

Monetary policy and household heterogeneity

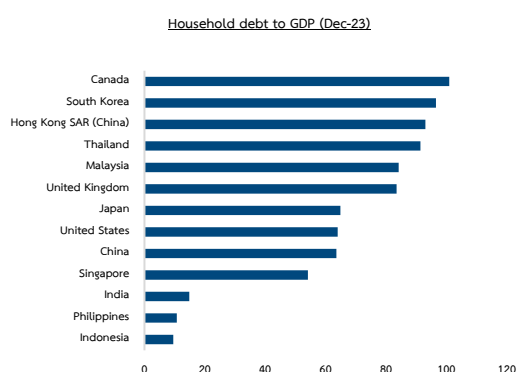
Bank of Thailand

Introduction

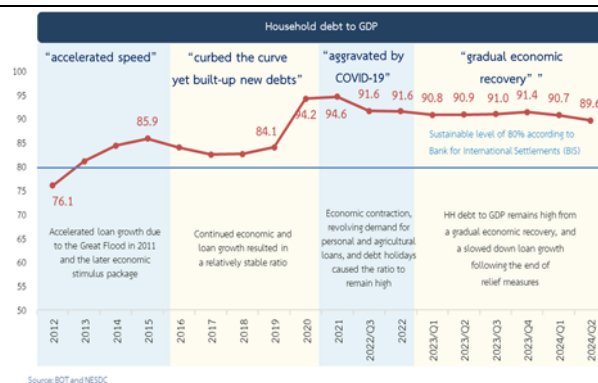
While the Monetary Policy Committee (MPC) has no mandate to address inequality directly, the Bank of Thailand has long used heterogeneity data to supplement decision-making. We view the issue of heterogeneity through the lens of financial stability, ensuring that potential imbalances do not abruptly affect the real economic outlook in both the short and medium terms. In addition, we want to make sure that our analyses are inclusive and comprehensive, as well as representative of the entire economy.

We understand that in some circumstances, vulnerable households and firms can trigger large cascading effects on the aggregate economy through financial linkages with other economic agents. It is therefore imperative to identify and monitor vulnerable populations and limit the possible expansion of these fragile groups at an early stage. These potential onsets of financial stability issues can be tackled using the policy interest rate and other targeted financial measures.

Graph 1a: Cross-country household debt-to-GDP ratio comparison



Graph 1b: Thailand's household debt-to-GDP ratio over time



Using the household debt-to-GDP ratio as a metric reveals that Thailand is one of the more indebted countries in the world. The government's stimulative measures in the early 2010s following the Great Flood in 2011 caused an acceleration in household debt. The substantial incentives to buy a first car and a first home pushed the household debt-to-GDP ratio surpassed 80% in 2013. After a brief period of a relatively stable ratio, the Thai household sector was hard hit by the onset of the COVID-19 pandemic. Higher levels of debt combined with lower incomes led to an all-time-high household debt-to-GDP ratio of almost 95% in 2021. Not only is the aggregate number already quite high, composition of the debt itself is problematic,

with a higher proportion of credit cards and personal loans for consumption in Thailand than in peer countries. MPC members have been very concerned about this issue, particularly its effects on financial stability and long-term growth. They have communicated a strong desire to bring down this ratio through an orderly debt deleveraging process.

Against this backdrop, this note aims to describe the usage of household heterogeneity data in the monetary policy decision-making process. The next section lays the groundwork by describing the sources of data and the different dimensions we can evaluate using them. The section following examines how the balance sheet of vulnerable households and their financial conditions weaved its way into monetary policy deliberations in 2024. The next sections continue with discussions of other financial measures being rolled out to target these vulnerable households and conclude with our final thoughts.

Sources of granular household data

Surveys

Our main sources of granular data for households are a few key surveys. The most important is the household socio-economic survey from the National Statistical Office. The survey contains results of in-depth interviews with roughly 60,000 households annually across all geographic regions. The first survey was done in 1957; however, the survey was not conducted at an annual frequency until 2006. Even with just the annual frequency, this is one of the older heterogeneous data sets available. The content of the survey focuses on the balance sheets of households. This is the only data source with access to both the asset and liabilities of households, as well as incomes broken down by sources, and expenditures broken down into categories.

