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PRESS RELEASE

Tychos Analytics Group
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Household Debt Continues to Mount in Two of the Largest Asian Economies Small & Micro Business Loans in China Are on the Rise

China's five-year growth in household debt to GDP has increased a brisk 47 percent, while business debt to GDP declined 3 percent in that same period, continuing the remarkable shift to household debt as the driver of China's economy.

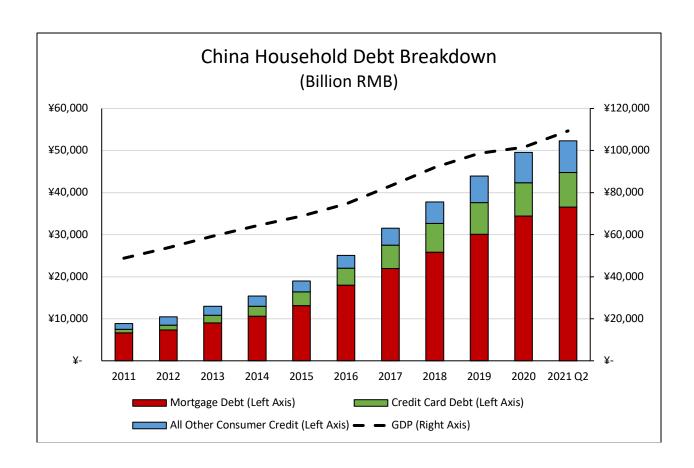
Gross Domestic Product

Japan observes another quarter of GDP declines, while India has a major bounce back from their 2020 GDP woes and China once again displayed consistent growth. The global pandemic continues to slow domestic consumption in Japan, causing GDP to drop 0.2 percent from June of 2020 to June of 2021. In contrast, India and China's GDP in that same period increased 9.1 percent and 11.3 percent, respectively. Growth in both India and China can be attributed in large measure to the rapid rise of household debt, with attendant risk to household financial stability. This data will be updated next on 12/2021.

China

Mortgage Debt:

Residential mortgage debt in China has reached CN¥36.6 trillion as of 6/30/2021, 13 percent higher on an annualized basis than the level of CN¥32.4 trillion on 06/30/2020. Current forecast suggests continued growth of over CN¥37 trillion for 2021 Q3. Making up nearly 70 percent of China's household debt, mortgage debt growth is a key area for analytical attention (See Chart).



Margin Debt:

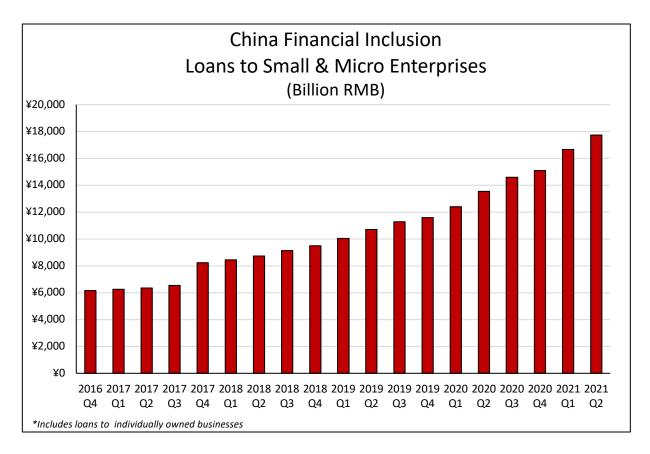
According to China's Shanghai and Shenzhen Stock Exchanges, margin debt is on the rise again following the peak of CN¥2 trillion in June of 2015. As of 06/30/2021, margin debt has reached CN¥1.8 trillion, 53% higher on an annualized basis than the level of CN¥1.2 trillion on 06/30/2020. Current forecasts show margin debt at a level of CN¥1.9 trillion on 09/30/2021 (See Chart).



