Section 5
Household Debt and the Housing Market in Asia

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1. Introduction

(1) Recent trends in household debt

According to the Institute of International Finance, total debt obligations globally reached an all-time high in 2022, breaking the $300 trillion threshold (three times the global GDP). Most of this increase in debt is due to a surge in public debt, which increased substantially as governments worldwide implemented sweeping policy interventions in response to the adverse impact of the COVID-19 pandemic. Public debt represents about 39% of total debt, the remainder being comprised of corporate debt (38%) and household debt (23%). Although the latter two did not expand at the same rate as public debt, they increased substantially, as well. In particular, the Asia-Pacific region saw a larger increase in the household debt-to-GDP ratio than any other world region. As a result, in some countries household debt is now at such a high level that it has raised concerns pertaining to debt sustainability and the stability of financial systems, especially in light of rising interest rates.

Table 1-5-1 shows that eight of the top 10 countries with the highest

Table 1-5-1 Changes in household debt levels during the Covid-19 pandemic

Country	Household debt in 2019, % of GDP	Household debt in 2021, % of GDP	Change 2019-2021, percentage points	Rate of change, global rank
Hong Kong	81.7	93.1	+11.4	1
Korea	95.0	105.8	+10.8	2
Thailand	79.9	90.0	+10.2	3
Nepal	29.9	37.8	+7.9	4
Vietnam	58.5	66.2	+7.7	5
New Zealand	91.7	98.8	+7.1	6
Japan	62.5	68.8	+6.3	7
China	55.8	62.1	+6.3	8
Switzerland	126.3	131.9	+5.6	9
Malaysia	68.1	73.1	+4.9	10

Sources: Bank of International Settlements (2023). Data on Vietnam sourced from CEIC (2023) and Thuong & Minh (2022).

household debt growth are in Asia.[1] In light of this, this article aims to identify the risks to economic growth and financial stability posed by rising household debt in Asian countries, and to discuss policies on how these risks can be mitigated.

(2) The impact of household debt on the economy

Since the ratio of household debt to GDP is positively correlated with GDP per capita, high-income countries naturally have higher household debt levels. This is due to three main factors, the first of which is that high-income countries have well-developed financial systems and an abundant supply of funds to meet demand for loans. Second, high-income countries have efficient institutions and frameworks for the protection of creditor rights and for insolvency resolutions, which allows financial institutions to lend without taking on significant risk. Third, loans are easier to obtain because customers have more assets that can serve as collateral. Even within high-income countries, most debt is held by wealthy households.

Only six countries in the world (Switzerland, Denmark, the Netherlands, Australia, Canada, and South Korea) have household debt exceeding 100% of GDP in 2021, and five of these are high-income Western countries with a long tradition of high levels of household debt. The ratio of household debt to GDP in these countries exceeds that in the U.S. just before the Global Recession (99.2% in 2007).

High household debt levels are not necessarily a cause for concern. Household debt is essential for economic growth because households take out loans to invest in housing, education, etc., which increases total domestic investment and boosts the economy (Punzi, 2022). However, many studies have shown that when the household debt level is too high, economic growth decelerates in the long run, and the negative impact of recessions is augmented.

For example, Cecchetti et al. (2011) found that a ratio of household debt to GDP exceeding 85% has a negative impact on economic growth. Additionally, based on data from 25 countries over the past 30 years, an IMF paper found

1) Only countries for which data is available, i.e. 70 countries, representing 84% of the world's population. Data on low-income countries is mostly unavailable. Cambodia, Laos, Myanmar, Nepal, and Bhutan, which are part of Asia, are classified as low-income countries by the IMF. These countries have very little household debt (less than 10% of GDP) due to the low level of development of their financial systems and the low penetration of bank lending. In addition to the scarcity of data, the proportion of the population living in urban areas in low-income countries is very low (less than one-third), making comparisons with middle- and high-income countries less valid. Therefore, low-income countries are not included in this analysis.

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that when recessions occur when household debt levels are high, recessions are longer and more severe, and unemployment rates are higher (Leigh et al., 2012). The reason for this is that when household debt levels are high, much of the disposable income (income excluding taxes and social insurance premiums, i.e. the take-home pay that can be freely spent by the household) is directed toward debt repayment, leaving many households with insufficient funds to cope in an emergency. Thus, the economy as a whole becomes more vulnerable to shocks, the recession worsens, and the recovery may weaken (Zabai, 2017).

Despite the surge during the COVID-19 pandemic, household debt levels in Asian countries, with the exception of Korea, Hong Kong, and Thailand, are still below 85% of GDP, making it appear as if there should be no concerns about potential deceleration of economic growth. However, looking solely at the outstanding amount of household debt in order to determine the degree of risk debt poses to the economy and the financial system is far from sufficient. When such an analysis is conducted, four groups of factors should be considered:

(1) The income-adjusted level of household debt and its growth rate;
(2) The determinants of household debt (demand versus supply-side factors);
(3) The composition of household debt, collateral prices and interest rates;
(4) The likelihood of default as determined by changes in household assets and disposable income.

The following subsections examine these factors one by one.