However, socio-economic survey has many limitations. First, the level of detail of the survey comes at the cost of its lower frequency. While the survey is useful for looking at long-term trends, it is not sufficiently up to date for us to make reactive policy decisions based on the latest data points. Second, we know from cross-checking with other surveys and administrative data that this data set is biased and skewed toward lower income households. While this is not ideal and makes it harder to generalise any result and analysis onto the entire population, it does allow us to do in-depth studies on one key target group: vulnerable low-income households.

In addition to the socio-economic survey, we use other surveys regularly to assess different aspects of household heterogeneity. The National Statistical Office's labor force survey allows us a quarterly look at sectoral employment and salaries. In addition, we can judge consumer confidence from the monthly Consumer Confidence Index (produced by the Ministry of Commerce) and the monthly Relationship Manager Sentiment Index (managed by the Bank of Thailand). The former is based on direct consumer surveys, while the latter uses the opinions of bank relationship managers from the two most important state-owned specialised financial

institutions.¹ These two data sets allow us to look at sentiment across income levels and professions.

Administrative data

As the regulator for financial institutions, we receive an array of data from these institutions at different frequencies across many dimensions, many of which are useful to monitor household heterogeneity. On the asset side, we can track the monthly changes in aggregated number of accounts and deposits outstanding for different brackets of deposit amounts. On the liabilities side, we have ready access to credit data with different dimensions .

Not all financial institutions are under the purview of the Bank of Thailand. Therefore, we also coordinate with the National Credit Bureau to get a fuller picture of household credit. Credit growth and credit quality are two regularly used metrics to monitor financial conditions across different loan types and incomes.

The situation in 2024

Questions that we want to answer

In the context of 2024, Thailand just finished its policy normalisation in the third quarter of 2023. The economy's recovery trajectory was flatter than past recessions and seemed to have settled at growth rates below those before COVID-19. As mentioned in the introduction, the household debt-to-GDP ratio is starting to decline but has remained very elevated. Discussion in 2024 MPC meetings centred on (i) setting the policy interest rate not too low to avoid creating incentives for unhealthy debt creations and disrupting debt deleveraging and (2) subsequently lowering the interest rate to recalibrate the policy stance. This recalibration is needed for the monetary policy stance to remain neutral; given tightened credit conditions, the macroprudential costs of reducing the policy rate is now lower.

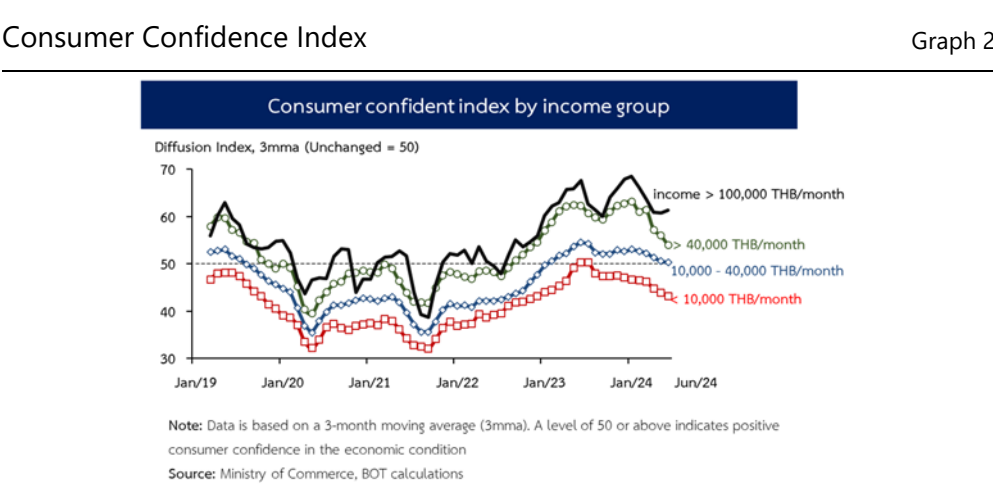
In terms of household heterogeneity, MPC's focus was on the delicate act of keeping a healthy deleveraging process going. Vulnerable groups were mentioned often, with questions such as (i) who they are and are they expanding, (ii) how much the higher rate resulting from policy rate normalisation meaningfully alters the fragile state of their balance sheets, (iii) whether their financial conditions have deteriorated further, and (iv) how monetary policy and other measures should be integrated to shore up their balance sheets and alleviate their financial conditions.

