German banks' credit profile remains resilient to potential domestic housing bubble

by Valerie Kok

- **The NUS-CRI Agg PD shows the improving credit profile of German and European banks, partially due to their well-capitalized balance sheets and strong earnings performance**
- **Stress tests conducted demonstrate the loss-absorption capabilities of German banks as threats of a domestic housing bubble raises concerns**

The residential property market in Europe has been booming over the last few months, driven by strong demand for housing in major European cities from institutional investors, which has been underpinned by low-interest rates and favorable regulatory frameworks. With soaring property prices across Europe, concerns regarding the formation of housing bubbles across major European countries have picked up steam. According to UBS Group AG's Global Real Estate Bubble Index released in Oct-2021, European cities accounted for 6 out of the top 10, with Frankfurt and Munich included in the top 5, housing markets globally that are most at risk of being in a bubble. As such, the spotlight falls onto Germany's banking sector, where close to three-quarters of loans disbursed to households are used to purchase houses. The NUS-CRI Aggregate (median) 1-year Probability of Default (Agg PD) for German banks has largely decreased over 2021, in tandem with the aggregate credit quality of other EU-domiciled banks (See Figure 1a), as mortgage lending increased significantly amidst a low-interest-rate environment and government stimulus. However, moving forward, German banks' credit profile is set to potentially worsen, with the NUS-CRI Agg Forward 1-year PD (Forward PD) steadily increasing in the short-to-medium term, though remaining below the BBB- upper bound (investment-grade territory) when referenced to PDiR2.0 bounds, amidst the risks of a potential housing bubble. (See Figure 1b).

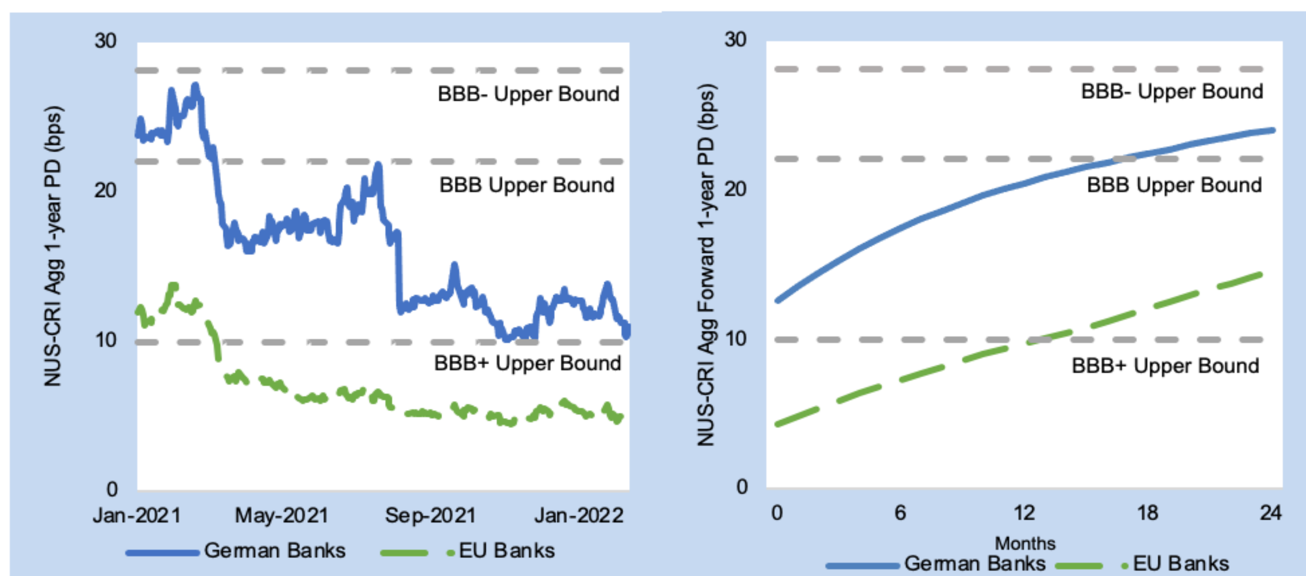

Figure 1a (LHS): NUS-CRI Agg 1-year PD for German banks and EU banks from Jan-2021 to Jan-2022 with reference to PDiR2.0[1] bounds. Figure 1b (RHS): NUS-CRI Forward PD for German banks and EU banks as of Feb-2022 with reference to PDiR2.0 bounds. *Source: NUS-CRI*

