China / Hong Kong Industry Focus

# China Banking Sector

Refer to important disclosures at the end of this report

DBS Group Research . Equity 14 Oct 2022

## How would property sector impact China banks?

- **Property sector performance is the main investor concern vis-à-vis banking sector YTD**
- **Expect loan growth and asset quality to remain weak in short term**
- **Expect no large changes in banks' property exposure strategy at the time being, as the NPL impact is controllable**
- **Negatives are largely priced in while we expect short-term volatility, long-term top pick remains PSBC (1658 HK)**

Property exposure is the main concern for China banks YTD. The China banking sector shows a high correlation of 0.82 with property sector performance YTD. Looking forward, our expectations are 1) a low to mid-single-digit y-o-y growth in property-related loans, while mortgage growth may see some recovery with lower pricing; 2) the mortgage NPL ratio in 2H22 is likely to be in line with the trend in 1H22, as indicated by the leading indicators (e.g. delinquency ratio of MBS' underlying assets); and 3) a significant drop in the mortgage rate after a 35bps decline in the five-year LPR.

Expect stable strategy to tackle property. From the banks' perspective, we don't expect a sharp change in their property exposure, though they are becoming more selective in issuing developer loans. Our key findings are that 1) property loans will remain an important part of the banks' loan book in the long run; 2) the NPL ratio impact, if SOE banks have to follow government guidance to support more property developers, is controllable at 0-4bps; and 3) mortgage remains a preferred product to banks. A 50bps mortgage rate cut may result in a 10bps NIM decline on average, but it could still be a good profit contributor if growth could recover to a high single-digit level, even if the higher NPL ratio is considered.

Impact priced in, but short-term volatility would remain. We estimate the implied ROE from the current valuation of 0.35x FY23F P/B to be c.5.3%, which is around the US banks' post-crisis ROE level during 2009-2011. We believe the negatives are largely in the price, though more upsides could materialise only after clearer signals of recovery of the China property sector and economy. Our top pick remains PSBC (1658 HK) for the mid-long term.

HSI: 16,389

ANALYSTS
Manyi Lu +852 36684186 manyilu@dbs.com
Ken Shih +852 36684184 kenshih@dbs.com
Iris GAO +852 36684196 irisgao@dbs.com

### Recommendation & valuation

| Company | Currency | Price Local$ | Target Price Local$ | Recom | Mkt Cap US$bn | PE 23F x |
|---|---|---|---|---|---|---|
| ABC (1288 HK) | HKD | 2.31 | 3.10 | HOLD | 136 | 3.0 |
| ABC-A (601288 CH) | CNY | 2.86 | 3.20 | HOLD | 136 | 4.1 |
| BOC (3988 HK) | HKD | 2.55 | 3.85 | BUY | 117 | 3.1 |
| BOC-A (601988 CH) | CNY | 3.05 | 3.40 | HOLD | 117 | 4.0 |
| BOCOM (3328 HK) | HKD | 4.05 | 5.70 | BUY | 43 | 3.0 |
| BOCOM-A (601328 CH) | CNY | 4.61 | 5.20 | BUY | 43 | 3.8 |
| CCB (939 HK) | HKD | 4.41 | 8.00 | BUY | 142 | 3.0 |
| CCB-A (601939 CH) | CNY | 5.50 | 7.00 | BUY | 142 | 4.1 |
| CMB (3968 HK) | HKD | 30.10 | 63.70 | BUY | 104 | 4.5 |
| CMB-A (600036 CH) | CNY | 29.89 | 51.80 | BUY | 104 | 4.9 |
| ICBC (1398 HK) | HKD | 3.61 | 6.10 | BUY | 203 | 3.1 |
| ICBC-A (601398 CH) | CNY | 4.35 | 5.40 | BUY | 203 | 4.1 |
| CITIC (998 HK) | HKD | 3.10 | 3.60 | HOLD | 28 | 2.3 |
| CITIC-A (601998 CH) | CNY | 4.63 | 4.40 | HOLD | 28 | 3.8 |
| PAB (000001 CH) | CNY | 11.34 | 15.90 | BUY | 31 | 4.6 |
| CEB (6818 HK) | HKD | 2.10 | 2.40 | HOLD | 22 | 2.4 |
| CEB-A (601818 CH) | CNY | 2.81 | 2.40 | HOLD | 22 | 3.6 |
| PSBC (1658 HK) | HKD | 4.04 | 7.40 | BUY | 52 | 3.7 |
| PSBC-A (601658 CH) | CNY | 4.17 | 6.80 | BUY | 52 | 4.2 |

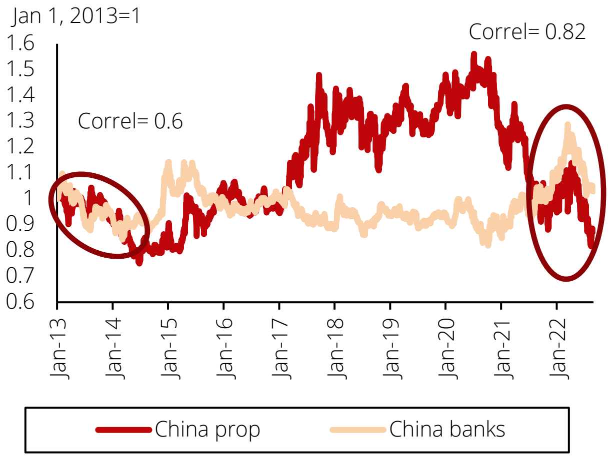
*Based on closing prices as at 13 Oct 22*

*Source: Thomson Reuters, DBS Bank (Hong Kong) Limited ("DBS HK")*

## Property sector remains the key concern YTD

**Property sector remains key area to watch for bank investors.** Through empirical study, we found that the China property and China banking sector performances are highly correlated during a downturn cycle of China property (Fig 1). The correlation reached c.0.82 YTD. So, it is understandable that investors are more concerned about banks' asset quality during economic downturns and watch more for revenue growth during economic upward cycles.

**Fig 1: China banks and China property share performance vs. HSI shows high correlation YTD**




*Source: Bloomberg Finance L.P., DBS HK*

Banks' exposure to the China property sector includes loans (developer loans and mortgage) as well as off-balance sheet items (wealth management products and property trust). The market is not as optimistic as it was before about the property market recovery after the mortgage boycott in July. Thus, the negative impacts on banks when the property sector is in trouble include 1) lower loan growth; 2) worsening asset quality from property-related loans; and 3) lower wealth management exposure to the sector.

**Property loan growth slowing down, especially mortgages.** By the end of 1H22, the outstanding balance of property-related loans was c.Rmb52.2tn, or 25.7% of total loans in China, compared with 27.5% of total loans by the end of 2021 (Fig 2). Mortgages showed a more significant decline in y-o-y growth and as a percentage of total loans than developer loans.

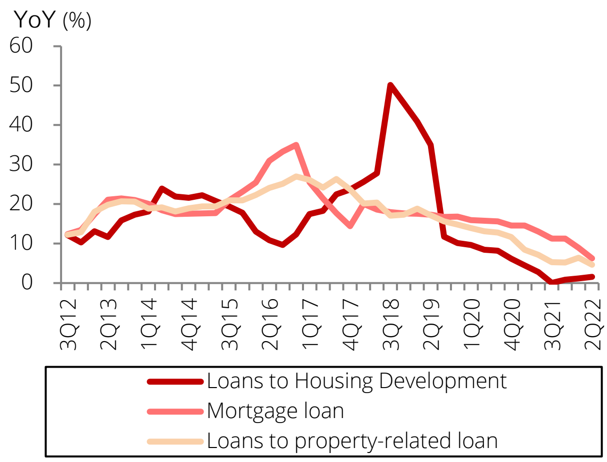
As property loan-related growth is correlated with residential property sales (Fig 4) and the DBS house view expects flattish y-o-y sales in 2023, we expect the overall property loan growth to remain at a low single digit in 2023.

**Fig 2: Lower proportion of property-related loans**

| | Outstanding balance (Rmb tr) | | As of total (%) | | yoy growth (%) | |
|---|---|---|---|---|---|---|
| | 2021 | 2Q22 | 2021 | 2Q22 | 2021 | 2Q22 |
| Total property loan | 52.17 | 53.11 | 27.5 | 25.7 | 5.2 | 4.6 |
| Property developer loan | 12.01 | 12.49 | 6.3 | 6.1 | 0.8 | 1.5 |
| Mortgage | 38.32 | 38.86 | 20.2 | 18.8 | 11.3 | 6.2 |

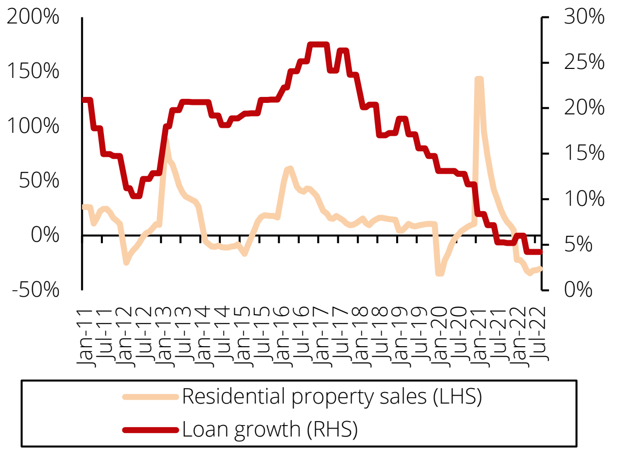
*Source: PBOC, DBS HK*

**Fig 3: Y-o-y growth in property-related loans**




*Source: PBOC, DBS HK*

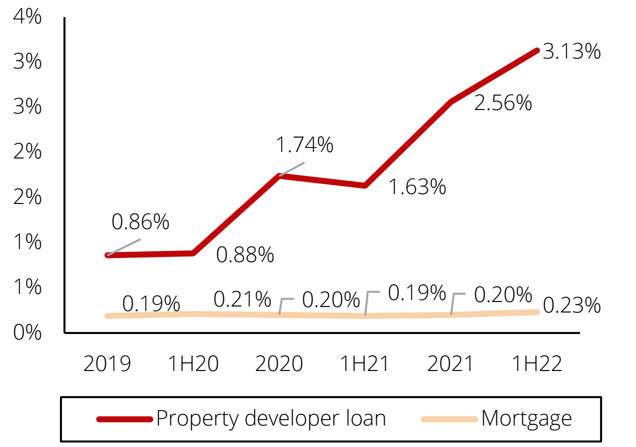
**Fig 4: Residential property sales vs. property loan growth**




*Source: PBOC,CEIC, DBS HK*

Credit risk remains the concern. The average NPL ratio of the banks under our coverage in the China property sector showed an increasing trend in 1H22 while the asset quality in other industries is largely stable or improving (Fig 5). The average NPL ratio of developer loans increased from 2.56% in FY21 to 3.13% in 1H22. The NPL ratio of mortgages, which has been stable in recent years, even during the COVID-19 outbreaks in 1H22, reached a new high of 0.23% in 1H22.

