Financial and Real Assets in the Household Sector — Understanding the Decline in Household Financial Assets in Fiscal 2000

By Tatsuya Ishikawa
Economic Research Group

1. Introduction

According to the *Flows of Funds Accounts* issued in June by the Bank of Japan, financial assets of the households sector decreased in fiscal 2000 for the first time since the survey was begun. Considering that the household savings flow has grown by at least 30 trillion yen annually, and that financial assets were expected to continue growing steadily, this finding has caught many by surprise.

To explain how this reversal could have happened, this paper examines background factors such as asset formation in the household sector and structural changes in transactions with other sectors, and looks at the prospects for the future.

2. Trends in Household Financial and Real Assets

(1) Downturn in Household Financial Assets in Fiscal 2000

The BOJ survey found that household financial assets at the end of fiscal 2000 had decreased by 4 trillion yen to 1,386 trillion yen, marking the first year-on-year decline since the survey was begun.

Changes in financial assets and liabilities are caused by changes in the financial surplus and in capital gains. The financial surplus has consistently been positive for the household sector in the past. The value of net financial assets (financial assets minus liabilities) at the end of a period is statistically equivalent to its value at the beginning of the period, plus financial surplus or deficit (net lending or net borrowing) and capital gain or loss. Thus unless liabilities change significantly, any change in financial assets must derive from the financial surplus and capital gain or loss.[1]

**Figure 1 Household Financial Assets and Liabilities**

(¥ trillion)

Fiscal yearend	94	95	96	97	98	99	00
Financial assets	1,150	1,218	1,255	1,288	1,325	1,390	1,386
Liabilities	383	404	393	393	396	393	390
Net financial assets	768	814	862	895	928	997	996

Note: Trillion yen
Source: BOJ, *Flows of Funds Accounts.*

As Figure 2 shows, the recent decline in financial assets was largely caused by the stock market decline at the end of the fiscal year, generating a capital loss of 23 trillion yen. The financial surplus, which shrank 15 trillion yen below its average to 21 trillion yen, was unable to absorb the capital loss.

Figure 2 Composition of Change in Financial Assets
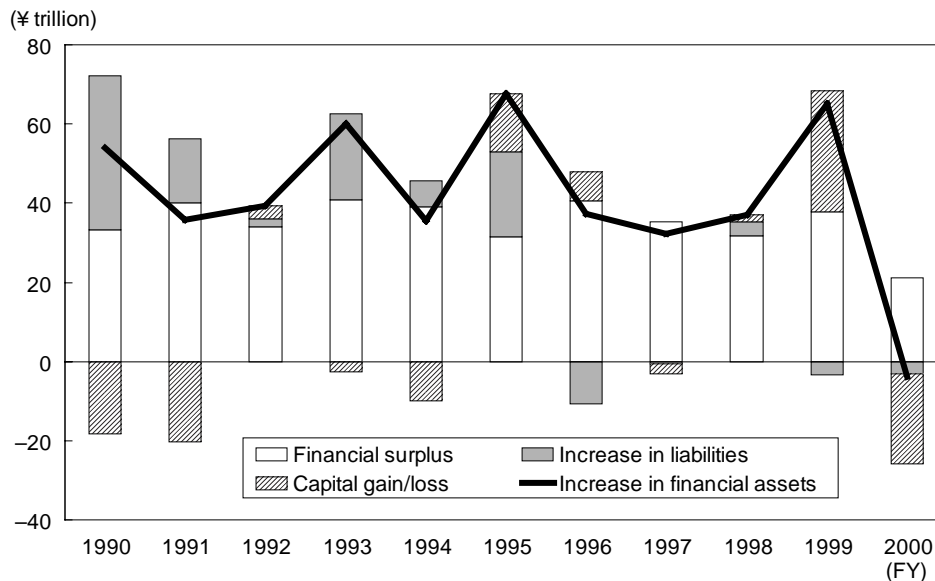
Source: BOJ, *Flows of Funds Accounts.*

(2) The Flow of Savings and Financial and Real Assets

Although the *Flows of Funds Accounts* shows only the end result of the financial surplus, this essentially reflects the result of income and expenditures generated in association with real economic activity. When compared against real economic statistics, the financial surplus conceptually corresponds with the difference between savings and investment. In other words, the following relationship holds.

$$\text{Change in net financial assets} = \text{Financial surplus} + \text{Capital gain/loss}$$
$$= \text{Savings} - \text{Investment} + \text{Capital gain/loss}$$

Savings are that part of disposable income (wage and other income minus taxes and social security contributions) left after consumption expenditure. Investment is the value of acquisitions of real assets such as housing or land. When capital gain or loss is excluded, the change in net financial assets corresponds to the remainder of savings after subtracting the amount spent on newly purchased real assets.[2]