2. The income-adjusted level of household debt and its growth rate

(1) The income-adjusted level of household debt

When analyzing the impact of household debt on the economy, it is important to distinguish between the absolute ratio of household debt to GDP and its level relative to a country's income level. As mentioned above, the ratio of household debt to GDP is positively and strongly correlated with per capita GDP. Thus, it is natural for lower income countries to also have lower ratios of household debt to GDP. Most high-income countries have a household debt-to-GDP ratio of 60-120%, while most low-income countries have a ratio of less than 10%.

However, some middle-income Asian countries (China, Thailand, Vietnam, and Malaysia) already exceed the ratios of household debt to GDP of many high-income countries (e.g. Germany, Japan, and Italy). In other words, their income-adjusted debt ratios are higher than one would expect to see in countries with similar per-capita income levels. This is also true for Korea, which is a high-income economy. According to the IMF, the average nominal GDP

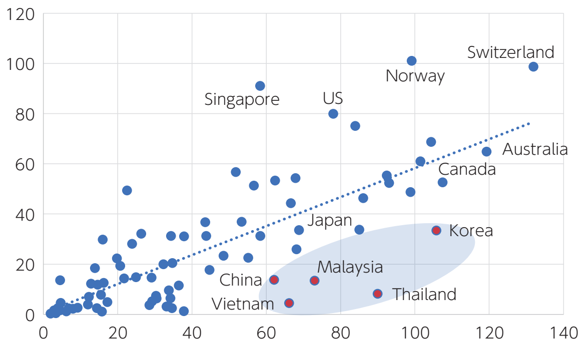

Figure 1-5-1 The ratio of household debt to GDP (percent, horizontal axis) vs nominal GDP per capita (thousand USD, vertical axis) in 2021

Sources: IMF (2023), Bank of International Settlements (2023).

per capita in 2023 in those Western countries where household debt exceeds national GDP is about $70,000. Meanwhile, in Korea, where the ratio of household debt to GDP is the same as in these countries, the per capita GDP is about $30,000, demonstrating that Korea's income-adjusted household debt level is extremely high.

Figure 1-5-1 shows the ratio of household debt to GDP (horizontal axis) plotted against nominal GDP per capita (vertical axis) in countries for which data is available. The line of best fit shows the expected value of the ratio of household debt to GDP, i.e. the income-adjusted level of household debt. Countries above the line have a lower level of household debt relative to what would be expected at their income level, while countries below the line have relatively higher household debt ratios. Notably, those located furthest below the line of best fit are all East Asian countries, which illustrates the fact that their income-adjusted household debt levels in the region are the highest.

(2) The growth rate of household debt

Regardless of whether household debt is high or low, the rate at which it increases does not seem to be any less relevant. In a recent panel VAR analysis using household debt data for nine Asian countries (Hong Kong, China, India, Indonesia, Japan, Korea, Malaysia, Singapore, and Thailand) from 2010 to 2017, Punzi (2022) found that a one-percentage-point increase in household debt to GDP ratio increases real GDP by +0.5% in the short run (two to three years), but this positive effect is reversed seven to eight years later, causing a real GDP decline of -1.5%.

In addition, a rapid increase in household debt is regarded as a leading indicator of economic recession and may pose various economic risks. For example, in the decade leading up to the Global Recession, the U.S. ratio of household debt to GDP rose from 69% to 99%, a 30-percentage-point increase. Consequently, close attention should be paid to the rate of increase in household debt.

Table 1-5-2 shows the growth of household debt as a percentage of GDP and the growth rate of outstanding household debt per adult from 2010 to 2021. As a reference, the U.S. and Western countries where household debt exceeds the GDP in 2021 are also shown.

It can be observed that the ratio of household debt to GDP has increased by more than 30 percentage points in five countries over the past decade: Korea, China, Hong Kong, Thailand, and Vietnam. This rate of increase is similar to that of the U.S. just before the Great Recession. Of these five countries, Korea, Hong Kong, and Thailand also exceed the 85% level, which, as mentioned above, is considered to have a negative impact on economic growth. It is also noteworthy

Table 1-5-2 Household debt as a percentage of GDP and household debt per adult in 2010 and 2021

Country	Household debt per adult (2021 USD)		Change, percent	Change, USD	Household debt, percent of GDP		Change, percent	Change, percentage points
	2010	2021			2010	2021		
China	679	8,991	1225%	+8,312	28%	62%	125%	+34.6
Vietnam	255	1,402	450%	+1,147	25%	66%	165%	+41.2
Philippines	262	1,206	360%	+943	5%	10%	106%	+5.2
Thailand	1,362	5,593	311%	+4,230	59%	90%	52%	+30.8
Indonesia	329	1,120	241%	+791	14%	17%	27%	+3.6
Malaysia	4,649	12,034	159%	+7,385	59%	73%	24%	+14.3
Korea	29,708	44,309	49%	+14,600	73%	106%	45%	+32.6
Switzerland	121,834	151,230	24%	+29,395	108%	132%	22%	+24.2
Taiwan	30,939	37,304	21%	+6,365	91%	92%	1%	+0.3
Hong Kong	46,591	53,928	16%	+7,337	59%	93%	57%	+33.9
Singapore	47,743	54,532	14%	+6,788	52%	58%	12%	+6.1
Sweden	69,070	73,759	7%	+4,688	76%	92%	22%	+16.5
New Zealand	52,922	52,957	0%	+34	90%	99%	9%	+8.6
Canada	71,376	69,323	-3%	-2,053	95%	107%	13%	+12.6
Australia	105,800	102,558	-3%	-3,241	111%	119%	7%	+8.3
United States	74,654	69,533	-7%	-5,120	92%	78%	-15%	-14.1
Netherlands	94,030	76,551	-19%	-17,478	120%	106%	-12%	-14.0
Japan	45,490	29,233	-36%	-16,257	61%	69%	12%	+7.6
Denmark	142,283	89,476	-37%	-52,807	134%	104%	-22%	-29.5

