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**China Financial Services**

# Testing the 'Impossible Trinity' Part I: Nine questions around local gov. debt

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We introduce the first report in our 3-part *Testing the 'Impossible Trinity'* series, which looks at the idea that banks cannot maintain a good balance of provisions, capital and dividends at the same time owing to squeezed earnings. In this report, we assume local gov. debt default risk will be limited as long as debt rollover is permitted and net balances continue to increase, and assess the potential multi-year margin loss of banks on the back of local gov. debt rollover due to lowering rates.

We look at nine questions that we think will be top of mind for investors and group these questions under three broad themes.

The first theme concerns the local gov. debt exposure on bank balance sheets, in terms of size, mix and distribution. We conclude non-covered banks with 48% local gov. debt to total assets (vs. 18% for covered banks) would face more challenges with potential tail risk. Inferring from this, we expect six large banks with larger balance sheets to step up and take on more local gov. debt.

The second theme is bank earnings risk, due to margin loss on local gov. debt. We use a loss assumption of Rmb ~30tn (USD 4.5tn) gross addition of local gov. debt and a ~30bps effective rate decrease each year, with banking system ROE decreasing by ~100bps, and non-covered banks by ~150bps each year in 2023E-25E. Based on this, we stress-test that a ~60bps rate cut per year on local gov. debt would trigger non-covered banks to face recapitalization risk with ROE declining to 1.7%.

Our third theme assesses risk factors of local gov. debt widening the divergence of individual banks. We highlight two sets of banks to see how these factors affect divergence: 1) **ABC** (downgrade to Sell, from Neutral) and **PSBC** (upgrade to Buy, from Sell) on the size of local gov. debt, and 2) **ICBC** (downgrade to Sell from Buy) and **CCB** (maintain Buy) on the % of local gov. bonds.

For our investment views on each bank, please see the third report in this series, *Testing the 'Impossible Trinity' III: Increasing dividend risk; **PSBC** up to Buy, **ICBC/ABC/Industrial** down to Sell*.

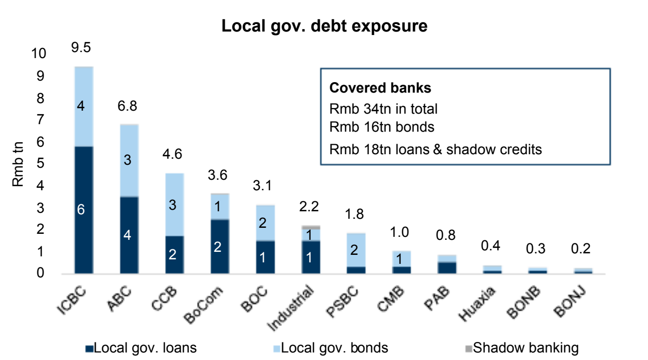
# Nine Questions around local gov. debt on bank balance sheets

## 1. What's the size and mix of local gov. debt on bank balance sheets?

Based on our economists' numbers, we estimate Rmb 34tn (USD 4.9tn) of local gov. debt sits on the balance sheets of covered banks, which account for 61% of banking assets. There are two elements to local gov. debt, namely loans (including shadow credit) of Rmb 18tn (USD 2.6tn) and bonds of Rmb 16tn (USD 2.3tn), on our estimates.

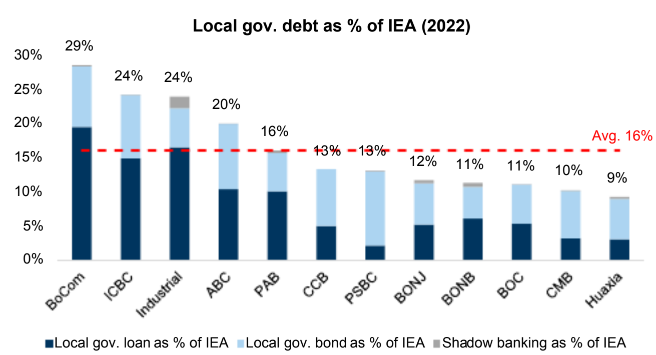
We arrive at this by summing up loans with a tenor of more than 5 years (excluding mortgages), and use the average portfolio share of ~48% for local gov. bonds held by banks. We also include shadow credit in local gov. debt and summarize it as part of loans.

**Exhibit 1: We assess Rmb 34tn(USD 4.9tn) local gov. debt on balance sheets of covered banks, accouting for 61% of banking assets, with loans (including shadow credit) of Rmb 18tn(USD 2.6tn) and bonds of Rmb 16tn(USD 2.3tn).**
As of 2022, GSe




Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 2: BoCom/Huaxia have largest/smallest local gov. debt exposure (as % of IEA) at 29%/9%, with 16% avg. of covered banks.**
As of 2022, GSe

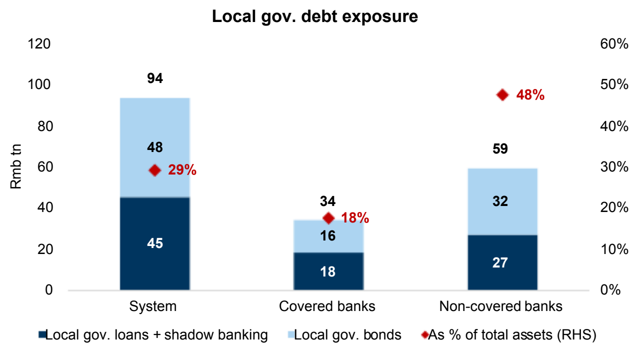



Source: Goldman Sachs Global Investment Research, Company data

## 2. What about the local gov. debt exposure of non-covered banks ?

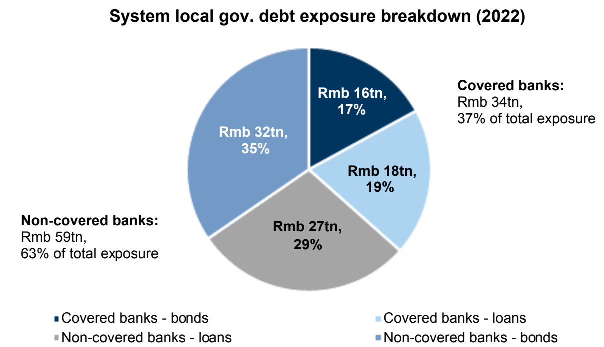
We estimate non-covered banks, which account for 39% of banking assets, have Rmb 59tn (USD 8.5tn) of local gov. debt, making up 63% of the total based on GS economists' estimates of total local gov. debt. We also estimate that non-covered banks account for 48% of local gov. debt as a % of total IEA, vs. 18% for covered banks, suggesting more earnings risk on potential margin loss on local gov. debt given the larger size.

**Exhibit 3: Covered banks have Rmb 34tn(USD 4.9tn) local gov. debt, 18% of total assets, vs. Rmb 59tn(USD 8.5tn) and 48% of total assets for non-covered banks.**
As of 2022, GSe




Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 4: System local gov. debt exposure breakdown**
As of 2022, GSe

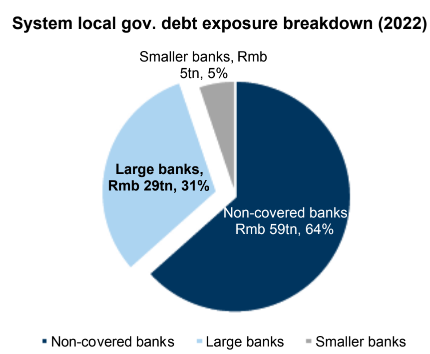



Source: Goldman Sachs Global Investment Research, Company data

## 3. Do large banks have larger exposure to local gov. debt ?

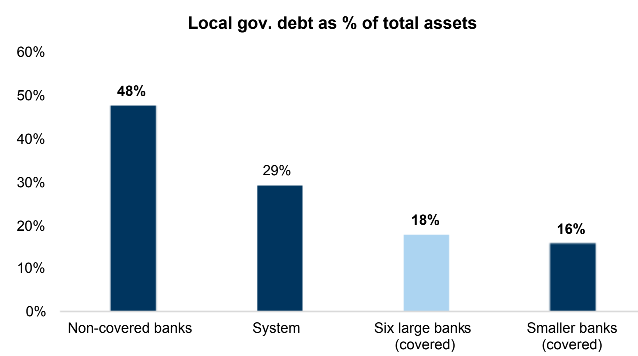
The six large banks (**ICBC, CCB, ABC, BOC, BoCom, PSBC)** account for Rmb 29tn (USD 4.2tn) of local gov. debt, 31% of the estimated system total, based on GS economists' estimates. And we assume larger banks can support more local gov. debt growth due to their sizable balance sheets, with local gov debt as a % of IEA at 18%, compared with 29% for the system. With a 1% increase in exposure, we believe these six banks could support additional local gov. debt of Rmb 1.6tn (USD 0.2tn), potentially offsetting the slowdown in growth of local gov. debt on non-covered bank balance sheets, as we assess the exposure would be 48%.

**Exhibit 5: Six large banks total Rmb 29tn(USD 4.2tn) local gov debt, 31% of estimated system total.**
As of 2022, GSe




Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 6: We expect large banks can support more local gov. debt growth on their large balance sheet, with local gov. debt as 18% of IEA, vs. 29% of system.**
As of 2022, GSe



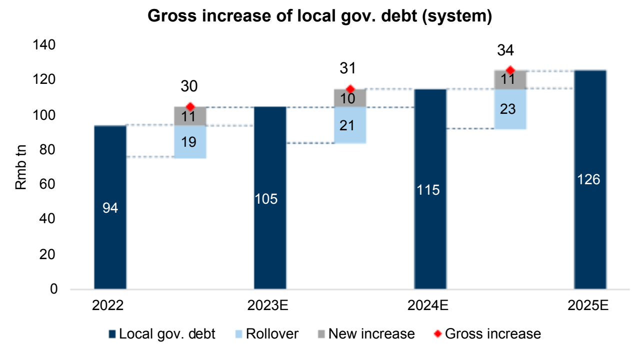

Source: Goldman Sachs Global Investment Research, Company data

## 4. What's the gross and net addition of local gov. debt each year ?

We estimate Rmb ~30tn (USD 4.5tn) of gross addition of local gov. debt each year to 2025E, with Rmb 20tn (USD 3.0tn) rollover balance and Rmb 10tn (USD 1.5tn) net addition.

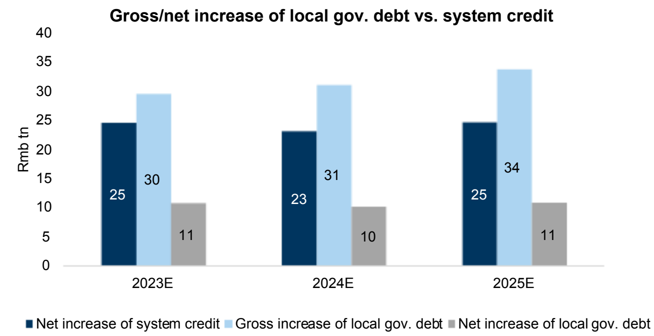
For the purposes of this analysis, we assume an average 5 year duration of local gov. debt, and unchanged weights of local gov. debt on bank balance sheets. This would mean 20% of local gov. debt rollover and ~10% balance growth each year.

**Exhibit 7: We estimate Rmb 30/31/34tn(USD 4.2/4.4/4.8tn) gross local gov. debt increase, with Rmb 19/21/23tn(USD 2.7/3.0/3.3tn) of rollover and Rmb 11/10/11tn(USD 1.5/1.4/1.5tn) of net increase in 2023E/24E/25E...**




Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 8: ...compared with new system credit growth addition of Rmb 25/23/25tn(USD 3.5/3.3/3.5tn), assuming annual balance growth of ~10%.**




Source: Goldman Sachs Global Investment Research, Company data

## 5. What's the potential margin loss on local gov. debt?

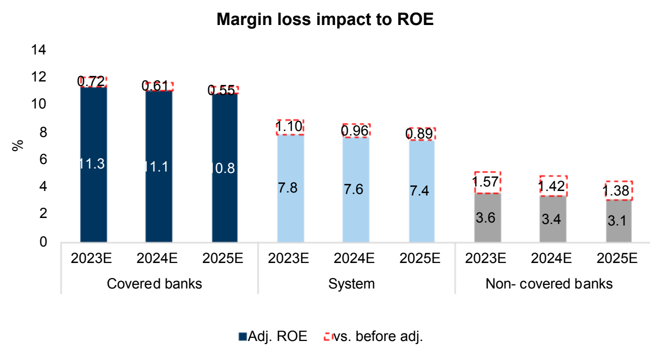
We estimate system ROE will decrease by ~100bps each year in 2023E-25E, due to margin loss on local gov. debt, else being equal. Looking at covered banks, we arrive at a ~60bps ROE decrease, and non-covered banks at ~150bps.

We quantify the margin risk of both stock rollover and increased flows of local gov. debt, assuming default risk is limited as long as rollover is allowed and net balances increase. We expect lowering rates on both stock rollover and increases in local gov. debt flows given the increasing size and difficulty of preventing default risk. We assume a 1% rate decrease on rollover debt each year and ~150 bps spread loss between local gov. debt and the overall bank rate as opportunity cost to model the margin loss of local gov. debt.

This implies the effective interest rate on local gov. debt would decrease by ~30bps each year on average in 2023E-25E. This would translate into a NIM decrease of covered banks by an average 3-10bps each year in 2023E-25E. We believe **ICBC/ABC/Industrial bank** would have a larger NIM contraction of 7.3/6.6/9.4bps vs. the 6.0bps average for covered banks each year 2023-25E, while **CMB** and **BOC** would have a smaller NIM decrease of 4.0/3.3bps, mainly due to the size of local gov. debt. The more local gov. debt held by banks, the more NIM dilution.

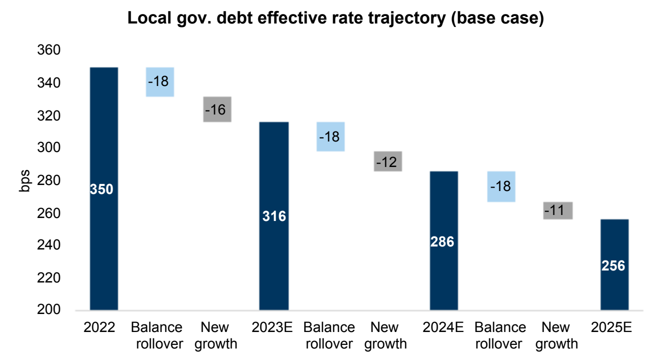
Based on these assumptions, and with the multi-year margin contraction led by lowering rates of increasing local gov. debt, banking system CET1 ratio could be 9.9%, with that of non-covered banks remaining above the minimum requirement at 7.9% by end-2025E, although the CET1 ratio would decrease by ~80bps cumulatively in 2023E-25E.

**Exhibit 9: We estimate system ROE decrease by ~100bps each year in 2023E-25E, due to margin loss on local gov. debt, else being equal. Compared with covered banks which at a ~60bps ROE decrease, non-covered banks would decrease c. ~150bps.**



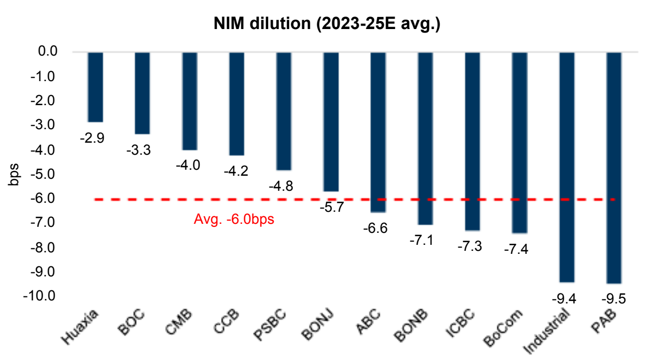

Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 10: The effective rate cut each year would be ~30bps, with 1% rate cut for 20% balance rollover and 150bps opportunity cost for ~10% new growth, which would translate to a NIM decrease of covered banks by 3-10bps each year in 2023E-25E.**



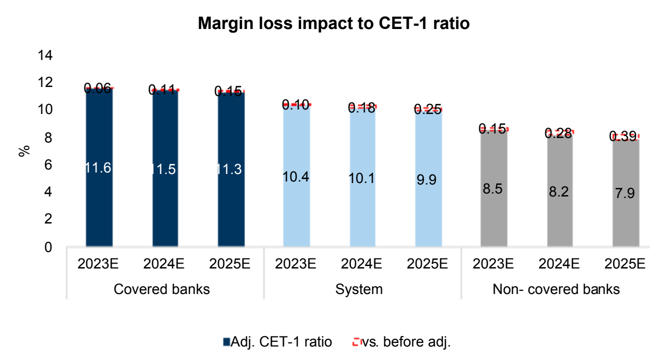

Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 11: We highlight ICBC/ABC/Industrial bank would have larger NIM contraction of 7.3/6.6/9.4bps vs. 6.0bps average of covered banks each year in 2023-25E, while CMB and BOC would have a smaller NIM decrease of 4.0/3.3bps, mainly due to the size of local gov. debt.**




Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 12: On our assumptions, with the multi-year margin contraction led by lowering rates of increasing local gov. debts, banking system CET1 ratio could be 9.9%, with that of non-covered banks remaining above the min. requirement at 7.9% by end-2025E, though the CET1 ratio would decrease by ~80bps cumulatively in 2023E-25E.**



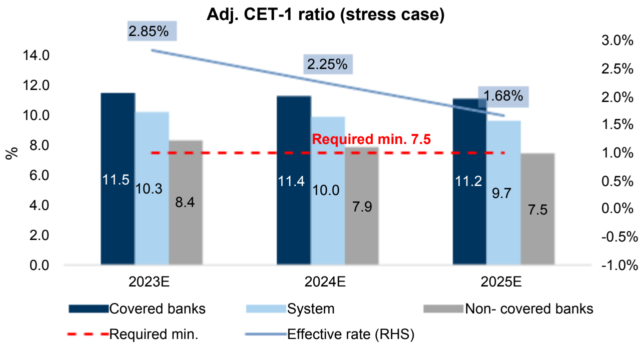

Source: Goldman Sachs Global Investment Research, Company data

## 6. How low could the rates on local gov. debt go?

Our stress-test shows that, if the effective interest rate on local gov. debt decreases by 183bps cumulatively in 2023E-25E, or ~60bps each year, non-covered banks would face recapitalization risk with the CET1 ratio dipping below 7.5%, the min. requirement, by end-2025E. And the system ROE would be 6.6% vs. 7.4% in our base case, with covered/non-covered banks ROE at 10.3%/1.7% vs. 10.8%/3.1% of our base case in 2025E.

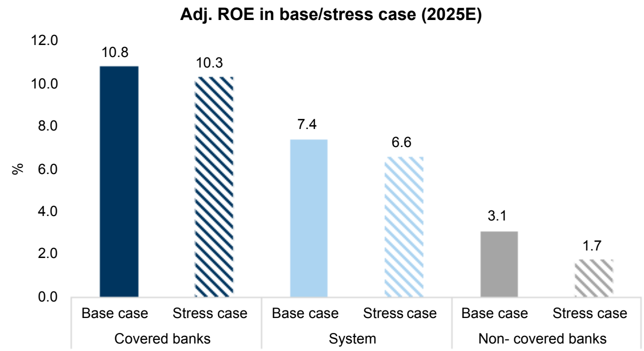
This suggests that, before reaching the point of non-covered banks (39% of banking assets) requiring recapitalization: 1) the effective interest rate on local gov. debt could go lower, as our stress test suggests 30bps more rate cuts each year or ~100bps lower in total for 2023E-25E; or 2) more time could be allowed for debt rollover, assuming a fixed setup of rate cuts on local gov. debt in our base case, else being equal.

**Exhibit 13: We stress-test that with effective interest rate on local gov. debt decreasing by ~60bps each year, non-covered banks would face recapitalization risk with the CET1 ratio dipping below 7.5%, the min. requirement by end-2025E.**




Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 14: The system ROE would be 6.6% vs. 7.4% base case, and covered/non-covered banks ROE would arrive at 10.3%/1.7% vs. 10.8%/3.1% of base case in 2025E.**

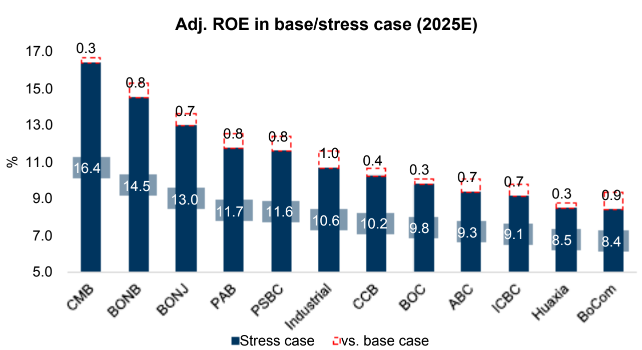



Source: Goldman Sachs Global Investment Research, Company data

## 7. What would happen to covered banks if the local gov. debt rate went lower towards the need for recapitilization?

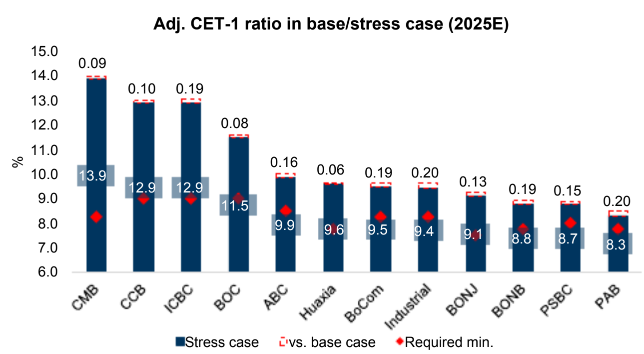
If we stress test rates on local gov. debt going lower at ~60bps each year in 2023E-25E, we could see covered banks have a NIM decrease of 12bps each year, driving ROE and CET1 ratio decrease by ~120/10bps each year, assuming credit cost does not climb up and else being equal. By the end-2025E, the stress tested ROE and CET1 ratio would be 10.3%/11.2% on average, or 52/14bps lower than the base case.

**Exhibit 15: With the stress test to set rates on local gov. debt is to lower at ~60bps each year in 2023E-25E vs. base case of ~30bps, ROE of covered banks would be 10.3%, or 52bps lower than of base case...**




Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 16: ...and CET-1 ratio would be 11.2%, or ~14bps lower than base case, by the end-2025E.**




Source: Goldman Sachs Global Investment Research, Company data

## 8. Does the local gov. debt mix matter as an offset to bank earnings?

With more bonds in local gov. debt portfolios, and more tax (0% tax rate vs. ~15% of loans) and capital savings (10% (LGGB) or 20% (LGSB) risk weighting vs. 100% of loans), it means banks can better offset the margin loss on local gov. debt.