Figure 3 Relationship Between Accumulation of Financial Assets and Savings & Investment
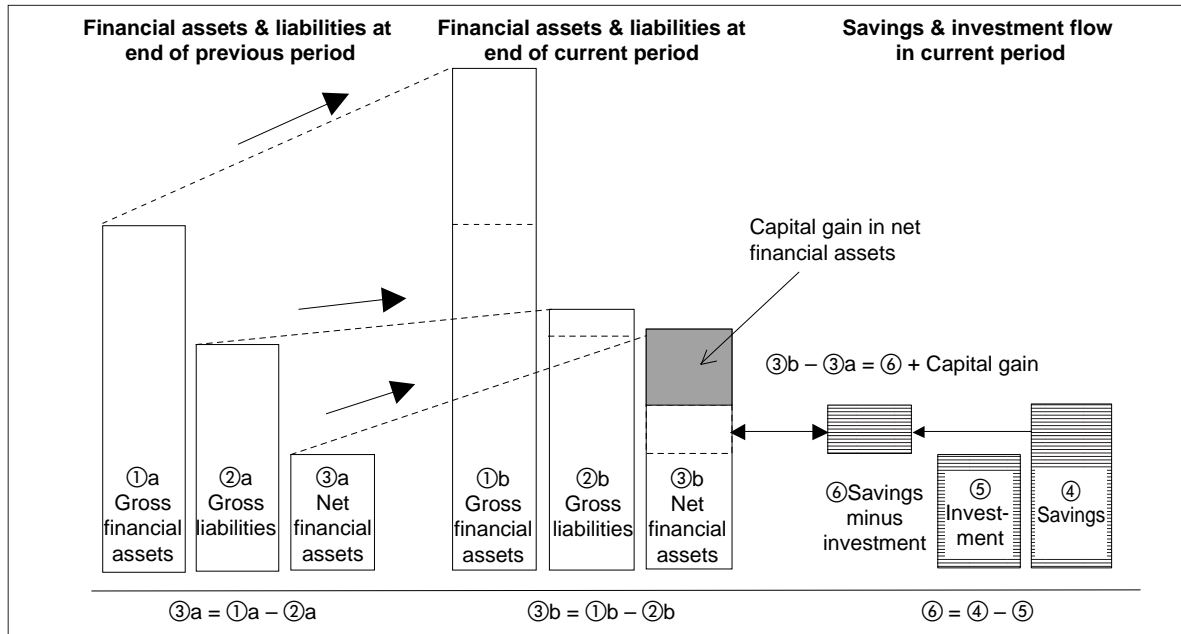
Changes in net financial assets are inseparable from changes in real assets and savings. Thus to understand financial assets and the structure of asset accumulation, we must first grasp the financial surplus and the characteristics of savings and investment that lie the background.

(3) Trend in Real Assets

We next look at the status of real assets such as housing and land, which are not contained in the *Flows of Funds Accounts*. The *Annual Report on National Accounts* is suited for this.

While it is widely known that the household sector owns approximately 1,400 trillion yen in financial assets, what is less well known is that the value of real assets is almost comparable. In fact, until recently, real assets had exceeded financial assets.

Figure 4 Financial and Real Assets of Households

(¥ trillion)

Calendar yearend		69	79	89	99
Financial assets		64	310	958	1,408
Real assets		109	548	1,613	1,261
	Housing, etc.	15	130	213	256
	Land	94	418	1,400	1,005
Total assets		177	868	2,581	2,692
Total liabilities		24	115	294	384

Notes: Trillion yen. Housing, etc. includes plant and equipment investment by unincorporated enterprises.
Source: Cabinet Office, *Annual Report on National Accounts.*

The value of real assets at the end of calendar year 1999 actually fell from a decade earlier due to the fact that investment in the 1990s — that is, new acquisition of real assets — was consistently exceeded by the capital loss from existing assets. The primary cause of this has been the sustained decline in land prices.

Figure 5 Composition of the Change in Real Asset Value of the Household Sector
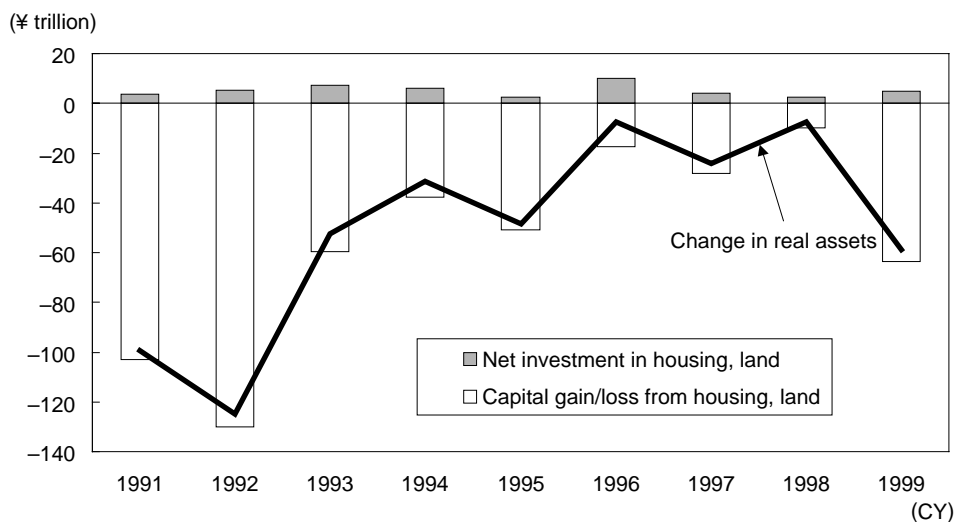
Notes: 1. Net investment in land and other real assets includes plant investment of unincorporated enterprises, and excludes consumption of fixed capital.
2. Capital gain or loss is the aggregate of "Other changes in volume of assets account," "Revaluation accounts," and "Other account."
Source: Cabinet Office, *Annual Report on National Accounts.*

Because capital losses have impacted real assets more than financial assets, people tend to overlook the fact that the volume of land and housing has not decreased. Moreover, the new acquisition of real assets remains firmly positive.