Overall five-year non-financial business debt growth to GDP in China declined 3 percent, down from 2 percent decline in the prior quarter and down from 23 percent growth in 2017. Preliminary 2021 second quarter data was released on 09/18/2021, and 2021 third quarter preliminary data will next be updated on 12/18/2021. Complete data through the first quarter was released on 09/01/2021 and will next be updated on 12/01/2021.

Financial Inclusion Loans to Small & Micro Businesses:

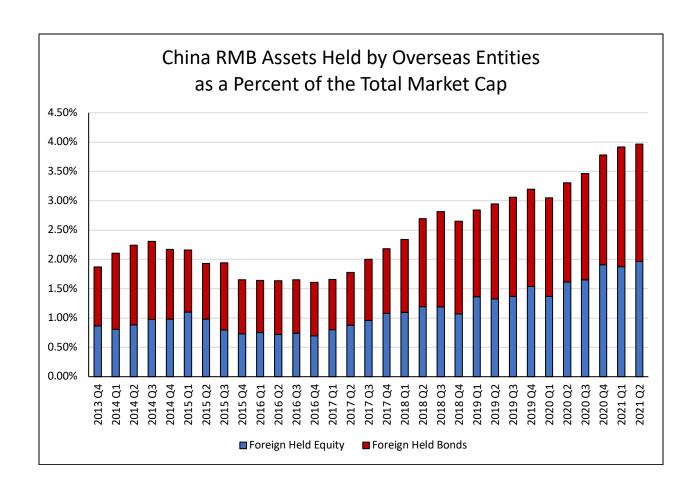
As reported by the People's Bank of China, financial inclusion loans continue to soar. As of 06/30/2021, financial inclusion loans to small and micro businesses have reached CN¥17.7 trillion, 31% higher on an annualized basis than the level of CN¥13.5 trillion on 06/30/2020 (See Chart). Current forecast suggests consistent growth of over CN¥18.5 trillion on 09/30/2021.



Financial inclusion refers to the delivery of financial services at affordable costs to disadvantaged and low-income segments of society. Growth in these loans presents a concern for credit risks of small and micro enterprises in China.

Cross Border Risk:

As reported by the People's Bank of China, foreign investment of China's domestic RMB assets has increased rapidly in recent years. Foreign equity and bond asset holdings as a percentage of the total market has reached an all-time high of 4 percent, up from the 3.3 percent on 06/30/2020 (See Chart). While still a small percentage, foreign held asset growth presents a concern for capital flight within China, which could lead to turmoil in their stock and bond markets. This data was released on 08/30/2021 and will next be updated on 11/30/2021.

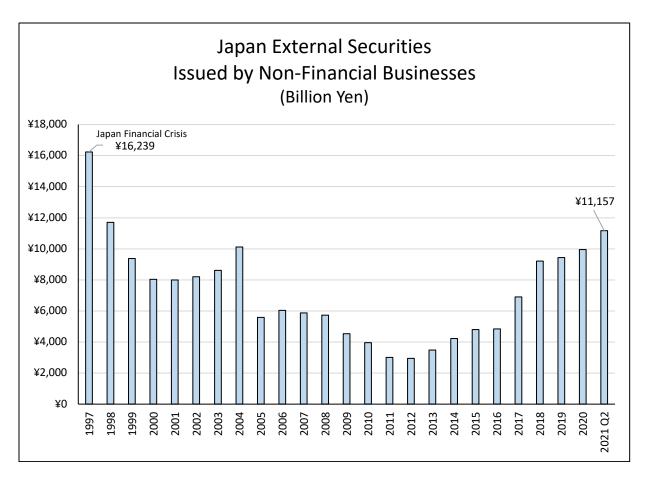


<u>Japan</u>

In Japan, overall five-year country-level private debt growth to GDP increased to 19%. Sector areas of heightened concern include Transportation Equipment, Real Estate, Transport, Commodity Lease, Utilities and Construction. This data was released on 09/18/2021 and will next be updated on 12/18/2021.