Therefore, we believe the % of bonds in local debt portfolios is an important factor in differentiating banks' bottom-line growth.

Most banks guide they would like to take more local gov. bonds onto their balance sheets; despite nominal yields on local gov. bond not being high, the tax and capital savings can provide more upside to adj. return. Banks also guide that if the central bank allows more local gov. bonds as qualified collateral for liquidity, local gov. bonds can be more attractive assets to enhance debt portfolio returns, amid lowering rates.

We estimate the system adjusted local gov. debt yield could be 0.8% higher on average in 2023E-25E, thanks to the tax and capital benefits of local gov. bonds.

We estimate the weighted capital charges of local gov. bonds could be 39%, blended by 29% of LGGB (local government general bonds) with a 10% risk weighting, 43% of LGSB (local government general bonds) with a 20% risk weighting, and 28% of implicit LGFV (local government financing vehicle bonds) with a 100% risk weighting. This could help banks save capital by 61%, compared with loans which require 100% risk weighting. We believe the saved capital could drive additional returns on normalized ROE of 11% for covered banks, assuming the return on capital for each covered bank remains unchanged.

Thereby, with inclusion of the tax and capital benefits of local gov. bonds, we could see the decrease in ROE due to margin loss of local gov. debt narrow by 1.1ppts for covered banks and 1.9ppts for non-covered banks.

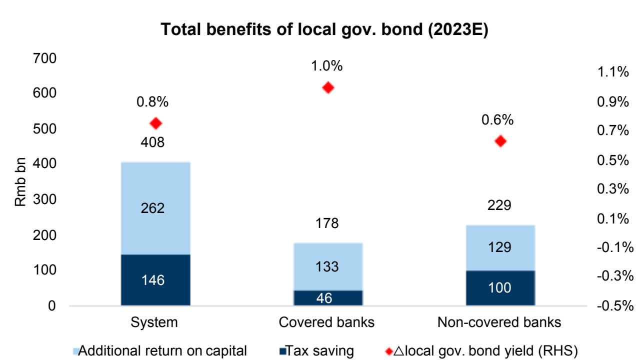
Within our coverage, we have banks with larger local gov. bond exposures, i.e. **PSBC/CMB** (83%/68% bond % local gov. debt), and banks with smaller exposures, i.e. **Industrial** and **BoCom** (24%/31%), compared with the 50% average of covered banks.

**Exhibit 17: More bonds in the local gov. debt portfolios, more tax (0% tax rate vs. ~15% of loans) and capital savings (10%(LGGB) or 20% (LSGB) risk weighting vs. 100% of loans) mean banks can offset the margin loss of local gov. debt**

| Rmb tn | Balance | Mix | Mix (bond) | Tax rate | Risk weighting |
|---|---|---|---|---|---|
| **Total local gov. debt (onshore)** | **94** | **100%** | | **9%** | **69%** |
| **Local gov. bond (onshore)** | **48** | **52%** | **100%** | **4%** | **39%** |
| Official | 35 | 37% | 72% | 0% | 16% |
| LGGB | 14 | 15% | 29% | 0% | 10% |
| LGSB | 21 | 22% | 43% | 0% | 20% |
| Implicit (LGFV bond) | 14 | 14% | 28% | 15% | 100% |
| **Local gov. loan** | **45** | **48%** | | **15%** | **100%** |

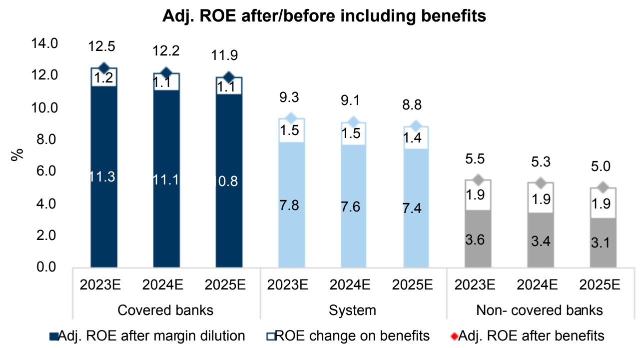
Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 18: We estimate the system adjusted local gov. debt yield could be 0.8% higher on average in 2023E-25E, thanks to the tax and capital benefits of local gov. bonds.**



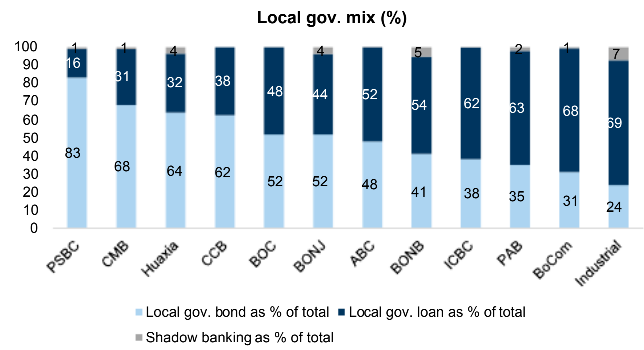

Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 19: With the inclusion of the tax and capital benefits of local gov. bonds, we could see the decrease in ROE due to margin loss of local gov. debt narrowing by 1.1ppts for covered banks and 1.9ppts for non-covered banks.**




Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 20: Within our coverage, we have banks with larger local gov. bond exposures, PSBC/CMB (83%/68% bond % local gov. debt), and banks with smaller exposures, Industrial and Bocom (24%/31%), compared with the 50% average of covered banks.**
As of 2022, GSe




Source: Goldman Sachs Global Investment Research, Company data

## 9. What's the potential earnings impact for covered banks?

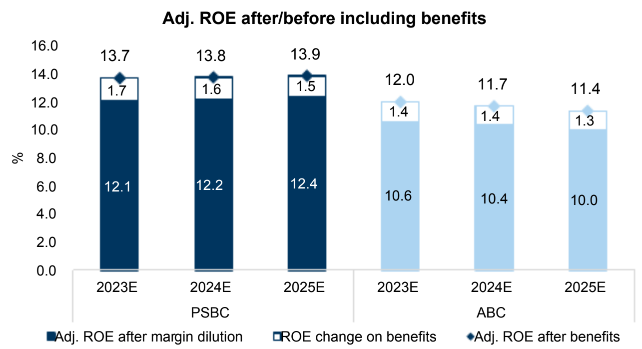
We estimate an average 6bps PPOP ROA decrease for our covered banks in 2023E-25E due to margin loss on local gov. debt. With the inclusion of tax and capital savings, we could see a lower ROE decrease for our covered banks, by ~1.1ppts each year to 12.5%/12.2%/11.9% in 2023E-25E.

We think both size and mix of local gov. debt are factors that differentiate banks, as we expect the larger levels of local debt held by banks, the more margin loss on the back of lowering rates of local gov. debt, while the more bonds in local gov. debt portfolios, the more tax and capital benefits can narrow the bottom-line decrease. Thus, we screen our covered banks, and highlight two groups: 1) **ABC** (downgrade to Sell, from Neutral) and **PSBC** (upgrade to Buy, from Sell) on the size of local gov. debt, and 2) **ICBC** (downgrade to Sell, from Buy) and **CCB** (maintain Buy) on the % of local gov. bonds (see Part III in the series for investment views of each bank).

- **ABC** and **PSBC** on the size of local gov. debt, given their similarly strong deposit bases. ABC has 20% local gov. debt as a % of IEA, compared with 13% for **PSBC**. Assuming local gov. debt on both banks rolls over with lowering rates, the PPOP ROA of **ABC** would decrease by 7bps each year on average in 2023E-25E, compared with 5bps of **PSBC**, else being equal. Moreover, when factoring in the tax and capital savings of local gov. bonds - **PSBC** has 83% bond exposure in their local gov. debt portfolio, compared with 48% for **ABC -** the savings could help **PSBC** narrow its ROE decrease by 160bps each year on average in 2023E-25E, vs. 139bps at **ABC**.
- **ICBC** and **CCB** on their local gov. mix, as **ICBC** has 38% exposure to local gov. bonds, compared with 62% for CCB. The more local gov. bonds, the more capital and tax savings to mitigate earnings pressure caused by local gov. debt. We compare **ICBC** with **CCB** as the two stocks generally trade in the same direction, and as investors see few differences between the two. However, we think local gov. debt can widen the divergence. If we look at these banks' reported data and apply

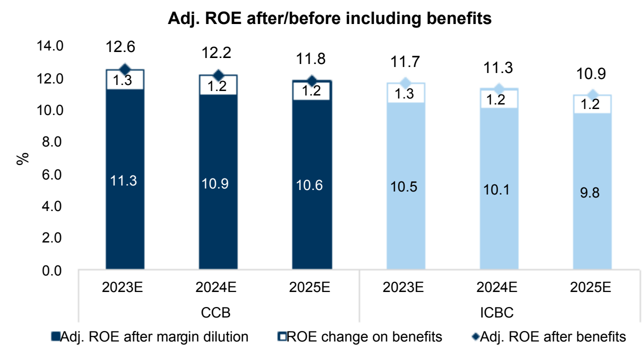
the same assumptions as our margin loss test, we estimate **ICBC** could see PPOP ROA decrease by 7bps each year on average in 2023E-25E, compared with 4bps for **CCB**. If we include tax and capital savings, the margin loss on the bottom line could narrow more for **CCB,** with ROE decreasing less by 125bps each year on average in 2023E-25E, compared with 120bps for **ICBC**.

**Exhibit 21: PSBC/ABC has 13%/20% local gov. debt exposure as % of IEA, with ROE adjusted for margin loss and bond benefits at 13.8%/11.7% on average in 2023-25E.**




Source: Goldman Sachs Global Investment Research, Company data

**Exhibit 22: ICBC/CCB has 38%/62% local gov. bond mix, with ROE adjusted for margin loss and bond benefits at 12.2%/11.3% on average in 2023-25E.**



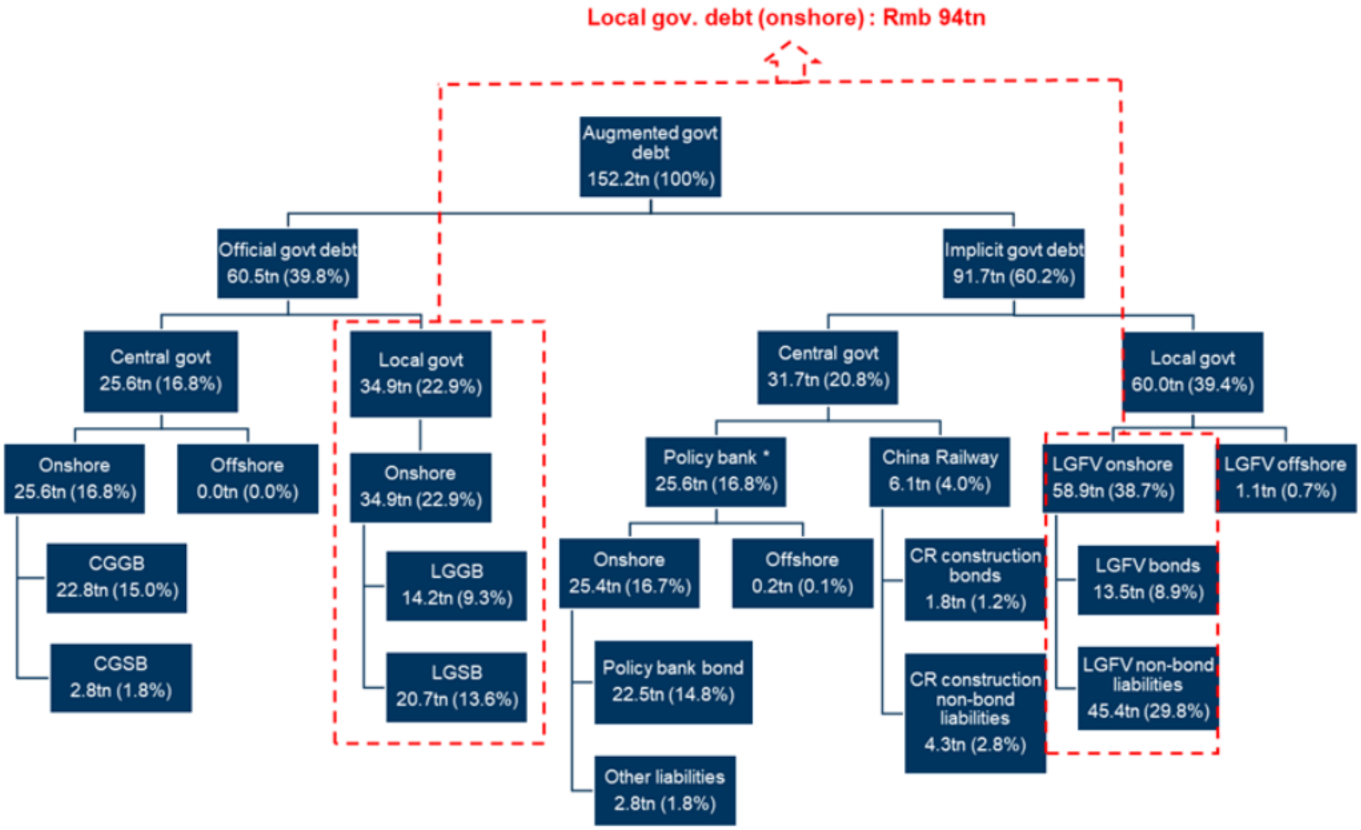

Source: Goldman Sachs Global Investment Research, Company data

*The author would like to thank Zihan Wang and Claire Ouyang for their contributions to this report.*

# Appendix

Based on GS macro team estimates for gov. debt, we sum up official local gov. debt of Rmb 34.9tn (USD 5.0tn) and implicit onshore local gov. debt of Rmb 58.9tn (USD 8.4tn) (incl. Rmb 13.5tn (USD 1.9tn) of bond and Rmb 45.4tn (USD 6.5tn) loans and shadow credits), to get to the total onshore local gov. debt exposure of Rmb ~94tn (USD 13.4tn).

**Exhibit 23: Local gov. debt (onshore) is estimated to be Rmb 94tn(USD 13.4tn), as of 2022.**




Estimates from GS macro team.

Source: Goldman Sachs Global Investment Research, MOF, Wind, Bloomberg, CEIC

# Disclosure Appendix

## Reg AC

I, Shuo Yang, Ph.D., hereby certify that all of the views expressed in this report accurately reflect my personal views about the subject company or companies and its or their securities. I also certify that no part of my compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in this report.

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**China Financial Services**

# Testing the 'Impossible Trinity' Part II: Assessing further losses on bank credit portfolios

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In this second *Testing the 'Impossible Trinity'* report, we continue our analysis of the trade-offs between provisions, capital and dividends in the current environment. We assess the normalized provisioning level of banks, with the potential inclusion of further losses on banks' credit portfolios, in order to evaluate whether provision release remains an option to drive profits.

With these, we address top of mind questions, namely 1) where we are in the property credit cycle, 2) hidden losses in non-loan assets, and 3) the adjusted ROE and NPL coverage ratio of banks. In summary:

- The property credit cycle continues with an increasing NPL formation rate. Large banks may face relatively less pressure given already high reported property NPL ratios, averaging 4.5%, vs. 1.8% for smaller banks which may continue to recognize more NPL.
- Risky non-loan assets including corporate bonds and shadow credit can be captured in debt investments, which allows us to calculate the implied loss ratio for covered banks averaging at 6% vs. 25% for **CMB** (Neutral). This suggests **CMB** has less room going forward to lower provisions on non-loan assets.
- Additional losses and provisions required by banks could amount to Rmb 337/429bn (USD 48/61bn). Adj. bank ROE would be 9.6% vs. 12.0% before adjustment. **BoCom** (Sell) and **Huaxia** (Sell) would see large ROE decreases of 450/438bps vs. 247bps on average.

For our investment views on each bank, please see the third report in this series, *Testing the 'Impossible Trinity' III: Increasing dividend risk; **PSBC** up to Buy, **ICBC/ABC/Industrial** down to Sell*.

*The author would like to thank Zihan Wang and Claire Ouyang for their contributions to this report.*

# I. Three questions answered: property credit cycle, non-loan asset losses and provisions, and adj. ROE with all loss

**Banks have started to release provisions, which has supported profits at a time of soft revenue growth, against the backdrop of prolonged property credit cycle and overarching regulation to clean bank balance sheets. Although banks have built up a risk buffer since Covid, the sustainability of provision release to drive profit growth is top of investors' minds. We build a new bottom-up framework to assess potential additional NPL and provisions arising from banks' credit portfolios including property credits, loan book and debt investment. We conclude 1) Rmb ~337 bn (USD 48bn) more asset losses could be recognized, and Rmb ~429bn (USD 61bn) provisions required, resulting in an NPL coverage ratio decrease of -6ppts, book value dilution of -2%, CET1 ratio and ROE decrease by 20/239bps to 9.6%/11.5% in 2023E.** We address three key investor questions below.

### 1. Where are we in property credit cycle?

To recap, we expect banks' loss taking order to be firstly property bonds and shadow credits given their mark-to-market pricing, and then bank loans (see Property Risk Monitor I, II, III and IV). As banks have reported increasing property NPL ratios and reduced total exposure (excluding mortgage) in five consecutive quarters, we expect most losses of property bonds and shadow credits to have been taken by market participants, and from here further losses should be recognized in bank balance sheets.

The framework suggests that divergence is set to widen between large banks and other banks, as the large banks have reported much higher NPL ratios for property loans, with an average of 4.5% vs. 1.8% for other covered banks. We would expect smaller banks to report more property NPLs going forward, while large banks such as **BOC** and **PSBC** could face less pressure on account of 1) the already high NPL ratio reported by **BOC**, which is close to our stressed estimates of ~8.0% loss ratio of banks; 2) the low property exposure of **PSBC**, which stands at 2% of total assets vs. 4% on average for covered banks. We expect Rmb 90/140bn (USD 13/20bn) losses and provisions to be recognized from property loans, with negative impacts on book value/ROE of -2%/-2ppts in aggregate for covered banks.

### 2. Can banks reduce provisions set aside on non-loan assets?

In the past few quarters, banks like **CMB** reduced the provisions set against non-loan assets to lower new provisions on bank credit portfolios, while more provisions were built up against the loan book. On net, this results in lowering provisions to drive profit growth, while the NPL coverage ratio based only on the loan book increased. Our analysis suggests that non-loan assets provision release could be increasingly difficult, as the implied loss ratio of credit portfolio in debt investment book could be 25% for **CMB** vs. 6% on average for covered banks.

### 3. What would happen if banks were to restate NPL in 2023E?

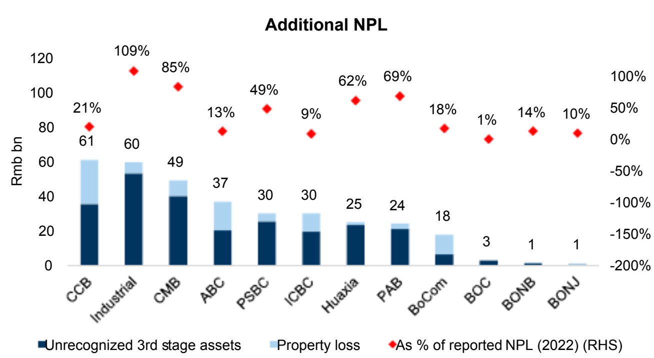
Our analysis suggests that covered banks would be able to maintain CET1 ratio above the minimum requirement, book value dilution would not be significant, with 2% markdown on average for covered banks, but net profits would decrease by 21% in aggregate, with NPL coverage ratio down by 6ppts in aggregate and 23ppts on average. Notably, **CMB** could have the largest NPL coverage ratio decrease with 138ppts. To arrive at this conclusion, we assume banks fully recognize the loss in 2023E by booking provisions, although banks may recognize losses over multiple years, which would smooth earnings growth.