The evidence

We show the evidence surrounding the issue of vulnerable households in 2024. First, we gauged the sentiment of different income groups through the Consumer

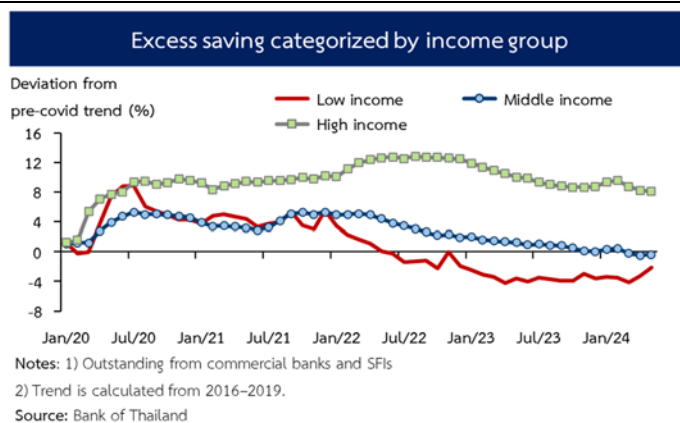
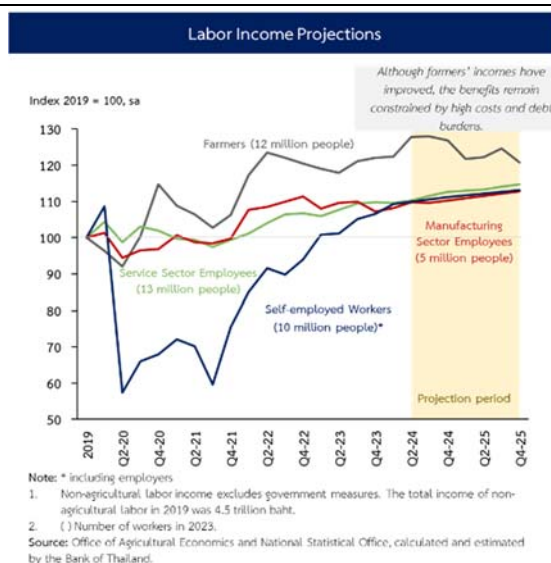
¹ Government Savings Bank and Bank for Agriculture and Agricultural Cooperatives.

Confidence Index. With the diffusion index, any value above 50 represents positive sentiment. Graph 2 shows that (i) higher income households are typically more confident of the economy; (ii) the COVID-19 shock decreased confidence across all income spectrums; (iii) confidence rose between mid-2021 during the last major lockdown and 2023; and (iv) there is a downward trend in 2024. The downward trend is more concerning for the lowest income group, as it represents many consecutive months of negative confidence with values below 50.



Graph 3 shows the income recovery path for different professions. In the second quarter of 2020, income fell in all sectors following the first lockdown. Social distancing was largely not an issue for workers in the agricultural sector, whose incomes rebounded quickly and remain elevated compared to other groups. Workers in the services and manufacturing sectors may have had their hours worked fall or become temporarily laid off, but the index never dipped much below 100. In contrast, self-employed individuals were hit hard. Day labourers, taxi drivers and delivery drivers were the most affected by lockdowns as they have no stable income to fall back on. While the index started to catch up with workers in the services and manufacturing sectors in 2024, these self-employed individuals never made up lost ground for the income lost in 2020–23. In terms of profession, the self-employed became the group that we closely monitored.

We also considered the asset side of the vulnerable group’s balance sheet. Lower income and self-employed were targets of government stimulus cash transfers in 2020–21. This can be observed through excess savings. We compared outstanding amounts of deposits against its trend growth before COVID-19. We used this metric across different deposit buckets as proxy for low-, middle- and high-income households. We found that all groups saved more in 2020, and excess savings increased. For low-income households, we attributed this to a combination of government stimulus and precautionary savings. High-income households were able to maintain this excess savings through 2024. In contrast, low-income households drew down this excess savings and are now below pre-COVID trends in 2024.