German, and more widely EU-domiciled, banks' profitability has generally benefited throughout 2021 from robust and diversified revenue streams and low impairment charges. Not only did these banks' strong performance in their investing arms provide a boost to their earnings, revenue from their retail banking segments also improved, despite tight margins, on the back of government support leading to fewer bad loans (NPL ratio for all European banks fell by 20bps QoQ to 2.1% in Q3 2021). Similarly, European banks are also well-capitalized with the

[1] The Probability of Default implied Rating version 2.0 (PDiR2.0) provides a more familiar interpretation through mapping the NUS-CRI 1-year PDs to the S&P letter grades. The method targets S&P's historical credit rating migration experience exhibited by its global corporate rating pool instead of relying solely on the reported default rates.

median CET1 ratio at 15.1% in Q3 2021, higher than pre-pandemic levels and ECB requirements. Strong performance, as well as robust loss absorption capabilities and a build-up in capital buffers, have helped improve the credit quality of EU-domiciled banks, including German banks, as they navigated through the continued fallout of the COVID-19 pandemic.

Looking forward, despite an increase in credit extension to the housing market proving beneficial for their NIMs in the past, German banks are becoming increasingly exposed to the housing market, raising concerns regarding the fallout of a potential housing bubble elevating their credit risk in the future. In light of the rising demand for housing since the beginning of the pandemic, fueled by low interest rates and loose lending standards, Germany's housing prices have soared about 13% throughout 2021. In tandem, housing loans extended by German banks grew over 7% YoY in Q3 2021 to reach a multi-decade high (see Figure 2a). Germany's central bank, Deutsche Bundesbank, has stated that it believes the German housing market is 15 - 30% overvalued, which could expose vulnerabilities in Germany's financial sector, especially those arising from interest-rate risk.

With increasing expectations of a rate hike by the ECB in Q4 2022, German banks' credit extension may no longer benefit from low-interest rates in the future. An interest rate hike would pressure banks' credit risk outlook amidst potential mortgage defaults impacting their asset quality. German mortgage loans typically carry a fixed rate that resets at a predefined date. The proportion of borrowers with fixed interest periods of over 10 years has risen in recent years, standing at about 50% of total mortgages outstanding currently. As such, a rise in mortgage costs due to rising interest rates could increase the repayment burden for borrowers, posing a potential challenge for German banks' asset quality. Meanwhile, long credit maturity on these mortgages also puts banks at risk of higher refinancing costs if interest rates rise, while the value of their assets is unlikely to change. Resultantly, German banks' profitability may be squeezed in the future.

