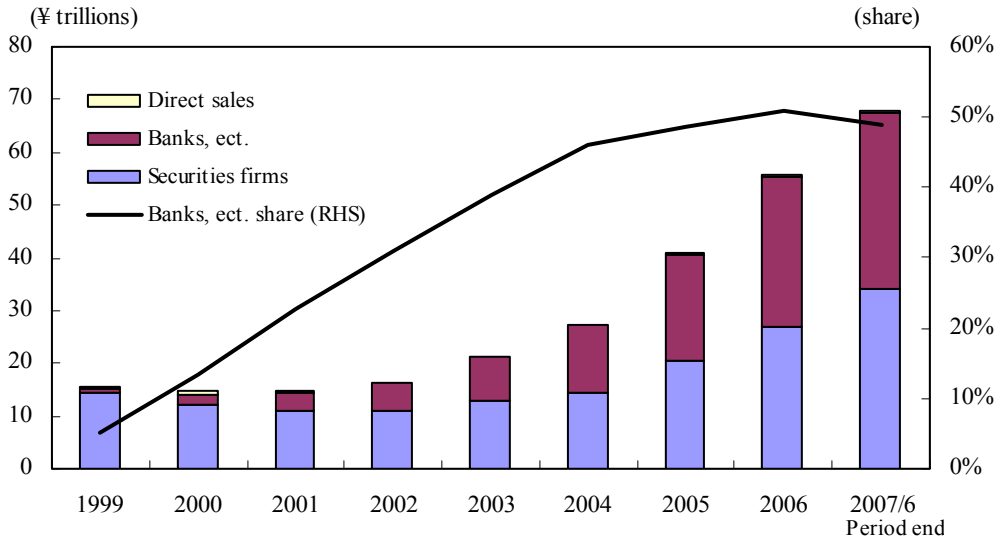


Estimation period 2: April 2003 to April 2007



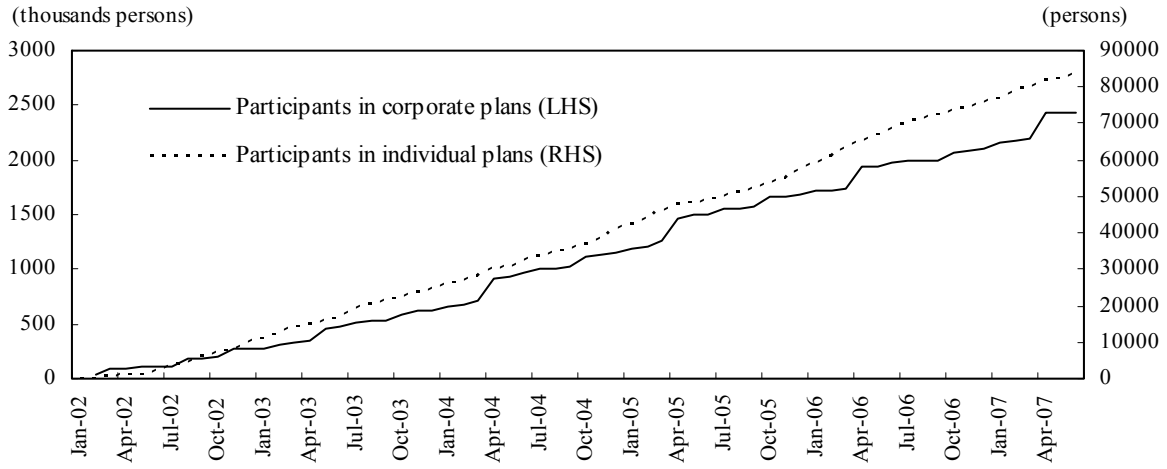
Note: We use a VAR model with three variables: the equity-deposit spread, the month-on-month change in the nominal effective exchange rate, and the net inflow of funds.
Source: Nomura Institute of Capital Markets Research

Figure 8: Equity investment trusts (net assets) by distribution channel



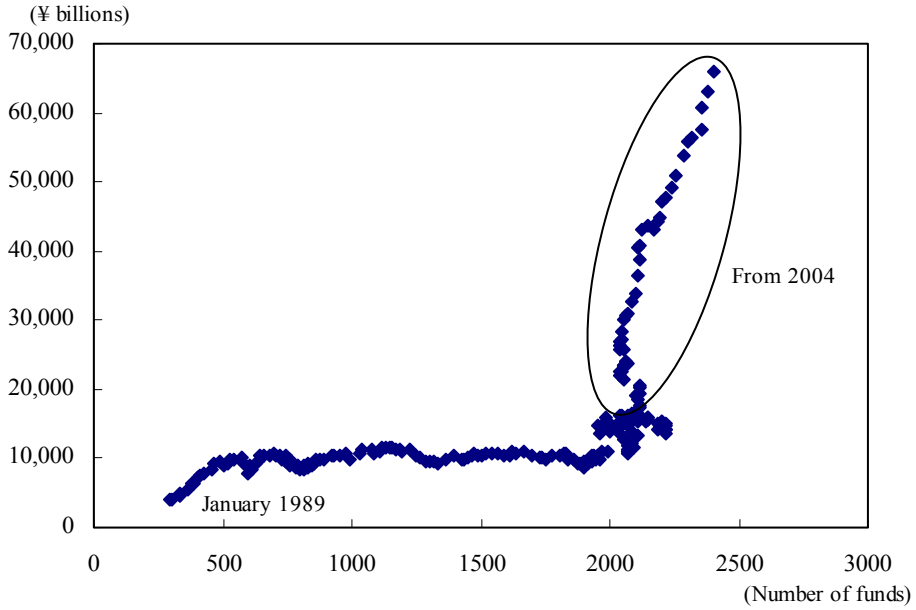
Note: Banks, etc. includes sales by Japan Post since October 2005.
Source: Nomura Institute of Capital Markets Research, based on materials from the Investment Trusts Association Japan

