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# Economic Letter from Asia: The Macro on Microchips

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Written by [Tian Yong Woon](#)

## The Macro on Microchips

In this week's newsletter, we analyze recent developments in advanced Asian economies, highlighting their gains from the upswing in the global tech cycle. Robust demand for AI-related semiconductor products and equipment continues to drive this upswing, bolstering overall economic growth. Additionally, we explore the geopolitical dynamics influencing the semiconductor industry. This includes US efforts to strengthen its onshore chip manufacturing capabilities and China's proactive measures to secure chipmaking equipment, possibly in anticipation of future export restrictions.

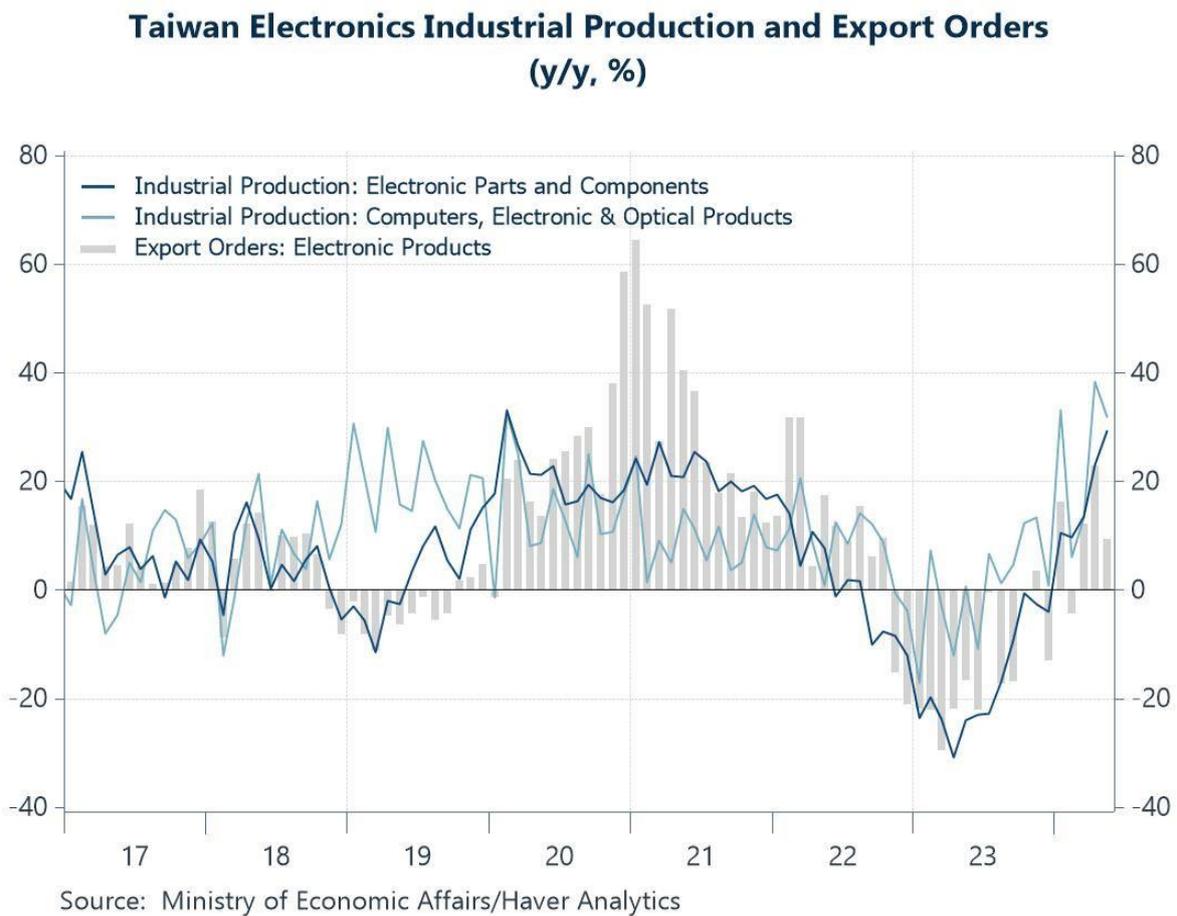
Shifting focus from semiconductors, we delve into domestic issues within these advanced Asian economies. Specifically, we address concerns such as the growth of household debt in South Korea and Taiwan. Central banks in these regions are actively addressing these concerns through measures aimed at controlling excessive debt accumulation. Meanwhile, Japan's household sector has shown promising signs of improvement recently.