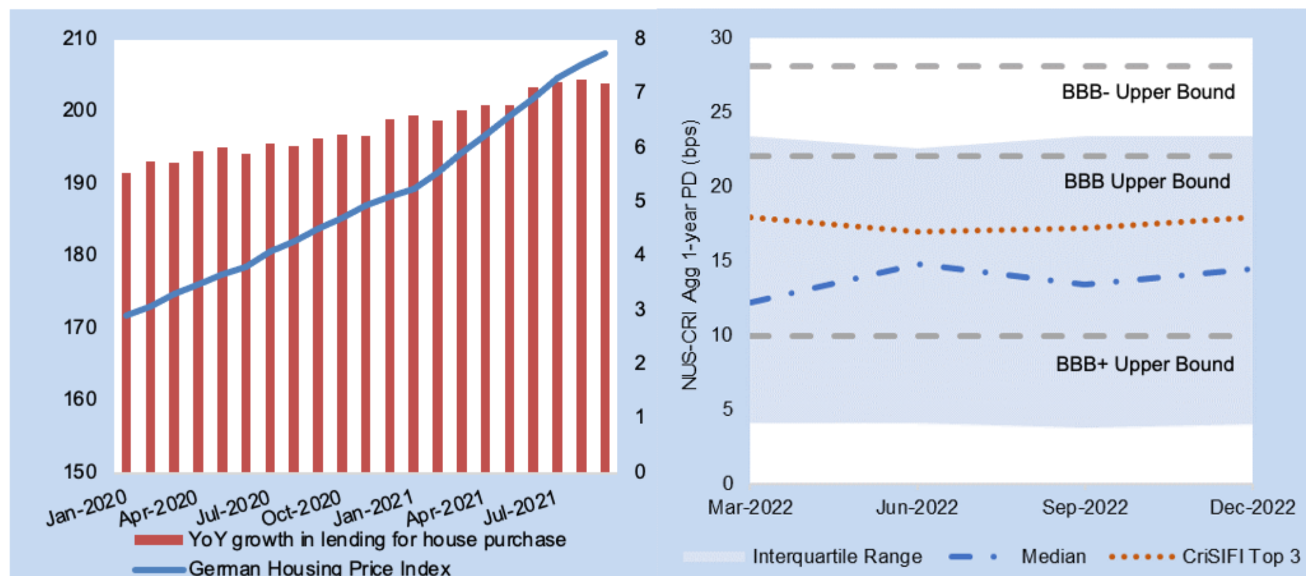

Figure 2a: Housing prices in Germany (LHS) and YoY growth in lending to households for house purchase (RHS) from Jan-2020 to Sep-2021. Figure 2b: NUS-CRI Agg 1-year PD (Median and interquartile range) of German banks under the adverse scenario with reference to PDiR2.0 bounds. *Source: Refinitiv, Deutsche Bundesbank Financial Stability Review 2021, NUS-CRI, BuDA v3.3.0*

To measure the sole impact of rising house prices on German banks' credit quality, scenario analysis can be conducted using NUS-CRI Bottom up Default Analysis toolkit (BuDA[2]). Figure 2b demonstrates the impact of rising house prices (German House Price index increases by 1% MoM) on Aggregate (Median and interquartile range) PD for German banks. As witnessed, the median PD increases marginally over the next 3 quarters for the industry, with the credit risk distribution between the riskiest and safest firms remaining relatively stable. The relative stability can be attributed to the industry's high loss-absorption capabilities should the housing bubble burst (excess capital that the industry currently holds is above the minimum capital requirement by EUR 30bn). However, the wider risk to the country's financial system remains as the median stressed PD for Germany's top three systemically important banks as of Jan-2022, as per NUS CriSIFI[3], are above the industry's median level of credit risk and closer to the top 25th percentile of risky banks, under this scenario. This may indicate that although individual banks may be able to come out of the crisis relatively unscathed due to their capital buffers,

[2] The Bottom-up Default Analysis (BuDA v3.3.0) is a credit stress testing and scenario analysis toolkit jointly developed by the Credit Research Initiative (CRI) team of National University of Singapore (NUS) and the International Monetary Fund (IMF).
[3] Germany's top three systemically important banks as ranked by NUS CriSIFI include Deutsche Bank AG, Commerzbank AG, and Tradegate AG Wertpapierhandelsbank as of Jan-2022.

the wider financial system may still be stressed if NPLs and loss absorption capabilities are hampered for those banks considered systemically important.

With recent increases in regulatory restrictions, such as Germany's tightening of approval criteria for mortgages in Q4 2021, as well as the Bundesbank recent reactivation of a requirement for banks to rebuild capital buffers, German banks' vulnerability to a potential housing market crisis may be reduced. Now, German banks will have to set aside an additional EUR 22bn of capital buffers by Feb-2023, with EUR 5bn for German residential mortgages and the remaining EUR 17bn for their countercyclical buffer. These new buffers will further enhance the resiliency of an already well-capitalized German banking sector, allowing them to absorb potential future losses without having to severely cut the supply of credit to businesses and households. As such, German banks are well-positioned to navigate headwinds in the property market.

Credit News

Investors brace for central banks' retreat from bond markets

Feb 19. Central banks worldwide have begun to shrink their vast portfolios after purchasing trillions of dollars of debt since the financial crisis of 2008. The Bank of England firstly started the Quantitative tightening (QT) process earlier this month, gradually reducing their debt of GBP 895bn. The Federal Reserve may provide more details on plans to shrink its USD 9tn balance sheet at the FOMC meeting next month, with expectations about rising interest rates for the first time since the pandemic began. The European Central Bank is expected to phase out its debt purchases later this year. As such, short-term bonds, which track rate expectations closely have so far been sold more than long-term bonds, which benefit the most from quantitative easing programs. Investors expect that tightening from the Bank of England may provide more clues on how the market responds to rate hikes and QT. (FT)