Figure 9: Number of participants in defined contribution pension plans



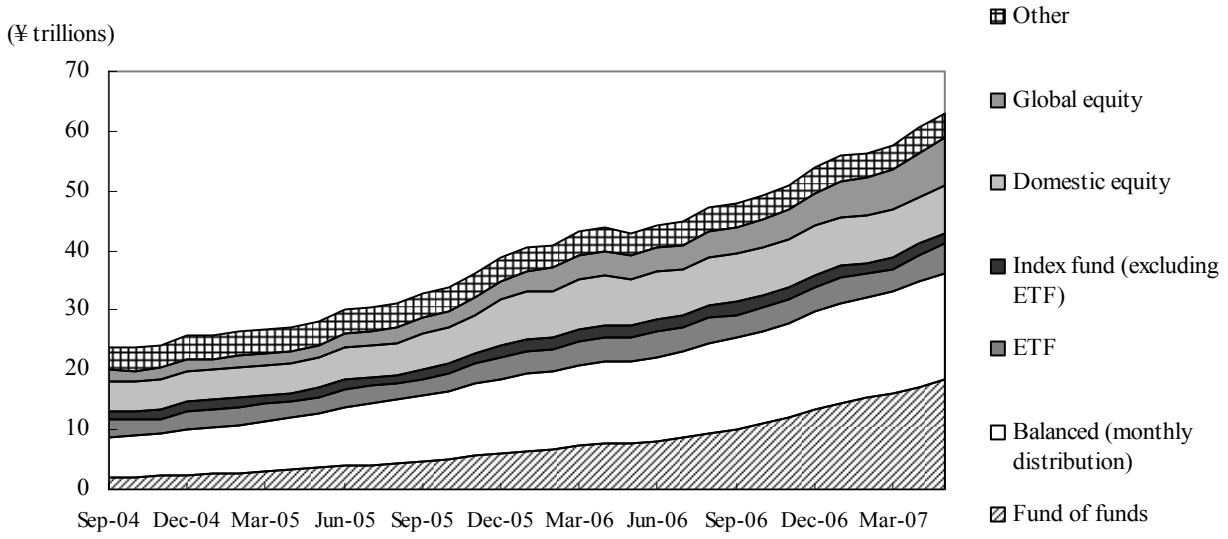
Source: Nomura Institute of Capital Markets Research, based on Jiji Press materials

Figure 10: Open-ended equity investment trusts: number of funds and total net assets



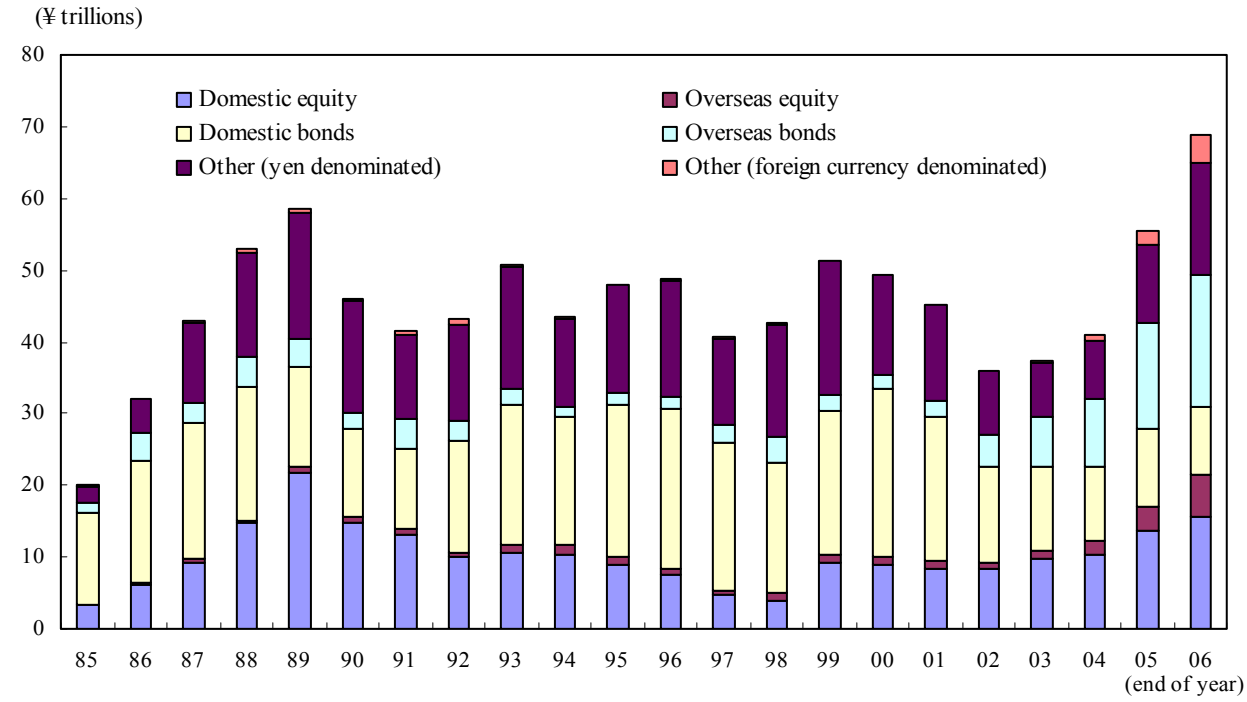
Source: Nomura Institute of Capital Markets Research, based on materials from the Investment Trusts Association, Japan

Figure 11: Open-ended equity investment trusts: total net assets by fund type



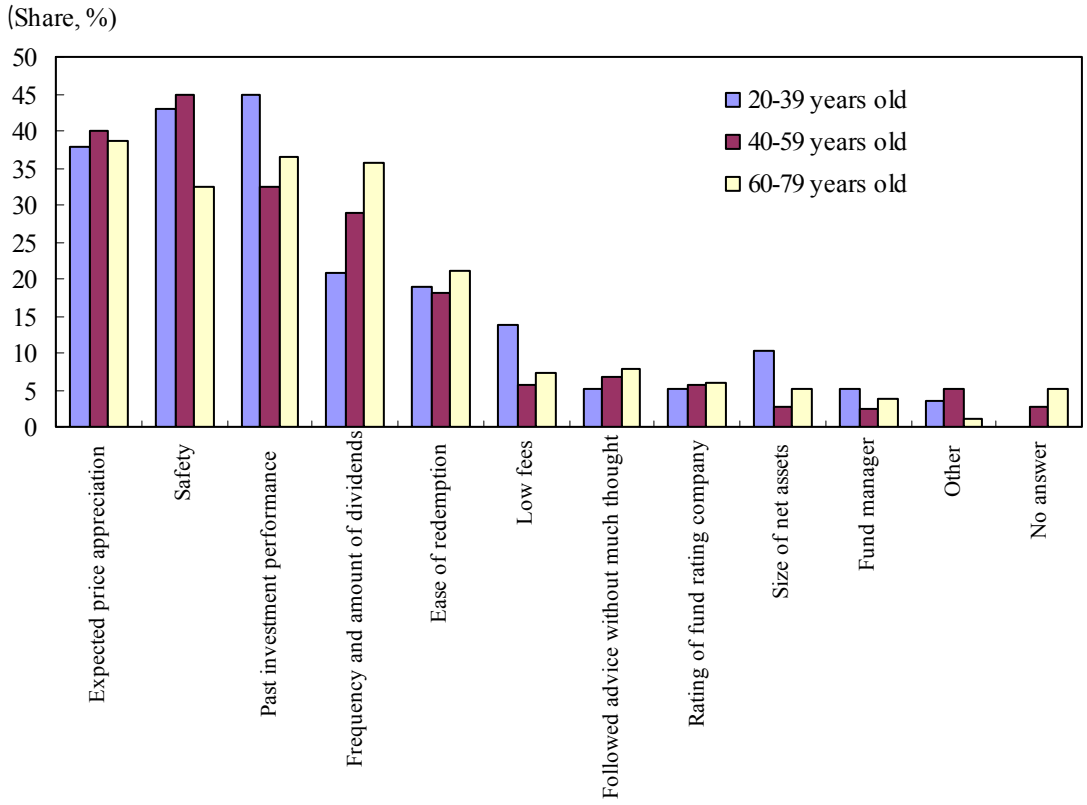
Source: The Investment Trusts Association, Japan