### Developments in Advanced Asia

Taiwan's electronics sector has lately demonstrated strong growth, largely thanks to the current upswing in the global tech cycle. Chart 1 highlights a significant acceleration in the industrial production of semiconductor-related products, such as electronic parts and components, which surged by nearly 30% y/y in May. Moreover, production of other electronic goods, including computers, saw a substantial increase of

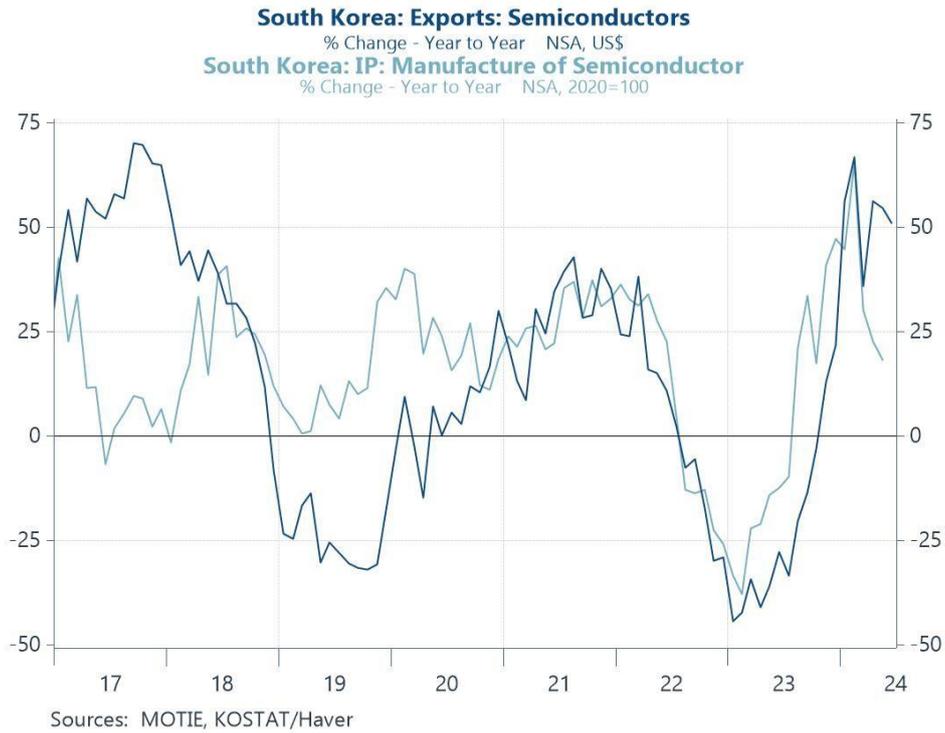
31.8% over the same period. Forward-looking indicators such as electronics export orders also point towards robust demand in the near future, having grown 9.2% m/m. Setting aside cyclical considerations, the trajectory of Taiwan’s semiconductor sector is deeply intertwined with global geopolitics. For instance, the US government is actively advancing onshore advanced chip manufacturing capabilities through initiatives like the CHIPS Act. This includes substantial funding to incentivize Taiwan’s TSMC, a global leader in chip production, to establish manufacturing facilities for highly advanced two-nanometer chips within the US. This strategic endeavour seeks to counter the trend of offshoring crucial chip production capacity away from the US in recent decades.