**Fig 5: Deteriorating asset quality in China property**




*Source: Companies, DBS HK*

There might be more developers facing liquidity problems. Some of the risky names which may be faced with trouble in bond repayments in the near term include CIFI, China SCE, Sino Ocean, and Agile, according to the DBS property team.

Most China banks have less than 0.5% of corporate loan exposure to these names, while CITIC Bank has a slightly higher exposure of 0.6% to those names (Fig 6). Looking ahead, we expect the credit risk in the property sector to remain a concern for banks until the liquidity problem of developers is really solved.

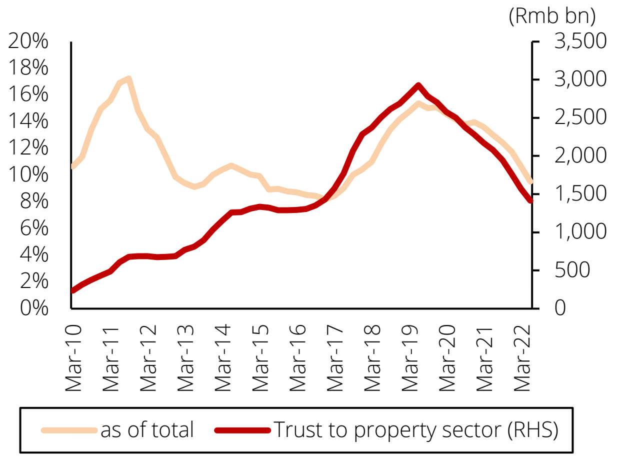
**Fig 6: Banks' exposure to risky developers**

| (Rmb bn) | CIFI (FY21) | Sino Ocean (1H21) | Agile (3Q20) | Total |
|---|---|---|---|---|
| ABC | 5.3 | | 5.3 | 10.6 |
| BOC | 1.8 | | 2.3 | 4.2 |
| BOCOM | 5.3 | 1.1 | | 6.4 |
| CCB | 7.4 | | 2.6 | 10.0 |
| CEB | 1.0 | 1.4 | 1.3 | 3.7 |
| Industrial Bank | 4.9 | | | 4.9 |
| CITIC | 6.1 | 6.4 | 1.9 | 14.4 |
| CMB | 6.1 | | 1.9 | 8.1 |
| China Minsheng | 3.7 | | 0.2 | 4.0 |
| PSBC | 0.5 | | | 0.5 |
| ICBC | 2.1 | | 2.0 | 4.1 |
| PAB | 1.2 | | 0.2 | 1.4 |

*Source: Companies, DBS HK*

Declines in off-balance sheet exposure. By the end of 1H22, property trusts declined by 51.7% from the peak in 1H19 to Rmb1.4tn (Fig 7). Trusts as a percentage of the total also dropped from the peak of 15.4% to 9.5%.

**Fig 7: Property trust as of total trust**




*Source: CEIC, DBS HK*

Banks' off-balance sheet exposure usually includes wealth management funds, entrusted loans, agency distribution of trust schemes under active management by cooperative institutions, debt financing with the bank as the lead underwriter, etc. Banks do not bear credit risks on these products, but their fee income would be negatively impacted if the volume declines significantly. Not all banks disclose off-balance sheet exposure to the China property sector, and we use CMB (3968 HK) and PAB (000001 CH) here as examples (Fig 8).

By the end of 1H22, both banks' off-balance sheet exposure to the China property sector dropped by c.23%-24% compared to FY21's level. Off-balance sheet exposure in terms of property-related corporate loans was c.80% for CMB and c.18% for PAB. Considering that CMB has the leading position and a much higher-than-peer portion of revenue coming from wealth management fees, PAB's number would be closer to the average. The total off-balance sheet exposure of all banks to the China property sector is estimated to be Rmb1.9-3.1tn by the end of 1H22 if we assume it makes up 15%-25% of property-related corporate loans.

**Fig 8: Banks' off-balance sheet exposure to property**

| | CMB | | PAB | |
|---|---|---|---|---|
| | 1H22 number (Rmb bn) | h-o-h growth (%) | 1H22 number (Rmb bn) | h-o-h growth (%) |
| Off balance sheet items | 316.4 | (23.22) | 52.6 | (23.7) |
| Credit risk bearing items | 493.7 | (3.48) | 298.0 | 0.6 |
| - of which Property corporate loan | 397.2 | (1.11) | 298.0 | 0.6 |
| Off-balance sheet items/property loans | 79.6% | | 17.6% | |

*Source: CEIC, DBS HK*

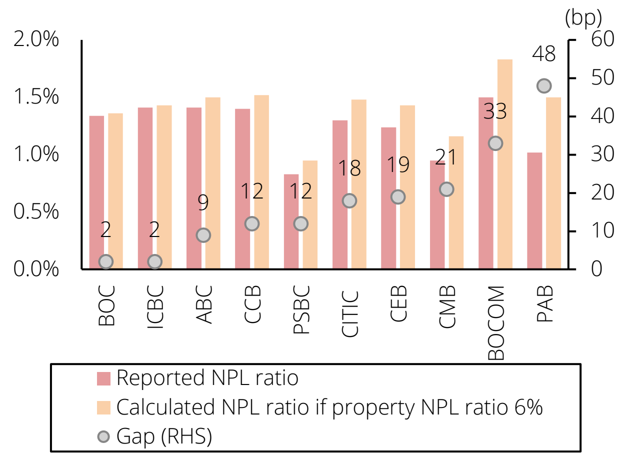
**Most banks are below the property exposure benchmark now.** Not surprisingly, all banks saw lower exposure to property-related loans in 1H22 compared with FY21, especially with a lower growth in mortgage. All banks except for CMB are within the limit for mortgage exposure now. Among all the SOE banks, PSBC (1658 HK) and CCB (939 HK) have the highest exposure to mortgages and CMB has the highest exposure among all joint-stock banks.

In terms of asset quality, BOC (3988 HK) and ICBC (1398 HK) have the highest NPL ratios for property-related corporate loans of 5.5% or more in 1H22, while CMB, CEB (6818 HK), and CCB saw the largest increase, of more than 100bps, in their NPL ratios.

**Hidden NPL?** HK and international banks also have exposure to the China property sector (Fig 11). The exposure is limited to less than 7% of their total loans, based on data of the three HK-listed banks that we analysed. We saw a declining trend in the loan outstanding balance in this sector in 1H22 while the NPL ratio has been increasing significantly. They reported 5-6.5% of NPL ratio in China property sector in 1H22, which was in general higher than their China peers who reported 3.1% NPL ratio on average. One of the possible explanations is that compared with HK/ foreign banks, China banks have better understanding of China property market and have more resources to choose qualified developers and projects.

But what if this is due to different NPL reporting standard? We have recalculated China banks' NPL ratio using 6% of NPL ratio in China property sector (Fig 9).

**Fig 9: NPL impact if 6% NPL ratio in property sector**




*Source: CEIC, DBS HK*

In this case, the NPL impact would be the lowest for BOC and ICBC, which have already reported >5.5% NPL ratio. Big Four have lower impact than the rest. PSBC also has lower impact due to its relatively lower exposure to property corporate loan, while BOCOM and PAB would have the highest impact of 33/48bps of NPL ratio increment as their current reporting NPL ratio in property sector was significantly lower than the sector average.