External Securities Issued by Non-Financial Businesses:

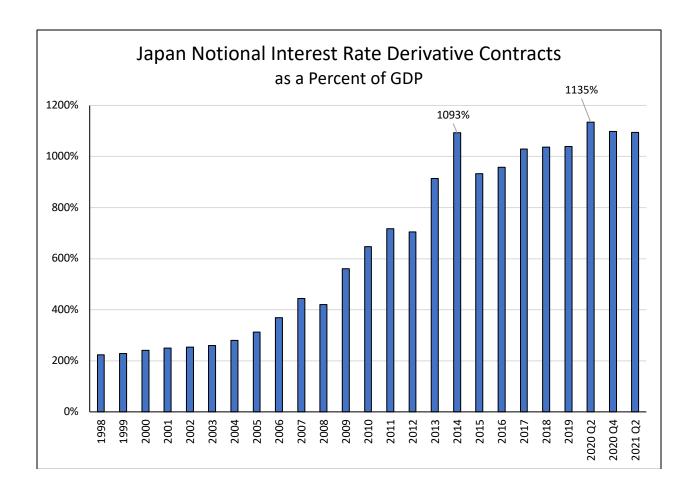
As reported by the Bank of Japan's Flow of Funds Accounts, external securities issued by non-financial businesses has reached 11.15 trillion Yen as of 06/30/2021, 32 percent higher on annualized basis than the level of 8.44 trillion Yen on 06/30/2020 (See Chart). A potential drop in the value of the yen could present a repayment risk for bond issuers, thus warranting continued observation.



External securities are bonds issued in overseas markets by Japanese non-financial businesses. This is based on information as of 2021 Q2 that became publicly available on 09/10/2021. The next update from the BOJ on this information will be 12/2021.

Interest Rate Derivatives:

As reported by the Bank of Japan in its most recent report on derivatives, interest rate derivatives in Japan are down to 1,095 percent of GDP after reaching an all-time high of 1,137 percent of GDP in the second quarter of 2020, above the previous peak of 1,093 percent of GDP reached in 2014 (See Chart). The possibility of significant movements in interest rates, along with the possibility of a counterparty default, make this a key area for analytical attention.

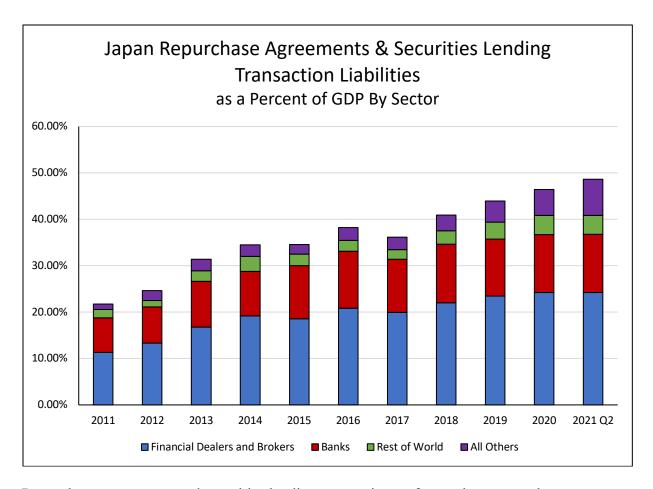


An interest rate derivative is a financial instrument with a value that is linked to the movements of an interest rate or rates. These may include futures, options, or swaps contracts. Interest rate derivatives are often used as hedges by institutional investors, banks, companies, and individuals to protect themselves against changes in market interest rates, but they can also be used to increase or refine the holder's risk profile or to speculate on rate moves.

This is based on information as of 2021 Q2 that became publicly available on 09/10/2021. The next update from the BOJ on this information will be 12/2021.

Repurchase Agreements and Securities Lending Transactions:

Japan's repurchase agreements and securities lending transaction liabilities remain at 250 trillion Yen, or 46 percent of GDP, as compared to 12 percent of GDP for equivalent liabilities in the United States. Financial Dealers and Brokers, Banks and Rest of World sectors hold a significant majority of the debt (See Chart). An increase in defaults or valuation of the underlying securities used for collateral make this an area for increased analytical attention.