(4) Composition of the Savings-Investment Balance

We now return to the cause of the decline in financial assets in fiscal 2000 — the shrinking financial surplus. This can occur due to a decline in savings, an increase in investment in land and housing, or a combination of the two.

For clarification, we turn to the national accounts for a breakdown of the savings-investment imbalance, which corresponds to the financial surplus in the *Flows of Funds Accounts*.[3]

Except for savings and net capital transfers payable (taxes such as the gift tax and inheritance tax, which are levied primarily on real assets), the components involve investment in real assets, including residential investment and plant investment by private unincorporated enterprises minus fixed capital consumption, inventory investment by private unincorporated enterprises, and investment in land.

Figure 6 Composition of the Savings-Investment Imbalance of the Household Sector
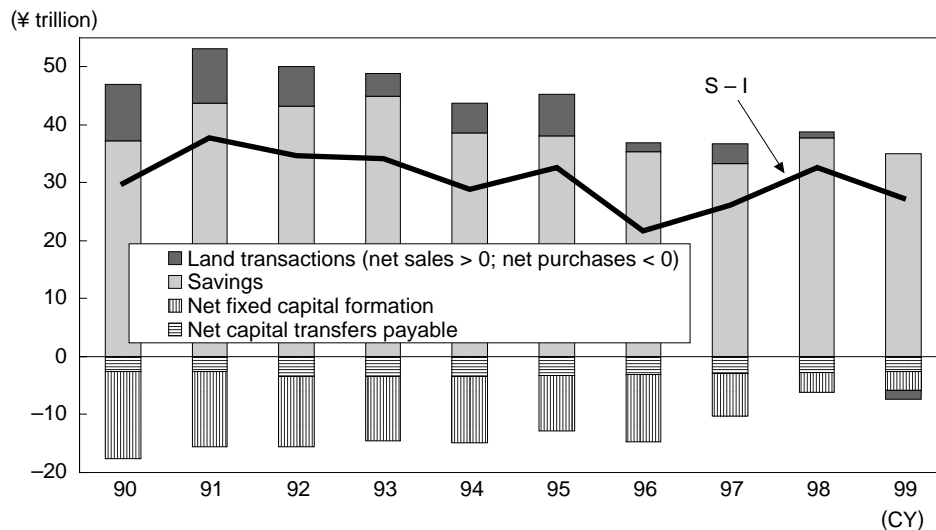
Notes: Net fixed capital formation is equal to fixed capital formation minus consumption of fixed capital. Inventory investment is negligible and is not shown.
Source: Cabinet Office, *Annual Report on National Accounts*.

Figure 7 Composition of Net Fixed Capital Formation in the Household Sector
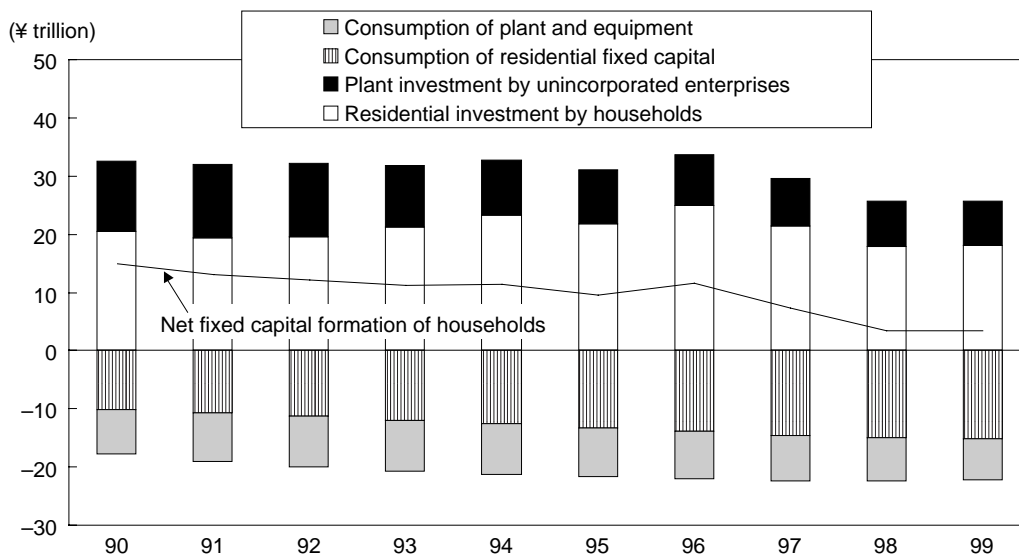
Note: Residential and non-residential investment for households is estimated from the fixed capital forma-
tion of households and of non-profit institutions serving households.
Source: Cabinet Office, *Annual Report on National Accounts*.

Since data is available only to 1999, the direct cause of the sudden decline in financial surplus in 2000 is unclear. However, judging from the fact that consumption and income remained almost unchanged in economic statistics other than the national accounts, we can infer that the change on the investment side was larger than on the savings side.

In particular, with regard to investment in land, structural changes had already appeared from the late 1990s.

3. Structural Change in Asset Accumulation in the Late 1990s

(1) Households Shift from Selling to Purchasing Land

While net purchases by definition amount to zero in domestic land transactions, the pattern of transactions among households, corporations, and the government has changed radically in recent years. The household sector has for many years primarily sold rather than bought land. However, these net sales began declining in 1996, and by 1999 the household sector had become a net purchaser of land.