**Fig 10: China banks' exposure to China property sector**

| Ticker | 1288 | 3988 | 3328 | 998 | 939 | 6818 | 3968 | 1398 | 1658 | 000001 |
|---|---|---|---|---|---|---|---|---|---|---|
| Bank | ABC | BOC | BoComm | CITIC | CCB | CEB | CMB | ICBC | PSBC | PAB |
| Real estate loan as a % of total loan | 4.5 | 4.3 | 7.2 | 5.8 | 4.1 | 5.3 | 6.7 | 3.2 | 2.2 | 9.2 |
| *h-o-h change %* | (0.4) | (0.0) | 0.8 | (0.0) | 0.2 | (0.6) | (0.5) | (0.2) | 0.0 | (0.2) |
| Mortgage loan as a % of total loan | 28.5 | 25.7 | 21.6 | 19.6 | 31.9 | 16.7 | 23.4 | 28.9 | 31.9 | 8.7 |
| *h-o-h change %* | (2.0) | (1.9) | (1.1) | (0.4) | (2.2) | (0.7) | (1.2) | (2.1) | (1.7) | (0.3) |
| Mortgage loan ratio cap | 32.5 | 32.5 | 32.5 | 20.0 | 32.5 | 20.0 | 20.0 | 32.5 | 32.5 | 20.0 |
| Property-related loan as a % of total loan | 33.0 | 30.0 | 28.7 | 25.4 | 35.9 | 22.0 | 30.1 | 32.0 | 34.1 | 18.0 |
| *h-o-h change %* | (4.1) | (3.6) | (2.7) | (2.6) | (4.4) | (5.3) | (5.2) | (3.8) | (3.6) | (2.1) |
| Property-related loan cap | 40.0 | 40.0 | 40.0 | 27.5 | 40.0 | 27.5 | 27.5 | 40.0 | 40.0 | 27.5 |
| Real estate loan NPL | 4.0 | 5.7 | 1.3 | 2.9 | 3.0 | 2.6 | 2.8 | 5.5 | 1.0 | 0.8 |
| *h-o-h change (bp)* | 58.0 | 62.0 | 6.0 | (74.0) | 113.0 | 133.0 | 141.0 | 68.0 | 99.0 | 0.0 |
| Mortgage loan NPL | 0.4 | 0.4 | | | 0.3 | | 0.3 | | 0.5 | 0.2 |
| *h-o-h change (bp)* | 0.0 | 9.0 | | | 5.0 | | (1.0) | | 9.0 | 0.0 |

*Source: Companies, DBS HK*

**Fig 11: HK banks' exposure to China property sector**

| | Exposure to China CRE corporate loan | | As of total loan | | NPL ratio in China CRE | |
|---|---|---|---|---|---|---|
| | FY21 | 1H22 | FY21 | 1H22 | FY21 | 1H22 |
| HSBC | USD 21.3bn | USD 19.8bn | 2.0% | 1.9% | 2.9% | 5.0% |
| Standard Chartered | USD 4bn | USD 3.7bn | 1.2% | 1.3% | n.a | 6.4% |
| Hang Seng Bank | HKD 75bn | HKD 66bn | 7.5% | 6.7% | 4.0% | 6.1% |

*Source: Companies, DBS HK*

## Developer loans: What's the current strategy?

Not expecting sharp y-o-y decline in property loan exposure, though the percentage does drop…We see less than 1ppt reduction of loan exposure to property-related corporate loans in 1H22 vs. FY21 and expect the trend to carry on into the future, according to our conversations with the banks. On one hand, it is likely that the property loan exposure will continue to see some decline, as banks are turning their focus to sectors like premium manufacturing, new infrastructure, new finance, etc., which show higher-than-average y-o-y growth, and remain cautious on the property sector. On the other hand, banks are still supporting reasonable financing demands from qualified developers, as guided by the government. In the mid to long term, the property sector would remain one of the key segments of the China economy and is likely to remain an important part of the banks' balance sheets.

We have made a five-year estimation based on China banks' exposure to property (including both corporate loans and mortgage). Our assumption is a 3% CAGR for property sector loan growth in the next five years, which we believe is a conservative assumption, as it might be just in line or lower than China's GDP growth. Our assumptions on the CAGR of other sector loans for the next five years are lower than their y-o-y growth in 1H22 with increasing scale.

Under such assumptions (Fig 12), property sector loans as a % of total loans would decline from 25.7% in 1H22 to 17.8% in 2027, and our key takeaways are that 1) the property sector would remain an important part of the banks' balance sheets if there is low single-digit y-o-y growth in the next few years; 2) the average decline in property exposure as a % of total loans was c.1.5ppt each year, and we don't expect sharp declines on a y-o-y basis; and 3) the overall loan growth CAGR is 10.9% for the next few years, under our assumptions. The loan book can maintain reasonable growth, even if the property sector is slowing down.

**Fig 12: Property remains important in the long run**

| Rmb tr | 1H22 Rmb loan balance | 1H22 y-o-y growth | 5-yr growth CAGR assumption | 2027F Loan balance |
|---|---|---|---|---|
| Total | 206.35 | | 10.9% | 345.8 |
| Property | 53.1 | 4.2% | 3% | 61.6 |
| Industrial mid-long term loan | 15.3 | 21.2% | 18% | 34.9 |
| Infrastructure mid-long term loan | 31.0 | 12.5% | 10% | 50.0 |
| Inclusive financing | 29.9 | 20.8% | 15% | 60.2 |
| Green financing | 19.6 | 40.4% | 30% | 72.6 |
| Others | 57.5 | | 3% | 66.7 |
| Property loan as of total | 25.7% | | | 17.8% |

*Source: PBOC, DBS HK*

…while banks are being more selective in choosing clients. Though the overall exposure is not likely to see a sharp decline, we expect banks to be more selective when issuing corporate loans to property developers. Preference would be for those with stable operating cash flow and SOE developers with higher asset quality might be preferred to POE developers.

SOE banks may take more responsibility. There are recent media reports that six SOE banks are required by the PBOC to inject a total of Rmb600bn into the property sector over the last few months of this year, in the form of developer loans, secured loans, or by purchasing bonds issued by property developers. The banks have not yet confirmed this news through official channels.

A major investor concern would be a higher NPL ratio if banks are asked to support the property sector. We have made an estimation based on the six SOE banks' 1H22 number (Fig 13). The Rmb100bn accounts for 0.8%-4% of their total corporate loan book in 1H22, while property loans accounted for 5.3%-11.3% of total corporate loans. Using the NPL ratio for the property sector and all other sectors' average NPL ratio as the baseline of our assumptions, if the total corporate loan amount is unchanged and Rmb 100bn is shifted to the property sector from other sectors, we estimate the NPL ratio would increase by 0-4bps from the overall corporate loan NPL ratio in 1H22. We believe the impact would not be significant, especially if property loans are priced higher than the average rate of corporate loans.

Among the Big Six, CCB would be least impacted, in our estimation, as 1) Rmb 100bn would account for a small portion of its corporate loans and 2) its NPL ratio in the property sector is not in the higher end. In contrast, BOC would see the highest impact of 4bps on its NPL ratio, given it has the highest NPL ratio in the property sector of 5.7% in 1H22.

**Fig 13: NPL ratio impact if SOE banks have to support the property sector**

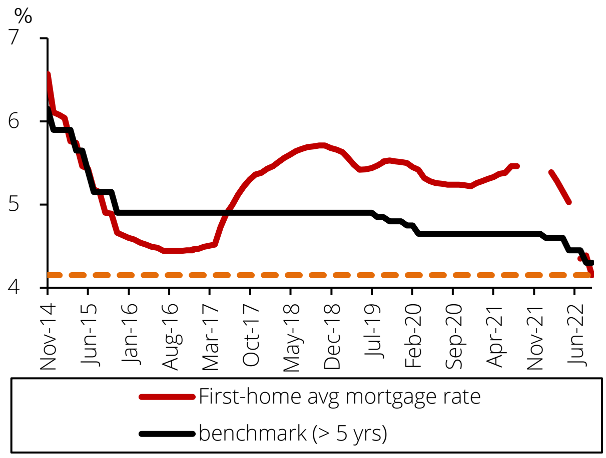
| Six SOE banks | Total corporate loan 1H22 (Rmb bn) | Of which property loan | Property sector as of total corporate loan | 100bn as of total corporate loan | Property sector NPL | All other sectors avg NPL ratio | Corporate loan NPL ratio | NPL ratio if 100bn of loans goes to property from other sectors |
|---|---|---|---|---|---|---|---|---|
| ABC | 10,255 | 843 | 8.2% | 1.0% | 4.0% | 2.0% | 2.14% | 2.16% |
| CCB | 10,597 | 763 | 7.2% | 0.9% | 3.0% | 2.1% | 2.15% | 2.15% |
| BOC | 8,434 | 735 | 8.7% | 1.2% | 5.7% | 1.7% | 2.03% | 2.07% |
| ICBC | 13,310 | 708 | 5.3% | 0.8% | 5.5% | 1.8% | 2.03% | 2.06% |
| BOCOM | 4,369 | 494 | 11.3% | 2.3% | 1.3% | 1.9% | 1.86% | 1.84% |
| PSBC | 2,519 | 178 | 7.1% | 4.0% | 1.0% | 0.5% | 0.56% | 0.58% |

*Source: Companies, DBS HK*

## Mortgage: Can banks balance price, volume growth, and credit cost?

Mortgage rate declining sharply. According to a Beike Research report, the mainstream first-home mortgage rate in 103 cities was 4.15% and that of the second house was 4.91% (Fig 14). First-home average mortgage rates have dropped by more than 1% YTD. Both have reached a historically low level in the past eight years. This is in line with the declining LPR trend, which saw the LPR drop by 35bps YTD. At the end of Sep 2022, PBOC and CBIRC had also granted local governments of eligible cities the discretion to periodically adjust their first-home mortgage rate floors up to end-2022.