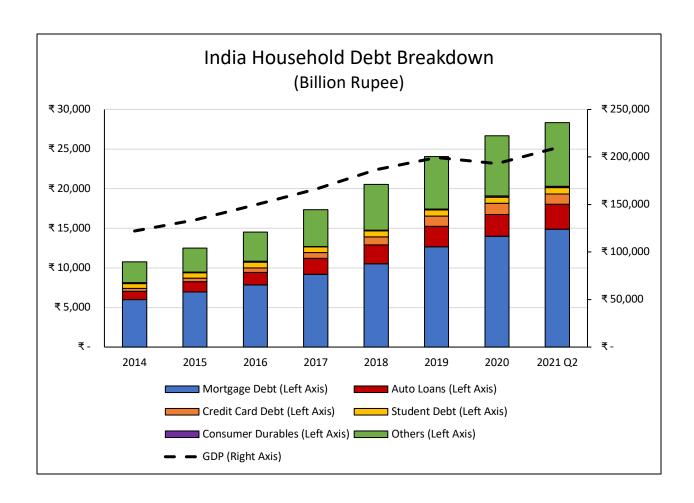


Repurchase agreements and securities lending transactions refers to those repurchase agreements and securities lending transactions that can be regarded as credit facilities backed by bonds and other instruments. Bonds and other instruments are sold or lent in real transactions. More specifically, they include bond gensaki (sale and repurchase) transactions in central government securities and treasury discount bills, and bond lending transactions with cash collateral.

This is based on information as of 2021 Q2 that became publicly available on 09/18/2021. The next update from the BOJ on this information will be 12/18/2021.

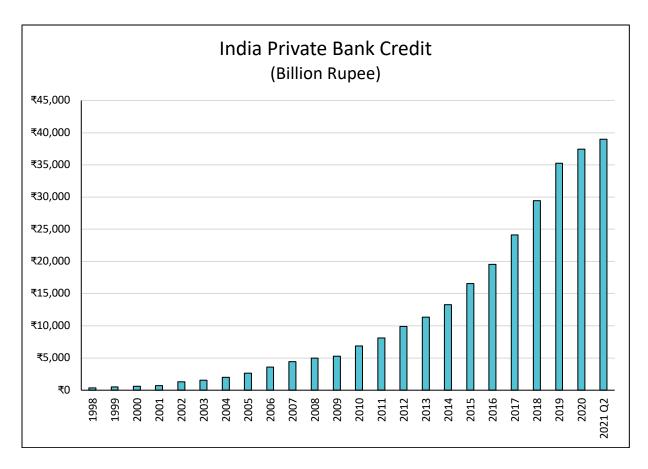
<u>India</u>

Overall, debt to GDP has been relatively flat in India, however, household debt is expanding moderately, especially mortgage debt, which represents the highest area of credit risk concern. Housing loans have reached 14.9 trillion Rupee as of 06/30/2021, 13 percent higher on an annualized basis than the level of 13.2 trillion Rupee on 06/30/2020 (See Chart). This data was released on 09/01/2021 and will next be updated on 12/01/2021.



Private Bank Credit:

As reported by the Reserve Bank of India, private bank credit outstanding has reached 38.9 trillion Rupee as of 06/30/2021, 11 percent increase on an annualized basis than the level of 35.6 trillion Rupee on 06/30/2020 (See Chart). Currently, private banks are the only financial institutions in India that present any potential credit risks.



Complete data through the first quarter was released on 09/01/2021 and will next be updated on 12/01/2021.

About Tychos

Tychos is a not-for-profit data analytics firm specializing in private sector credit and derivative information. Historically, a rapid buildup in credit in a given sector has led to credit related issues in that sector, and Tychos analyses are designed to monitor these types of trends. Tychos examines data for the largest seven economies in the world, namely the United States, China, Japan, Germany, France, the United Kingdom, and India, which collectively represent over 60 percent of global GDP.

For additional details, including commentary on recent U.S. trends, please visit www.tychosgroup.org.