Figure 8 Land Transactions by Sector (ratio to nominal GDP)
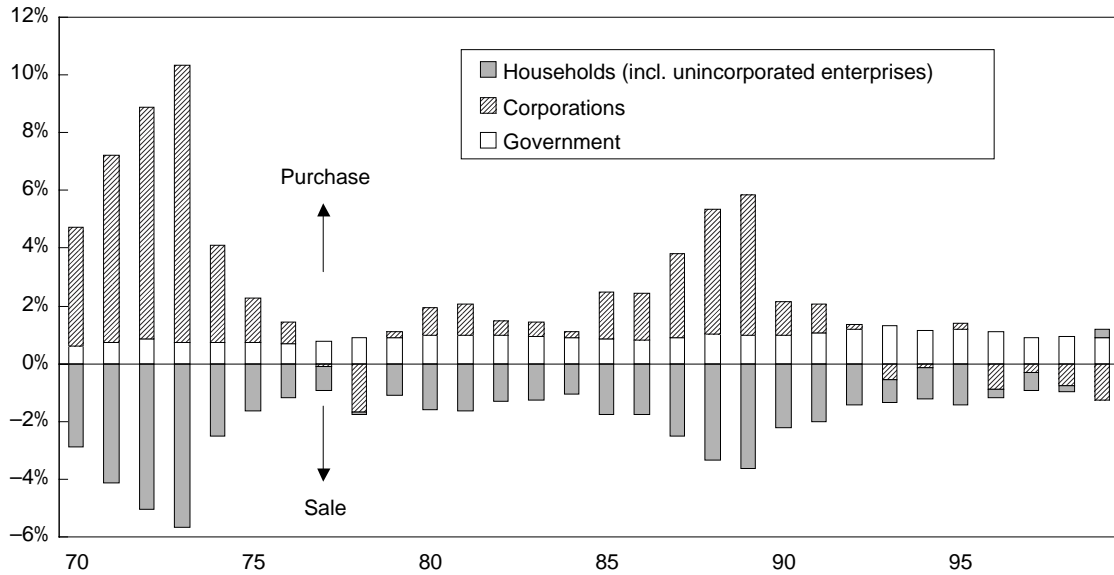
Notes: Corporations include non-financial corporations and financial institutions. Private non-profit institu-
tions serving households have been omitted. Data is 68SNA basis for 1989 and earlier.
Source: Cabinet Office, *Annual Report on National Accounts.*

Some people may be surprised to learn that the household sector has been selling land. This trend has
been dominated by the sale of farmland by farm households for conversion to commercial or residen-
tial land. By land area, the growth rate of commercial land exceeded that of residential land from 1991
to 1993, but subsequently fell sharply, and from the late 1990s the growth of residential land has been
prominent.

Figure 9 Change in Agricultural, Residential, and Commercial Land Area
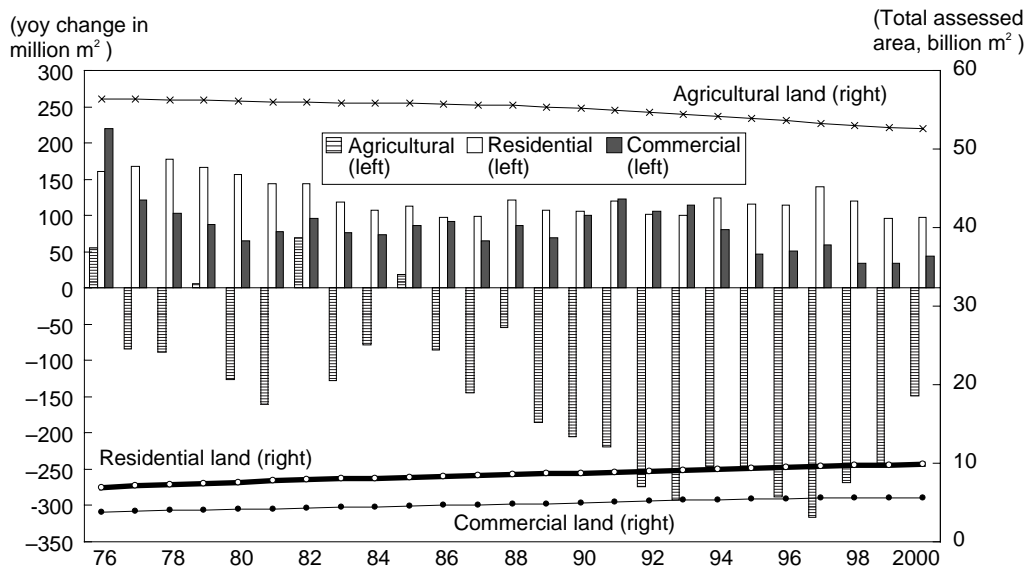
Note: Agricultural land includes paddies and fields.
Source: Ministry of Public management, Home Affairs, and Post and Telecommunications, *Summary
Report on Prices, etc. of Fixed Assets (Land).*

Land previously acquired by companies for commercial use has been being sold on balance, and in 1999 was ultimately acquired by white collar households as residential land. Since total residential investment in that year did not change, housing and land acquisitions by persons without landholdings is thought to have increased, and residential investment by landowners to have decreased.

In the composition of taxpayers of the fixed property tax on land, the proportion of individuals has continued to grow, while that of corporations turned downward in 2000. Thus based on land transactions in the national accounts as well, the household sector is surmised to still be a net purchaser. This factor should have reduced the financial surplus in 2000.