Chart 1: Taiwan electronics production and export orders



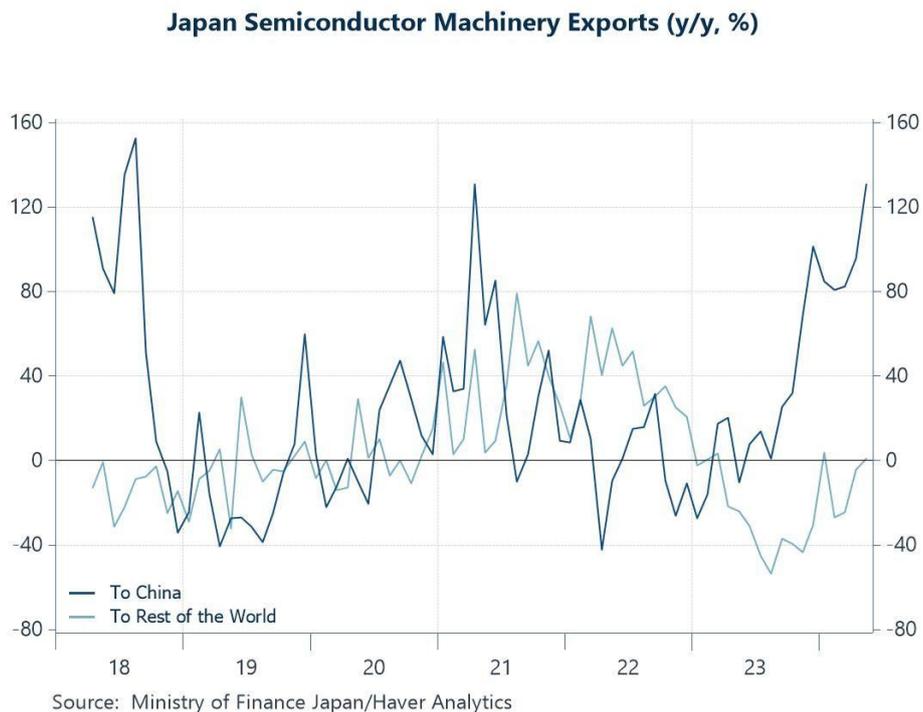
Apart from Taiwan, South Korea has also experienced strong growth in its semiconductor sector in recent months. Chart 2 specifically illustrates a surge of 50.9% y/y in South Korea's semiconductor exports in June, driving substantial growth in overall exports. However, unlike Taiwan, South Korea's strength in the semiconductor industry primarily lies in memory chips, including those well-suited for AI applications. Digging deeper, the demand for these AI-related memory chips, including high-bandwidth memory (HBM), has soared to unprecedented levels. South Korea’s SK Hynix, the dominant producer of these chips, has already signaled that their production capacity for HBM chips is nearly at full capacity through 2025. This highlights the ongoing promising outlook for South Korea’s producers in this sector and underscores the critical challenge of ensuring that supply keeps pace with the rapid growth in demand.

Chart 2: South Korea semiconductor manufacture and exports



Turning to Japan, well-known for its comparative advantage in semiconductor manufacturing equipment, there has been a significant rise in its exports of such equipment to China (Chart 3). This surge is substantial, with China now accounting for about half of Japan's semiconductor equipment exports. In contrast, Japan's exports of this equipment to other economies have seen minimal growth. Beneath these figures, geopolitical factors have come into play. Specifically, China's increased procurement of equipment may have stemmed from concerns about potential access restrictions, as the US and its allies move to limit China's semiconductor manufacturing capabilities.