Figure 12: Distribution of net assets of investment trusts



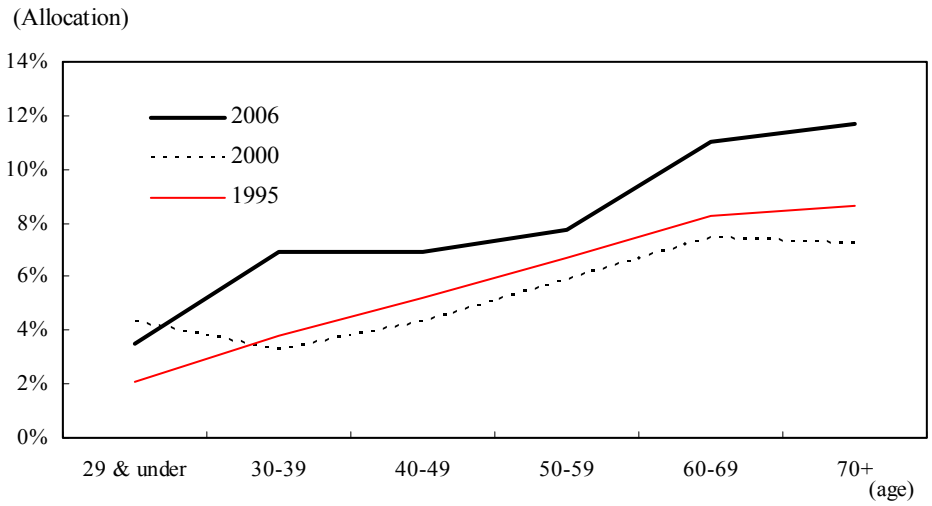
Source: The Investment Trusts Association, Japan

Figure 13: Deciding factors in investment trust purchases (according to survey)



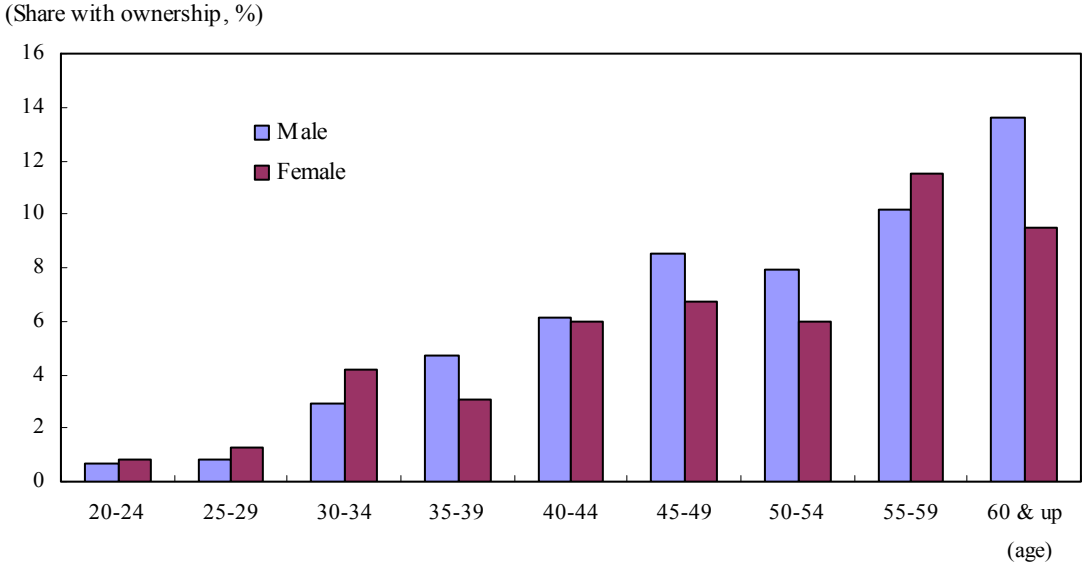
Note: Survey taken in November 2006.
Source: Nomura Institute of Capital Markets Research, based on the investment trusts survey by the Investment Trusts Association, Japan

Figure 14: Allocation to risk assets by age cohort



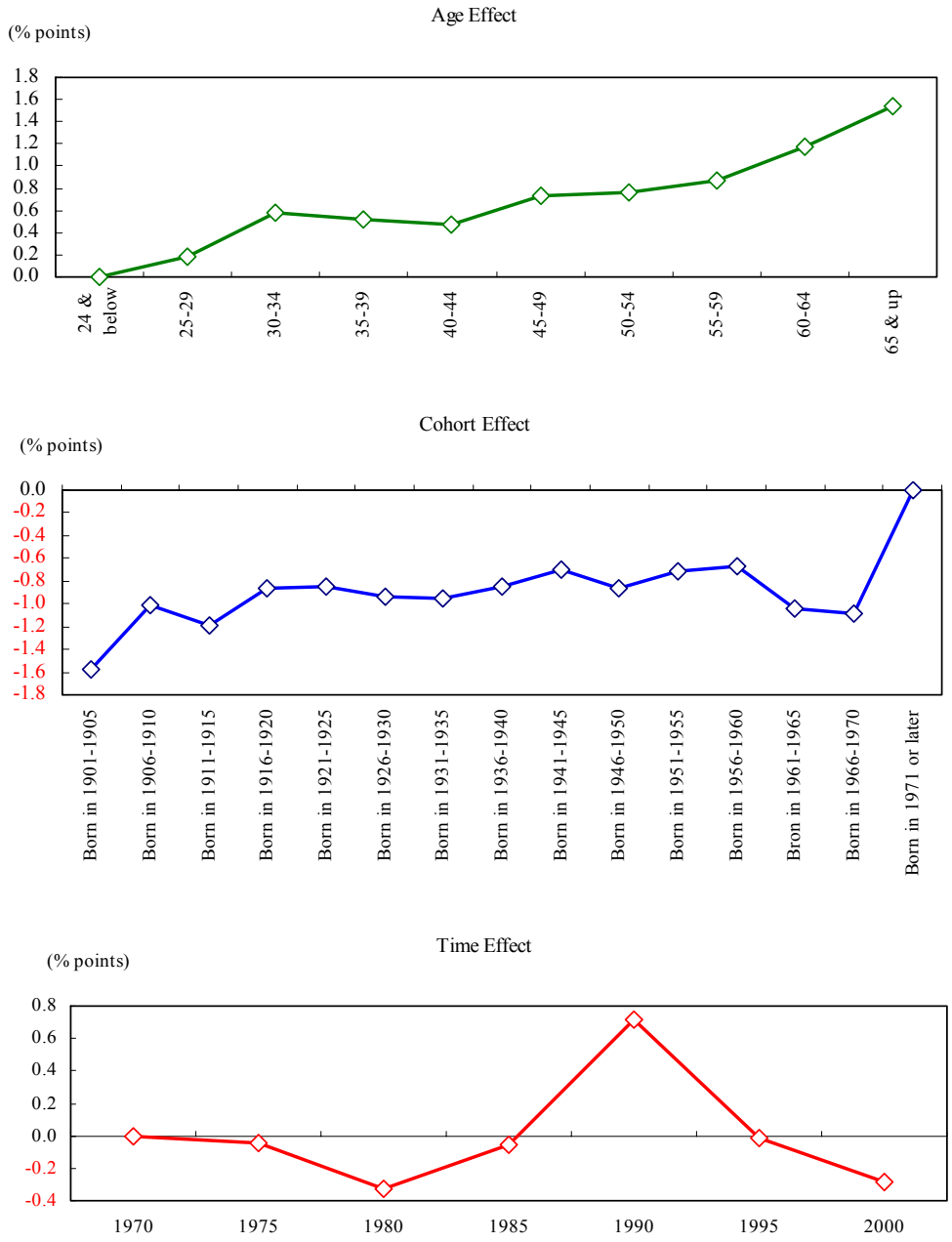
Note: 1. Investments in equities and equity funds as a percentage of savings.
2. Figures from 2006 based on the Family Income and Expenditure Survey, figures from 2000 and 1995 based on the Family Saving Survey.
Source: Nomura Institute of Capital Markets Research, based on the Family Saving Survey and the Family Income and Expenditure Survey.