Sources: Credit Suisse (2022) , IMF (2023), Bank of International Settlements (2023).

that in absolute terms, China's increase of over $8,000 is larger than that of almost any other country, including high-income ones (except for Switzerland and Korea).

To summarize the discussion in this subsection two characteristics stand out when looking at household debt in Asian countries (especially Korea, China, Thailand, and Vietnam). First, the income-adjusted level of household debt in Asia is the highest in the world. Second, household debt in Asia has consistently and significantly increased during the decade leading to the COVID-19 pandemic. These two characteristics represent a major difference from debt-ridden Western countries, and point to the existence of major risks to future economic growth in East Asia.

3. The determinants of household debt

In analyzing the rapid increase in household debt, it is important to determine why debt increases in the first place, i.e. whether it is due to the demand for loans or the supply of loans. If the main determinant of household debt is the demand for loans, that would indicate an increase in aggregate demand due to an increase in household consumption, which would boost economic growth. However, if the main determinant is an increase in the supply of loans, and that increase is not matched by a similar increase in demand, that can eventually cause deflationary pressures and slow economic growth.

(1) Demand-side factors

The rapid increase in the ratio of household debt to GDP seen in many Asian countries is frequently attributed to an increasing demand for loans, which is traditionally driven by mortgages. While home ownership is essential in most societies, this is especially true in Asian countries. Although data is not available for all countries, a recent survey of home-ownership preferences shows that a much larger percentage of the population in Asian countries would like to own their own homes than in other regions. For example, 95% of respondents in Indonesia, 89% in Korea, 84% in Singapore, and 82% in China indicated that they would like to own their own homes. In contrast, only 68% of respondents in the U.S, 66% in Denmark, 62% in France, and 48% in Germany did so.

In Korea and China, as well as in other aging societies, the percentage of respondents who would like to own their own homes is even more pronounced among younger generations, due in part to concerns about old-age financial security. For example, according to a joint survey by JobKorea and Albamon (Korean employment websites), 95% of Koreans in their 20s want to own their own home, which is a higher percentage than the 89% figure for Koreans of all ages. Additionally, 78% of Koreans in their 20s answered that they plan to buy a home even if that requires a loan (Korea JoongAng Daily, 2020).

Despite the high demand for mortgages in Asian countries, household debt would not have increased without a sufficient supply of loans to meet this demand in the first place. In fact, some researchers argue that what drove the rapid increase in household debt is precisely the supply of loans and the abundance of bank assets, as discussed next.

(2) Supply-side factors

In a recent study, Punzi (2022) has challenged the widespread assumption that household debt in Asia is driven by demand-side factors. Using data on nine Asian countries (Hong Kong, China, India, Indonesia, Japan, Korea, Malaysia, Singapore, and Thailand), the study argues that the large increase in household debt in recent years is mainly due to the increasing supply of loans.

The easing of lending constraints and deregulation of the banking sector in Asia in recent years has made it easier to obtain loans at low interest rates. This

Table 1-5-3 Average annual growth rates of real GDP and household debt per person between 2010 and 2021

Country	Average annual growth, 2010-2021		Difference
	Real GDP (A)	Household debt (B)	(A-B)
Vietnam	6.6%	15.7%	-9.0%
China	6.5%	13.9%	-7.5%
Philippines	4.1%	10.6%	-6.5%
Thailand	3.2%	6.9%	-3.7%
Korea	3.9%	7.1%	-3.2%
Hong Kong	3.8%	6.5%	-2.7%
Indonesia	3.5%	5.6%	-2.1%
Malaysia	3.2%	5.1%	-1.9%
Switzerland	2.8%	4.5%	-1.8%
Canada	2.5%	3.5%	-1.1%
Japan	2.0%	3.0%	-1.0%
Australia	2.6%	3.2%	-0.6%
Singapore	3.9%	4.3%	-0.4%
Taiwan	4.2%	4.2%	0.0%
India	4.9%	4.7%	0.1%
Netherlands	2.8%	1.7%	1.1%
United States	3.1%	1.7%	1.4%
Denmark	3.4%	1.3%	2.1%

Source: IMF (2023).

poses two major economic risks, one of which is that loans issued at low interest rates flow to households that are less likely to repay their debts, creating a risk of default. The second is that if the determinant of household debt is supply rather than demand, the risk of default and economic recession increases if the growth rate of debt is greater than that of income.

Table 1-5-3 shows the average annual growth rates of real GDP and household debt per person between 2010 and 2021. The growth in household debt has been outpacing GDP growth in virtually all East Asian countries, with the difference being around or over three percentage points in Vietnam, China, the Philippines, Thailand and Korea. As seen above, except for the Philippines, these are the countries with both the highest levels of, and the steepest increases in, household debt.