**Exhibit 1: Summary of additional NPL and provision required for property risk and non-loan assets**
Rmb bn

| | Large | | | | | | Joint-stock | | | | Regional | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rmb bn | ICBC | CCB | BOC | ABC | BoCom | PSBC | CMB | PAB | Industrial | Huaxia | BONJ | BONB | Aggregate | Average |
| **NPL coverage ratio** | **202%** | **228%** | **189%** | **296%** | **176%** | **371%** | **437%** | **262%** | **215%** | **147%** | **368%** | **476%** | **239%** | **281%** |
| NPL | 368 | 337 | 246 | 301 | 113 | 66 | 63 | 41 | 56 | 47 | 11 | 9 | 1,658 | 138 |
| LLR | 745 | 768 | 465 | 892 | 198 | 244 | 275 | 108 | 120 | 69 | 41 | 43 | 3,967 | 331 |
| **Additional NPL** | **30** | **61** | **3** | **37** | **18** | **30** | **49** | **24** | **60** | **25** | **1** | **1** | **337** | **28** |
| - unrecognized 3rd stage assets | 19 | 35 | 3 | 20 | 6 | 25 | 40 | 21 | 53 | 23 | 0 | 1 | 247 | 21 |
| - property loss | 11 | 25 | 0 | 17 | 12 | 5 | 9 | 3 | 6 | 2 | 1 | 0 | 90 | 8 |
| Existing debt provision | 33 | 41 | 10 | 20 | 3 | 28 | 43 | 16 | 45 | 17 | 3 | 2 | 262 | 22 |
| **Additional provision** | **49** | **112** | **35** | **101** | **43** | **8** | **17** | **22** | **25** | **16** | **3** | **0** | **429** | **36** |
| - unrecognized 3rd stage assets | 33 | 74 | 35 | 76 | 26 | 0 | 3 | 14 | 15 | 13 | 0 | 0 | 289 | 24 |
| - property loss | 16 | 38 | 0 | 25 | 17 | 8 | 14 | 8 | 10 | 3 | 2 | 0 | 140 | 12 |
| **Adj. NPL coverage ratio** | **208%** | **231%** | **205%** | **300%** | **188%** | **292%** | **299%** | **223%** | **165%** | **142%** | **390%** | **451%** | **234%** | **258%** |
| vs. before adj. (ppts) | 5 | 4 | 16 | 4 | 12 | -78 | -138 | -38 | -50 | -5 | 22 | -25 | -6 | -23 |
| **Driven by NPL increase (ppts)** | **-15** | **-35** | **-2** | **-32** | **-24** | **-116** | **-191** | **-96** | **-111** | **-51** | **-27** | **-50** | **-40** | **-63** |
| - unrecognized 3rd stage assets | -10 | -22 | -2 | -18 | -9 | -103 | -170 | -87 | -105 | -49 | -7 | -50 | -31 | -53 |
| - property loss | -5 | -13 | 0 | -14 | -15 | -13 | -22 | -9 | -6 | -2 | -20 | 0 | -9 | -10 |
| **Driven by provision increase (ppts)** | **20** | **38** | **18** | **36** | **35** | **37** | **54** | **58** | **61** | **46** | **49** | **25** | **35** | **40** |
| - unrecognized 3rd stage assets | 16 | 29 | 18 | 29 | 22 | 29 | 41 | 47 | 53 | 42 | 31 | 25 | 28 | 32 |
| - property loss | 4 | 10 | 0 | 7 | 13 | 8 | 12 | 11 | 8 | 4 | 18 | 0 | 7 | 8 |
| **Adj. net NPL formation rate** | **0.8%** | **1.0%** | **0.7%** | **0.9%** | **1.2%** | **0.7%** | **2.7%** | **4.3%** | **2.0%** | **6.6%** | **12.0%** | **0.6%** | **1.3%** | **2.8%** |
| Before adj. | 0.7% | 0.7% | 0.7% | 0.7% | 0.9% | 0.4% | 2.0% | 3.6% | 0.9% | 5.6% | 11.9% | 0.5% | 1.0% | 2.4% |
| Diff. (bps) | 11 | 26 | 1 | 16 | 22 | 37 | 73 | 65 | 108 | 104 | 8 | 9 | 26 | 40 |
| **Impact (2023E):** | | | | | | | | | | | | | | |
| △NPAT (Rmb bn) | -42 | -92 | -29 | -85 | -41 | -7 | -14 | -17 | -22 | -12 | -2.2 | -0.3 | -363 | -30 |
| As % of NPAT | -11% | -28% | -12% | -32% | -42% | -8% | -9% | -34% | -23% | -47% | -11% | -1% | -21% | -22% |
| Adj. NPAT | 328 | 241 | 209 | 183 | 56 | 86 | 137 | 34 | 71 | 14 | 18 | 26 | 1,402 | 117 |
| Adj. book value | 3,373 | 2,882 | 2,216 | 2,343 | 886 | 745 | 910 | 395 | 712 | 272 | 137 | 175 | 15,045 | 1,254 |
| **vs. before adj.** | **-1%** | **-2%** | **-1%** | **-2%** | **-3%** | **-1%** | **-1%** | **-4%** | **-2%** | **-3%** | **-1%** | **0%** | **-2%** | **-2%** |
| **Adj. ROE** | **10.1%** | **8.6%** | **9.8%** | **8.0%** | **6.4%** | **12.0%** | **15.8%** | **9.0%** | **10.4%** | **5.2%** | **13.4%** | **15.8%** | **9.6%** | **10.4%** |
| Before adj. | 11.3% | 11.7% | 11.1% | 11.6% | 10.9% | 13.0% | 17.3% | 13.3% | 13.4% | 9.6% | 15.0% | 16.0% | 12.0% | 12.8% |
| diff. (bps) | -123 | -314 | -130 | -357 | -450 | -97 | -152 | -429 | -300 | -438 | -159 | -20 | -239 | -247 |
| **Adj. CET-1 ratio** | **13.5%** | **13.1%** | **11.5%** | **10.4%** | **9.7%** | **9.2%** | **13.3%** | **8.2%** | **9.6%** | **9.0%** | **9.5%** | **9.4%** | **11.5%** | **10.5%** |
| Before adj. | 13.6% | 13.4% | 11.6% | 10.7% | 10.0% | 9.2% | 13.5% | 8.5% | 9.9% | 9.3% | 9.7% | 9.4% | 11.7% | 10.7% |
| diff. (bps) | -12 | -29 | -11 | -27 | -31 | -6 | -14 | -33 | -21 | -30 | -11 | -2 | -20 | -19 |

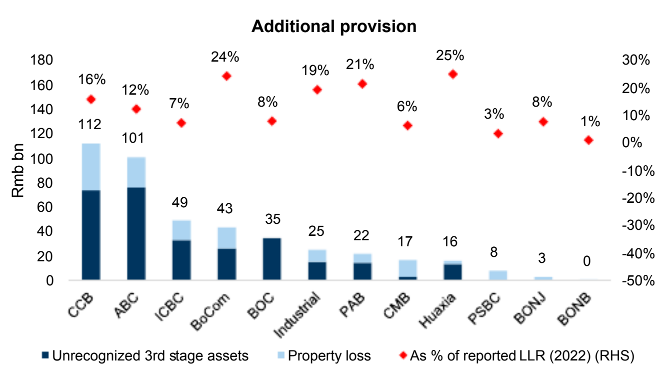
Source: Company data, Goldman Sachs Global Investment Research

**Exhibit 2: Additional losses could amount to Rmb 337bn or USD 48bn (2023E)**



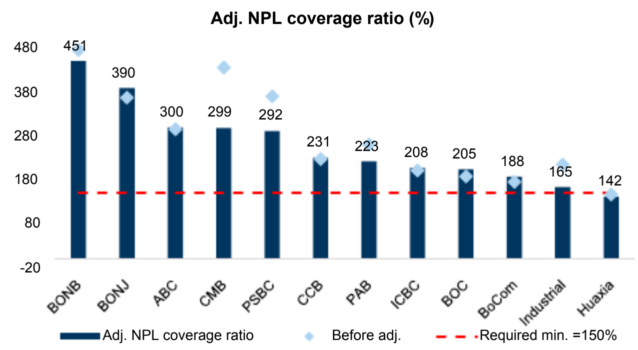

Source: Goldman Sachs Global Investment Research

**Exhibit 3: Additional provisions required by banks could amount to Rmb 429bn or USD 61bn (2023E)**



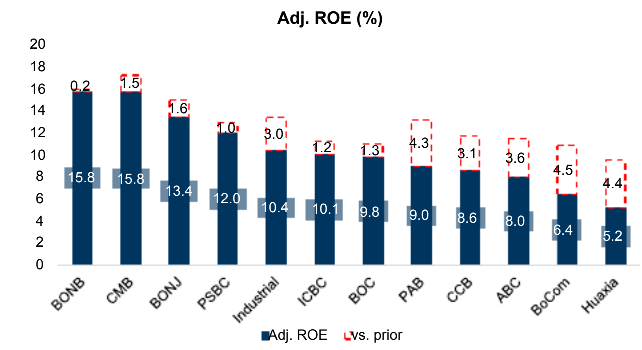

Source: Goldman Sachs Global Investment Research

**Exhibit 4: Adj. NPL coverage ratio would be 234% vs. 239% before adjustment (2023E)**



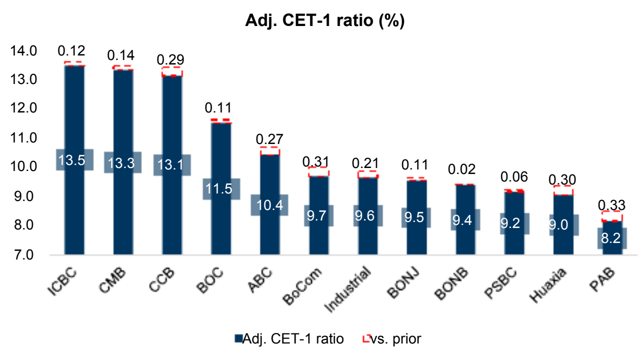

Source: Goldman Sachs Global Investment Research

**Exhibit 5: The adj. bank ROE would be 9.6% vs. 12.0% before adjustment (2023E)**



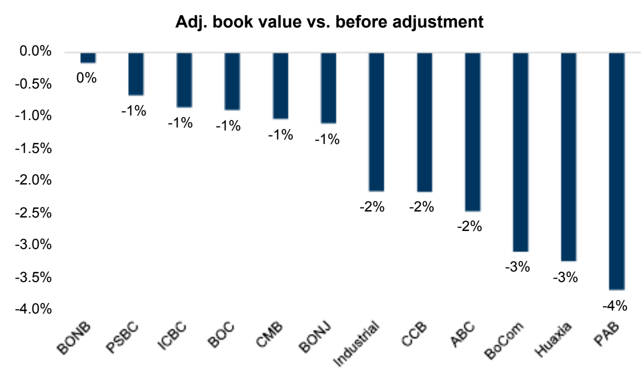

Source: Goldman Sachs Global Investment Research

**Exhibit 6: Adj. Bank CET1 ratio would be 11.5% vs. 11.7% before adjustment (2023E)**




Source: Goldman Sachs Global Investment Research

**Exhibit 7: Adj. book value would be ~2% lower vs. before adjustment (2023E)**




Source: Goldman Sachs Global Investment Research

# II. Quantifying additional property losses and provisions

**Banks have reported increasing property NPL ratio since 3Q21, and guide that sufficient provisions are in place against losses. Based on our Property Risk Monitor framework (see I, II, III and IV), we believe more losses should be recognized in bank loans as property bonds and shadow credits are mark-to-market and have taken losses. We believe the property NPL formation rate has not peaked out given deteriorating property sales volume and price. We estimate Rmb 90bn (USD 13bn) more NPL and Rmb 140bn (USD 20bn) more provisions required for covered banks, which could result in ROE/CET1 ratio decreasing by -78/-6bps, with adj. NPL coverage ratio on average decreasing to 274% from 281% prior. We note the adj. ROE of CMB would be 16.0% vs. 17.3% before adjustment.**

To assess the property risk of individual bank, we consider three factors, namely 1) size, represented by % of total assets; 2) mix, the more non-loan assets, the higher risk; 3) pace of NPL recognition, the higher reported NPL ratio, the more likely close to the peak of NPL cycle. We summarize the statistics as:

- **PAB/CMB** have the largest property exposure (excluding mortgage), with Rmb 403/605bn (USD 57/86bn) or 8%/6% of total assets.
- **ABC/BOC** have the largest loan mix, with 90%/89% of total exposure, **CMB/Industrial Bank** have the lowest, suggesting riskier property credit portfolio as the non-loan asset like bonds and shadow credits could take more losses.
- **BOC/ICBC** presented the highest property NPL ratios of 7.2%/6.1%, which is close to our estimated 8.0% from our ECL (Expected Credit Loss) model.

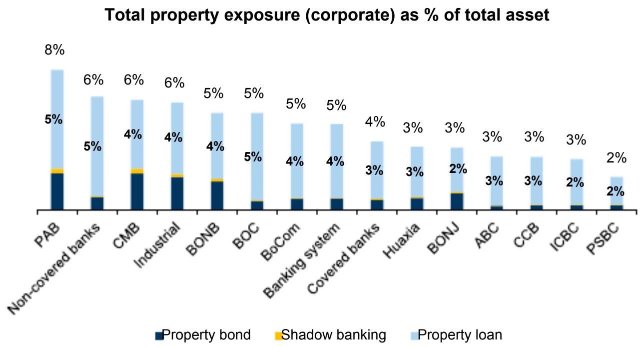
Given the further slowdown of property sales and guidance of banks to expect continued property risk, we expect property NPL formation rate has not peaked out yet, despite the record high printed in 4Q22. Thus, we expect the property NPL ratio of covered banks to continue to increase, which can drive widening divergence of banks, given their varying reported property NPL ratios. We expect large banks may face less pressure on smaller property exposure relative to their large balance sheets, which is 3% of total assets vs. 5% for smaller banks (Exhibit 8), and high reported property NPL ratio of 4.5% on average vs. 1.8% for smaller banks. Our analysis suggests **CMB** with large property exposure and low mix of property loans, and a reported property NPL ratio lower than that of large banks could recognize more property losses arising from its balance sheet.

We estimate that covered banks would recognize Rmb 90bn (USD 13bn) more property NPL, or 31% more of the total recognized NPL. With this setup, **PSBC/BONJ** may recognize more property NPL which takes 151%/132% of the reported, and **BOC/BONB** could be less pressured given smaller new property NPL to recognize. (Exhibit 12)

We also assess that Rmb 140bn (USD 20bn) more provisions would be required to cover the additional property NPL. We factor in bank guidance to set aside 2x of bank LLR (loan loss reserve) as the risk buffer against property loans, and expect banks to at least maintain the current provisioning level for both existing and newly recognized property NPL. The new provisions would result in a profit decrease of 7% for covered banks, and ROE, CET1 ratio and book value decrease of 78bps/6bps/-0.6%. Our analysis suggests **BoCom/PAB/BONJ/CMB** would recognize more provisions with ROE decreases of 178/147/133/125bps vs. 92bps average of peers. (Exhibit 12)

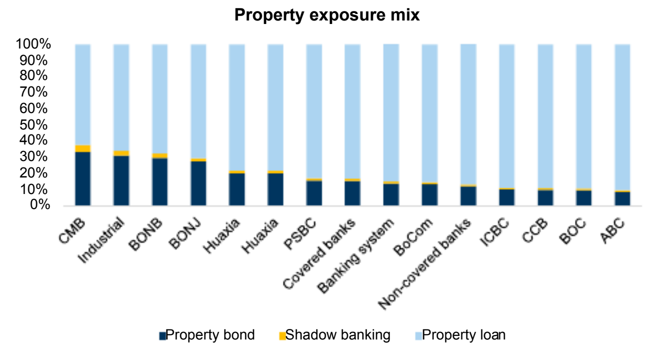
In summary, with inclusion of more NPL and provisions to recognize, the adj. ROE and NPL coverage ratio of covered banks on average could decrease to 11.9%/274% vs. 12.8%/281% prior. CMB's adj. ROE and NPL coverage ratio would be 16.0%/400% vs. 17.3%/437% prior.

**Exhibit 8: Total property exposure (excl. mortgage) as % of total assets**
As of 2022



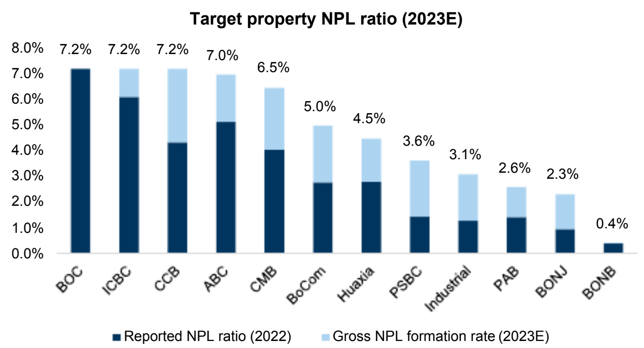

Source: Company data, Goldman Sachs Global Investment Research

**Exhibit 9: Property exposure (excl. mortgage) mix**
As of 2022



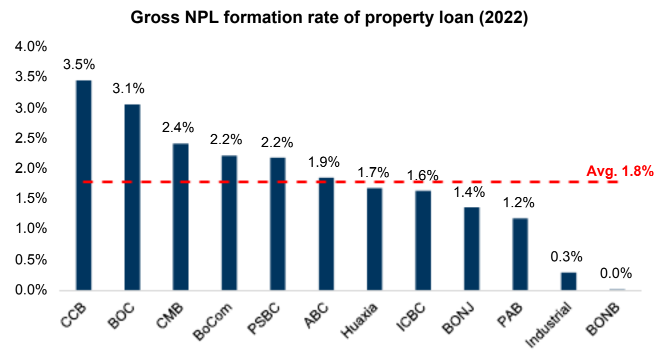

Source: Goldman Sachs Global Investment Research

**Exhibit 10: Target property NPL ratio (2023E)**




Source: Company data, Goldman Sachs Global Investment Research

**Exhibit 11: Gross NPL formation rate of property loan (2022)**




Source: Goldman Sachs Global Investment Research

**Exhibit 12: Assessing additional NPL and provision of property risk**
Rmb bn

| | Large | | | | | | Joint-stock | | | | Regional | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rmb bn | ICBC | CCB | BOC | ABC | BoCom | PSBC | CMB | PAB | Industrial | Huaxia | BONJ | BONB |
| Property loan (2022) | 976 | 888 | 1,360 | 891 | 520 | 212 | 377 | 283 | 356 | 105 | 49 | 84 |
| As % of total loan | 4% | 4% | 8% | 5% | 7% | 3% | 6% | 9% | 7% | 5% | 5% | 8% |
| As % of IEA | 3% | 3% | 5% | 3% | 4% | 2% | 4% | 5% | 4% | 3% | 2% | 4% |
| Reported NPL ratio (2022) | 6.1% | 4.4% | 7.2% | 5.2% | 2.8% | 1.5% | 4.1% | 1.4% | 1.3% | 2.8% | 1.0% | 0.4% |
| Gross property NPL formation rate (2023E) | 1.1% | 2.9% | 0.0% | 1.9% | 2.2% | 2.2% | 2.4% | 1.2% | 1.8% | 1.7% | 1.4% | 0.0% |
| Target NPL ratio | 7.2% | 7.2% | 7.2% | 7.0% | 5.0% | 3.6% | 6.5% | 2.6% | 3.1% | 4.5% | 2.3% | 0.4% |
| **Additional NPL** | **11** | **25** | **0** | **17** | **12** | **5** | **9** | **3** | **6** | **2** | **1** | **0** |
| LLR ratio of the bank | 2.9% | 3.3% | 1.8% | 4.0% | 2.5% | 3.0% | 4.1% | 2.9% | 2.2% | 2.9% | 3.7% | 0.2% |
| LLR ratio for property loan | 5.7% | 6.5% | 3.6% | 7.9% | 4.9% | 6.1% | 8.2% | 5.9% | 4.3% | 5.8% | 7.5% | 0.3% |
| Implied property NPL coverage ratio (based on reported NPL ratio) | 93% | 149% | 49% | 153% | 175% | 419% | 201% | 410% | 332% | 205% | 779% | 81% |
| Implied property NPL coverage ratio (based on target NPL ratio) | 79% | 90% | 49% | 113% | 98% | 167% | 126% | 224% | 139% | 129% | 322% | 79% |
| Target NPL coverage ratio for △property NPL (150% min.) | 150% | 150% | 150% | 150% | 150% | 167% | 150% | 224% | 150% | 150% | 322% | 150% |
| **Additional provisions** | **16** | **38** | **0** | **25** | **17** | **8** | **14** | **8** | **10** | **3** | **2** | **0** |
| **Adj. NPL coverage ratio** | **201%** | **222%** | **189%** | **289%** | **174%** | **357%** | **400%** | **259%** | **209%** | **147%** | **365%** | **476%** |
| NPL coverage ratio (2023E) | 202% | 228% | 189% | 296% | 176% | 371% | 437% | 262% | 215% | 147% | 368% | 476% |
| vs. before adj. (ppts) | -1 | -5 | 0 | -8 | -2 | -13 | -36 | -3 | -7 | 0 | -3 | 0 |
| Driven by NPL increase (ppts) | -6 | -16 | 0 | -15 | -16 | -24 | -55 | -20 | -22 | -5 | -21 | -1 |
| Driven by provision increase (ppts) | 4 | 11 | 0 | 8 | 14 | 11 | 19 | 17 | 16 | 5 | 19 | 0 |
| **Impact (2023E):** | | | | | | | | | | | | |
| △NPAT (Rmb bn) | -14 | -31 | 0 | -21 | -16 | -7 | -12 | -6 | -8 | -2 | -1.8 | 0.0 |
| As % of NPAT | -4% | -9% | 0% | -8% | -17% | -8% | -8% | -12% | -9% | -8% | -9% | 0% |
| Adj. NPAT | 356 | 301 | 238 | 247 | 80 | 86 | 139 | 45 | 85 | 24 | 18 | 26 |
| **Adj. book value** | **3,392** | **2,924** | **2,236** | **2,388** | **903** | **745** | **912** | **405** | **721** | **279** | **138** | **175** |
| vs. before | -0.3% | -0.7% | 0.0% | -0.6% | -1.2% | -0.7% | -0.9% | -1.3% | -0.8% | -0.5% | -0.9% | 0.0% |
| **Adj. ROE** | **10.9%** | **10.7%** | **11.1%** | **10.7%** | **9.1%** | **12.0%** | **16.0%** | **11.8%** | **12.3%** | **8.8%** | **13.7%** | **16.0%** |
| Before adj. | 11.3% | 11.7% | 11.1% | 11.6% | 10.9% | 13.0% | 17.3% | 13.3% | 13.4% | 9.6% | 15.0% | 16.0% |
| diff. (bps) | -40 | -107 | 0 | -87 | -178 | -97 | -125 | -147 | -115 | -72 | -133 | -1 |
| **Adj. CET-1 ratio** | **13.6%** | **13.3%** | **11.6%** | **10.6%** | **9.9%** | **9.2%** | **13.4%** | **8.4%** | **9.8%** | **9.3%** | **9.6%** | **9.4%** |
| Before adj. | 13.6% | 13.4% | 11.6% | 10.7% | 10.0% | 9.2% | 13.5% | 8.5% | 9.9% | 9.3% | 9.7% | 9.4% |
| diff. (bps) | -4 | -10 | 0 | -7 | -13 | -6 | -12 | -11 | -8 | -5 | -9 | 0 |

Source: Company data, Goldman Sachs Global Investment Research

# III. Quantifying potential further losses and provisions for assets under stage 3

**We estimate Rmb 247bn (USD 35bn) more NPL and Rmb 289bn (USD 41bn) more provisions in total would be required for assets under stage 3, with ROE and CET1 ratio decreasing by -167bps/-11bps. We calculate the implied loss ratio of debt investments (excluding gov. bond) is 6% on average, and 25% for CMB, while corporate bonds and non-standard credit assets (NSCA) are 9% of debt investments for CMB, compared with 16% for covered banks on average. This suggests to us that CMB is unlikely to benefit easily going forward from reduced provisions on non-loan assets that boosted earnings in the past quarters.**

As assets under stage 3 are risky assets with high probability to incur losses, which should be recognized as NPL. This in our view means that the NPL should be at least equal to assets under stage 3, otherwise, the reported NPL would be understated. Like NPL, assets under stage 3 should be well provisioned with appropriate risk buffers. As such, we set the highest provisioning level of covered banks as the benchmark to assess the provision required for loans, and apply 100% provisioning level to debt investments (excluding gov. bonds) to assess the provision required. So we could have:

- In the loan book, Rmb 87bn (USD 12bn) more NPL to recognize, and Rmb 260bn (USD 37bn) more provisions required. (Exhibit 16)
- In the debt investment, Rmb 160bn (USD 23bn) more NPL to recognize, and Rmb 30bn (USD 4.3bn) more provisions required. (Exhibit 19)

To better assess the credit risk of debt investments, we exclude bonds from debt investments to have shadow credit, which is also called non-standard credit assets (NSCA), and add it back with corporate bonds to assess the implied loss of debt investment as we assume gov. bond remains risk free. Thus, we can calculate the implied loss ratio of the debt investment book, which could be 6% on average for covered banks with 25% for **CMB.**

In summary, combining the assessment of loss and provisions for both the loan and debt investment book (Exhibit 13):

- Most new loss is from debt investment book, which takes 65% of total loss we estimate. **CMB, Industrial, Huaxia** could recognize further losses of Rmb 34/40/20bn (USD 4.9/5.7/2.9bn) from debt investment, or 59%/73%/50% of the reported.
- Most new provisions are from bank loans, which take 90% of the total required provision. **ABC** would potentially require Rmb 76bn (USD 11bn) more provisions, or 9% of the reported loan provision, against the additional loss of Rmb 19bn (USD 2.7bn) in its loan book.