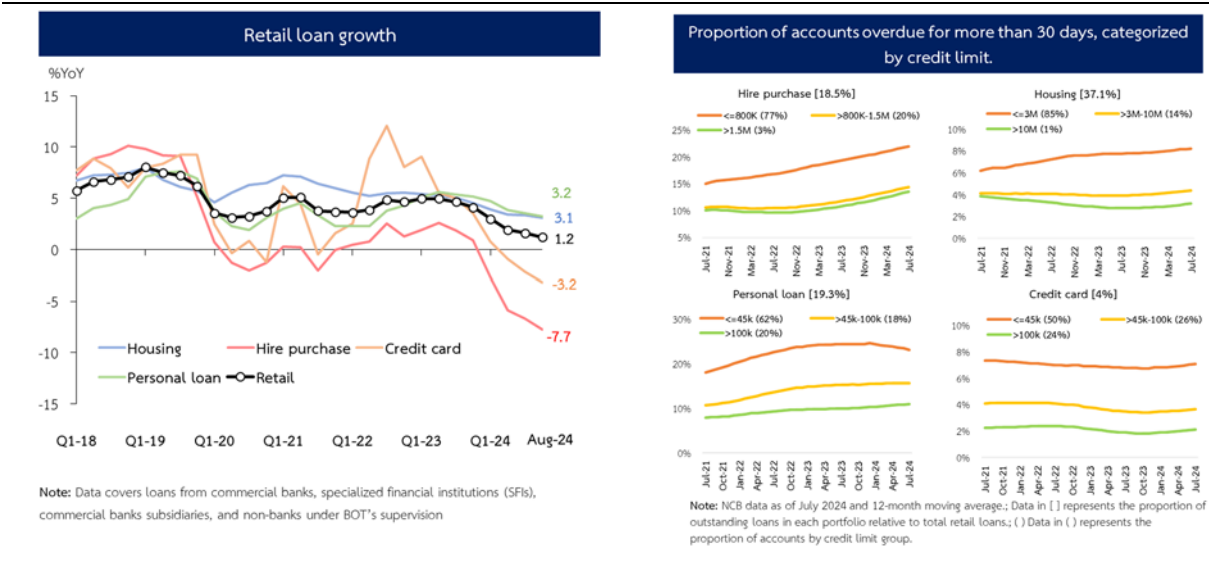
The last dimension we considered was the credit conditions of low-income households. Data in Graph 5.A shows a gradual decline in loan growth across all household portfolios. Loan growth shrank considerably in the hire purchase and credit cards segment, which has sector-specific explanations in addition to changes in economic activity. One of the main factors that depressed demand for hire purchase loans was the arrival of cheap Chinese electric vehicle imports. Higher competition brought down prices both at the dealers and in the second-hand markets. The lower price in the resale market creates a negative feedback loop, as new buyers typically fund their purchases through sales of their current cars. This shock is compounded by worse credit quality in the sector, partially due to eased lending standards during the pandemic. For credit cards, a higher minimum payment (reversion to pre-COVID regulation) may partially explain the downward slope.

Sector-specific explanations cannot erase the aggregate decline for growth in all segments, however, and concerns remained.

Loan quality, measured by the proportion of loans with a balance greater than 30 days past due are shown in Graph 5.B. Each loan portfolio is shown in its own separate graph with three lines representing different levels of contract amounts (proxy for income). The low- income households have a higher proportion of accounts with 30 days past due. In some segments—namely, hire purchase and housing—we observed a widening difference between the low- and high-income households.

Graph 5a: Credit growth by portfolio

Graph 5b: Credit quality by income



Monetary policy deliberation

With many households lacking access to formal channels of finance, the informal sector plays a role in credit and somewhat dampens the effect of monetary policy transmission. The two most tangible transmission channels for households in Thailand are the interest rate channel and the cash-flow channel. The effect of the interest rate channel for households can be quantified using the socio-economic survey; however, with the limitations mentioned earlier, the estimates only offer a rough guidance.