The reason for the abundance of loan supply in Asian countries is that banks in these countries have large assets. According to data from the Bank for International Settlements (BIS), Asian banks' lending to the private sector (i.e. households plus firms) as a percentage of GDP is the highest in the world, with Hong Kong, China and Korea topping the global ranking. Table 1-5-4 shows that bank lending exceeds GDP in almost all countries. Additionally, the

Table 1-5-4 Bank assets and bank credit to the private non-financial sector

Country	Bank credit to the private non-financial sector in Q3 2022		Bank assets to GDP in 2021	
	% of GDP	Globanl rank	% of GDP	Globanl rank
Hong Kong	275%	1	269%	1
China	185%	2	214%	3
Korea	163%	3	182%	5
Switzerland	155%	4	NA	NA
New Zealand	142%	5	154%	9
Sweden	137%	6	146%	13
Singapore	135%	7	NA	NA
Denmark	135%	8	170%	6
Australia	134%	9	148%	12
Malaysia	126%	10	153%	10
Thailand	125%	11	152%	11
Japan	122%	12	170%	7
Indonesia	33%	40	43%	95
United States	51%	35	NA	NA
Vietnam	NA	NA	136%	14
Philippines	NA	NA	71%	59

Note: Latest available data. Values within the global top 15 are highlighted.
Source: Bank of International Settlements (2023).

steepest increases in this ratio during the Covid-19 pandemic can be observed in Korea, China, and Thailand (no data is available for Vietnam).

The reason for this is that, until the latter half of the 20th century, mortgage loans were not available in Asia, and thus a large amount of savings was required to purchase a home. However, as economies developed, savings increased and financial institutions accumulated assets. Accordingly, lending increased, as well.

4. The composition of household debt and collateral prices

Having established the importance of home ownership in Asia, it is essential to discuss the role that mortgages play in household debt. Detailed data on the composition of household debt is needed for this purpose, and unfortunately, little information on the composition of household debt is available for Asian countries. It is well known, however, that most of the world's household debt is in the form of mortgages. In general, the higher the per capita income of a country, the larger the share of mortgage loans in household income. In OECD countries, this share is between 60% and 90% of total household debt, and in emerging economies it is between 30% and 50%. In other words, mortgages are the largest component of household debt, even if they account for only half or less of the total. Therefore, when analyzing collateral prices, it is best to focus on trends in housing prices.

(1) Trends in housing prices

In the case of the U.S. and Europe, housing prices seemed unstoppable during the long boom after the Great Recession. Sales rose sharply due to intensifying competition for properties caused by ultra-low interest rates and a shortage of housing supply. However, this changed dramatically after the Covid-19 pandemic. In high-income countries, central banks have embarked on the most intensive monetary tightening in 40 years, making mortgages less accessible. This resulted in a sharp decline in sales and a sharp drop in home prices. For example, according to the OECD, prices have fallen 14% from their peak in Sweden and New Zealand, and about 9% in Australia.

In contrast, trends in housing prices in Asian countries have been quite different. As Figure 1-5-2 shows, real housing prices in Asian countries have grown only slightly over the past decade, with the exception of Malaysia and the Philippines. The temporary increase seen during the Covid-19 pandemic is also considerably smaller in Asia than in Europe and the U.S.

This seemingly favorable trend, however, conceals a structural problem.

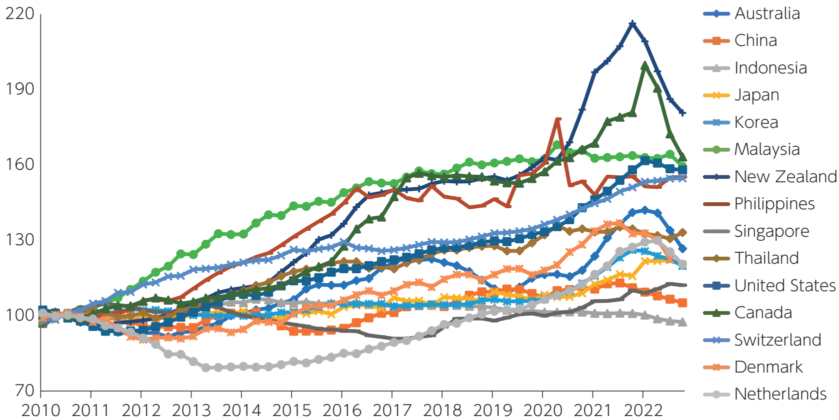

Figure 1-5-2 Monthly changes in real housing prices (March 2010 = 100)

Source: Bank of International Settlements (2023).

The reason why housing prices in Asian countries (especially China) have not risen as much as in other regions is that housing prices in Asia are extremely high to begin with, and accordingly, there is not much room for further appreciation. Rather, there is a strong possibility that there will be a downward correction in housing prices, as is the case in high-income countries. As of the end of 2023, such a downward correction is becoming increasingly visible in China and Korea.

(2) The high level of housing prices in Asia

As mentioned above, demand for housing has traditionally been high in Asian countries. Housing supply has not been able to keep up with this demand, and banks have been providing an abundance of loans, which is why housing prices in Asian countries, especially in urban areas, are extremely high even by global standards.