So there could be Rmb 247bn (USD 35bn) total losses to recognize and Rmb 289bn (USD 41bn) more risk buffer required for covered banks in aggregate, with profits/CET1 ratio down -14%/-11bps.

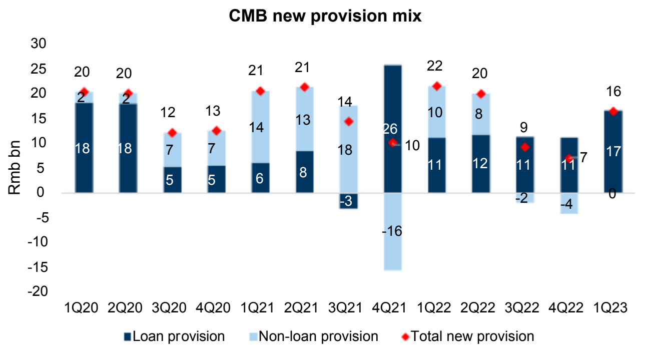
Moreover, we conclude that **CMB** is unlikely to be able to further reduce provisions easily on debt investment (non-loan assets) to drive profit growth, as it did in the previous quarters, and the adj. ROE and NPL coverage ratio could be 17.0%/312% vs. 17.3%/437% before adjustment.

**Exhibit 13: Aggregate impact of additional NPL and provisions in loan and debt investments**
Rmb bn

| | Large | | | | | | Joint-stock | | | | Regional | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rmb bn | ICBC | CCB | BOC | ABC | BoCom | PSBC | CMB | PAB | Industrial | Huaxia | BONJ | BONB |
| **Aggregate** | | | | | | | | | | | | |
| **Total additional NPL** | **19** | **35** | **3** | **20** | **6** | **25** | **40** | **21** | **53** | **23** | **0.2** | **1** |
| -Loans | 16 | 15 | 0.1 | 19 | 4 | 5 | 6 | 4 | 14 | 3 | -0.2 | 1 |
| -Debt investments | 3 | 20 | 2 | 1 | 2 | 20 | 34 | 17 | 40 | 20 | 0.4 | 0.3 |
| **Total additional provision** | **33** | **74** | **35** | **76** | **26** | **0.0** | **3** | **14** | **15** | **13** | **0.4** | **0.4** |
| -Loans | 32 | 71 | 32 | 76 | 25 | 0.0 | 1 | 7 | 8 | 6 | 0.4 | 0.4 |
| -Debt investments | 0.4 | 3 | 2 | 0.01 | 0.8 | 0.0 | 1.7 | 7.2 | 7.3 | 7.3 | 0.04 | 0.01 |
| **Adj. NPL coverage ratio** | **209%** | **237%** | **205%** | **308%** | **191%** | **299%** | **312%** | **223%** | **166%** | **142%** | **394%** | **452%** |
| vs. before adj. (ppts) | 7 | 9 | 16 | 12 | 15 | -72 | -125 | -38 | -49 | -5 | 26 | -25 |
| Driven by NPL increase (ppts) | -10 | -22 | -2 | -18 | -9 | -103 | -170 | -87 | -105 | -49 | -7 | -50 |
| Driven by provision increase (ppts) | 17 | 31 | 18 | 30 | 24 | 31 | 45 | 49 | 56 | 43 | 33 | 25 |
| **Impact (2023E):** | | | | | | | | | | | | |
| △NPAT (Rmb bn) | -28 | -60 | -29 | -64 | -24 | 0 | -2 | -11 | -13 | -10 | -0.4 | -0.3 |
| As % of NPAT | -8% | -18% | -12% | -24% | -25% | 0% | -2% | -22% | -14% | -39% | -2% | -1% |
| Adj. NPAT | 342 | 272 | 209 | 204 | 72 | 93 | 148 | 40 | 80 | 16 | 19 | 26 |
| Adj. book value | 3,382 | 2,904 | 2,216 | 2,358 | 897 | 750 | 920 | 400 | 718 | 273 | 139 | 175 |
| **vs. before** | **-0.6%** | **-1.4%** | **-0.9%** | **-1.9%** | **-1.9%** | **0.0%** | **-0.2%** | **-2.4%** | **-1.3%** | **-2.7%** | **-0.2%** | **-0.2%** |
| **Adj. ROE** | 10.5% | 9.7% | 9.8% | 8.9% | 8.2% | 13.0% | 17.0% | 10.5% | 11.6% | 5.9% | 14.8% | 15.8% |
| Before adj. | 11.3% | 11.7% | 11.1% | 11.6% | 10.9% | 13.0% | 17.3% | 13.3% | 13.4% | 9.6% | 15.0% | 16.0% |
| diff. (bps) | -86 | -213 | -135 | -277 | -276 | 0 | -29 | -292 | -191 | -373 | -27 | -20 |
| **Adj. CET-1 ratio** | 13.5% | 13.2% | 11.5% | 10.5% | 9.8% | 9.2% | 13.5% | 8.3% | 9.7% | 9.1% | 9.6% | 9.4% |
| Before adj. | 13.6% | 13.4% | 11.6% | 10.7% | 10.0% | 9.2% | 13.5% | 8.5% | 9.9% | 9.3% | 9.7% | 9.4% |
| diff. (bps) | -7 | -16 | -9 | -17 | -18 | 0 | -2 | -17 | -11 | -19 | -1 | -1 |

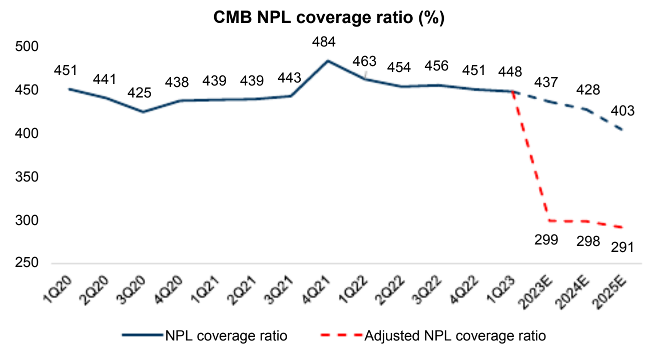
Source: Company data, Goldman Sachs Global Investment Research

### Exhibit 14: CMB new provision mix




Source: Company data

### Exhibit 15: CMB NPL coverage ratio




Source: Company data

### Exhibit 16: In the loan book, Rmb 87bn more NPL to recognize, and Rmb 260bn more provisions required

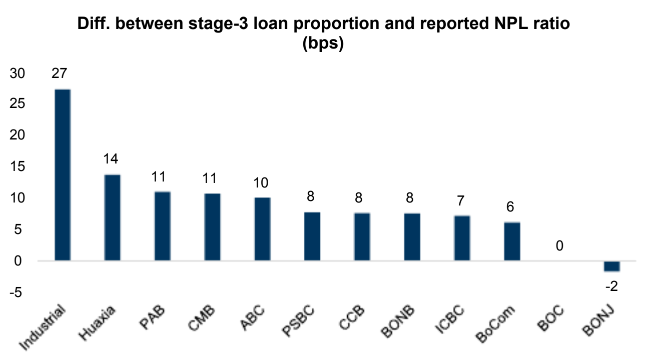
Rmb bn

| | Large | | | | | | Joint-stock | | | | Regional | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Rmb bn** | **ICBC** | **CCB** | **BOC** | **ABC** | **BoCom** | **PSBC** | **CMB** | **PAB** | **Industrial** | **Huaxia** | **BONJ** | **BONB** |
| **Loans** | | | | | | | | | | | | |
| Loans in stage 3 as % of total | 1.45% | 1.46% | 1.32% | 1.47% | 1.41% | 0.92% | 1.07% | 1.16% | 1.36% | 1.89% | 0.88% | 0.83% |
| Reported NPL ratio | 1.38% | 1.38% | 1.32% | 1.37% | 1.35% | 0.84% | 0.96% | 1.05% | 1.09% | 1.75% | 0.90% | 0.75% |
| Diff. (bps) | 7 | 8 | 0 | 10 | 6 | 8 | 11 | 11 | 27 | 14 | -2 | 8 |
| **Additional NPL** | **16** | **15** | **0** | **19** | **4** | **5** | **6** | **4** | **14** | **3** | **0** | **1** |
| Stage-3 loan coverage ratio | 78% | 64% | 75% | 61% | 63% | 89% | 86% | 70% | 77% | 74% | 84% | 85% |
| Target coverage ratio (sample max) | 89% | 89% | 89% | 89% | 89% | 89% | 89% | 89% | 89% | 89% | 89% | 89% |
| Diff (ppts) | -10 | -24 | -14 | -28 | -26 | 0.0 | -2 | -18 | -12 | -15 | -5 | -4 |
| **Additional provision** | **32** | **71** | **32** | **76** | **25** | **0.0** | **1** | **7** | **8** | **6** | **0.4** | **0.4** |

Source: Company data, Goldman Sachs Global Investment Research

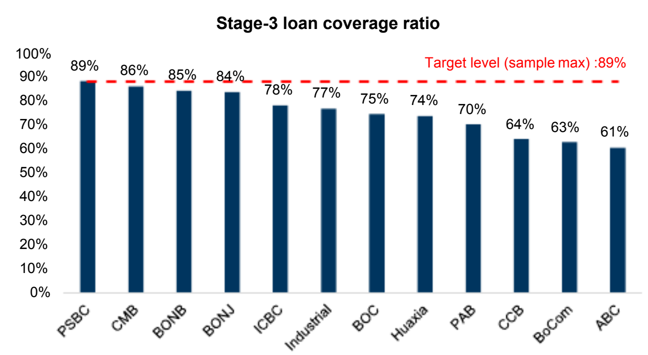
### Exhibit 17: Diff between stage-3 loan proportion and reported NPL ratio as of 2022

bps




Source: Company data

### Exhibit 18: Stage-3 loan coverage ratio as of 2022



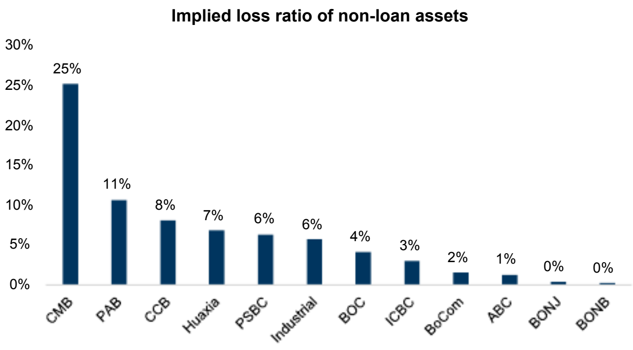

Source: Company data

**Exhibit 19: In the debt investment, Rmb 160bn more NPL to recognize, and Rmb 30bn more provisions required**
Rmb bn

| | Large | | | | | | Joint-stock | | | | Regional | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Rmb bn** | **ICBC** | **CCB** | **BOC** | **ABC** | **BoCom** | **PSBC** | **CMB** | **PAB** | **Industrial** | **Huaxia** | **BONJ** | **BONB** |
| **Debt investments** | | | | | | | | | | | | |
| **Additional NPL** | **3** | **20** | **2** | **1** | **2** | **20** | **34** | **17** | **40** | **20** | **0.4** | **0.3** |
| **Existing debt provision** | **33** | **41** | **10** | **20** | **3** | **28** | **43** | **16** | **45** | **17** | **3** | **2** |
| Stage-3 debt investment coverage ratio | 86% | 87% | 90% | 99% | 54% | 100% | 95% | 58% | 81% | 64% | 90% | 95% |
| Target coverage ratio (sample max) | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Diff (ppts) | -14 | -13 | -9 | -1 | -45 | 0.0 | -5 | -42 | -18 | -36 | -10 | -5 |
| **Additional provision** | **0.4** | **2.6** | **2.4** | **0.01** | **0.8** | **0.0** | **1.7** | **7.2** | **7.3** | **7.3** | **0.04** | **0.01** |

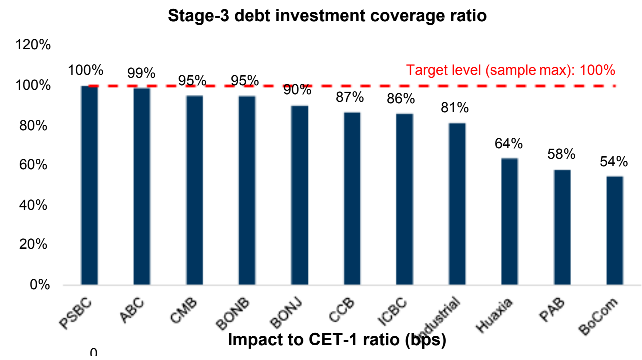
Source: Company data, Goldman Sachs Global Investment Research

**Exhibit 20: Risky non-loan assets including corp. bonds and shadow credit can be captured in debt investments, which allows us to calculate the implied loss ratio for covered banks averaging 6%**
As of 2022




Source: Company data, Goldman Sachs Global Investment Research

**Exhibit 21: Stage-3 debt investment coverage ratio as of 2022**




Source: Company data

# Appendix: What our top-down asset quality model implies

**Given the importance of property developers to China's economy, we assess the spillover risk to bank loan portfolios given the potential for property credit default. After incorporating 1Q23 earnings results for ~3,000 listed companies, our implied NPL data shows that systemwide implied PD decreased in 1Q23 to 12.8% from 13.5% in 4Q22.**

1. Total implied PD of our listco sample decreased to 12.8% in 1Q23, -1.0/-0.7ppts vs. 1Q22/4Q22, primarily driven by falling aggregate EIC (6.18x in 1Q23 vs. 6.34x in 4Q22). We decompose changes in Earnings Interest Coverage (EIC) into three moving parts: total debt, interest rates and cash flow.

Total debt increased by 5% in 1Q23 vs. 4Q22 driven by strong credit growth. (Exhibit 26)

Interest rate of corporate loans fell by 7bps in 1Q23 vs. 4Q22, driven by LPR cut and liquidity loosening such as the cut to RRR. (Exhibit 27)

Cash flow deteriorated with 1Q23 EBIT falling 1.5% vs. 4Q22. (Exhibit 25)

All in, the decline in interest rates (a 0.1x improvement in EIC) is not enough to offset the impact of increasing debt and decreasing EBIT (cash flow), which combined result in a 0.16x deterioration in total EIC. (Exhibit 24)

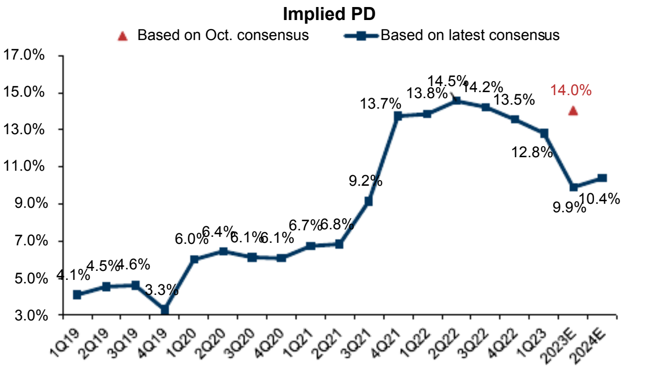
2. What are consensus earnings estimates telling us? Based on the latest 2023E/2024E Wind consensus estimates, 2023E implied PD is expected to drop to 9.9%, lower than the peak of 2Q22, but rise to 10.4% in 2024E on macro challenges and cuts to consensus earnings.

**Banking sector margin of safety: Rmb 10.6tn (USD 1.5tn) in buffers vs. Rmb 8.4tn (USD 1.2tn) NPLs**

We set our stress test at an 7% NPL ratio on the total loan book, factoring in the asset quality risk implied from A-share quasi-cash flow (as noted above: 12.8% PD, 55% LGD). This implies total systemwide losses of Rmb 8.4tn (USD 1.2tn) vs. total risk buffers of Rmb 10.6tn (USD 1.5tn) (above the minimum CET1 ratio). Overall, our covered banks appear well placed to absorb losses with Rmb 7.6tn (USD 1.1tn) of risk buffers vs. Rmb 4.9tn (USD 0.7tn) in NPLs.

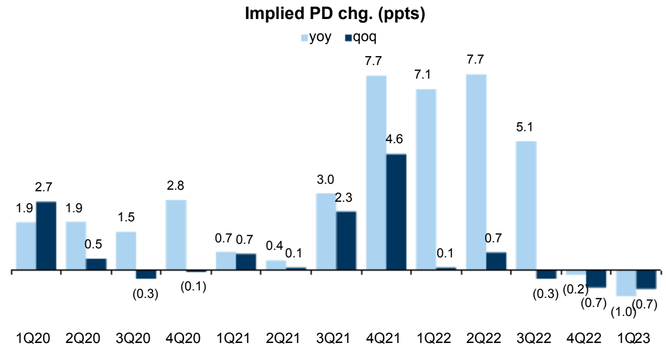
We could see widening divergence in banks' balance sheet strength. Incorporating our estimated loss of Rmb ~8.4tn (USD 1.2tn) we adjust the banks' book value, and compare them with our estimated book value. Our analysis suggests that most banks show limited further markdowns, such as 0%/3%/3% for **CMB/PSBC/PAB**, while **Huaxia/BoCom** could face more challenges if further property credit losses are recognized.

**Exhibit 22: Total implied PD of our listco sample decreased to 12.8% in 1Q23...**



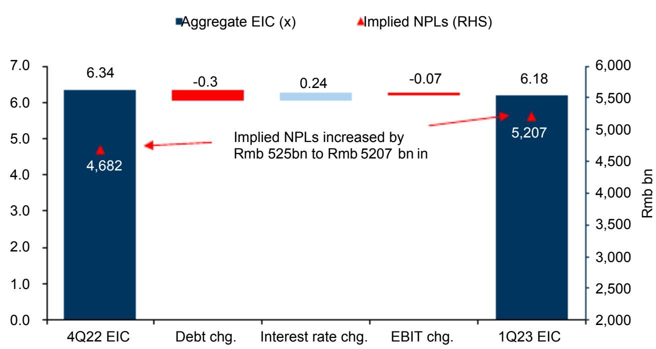

Source: Goldman Sachs Global Investment Research

**Exhibit 23: ...-1.0/-0.7ppts vs. 1Q22/4Q22**



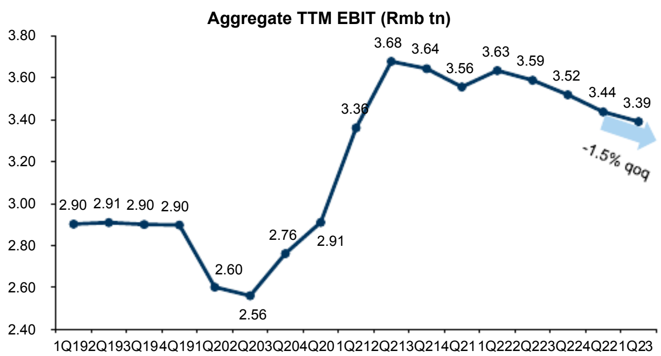

Source: Goldman Sachs Global Investment Research

**Exhibit 24: The decline in interest rates (a 0.1x improvement in EIC) is not enough to offset the impact of increasing debt and decreasing EBIT (cash flow), which combined result in a 0.16x deterioration in total EIC**



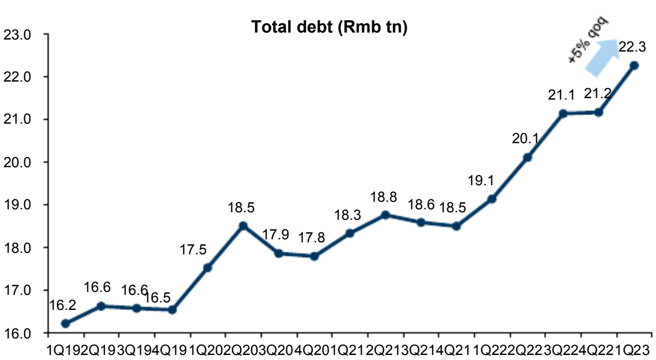

Source: Goldman Sachs Global Investment Research

**Exhibit 25: Cash flow deteriorated with 1Q23 EBIT falling 1.5% vs. 4Q22**



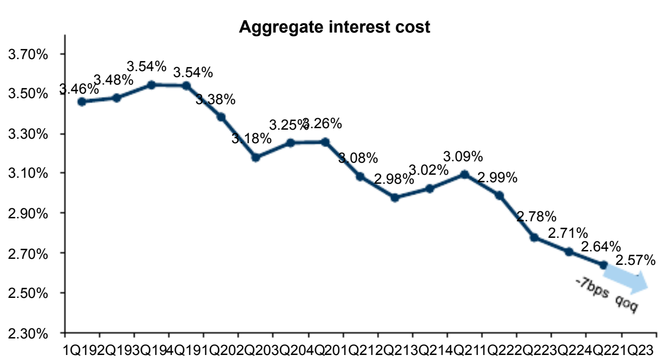

Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 26: Total debt increased by 5% in 1Q23 vs. 4Q22, driven by strong credit growth**