European corporate debt shows cracks under tougher market conditions

Feb 19. Investors have been pulling back from European corporate debt as European central banks are on the verge of tapering stimulus. European high-yield fund registered an outflow of EUR 724mn last week, with outflows from investment-grade funds being even higher at EUR 2.3bn. High-yield funds have reduced their AUM by close to 3% YTD, marking the worst start to the year since 2018. ICE BofA Euro high-yield bond index has dropped 3.3% since the start of last year as yields on government bonds have increased, making corporate bond yields less appealing for investors. This transition comes on the back of rising inflation that has set the US Fed and the ECB on the brink of rising rates, with the former estimated to increase rated by 0.25 percentage points in Mar-2022. However, market participants estimate that the threat to corporate default is still relatively low despite the sell-off. (FT)

Financial issuers are storming the bond market with floating-rate sales

Feb 16. As the federal reserve looks to raise interest rates, large banks are tapping into the investment-grade bond market, selling at least one trance of variable interest rates. Rising treasury yields have led to losses for longer-duration bonds, which is driving investors towards debt that pays interest that can increase. Sales of floating rate debt have soared in 2022, compared to the start of the pandemic where rock-bottom rates were locked in by borrowers, as investors look for yield without accompanying duration risk. Furthermore, most of these sales are pegged to the SOFR, which helps in minimizing interest-rate mismatch as loans will now be made referencing SOFR, making these transactions more advantageous from a bank funding perspective. (Bloomberg)

China central bank warns of default risks after climate stress test

Feb 18. Last year China launched a national emissions-trading scheme, which included more than 2,000 coal-fired power stations, cement, and steel producers, putting upward pressure on carbon emissions costs. However, Chinese financial institutions continued to provide lending and underwriting services for new coal-fired power plants. Therefore, the People's Bank of China conducted climate risk stress testing on 23 major China-domiciled banks. The test result from the first phase of stress tests demonstrates that should thermal power, steel, and cement sectors not develop low-carbon transformation, their repayment ability will be negatively affected. As a result, China's banks face rising default risks coming from carbon-intensive sectors due to rising climate-related costs. (CNA)

Chinese developer is in fresh trouble months after debt swap

Feb 18. Earlier this week, Yango Group's 30-day grace period to pay interest on the bonds ended with a total of USD 27.3mn in interest due. However, Yango Group failed to pay the overdue interest before the end of the grace period, which is generally regarded as an event of default. As a result, investors have little confidence in getting full repayment from the company, with its bonds being bid at a much lower price on Friday. In recent months, a broader trust crisis of investors in the property sector has picked up steam due to many unexpected defaults. Among the total USD 6.3bn in high-yield Chinese property bonds that matured last month, 15% defaulted directly, and 40% were swapped for new bonds. (WSJ)

JPMorgan to add Ukraine bonds to debt index despite war threat (WSJ)

The bond market is sending a worrying message about the economy (Bloomberg)

China vows to contain bond default risks, deepen reforms (Bloomberg)

Regulatory Updates

Top Fed officials back March liftoff as consensus takes shape

Feb 19. To curb the hottest inflation in 40 years, two senior Fed officials supported a rate hike and start shrinking their bloated balance sheet in the following months. Therefore, the Fed is expected to raise rates by 0.5 percentage points instead of a quarter-point. The market performance is consistent with this interest hike expectation as the increasing interest rate has been transmitted to the real economy through changes in lending rates amidst tightened credit conditions for loan extensions. However, the Fed officer believes that underlying long-term inflation in the US and other developed countries will remain low on the back of inhibited structural factors. As such, the long-term target rate is estimated to be around 2.5%. (Bloomberg)

Fed sets trading restrictions for top officials

Feb 18. The federal reserve has formally adopted new ethics rules regarding trading by its top officials, senior staff, and close family members. The new rules "aim to support public confidence in the impartiality and integrity of the FOMC's work by guarding against even the appearance of any conflict of interest." The new rules currently apply to all senior management at the Fed but may be expanded to include other Fed members. Senior officials are banned from trading stocks and sector funds, cryptocurrencies, individual bonds, agency securities, commodities, and derivative contracts. These new rules have been put in place after disclosure forms revealed a number of senior officials had been actively trading in the markets in 2020, causing moral hazard concerns regarding policy settings. (WSJ)

China PBOC keeps benchmark lending rates unchanged (WSJ)

Turkey holds rates as Ukraine crisis looms over its economy (WSJ)

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