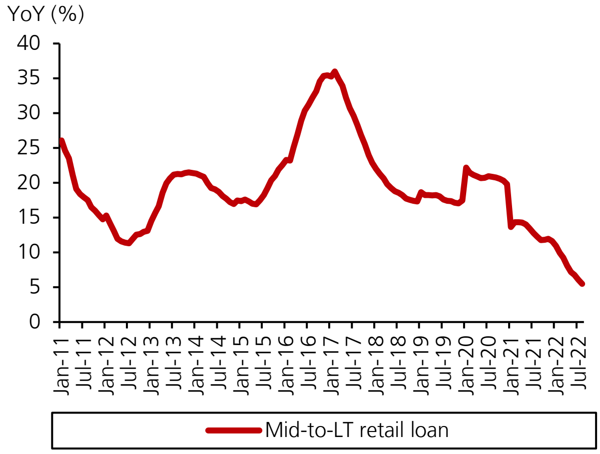
**Fig 14: First-home average mortgage rate reaching new low**




*Source: Wind, DBS HK*

Mortgage demand remains weak in 3Q22. Using mid to long-term retail loans as a proxy to mortgages, the y-o-y growth dropped from a double digit in FY21 to a mid-to-high single digit YTD (Fig 15). It further dropped to 5.5% in Aug. We see some marginal recovery in terms of lower drop in new increment in Sep. Residential mid to long term loan increased by Rmb 345bn. The increment is Rmb 120bn lower than the same period last year. With further cuts in mortgage pricing and the policies to stabilise the property market gradually taking effect, we expect some marginal recovery in 4Q22 and 2023, though it's unlikely that the property market and mortgage demand would recover to the previous year's level.

**Fig 15: Weaker mortgage growth in 3Q22**




*Source: PBOC, DBS HK*

Slight deterioration in asset quality in 3Q22. The delinquency ratio is a leading indicator of the NPL ratio. The monthly disclosure of the delinquency ratio of underlying assets of the MBSs issued by each bank offers a higher frequency monitor of the asset quality of mortgages.

Here we use PSBC, CCB, and CMB, which have the largest exposure to mortgages, as examples (Fig 16). As the delinquency ratio is an accumulated number (e.g. higher delinquency ratio for a longer period of the same product), we chose MBSs that have a similar duration from effective date to comparison period for an apple-to-apple comparison. For example, the PSBC 2022 Batch 1 MBS was issued in Jan 2022, and was issued by around 7 months in Sep 2022. The comparison we choose is PSBC 2019 Batch 1, which was issued in Dec 2019 and was issued by around 8 months in Sep 2020. We then compare the delinquency ratio of these two products in Sep 22 and Sep 20 respectively, to eliminate the impact on from seasonality and different duration from issuance date.

We found that the Aug-Sep delinquency ratio is higher in 2022 for most of the MBSs compared with the same period in previous years. The average gap between the >90 days delinquency ratio in Sep 2022 vs. that of previous years is 2bps, which is in line with 1H22's mortgage NPL ratio performance of 3bps NPL ratio increment h-o-h.

Following the weak asset quality in 1H22, we did not see a recovery in 3Q22. The uncertainties for the economic and property sector recovery, as well as the mortgage boycott in Jul, are likely to have a continuous negative impact on the NPL ratio in 2H22.

**Fig 16: Higher mortgage delinquency ratio in 3Q22 indicated in the MBSs**

| | | | Delinquency rate | | | | | |
|---|---|---|---|---|---|---|---|---|
| MBS | Effective rate | Period | 1-30 days | 30-60 days | 60-90 days | 90-180days | Default | Total |
| PSBC 2022 Batch 1 | 1/27/2022 | 2022/8/26-2022/9/26 | 0.16% | 0.06% | 0.02% | 0.04% | 0.10% | 0.38% |
| PSBC 2019 Batch 1 | 12/17/2019 | 2020/8/26-2020/9/26 | 0.12% | 0.03% | 0.01% | 0.05% | 0.15% | 0.36% |
| CMB 2021 Batch 4 | 9/30/2021 | 2022/8/19-2022/9/19 | 0.08% | 0.08% | 0.06% | 0.03% | 0.01% | 0.26% |
| CMB 2021 Batch 3 | 9/14/2021 | 2022/8/19-2022/9/19 | 0.06% | 0.06% | 0.09% | 0.10% | 0.07% | 0.38% |
| CMB 2020 Batch 4 | 9/25/2020 | 2021/8/19-2021/9/19 | 0.00% | 0.05% | 0.00% | 0.01% | 0.00% | 0.06% |
| CMB 2019 Batch 3 | 10/30/2019 | 2020/8/19-2020/9/19 | 0.07% | 0.05% | 0.02% | 0.01% | 0.03% | 0.18% |
| CCB 2021 Batch 15 | 11/18/2021 | 2022/8/26-2022/9/26 | 0.22% | 0.03% | 0.04% | 0.06% | 0.09% | 0.44% |
| CCB 2021 Batch 1 | 1/21/2021 | 2022/8/26-2022/9/26 | 0.32% | 0.06% | 0.08% | 0.09% | 0.32% | 0.87% |
| CCB 2020 Batch 14 | 12/10/2020 | 2021/8/26-2021/9/26 | 0.28% | 0.08% | 0.11% | 0.26% | 0.13% | 0.13% |

*Source: China Bond, DBS HK*

How mortgage growth, rate, and asset quality affect banks NII growth and profitability? We have done a sensitivity analysis on how the mortgage rate and growth change would affect banks' NIM and NII growth. The table below (Fig 17) is based on the total mortgage loan book, NII, and interest-earning assets as of FY21 of the 10 China banks under our coverage, which is used as a proxy for the China banking sector. A similar analysis was done for each individual bank as well.

Key assumptions for FY22F are 1) mortgage growth of 8% y-o-y: Assuming marginal recovery from c.6.2% y-o-y in 1H22 with stimulus policies in place; 2) Mortgage rate drop of 50bps: Based on a 35bps drop in the five-year LPR YTD and lower first-home mortgage rate; and 3) a 3bps increase in the NPL ratio: In line with the 1H22 trend when the NPL ratio increased by 3bps to 0.23%, as our estimations from the delinquency ratio are showing a trend in 3Q22 that is similar to that of 1H22. We assume a provision coverage of 200%, which was in line with China banks' overall provision coverage ratio for FY21, as reported by CBIRC.

Under these assumptions, our key findings are:

1) NIM sensitivity: The impact on NIM would be mainly from the repricing of existing mortgage loans. Using the FY21 data as the baseline for the estimation, we estimate that a 10bps mortgage rate drop would bring a c.1.9bps negative impact on NIM, and a 50bps rate drop would drag down NIM by 9.8bps. For individual banks (Fig 18), SOE banks like the Big Four and PSBC have relatively higher NIM sensitivity, as they have a higher exposure to mortgages. Again, CMB has the highest NIM sensitivity to mortgages among the joint-stock banks.

2) NII and PBT impact: Under such assumptions, we expect mortgages to bring a c.3.3% y-o-y NII growth and contribute 5.8% of FY21 PBT. The negative NIM impact could be offset by volume growth. Provision costs will also be slightly higher and the total contribution to PBT is estimated to be c.Rmb 89bn, or 4.8% of total FY21 PBT.

This PBT estimation only considers the credit costs on the cost side, while not considering other costs such as staff, admin, and due diligence costs. We think other costs are likely to increase at a lower rate than mortgage revenue growth due to economies of scale.

We have also done a sensitivity analysis by changing our key assumptions on mortgage loan growth and the change in the NPL ratio. Assuming other cost increments from the mortgage business come to 5% of PBT (a slightly lower assumption than the NII contribution to PBT of 5.8%), the mortgage business would be profitable in half of the assumed scenarios (marked in red), especially if the volume growth could recover to higher than 8% y-o-y with the sharp rate decline. Still, it remains a product preferred by banks, with a long duration and relatively lower NPL ratio compared with other consumer loans, especially as the interest rate is declining for all loans.

Downward revise of existing mortgage rate? There are market speculations recently that existing mortgage rate could be revised down to the latest policy rate if its rate is higher than 5.88%. Banks have not confirmed this news from official channels but there was similar news in 2009 that banks offered 30% discount in existing mortgage rate.

If 60% of the existing mortgage (e.g. outstanding balance in 2015+ new issuance in 2018/19 as of total) saw 158bps (5.88% vs current LPR of 4.3%) of rate cut and the remaining 40% and new mortgage have 50bps of rate cut, the estimated NIM drop would be c.21-22bps and NII would drop by c.2.4% from FY21's level. However, the real impact might be smaller than this as 1) our NIM calculation did not consider the decline in funding costs; and 2) the real scale of mortgage being repriced might be lower than our rough estimation of 60%.

**Fig 17: Mortgage vs. NIM and NII sensitivity analysis**

| RMB (bn) if otherwise stated | |
|---|---|
| Mortgage loan book in FY21 | 29,100 |
| NII in FY21 | 3,315 |
| NIM | 2.07% |
| Average interest earnings assets in FY21 | 160,054 |
| Mortgage loan growth rate | 8% |
| Increase in mortgage loans that are repriced at lower rate | 2,328 |
| NIM drop assumption | 50bps |
| NII in FY22F | 3,422.64 |
| y-o-y growth | 3.3% |
| Increase in NPL ratio in 2022 | 0.03% |
| Provision coverage assumption | 200% |
| Provision cost change | 19 |
| PBT contribution | 89.17 |
| Total FY21 PBT | 1851.74 |
| Contribution in PBT | **4.8%** |

Sensitivity analysis (new mortgage loans priced at lower rates)

| rate decrease (bps) | Change in NII | Change in NII | New NIM | Increase in NIM (bps) |
|---|---|---|---|---|
| -10 | (2.33) | -0.1% | 2.07% | -0.1 |
| -20 | (4.66) | -0.1% | 2.07% | -0.3 |
| -30 | (6.98) | -0.2% | 2.07% | -0.4 |
| -40 | (9.31) | -0.3% | 2.07% | -0.6 |
| -50 | (11.64) | -0.4% | 2.06% | -0.7 |

Sensitivity analysis (existing mortgage loans priced at lower rate:

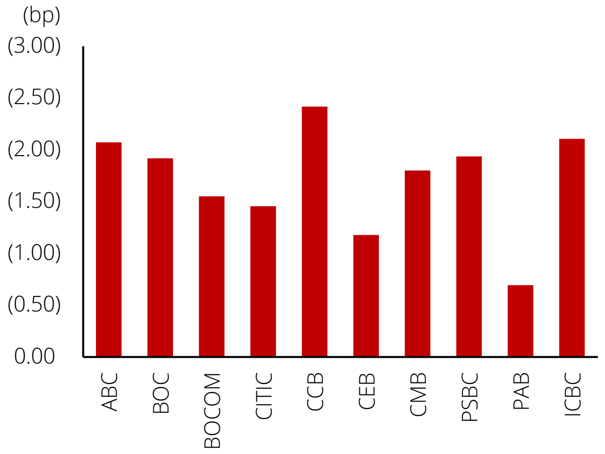
| rate decrease (bps) | Change in NII | Change in NII | New NIM | Increase in NIM (bps) |
|---|---|---|---|---|
| -10 | (29.10) | -0.9% | 2.05% | -1.8 |
| -20 | (58.20) | -1.8% | 2.03% | -3.6 |
| -30 | (87.30) | -2.6% | 2.02% | -5.5 |
| -40 | (116.40) | -3.5% | 2.00% | -7.3 |
| -50 | (145.50) | -4.4% | 1.98% | -9.1 |

Sensitivity analysis on change in PBT:

| | | Loan growth | | | | |
|---|---|---|---|---|---|---|
| | 4.8% | 6% | 7% | 8% | 9% | 10% |
| | -0.03% | 3.4% | 5.1% | 6.9% | 8.6% | 10.3% |
| | 0.00% | 2.4% | 4.1% | 5.8% | 7.5% | 9.3% |
| NPL ratio change | 0.03% | 1.4% | 3.1% | 4.8% | 6.5% | 8.2% |
| | 0.06% | 0.4% | 2.1% | 3.8% | 5.5% | 7.2% |
| | 0.09% | -0.6% | 1.1% | 2.8% | 4.5% | 6.1% |

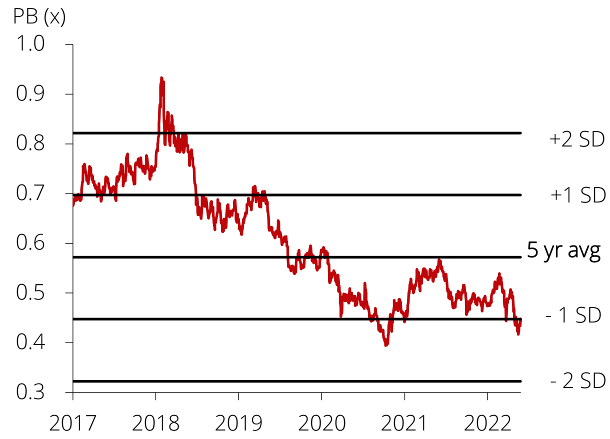
*Source: Companies, DBS HK*

**Fig 18: NIM sensitivity if mortgage rate drops by 10bps**



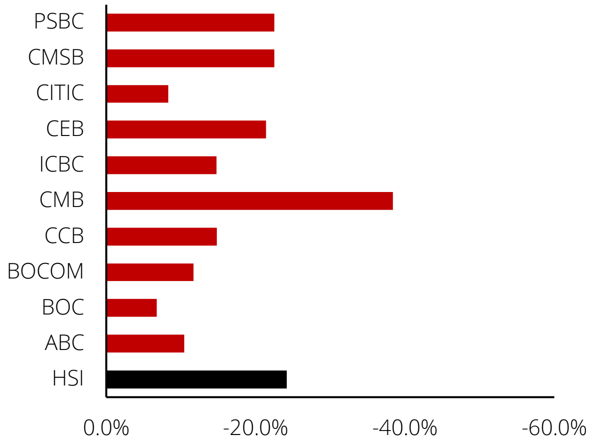

*Source: Companies, DBS HK*

**Fig 19: Sector valuation almost around five-year low**




*Source: Bloomberg Finance L.P., DBS HK, Based on 7 Oct closing*

**Fig 20: China banks' stock performance YTD**




*Source: Bloomberg Finance L.P., DBS HK, Based on Oct 7 closing*

## Has the property market weakness been factored in the banks' valuation?

Trading below five-year average, -1SD now. The sector is now trading at an average of c.0.35x forward P/B, almost around it five-year low (Fig 19), while the five-year average is around c.0.57x P/B. Of course, most of the HK-listed sectors are trading around the five-year low now. Most of the China banks, except for CMB, are still outperforming the HSI YTD. But the question we want to answer here is, is there any chance that the sector would be re-rated to its five-year average, or would a lower valuation be the new normal? If the latter is true, has the current valuation already priced in the negatives?

We believe the negative impacts from the property sector are largely priced in now. The five-year average P/B was 0.57x and the average ROE of the banks we cover was c.12.4% for the past five years. With the assumption of a long-term ROE of 10% and terminal growth rate of 3%, we get an implied cost of equity (COE) of c.15%, derived from the past five-year trading P/B.

Using the same COE of 15% and a lower terminal growth of 0% to reflect the economic uncertainties, the ROE derived from the current valuation of 0.35x P/B is 5.3%, which, we see, is already a very pessimistic assumption, as it's around or lower than the level at which the US banks (e.g. Citi, JP Morgan, and Wells Fargo) were trading during the post-crisis years of 2009-2011.

Based on our previous analysis that 1) the bank loan book could maintain a reasonable growth level, even with the property sector slowing down; 2) mortgage remains a profitable business for banks if growth could recover to the high single-digit level; and 3) the NPL impact is not significant, even if SOE banks have to support the property sector, we don't expect a high ROE drop, even in the long run.

As mentioned, the banking sector's share performance YTD was largely correlated with the property sector's performance, which means that investors may neglect to consider banks' profitability arising from exposure to other industries, such as new infrastructure, green finance, premium manufacturing, etc., that have higher growth and a better asset quality than the property sector.

**Fig 21: Implied ROE of 5.3% at current valuation**

| | Implication from 5-yr valuation | | Implication from current valuation | |
|---|---|---|---|---|
| P/B | 0.57 | 5-yr average | 0.35 | current valuation |
| ROE | 10% | 5-yr average at 12.4% | **5.3%** | Derived from other parameters |
| Cost of equity | 15% | Derived from other parameters | 15% | COE derived from 5-yr average level |
| Terminal growth | 3% | Assumption | 0% | Assumptions |

*Source: Bloomberg Finance L.P., DBS HK*

However, we maintain a neutral outlook on the share price in the short term. We see a long-term buying opportunity for China banks, but the short-term volatility may remain before we see more signals of a recovery of the China property sector and economy. Property sales showed limited improvement during the national holiday week.

In the near term, we prefer more defensive names like Big Four as 1) relatively lower valuation among peers and >10% dividend yield; 2) NPL impact controllable even if they are asked to inject more liquidity to developers; and 3) NPL risk in property sector has been largely exposed, especially for BOC and ICBC. Among the Big Four, we currently prefer BOC (3988 HK, BUY, TP HKD 3.85) as 1) its NIM sensitivity on mortgage rate change is the lowest among Big Four; and 2) its international exposure diversifies risks and could benefit more from USD interest rate upward cycle.

We maintain our preference on the oversold quality names such as PSBC (1658 HK) in the mid-long term with BUY and TP at HKD 7.4. Investors are worried about its mortgage exposure, but we found that its NIM impact from mortgages is no higher than that of the Big Four. Additionally, robust fee growth, especially in rural areas, would be a new growth driver.