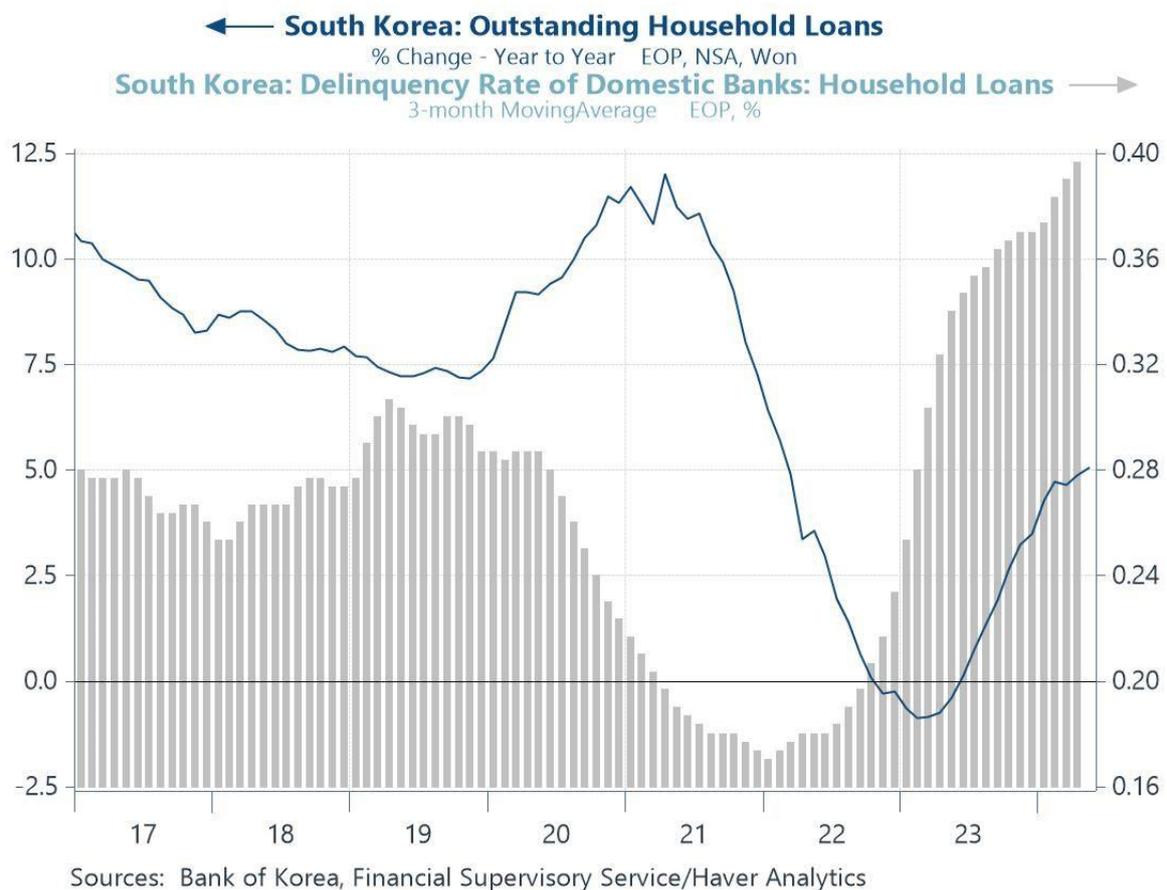
Chart 3: Japan semiconductor machinery exports



## Domestic issues in Advanced Asia

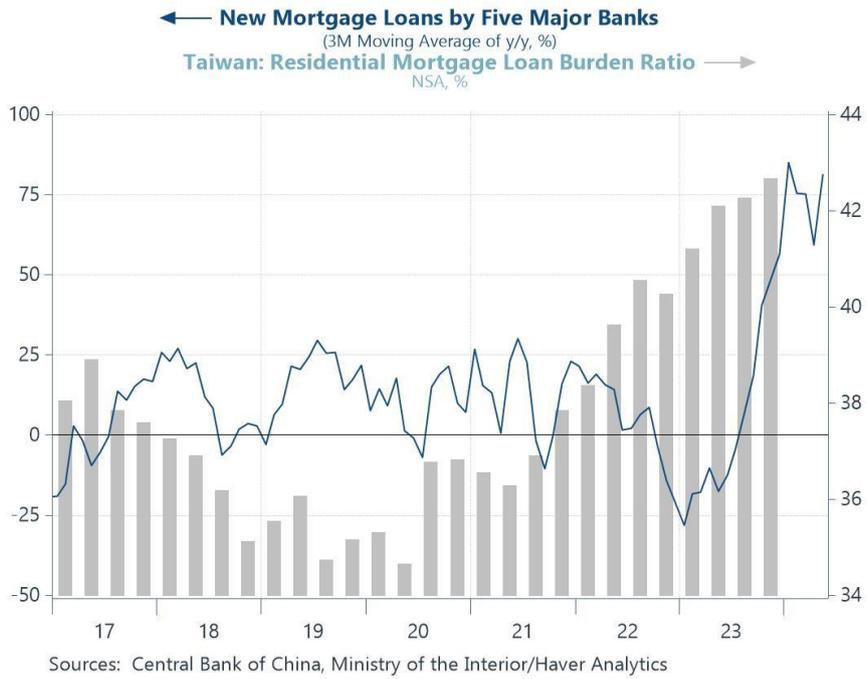
Moving on to domestic issues in the aforementioned advanced Asian economies, we begin with South Korea. The country's central bank (BoK) remains vigilant about the evolution of household debt. Particularly, the BoK is concerned about the pace of mortgage loan growth and the potential financial stability risks posed by high levels of household indebtedness. In May, South Korea witnessed accelerated growth in outstanding household loans, rising by 5% y/y (Chart 4), primarily driven by mortgage loans. Concurrently, the delinquency rate on household loans has been on a steady increase, reaching 0.4%. Despite the BoK maintaining its policy stance, the continued acceleration in South Korea's high household debt growth has prompted caution, leading the central bank to maintain tighter monetary policy for longer. Additionally, although it moderated in 2023, the economy's household debt ratio remained the fourth highest globally, according to data from the Bank for International Settlements (BIS).