(2) Corporate Savings & Investment Behavior and the Impact on Households

Behind the altered structure of land transactions in the household sector has been a radical change in the corporate sector's investment behavior and financial surplus. As companies restructured in the late 1990s, they refrained from making land acquisitions and fixed capital investment. As a result, the savings investment balance turned positive in 1998 for the first time since statistics were begun.

Figure 10 Savings & Investment Balance by Sector (ratio to nominal GDP)
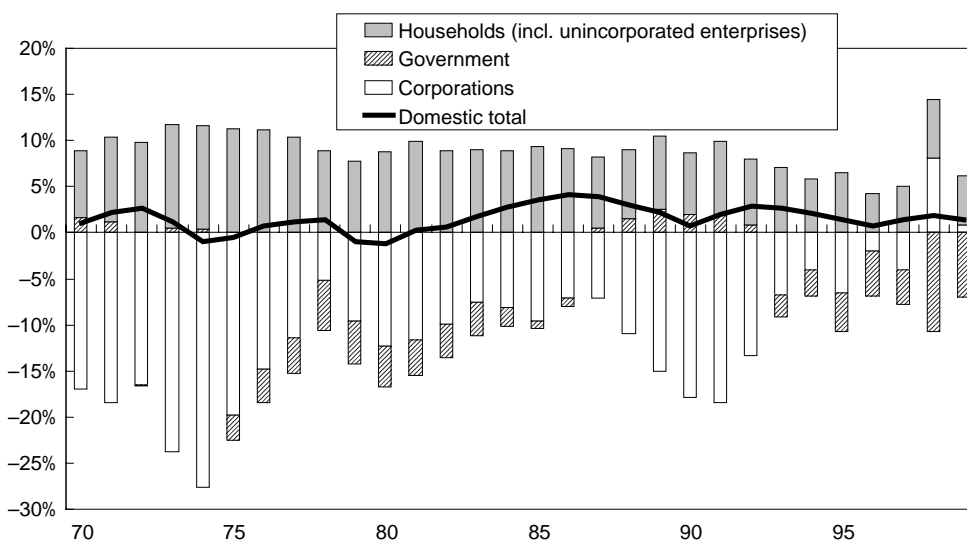
Notes: Corporations is the total of non-financial corporations and financial institutions. Private non-profit institutions serving households are omitted.

Normally, the corporate sector runs a financial deficit. While temporary financial surpluses may occur, a sustained financial surplus has never been observed in any industrialized economy. As corporate restructuring stabilizes, the savings investment balance is expected to return to deficit or at least to a level near zero. Thus the household sector's condition as a net purchaser of land is also likely to be alleviated in due time.

(3) Stock Changes Increase the Importance of Flow Variables

Combining the above discussions on the composition of savings and investment and analysis of capital gains and losses, below we present an overview of the long-term trend in accumulation of financial assets since the 1970s.

First, according to the *Annual Report on National Accounts*, in calendar year 1999 household disposable income was 317 trillion yen, of which 88.9 percent was consumed and the remaining 11.1 percent saved. Of the 35 trillion yen in savings, 5 trillion yen was invested in real assets such as land and housing, with the other 30 trillion yen going toward increasing net financial assets. After adding 68 trillion yen for capital gains and other accounts, financial assets in 1999 rose to 1,408 trillion yen from 1,314 trillion yen in the previous year.

Figure 11 Composition of the Increase in Financial Assets

(¥ trillion)

		1970s avg.	1980s avg.	1990s avg.	1999
Increase in financial assets		24.6	64.8	45.0	93.7
Increase in liabilities		−9.1	−17.9	−9.0	4.4
Increase in net financial assets		15.5	46.9	36.0	98.1
+	Savings	20.7	33.0	38.7	35.1
+	Land sales	2.8	6.6	4.7	−1.6
−	Residential investment, etc.	−8.9	−10.7	−9.8	−3.6
+	Capital gain/loss	2.3	19.4	2.4	62.4
	Other	−1.6	−1.4	0.1	5.8

As percentage of disposable income

		1970s avg.	1980s avg.	1990s avg.	1999
Increase in financial assets		24.6%	30.2%	15.0%	29.7%
Increase in liabilities		−9.2%	−8.3%	−3.0%	1.4%
Increase in net financial assets		15.5%	21.8%	12.0%	31.1%
+	Savings	20.8%	15.4%	12.9%	11.1%
+	Land sales	2.8%	3.1%	1.6%	−0.5%
−	Residential investment, etc.	−8.9%	−5.0%	−3.3%	−1.1%
+	Capital gain/loss	2.3%	9.0%	0.8%	19.8%
	Other	−1.6%	−0.6%	0.0%	1.8%

The composition of asset formation has changed significantly with the times. The accumulation of financial assets was more rapid in the 1980s when capital gains were large. In the 1990s, while the flow of savings has increased compared to the 1980s, asset accumulation has slowed because capital gains have been almost nonexistent.

While price fluctuations of existing assets still have a significant impact in a single year, on average the impact has lessened as the nominal economic growth rate declines, and the relative role of capital

gains in financial asset accumulation has decreased. As a result, the flow variable of new asset acquisitions is contributing more in relative terms to asset accumulation.

4. Prospects for Household Financial Assets

(1) Economic Growth and the Decline in Savings Rate

To predict the future trend of financial assets, we consider the effect of population aging mainly on the flow variable of new asset acquisitions.