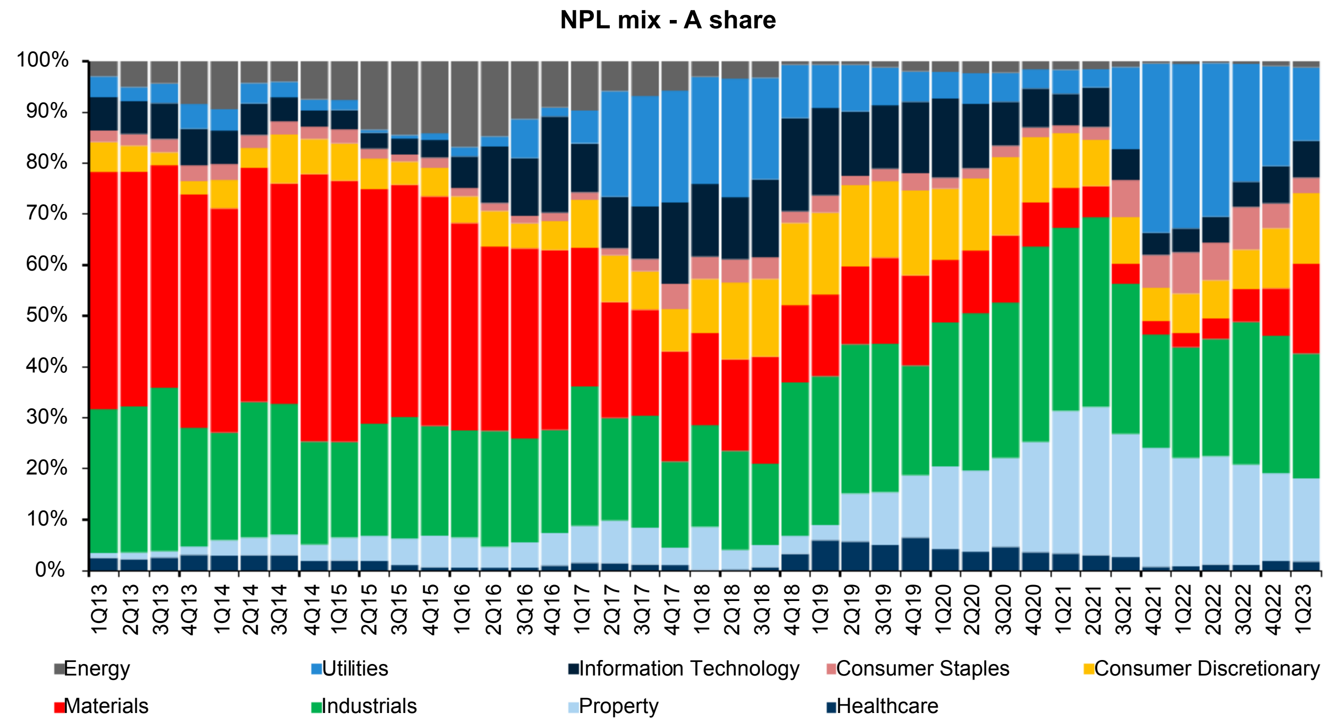

Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 27: Interest rate of corporate loans fell by 7bps in 1Q23 vs. 4Q22**




Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 28: Implied NPL mix of A share listed companies**




Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 29: We estimate Rmb 10.6tn in systemwide risk buffers, comprising Rmb 7.6tn from covered (large cap) banks and Rmb 2.9tn from non-covered (small) banks**

Rmb bn, as of 2023E

| Rmb bn, as of 2023E | 1st layer: Additional LLR | | | | 2nd layer: PPOP excl. provision | | | 3rd layer: Additional CET-1 excl. new R/E | | | | | Total risk buffer |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LLR | NPL | Min. LLR ratio | Additional LLR | PPOP | Provision | PPOP excl. provision | CET-1 | CET-1 ratio | Min. CET-1 ratio | New Retained earnings | Additional CET-1 excl. new R/E | |
| ICBC | 745 | 368 | 70% | **487** | 631 | 196 | **435** | 3,381 | 13.6% | 9.0% | 260 | **884** | **1,807** |
| CCB | 768 | 337 | 70% | **532** | 555 | 148 | **407** | 2,941 | 13.4% | 9.0% | 241 | **729** | **1,668** |
| BOC | 465 | 246 | 70% | **293** | 408 | 110 | **299** | 2,169 | 11.6% | 9.0% | 174 | **316** | **908** |
| ABC | 892 | 301 | 70% | **681** | 461 | 145 | **316** | 2,402 | 10.7% | 8.5% | 187 | **307** | **1,304** |
| PSBC | 244 | 66 | 70% | **198** | 135 | 35 | **100** | 745 | 9.2% | 8.0% | 65 | **34** | **332** |
| BoCom | 198 | 113 | 70% | **119** | 166 | 64 | **102** | 907 | 10.0% | 8.3% | 67 | **92** | **314** |
| CMB | 275 | 63 | 70% | **231** | 233 | 53 | **180** | 895 | 13.5% | 8.3% | 104 | **243** | **654** |
| PAB | 108 | 41 | 70% | **79** | 135 | 70 | **65** | 389 | 8.5% | 7.8% | 45 | **0** | **144** |
| Huaxia | 69 | 47 | 70% | **36** | 64 | 29 | **35** | 283 | 9.3% | 7.8% | 20 | **28** | **99** |
| Industrial | 120 | 56 | 70% | **81** | 157 | 49 | **108** | 731 | 9.9% | 8.3% | 69 | **50** | **239** |
| BONB | 43 | 9 | 70% | **37** | 40 | 11 | **29** | 174 | 9.4% | 7.8% | 23 | **8** | **74** |
| BONJ | 41 | 11 | 70% | **33** | 33 | 10 | **23** | 140 | 9.7% | 7.5% | 14 | **17** | **74** |
| **Banking system** | 6,664 | 3,503 | 70% | **4,212** | | | **2,885** | 23,198 | 10.7% | 8.2% | 1,970 | **3,458** | **10,554** |
| **Covered banks** | 3,967 | 1,658 | 70% | **2,807** | 3,018 | 919 | **2,099** | 15,157 | 11.7% | 8.6% | 1,268 | **2,710** | **7,616** |
| **Non-covered banks** | 2,697 | 1,845 | 70% | **1,405** | | | **786** | 8,042 | 9.2% | 7.5% | 702 | **747** | **2,938** |

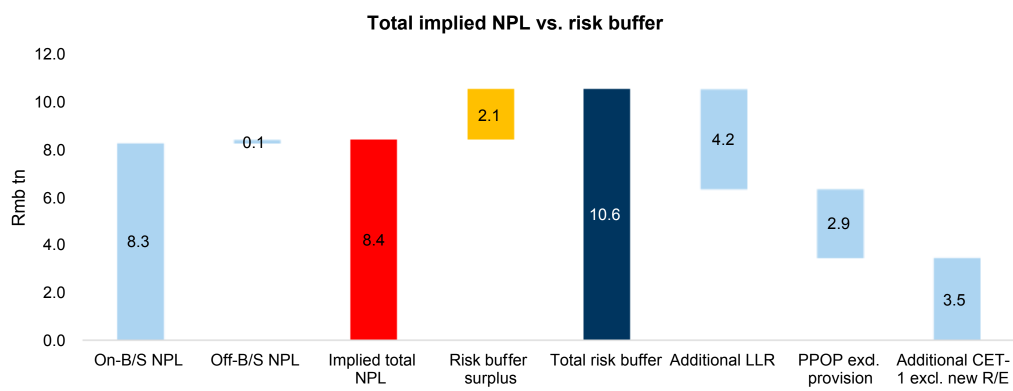
Source: Goldman Sachs Global Investment Research

### Exhibit 30: We forecast systemwide NPLs of Rmb 8.4tn, with possibility that non-covered small banks could exhaust their risk buffer
Rmb bn

| | Exposure | | | Loss rate | | | Implied NPL | | | Risk buffer (2023E) | | | | NPL absorption | | | | NPL ratio when… | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | On-B/S: Corporate loan | Off-B/S: Shadow banking | Total exposure | PD | LGD | NPL ratio | Implied on-B/S NPL | Implied off-B/S NPL | Implied total NPL | Additional LLR | PPOP excl. provision | Additional CET-1 excl. new R/E | Total | Additional LLR | PPOP excl. provision | Additional CET-1 excl. new R/E | Gap (as % of total buffer) | No dividend | Recap required |
| Rmb bn | 2022 | 2022 | 2022 | | | | | | | 2023E | 2023E | 2023E | 2023E | | | | | | |
| ICBC | 14,202 | 180 | 14,382 | 12.8% | 55% | 7.0% | 1,001 | 13 | 1,013 | 487 | 435 | 884 | 1,807 | 100% | 100% | 10% | 0% | 13% | 19% |
| CCB | 12,164 | 169 | 12,333 | 12.8% | 55% | 7.0% | 857 | 12 | 869 | 532 | 407 | 729 | 1,668 | 100% | 83% | 0% | 0% | 14% | 21% |
| BOC | 11,099 | 148 | 11,247 | 12.8% | 55% | 7.0% | 782 | 10 | 793 | 293 | 299 | 316 | 908 | 100% | 100% | 64% | 0% | 8% | 15% |
| ABC | 12,159 | 162 | 12,321 | 12.8% | 55% | 7.0% | 857 | 11 | 868 | 681 | 316 | 307 | 1,304 | 100% | 59% | 0% | 0% | 11% | 17% |
| PSBC | 3,164 | 70 | 3,234 | 12.8% | 55% | 7.0% | 223 | 5 | 228 | 198 | 100 | 34 | 332 | 100% | 30% | 0% | 0% | 10% | 18% |
| BoCom | 4,930 | 101 | 5,031 | 12.8% | 55% | 7.0% | 347 | 7 | 355 | 119 | 102 | 92 | 314 | 100% | 100% | 100% | 13% | 6% | 12% |
| CMB | 2,890 | 264 | 3,153 | 12.8% | 55% | 7.0% | 204 | 19 | 222 | 231 | 180 | 243 | 654 | 96% | 0% | 0% | 0% | 21% | 28% |
| PAB | 1,282 | 74 | 1,356 | 12.8% | 55% | 7.0% | 90 | 5 | 96 | 79 | 65 | 0 | 144 | 100% | 25% | 0% | 0% | 11% | 20% |
| Huaxia | 1,566 | 43 | 1,609 | 12.8% | 55% | 7.0% | 110 | 3 | 113 | 36 | 35 | 28 | 99 | 100% | 100% | 100% | 14% | 6% | 11% |
| Industrial | 3,009 | 176 | 3,185 | 12.8% | 55% | 7.0% | 212 | 12 | 224 | 81 | 108 | 50 | 239 | 100% | 100% | 70% | 0% | 8% | 15% |
| BONB | 655 | 33 | 688 | 12.8% | 55% | 7.0% | 46 | 2 | 48 | 37 | 29 | 8 | 74 | 100% | 40% | 0% | 0% | 11% | 18% |
| BONJ | 675 | 25 | 700 | 12.8% | 55% | 7.0% | 48 | 2 | 49 | 33 | 23 | 17 | 74 | 100% | 71% | 0% | 0% | 10% | 16% |
| **Banking system** | 117,459 | 1,940 | 119,399 | 12.8% | 55% | 7.0% | 8,277 | 137 | 8,414 | 4,212 | 2,885 | 3,458 | 10,554 | 100% | 100% | 38% | 0% | 9% | 15% |
| **Covered banks** | 67,793 | 1,446 | 69,239 | 12.8% | 55% | 7.0% | 4,777 | 102 | 4,879 | 2,807 | 2,099 | 2,710 | 7,616 | 100% | 99% | 0% | 0% | 11% | 18% |
| **Non-covered banks** | 49,666 | 494 | 50,160 | 12.8% | 55% | 7.0% | 3,500 | 35 | 3,535 | 1,405 | 786 | 747 | 2,938 | 100% | 100% | 100% | 20% | 6% | 10% |

Source: Company data, Goldman Sachs Global Investment Research

### Exhibit 31: Systemwide, risk buffer is sufficient to cover implied total NPL, with surplus of Rmb 2.1tn
Rmb tn




Source: Goldman Sachs Global Investment Research

**Exhibit 32: Adj. book value after absorbing implied NPL**

| Rmb bn | Book value (GSe) | Due to PPOP erosion | Due to CET-1 erosion (excl. gap) | Due to CET-1 erosion (gap) | Adj. BV | Diff. with GSe |
|---|---|---|---|---|---|---|
| | A, 2023E | B | C | D | E=A+B+C+D | F=E/A-1 |
| ICBC | 3,402 | -260 | -91 | 0 | 3,050 | -10% |
| CCB | 2,946 | -200 | 0 | 0 | 2,746 | -7% |
| BOC | 2,236 | -174 | -201 | 0 | 1,860 | -17% |
| ABC | 2,403 | -111 | 0 | 0 | 2,292 | -5% |
| PSBC | 750 | -20 | 0 | 0 | 730 | -3% |
| BoCom | 914 | -67 | -92 | -41 | 714 | -22% |
| CMB | 920 | 0 | 0 | 0 | 920 | 0% |
| PAB | 410 | -11 | 0 | 0 | 399 | -3% |
| Huaxia | 281 | -20 | -28 | -14 | 218 | -22% |
| Industrial | 727 | -69 | -35 | 0 | 623 | -14% |
| BONB | 175 | -9 | 0 | 0 | 166 | -5% |
| BONJ | 139 | -10 | 0 | 0 | 129 | -7% |

Source: Goldman Sachs Global Investment Research

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**Growth** is based on a stock's forward-looking sales growth, EBITDA growth and EPS growth (for financial stocks, only EPS and sales growth), with a higher percentile indicating a higher growth company. **Financial Returns** is based on a stock's forward-looking ROE, ROCE and CROCI (for financial stocks, only ROE), with a higher percentile indicating a company with higher financial returns. **Multiple** is based on a stock's forward-looking P/E, P/B, price/dividend (P/D), EV/EBITDA, EV/FCF and EV/Debt Adjusted Cash Flow (DACF) (for financial stocks, only P/E, P/B and P/D), with a higher percentile indicating a stock trading at a higher multiple. The **Integrated** percentile is calculated as the average of the Growth percentile, Financial Returns percentile and (100% - Multiple percentile).

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## China Financial Services

# Testing the 'Impossible Trinity' Part III: Increasing dividend risk; PSBC up to Buy, ICBC/ABC/Industrial down to Sell

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In the third of our *Testing the 'Impossible Trinity'* series, we assess the dividend sustainability of banks in our coverage, based on adjusted book value incorporating the margin risk of local government debt and additional losses in bank credit portfolios (see Parts I and II in the series).

Our analysis suggests that 1) adjusted dividend yields of A/H covered banks will come in at ~4%/6% in 2023E, ~2ppt lower than before adjustment, and 2) dividend payout targets could come under increasing pressure, on weaker earnings growth and the need to maintain high CET1 ratio targets. Based on our framework, we see potential for **BoCom** and **Hua Xia** to miss dividend payout targets in 2023E, **Industrial Bank** in 2024E, and **ICBC** and **ABC** in 2025E (Exhibit 10-Exhibit 11).

Drawing parallels from the 2013-15 cycle, we note that banks struggled to maintain dividends at the beginning of the downcycle then gave up dividend targets in order to prioritize capital and risk buffers when the trinity of dividends, capital and provisions could not be well balanced. We expect banks to face similar challenges in 2023-25E, with a similar dividend pattern to repeat.

Consensus believes that large banks are trading at distressed valuation multiples (average ~2.5x P/PPOP), posing upside share performance risk. Fundamentally, however, we believe a further multiple correction is likely, driven by margin risk from local government debt and more losses within bank credit portfolios. This could weaken earnings growth, pressure capital accumulation and thus pressure dividend payout levels. We revise down our large bank PPOP estimates by -5%/-6% in 23E/24E reflecting margin risk. Our CAMELOT-based target P/PPOP (reflecting bank PPOP growth, ROE, capital and dividend levels) is cut to 2.4x/2.2x for A/H shares in order to capture squeezed bank earnings and notably incorporate dividend payout risk, and therefore we revise our A/H 12m TPs by an average of -5%/-1%.

That said, **PSBC**'s peer-leading earnings forecasts and stable dividend payouts are underappreciated, in our view, and we upgrade **PSBC-**A/H to Buy from Sell, on target P/PPOP of 3.75x/3.25x vs. 2.75x/2.25x prior and 3% PPOP increase vs. prior, with new 12m TPs of Rmb6.03/HK$5.8 or 21%/19% upside. At the same time, we downgrade **ABC**-A/H to Sell from Neutral, on target P/PPOP of 1.875x/1.6x vs.

2x/1.6x prior and -9% PPOP change vs. prior, with new 12m TPs of Rmb2.59/HK$2.45 or -28%/-21% downside, given similarly rich deposits but diverging local government debt exposure. We model that **ABC**'s dividend is not at risk until 2025E, with DPS increases of 2%/1% vs. prior in 2023E/24E on provision release, but a 1ppt dividend payout cut in 2025E. With increasing target CET1 ratio (11.5% for ABC as G-SIB vs. 13.3% for ICBC), **ABC** will face more dividend risk.

We maintain Buy on **CCB** A/H on more local government bond for capital and tax savings to mitigate earnings risk. We downgrade **ICBC** A/H to Sell from Buy on large local government debt, with increasing dividend risk owing to the high CET-1 ratio target of 13% required as a G-SIB being difficult to maintain. We cut DPS by 3%/5% vs. prior in 2023E-24E and payout by 7ppts to 23% in 2025E and revise our target P/PPOP to 2.25x/1.75x from 2.75x/2.25x and -10% PPOP change vs. prior, to derive 12m TPs of Rmb4.12/HK$3.55 or -16%/-16% downside.

We downgrade **Industrial Bank** to Sell from Buy on a worsening balance sheet. We cut DPS by 4%/30% vs. prior in 2023E-24E, and revise target P/PPOP to 1.5x from 2.25x and -4% PPOP change vs. prior, to derive our 12m TP of Rmb12.09 or -24% downside. Lastly, we remain Neutral on **CMB** with new TPs of Rmb32.65/HK$36.24 or -3%/-2% downside due to more credit losses to digest.

In summary, our DPS are 8%/15% lower vs. prior, driven by an average 3-4ppts payout cut for covered banks. Having said that, we still see most banks able to maintain dividends, though divergence is set to widen on payouts. In our view, upside risk could come from new capital raises or lower CET1 ratio, which could allow banks such as **ICBC** and **ABC** to alleviate dividend risk and sustain payouts.

*The author would like to thank Zihan Wang and Claire Ouyang for their contributions to this report.*

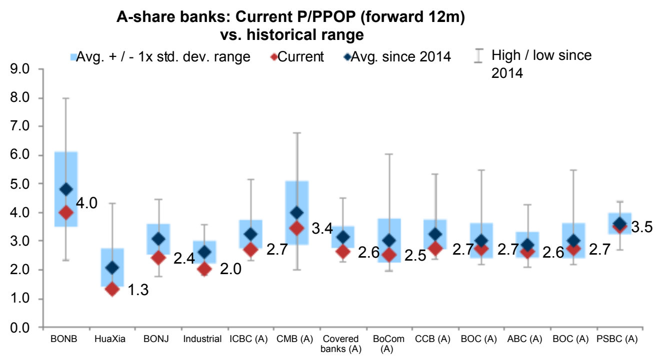
**Exhibit 1: Valuation revisions**

| | Currency | Current price | Current TP | Previous TP | TP change | Rating | Previous rating | Target P/PPOP | Previous Target multiple | Target multiple Change | PPOP change | Upside/ downside (%) | Implied P/E | | Implied P/B | | Trading P/E | | Trading P/B | | Trading P/PPOP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **H-share (HKD)** | | | | | | | | | | | | | 2023E | 2024E | 2023E | 2024E | 2023E | 2024E | 2023E | 2024E | 2023E | 2024E |
| ICBC (H) | HK$ | 4.24 | 3.55 | 4.98 | ↓ -29% | Sell | Buy | 1.750x | 2.250x | ↓ -0.500x | ↓ -10% | ↓ -16% | 3.1 | 3.0 | 0.3 | 0.3 | 3.7 | 3.6 | 0.4 | 0.4 | 2.2 | 2.1 |
| BOC (H) | HK$ | 3.19 | 2.83 | 2.72 | ↑ 4% | Neutral | | 1.750x | 1.750x | | ↑ 2% | ↓ -11% | 3.2 | 3.0 | 0.3 | 0.3 | 3.6 | 3.4 | 0.4 | 0.3 | 2.1 | 2.0 |
| CCB (H) | HK$ | 5.12 | 5.81 | 6.07 | ↓ -4% | Buy | | 2.250x | 2.250x | | ↓ -6% | ↑ 13% | 3.9 | 3.8 | 0.4 | 0.4 | 3.5 | 3.3 | 0.4 | 0.4 | 2.1 | 2.0 |
| ABC (H) | HK$ | 3.12 | 2.45 | 2.62 | ↓ -6% | Sell | Neutral | 1.600x | 1.600x | | ↓ -9% | ↓ -21% | 2.9 | 2.8 | 0.3 | 0.3 | 3.7 | 3.5 | 0.4 | 0.4 | 2.1 | 2.0 |
| BoCom (H) | HK$ | 5.20 | 3.88 | 3.97 | ↓ -2% | Sell | | 1.500x | 1.500x | | ↓ -3% | ↓ -25% | 2.7 | 2.6 | 0.3 | 0.3 | 3.6 | 3.5 | 0.4 | 0.3 | 2.1 | 2.0 |
| PSBC (H) | HK$ | 4.87 | 5.80 | 4.06 | ↑ 43% | Buy | Sell | 3.250x | 2.250x | ↑ 1.000x | ↑ 3% | ↑ 19% | 5.2 | 4.7 | 0.6 | 0.6 | 4.4 | 4.0 | 0.5 | 0.5 | 3.0 | 2.7 |
| CMB (H) | HK$ | 37.05 | 36.24 | 40.85 | ↓ -11% | Neutral | | 3.250x | 3.500x | ↓ -0.250x | ↓ -1% | ↓ -2% | 5.5 | 5.0 | 0.9 | 0.8 | 5.6 | 5.1 | 0.9 | 0.8 | 3.6 | 3.3 |
| **A-share (Rmb)** | | | | | | | | | | | | | | | | | | | | | | |
| ICBC (A) | Rmb | 4.88 | 4.12 | 5.29 | ↓ -22% | Sell | Buy | 2.250x | 2.750x | ↓ -0.500x | ↓ -10% | ↓ -16% | 4.0 | 3.5 | 0.4 | 0.4 | 4.7 | 4.5 | 0.5 | 0.5 | 2.8 | 2.7 |
| BOC (A) | Rmb | 3.98 | 3.46 | 2.71 | ↑ 28% | Neutral | | 2.375x | 2.000x | ↑ 0.375x | ↑ 2% | ↓ -13% | 4.3 | 3.7 | 0.5 | 0.4 | 4.9 | 4.7 | 0.5 | 0.5 | 2.9 | 2.7 |
| CCB (A) | Rmb | 6.34 | 6.40 | 6.46 | ↓ -1% | Buy | | 2.750x | 2.750x | | ↓ -6% | ↑ 1% | 4.8 | 4.1 | 0.5 | 0.5 | 4.8 | 4.6 | 0.5 | 0.5 | 2.9 | 2.7 |
| ABC (A) | Rmb | 3.62 | 2.59 | 2.85 | ↓ -9% | Sell | Neutral | 1.875x | 2.000x | ↓ -0.125x | ↓ -9% | ↓ -28% | 3.4 | 2.9 | 0.4 | 0.3 | 4.7 | 4.5 | 0.5 | 0.5 | 2.7 | 2.6 |
| BoCom (A) | Rmb | 5.89 | 3.79 | 3.74 | ↑ 1% | Sell | | 1.625x | 1.625x | | ↓ -3% | ↓ -36% | 2.9 | 2.5 | 0.3 | 0.3 | 4.6 | 4.4 | 0.5 | 0.4 | 2.6 | 2.5 |
| PSBC (A) | Rmb | 4.98 | 6.03 | 4.31 | ↑ 40% | Buy | Sell | 3.750x | 2.750x | ↑ 1.000x | ↑ 3% | ↑ 21% | 6.0 | 4.9 | 0.7 | 0.7 | 4.9 | 4.5 | 0.6 | 0.6 | 3.4 | 3.1 |
| CMB (A) | Rmb | 33.72 | 32.65 | 35.52 | ↓ -8% | Neutral | | 3.250x | 3.500x | ↓ -0.250x | ↓ -1% | ↓ -3% | 5.5 | 4.5 | 0.9 | 0.8 | 5.6 | 5.1 | 0.9 | 0.8 | 3.6 | 3.4 |
| Industrial | Rmb | 15.83 | 12.09 | 18.93 | ↓ -36% | Sell | Buy | 1.500x | 2.250x | ↓ -0.750x | ↓ -4% | ↓ -24% | 2.7 | 2.3 | 0.3 | 0.3 | 3.5 | 3.3 | 0.5 | 0.4 | 2.1 | 2.0 |
| PAB | Rmb | 11.49 | 13.12 | 16.84 | ↓ -22% | Buy | | 1.750x | 2.250x | ↓ -0.500x | ↑ 0% | ↑ 14% | 5.0 | 4.0 | 0.6 | 0.6 | 4.3 | 3.9 | 0.5 | 0.5 | 1.7 | 1.5 |
| HuaXia | Rmb | 5.48 | 4.25 | 4.23 | ↑ 0% | Sell | | 1.000x | 1.000x | | ↓ -3% | ↓ -22% | 2.5 | 2.2 | 0.2 | 0.2 | 3.3 | 3.1 | 0.3 | 0.3 | 1.3 | 1.3 |
| BONB | Rmb | 25.58 | 30.52 | 35.76 | ↓ -15% | Buy | | 4.500x | 5.000x | ↓ -0.500x | ↓ -5% | ↑ 19% | 7.7 | 6.0 | 1.1 | 1.0 | 6.4 | 5.6 | 1.0 | 0.8 | 4.3 | 3.8 |
| BONJ | Rmb | 8.09 | 8.61 | 9.98 | ↓ -14% | Neutral | | 2.500x | 2.750x | ↓ -0.250x | ↓ -16% | ↑ 6% | 4.5 | 3.8 | 0.6 | 0.6 | 4.2 | 3.9 | 0.6 | 0.5 | 2.5 | 2.3 |