## Peers valuation

| Company Name | Code | Price Local$ | Target Price Local$ | Recom | Mkt Cap US$m | Fiscal Yr | PE 22F x | PE 23F x | Yield 22F % | Yield 23F % | P/Bk 22F x | P/Bk 23F x | ROE 22F % | ROE 23F % | FY21-23 Earnings CAGR % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H-share banks | | | | | | | | | | | | | | | |
| China Con.Bank 'H'* | 939 HK | 4.41 | 8.00 | BUY | 142,427 | Dec | 3.3 | 3.0 | 9.4 | 10.2 | 0.4 | 0.3 | 12.5 | 12.5 | 6.2 |
| Bank Of China 'H'* | 3988 HK | 2.55 | 3.85 | BUY | 116,827 | Dec | 3.2 | 3.1 | 9.8 | 10.2 | 0.3 | 0.3 | 10.8 | 10.5 | 4.1 |
| Agricultural Bk.Of Chin. 'H'* | 1288 HK | 2.31 | 3.10 | HOLD | 136,396 | Dec | 3.2 | 3.0 | 10.0 | 10.5 | 0.3 | 0.3 | 10.9 | 10.6 | 3.8 |
| Bank Of Comms.'H'* | 3328 HK | 4.05 | 5.70 | BUY | 43,302 | Dec | 3.2 | 3.0 | 9.9 | 10.5 | 0.3 | 0.3 | 10.4 | 10.3 | 5.1 |
| China Merchants Bank 'H'* | 3968 HK | 30.10 | 63.70 | BUY | 103,607 | Dec | 5.3 | 4.5 | 6.3 | 7.3 | 0.8 | 0.7 | 17.9 | 17.3 | 14.9 |
| China Citic Bank 'H'* | 998 HK | 3.10 | 3.60 | HOLD | 27,868 | Dec | 2.5 | 2.3 | 11.2 | 12.2 | 0.2 | 0.2 | 11.0 | 11.3 | 6.3 |
| China Everbright Bk.'H'* | 6818 HK | 2.10 | 2.40 | HOLD | 21,877 | Dec | 2.6 | 2.4 | 10.8 | 11.4 | 0.3 | 0.2 | 10.4 | 10.2 | 4.7 |
| China Minsheng Banking 'H' | 1988 HK | 2.27 | n.a. | NR | 19,223 | Dec | 3.0 | 2.9 | 9.8 | 10.1 | 0.2 | 0.2 | 6.0 | 6.0 | 1.3 |
| Chongqing Rur.Coml.Bk. 'H' | 3618 HK | 2.55 | n.a. | NR | 5,282 | Dec | 2.5 | 2.3 | 11.1 | 11.8 | 0.2 | 0.2 | 9.8 | 10.0 | 8.8 |
| Postal Savings Boc.'H'* | 1658 HK | 4.04 | 7.40 | BUY | 52,404 | Dec | 4.3 | 3.7 | 7.5 | 8.6 | 0.5 | 0.5 | 12.1 | 12.9 | 14.1 |
| Indl&Coml.Boc.'H'* | 1398 HK | 3.61 | 6.10 | BUY | 203,499 | Dec | 3.3 | 3.1 | 9.4 | 9.9 | 0.4 | 0.3 | 11.7 | 11.3 | 5.5 |
| A-share banks | | | | | | | | | | | | | | | |
| China Con.Bank 'A'* | 601939 CH | 5.5 | 7.00 | BUY | 142,427 | Dec | 4.4 | 4.1 | 6.9 | 7.5 | 0.5 | 0.5 | 12.5 | 12.5 | 6.2 |
| Bank Of China 'A'* | 601988 CH | 3.05 | 3.40 | HOLD | 116,827 | Dec | 4.2 | 4.0 | 7.5 | 7.9 | 0.4 | 0.4 | 10.9 | 10.6 | 4.7 |
| Agricultural Bank Of China 'A'* | 601288 CH | 2.86 | 3.20 | HOLD | 136,396 | Dec | 4.3 | 4.1 | 7.4 | 7.8 | 0.5 | 0.4 | 10.9 | 10.6 | 3.8 |
| Bank Of Comms.'A'* | 601328 CH | 4.61 | 5.20 | BUY | 43,302 | Dec | 4.0 | 3.8 | 8.0 | 8.4 | 0.4 | 0.4 | 10.4 | 10.3 | 5.1 |
| China Merchants Bank 'A'* | 600036 CH | 29.89 | 51.80 | BUY | 103,607 | Dec | 5.7 | 4.9 | 5.8 | 6.7 | 0.9 | 0.8 | 17.9 | 17.3 | 14.9 |
| China Citic Bank 'A'* | 601998 CH | 4.63 | 4.40 | HOLD | 27,868 | Dec | 4.2 | 3.8 | 6.9 | 7.4 | 0.4 | 0.3 | 11.0 | 11.3 | 6.3 |
| China Everbright Bk.'A'* | 601818 CH | 2.81 | 2.40 | HOLD | 21,877 | Dec | 3.8 | 3.6 | 7.4 | 7.8 | 0.4 | 0.4 | 10.4 | 10.2 | 4.7 |
| China Minsheng Banking 'A' | 600016 CH | 3.40 | n.a. | NR | 19,223 | Dec | 4.8 | 4.7 | 6.1 | 6.2 | 0.3 | 0.3 | 6.0 | 6.0 | 1.5 |
| CQ Rural Commercial Bank 'A' | 601077 CH | 3.62 | n.a. | NR | 5,282 | Dec | 3.9 | 3.5 | 7.4 | 8.0 | 0.4 | 0.3 | 9.8 | 10.0 | 10.6 |
| Postal Savings Bank Of China 'A'* | 601658 CH | 4.17 | 6.80 | BUY | 52,404 | Dec | 4.8 | 4.2 | 6.6 | 7.6 | 0.6 | 0.5 | 12.1 | 12.9 | 14.1 |
| Bank Of Shai. 'A' | 601229 CH | 5.92 | n.a. | NR | 11,731 | Dec | 3.7 | 3.4 | 8.0 | 8.7 | 0.4 | 0.4 | 11.6 | 11.7 | 7.2 |
| Ping An Bank 'A'* | 000001 CH | 11.34 | 15.90 | BUY | 30,694 | Dec | 5.6 | 4.6 | 2.3 | 2.8 | 0.6 | 0.5 | 11.5 | 12.7 | 20.1 |
| Industrial & Coml.Bk.Of China 'A'* | 601398 CH | 4.35 | 5.40 | BUY | 203,499 | Dec | 4.3 | 4.1 | 7.1 | 7.5 | 0.5 | 0.4 | 11.7 | 11.3 | 5.5 |
| HK banks | | | | | | | | | | | | | | | |
| Hang Seng Bank* | 11 HK | 117.40 | 150.00 | BUY | 28,596 | Dec | 17.7 | 11.6 | 3.9 | 6.1 | 1.2 | 1.2 | 6.9 | 10.3 | 18.6 |
| Boc Hong Kong Holdings* | 2388 HK | 25.70 | 34.10 | BUY | 34,617 | Dec | 9.9 | 7.7 | 5.3 | 6.7 | 0.9 | 0.8 | 9.0 | 11.0 | 23.8 |
| Bank Of East Asia | 23 HK | 8.28 | n.a. | NR | 2,843 | Dec | 6.6 | 4.9 | 8.5 | 9.4 | 0.2 | 0.2 | 3.1 | 4.3 | 2.6 |
| Dah Sing Banking Gp. | 2356 HK | 5.13 | n.a. | NR | 919 | Dec | 3.2 | 3.6 | 8.8 | 8.4 | 0.2 | 0.2 | 9.0 | 7.1 | 9.5 |
| ASEAN banks | | | | | | | | | | | | | | | |
| Oversea-Chinese Bkg. | OCBC SP | 11.59 | 15.00 | BUY | 36,574 | Dec | 9.1 | 8.0 | 5.1 | 5.7 | 1.0 | 0.9 | 10.7 | 11.6 | 16.1 |
| United Overseas Bank | UOB SP | 26.15 | 34.20 | BUY | 30,815 | Dec | 10.0 | 8.2 | 4.9 | 5.9 | 1.0 | 1.0 | 10.3 | 12.2 | 15.8 |
| Rhb Bank Bhd | RHBBANK MK | 5.49 | 6.00 | BUY | 4,928 | Dec | 8.7 | 7.1 | 6.1 | 7.2 | 0.8 | 0.7 | 9.0 | 10.5 | 10.3 |
| Public Bank | PBK MK | 4.17 | 4.45 | HOLD | 17,249 | Dec | 13.7 | 11.6 | 3.9 | 4.5 | 1.6 | 1.5 | 11.8 | 13.1 | 11.0 |
| Global banks | | | | | | | | | | | | | | | |
| Bank Of America | BAC US | 31.69 | n.a. | NR | 254,637 | Dec | 10.0 | 8.6 | 2.8 | 3.0 | 1.0 | 0.9 | 10.6 | 11.3 | (1.6) |
| Citigroup | C US | 42.95 | n.a. | NR | 83,182 | Dec | 6.1 | 6.4 | 4.8 | 4.9 | 0.5 | 0.4 | 7.6 | 6.9 | (20.0) |
| Jp Morgan Chase & Co. | JPM US | 109.37 | n.a. | NR | 321,225 | Dec | 9.8 | 8.8 | 3.7 | 3.8 | 1.2 | 1.1 | 12.5 | 13.2 | (11.3) |
| Standard Chartered (Hkg)* | 2888 HK | 46.5 | 58.30 | BUY | 17,148 | Dec | 6.4 | 5.2 | 1.6 | 2.7 | 0.3 | 0.3 | 5.2 | 6.0 | 33.6 |
| HSBC Holdings* | 5 HK | 38.75 | 63.90 | BUY | 98,573 | Dec | 8.3 | 5.3 | 6.1 | 9.4 | 0.5 | 0.4 | 7.8 | 8.6 | 21.7 |

*Source: Thomson Reuters, *DBS HK*

| |
|---|
| DBS HK recommendations are based on an Absolute Total Return* Rating system, defined as follows: |
| STRONG BUY (>20% total return over the next 3 months, with identifiable share price catalysts within this time frame) |
| BUY (>15% total return over the next 12 months for small caps, >10% for large caps) |
| HOLD (-10% to +15% total return over the next 12 months for small caps, -10% to +10% for large caps) |
| FULLY VALUED (negative total return, i.e., > -10% over the next 12 months) |
| SELL (negative total return of > -20% over the next 3 months, with identifiable share price catalysts within this time frame) |

**Share price appreciation + dividends*

Completed Date: 14 Oct 2022 16:15:38 (HKT)
Dissemination Date: 14 Oct 2022 17:24:42 (HKT)

Sources for all charts and tables are DBS HK unless otherwise specified.

GENERAL DISCLOSURE/DISCLAIMER

This report is prepared by DBS Bank (Hong Kong) Limited ("DBS HK"). This report is solely intended for the clients of DBS Bank Ltd., DBS HK, DBS Vickers (Hong Kong) Limited ("DBSV HK"), and DBS Vickers Securities (Singapore) Pte Ltd. ("DBSVS"), its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBS HK.