Asset accumulation is derived from the flow variable of savings, which is determined from disposable income and the savings rate. It is reasonable to assume that the future growth rate of disposable income is equivalent to the economy's nominal growth rate.

The economy's growth rate is most likely to decline in tandem with the aging of the population. Even if the labor participation rate rises among women and the elderly, since the population's composition is shifting toward age groups that have low participation rates to begin with, the labor force will inevitably decline sooner or later. The government predicts that until 2010 the economy will have a real growth rate of approximately 2 percent, and a nominal growth rate of approximately 3.5 percent (Economic Council, *Ideal Socioeconomy and Policies for Rebirth,* July 1999) .

Figure 12 Forecast for the Population and Number of Households
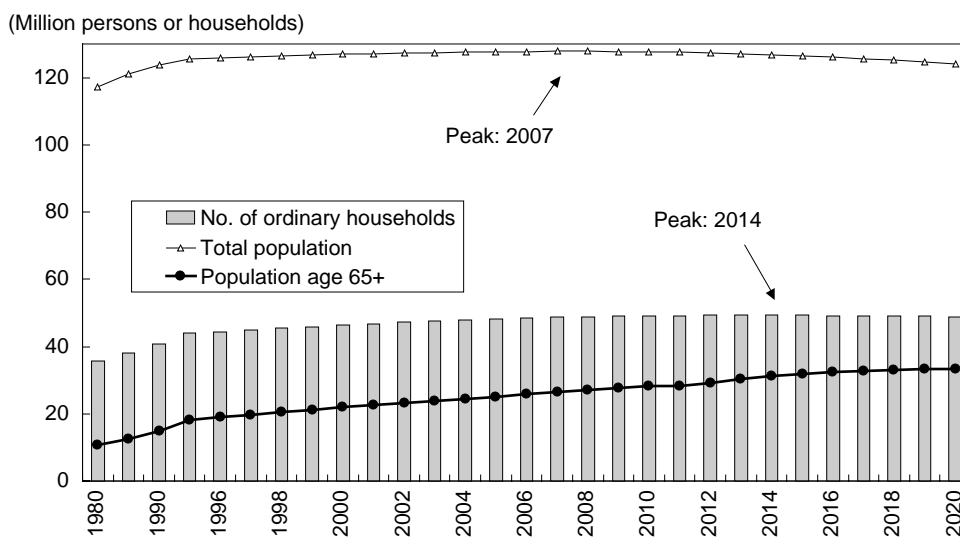
Source: National Institute of Population and Social Security Research

Figure 13 Long-term Forecast of the Economic Council (to 2010)

Contribution of capital	Approx. 1%
Contribution of labor	Slightly negative
Contribution of technological progress	Over 1%
Real economic growth rate	Approx. 2%
Nominal economic growth rate	Approx. 3.5%

Source: Economic Council, *Ideal Socioeconomy and Policies for Rebirth, July 1999.*

The household savings rate is also likely to decline moderately as aging progresses. This is because non-working elderly households have a negative savings rate, and the growth of this population segment would pull down the overall household savings rate. On the other hand, anxiety about the future has pushed the savings rate up among young and middle-aged generations, a trend that could alleviate the decline due to aging.

Figure 14 Household Savings Scenarios for 2010

(¥ trillion)

		Disposable income growth rate from 1999 (annualized)										
		0.0%	0.5%	1.0%	1.5%	2.0%	2.5%	3.0%	3.5%	4.0%	4.5%	5.0%
savings rate in 2010	11.1%	35.1	37.0	39.1	41.3	43.6	46.0	48.5	51.2	54.0	56.9	60.0
	11.0%	34.9	36.9	38.9	41.1	43.4	45.8	48.3	51.0	53.7	56.6	59.7
	10.0%	31.7	33.5	35.4	37.4	39.5	41.6	43.9	46.3	48.8	51.5	54.3
	9.0%	28.6	30.2	31.9	33.6	35.5	37.5	39.5	41.7	44.0	46.3	48.8
	8.0%	25.4	26.8	28.3	29.9	31.6	33.3	35.1	37.1	39.1	41.2	43.4
	7.0%	22.2	23.5	24.8	26.2	27.6	29.1	30.7	32.4	34.2	36.0	38.0
	6.0%	19.0	20.1	21.2	22.4	23.7	25.0	26.4	27.8	29.3	30.9	32.6
	5.0%	15.9	16.8	17.7	18.7	19.7	20.8	22.0	23.2	24.4	25.7	27.1
	4.0%	12.7	13.4	14.2	15.0	15.8	16.7	17.6	18.5	19.5	20.6	21.7
	3.0%	9.5	10.1	10.6	11.2	11.8	12.5	13.2	13.9	14.7	15.4	16.3
	2.0%	6.3	6.7	7.1	7.5	7.9	8.3	8.8	9.3	9.8	10.3	10.9
	1.0%	3.2	3.4	3.5	3.7	3.9	4.2	4.4	4.6	4.9	5.1	5.4
	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes: In trillion yen. Calculated based on 1999 household disposable income and savings rates data from the national accounts. Shaded area denotes cases in which savings amount falls below 1999 level.

Figure 14 shows simulation results for different combinations of projected disposable income growth rates and savings rates to determine whether savings in 2010 will increase or decrease compared to 1999. For example, if disposable income grows at 3.5 percent, which is the government's predicted nominal economic growth rate, savings will fall below the 1999 level unless the savings rate exceeds 7 percent.