TPs are on a 12-month timeframe; Priced as of July 3, 2023

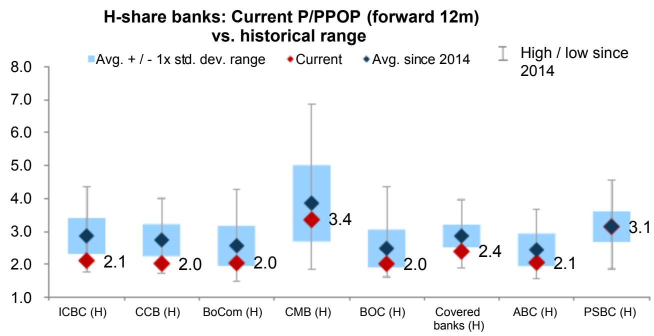
Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 2: A-share banks current P/PPOP vs. historical range**




Source: Wind

**Exhibit 3: H-share banks current P/PPOP vs. historical range**




Source: Wind

# I. Dividend: Stress-tested bank dividend yield suggests ~2ppt lower yield and increasing risk of payout miss

**With ongoing weakening of balance sheets expected for China banks, we stress tested dividend risk in 2023E-25E using an adjusted ROE, which assumes margin losses on local government debt and additional losses from banks' credit portfolios. The stress test implies average 2023E-25E adjusted dividend yields of 5.5%/7.2%, vs. 6.4%/8.3% pre-adjustment for our covered A/H shares. The test also suggests that banks like BoCom, Hua Xia, Industrial, ABC and ICBC are likely to face heightened dividend risk from weakening balance sheets and difficulty maintaining target CET1 ratios. Based on risk buffer shortfalls according to our framework (Exhibit 10), we see potential for BoCom and Hua Xia to miss dividend payout targets in 2023E, Industrial Bank in 2024E, and ICBC, PAB and ABC in 2025E.**

As per our economists, local government debt risk has been a long-standing issue over the past decade, but recent reports have brought bond default risks back to investors' attention (here, here, here). With this in mind, we use adjusted ROE in our stress test, which assumes earnings cuts caused by the margin risk of local government debt and losses on bank credit portfolios. We further tested banks' dividend risk to assess the robustness of bank balance sheets and sustainable investor returns; of note, company strategies in Asia Pacific have recently moved toward reducing capital expenditures and increasing R&D investment and cash to shareholders per our Asia Pacific Strategy team (here). Amid this environment, we attempt to answer: 1) what's the adjusted bank dividend yield as the current market price appears to be implying a higher yield (non adjusted) in a declining rate environment at ~6%/8% for A/H shares, and; 2) which banks can sustainably pay a dividend amid challenging fundamentals.

Starting with adjusted ROE in 2023E, we adjust bank book value by taking prolonged margin loss led by a net balance increase of government debt in 2024E-25E. We flex the condition that the NPL coverage ratio is lowered to 150%, the minimum requirement. We can assume this, because we have built in most credit losses in 2023E for the stress test, though we expect banks in reality to manage the pace of loss digestion for their credit portfolios.

So for the stress test, bank balance sheets from 2024E should be cleaner and setting an NPL coverage ratio of 150% can allow for the maximum provision release banks can have to maintain capital and dividend. We expect banks to prioritize capital over dividend based on historical precedence, which means when the CET1 ratio cannot be maintained at the target level, we believe provision release would fill in the capital shortfall as the top priority over dividend payments.

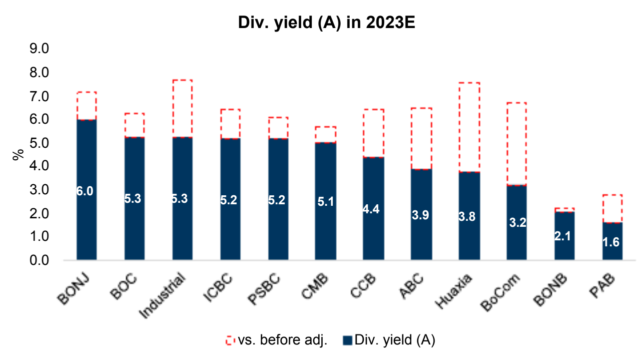
We summarize our stress-test results below:

- Adj. bank dividend works out to 5.5%/7.2% for our A/H shares vs. 6.4%/8.3% before adjustment on average for 2023-25E.
- From 2023E, **BoCom** and **Huaxia** could see heightened dividend payout risk, given

their lower adj. ROEs at 5.4%/4.9% respectively, and any provision release will likely not be sufficient to fill the capital shortfall. We bake in dividend payout cuts of 22ppts and 11ppts for **BoCom** and **Huaxia** in 2023E.

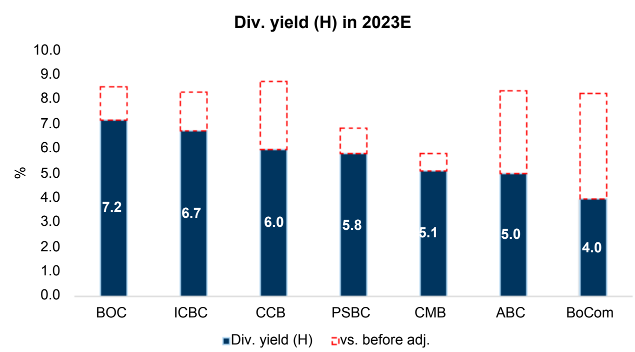
- **Industrial Bank** could miss its dividend payout target in 2024E, partly due to its high target CET1 ratio, but more likely given fundamentals e.g. a worsening balance sheet on larger local gov. debt exposure and potential for additional credit loss. Adj. ROE before dividends in 2023E/24E/25E is 9.4%/12.3%/11.9% vs. 13.4%/12.9%/12.5% pre-adjustment. We bake in dividend payout cuts of 28ppts, 13ppts and 7ppts for **BoCom, Huaxia** and **Industrial** in 2024E.
- **ICBC** and **ABC** could see heightened dividend risk in 2025E, mainly due to the prolonged margin loss on larger local gov. debt exposure. We expect **ICBC** and **ABC** to maintain their high target CET1 ratios at 13.3%/11.5% as G-SIBs, which have set an aggressive limit as the potential capital shortfall could be large and not covered by provision release. We note that during the 2013-15 cycle, banks lowered CET1 ratios to meet the demands of provisions and dividends but weakened the overall strength of their balance sheets, resulting in banks eventually cutting dividends to save capital. (See Part II for bank dividend history.) We bake in dividend payout cuts of 30ppts, 13ppts, 12ppts, 7ppts and 1ppts for **BoCom, Huaxia**, **Industrial**, **ICBC, PAB** and **ABC** in 2025E.

**Exhibit 4: A-share dividend yield pre/post adjustment (2023E)**



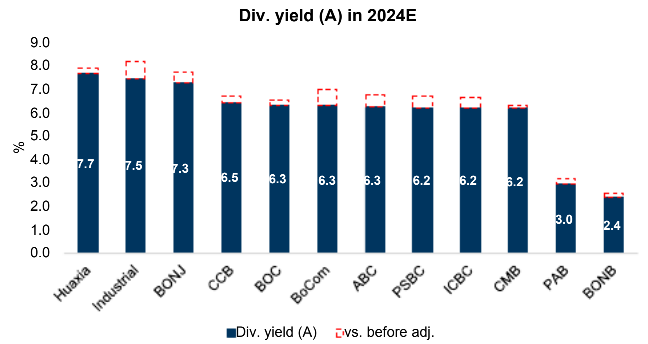

Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 5: H-share dividend yield pre/post adjustment (2023E)**



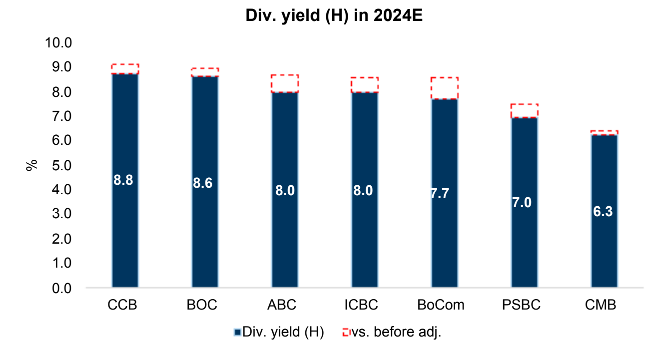

Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 6: A-share dividend yield pre/post adjustment (2024E)**



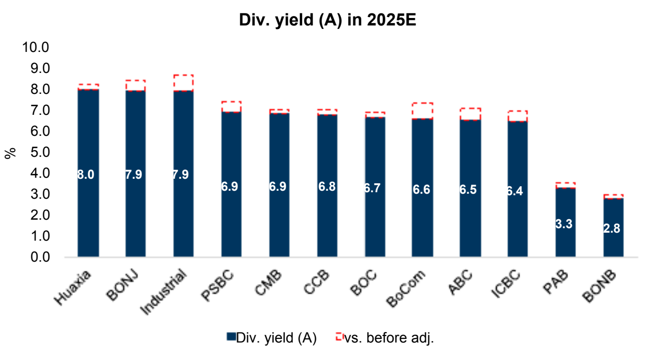

Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 7: H-share dividend yield pre/post adjustment (2024E)**



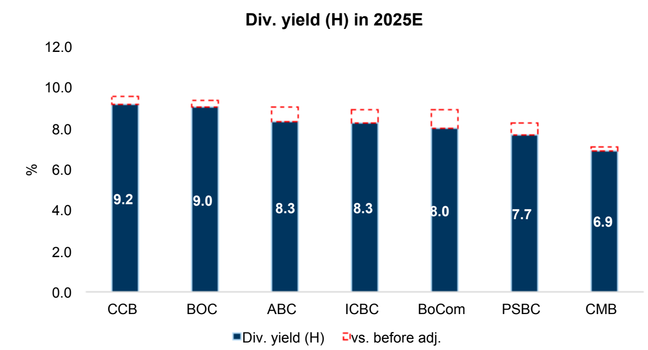

Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 8: A-share dividend yield pre/post adjustment (2025E)**




Source: Wind, Goldman Sachs Global Investment Research

**Exhibit 9: H-share dividend yield pre/post adjustment (2025E)**



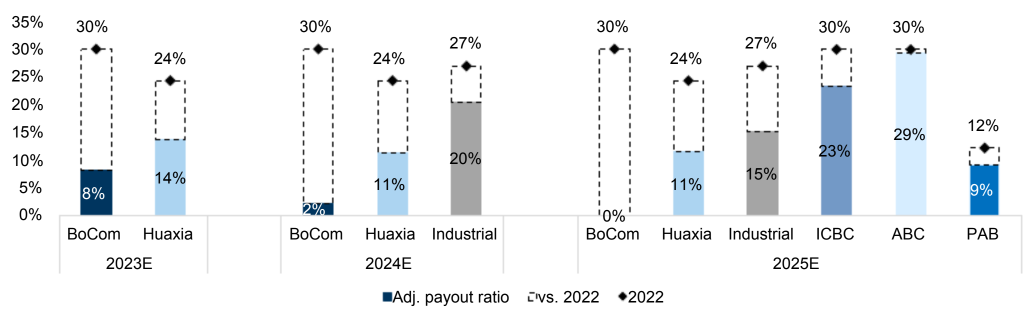

Source: Wind, Goldman Sachs Global Investment Research

### Exhibit 10: Dividend Stress test

| | Large | | | | | | Joint-stock | | | | Regional | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rmb bn | ICBC | CCB | BOC | ABC | BoCom | PSBC | CMB | PAB | Industrial | Huaxia | BONJ | BONB |
| **2023E** | | | | | | | | | | | | |
| Adj.NPL coverage ratio | 208% | 231% | 205% | 300% | 188% | 292% | 299% | 223% | 165% | 142% | 390% | 451% |
| Required min. | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% |
| Diff. (ppts) | 58 | 81 | 55 | 150 | 38 | 142 | 149 | 73 | 15 | -8 | 240 | 301 |
| Adj. NPL | 398 | 398 | 249 | 338 | 130 | 96 | 112 | 66 | 115 | 72 | 12 | 10 |
| **Provision available to release** | **229** | **324** | **136** | **506** | **49** | **136** | **167** | **48** | **17** | **-6** | **29** | **31** |
| Adj. CET-1 ratio after div. payout | 13.0% | 12.8% | 11.2% | 10.2% | 9.5% | 8.8% | 12.7% | 8.0% | 9.3% | 8.9% | 9.2% | 9.1% |
| Target | 13.3% | 13.3% | 11.5% | 11.5% | 10.8% | 9.7% | 12.5% | 8.7% | 9.5% | 9.1% | 9.4% | 9.6% |
| Diff. (ppts) | -0.3 | -0.6 | -0.3 | -1.3 | -1.3 | -0.9 | 0.2 | -0.7 | -0.2 | -0.2 | -0.3 | -0.5 |
| RWA | 24,852 | 21,891 | 18,651 | 22,447 | 9,064 | 8,080 | 6,643 | 4,580 | 7,419 | 3,023 | 1,452 | 1,847 |
| **CET-1 surplus (shortfall)** | **-74** | **-122** | **-62** | **-303** | **-120** | **-73** | **12** | **-33** | **-16** | **-6** | **-4** | **-9** |
| **Adj. CET-1 ratio with provision release** | **13.8%** | **14.0%** | **11.8%** | **12.1%** | **10.0%** | **10.4%** | **14.8%** | **8.8%** | **9.5%** | **8.8%** | **10.8%** | **10.7%** |
| **Total additional risk buffer** | **155** | **202** | **74** | **203** | **-70** | **64** | **179** | **15** | **2** | **-11** | **24** | **21** |
| | YES | YES | YES | YES | NO | YES | YES | YES | YES | NO | YES | YES |
| **2024E** | | | | | | | | | | | | |
| Adj.NPL coverage ratio | 192% | 221% | 201% | 289% | 175% | 288% | 298% | 198% | 151% | 134% | 374% | 435% |
| Required min. | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% |
| Diff. (ppts) | 42 | 71 | 51 | 139 | 25 | 138 | 148 | 48 | 1 | -16 | 224 | 285 |
| Adj. NPL | 462 | 445 | 279 | 375 | 150 | 101 | 116 | 79 | 119 | 80 | 14 | 12 |
| **Provision available to release** | **193** | **314** | **142** | **522** | **38** | **139** | **172** | **38** | **2** | **-13** | **32** | **33** |
| Adj. CET-1 ratio after div. payout | 12.8% | 12.5% | 11.1% | 9.8% | 9.2% | 8.6% | 12.9% | 8.0% | 9.2% | 9.0% | 9.0% | 8.9% |
| Target | 13.3% | 13.3% | 11.5% | 11.5% | 10.8% | 9.7% | 12.5% | 8.7% | 9.5% | 9.1% | 9.4% | 9.6% |
| Diff. (ppts) | -0.5 | -0.9 | -0.4 | -1.7 | -1.6 | -1.1 | 0.4 | -0.7 | -0.3 | -0.1 | -0.5 | -0.7 |
| RWA | 27,113 | 24,048 | 20,219 | 24,889 | 9,825 | 8,948 | 7,276 | 5,107 | 8,152 | 3,194 | 1,629 | 2,151 |
| **CET-1 surplus (shortfall)** | **-141** | **-207** | **-75** | **-434** | **-152** | **-95** | **30** | **-35** | **-26** | **-4** | **-8** | **-15** |
| **Adj. CET-1 ratio with provision release** | **13.4%** | **13.6%** | **11.7%** | **11.5%** | **9.6%** | **10.1%** | **14.9%** | **8.6%** | **9.2%** | **8.7%** | **10.6%** | **10.3%** |
| **Total additional risk buffer** | **51** | **108** | **67** | **88** | **-114** | **43** | **202** | **2** | **-24** | **-17** | **24** | **18** |
| | YES | YES | YES | YES | NO | YES | YES | YES | NO | NO | YES | YES |
| **2025E** | | | | | | | | | | | | |
| Adj.NPL coverage ratio | 173% | 211% | 196% | 279% | 164% | 286% | 291% | 169% | 135% | 125% | 352% | 424% |
| Required min. | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% | 150% |
| Diff. (ppts) | 23 | 61 | 46 | 129 | 14 | 136 | 141 | 19 | -15 | -25 | 202 | 274 |
| Adj. NPL | 548 | 498 | 312 | 416 | 172 | 105 | 123 | 97 | 125 | 90 | 17 | 13 |
| **Provision available to release** | **127** | **303** | **145** | **536** | **23** | **143** | **173** | **19** | **-19** | **-23** | **35** | **35** |
| Adj. CET-1 ratio after div. payout | 12.6% | 12.4% | 11.1% | 9.5% | 9.1% | 8.5% | 13.2% | 8.1% | 9.2% | 9.2% | 8.8% | 8.8% |
| Target | 13.3% | 13.3% | 11.5% | 11.5% | 10.8% | 9.7% | 12.5% | 8.7% | 9.5% | 9.1% | 9.4% | 9.6% |
| Diff. (ppts) | -0.7 | -1.0 | -0.4 | -2.0 | -1.7 | -1.2 | 0.7 | -0.6 | -0.4 | 0.0 | -0.6 | -0.9 |
| RWA | 29,588 | 26,245 | 21,860 | 27,415 | 10,644 | 9,904 | 7,983 | 5,693 | 8,972 | 3,357 | 1,829 | 2,507 |
| **CET-1 surplus (shortfall)** | **-216** | **-258** | **-79** | **-541** | **-177** | **-117** | **55** | **-35** | **-34** | **2** | **-12** | **-22** |
| **Adj. CET-1 ratio with provision release** | **13.0%** | **13.3%** | **11.7%** | **11.2%** | **9.3%** | **9.9%** | **15.0%** | **8.4%** | **9.0%** | **8.6%** | **10.4%** | **10.0%** |
| **Total additional risk buffer** | **-89** | **44** | **65** | **-6** | **-153** | **26** | **228** | **-16** | **-53** | **-21** | **23** | **13** |
| | NO | YES | YES | NO | NO | YES | YES | NO | NO | NO | YES | YES |

Source: Goldman Sachs Global Investment Research

### Exhibit 11: We baked in dividend payout cut of BoCom, Huaxia, Industrial, PAB, ICBC, and ABC in out years given risk buffer shortfall built in our framework.




Source: Company data, Goldman Sachs Global Investment Research

# II. Learning from previous bank dividend misses

**We expect banks to repeat the cycle of 2013-15 in terms of dividend risk given deteriorating fundamentals. We believe that at the start of the down-cycle banks would likely try to maintain dividends rather than risk buffers, but swiftly change to cutting dividends and prioritizing provision release to secure capital. As such, we believe bank dividend risk is increasing and adj. dividend yield in 2023E could potentially be -2ppts lower vs. before adjustment.**

In order to assess when the tipping point might be at which banks would cut dividends, we have back-tested data from past cycles, to see whether banks prioritized capital over investor returns, in order to strengthen balance sheets and maintain sustainable growth amid challenging times.

In the exhibits below we display the changes in dividend payout, NPL coverage ratio and CET1 ratio starting from 2010 until 2022, and note that at the beginning of the 2010-16 cycle, banks started to cut dividend payouts and release additional provisions to support capital.

From 2013-16, we see that banks struggled to prioritize dividend over risk buffers until their balance sheets were no longer able to maintain sufficient capital. Notably, 2013 was the most challenging year for banks, as NPL coverage ratios and CET1 ratios both declined by 35ppts/75bps on average, the largest drop in the 2010-2016 cycle, but average dividend payout was maintained. Bank valuations bottomed, with dividend yield peaking in 2013, likely suggesting that the market was expecting deteriorating bank balance sheets and dividend risk given the weakening risk buffers (Exhibit 13).

Moving into 2014 and 2015, banks cut dividends and further lowered NPL coverage ratios to accumulate earnings and support capital. We summarize the change over 2013-15 as:

- Banks could prioritize dividend at the beginning to support high dividend yield, despite weakening balance sheets;
- But approaching the tipping point when banks could not maintain the balance of provision, capital and dividend, banks shifted to prioritize capital over dividend to support the balance sheet.

We think the 2023E-25E cycle could largely repeat what happened in 2013-15. We model dividend payout risk, with lowering DPS by 8%/15% vs. prior, driven by an average 3-4ppts payout cut for covered banks. Having said that, we still see most banks able to maintain dividends, though divergence is set to widen on payouts (Exhibit 14, Exhibit 15).