The most common indicator used to measure housing affordability (e.g. by the World Bank and the United Nations) is the 'median multiple.' This multiple (or ratio) is calculated by dividing the median housing price by the median gross annual household income. A ratio of three and below signals that the housing market of an area is affordable. A ratio of four or more signals an "unaffordable" market.

If average rather than median values are used, and/or if disposable income is used instead of gross income, these benchmarks might be up to twice higher. If the ratio is above 10, however, the housing market can be considered extremely unaffordable in any case. Table 1-5-5, based on Numbeo data, shows how this multiple has changed in the past decade using average urban housing prices and average individual disposable incomes. For reference, the U.S. and Western countries whose household debt exceeds their GDP are also shown.

The data in Table 1-5-5 suggests that urban housing in Asian countries is extremely unaffordable. An average apartment of 90 m^2 would require about 45 years' worth of an average disposable income in Hong Kong, and 30 years in China and the Philippines, to be completely saved (i.e. none of it consumed). This is followed by Korea, with 26 years, the highest of all high-income countries (the average for high-income countries is about 5 to 10 years). Thailand, Taiwan, Vietnam, and Indonesia are in a similar situation to Korea, with ratios ranging from 21 to 23 years. Malaysia and Japan are the only Asian countries with relatively affordable housing prices, with ratios in the 7 to 11-year range.

Since it is not possible to save all of one's disposable income, a single person with an average income in Hong Kong, China, the Philippines, or Korea would be unable to purchase an average urban home during their lifetime. Assuming an average income and zero interest rate, the minimum condition for purchasing

Table 1-5-5 Ratios of average housing prices to average disposable incomes

Country	Price-to-Income Ratio		
	2011-13 average	2021-23 average	10-year change
Hong Kong	25.5	45.7	+20.2
China	28.1	30.9	+2.7
Philippines	16.4	29.9	+13.5
Korea	14.6	26.3	+11.7
Thailand	18.4	22.6	+4.2
Taiwan	17.8	21.8	+4.1
Vietnam	15.9	21.5	+5.6
Indonesia	24.7	20.8	-3.9
Singapore	19.7	17.5	-2.2
Japan	12.1	11.4	-0.7
Malaysia	5.7	9.3	+3.6
Switzerland	6.3	8.8	+2.5
New Zealand	6.7	8.4	+1.7
Canada	5.3	8.1	+2.9
Australia	7.3	7.4	+0.1
Netherlands	6.0	7.3	+1.2
Denmark	7.1	6.7	-0.4
United States	2.6	4.2	+1.5

Note: The average price of a 90 m^2 apartment divided by the average individual disposable income in urban areas. Source: Based on data by Numbeo (2023) an average urban residence is a double-income household whose saving rate is 45% in China and 30% or more in Korea, Thailand, and Vietnam over a 40-year working life.

(3) Mortgage interest rates

The above simulation assumes that interest rates are zero. However, mortgages do have interest rates, making it even more difficult to own real estate, and rising interest rates pose a significant risk to debt sustainability.

In the decade before the Covid-19 pandemic, interest rates in Asian countries were quite low, contributing to the increase in household debt. However, Asian governments, like their Western counterparts, have started raising interest rates to control inflation. At present, most Asian countries have not raised interest rates as much as Western countries, but there is concern that this might change in the future.

Figure 1-5-3 juxtaposes the increase in household debt during the Covid-19 pandemic (2019 = 100) with mortgage interest rates in early 2023. The U.S. and Western countries whose household debt exceeds their GDP are also shown for reference. A risky combination of a rapid increase in household debt and relatively high interest rates can be observed in China, Vietnam, Korea, and Thailand, the four countries with the highest levels of income-adjusted levels of, and steepest increases in, household debt, which keep recurring in every subsection of this analysis. Although the Philippines also appears to be in a similar situation, the ratio of household debt to GDP there is very low (10% in 2021), suggesting that the overall risk is considerably lower.

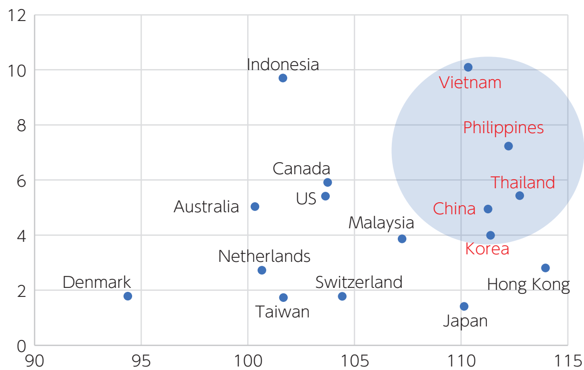

Figure 1-5-3 Increase in household debt during the Covid-19 pandemic (2019 = 100, horizontal axis) plotted against mortgage interest rates in early 2023 (vertical axis)

Sources: Bank of International Settlements (2023), Numbeo(2023)

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A related risk factor in Asian countries is the limited use of fixed interest rate loans. Whereas fixed interest rate loans are the norm in Europe and the U.S., the majority of housing loans in Asian countries (about 60% in the case of Korea) have variable interest rates, which means that rising policy interest rates pose serious risks to indebted households. As interest rates rise, household finances are squeezed, the worst-case scenario being that those who cannot service their mortgage debts might be forced to sell their mortgaged homes, causing a steep decline in housing prices to occur. A decline in housing prices would in turn increase the number of households whose household debt exceeds household assets, causing domestic consumption to decline and further increasing the risk of default. The possibility of such a negative scenario necessitates a deeper look into the composition and status of household assets.