The quantification of transmission of monetary policy through the cash-flow channel, at least for bank loans, can be estimated with better precision. Mortgages represent the largest share of household debt, as shown in Graph 6. While most mortgages in Thailand are floating rate loans, the instalments are fixed. When the interest rate decreases, the payment is unchanged, but the duration of payment is shortened. Hire purchase and credit card loans are fixed rate and mostly unaffected by monetary policy. Personal and business-related loans are mostly floating rate and can benefit from changes in monetary policy.

Composition of household debt

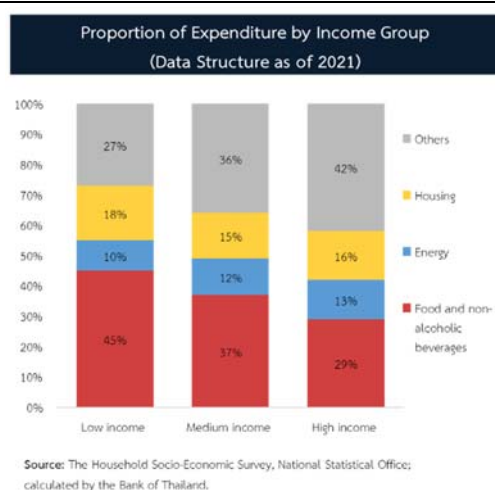
Graph 6

Composition of household debt by loan types

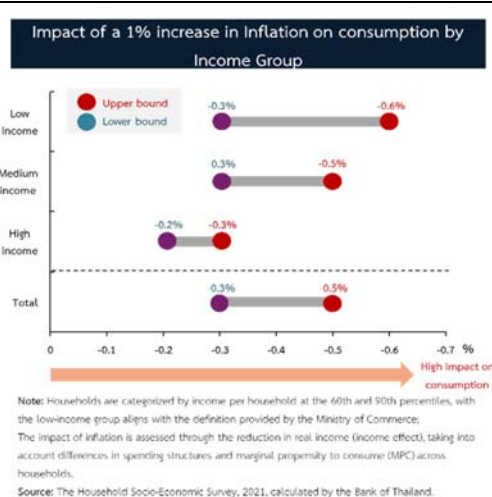


Household heterogeneity is a recurring issue discussed extensively throughout recent MPC meetings. During normalisation, discussions focused on the impacts of inflation and rising interest rates on low-income households and the effects on aggregate inequality. Graph 7.A shows the composition of expenditures by income groups, suggesting that low-income households spend significantly more on food and non-alcoholic beverages, which, in turn, leads to relatively higher declines in consumption after a positive inflation shock, as shown in Graph 7.B.

Graph 7a: Composition of household expenditures



Graph 7b: Impacts of inflation on consumption

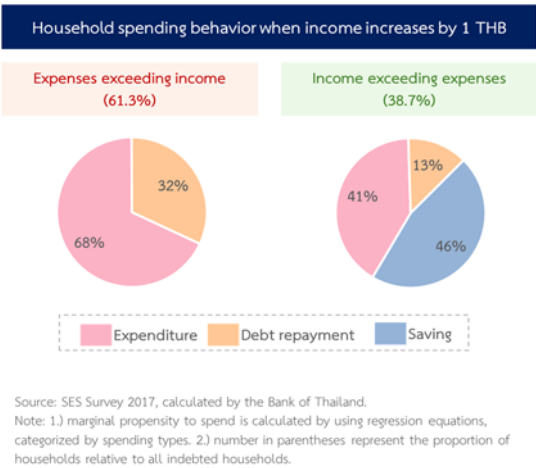


In Graph 8, we estimate marginal propensity to consume for two groups: those with less income than expenditures (hand-to-mouth) and others. The marginal propensity to consume is 27% higher for the former, implying that the hand-to-mouth group will also decrease consumption more after a rate increase. After a rate increase, therefore, the low-income population gets more benefit from decreases in inflation but is also more affected by decreases in income. On the whole, the latter

will always have a net negative short-run impact on consumption. The analyses and following discussions thus contributed to “gradual and measured” policy rate hikes that made it more manageable for fragile groups to adapt to the increase in interest burden.