## Exhibit 12: DPS

| DPS (Rmb) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICBC | 0.18 | 0.20 | 0.24 | 0.26 | 0.26 | 0.23 | 0.23 | 0.24 | 0.25 | 0.26 | 0.27 | 0.29 | 0.30 | 0.31 | 0.32 | 0.26 |
| CCB | 0.21 | 0.24 | 0.27 | 0.30 | 0.30 | 0.27 | 0.28 | 0.29 | 0.31 | 0.32 | 0.33 | 0.36 | 0.39 | 0.40 | 0.42 | 0.44 |
| BOC | 0.15 | 0.16 | 0.18 | 0.20 | 0.19 | 0.18 | 0.17 | 0.18 | 0.18 | 0.19 | 0.20 | 0.22 | 0.23 | 0.24 | 0.25 | 0.27 |
| ABC | 0.15 | 0.13 | 0.16 | 0.18 | 0.18 | 0.17 | 0.17 | 0.18 | 0.17 | 0.18 | 0.19 | 0.21 | 0.22 | 0.23 | 0.24 | 0.24 |
| BoCom | 0.12 | 0.10 | 0.24 | 0.26 | 0.27 | 0.27 | 0.27 | 0.29 | 0.30 | 0.32 | 0.32 | 0.35 | 0.37 | 0.10 | 0.03 | 0.00 |
| PSBC | | | | | | | 0.07 | 0.15 | 0.19 | 0.21 | 0.22 | 0.25 | 0.28 | 0.30 | 0.33 | 0.37 |
| CMB | 0.29 | 0.42 | 0.63 | 0.62 | 0.67 | 0.69 | 0.74 | 0.84 | 0.94 | 1.20 | 1.25 | 1.52 | 1.74 | 1.90 | 2.09 | 2.32 |
| PAB | | | 0.27 | 0.16 | 0.17 | 0.15 | 0.16 | 0.15 | 0.15 | 0.22 | 0.18 | 0.23 | 0.29 | 0.32 | 0.36 | 0.30 |
| Industrial | 0.46 | 0.37 | 0.57 | 0.46 | 0.57 | 0.61 | 0.67 | 0.65 | 0.69 | 0.76 | 0.80 | 1.03 | 1.19 | 1.21 | 0.97 | 0.76 |
| Huaxia | 0.20 | 0.25 | 0.47 | 0.43 | 0.43 | 0.36 | 0.18 | 0.15 | 0.17 | 0.25 | 0.30 | 0.34 | 0.40 | 0.23 | 0.20 | 0.21 |
| BONJ | 0.20 | 0.30 | 0.41 | 0.46 | 0.57 | 0.40 | 0.26 | 0.34 | 0.39 | 0.46 | 0.39 | 0.48 | 0.53 | 0.57 | 0.62 | 0.67 |
| BONB | 0.20 | 0.20 | 0.25 | 0.40 | 0.45 | 0.45 | 0.35 | 0.40 | 0.41 | 0.53 | 0.50 | 0.50 | 0.50 | 0.57 | 0.65 | 0.75 |

| △DPS (Rmb) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICBC | 0.01 | 0.02 | 0.04 | 0.02 | 0.00 | -0.02 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.03 | 0.01 | 0.01 | 0.01 | -0.06 |
| CCB | 0.01 | 0.02 | 0.03 | 0.03 | 0.00 | -0.03 | 0.00 | 0.01 | 0.02 | 0.01 | 0.01 | 0.04 | 0.02 | 0.01 | 0.02 | 0.02 |
| BOC | 0.01 | 0.01 | 0.02 | 0.02 | 0.00 | -0.02 | -0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.01 |
| ABC | | -0.02 | 0.03 | 0.02 | 0.01 | -0.02 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.02 | 0.02 | 0.01 | 0.01 | 0.00 |
| BoCom | -0.09 | -0.02 | 0.14 | 0.02 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.04 | 0.02 | -0.27 | -0.08 | -0.03 |
| PSBC | | | | | | | | 0.07 | 0.05 | 0.02 | 0.01 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| CMB | 0.05 | 0.13 | 0.21 | -0.01 | 0.05 | 0.02 | 0.05 | 0.10 | 0.10 | 0.26 | 0.05 | 0.27 | 0.22 | 0.16 | 0.19 | 0.23 |
| PAB | | | | -0.11 | 0.01 | -0.02 | 0.01 | -0.01 | 0.00 | 0.07 | -0.04 | 0.05 | 0.06 | 0.04 | 0.04 | -0.06 |
| Industrial | -0.04 | -0.09 | 0.20 | -0.11 | 0.11 | 0.04 | 0.06 | -0.02 | 0.04 | 0.07 | 0.04 | 0.23 | 0.15 | 0.02 | -0.24 | -0.21 |
| Huaxia | 0.07 | 0.05 | 0.22 | -0.04 | 0.00 | -0.07 | -0.18 | -0.03 | 0.02 | 0.08 | 0.05 | 0.04 | 0.06 | -0.16 | -0.03 | 0.01 |
| BONJ | 0.10 | 0.10 | 0.11 | 0.05 | 0.11 | -0.17 | -0.14 | 0.08 | 0.05 | 0.07 | -0.07 | 0.08 | 0.06 | 0.04 | 0.04 | 0.05 |
| BONB | 0.00 | 0.00 | 0.05 | 0.15 | 0.05 | 0.00 | -0.10 | 0.05 | 0.01 | 0.12 | -0.03 | 0.00 | 0.00 | 0.07 | 0.08 | 0.10 |

Source: Company data, Goldman Sachs Global Investment Research

## Exhibit 13: Dividend payout ratio

| Payout ratio (%) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICBC | 39% | 34% | 35% | 35% | 33% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 23% |
| CCB | 39% | 35% | 35% | 35% | 33% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% |
| BOC | 39% | 35% | 35% | 35% | 33% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% |
| ABC | 52% | 35% | 35% | 35% | 33% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 29% |
| BoCom | 17% | 12% | 31% | 31% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 8% | 2% | 0% |
| PSBC | | | | | | | 15% | 25% | 30% | 30% | 30% | 30% | 30% | 30% | 30% | 30% |
| CMB | 24% | 25% | 30% | 30% | 30% | 30% | 30% | 30% | 29% | 33% | 32% | 32% | 32% | 32% | 32% | 32% |
| PAB | | | 10% | 10% | 10% | 10% | 12% | 11% | 10% | 15% | 12% | 12% | 12% | 12% | 12% | 9% |
| Industrial | 15% | 16% | 21% | 21% | 23% | 23% | 24% | 24% | 24% | 24% | 25% | 26% | 27% | 27% | 20% | 15% |
| Huaxia | 17% | 19% | 25% | 25% | 22% | 21% | 10% | 10% | 13% | 17% | 22% | 22% | 24% | 14% | 11% | 11% |
| BONJ | 26% | 28% | 30% | 30% | 30% | 19% | 19% | 30% | 30% | 31% | 30% | 30% | 30% | 30% | 30% | 30% |
| BONB | 25% | 18% | 18% | 24% | 26% | 27% | 17% | 22% | 19% | 22% | 20% | 17% | 14% | 14% | 14% | 14% |

| △Payout ratio (ppts) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICBC | -5 | -5 | 1 | 0 | -2 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -7 |
| CCB | -5 | -4 | 0 | 0 | -2 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BOC | -5 | -4 | 0 | 0 | -2 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ABC | | -17 | 0 | 0 | -2 | -3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 |
| BoCom | -18 | -5 | 18 | 0 | -1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -22 | -6 | -2 |
| PSBC | | | | | | | | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CMB | -1 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | -1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| PAB | | | | 0 | 0 | 0 | 2 | -1 | -1 | 5 | -3 | 0 | 0 | 0 | 0 | -3 |
| Industrial | -4 | 1 | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | -7 | -5 |
| Huaxia | -1 | 2 | 7 | 0 | -3 | -1 | -11 | 0 | 3 | 5 | 4 | 0 | 2 | -11 | -3 | 0 |
| BONJ | 14 | 2 | 2 | 0 | 0 | -11 | 0 | 11 | 0 | 1 | -1 | 0 | 0 | 0 | 0 | 0 |
| BONB | -9 | -7 | 0 | 6 | 2 | 1 | -9 | 4 | -2 | 3 | -2 | -3 | -3 | 0 | 0 | 0 |

Source: Company data, Goldman Sachs Global Investment Research

### Exhibit 14: Dividend yield (A-share)

| Div. yield (A-share, %) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICBC | 4.3 | 4.8 | 5.8 | 7.3 | 5.2 | 5.1 | 5.3 | 3.9 | 4.7 | 4.5 | 5.3 | 6.3 | 7.0 | 6.5 | 6.7 | 5.4 |
| CCB | 4.6 | 5.2 | 5.8 | 7.2 | 4.5 | 4.7 | 5.1 | 3.8 | 4.8 | 4.4 | 5.2 | 6.2 | 6.9 | 6.4 | 6.7 | 7.1 |
| BOC | 4.5 | 5.3 | 6.0 | 7.5 | 4.6 | 4.4 | 4.9 | 4.4 | 5.1 | 5.2 | 6.2 | 7.2 | 7.3 | 6.3 | 6.6 | 6.9 |
| ABC | 2.0 | 5.0 | 5.6 | 7.1 | 4.9 | 5.2 | 5.5 | 4.7 | 4.8 | 4.9 | 5.9 | 7.0 | 7.6 | 6.5 | 6.8 | 6.9 |
| BoCom | 2.2 | 2.2 | 4.9 | 6.8 | 4.0 | 4.2 | 4.7 | 4.6 | 5.2 | 5.6 | 7.1 | 7.7 | 7.9 | 1.8 | 0.5 | 0.0 |
| PSBC | | | | | | | | | | 3.6 | 4.4 | 4.9 | 5.6 | 6.1 | 6.7 | 7.4 |
| CMB | 2.3 | 3.5 | 4.6 | 5.7 | 4.0 | 3.8 | 4.2 | 2.9 | 3.7 | 3.2 | 2.9 | 3.1 | 4.7 | 5.7 | 6.3 | 7.0 |
| PAB | | | 1.7 | 1.3 | 1.1 | 1.3 | 1.7 | 1.0 | 1.5 | 1.3 | 0.9 | 1.4 | 2.2 | 2.8 | 3.2 | 2.7 |
| Industrial | 1.9 | 3.0 | 3.4 | 4.5 | 3.5 | 3.6 | 3.8 | 3.8 | 4.6 | 3.8 | 3.8 | 5.4 | 6.8 | 7.7 | 6.2 | 4.8 |
| Huaxia | 1.8 | 2.2 | 4.5 | 5.1 | 3.2 | 3.0 | 1.7 | 1.7 | 2.4 | 3.2 | 4.8 | 6.0 | 7.4 | 4.3 | 3.7 | 3.9 |
| BONJ | 2.0 | 3.2 | 4.4 | 5.7 | 3.4 | 2.3 | 2.4 | 4.5 | 6.1 | 4.5 | 4.9 | 5.2 | 5.1 | 7.2 | 7.7 | 8.4 |
| BONB | 1.6 | 2.2 | 2.3 | 4.3 | 2.9 | 2.9 | 2.1 | 2.2 | 2.5 | 1.8 | 1.4 | 1.3 | 1.5 | 2.2 | 2.6 | 3.0 |

| ∆Div. yield (A-share, ppts) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICBC | 1.2 | 0.4 | 1.0 | 1.6 | -2.1 | -0.2 | 0.2 | -1.4 | 0.9 | -0.3 | 0.9 | 1.0 | 0.7 | -0.5 | 0.2 | -1.3 |
| CCB | 1.4 | 0.6 | 0.6 | 1.4 | -2.8 | 0.3 | 0.4 | -1.3 | 1.0 | -0.4 | 0.8 | 1.0 | 0.7 | -0.5 | 0.3 | 0.3 |
| BOC | 1.3 | 0.8 | 0.7 | 1.5 | -2.9 | -0.2 | 0.5 | -0.5 | 0.7 | 0.1 | 1.0 | 1.1 | 0.1 | -1.1 | 0.3 | 0.3 |
| ABC | | 3.0 | 0.6 | 1.5 | -2.2 | 0.3 | 0.3 | -0.8 | 0.2 | 0.1 | 1.0 | 1.1 | 0.6 | -1.1 | 0.3 | 0.1 |
| BoCom | 0.1 | 0.0 | 2.6 | 1.9 | -2.8 | 0.2 | 0.5 | -0.1 | 0.6 | 0.4 | 1.5 | 0.6 | 0.2 | -6.1 | -1.3 | -0.5 |
| PSBC | | | | | | | | | | 3.6 | 0.8 | 0.5 | 0.7 | 0.5 | 0.6 | 0.7 |
| CMB | 1.1 | 1.3 | 1.0 | 1.1 | -1.7 | -0.2 | 0.4 | -1.3 | 0.8 | -0.5 | -0.3 | 0.3 | 1.5 | 1.1 | 0.6 | 0.7 |
| PAB | | | | -0.4 | -0.2 | 0.2 | 0.5 | -0.7 | 0.5 | -0.2 | -0.4 | 0.5 | 0.8 | 0.7 | 0.3 | -0.5 |
| Industrial | 0.7 | 1.0 | 0.5 | 1.1 | -1.1 | 0.1 | 0.2 | 0.0 | 0.8 | -0.8 | 0.0 | 1.6 | 1.3 | 0.9 | -1.5 | -1.4 |
| Huaxia | 0.8 | 0.4 | 2.3 | 0.5 | -1.8 | -0.2 | -1.3 | 0.0 | 0.7 | 0.9 | 1.6 | 1.2 | 1.3 | -3.1 | -0.6 | 0.2 |
| BONJ | 1.5 | 1.2 | 1.2 | 1.3 | -2.3 | -1.2 | 0.1 | 2.1 | 1.6 | -1.6 | 0.4 | 0.3 | 0.0 | 2.1 | 0.5 | 0.7 |
| BONB | 0.5 | 0.6 | 0.2 | 2.0 | -1.5 | 0.0 | -0.8 | 0.1 | 0.2 | -0.7 | -0.4 | -0.1 | 0.2 | 0.7 | 0.3 | 0.4 |

Source: Wind, Goldman Sachs Global Investment Research

### Exhibit 15: Dividend yield (H-share)

| Div. yield (H-share, %) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICBC | 3.8 | 5.4 | 5.4 | 6.3 | 5.7 | 5.9 | 5.8 | 4.6 | 5.1 | 4.8 | 6.4 | 7.8 | 8.6 | 8.3 | 8.6 | 6.9 |
| CCB | 3.7 | 5.4 | 5.4 | 6.5 | 6.0 | 6.1 | 5.4 | 4.8 | 5.4 | 5.2 | 6.6 | 7.9 | 9.1 | 8.7 | 9.1 | 9.6 |
| BOC | 4.2 | 6.7 | 6.3 | 6.9 | 5.5 | 6.0 | 5.6 | 5.5 | 6.2 | 6.3 | 9.0 | 9.2 | 9.3 | 8.5 | 8.9 | 9.4 |
| ABC | 1.7 | 4.8 | 5.1 | 5.8 | 5.9 | 6.2 | 6.1 | 6.1 | 5.8 | 5.8 | 7.9 | 9.0 | 9.4 | 8.4 | 8.7 | 8.9 |
| BoCom | 1.8 | 2.3 | 5.1 | 6.0 | 4.7 | 5.9 | 5.5 | 6.1 | 5.7 | 6.3 | 9.2 | 8.8 | 9.5 | 2.2 | 0.6 | 0.0 |
| PSBC | | | | | | | 2.0 | 4.3 | 5.3 | 4.3 | 5.7 | 5.3 | 6.1 | 6.9 | 7.5 | 8.3 |
| CMB | 1.8 | 3.3 | 4.6 | 4.7 | 4.4 | 4.4 | 4.6 | 3.3 | 3.7 | 3.3 | 3.1 | 2.9 | 4.6 | 5.8 | 6.4 | 7.1 |

| ∆Div. yield (H-share, ppts) | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ICBC | 0.8 | 1.6 | -0.1 | 0.9 | -0.6 | 0.2 | -0.1 | -1.1 | 0.5 | -0.3 | 1.6 | 1.4 | 0.8 | -0.3 | 0.3 | -1.7 |
| CCB | 0.2 | 1.7 | 0.1 | 1.0 | -0.5 | 0.1 | -0.7 | -0.6 | 0.6 | -0.2 | 1.4 | 1.3 | 1.2 | -0.3 | 0.4 | 0.4 |
| BOC | 0.4 | 2.5 | -0.4 | 0.7 | -1.4 | 0.5 | -0.4 | -0.1 | 0.7 | 0.0 | 2.7 | 0.2 | 0.1 | -0.8 | 0.4 | 0.4 |
| ABC | | 3.2 | 0.3 | 0.7 | 0.0 | 0.3 | 0.0 | -0.1 | -0.3 | 0.0 | 2.1 | 1.1 | 0.4 | -1.1 | 0.3 | 0.2 |
| BoCom | -0.8 | 0.5 | 2.8 | 0.9 | -1.3 | 1.2 | -0.4 | 0.7 | -0.4 | 0.5 | 2.9 | -0.4 | 0.6 | -7.3 | -1.6 | -0.6 |
| PSBC | | | | | | | | 2.3 | 1.0 | -1.0 | 1.4 | -0.4 | 0.8 | 0.8 | 0.7 | 0.8 |
| CMB | 0.6 | 1.5 | 1.3 | 0.1 | -0.4 | 0.1 | 0.2 | -1.4 | 0.5 | -0.5 | -0.2 | -0.1 | 1.6 | 1.2 | 0.6 | 0.7 |

Source: Wind, Goldman Sachs Global Investment Research

# III. Rating changes: PSBC (A/H) up to Buy; ICBC (A/H), ABC (A/H) and Industrial down to Sell

**Despite the distressed valuations large banks in China are trading at and likely stimulus policy to boost market sentiment and drive banks' share prices, we further cut our covered bank earnings and target P/PPOP multiples to bake in deteriorating fundamentals on margin risk from local government debt and credit loss, which could send capital and dividend at risk. We lower the ROE of our covered banks to 9.6% on average in 2023E (from 12.8%), expecting Industrial Bank to miss dividend payout targets in 2024E on a deteriorating balance sheet, and ICBC and ABC in 2025E given G-SIB requirements to prioritize capital over dividends. Therefore, we cut dividend payouts of BoCom, Huaxia, Industrial, ICBC, ABC and PAB in outer years, assuming no new capital raise or decrease in target CET1 ratio. We downgrade ICBC (A/H), Industrial Bank and ABC (A/H) to Sell. That said, we believe the market has underappreciated PSBC which could maintain its dividend on robust balance sheet. We upgrade PSBC A/H to Buy from Sell.**

Given the expected overall weakening of balance sheets, making it more challenging for banks to maintain dividend targets in outer years, we further cut our covered banks' net profit by -1%~-4% in 2023E-25E to factor in the margin risk of local government debt and more losses within banks' credit portfolios. With this, we revise the ROE for our covered A/H banks to 10.9% on average for 2023-25E from 12.8% prior. Our revenue estimates on average are -1%/-3%/-5% below Visible Alpha consensus, and net profit is -1%/-2%/-2% below consensus. Average DPS is -8%/-15% vs. prior on payout cut of 3/4ppts vs. prior in 2023E-24E. We revise the target P/PPOP by -4%/+2% on average for A/H shares, and revise our 12m TPs by an average of -5%/-1% for A/H shares.

Having said that, we see two factors, namely local government debt and credit losses, that could further differentiate banks:

**1. Divergence within large banks set to widen, with local government debt the key factor:** We estimate large banks to have Rmb 29tn (USD 4.1tn) in local government debt, or 86% of total debt for our covered banks:

- **Size:** We expect **ICBC, ABC** and **BoCom** to have larger exposure to local government debt at 24%/20%/29% of IEA, compared with 18% on average for the large banks.
- **Mix:** Banks with more local government bonds could utilize tax savings and capital efficiency to offset the margin headwinds of local government debt. **CCB** has local government bonds worth Rmb 2.9tn, or 62% of total exposure in terms of local gov. debt, vs 38% for **ICBC**. **PSBC** has the largest local government bond exposure at 83%, the highest among covered banks, with tax and capital savings as a % of NPAT of 13% in 2023E vs. 9% on average for the covered banks.

**2. Large banks look overall better positioned than smaller banks, as their larger balance sheets allow them to digest more credit losses.** We estimate property exposure as a % of total assets for the large banks at 3% on average vs. 5% for other covered banks, and reported NPL ratio of property loans at 4.5% vs. 1.8%. Given we assume large banks to have better reporting standards, we expect other banks could report a higher NPL ratio of property loans, and thus more losses. We upgrade **PSBC** to Buy from Sell with 2% property exposure, compared to Neutral rated **CMB** with 6% (see here), and **Industrial Bank** with 6%.

All in, with the adjusted ROE revisions we make, we further normalize bank dividend yield:

1. We expect **BoCom/Huaxia** to print the largest drop in normalized bank dividend yield also in 2023E, and **BONB/CMB** to show the smallest decrease in 2023E.
2. We expect **Industrial Bank** to miss its dividend target in 2024E, and **ICBC/ABC** in 2025E, assuming that maintaining the target CET1 ratio as G-SIBs is prioritized over paying dividends.

We believe a further multiple correction is likely, driven by margin risk from local government debt and the ongoing credit cycle, and as such, we recalibrate our CAMELOT scorecard and revise our target P/PPOPs by -4%/+2% on average in 2024E to 2.4x/2.2x for A/H shares, and further revise down PPOP by -3%/-4%/-2% in 2023E-25E. Given our more cautious sector view, the continued weak trend in retail demand and more divergence expected among large banks, we make one upgrade and three downgrades.

**Upgrade**

**PSBC (A/H):** We upgrade **PSBC A/H** to Buy from Sell on peer-leading earnings forecasts within the large bank group, a strong risk buffer and better NIM trajectory. Our new target P/PPOPs for A/H are 3.75x/3.25x in 2024E vs. 2.75x/2.25x prior, with a +2%~+3% change in PPOP in 2023E-25E. Our new 12m TPs are Rmb6.03/HK$5.8 from Rmb4.31/HK$4.06.

**Downgrades**

- **ICBC (A/H):** We downgrade **ICBC A/H** to Sell from Buy on increasing difficulty to maintain dividend payout ratio targets in 2025E, given the high CET1 ratio target that G-SIBs need to maintain. We lower our target P/PPOP to 2.25x/1.75x from 2.75x/2.25x prior, with our PPOP cut -8%/-10% in 2023E/24E. Our new 12m TPs for A/H are Rmb4.12/HK$3.55 from Rmb5.29/HK$4.98.
- **Industrial Bank:** We downgrade **Industrial Bank** to Sell from Buy, on a double squeeze of both top and bottom line growth, due to more margin dilution and credit loss digestion. Our target P/PPOP moves lower to 1.5x in 2024E from 2.25x, with PPOP down -3%~-5% in 2023E-25E. Our new 12m TP is Rmb12.09, from Rmb18.93.
- **ABC (A):** We downgrade **ABC A/H** shares to Sell from Neutral on long-term dividend uncertainty, on top of year-to-date outperformance (+21%/+15% vs. +3.2%/+4.2% average of our covered banks). Our target P/PPOPs for A/H are 1.875x/1.6x vs. 2x/1.6x prior, with PPOP down -8%/-9% in 2023E/24E. Our new 12m TPs for A/H are Rmb 2.59/HK$2.45 from Rmb2.85/HK$2.62.