(2) Residential Investment Trend

As mentioned earlier, growth in financial assets depends not only on the savings rate and savings amount but on investment in real assets such as housing and land. As long as the savings rate does not turn negative, total assets will basically increase. However, if the amount of investment in housing exceeds the amount of savings, financial assets will decline despite a positive savings rate. Of course, as aging progresses and the number of children declines, residential assets and the housing market will expand at a slower pace.

On this point, one view is that the decline in children will increase the probability that housing will be bequeathed to children, thereby making residential investment less necessary in the future. However, even if this effect strengthens, it is unlikely to cause a downturn in residential investment during the next decade.

Figure 15 Percentage of Households Age 65 and Over Not Living With Children
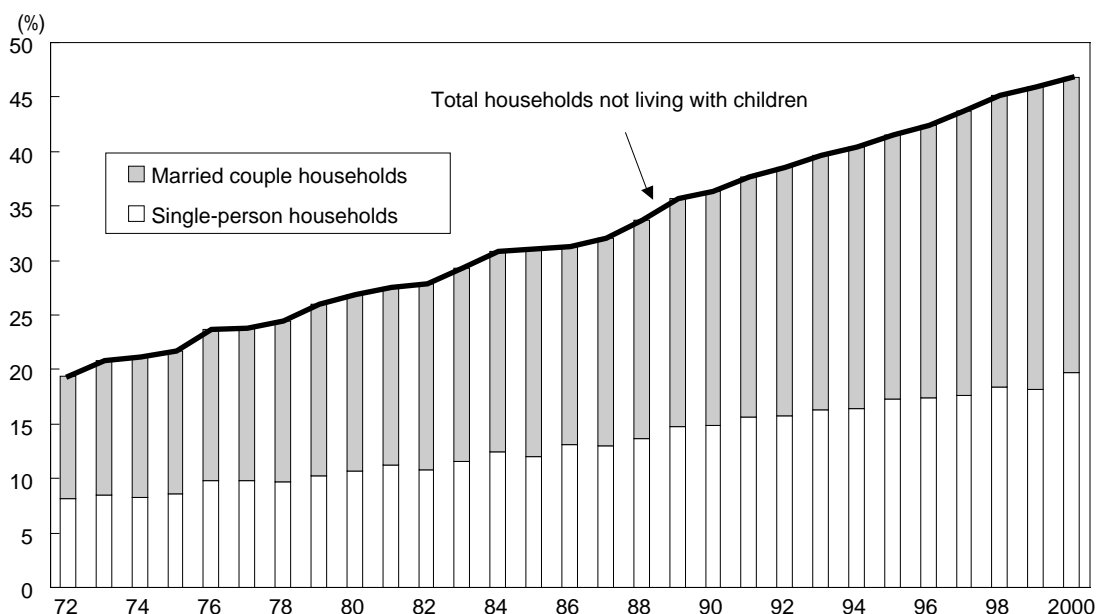
Source: Ministry of Health, Labor and Welfare, *Comprehensive Survey of the Living Conditions of People on Health and Welfare*.

The first reason is that, according to the National Institute of Population and Social Security Research, the number of households is projected to start declining no sooner than 2015. While the population is predicted to begin declining in 2008, the number of households will continue growing because more elderly persons will be living separately from their children. This proportion is already 47 percent today. If a child does inherit a home after both parents pass away, he or she will probably be 55 to 60 years old. Clearly, not everyone will refrain from buying a home until this age just because they stand to inherit a home.

Figure 16 Quality Improvement of Residential Investment
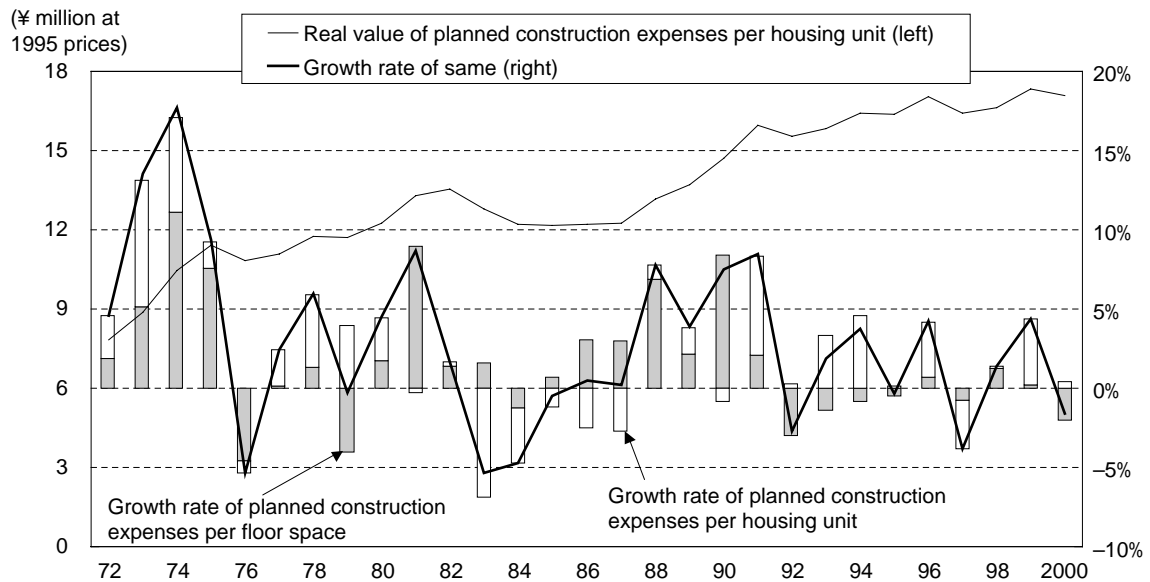
Notes: Planned real construction expense per unit is equal to floor space per unit multiplied by planned real construction expense per floor space. Planned real construction expense per floor space is equal to planned construction expense divided by floor space, divided by construction expense deflator, multiplied by 100.