The research set out in this report is based on information obtained from sources believed to be reliable, but we (which collectively refers to DBS Bank Ltd., DBS HK, DBSV HK, DBSVS, its respective connected and associated corporations, affiliates and their respective directors, officers, employees and agents (collectively, the "DBS Group") have not conducted due diligence on any of the companies, verified any information or sources or taken into account any other factors which we may consider to be relevant or appropriate in preparing the research. Accordingly, we do not make any representation or warranty as to the accuracy, completeness or correctness of the research set out in this report. Opinions expressed are subject to change without notice. This research is prepared for general circulation. Any recommendation contained in this document does not have regard to the specific investment objectives, financial situation and the particular needs of any specific addressee. This document is for the information of addressees only and is not to be taken in substitution for the exercise of judgement by addressees, who should obtain separate independent legal or financial advice. The DBS Group accepts no liability whatsoever for any direct, indirect and/or consequential loss (including any claims for loss of profit) arising from any use of and/or reliance upon this document and/or further communication given in relation to this document. This document is not to be construed as an offer or a solicitation of an offer to buy or sell any securities. The DBS Group, along with its affiliates and/or persons associated with any of them may from time to time have interests in the securities mentioned in this document. The DBS Group, may have positions in, and may effect transactions in securities mentioned herein and may also perform or seek to perform broking, investment banking and other banking services for these companies.

Any valuations, opinions, estimates, forecasts, ratings or risk assessments herein constitutes a judgment as of the date of this report, and there can be no assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments. The information in this document is subject to change without notice, its accuracy is not guaranteed, it may be incomplete or condensed, it may not contain all material information concerning the company (or companies) referred to in this report and the DBS Group is under no obligation to update the information in this report.

This publication has not been reviewed or authorized by any regulatory authority in Singapore, Hong Kong or elsewhere. There is no planned schedule or frequency for updating research publication relating to any issuer.

The valuations, opinions, estimates, forecasts, ratings or risk assessments described in this report were based upon a number of estimates and assumptions and are inherently subject to significant uncertainties and contingencies. It can be expected that one or more of the estimates on which the valuations, opinions, estimates, forecasts, ratings or risk assessments were based will not materialize or will vary significantly from actual results. Therefore, the inclusion of the valuations, opinions, estimates, forecasts, ratings or risk assessments described herein IS NOT TO BE RELIED UPON as a representation and/or warranty by the DBS Group (and/or any persons associated with the aforesaid entities), that:

(a) such valuations, opinions, estimates, forecasts, ratings or risk assessments or their underlying assumptions will be achieved, and
(b) there is any assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments stated therein.

Please contact the primary analyst for valuation methodologies and assumptions associated with the covered companies or price targets. Any assumptions made in this report that refers to commodities, are for the purposes of making forecasts for the company (or companies) mentioned herein. They are not to be construed as recommendations to trade in the physical commodity or in the futures contract relating to the commodity referred to in this report.

DBS Vickers Securities (USA) Inc ("DBSVUSA"), a US-registered broker-dealer, does not have its own investment banking or research department, has not participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months and does not engage in market-making.

ANALYST CERTIFICATION

The research analyst(s) primarily responsible for the content of this research report, in part or in whole, certifies that the views about the companies and their securities expressed in this report accurately reflect his/her personal views. The analyst(s) also certifies that no part of his/her compensation was, is, or will be, directly or indirectly, related to specific recommendations or views expressed in the report. The research analyst (s) primarily responsible for the content of this research report, in part or in whole, certifies that he or his associate[1] does not serve as an officer of the issuer or the new listing applicant (which includes in the case of a real estate investment trust, an officer of the management company of the real estate investment trust; and in the case of any other entity, an officer or its equivalent counterparty of the entity who is responsible for the management of the issuer or the new listing applicant) and the research analyst(s) primarily responsible for the content of this research report or his associate does not have financial interests[2] in relation to an issuer or a new listing applicant that the analyst reviews. DBS Group has procedures in place to eliminate, avoid and manage any potential conflicts of interests that may arise in connection with the production of research reports. The research analyst(s) responsible for this report operates as part of a separate and independent team to the investment banking function of the DBS Group and procedures are in place to ensure that confidential information held by either the research or investment banking function is handled appropriately. There is no direct link of DBS Group's compensation to any specific investment banking function of the DBS Group.

COMPANY-SPECIFIC / REGULATORY DISCLOSURES

1. DBS Bank Ltd, DBS HK, DBSVS or their subsidiaries and/or other affiliates have proprietary positions in China Construction Bank Corp (939 HK), Bank of China Ltd (3988 HK), Agricultural Bank of China Ltd (1288 HK), Bank of Communications Co Ltd (3328 HK), China Merchants Bank Co Ltd (3968 HK), China CITIC Bank Corp Ltd (998 HK), China Minsheng Banking Corp Ltd (1988 HK), Postal Savings Bank of China Co Ltd (1658 HK), Industrial & Commercial Bank of China Ltd (1398 HK), Hang Seng Bank Ltd (11 HK), BOC Hong Kong Holdings Ltd (2388 HK), Bank of East Asia Ltd/The (23 HK), Standard Chartered PLC (2888 HK) and HSBC Holdings PLC (5 HK) recommended in this report as of 11 Oct 2022.

   DBS Bank Ltd, DBS HK, DBSVS or their subsidiaries and/or other affiliates have proprietary positions in Oversea-Chinese Banking Corp Limited (OCBC SP), United Overseas Bank Limited (UOB SP), Bank Of America Corporation (BAC US), Citigroup Incorporated (C US) and Jp Morgan Chase & Company (JPM US) recommended in this report as of 30 Sep 2022

2. DBS Bank Ltd, DBS HK, DBSVS, their subsidiaries and/or other affiliates have a net long position exceeding 0.5% of the total issued share capital in China Merchants Bank Co Ltd (3968 HK) and Postal Savings Bank of China Co Ltd (1658 HK) recommended in this report as of 11 Oct 2022.

3. DBS Bank Ltd, DBS HK, DBSVS, DBS Vickers Securities (USA) Inc ("DBSVUSA"), or their subsidiaries and/or other affiliates beneficially own a total of 1% of the issuer's market capitalization of Postal Savings Bank of China Co Ltd (1658 HK) as of 11 Oct 2022.

   DBS Bank Ltd, DBS HK, DBSVS, DBS Vickers Securities (USA) Inc ("DBSVUSA"), or their subsidiaries and/or other affiliates beneficially own a total of 1% of any class of common equity securities of Wells Fargo & Company (WFC US) as of 30 Sep 2022.

[1] An associate is defined as (i) the spouse, or any minor child (natural or adopted) or minor step-child, of the analyst; (ii) the trustee of a trust of which the analyst, his spouse, minor child (natural or adopted) or minor step-child, is a beneficiary or discretionary object; or (iii) another person accustomed or obliged to act in accordance with the directions or instructions of the analyst.

[2] Financial interest is defined as interests that are commonly known financial interest, such as investment in the securities in respect of an issuer or a new listing applicant, or financial accommodation arrangement between the issuer or the new listing applicant and the firm or analysis. This term does not include commercial lending conducted at arm's length, or investments in any collective investment scheme other than an issuer or new listing applicant notwithstanding the fact that the scheme has investments in securities in respect of an issuer or a new listing applicant.

4. Compensation for investment banking services:
DBS Bank Ltd, DBS HK, DBSVS, their subsidiaries and/or other affiliates of DBSVUSA have received compensation, within the past 12 months for investment banking services from China Construction Bank Corp (939 HK), Bank of China Ltd (3988 HK), Agricultural Bank of China Ltd (1288 HK), Bank of Communications Co Ltd (3328 HK), China Merchants Bank Co Ltd (3968 HK), China CITIC Bank Corp Ltd (998 HK), China Everbright Bank Co Ltd (6818 HK), Industrial & Commercial Bank of China Ltd (1398 HK), China Construction Bank Corporation (601939 CH), Bank Of China Limited (601988 CH), Agricultural Bank Of China Limited (601288 CH), Bank Of Communications Company Limited (601328 CH), China Merchants Bank Company Limited (600036 CH), China Citic Bank Corporation Limited (601998 CH), China Everbright Bank Company Limited (601818 CH), Ping An Bank Company Limited (000001 CH), Industrial & Commercial Bank Of China Limited (601398 CH), BOC Hong Kong Holdings Ltd (2388 HK), Bank of East Asia Ltd/The (23 HK) and HSBC Holdings PLC (5 HK) as of 30 Sep 2022.

DBS Bank Ltd, DBS HK, DBSVS, their subsidiaries and/or other affiliates of DBSVUSA, within the next 3 months, will receive or intend to seek compensation for investment banking services from China Construction Bank Corp (939 HK), Bank of China Ltd (3988 HK), Agricultural Bank of China Ltd (1288 HK), Bank of Communications Co Ltd (3328 HK), China Merchants Bank Co Ltd (3968 HK), China CITIC Bank Corp Ltd (998 HK), China Everbright Bank Co Ltd (6818 HK), China Minsheng Banking Corp Ltd (1988 HK), Industrial & Commercial Bank of China Ltd (1398 HK), China Construction Bank Corporation (601939 CH), Bank Of China Limited (601988 CH), Agricultural Bank Of China Limited (601288 CH), Bank Of Communications Company Limited (601328 CH), China Merchants Bank Company Limited (600036 CH), China Citic Bank Corporation Limited (601998 CH), China Everbright Bank Company Limited (601818 CH), China Minsheng Banking Corporation Limited (600016 CH), Bank of Shanghai A (601229 CH), Ping An Bank Company Limited (000001 CH), Industrial & Commercial Bank Of China Limited (601398 CH), BOC Hong Kong Holdings Ltd (2388 HK), Bank of East Asia Ltd/The (23 HK), RHB Bank (RHBBANK MK), Bank Of America Corporation (BAC US), Citigroup Incorporated (C US) and Industrial Bank Company Limited (601166 CH) as of 30 Sep 2022.