Marginal propensity to consume for hand-to-mouth

Graph 8



Back to the issue in 2024, amidst high household debt and a worsening sentiment and financial conditions for vulnerable groups, we had to evaluate how a change in policy rate would affect household balance sheets in the short and long terms. In the long run, lower rates will slow down the household debt deleveraging process; in the short run, lower rates can alleviate the debt service burden. The extent of the gains is arguable, as our aggregate quantitative model showed that the immediate impacts of a change in policy rate to household debt service burden may be small in terms of amount and contribution to GDP. However, what the model does not show is that it may be have an impact on vulnerable groups, the hand-to-mouth part of the population for which every marginal baht matters. The MPC members also pointed out that a growing “vulnerable” population can potentially create outsized impacts beyond their own GDP contribution because of adverse nonlinear macro-financial linkages they have with other economic agents in the economy.

The MPC decreased its policy rate in October 2024. While household heterogeneity itself was not the primary reason for the policy rate decrease, discussions of the analyses above played a significant role. The low-income households were becoming more pessimistic as their debt-laden balance sheets worsened from slower income recovery. Their credit conditions tightened more than other segments’, and many committee members expressed the view that any help to these vulnerable groups is better than no help, especially when the lowered rate aligns with the outlook of the economy and does not derail debt deleveraging.

Targeted measures and final thoughts

Targeted measures

Targeted measures for households require the involvement of financial institutions. The MPC meets semi-annually with the Financial Institutions Policy Committee to jointly discuss issues pertaining to both committees, such as household debt. The Bank of Thailand has adopted many measures to address the issue of high household debt. A press release in January 2024 summarised this into three main pillars: (i) debt restructuring; (ii) creditor assistance to speed up debt repayment for persistent debt; and (iii) fairer debtor protection that includes limits and eliminations of fees. For 2025, jointly with the Ministry of Finance, the Bank of Thailand plans to issue additional debt relief measures to support vulnerable debtors through suspension of interest and reduction on principal payments for three years.

Part of the heterogeneity in the economy comes as a result of financial access issues, with the lower income population having limited access to financial services. The Bank of Thailand wishes to minimise financial access gaps in the economy. With the planned launch of virtual banks in 2025, the use of diverse types of data will provide better access to financial services for the unserved and underserved segments of households and stipulate competition among the Thai financial institution system. In addition, we also support the mechanism for “Open Banking Data for Consumer Empowerment,” which allows financial service providers to access and use data and key digital infrastructure with standardised processes and connections. This will reduce redundancy and lead to lower costs, better service and greater financial access.

Final thoughts

We wish to touch upon many findings from the Heterogeneous Agent New Keynesian (HANK) framework. First, changes in income and wealth distributions can have profound impacts on the strength of monetary policy transmission, as shown by Kaplan et al (2018). This is one of many reasons we wish to understand heterogeneity better. As summarised by Violante (2021), the consumption response of hand-to-mouth households to monetary policy is very strong because of the indirect effect of changes in employment and wages. As we move toward households with more income, the direct effect of intertemporal substitution dominates until we reach the very top of the wealth distribution, when the negative income effect starts to play a role.

Violante (2021) pointed to three other lessons from HANK that we can relate to. First, macroeconomic shocks can be amplified or dampened depending on income and wealth distributions. This amplification can possibly provide justification for nonlinearities resulting from macro-financial linkages. Second, every policy has redistributive properties, and fiscal policies are better suited to offer welfare-improving redistributive outcomes. Thus, central banks should not solely use the blunt interest rate tool to tackle inequality but instead should work closely with fiscal authorities where possible. Third, the HANK framework requires that central banks have access to rich micro-level data. This lesson strikes a chord with us, as we have

also started to implement a HANK model and have run into the issues of data calibration. Some of the impulses looked odd and we suspect this may be partly due to the calibration against the socio-economic survey, with its known limitations discussed earlier.

A HANK-type framework can assist in our attempt to more comprehensively consider heterogeneity in the Thai economy. In addition to recognising how vulnerable groups are affected by monetary policy in the short term and the potential nonlinearities created by the amplification mechanisms resulting from a biased wealth distribution, we also would like to better understand the interactions between monetary policy, inequality and economic growth in all horizons. One avenue of research we have an interest in pursuing is how inequality that is created/reduced as a by-product of monetary policy affects potential growth in the longer horizon.

References

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