Figure 15: Ownership of investment trusts (FY2006)



Note: Shows the percentage of each age cohort that owns investment trusts.
Source: FY2006 nationwide survey on individual securities investment, taken jointly by the Japan Security Dealers Association (JSDA) and the Institute for Securities Education & Public Relations.

Figure 16: Cohort analysis (equity investment trusts / savings)

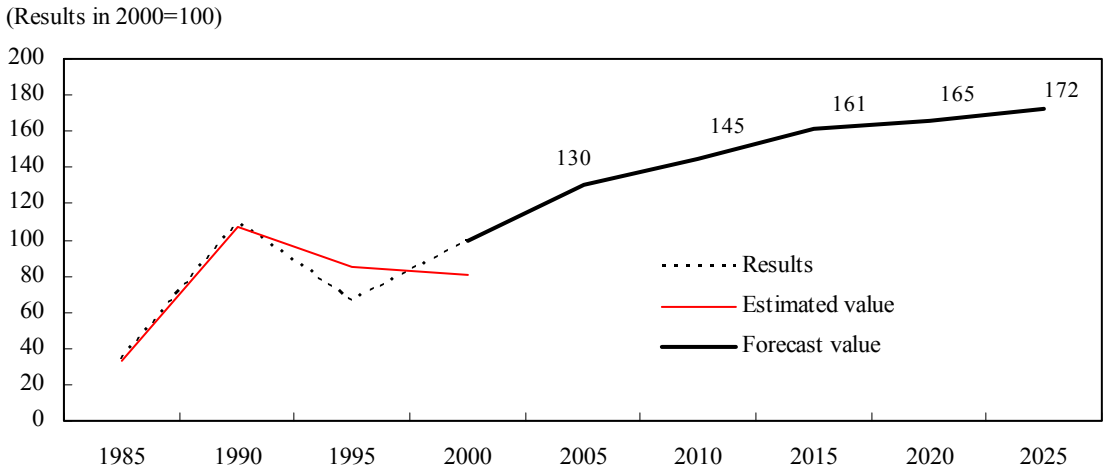


Note: 1. Estimation model is as follows. $X_{it} = \beta_0 + \beta_i + \beta_t + \beta_c + \varepsilon_{it}$

X_{it}: Share of savings invested in equity investment trusts for age cohort i at time t.
β_0: Constant
β_i: Age effect
β_t: Time effect
β_c: Cohort effect
ε_{it}: Error term

2. Estimation period is 1970 to 2000 in 5-year increments.
3. Estimation results: Adjusted R2 = 0.41, F-value - 2.73, P-value = 0.001
Source: Nomura Institute of Capital Markets Research, based on the Family Saving Survey (now part of the Family Income and Expenditure Survey) from the Ministry of Internal Affairs and Communications.

Figure 17: Forecasts for Japan's investment trust market

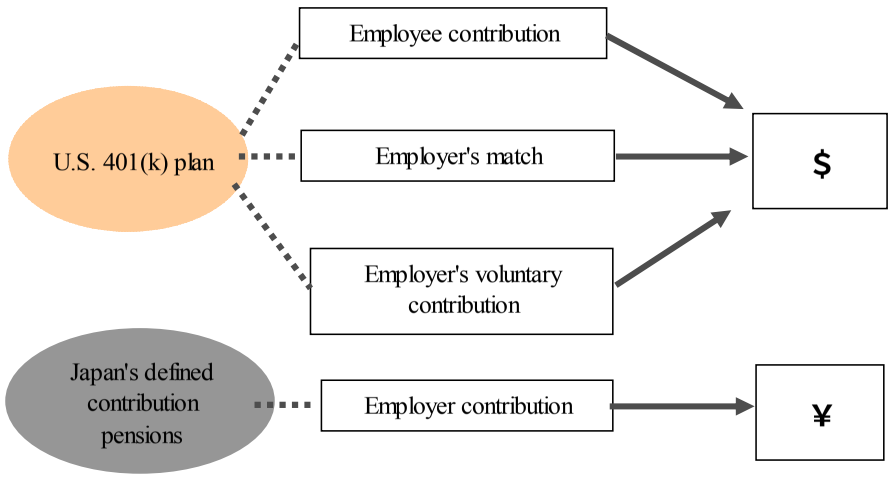


Note: 1. Forecasts based on following equation.
Forecast value for future time t = (1) Savings per household in 2000 x
(2) Growth rate in savings per household x
(3) Investment trusts as a percentage of savings for each household at time t (by age cohort) x
(4) Forecast number of households at time t (by age cohort)

2. Forecasts based on the following assumptions.
1) For (2), assumed no change from results in 2000
2) For (3), used estimation results in cohort analysis, for 2000, used actual figures
3) For (4), used estimates from the National Institute of Population and Social Security Research
4) Percentage of households in each age cohort with ownership in investment trusts assumed to remain the same as in 2000 in future years
5) The cohort effect for new generations to be born assumed to be the same as for the cohort born in 1971 or later.
6) The time effect in the future assumed to be the average of the time effect from 1985 to 2000

Source: Nomura Institute of Capital Markets Research, based on various data sources

