Housing, Household Debt, and the Business Cycle: An Application to China and Korea

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China and South Korea have experienced a substantial household debt boom, and a correction is underway. There are many open questions about how severe it will be.

Historically, credit booms have often ended in busts and prolonged recessions. At the 10th Annual Conference of ABFER, **Professor Amir Sufi** delivered a keynote speech that addressed how the household debt booms in China and Korea might end.

To start with, the Professor drew upon previous research on credit cycles. In 2018, he and his colleagues developed the phrase "credit-driven household demand channel," which refers to the boom-bust pattern associated with a surge in household debt.

The first pillar of this thesis states that the primary source of economic fluctuations is a credit supply shock, which refers to a sudden rise in the willingness of the financial sector to provide credit to finance real economic activity. So, credit booms often begin from the financial side.

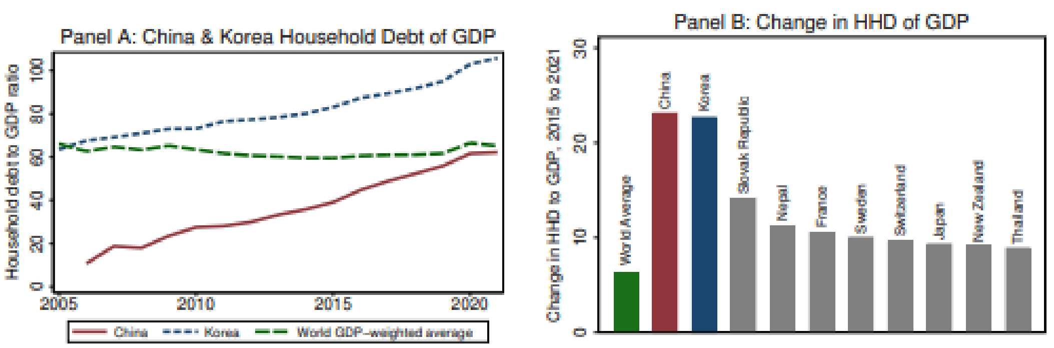
Secondly, expansion in credit supply often-time boosts real estate while not channelled adequately to promote productive capital formation in other sectors.

Finally, credit booms often end in busts and prolonged recessions. Furthermore, data show that these booms often precede slower growth.

For China and Korea, the first two pillars fit empirical observations; these two countries' aggregate demand booms are indeed driven by credit expansion, which operates primarily through the household and property sectors. However, we do not know whether the third pillar will hold – will the correction be severe?

The household debt to GDP ratio has risen sharply in South Korea and China over the last 15 to 20 years, strikingly more than the global average.

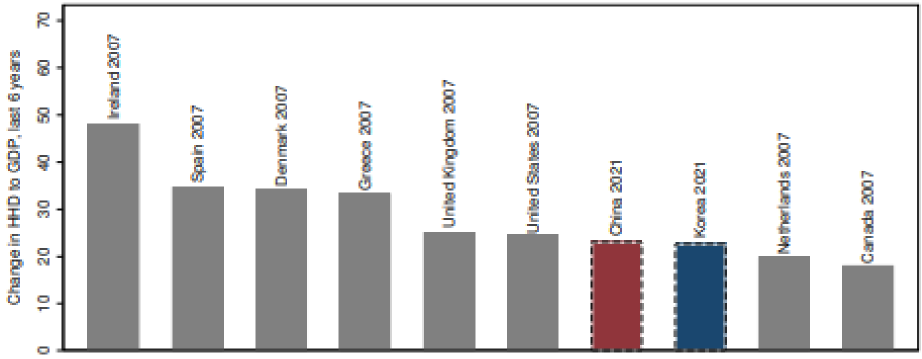
Figure 1: Household Debt to GDP in China and Korea



The left panel of this figure is the Household debt, loans and debt securities % of GDP for China, Korea, and the GDP weighted average of the World. Data is from the IMF Global Debt Database. The right panel is the change of household debt of GDP ratio from 2015 to 2021 for various countries.

From a historical perspective, the household debt booms in China and Korea are unlike the ones in Ireland and Spain before the Global Financial Crisis – each followed by a severe recession. In Ireland and Spain, the booms coincided with considerable current account deficits, which China and Korea are not facing. However, household debts in China and Korea are at the same level as the US and the UK in 2007 – and both experienced severe recessions afterward.

Figure 2: Debt Booms in China and Korea: Comparison with 2001 to 2007



This figure shows the magnitude of the household debt boom for prominent episodes in history, and for China and Korea as of 2021.