5. DBS Bank Ltd, DBS HK, DBSVS, their subsidiaries and/or other affiliates of DBSVUSA have managed or co-managed a public offering of securities for China Construction Bank Corp (939 HK), Bank of China Ltd (3988 HK), Agricultural Bank of China Ltd (1288 HK), Industrial & Commercial Bank of China Ltd (1398 HK) and Industrial & Commercial Bank Of China Limited (601398 CH) in the past 12 months, as of 30 Sep 2022.

DBSVUSA does not have its own investment banking or research department, nor has it participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months. Any US persons wishing to obtain further information, including any clarification on disclosures in this disclaimer, or to effect a transaction in any security discussed in this document should contact DBSVUSA exclusively.

6. Disclosure of previous investment recommendation produced:
DBS Bank Ltd, DBSVS, DBS HK, their subsidiaries and/or other affiliates of DBSVUSA may have published other investment recommendations in respect of the same securities / instruments recommended in this research report during the preceding 12 months. Please contact the primary analyst listed on page 1 of this report to view previous investment recommendations published by DBS Bank Ltd, DBS HK, DBSVS, their subsidiaries and/or other affiliates of DBSVUSA in the preceding 12 months.

RESTRICTIONS ON DISTRIBUTION

| | |
|---|---|
| General | This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation. |
| Australia | This report is being distributed in Australia by DBS Bank Ltd, DBSVS or DBSV HK. DBS Bank Ltd holds Australian Financial Services Licence no. 475946.<br><br>DBS Bank Ltd, DBSVS and DBSV HK are exempted from the requirement to hold an Australian Financial Services Licence under the Corporation Act 2001 ("CA") in respect of financial services provided to the recipients. Both DBS Bank Ltd and DBSVS are regulated by the Monetary Authority of Singapore under the laws of Singapore, and DBSV HK is regulated by the Hong Kong Securities and Futures Commission under the laws of Hong Kong, which differ from Australian laws.<br><br>Distribution of this report is intended only for "wholesale investors" within the meaning of the CA. |
| Hong Kong | This report is being distributed in Hong Kong by DBS Bank Ltd, DBS Bank (Hong Kong) Limited and DBS Vickers (Hong Kong) Limited, all of which are registered with or licensed by the Hong Kong Securities and Futures Commission to carry out the regulated activity of advising on securities. DBS Bank Ltd., Hong Kong Branch is a limited liability company incorporated in Singapore. |
| Indonesia | This report is being distributed in Indonesia by PT DBS Vickers Sekuritas Indonesia. |
| Malaysia | This report is distributed in Malaysia by AllianceDBS Research Sdn Bhd ("ADBSR"). Recipients of this report, received from ADBSR are to contact the undersigned at 603-2604 3333 in respect of any matters arising from or in connection with this report. In addition to the General Disclosure/Disclaimer found at the preceding page, recipients of this report are advised that ADBSR (the preparer of this report), its holding company Alliance Investment Bank Berhad, their respective connected and associated corporations, affiliates, their directors, officers, employees, agents and parties related or associated with any of them may have positions in, and may effect transactions in the securities mentioned herein and may also perform or seek to perform broking, investment banking/corporate advisory and other services for the subject companies. They may also have received compensation and/or seek to obtain compensation for broking, investment banking/corporate advisory and other services from the subject companies.<br><br>Wong Ming Tek, Executive Director, ADBSR |
| Singapore | This report is distributed in Singapore by DBS Bank Ltd (Company Regn. No. 196800306E) or DBSVS (Company Regn No. 198600294G), both of which are Exempt Financial Advisers as defined in the Financial Advisers Act and regulated by the Monetary Authority of Singapore. DBS Bank Ltd and/or DBSVS, may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an arrangement under Regulation 32C of the Financial Advisers Regulations. Where the report is distributed in Singapore to a person who is not an Accredited Investor, Expert Investor or an Institutional Investor, DBS Bank Ltd accepts legal responsibility for the contents of the report to such persons only to the extent required by law. Singapore recipients should contact DBS Bank Ltd at 6878 8888 for matters arising from, or in connection with the report. |
| Thailand | This report is being distributed in Thailand by DBS Vickers Securities (Thailand) Co Ltd.<br><br>For any query regarding the materials herein, please contact [Chanpen Sirithanarattanakul] at [research@th.dbs.com] |
| United Kingdom | This report is produced by DBS HK which is regulated by the Hong Kong Monetary Authority<br><br>This report is disseminated in the United Kingdom by DBS Bank Ltd, London Branch ("DBS UK"). DBS Bank Ltd is regulated by the Monetary Authority of Singapore. DBS UK is authorised by the Prudential Regulation Authority and is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request.<br><br>In respect of the United Kingdom, this report is solely intended for the clients of DBS UK, its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBS UK. This communication is directed at persons having professional experience in matters relating to investments. Any investment activity following from this communication will only be engaged in with such persons. Persons who do not have professional experience in matters relating to investments should not rely on this communication. |

| | |
|---|---|
| Dubai International Financial Centre | This communication is provided to you as a Professional Client or Market Counterparty as defined in the DFSA Rulebook Conduct of Business Module (the "COB Module"), and should not be relied upon or acted on by any person which does not meet the criteria to be classified as a Professional Client or Market Counterparty under the DFSA rules.<br><br>This communication is from the branch of DBS Bank Ltd operating in the Dubai International Financial Centre (the "DIFC") under the trading name "DBS Bank Ltd. (DIFC Branch)" ("DBS DIFC"), registered with the DIFC Registrar of Companies under number 156 and having its registered office at units 608 - 610, 6th Floor, Gate Precinct Building 5, PO Box 506538, DIFC, Dubai, United Arab Emirates.<br><br>DBS DIFC is regulated by the Dubai Financial Services Authority (the "DFSA") with a DFSA reference number F000164. For more information on DBS DIFC and its affiliates, please see http://www.dbs.com/ae/our--network/default.page.<br><br>Where this communication contains a research report, this research report is prepared by the entity referred to therein, which may be DBS Bank Ltd or a third party, and is provided to you by DBS DIFC. The research report has not been reviewed or authorised by the DFSA. Such research report is distributed on the express understanding that, whilst the information contained within is believed to be reliable, the information has not been independently verified by DBS DIFC.<br><br>Unless otherwise indicated, this communication does not constitute an "Offer of Securities to the Public" as defined under Article 12 of the Markets Law (DIFC Law No.1 of 2012) or an "Offer of a Unit of a Fund" as defined under Article 19(2) of the Collective Investment Law (DIFC Law No.2 of 2010).<br><br>The DFSA has no responsibility for reviewing or verifying this communication or any associated documents in connection with this investment and it is not subject to any form of regulation or approval by the DFSA. Accordingly, the DFSA has not approved this communication or any other associated documents in connection with this investment nor taken any steps to verify the information set out in this communication or any associated documents, and has no responsibility for them. The DFSA has not assessed the suitability of any investments to which the communication relates and, in respect of any Islamic investments (or other investments identified to be Shari'a compliant), neither we nor the DFSA has determined whether they are Shari'a compliant in any way.<br><br>Any investments which this communication relates to may be illiquid and/or subject to restrictions on their resale. Prospective purchasers should conduct their own due diligence on any investments. If you do not understand the contents of this document you should consult an authorised financial adviser. |
| United States | This report was prepared by DBS HK. DBSVUSA did not participate in its preparation. The research analyst(s) named on this report are not registered as research analysts with FINRA and are not associated persons of DBSVUSA. The research analyst(s) are not subject to FINRA Rule 2241 restrictions on analyst compensation, communications with a subject company, public appearances and trading securities held by a research analyst. This report is being distributed in the United States by DBSVUSA, which accepts responsibility for its contents. This report may only be distributed to Major U.S. Institutional Investors (as defined in SEC Rule 15a-6) and to such other institutional investors and qualified persons as DBSVUSA may authorize. Any U.S. person receiving this report who wishes to effect transactions in any securities referred to herein should contact DBSVUSA directly and not its affiliate. |
| Other jurisdictions | In any other jurisdictions, except if otherwise restricted by laws or regulations, this report is intended only for qualified, professional, institutional or sophisticated investors as defined in the laws and regulations of such jurisdictions. |

DBS Bank (Hong Kong) Limited

13th Floor One Island East, 18 Westlands Road, Quarry Bay, Hong Kong

Tel: (852) 3668-4181, Fax: (852) 2521-1812

Live more, Bank less

DBS Regional Research Offices

HONG KONG
DBS Bank (Hong Kong) Ltd
Contact: Dennis Lam
13th Floor One Island East,
18 Westlands Road, Quarry Bay, Hong Kong
Tel: 852 3668 4181
Fax: 852 2521 1812
e-mail: dbsvhk@dbs.com

SINGAPORE
DBS Bank Ltd
Contact: Paul Yong
12 Marina Boulevard,
Marina Bay Financial Centre Tower 3
Singapore 018982
Tel: 65 6878 8888
e-mail: groupresearch@dbs.com
Company Regn. No. 196800306E

INDONESIA
PT DBS Vickers Sekuritas (Indonesia)
Contact: Maynard Priajaya Arif
DBS Bank Tower
Ciputra World 1, 32/F
Jl. Prof. Dr. Satrio Kav. 3-5
Jakarta 12940, Indonesia
Tel: 62 21 3003 4900
Fax: 6221 3003 4943
e-mail: indonesiaresearch@dbs.com

THAILAND
DBS Vickers Securities (Thailand) Co Ltd
Contact: Chanpen Sirithanarattanakul
989 Siam Piwat Tower Building,
9th, 14th-15th Floor
Rama 1 Road, Pathumwan,
Bangkok Thailand 10330
Tel. 66 2 857 7831
Fax: 66 2 658 1269
e-mail: research@th.dbs.com
Company Regn. No 0105539127012
Securities and Exchange Commission, Thailand