Figure 18: Japan-US differences in defined contribution pension plans



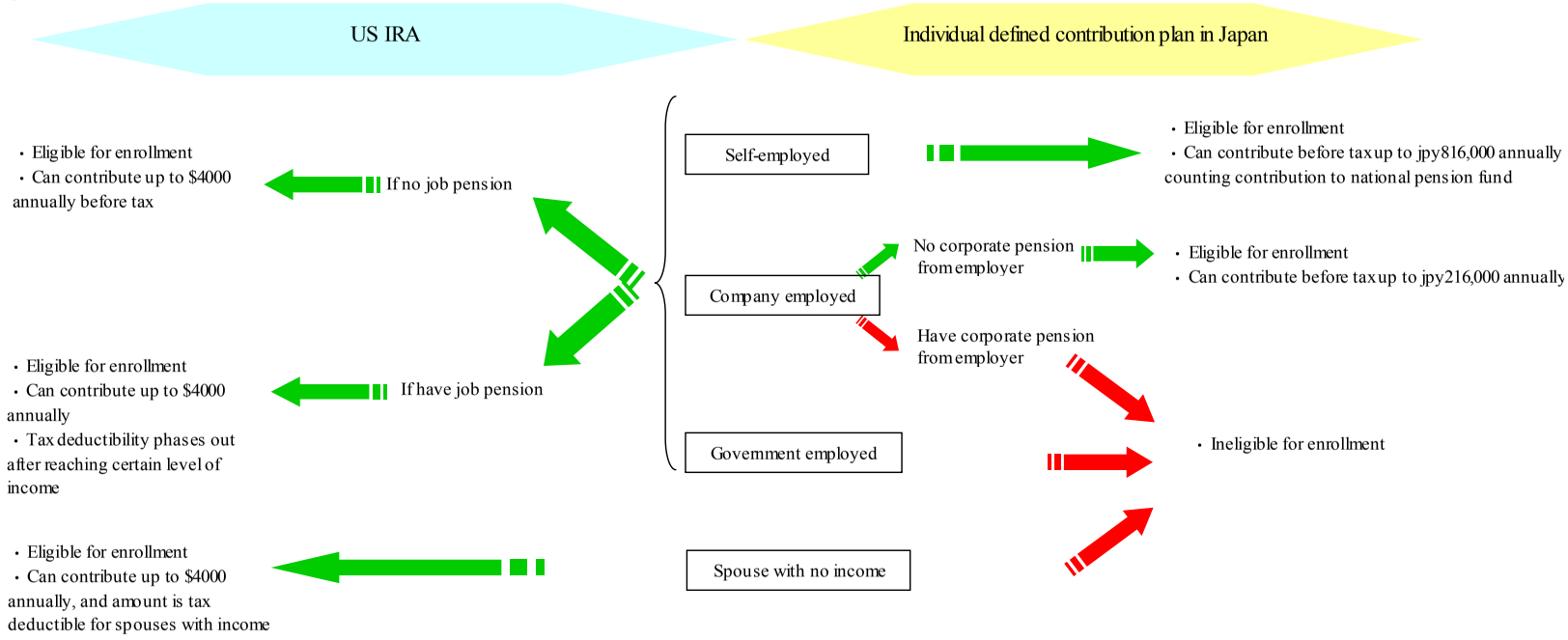
U.S.

	Maximun annual contribution
Participant's before-tax contribution	$15,500
Total contribution to account	$45,000
401(k) catch up contribution	$5,000

Japan

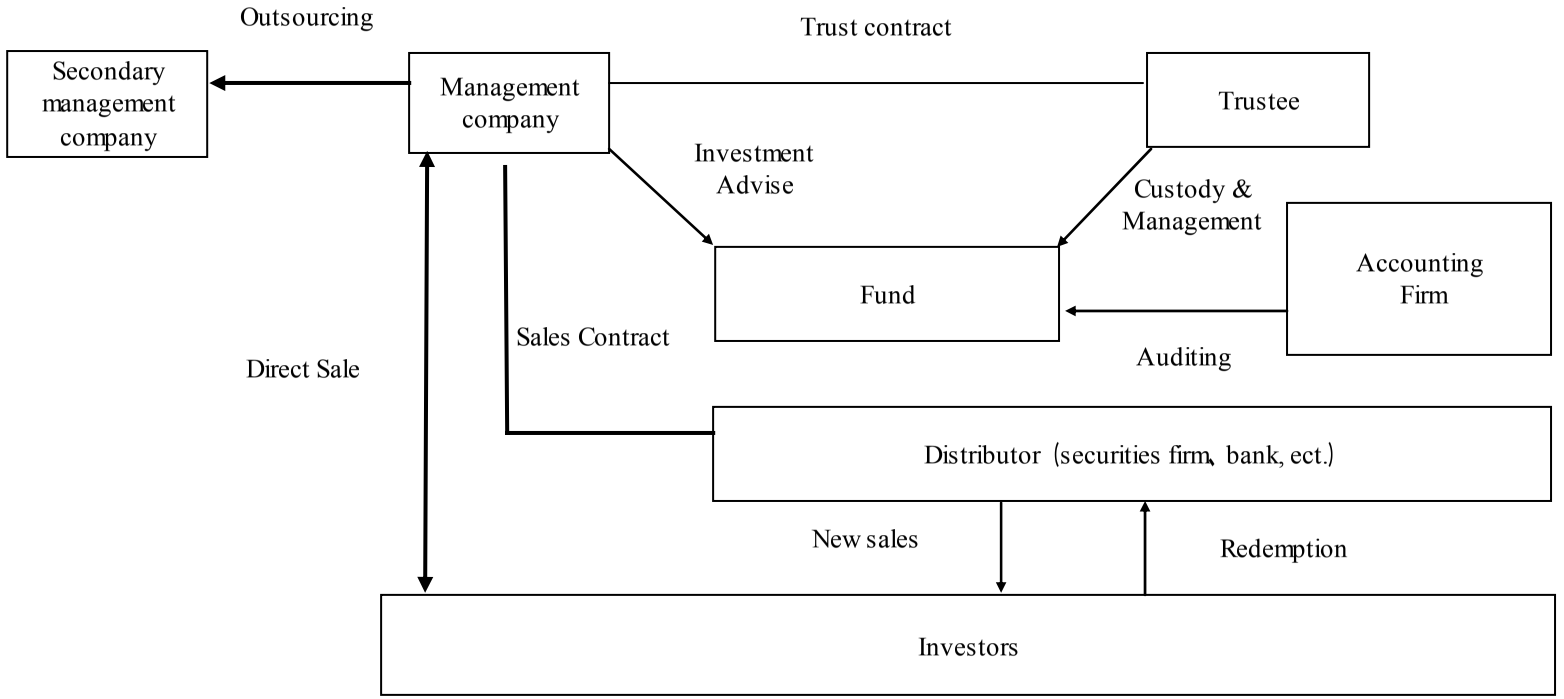
Corporate defined contribution plan (without any defined benefit plan)	jpy 552,000
Corporate defined contribution plan (with any defined benefit plan)	jpy 276,000

Figure 18 (continued)



Source: Nomura Institute of Capital Markets Research

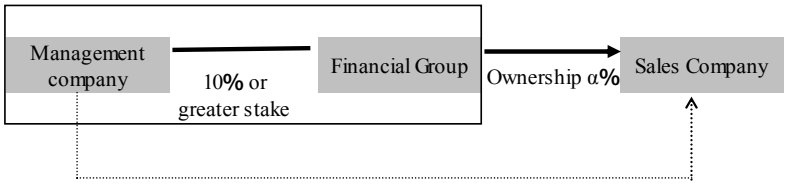
Figure 19: Outline of Japan's contractual-type investment trust (trustee directed type)