The Professor then shared a preliminary forecast for China and Korea, extrapolating from his previous research. This previous work entails first obtaining for 70 countries the difference in the average annualized real GDP growth in each country from a pre-period to a post-period. The pre-period is from years t-1 to t-7, and the post-period is from year t+1 to year t+3. The difference in the growth rates is then regressed onto the change in the household debt to GDP ratio and the change in non-financial firm debt to GDP ratio from t-7 to t-1.

His regression produced a relevant β estimate of -0.09, implying that a 23 percentage point rise in the household debt to GDP ratio from 6 years ago to last year (as happened in China and Korea) would precede a (-0.09*23=) 2.1 percentage point decline in average annualized real GDP growth in the three years after the boom relative to the five years prior.

To shed further light on whether China and Korea would experience the predicted decline in growth, the Professor highlighted five factors that drive a boom-to-bust credit cycle.

Firstly, there is a close link between consumption, household debt burdens, and house prices. During the boom, rising household debt leads to higher consumption-to-GDP ratios. However, during the crash, a sharp decline in house prices leads to a pullback in consumption through both a standard negative wealth effect and tightened borrowing constraints.

Secondly, household debt booms are associated with severe imbalances within the production sectors of the economy. Typically, booms in construction shift investment from tradable to non-tradable industries – which can temporarily boost economic activity but could stem from distortions.

Thirdly, booms often lead to financial crises because borrowers do not heed the negative externalities stemming from an overall rise in debt. These crises can impair economic activity.

Fourth, household debt cycles are often global, leading to a worldwide slowdown.

Finally, open economy frictions can prevent needed adjustments, worsening the slowdown.

From this lens, the Professor underscored that the recessionary slowdowns in China and Korea would likely not be as severe as the ones witnessed in history because, although the first three factors seem particularly problematic in China and Korea, the latter two are not as big of issues.

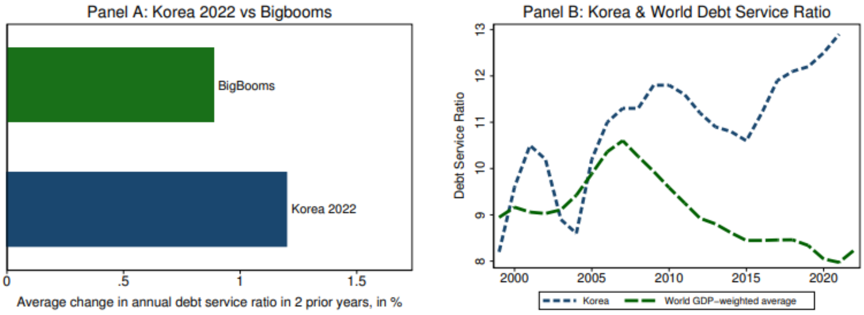
Moreover, the worst contractions tend to be associated with countries running current account deficits during the boom. China and Korea are running current account surpluses – signaling that the recessions will not be as severe compared to historical episodes.

Also, a financial crisis is much less likely in China and Korea relative to the historical data. Although Evergrande in August 2021 and Legoland in September 2022 sent tremors through the financial systems, governments in both countries have taken bold actions to prevent widespread panic.
However, the Professor noted that two classes of debt in China are particularly likely to experience significant credit losses: property developers' debt and local governments' debt, including their financing vehicles. A large amount of this debt resides on bank balance sheets, and these credit losses may impair the banking sector.

The Professor then stressed two factors that he thought were most problematic. Although, unlike historical episodes, neither China nor Korea saw a substantial increase in consumption-to-GDP ratio during the boom, both countries are at risk of lackluster consumption growth and a real slowdown in domestic demand because of house price corrections in both countries.

In China, housing assets make up 60% or more of the total assets of Chinese households. Similarly, in Korea, authorities have raised the policy rate, resulting in a sharp rise in the household debt service ratio (DSR) immediately. A large rise in the household debt service ratio has a strong negative impact on GDP growth.

Sharp Rise in Debt Service Ratio for Korea



Drehmann, Juselius, and Korinek 2017: a large rise in household DSR has substantial negative impact on GDP growth

Lastly, the Professor called imbalances on the production side in China highly worrisome. Many top economists focusing on China suggest that housing demand peaked in 2018 and is likely to slow significantly moving forward. Tier 3 cities, which constitute 60% of China's GDP, have severe property imbalances and saw housing prices fall by 20%. Prolonged recessions in these cities will drag down the Chinese economy.

To conclude, the Professor underlined that the massive shift toward real estate in China since 2009 is part of a broader issue: the amazingly high investment-to-GDP ratio in China. It seems inevitable that, eventually, less productive investment will be the result.