5. The composition of household assets and disposable income

(1) The composition of household assets

The inextricably linked phenomena of high housing prices and high household debt in Asia are reflected in the composition of household assets. Table 1-5-6 shows that household assets in Asian countries are mainly non-financial, i.e. real estate. For reference, the U.S. and Western countries whose household debt exceeds their GDP are also shown. It can be observed that in high-income Western countries, except Australia, non-financial assets account for 30-50% of total household assets, whereas in Asia, they account for an extremely high 60-80%.

Not only are households' assets in Asia highly illiquid, their financial assets (cash, savings, stocks, mutual funds, etc.) are also far below the average levels in high-income countries. Even in Korea, a high-income country, households' average net financial assets are only one-third to one-fourth of those in other high-income countries. This is problematic because the lack of net financial assets is linked to an increased economic vulnerability. As noted above, high household debt levels mean that much of the disposable income is directed toward debt repayment, so that many households might not have enough money to deal with an unexpected emergency, which can exacerbate an otherwise mild recession.

Asian countries have been the center of global economic growth in recent decades, and presumably their high economic growth and savings rates should have helped households accumulate financial assets. However, Asian

Table 1-5-6 Financial vs non-financial household assets

Country	Share of non-financial wealth in total wealth	Financial wealth per adult	Change 2010-2021	Non-financial wealth per adult	Change 2010-2021	Household debt per adult	Change 2010-2021	Home ownership rate
Vietnam	79%	3,232	161%	12,416	162%	1,402	450%	90%
Malaysia	68%	12,479	-39%	26,633	40%	12,034	159%	77%
Thailand	67%	10,027	89%	20,205	334%	5,593	311%	80%
Korea	66%	97,177	49%	184,775	234%	44,309	49%	56%
Indonesia	65%	6,883	175%	12,770	11%	1,120	241%	84%
Philippines	62%	6,024	183%	9,684	79%	1,206	360%	64%
Australia	61%	254,419	48%	398,248	14%	102,558	-3%	66%
China	55%	38,248	227%	47,382	321%	8,991	1225%	90%
Canada	49%	241,785	19%	236,835	47%	69,323	-3%	69%
New Zealand	48%	272,410	345%	252,700	47%	52,957	0%	65%
Netherlands	46%	257,224	22%	220,155	117%	76,551	-19%	71%
Switzerland	44%	475,140	27%	372,694	39%	151,230	24%	36%
Singapore	42%	238,070	29%	174,666	5%	54,532	14%	88%
Japan	38%	169,080	-10%	105,391	-15%	29,233	-36%	61%
Sweden	36%	292,931	83%	162,796	-23%	73,759	7%	65%
Hong Kong	35%	393,130	251%	213,729	125%	53,928	16%	51%
Denmark	32%	350,452	51%	165,517	-8%	89,476	-37%	59%
Taiwan	31%	232,920	63%	102,249	26%	37,304	21%	84%
United States	28%	468,295	83%	180,290	44%	69,533	-7%	66%

Source: Based on data by Credit Suisse (2022).

households' net financial assets remain low. Apart from the high homeownership rates and the related elevated levels of household debt, the low level of net financial wealth can be attributed to three other factors. First, as discussed throughout this article, income-adjusted household debt levels in Asian countries are unusually high, which automatically affects net assets. Second, with the exception of Japan, the high economic growth rates of Asian countries are a recent phenomenon. As a result, although GDP per person has registered impressive growth in places like China, Korea and Vietnam in the past two to three decades, financial assets will inevitably take much longer to accumulate. Third, GDP per person and disposable income per person in Asian countries tend to diverge more than in Western countries, and usually in the opposite direction. This point is examined in more detail below.

(2) The discrepancy between GDP and disposable income

While most analyses of household debt tend to focus on household debt as a percentage of a country's GDP, others (especially analyses by the OECD) look at household debt as a percentage of household disposable income (i.e. the after-tax income per person, which is invariably lower than GDP per person).

Some researchers argue that using disposable income is more appropriate than GDP because income tax rates vary widely across countries. Additionally, the share of wages (labor income) in national income differs substantially from country to country. In countries where the share of labor income in the Gross Domestic Income (GDE, i.e. GDP as seen from the income distribution perspective) is relatively low, disposable income per person tends to be significantly lower than GDP per person. This is the case in many Asian countries.

Unfortunately, data on the ratio of household debt to disposable income is only available for high-income economies (in the case of Asia, only Korea and Japan). Since most countries in East Asia are not high-income, the current analysis measures household debt as a percentage of GDP. The implication is that the results presented here may be only a lower-bound estimate. In other words, the household debt problem in Asian countries might in reality be up to twice as severe. To illustrate, according to the OECD, Korea's household debt in 2021 was more than 206% of disposable income, while the ratio of household debt to GDP was only one-half of that (105%).