Source: Nomura Institute of Capital Markets Research, base on various materials

Figure 20: Approach on group variable (Some typical cases)

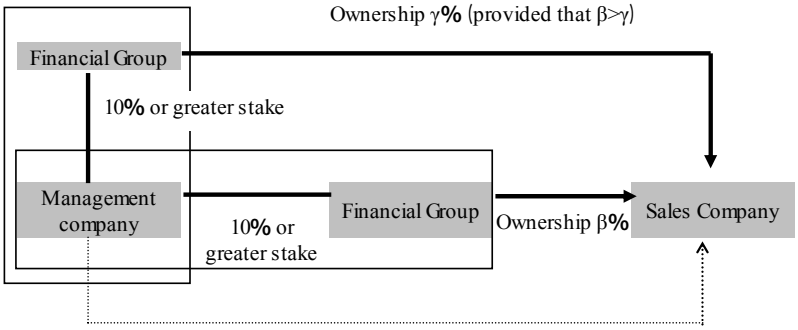
Case1



Group variable 1(Fund A)=α%

Fund A

Case2

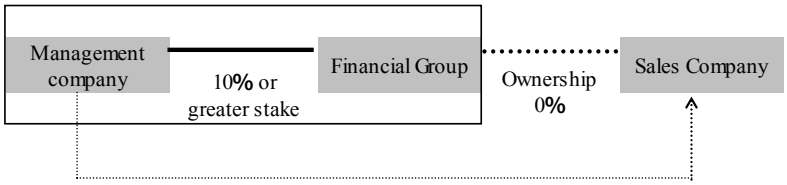


Group variable 1(Fund B)=β%

Group variable 2(Fund B)=γ%

Fund B

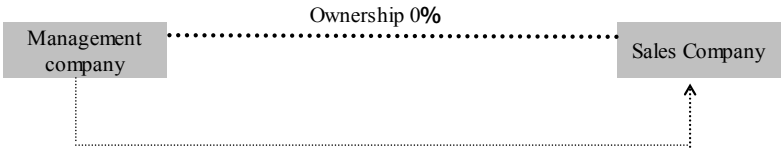
Case3



Group variable (Fund C)=0%

Fund C

Case4



Group variable (Fund D)=0%

Fund D

Source: Nomura Institute of Capital Markets Research

Table 1: Top 20 equity investment trusts

As of December 2001 (jpy millions)

	Fund name	Net assets	Asset management company name	Investment Trust Association Japan categories	Date established
1	Nomura Japan Equity Strategy Fund	548,462	Nomura Asset Management	Domestic equity	2000/2/2
2	Global Sovereign Open (monthly distribution)	501,728	Kokusai Asset Management	Balanced	1997/12/18
3	Fidelity Japan Open	288,164	Fidelity Investment Trust	Domestic equity	1995/12/22
4	Nikko Japan Open	262,577	Nikko Asset Management	Domestic equity	1998/8/28
5	Fidelity Japan Growth	208,899	Fidelity Investment Trust	Domestic equity	1998/4/1
6	Active Nippon	182,646	Daiwa Asset Management	Domestic equity	1998/11/20
7	Index Fund 225	159,616	Nikko Asset Management	Index	1988/6/17
8	Nomura Japan Open	154,501	Nomura Asset Management	Domestic equity	1996/2/28
9	Alliance Global High Income A	153,186	Alliance Capital Asset Management	Balanced	1997/6/27
10	Daiwa Information Technology Revolution (0101 Fund)	139,378	Daiwa Asset Management	Domestic equity	1999/9/1
11	Nissay/Putnam Income Open	132,131	Nissay Asset Management	Balanced	1998/7/31
12	Nikko Evolution	130,359	Nikko Asset Management	Domestic equity	2000/4/21
13	Galileo	119,798	Goldman Sachs Asset Management	Balanced	1997/5/1
14	Fuji Three-way Open	110,320	Fuji Investment Management [TN now Mizuho Asset Management]	Balanced	1993/11/26
15	Alliance High Yield Open	108,423	Alliance Capital Asset Management	Balanced	1997/1/31
16	(Power Select Fund) Double Japan Equity	107,612	Daiwa Asset Management	Derivative products	1995/4/21
17	DaVinci	104,717	Goldman Sachs Asset Management	Global equity	1996/9/27
18	Variety Open	104,523	Goldman Sachs Asset Management	Balanced	1998/2/12
19	Alliance Global Income Fund	93,934	Alliance Capital Asset Management	Balanced	1997/12/18
20	Euro Land Sovereign Income	88,580	Kokusai Asset Management	Balanced	1998/8/28

As of December 2006 (jpy millions)

	Fund name	Net assets	Asset management company name	Investment Trust Association Japan categories	Date established
1	Global Sovereign Open (monthly distribution)	5,635,105	Kokusai Asset Management	Balanced	1997/12/18
2	Pictet Global Income Equity Fund (monthly distribution)	1,928,014	Pictet Financial Management Consultants	Fund of funds	2005/2/28
3	Daiwa Global Bond Fund (monthly distribution)	1,521,795	Daiwa Asset Management	Balanced	2003/10/23
4	Nomura My Story B course (bymonthly distribution)	1,290,764	Nomura Asset Management	Fund of funds	2005/5/30
5	Nikko Triple Fund (Property Bond Equity) (monthly distribution)	1,247,133	Nikko Asset Management	Fund of funds	2003/8/5
6	Nikkei 225 ETF	1,008,866	Nomura Asset Management	Index	2001/7/9
7	TOPIX ETF	874,453	Nomura Asset Management	Index	2001/7/11
8	DIAM High Grade Income Open (monthly distribution)	861,110	DLIBJ Asset Management	Balanced	2003/7/15
9	Listed Index Fund TOPIX	739,140	Nikko Asset Management	Index	2001/12/20
10	Nissay/Putnam Income Open	665,595	Nissay Asset Management	Balanced	1998/7/31
11	GW7 Eggs	644,661	Nikko Asset Management	Global equity	2003/2/28
12	Mitsubishi UFJ Foreign Bond Open (monthly distribution)	631,167	Mitsubishi UFJ Asset Management	Balanced	2002/8/29
13	Global REIT Open	590,471	Nomura Asset Management	Fund of funds	2005/2/21
14	Fidelity Japan Growth	515,919	Fidelity Investment Trust	Domestic equity	1998/4/1
15	Listed Index Fund 225	493,799	Nikko Asset Management	Index	2001/7/9
16	PIMCO High Income (monthly distribution)	483,784	Mitsubishi UFJ Asset Management	Fund of funds	2003/8/8
17	Daiwa ETF Nikkei 225	451,733	Daiwa Asset Management	Index	2001/7/9
18	World Sovereign Income	440,126	Japan Investment Trust Management	Balanced	2002/3/26
19	High Grade Oceania Bond Open (monthly distribution)	404,875	Daiwa Asset Management	Balanced	2003/6/13
20	Daiwa ETF TOPIX	382,982	Daiwa Asset Management	Index	2001/7/11

Source: Nomura Institute of Capital Markets Research, based on Morningstar Principia data.