Sources: Ministry of Land and Infrastructure, *Statistics on Building Construction Starts*; Ministry of Public Management, *Family Income and Expenditure Survey Report.*

Even if the number of households does decline, the increase in real housing value, that is, quality improvements, is expected to continue in real housing stock per household and new residential investment. This is based on the assumption that even if the economy's growth rate declines, per capita and household real income will continue growing, thus causing the demand for housing quality improvement on a household basis to continue growing. As long as the effect of growth in residential investment per household exceeds the effect of the decline in number of households, overall residential investment will not decline.[4]

In the late 1990s, the increase in land purchases by households was associated with the extraordinary sale of land by companies undergoing restructuring. Still, we cannot deny the possibility that with the declining savings rate, household savings will be outweighed by residential investment, causing financial assets to decline despite the absence of capital losses. Ofcourse, even in that case, as long as the household savings rate remains non-negative, total assets (financial plus real assets) will continue to grow.

4. Conclusion

The aging society is best characterized not as a society with a growing stock, but one in which stock carries significance. To raise the standard of living, we need to consider not how to increase the accu-

mulation of assets, but how to effectively use existing assets.

Figure 17 Household Financial and Real Assets in Industrialized Nations (1999)

(Ratio to disposable income, %)
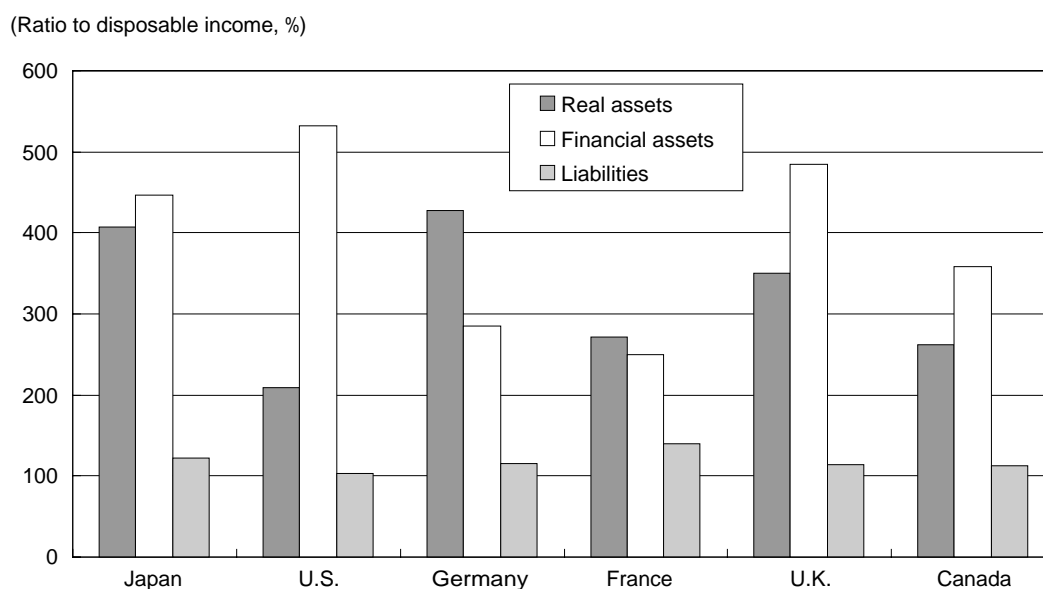
Note: Shows 1998 data for France.
Source: Cabinet Office, *Annual Report on National Accounts*; OECD, *Economic Outlook No. 68.*

Looking at the asset holdings of households in the major industrialized nations, real assets are significantly less than financial assets only in the U.S. However, the real assets are being effectively used thanks to an active secondary market for existing homes and land, which enables people to easily sell off real assets and convert them into financial assets. By moving into smaller homes, the elderly are able to increase their financial assets and funds for daily living, and thereby live comfortably in retirement.

The need to effectively use real assets will grow in Japan as well. Households will increasingly rely on comprehensive consulting services to manage both their financial assets and real assets. And since the growth of financial assets will decline, financial institutions must offer attractive products to survive in the increasingly competitive environment.

Notes

1. Increase in net financial assets = Financial surplus + Capital gain/loss
   Also,
      Increase in net financial assets= Increase in financial assets – Increase in liabilities.

Thus,

Increase in net financial assets= Financial surplus + Capital gain/loss + Increase in liabilities

2. This can be rewritten as follows.

Savings = Increase in net financial assets + Increase in real assets

While this appears obvious, the relationship holds even if savings are negative, that is, people are consuming out of assets. For example, for non-working elderly households who must finance their daily needs, we can analyze how much they consume out of financial assets and out of real assets.

3. While both fiscal year and calendar year calculations can be used for the savings investment balance, we used the calendar year calculation since data for real assets and capital gains are available only on a calendar year basis.

4. This holds under the condition that the rate of decline in number of households is less than the following:

$$\text{Real income growth rate per household} \times \text{Income elasticity of residential investment} + \text{Inflation rate of residential investment goods}$$