It is worth noting that neither the share of wages in national income nor the tax rate in a country are stationary variables. As they change over time, so does the ratio of disposable income to GDP. As a result, disposable income may increase or remain unchanged even when GDP decreases. Conversely, disposable income may not change much even if GDP increases. Consequently, GDP growth and growth in disposable income are not necessarily correlated.

Among OECD members, the largest discrepancy between per capita GDP growth and disposable income growth is observed in Korea: between 1995 and 2013, Korea's average per capita GDP growth rate was 3.8%, while its per capita disposable income growth rate was only about 2.0%. Under these conditions, debt growth in Korea is likely to have exceeded income growth at a much higher pace (over 5 percentage points) than the one seen in Table 1-5-3 (3.2 percentage points).

Considering the structural characteristics of other countries in East Asia (high share of invested earnings, lower share of labor income, etc.), the growth rate of household disposable income is likely to be significantly lower than the growth rate of the GDP in the other high-risk countries identified in this analysis (China, Thailand and Vietnam).

As a reference, in the U.S. and Western countries whose household debt exceeds their GDP, the growth rate of per capita disposable income was higher than the growth rate of per capita GDP over the same period. Thus, the significant discrepancy between per capita GDP and household disposable income in East Asia is a major difference from the West, and it suggests that East Asian economies might be more vulnerable to economic shock than previously thought.

6. Outlook and policies

(1) The looming Japanification of East Asian economies?

This analysis has shown that the characteristics of household debt in Asian countries (e.g. its determinants, trends, and composition) are quite different from the characteristics of household debt in high-income Western countries, which raises serious concerns about debt sustainability and economic growth. As seen throughout this analysis, the countries facing the highest risks related to household debt seem to be Korea, China, Thailand and Vietnam. In these four countries, the risks posed by household debt could be significantly exacerbated by changes in interest rates and housing prices.

In the case of Korea, housing prices have been declining for seven consecutive quarters (likely eight, at the time of writing), registering a decline of over 11% between 2021 Q4 and 2023 Q2, the worst since the data has been available, and in the same period, the policy interest rate has spiked by 3 percentage points (from 0.5% to 3.5%), with the actual lending rate being at least one percentage point higher. In particular, condominium prices in Seoul have fallen by an impressive one-fourth from their peak in October 2009. A similar trend can be seen in urban China since 2020, triggered by the default of Evergrande, China's largest real estate developer, which resorted to temporarily selling all properties at a 30% discount as a result. As for Thailand and Vietnam, since these countries are at an earlier stage of urbanization and economic development, the decline in urban housing prices there is not as noticeable.

Given region-wide demographic factors, such as declining populations and low levels of immigration, the decline of housing prices in Asian countries is likely to continue. According to United Nations data, the populations of Korea and China are already declining, while Thailand's population is expected to begin declining by 2029 and Vietnam's by 2050. Unlike Western countries, immigration will not compensate for that decline, as most Asian countries receive little or no immigration, with most countries sending out more migrants than they receive. For instance, China and Vietnam have the lowest percentage of foreign-born people in the world (0.07%), which is a major difference from debt-ridden Western countries, where immigration is abundant: in Australia, Switzerland, and New Zealand, the foreign-born account for about 30% of the total population. The percentage in Canada is 25%, and in Denmark and the

Netherlands about 15%. These figures are much higher than the world average of 3.5%, indicating that immigrants are a major factor behind rising (urban) housing prices in Western countries.

Additionally, given the abnormally high housing prices in urban areas of Asian countries, and the fact that some countries (China and Korea) have approached the limit of urbanization, pressures for downward correction are likely to remain strong. The decline in housing prices will increase the number of households whose debts exceed their assets, and as household assets in Asia are highly illiquid, many households might become highly vulnerable to economic shocks such as unemployment and declining disposable income. As a result, social inequalities might worsen and economic growth might decelerate. Eventually, China, Korea, Thailand and Vietnam could end up in a situation similar to Japan's "lost decades." In 1989-90, stock and real estate (housing) prices in Japan began to slump, ending a decades-long economic boom. Uncertainty about the future permeated the economy, and economic growth stalled as consumers and businesses became increasingly thrifty.

Apart from the property market, another similarity between the experiences of Asian countries (especially China, Korea, Taiwan, Thailand, and Vietnam) and Japan's experience over the past three decades is the rapid aging of the population. Korea, a high-income country, is expected to be the most aged society in the world in 2044, with the share of the population over 65 years old reaching 45% around 2060. Similarly, China, Thailand, and Vietnam, middle-income countries, are aging more rapidly than other countries at similar stages of economic development. The percentage of Chinese above retirement age is projected to reach 40% of the total population in less than 50 years, and some Chinese banks have already extended the upper age limit for mortgage loans to 80-95 years. The extension of the upper age limit will make it possible to take out a mortgage loan for 30 to 40 years even past the age of 50, which may lead to higher debt burdens in the post-retirement age group, increasing the risk of default and undermining the sustainability of household debt in the future.

(2) Demand- vs. Supply-side Policies

Considering the possibility of such a grim outlook, measures need to be taken in order to bring the increase in household debt as well as the exorbitant prices of urban housing under control. Similar to the determinants of household debt, which can be either demand-driven or supply-driven, measures required to address this issue can be divided into demand-side policies and supply-side policies.