Table 2: Distribution of investment risk (standard deviation of return over past three years)

Dec-01

	# of funds	Average	Minimum	Maximum	Std. dev
Index	64	18.7	16.6	22.5	1.1
Balanced	158	7.8	0.1	28.1	4.7
Fund of funds	n.a.	n.a.	n.a.	n.a.	n.a.
Index fund	27	25.0	16.5	38.0	7.0
Global equity	107	26.2	5.8	128.3	14.8
Domestic equity	188	28.0	10.7	71.5	12.2

Jun-04

	# of funds	Average	Minimum	Maximum	Std. dev
Index	68	18.1	16.0	25.6	1.6
Balanced	213	6.2	0.0	14.2	3.4
Fund of funds	9	8.5	3.3	19.8	5.1
Index fund	23	21.3	12.5	31.6	4.1
Global equity	112	22.0	6.7	75.7	8.9
Domestic equity	302	20.6	8.5	60.9	6.3

Dec-06

	# of funds	Average	Minimum	Maximum	Std. dev
Index	84	16.2	13.0	18.6	0.8
Balanced	342	5.7	0.3	11.5	2.6
Fund of funds	65	7.3	0.6	20.5	5.5
Index fund	22	20.9	10.8	32.5	5.1
Global equity	148	16.0	4.4	51.6	6.8
Domestic equity	328	19.2	1.9	50.9	6.7

Note: Covers open-ended equity investment trusts with net assets of at least jpy1 billion.
Source: Nomura Institute of Capital Markets Research, based on Morningstar materials

Table 3: Top 20 Asset management firms (as of end-June 2007)

(jpy billions, share %)

Asset management firm	Category	Total		Equity funds		Bond funds		Money market funds	
Nomura	Securities firm affiliates	19,520	(23.8%)	13,276	(19.5%)	5,310	(47.5%)	935	(32.3%)
Daiwa	Securities firm affiliates	11,144	(13.6%)	7,584	(11.2%)	2,264	(20.3%)	1,296	(44.8%)
Nikko	Securities firm affiliates	9,307	(11.4%)	7,705	(11.3%)	1,583	(14.2%)	19	(0.7%)
Kokusai	Bank affiliates	7,171	(8.7%)	6,553	(9.6%)	306	(2.7%)	312	(10.8%)
Mitsubishi UFJ Asset Management	Bank affiliates	5,135	(6.3%)	4,483	(6.6%)	648	(5.8%)	4	(0.1%)
Pictet	Foreign capitalized affiliates	3,154	(3.8%)	3,154	(4.6%)	0	(0.0%)	0	(0.0%)
DLIBJ	Bank affiliates	2,558	(3.1%)	2,556	(3.8%)	2	(0.0%)	0	(0.0%)
Fidelity	Foreign capitalized affiliates	1,959	(2.4%)	1,959	(2.9%)	0	(0.0%)	0	(0.0%)
Sumitomo Mitsui	Bank affiliates	1,933	(2.4%)	1,933	(2.8%)	0	(0.0%)	0	(0.0%)
Shinko	Bank affiliates	1,802	(2.2%)	1,247	(1.8%)	459	(4.1%)	96	(3.3%)
Dai-Ichi Kangyo	Bank affiliates	1,679	(2.0%)	1,326	(2.0%)	273	(2.4%)	80	(2.8%)
Daiwa SBI	Bank affiliates	1,649	(2.0%)	1,649	(2.4%)	0	(0.0%)	0	(0.0%)
Goldman Sachs	Foreign capitalized affiliates	1,159	(1.4%)	1,159	(1.7%)	0	(0.0%)	0	(0.0%)
Nissay	Insurer affiliates	1,036	(1.3%)	1,036	(1.5%)	0	(0.0%)	0	(0.0%)
JP Morgan	Foreign capitalized affiliates	948	(1.2%)	882	(1.3%)	65	(0.6%)	0	(0.0%)
Japan	Securities firm affiliates	935	(1.1%)	780	(1.1%)	147	(1.3%)	8	(0.3%)
Sumitomo Trust	Bank affiliates	901	(1.1%)	897	(1.3%)	3	(0.0%)	0	(0.0%)
Chuo Mitsui	Bank affiliates	765	(0.9%)	765	(1.1%)	0	(0.0%)	0	(0.0%)
Credit Agricole	Foreign capitalized affiliates	706	(0.9%)	706	(1.0%)	0	(0.0%)	0	(0.0%)
PCA	Foreign capitalized affiliates	695	(0.8%)	695	(1.0%)	0	(0.0%)	0	(0.0%)
Total		81,977	(100%)	67,912	(100%)	11,175	(100%)	2,890	(100%)
Top 5		52,277	(64%)	39,600	(58%)	10,110	(90%)	2,566	(89%)
Top 10		63,683	(78%)	50,449	(74%)	10,572	(95%)	2,663	(92%)

(Reference) Top market shares in the US mutual fund industry (%)

	1985	1990	1995	2000	2005	2006
Top 5	37	34	34	32	37	38
Top 10	54	53	47	46	48	49
Top 25	78	75	70	74	71	71

Source: Nomura Institute of Capital Markets Research, based on materials from the Investment Trusts Association Japan and the Investment Company Institute (ICI)

Table 4: Market share by industry segment (as of June 2007)

(jpy trillions, share)

	# of cos.	Total		Equity funds		Bond funds		Money market funds	
		Net assets	Market share	Net assets	Market share	Net assets	Market share	Net assets	Market share
Domestic securities affiliates	4	40.9	50%	29.3	43%	9.3	83%	2.3	78%
Domestic bank affiliates	10	23.3	28%	21.2	31%	1.7	15%	0.5	17%
Domestic insurer affiliates	8	3.1	4%	3.0	4%	0.0	0%	0.0	2%
Domestic independents	17	1.3	2%	1.2	2%	0.1	1%	0.1	2%
Foreign capitalized affiliates	32	13.3	16%	13.2	19%	0.1	1%	0.0	1%
Total	71	82.0	100%	67.9	100%	11.2	100%	2.9	100%

Source: Nomura Institute of Capital Markets Research, based on materials from The Investment Trusts Association Japan