Chart 4: South Korea's household debt



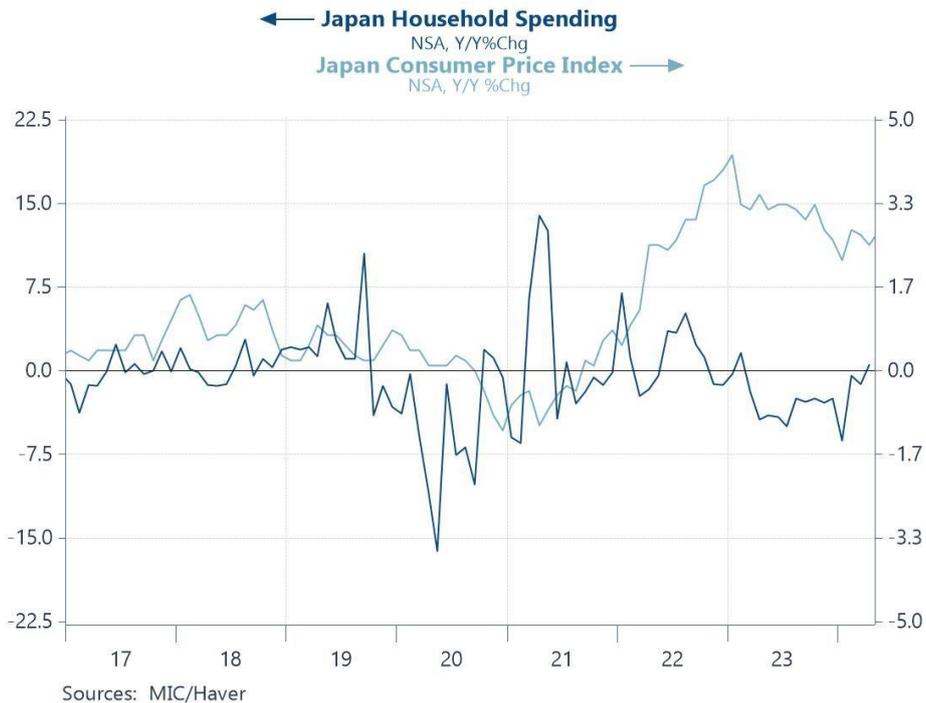
Taiwan faces similar challenges with rapidly escalating household debt, driven primarily by mortgage borrowing. Major Taiwanese banks have consistently issued new mortgage loans at high double-digit y/y growth rates in recent months. Concurrently, the loan burden ratio linked to residential mortgages has risen considerably, now accounting for 42.7% of Taiwan households' disposable income, underscoring increased financial strain on households. To address these concerns, Taiwan's central bank (CBC) has implemented several macro prudential measures aimed at stabilizing the property market. These include lowering the loan-to-value cap on second outstanding home loans in specific regions to 60%, from 70%. Additionally, effective July 1, 2024, the CBC has raised banks' reserve requirements by 25 basis points as part of its efforts to manage systemic risks associated with escalating household debt.

Chart 5: Taiwan individual loans and housing prices



Turning our attention to domestic developments in Japan, there has lately been a positive shift in household spending, which grew by 0.5% y/y in April. The growth reading marks the first increase after 14 consecutive months of declines. The question remains however, if this uptick is an isolated event or indicative of a broader change in household behaviour. Sustained growth in spending would be welcomed by the Bank of Japan (BoJ), aligning with its efforts to foster “virtuous cycles” driven by wage growth and consumer spending. Regarding Japan’s inflation trends, the slowdown in CPI inflation appears to have stalled, with a reading of 2.8% y/y observed in May. A combination of continued growth in household spending, prices, and wages, could pave the way for the BoJ to further normalize its monetary policy.