Naturally, what kind of measures can best solve the issue of household debt and unaffordable housing is of great concern to governments in Asia. In recent years, a number of demand-side-oriented policies have been implemented in Asian countries, including a reduction of the loan-to-value (LTV) ratio of mortgages, and extending mortgage repayment terms. Policies implemented by the Moon administration in Korea have been particularly prominent. However, these have largely been regarded as a policy failure. In consideration of that, this section argues in favor of supply-side policies, such as the ones in those Western countries where household debt has been declining.

As mentioned above, home-ownership is relatively low in many Western countries, and renting is increasingly seen as the norm, especially in urban areas. Some of the reasons behind the low propensity for home-ownership in places like Germany, Switzerland, and the Scandinavian countries are high real estate taxes, the absence of mortgage interest deductions for owner-occupied homes, and most importantly, the abundant availability and use of public housing and public rental housing (a supply-side policy).

As shown in Table 1-5-7, in Asian countries, notably Korea, China, the

Table 1-5-7 Trends in housing price-to-rent ratios in urban areas

Country	Price-to-Rent Ratio in Urban Areas		
	2011-13 average	2021-23 average	10-year change
Korea	52.4	102.3	+49.8
China	28.0	62.5	+34.5
Hong Kong	31.8	61.3	+29.5
Philippines	15.4	30.4	+15.0
Thailand	17.8	30.4	+12.6
Taiwan	50.6	63.1	+12.6
Vietnam	12.3	24.4	+12.2
Japan	31.9	40.4	+8.5
Switzerland	24.7	32.9	+8.2
Singapore	25.6	32.7	+7.1
Canada	17.4	21.4	+4.1
Malaysia	21.1	24.6	+3.6
Indonesia	19.3	22.7	+3.4
United States	8.8	11.1	+2.3
New Zealand	20.2	22.2	+2.0
Netherlands	17.7	19.2	+1.6
Australia	21.0	22.5	+1.5
Denmark	23.1	23.1	-0.0

Note: The price-to-rent ratio is the average housing price divided by the average annual housing rent for a 90 m^2 apartment in urban areas. Countries with significant increases are highlighed.
Source: Numbeo (2023).

Philippines, Thailand, and Vietnam, the average growth in rents over the past decade has been considerably lower than the average growth in housing prices. This trend indicates that affordability of home-ownership and renting have diverged, with rents having become relatively more affordable. On the other hand, in the high-income Western countries, where housing prices and rents have been increasing at about the same pace, a similar trend is not observed.

This suggests that Asian countries could benefit from promoting affordable renting as an alternative to home-ownership. Since renting in Asian countries is relatively affordable, an expansion in renting could reduce household debt and improve prospects for economic growth in the long run. Renting could also generate positive externalities in the rest of the economy. For example, it could increase labor market flexibility by making it easier for people to relocate.

A reference to countries in northern Europe suggests that the key to promoting renting as an alternative to home-ownership in Asia might be to increase the supply of affordable public housing. In fact, public housing projects in some Asian countries (notably Singapore and Japan) have a long history of public housing provision dating back to the postwar period. However, such projects remain extremely limited in scope in the high-risk countries identified in this analysis (Korea, China, Thailand and Vietnam).

Fortunately, this is gradually changing. In the case of China, in May 2021 the Ministry of Housing and Urban-Rural Construction called for an accelerated development of public rental housing, and less than two months later, the State Council declared a policy aimed at "accelerating the development of public rental housing." As a result, the development of public rental housing has become a priority during China's 14th Five-Year Plan. Similar trends can be seen in Korea, Thailand, Vietnam, and the Philippines, indicating that policies in Asian countries are moving in the right direction.

Nevertheless, according to the IMF, supply-side policies, such as public housing construction, take much longer to take effect than demand-side policies (Deb et al., 2022). In addition, the question of how to finance the construction of public housing without running fiscal deficits remains a major challenge. Since the construction of public housing is often insufficiently profitable from the perspective of private construction companies, governments are expected to play an important role in the provision of such housing. Bert Hofman (2022), a professor at the National University of Singapore, has suggested that utilizing state-run pension funds to accelerate the development of public housing might provide a sustainable solution. Whereas this may be feasible in China, many middle-income Asian countries, including Vietnam and Thailand, have few pension funds, making it difficult to raise funds for public housing projects. Therefore, a solution to this problem will necessitate an open discussion involving all relevant stakeholders.

Finally, the fact that many people in countries with aging populations purchase homes in order to secure rent-free housing for their retirement suggests that encouraging investment in housing for the elderly, such as nursing homes and assisted living facilities, could reduce demand for housing in general. To this end, however, the stigma related to the use of old-age homes that permeates many societies in Asia, needs to be eliminated.

On the positive side, there are signs that such social changes are already underway. According to Reuters, China's senior housing market is expected to boom around 2025-2028, and investment is accelerating to the extent that the sector is attracting foreign companies. For example, the Japanese Panasonic Corporation recently opened a 1,170-unit complex for the elderly in Jiangsu Province, China. Investment in affordable rental housing both for senior citizens and for the younger segments of the population is a win-win situation for both tenants and investors, which can create a virtuous cycle of lower household debt and higher economic growth.

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