Table 5: Asset management firms by group

Group name	Asset management firm
Mizuho	Shinko Investment Trust Mgmt, Dai-Ichi Kangyo Asset Mgmt, Fuji Investment Mgmt, DLIBJ Asset Mgmt
Mitsubishi UFJ Bank	Mitsubishi UFJ Asset Mgmt, Kokusai Asset Mgmt
Sumitomo Mitsui Banking	Daiwa SBI Investments, Sumitomo Mitsui Asset Mgmt
Chuo Mitsui Trust	Chuo Mitsui Asset Mgmt
Shinsei Bank	Shinsei Investment Mgmt
Sumitomo Trust	STB Asset Mgmt
Nomura	Nomura Asset Mgmt
Daiwa Securities	Daiwa Asset Mgmt
Nikko Cordial	Nikko Asset Mgmt
Okasan Securities	Japan Investment Trust
Nissay	Nissay Asset Mgmt
Dai-Ichi Life	DLIBJ Asset Mgmt
Asahi Life	Asahi Life Asset Mgmt
Sumitomo Life	Sumitomo Mitsui Asset Mgmt
Aioi Insurance	Toyota Asset Mgmt
Sompo Japan Insurance	Sompo Japan Asset Mgmt
Tokio Marine & Nichido Fire	Tokio Marine Asset Mgmt
Mitsui Sumitomo Insurance	Sumitomo Mitsui Asset Mgmt
Shinkin Central Bank	Shinkin Asset Mgmt
Toyota	Toyota Asset Mgmt
SBI	SBI Asset Mgmt
Independent	Sawakami Asset Mgmt, Sparx Asset Mgmt, Arigato Asset Mgmt, Fund Creation Asset Mgmt, Plaza Asset Mgmt, Hitachi Investment Mgmt, United Investments,
Foreign-capitalized	JP Morgan, Invesco Asset Mgmt, Schroder Investment Mgmt, Credit Suisse Asset Mgmt, Morgan Stanley Investment Mgmt, Fidelity Investments Japan, Deutsche Asset Mgmt, Goldman Sachs Asset Mgmt, Alliance, AIG Investments, Pictet Financial Mgmt Consultants, Blackrock, Commerz Int'l, Capital Mgmt (Japan), Barclays, UBS Global Asset Mgmt, HSBC Investments, Legg Mason, Prudential, State Street, Credit Agricole, Societe General Asset Mgmt, BNP Paribas, Frank Russell, ING Mutual Funds Mgmt, MFS, PCA, Pimco, Mellon Global Investments, AXA Investment Managers, Franklin Templeton Investments

Note: Classifications based on a minimum equity stake of 10%.

Source: Nomura Institute of Capital Markets Research, based on various materials

Table 6: Estimation results for logit model (balanced and fund of funds)

		Large Banks (10 firms)		Regional Banks (111firms)		Securities Firms (18firms)	
explanatory variable		coefficient	p-value	coefficient	p-value	coefficient	p-value
x1	Group_1	0.039	0.000	0.026	0.00	0.044	0.000
x2	Group_2	0.017	0.000	0.333	0.00	0.055	0.000
x3	Group_3			-0.335	0.35	0.382	0.000
x4	Group_4			0.039	0.00		
x5	Fees_Distributor	-0.583	0.000	-0.097	0.05	0.199	0.014
x6	x5*Dummy(Independent/Foreign Manager)	0.599	0.000	0.024	0.55	-0.063	0.561
x7	Fee_Trustee	14.885	0.000	3.854	0.05	-3.846	0.104
x8	Fee_Asset_Manager	-0.797	0.172	-0.978	0.00	0.589	0.150
x9	log(Total Net Assets)	0.139	0.004	0.410	0.00	0.196	0.000
x10	Share_within_Mstar_Category	12.537	0.000	6.408	0.00	4.330	0.001
x11	Number_Mstar	0.139	0.087	-0.158	0.00	0.135	0.003
x12	Sharp_Ratio_1yr	0.116	0.302	-0.155	0.01	0.208	0.025
x13	Sharp_Ratio_3yr	-0.290	0.066	0.454	0.00	-0.775	0.000
x14	Fund_age	-0.055	0.073	0.137	0.00	0.276	0.000
x15	Constant	-4.498	0.000	-7.844	0.00	-7.071	0.000
Number of Obs		5,370		59,607		10,178	
Pseudo R2		0.234		0.113		0.235	

Note: 1. Samples include only "Balanced Funds" and "Fund of Funds" defined by The Investment Trusts Association, Japan.
2. Data of mutual funds are as of December, 2006, and group variables are calculated using information at March, 2006.

Source: Nomura Institute of Capital Markets Research

Table 7: Number of funds by net assets

Net assets	Indexed		Industry-specific indexed	
	# of funds	Share	# of funds	Share
Less than jpy100 mn	4	<3%>	10	<17%>
jpy100 mn to less than jpy1 bn	18	<14%>	27	<46%>
jpy1 bn to less than jpy5bn	39	<30%>	20	<34%>
jpy5 bn to less than jpy10 bn	22	<17%>	1	<2%>
jpy10 bn to less than jpy100 bn	38	<29%>	1	<2%>
jpy100 bn to less than jpy500 bn	7	<5%>	n.a.	n.a.
jpy500 bn and higher	3	<2%>	n.a.	n.a.
Total	131	<100%>	59	<100%>

Net assets	Global equity		Domestic equity	
	# of funds	Share	# of funds	Share
Less than jpy100 mn	26	<7%>	38	<7%>
jpy100 mn to less than jpy1 bn	99	<28%>	115	<20%>
jpy10 bn to less than jpy5bn	99	<28%>	194	<33%>
jpy5 bn to less than jpy10 bn	52	<14%>	82	<14%>
jpy10 bn to less than jpy100 bn	71	<20%>	139	<24%>
jpy100 bn to less than jpy500 bn	12	<3%>	13	<2%>
jpy500 bn and higher	1	<0%>	1	<0%>
Total	360	<100%>	582	<100%>

Net assets	Balanced		Fund of funds	
	# of funds	Share	# of funds	Share
Less than jpy100 mn	65	<9%>	7	<5%>
jpy100 mn to less than jpy1 bn	145	<21%>	25	<18%>
jpy10 bn to less than jpy5bn	245	<36%>	35	<26%>
jpy5 bn to less than jpy10 bn	79	<11%>	15	<11%>
jpy10 bn to less than jpy100 bn	123	<18%>	42	<31%>
jpy100 bn to less than jpy500 bn	26	<4%>	10	<7%>
jpy500 bn and higher	5	<1%>	2	<1%>
Total	688	<100%>	136	<100%>

Net assets	Convertible bond		Derivative products	
	# of funds	Share	# of funds	Share
Less than jpy100 mn	n.a.	n.a.	3	<5%>
jpy100 mn to less than jpy1 bn	5	<36%>	16	<29%>
jpy10 bn to less than jpy5bn	4	<29%>	20	<36%>
jpy5 bn to less than jpy10 bn	1	<7%>	10	<18%>
jpy10 bn to less than jpy100 bn	4	<29%>	7	<13%>
jpy100 bn to less than jpy500 bn	n.a.	n.a.	n.a.	n.a.
jpy500 bn and higher	n.a.	n.a.	n.a.	n.a.
Total	14	<1100%>	56	<100%>

Note: As of December 2006.

Source: Nomura Institute of Capital Markets Research, based on Morningstar Principia data.