Chart 6: Japan household spending and inflation



# About the author



Haver Analytics is pleased to bring [Tian Yong Woon's](#) commentaries on the state of the global economy to its clients.

Tian Yong joined Haver Analytics as an Economist in 2023. Previously, Tian Yong worked as an Economist with Deutsche Bank, covering Emerging Asian economies while also writing on thematic issues within the broader Asia region. Prior to his work with Deutsche Bank, he worked as an Economic Analyst with the International Monetary Fund, where he contributed to Article IV consultations with Singapore and Malaysia, and to the regular surveillance of financial stability issues in the Asia Pacific region. Tian Yong holds a Master of Science in Quantitative Finance from the Singapore Management University, and a Bachelor of Science in Banking and Finance from the University of London.

## Data featured in this commentary:

### Chart 1: Taiwan electronics production and export orders

#### Series 1: [yryr%\(N528DMET@EMERGEPR\)](#)

N528DMET@EMERGEPR [Taiwan: IP: Mfg: Electronic Parts and Components (NSA, 2021=100)]

#### Series 2: [yryr%\(N528DCPU@EMERGEPR\)](#)

N528DCPU@EMERGEPR [Taiwan: IP: Mfg: Computers, Electronic & Optical Products (NSA, 2021=100)]

#### Series 3: [yryr%\(U528TGEL@EMERGEPR\)](#)

U528TGEL@EMERGEPR [Taiwan: Export Orders: Electronic Products (NSA, Mil.US\$)]

### Chart 2: South Korea semiconductor manufacture and exports

#### Series 1: [yryr%\(N542IXSC@EMERGEPR\)](#)

N542IXSC@EMERGEPR [South Korea: Exports: Semiconductors (NSA, Thous.US\$)]

#### Series 2: [yryr%\(N542DMES@EMERGEPR\)](#)

N542DMES@EMERGEPR [South Korea: IP: Manufacture of Semiconductor (NSA, 2020=100)]

### Chart 3: Japan semiconductor machinery exports

#### Series 1: [yryr%\(VEACNSE@JAPAN\)](#)

VEACNSE@JAPAN [Japan: Exports of Goods: China: Semicon Machinery Etc (NSA, Bil.Yen)]

#### Series 2: [yryr%\(\(VEATTSE@JAPAN - VEACNSE@JAPAN\)\)](#)

VEATTSE@JAPAN [Japan: Exports of Goods: Grand Total: Semicon Machinery Etc (NSA, Bil.Yen)]

VEACNSE@JAPAN [Japan: Exports of Goods: China: Semicon Machinery Etc (NSA, Bil.Yen)]

### Chart 4: South Korea's household debt

#### Series 1: [yryr%\(N542FCHX@EMERGEPR\)](#)

N542FCHX@EMERGEPR [South Korea: Outstanding Household Loans (EOP, NSA, Bil.Won)]

#### Series 2: [movv\(N542ZRTH@EMERGEPR,3\)](#)

N542ZRTH@EMERGEPR [South Korea: Delinquency Rate of Domestic Banks: Household Loans (EOP, %)]

### Chart 5: Taiwan individual loans and housing prices

#### Series 1: [movv\(yryr%\(N528C5M@EMERGEPR\),3\)](#)

N528C5M@EMERGEPR [Taiwan: New Mortgage Loans by Five Leading Banks (NSA, Mil.NTD)]

#### Series 2: [N528F7PA@EMERGEPR](#)

N528F7PA@EMERGEPR [Taiwan: Residential Mortgage Loan Burden Ratio (NSA, %)]

Chart 6: Japan household spending and inflation

Series 1: FIAALEC@JAPAN

FIAALEC@JAPAN [Japan: Avg Disb per HH, Real: 2+ Person HH Inc Agr: Living Exp (NSA, Y/Y%Chg)]

Series 2: JYCIJ@JAPAN

JYCIJ@JAPAN [Japan: Consumer Price Index: General (NSA, Y/Y %Chg)]

For more info on our data offerings please contact our team on [sales@haver.com](mailto:sales@haver.com).