### Others

For those banks we make no rating changes to, we lower the target P/PPOP multiples of some to rebalance their relative position in terms of expected share price changes.

**CMB (A/H):** We maintain Neutral ratings on **CMB A/H** on continued soft retail growth and more credit losses to contain provision releases per our framework (see Part II). Our new target P/PPOPs for A/H decline to 3.25x/3.25x in 2024E vs. 3.5x/3.5x prior, with no change to PPOP in 2023E-25E. Our 12m TPs decline to Rmb32.65/HK$36.24 from Rmb35.52/HK$40.85.

**BOC (A/H):** We maintain Neutral ratings on **BOC A/H** on relatively low local government debt exposure and an improving balance sheet as suggested by 1Q23 results. Our target P/PPOP for A/H moves to 2.375x/1.75x vs. 2x/1.75x prior, with our PPOP estimates in 2023E/24E changing by +3%/+2%. Our 12m TPs move to Rmb3.46/HK$2.83 from Rmb2.71/HK$2.72.

**PAB:** We maintain a Neutral rating on **PAB**, with a lower target P/PPOP of 1.75x vs. 2.25x prior, to reflect increased credit losses needed to digest and a lower rank as suggested by our CAMELOT framework. Our 12m TP declines to Rmb13.12 from Rmb16.84.

**BONJ:** We maintain a Neutral rating on **BONJ**, with a lower target P/PPOP of 2.5x vs. 2.75x prior, to reflect the lower rank suggested by our CAMELOT framework. Our 12m TP declines to Rmb8.61 from Rmb9.98.

**BONB:** We maintain a Buy rating on **BONB**, with a lower target P/PPOP of 4.5x vs. 5x prior, to factor in sector headwinds. Our 12m TP declines to Rmb 30.52 from Rmb 35.76.

**Exhibit 16: GSe vs. Consensus**

Rmb bn

**Revenue**

| Company | GSe growth yoy | | | Consensus growth yoy | | | GSe - consensus growth | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E |
| ICBC | 3% | 4% | 5% | 5% | 8% | 8% | -3% | -4% | -3% |
| CCB | 3% | 5% | 5% | 5% | 9% | 8% | -1% | -4% | -3% |
| BOC | 5% | 5% | 5% | 3% | 8% | 7% | 2% | -3% | -2% |
| ABC | 2% | 5% | 5% | 2% | 9% | 8% | 0% | -4% | -3% |
| BoCom | 3% | 4% | 5% | 3% | 6% | 8% | 0% | -1% | -2% |
| PSBC | 6% | 10% | 9% | 7% | 11% | 11% | -1% | -1% | -1% |
| CMB | 5% | 9% | 9% | 5% | 9% | 10% | 0% | -1% | -1% |
| PAB | 5% | 8% | 7% | 6% | 9% | 8% | -1% | -1% | -1% |
| Industrial | 1% | 7% | 7% | 4% | 8% | 9% | -2% | -2% | -1% |
| Huaxia | 0% | 2% | 3% | 4% | 7% | 3% | -5% | -5% | -1% |
| BONB | 11% | 13% | 13% | 11% | 13% | 14% | 0% | -1% | -2% |
| BONJ | 8% | 8% | 9% | 10% | 10% | 11% | -2% | -2% | -2% |
| Aggregate | | | | | | | | | |
| Total | 4% | 6% | 6% | 4% | 9% | 8% | -1% | -3% | -2% |
| Large | 3% | 5% | 6% | 4% | 8% | 8% | -1% | -3% | -3% |
| Joint-stock | 3% | 7% | 8% | 5% | 9% | 8% | -1% | -1% | -1% |
| Regional | 10% | 11% | 11% | 11% | 12% | 13% | -1% | -1% | -2% |

**NPAT**

| Company | GSe growth yoy | | | Consensus growth yoy | | | GSe - consensus growth | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E |
| ICBC | 3% | 3% | 4% | 3% | 4% | 5% | 0% | 0% | -1% |
| CCB | 3% | 4% | 5% | 3% | 5% | 6% | -1% | -1% | -1% |
| BOC | 5% | 5% | 5% | 4% | 5% | 5% | 0% | 0% | 0% |
| ABC | 3% | 4% | 4% | 5% | 6% | 5% | -1% | -1% | -1% |
| BoCom | 4% | 4% | 4% | 5% | 4% | 4% | 0% | 0% | 0% |
| PSBC | 9% | 10% | 10% | 9% | 11% | 10% | 0% | -1% | 0% |
| CMB | 9% | 10% | 11% | 11% | 13% | 12% | -2% | -3% | -1% |
| PAB | 13% | 12% | 12% | 15% | 14% | 13% | -2% | -2% | -1% |
| Industrial | 2% | 6% | 6% | 5% | 9% | 9% | -3% | -3% | -3% |
| Huaxia | 3% | 4% | 4% | 6% | 5% | 7% | -3% | -1% | -3% |
| BONB | 14% | 15% | 15% | 15% | 17% | 16% | -1% | -2% | -1% |
| BONJ | 8% | 8% | 9% | 9% | 10% | 10% | -1% | -2% | -2% |
| Aggregate | | | | | | | | | |
| Total | 4% | 5% | 6% | 5% | 7% | 7% | -1% | -1% | -1% |
| Large | 4% | 5% | 5% | 4% | 5% | 5% | 0% | -1% | -1% |
| Joint-stock | 7% | 9% | 9% | 10% | 11% | 11% | -3% | -2% | -1% |
| Regional | 11% | 12% | 12% | 12% | 14% | 14% | -1% | -2% | -1% |

**Revenue**

| Company | GSe | | | Consensus | | | Diff | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E |
| ICBC | 867 | 901 | 945 | 890 | 961 | 1036 | -3% | -6% | -9% |
| CCB | 785 | 823 | 865 | 794 | 862 | 935 | -1% | -5% | -7% |
| BOC | 596 | 625 | 657 | 582 | 629 | 675 | 2% | -1% | -3% |
| ABC | 702 | 737 | 777 | 700 | 762 | 823 | 0% | -3% | -6% |
| BoCom | 249 | 259 | 273 | 248 | 262 | 282 | 0% | -1% | -3% |
| PSBC | 354 | 390 | 427 | 359 | 399 | 441 | -1% | -2% | -3% |
| CMB | 356 | 386 | 421 | 355 | 388 | 425 | 0% | 0% | -1% |
| PAB | 188 | 203 | 218 | 190 | 206 | 223 | -1% | -2% | -2% |
| Industrial | 225 | 240 | 258 | 230 | 249 | 271 | -2% | -4% | -5% |
| Huaxia | 93 | 95 | 98 | 98 | 104 | 108 | -4% | -8% | -9% |
| BONB | 64 | 72 | 82 | 64 | 73 | 83 | 0% | 0% | -2% |
| BONJ | 48 | 52 | 57 | 49 | 54 | 59 | -1% | -3% | -4% |
| Aggregate | | | | | | | | | |
| Total | 4528 | 4785 | 5076 | 4557 | 4946 | 5358 | -1% | -3% | -5% |
| Large | 3553 | 3735 | 3943 | 3572 | 3873 | 4189 | -1% | -4% | -6% |
| Joint-stock | 863 | 925 | 995 | 872 | 948 | 1027 | -1% | -2% | -3% |
| Regional | 112 | 124 | 138 | 113 | 126 | 142 | -1% | -2% | -3% |

**NPAT**

| Company | GSe | | | Consensus | | | Diff | | |
|---|---|---|---|---|---|---|---|---|---|
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E |
| ICBC | 370 | 383 | 397 | 370 | 384 | 402 | 0% | 0% | -1% |
| CCB | 333 | 347 | 364 | 335 | 353 | 373 | -1% | -2% | -2% |
| BOC | 238 | 250 | 262 | 238 | 249 | 260 | 0% | 0% | 0% |
| ABC | 268 | 279 | 290 | 271 | 286 | 301 | -1% | -3% | -4% |
| BoCom | 96 | 100 | 104 | 96 | 101 | 105 | 0% | -1% | 0% |
| PSBC | 93 | 102 | 113 | 93 | 104 | 115 | 0% | -1% | -1% |
| CMB | 151 | 166 | 184 | 154 | 173 | 193 | -2% | -4% | -5% |
| PAB | 51 | 58 | 65 | 52 | 59 | 67 | -2% | -3% | -4% |
| Industrial | 93 | 99 | 105 | 96 | 105 | 114 | -3% | -6% | -8% |
| Huaxia | 26 | 27 | 28 | 28 | 29 | 30 | -7% | -7% | -7% |
| BONB | 26 | 30 | 35 | 27 | 31 | 36 | -1% | -3% | -4% |
| BONJ | 20 | 21 | 23 | 20 | 22 | 24 | -1% | -3% | -5% |
| Aggregate | | | | | | | | | |
| Total | 1765 | 1862 | 1970 | 1777 | 1893 | 2018 | -1% | -2% | -2% |
| Large | 1398 | 1461 | 1530 | 1403 | 1476 | 1555 | 0% | -1% | -2% |
| Joint-stock | 321 | 350 | 382 | 327 | 364 | 403 | -2% | -4% | -5% |
| Regional | 46 | 51 | 58 | 47 | 53 | 60 | -1% | -3% | -4% |

Source: Visible Alpha Consensus Data, Goldman Sachs Global Investment Research

**Exhibit 17: Valuation revisions**

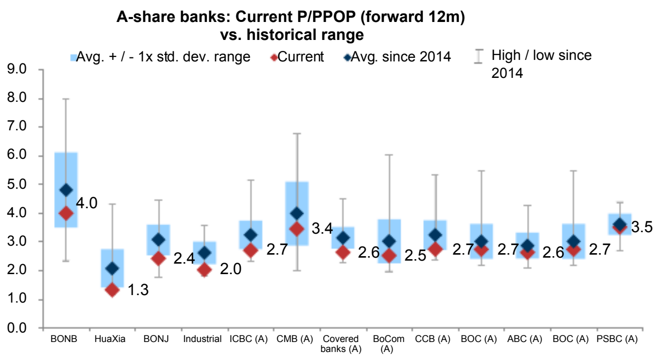
price as of July 3

| | Currency | Current price | Current TP | Previous TP | TP change | Rating | Previous rating | Target P/PPOP | Previous Target multiple | Target multiple Change | PPOP change | Upside/ downside (%) | Implied P/E | | Implied P/B | | Trading P/E | | Trading P/B | | Trading P/PPOP | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H-share (HKD) | | | | | | | | | | | | | 2023E | 2024E | 2023E | 2024E | 2023E | 2024E | 2023E | 2024E | 2023E | 2024E |
| ICBC (H) | HK$ | 4.24 | 3.55 | 4.98 | ↓ -29% | Sell | Buy | 1.750x | 2.250x | ↓ -0.500x | ↓ -10% | ↓ -16% | 3.1 | 3.0 | 0.3 | 0.3 | 3.7 | 3.6 | 0.4 | 0.4 | 2.2 | 2.1 |
| BOC (H) | HK$ | 3.19 | 2.83 | 2.72 | ↑ 4% | Neutral | | 1.750x | 1.750x | | ↑ 2% | ↓ -11% | 3.2 | 3.0 | 0.3 | 0.3 | 3.6 | 3.4 | 0.4 | 0.3 | 2.1 | 2.0 |
| CCB (H) | HK$ | 5.12 | 5.81 | 6.07 | ↓ -4% | Buy | | 2.250x | 2.250x | | ↓ -6% | ↑ 13% | 3.9 | 3.8 | 0.4 | 0.4 | 3.5 | 3.3 | 0.4 | 0.4 | 2.1 | 2.0 |
| ABC (H) | HK$ | 3.12 | 2.45 | 2.62 | ↓ -6% | Sell | Neutral | 1.600x | 1.600x | | ↓ -9% | ↓ -21% | 2.9 | 2.8 | 0.3 | 0.3 | 3.7 | 3.5 | 0.4 | 0.4 | 2.1 | 2.0 |
| BoCom (H) | HK$ | 5.20 | 3.88 | 3.97 | ↓ -2% | Sell | | 1.500x | 1.500x | | ↓ -3% | ↓ -25% | 2.7 | 2.6 | 0.3 | 0.3 | 3.6 | 3.5 | 0.4 | 0.3 | 2.1 | 2.0 |
| PSBC (H) | HK$ | 4.87 | 5.80 | 4.06 | ↑ 43% | Buy | Sell | 3.250x | 2.250x | ↑ 1.000x | ↑ 3% | ↑ 19% | 5.2 | 4.7 | 0.6 | 0.6 | 4.4 | 4.0 | 0.5 | 0.5 | 3.0 | 2.7 |
| CMB (H) | HK$ | 37.05 | 36.24 | 40.85 | ↓ -11% | Neutral | | 3.250x | 3.500x | ↓ -0.250x | ↓ -1% | ↓ -2% | 5.5 | 5.0 | 0.9 | 0.8 | 5.6 | 5.1 | 0.9 | 0.8 | 3.6 | 3.3 |
| A-share (Rmb) | | | | | | | | | | | | | | | | | | | | | | |
| ICBC (A) | Rmb | 4.88 | 4.12 | 5.29 | ↓ -22% | Sell | Buy | 2.250x | 2.750x | ↓ -0.500x | ↓ -10% | ↓ -16% | 4.0 | 3.5 | 0.4 | 0.4 | 4.7 | 4.5 | 0.5 | 0.5 | 2.8 | 2.7 |
| BOC (A) | Rmb | 3.98 | 3.46 | 2.71 | ↑ 28% | Neutral | | 2.375x | 2.000x | ↑ 0.375x | ↑ 2% | ↓ -13% | 4.3 | 3.7 | 0.5 | 0.4 | 4.9 | 4.7 | 0.5 | 0.5 | 2.9 | 2.7 |
| CCB (A) | Rmb | 6.34 | 6.40 | 6.46 | ↓ -1% | Buy | | 2.750x | 2.750x | | ↓ -6% | ↑ 1% | 4.8 | 4.1 | 0.5 | 0.5 | 4.8 | 4.6 | 0.5 | 0.5 | 2.9 | 2.7 |
| ABC (A) | Rmb | 3.62 | 2.59 | 2.85 | ↓ -9% | Sell | Neutral | 1.875x | 2.000x | ↓ -0.125x | ↓ -9% | ↓ -28% | 3.4 | 2.9 | 0.4 | 0.3 | 4.7 | 4.5 | 0.5 | 0.5 | 2.7 | 2.6 |
| BoCom (A) | Rmb | 5.89 | 3.79 | 3.74 | ↑ 1% | Sell | | 1.625x | 1.625x | | ↓ -3% | ↓ -36% | 2.9 | 2.5 | 0.3 | 0.3 | 4.6 | 4.4 | 0.5 | 0.4 | 2.6 | 2.5 |
| PSBC (A) | Rmb | 4.98 | 6.03 | 4.31 | ↑ 40% | Buy | Sell | 3.750x | 2.750x | ↑ 1.000x | ↑ 3% | ↑ 21% | 6.0 | 4.9 | 0.7 | 0.7 | 4.9 | 4.5 | 0.6 | 0.6 | 3.4 | 3.1 |
| CMB (A) | Rmb | 33.72 | 32.65 | 35.52 | ↓ -8% | Neutral | | 3.250x | 3.500x | ↓ -0.250x | ↓ -1% | ↓ -3% | 5.5 | 4.5 | 0.9 | 0.8 | 5.6 | 5.1 | 0.9 | 0.8 | 3.6 | 3.4 |
| Industrial | Rmb | 15.83 | 12.09 | 18.93 | ↓ -36% | Sell | Buy | 1.500x | 2.250x | ↓ -0.750x | ↓ -4% | ↓ -24% | 2.7 | 2.3 | 0.3 | 0.3 | 3.5 | 3.3 | 0.5 | 0.4 | 2.1 | 2.0 |
| PAB | Rmb | 11.49 | 13.12 | 16.84 | ↓ -22% | Buy | | 1.750x | 2.250x | ↓ -0.500x | ↑ 0% | ↑ 14% | 5.0 | 4.0 | 0.6 | 0.6 | 4.3 | 3.9 | 0.5 | 0.5 | 1.7 | 1.5 |
| HuaXia | Rmb | 5.48 | 4.25 | 4.23 | ↑ 0% | Sell | | 1.000x | 1.000x | | ↓ -3% | ↓ -22% | 2.5 | 2.2 | 0.2 | 0.2 | 3.3 | 3.1 | 0.3 | 0.3 | 1.3 | 1.3 |
| BONB | Rmb | 25.58 | 30.52 | 35.76 | ↓ -15% | Buy | | 4.500x | 5.000x | ↓ -0.500x | ↓ -5% | ↑ 19% | 7.7 | 6.0 | 1.1 | 1.0 | 6.4 | 5.6 | 1.0 | 0.8 | 4.3 | 3.8 |
| BONJ | Rmb | 8.09 | 8.61 | 9.98 | ↓ -14% | Neutral | | 2.500x | 2.750x | ↓ -0.250x | ↓ -16% | ↑ 6% | 4.5 | 3.8 | 0.6 | 0.6 | 4.2 | 3.9 | 0.6 | 0.5 | 2.5 | 2.3 |

TPs are on a 12-month time frame; Priced as of July 3, 2023

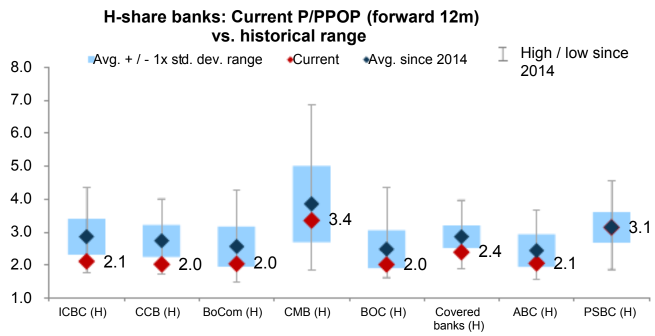
Source: Wind, Goldman Sachs Global Investment Research

### Exhibit 18: A-share banks current P/PPOP vs. historical range



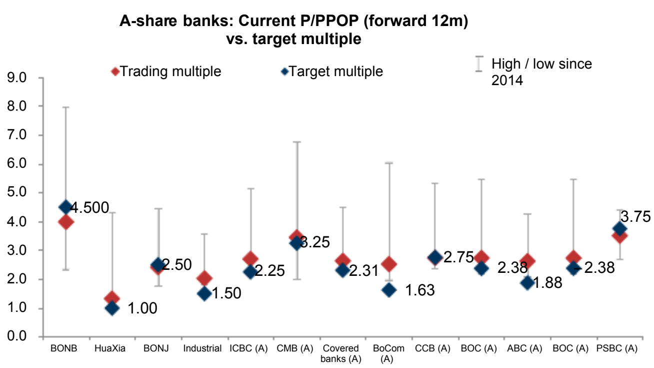

Source: Wind

### Exhibit 19: H-share banks current P/PPOP vs. historical range



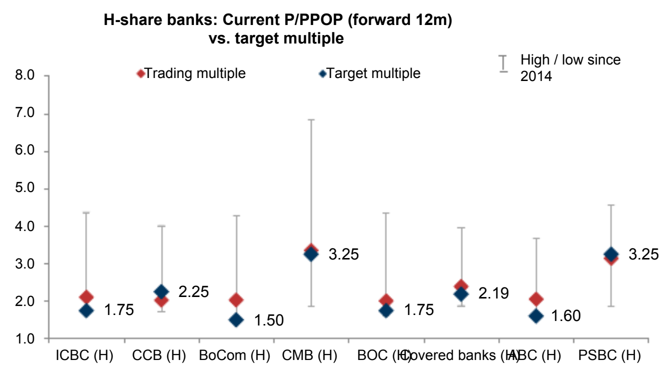

Source: Wind

### Exhibit 20: A-share banks trading multiple vs target multiple: P/PPOP




Source: Wind, Goldman Sachs Global Investment Research

### Exhibit 21: H-share banks trading multiple vs target multiple: P/PPOP




Source: Wind, Goldman Sachs Global Investment Research

### Exhibit 22: New vs. Old: PPOP

Rmb bn

| PPOP | | | | | | | |
|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | Change | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2023E | 2024E |
| ICBC | 631 | 652 | 683 | 685 | 725 | (8%) | (10%) |
| CCB | 555 | 582 | 612 | 587 | 620 | (5%) | (6%) |
| BOC | 408 | 429 | 450 | 398 | 421 | 3% | 2% |
| ABC | 461 | 483 | 508 | 499 | 531 | (8%) | (9%) |
| BoCom | 166 | 173 | 182 | 171 | 179 | (3%) | (3%) |
| PSBC | 135 | 148 | 162 | 133 | 145 | 2% | 3% |
| CMB | 233 | 253 | 276 | 236 | 256 | (1%) | (1%) |
| Industrial | 157 | 167 | 180 | 162 | 175 | (3%) | (4%) |
| HuaXia | 64 | 65 | 67 | 65 | 67 | (2%) | (3%) |
| PAB | 135 | 145 | 156 | 135 | 145 | (0%) | 0% |
| BONB | 40 | 45 | 50 | 42 | 47 | (4%) | (5%) |
| BONJ | 33 | 36 | 39 | 37 | 42 | (12%) | (16%) |
| Aggregate | | | | | | | |
| Total | 3,018 | 3,179 | 3,366 | 3,150 | 3,352 | (4%) | (5%) |
| Large | 2,356 | 2,466 | 2,597 | 2,473 | 2,619 | (5%) | (6%) |
| Joint-stock | 589 | 632 | 679 | 598 | 643 | (2%) | (2%) |
| Regional | 73 | 80 | 89 | 79 | 90 | (8%) | (10%) |

| PPOP growth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | Change | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2023E | 2024E |
| ICBC | 4% | 3% | 5% | 6% | 6% | (1) | (2) |
| CCB | 3% | 5% | 5% | 5% | 6% | (2) | (1) |
| BOC | 5% | 5% | 5% | 5% | 6% | 0 | (1) |
| ABC | 2% | 5% | 5% | 6% | 6% | (4) | (2) |
| BoCom | 3% | 4% | 5% | 4% | 5% | (1) | (0) |
| PSBC | 6% | 10% | 9% | 5% | 9% | 2 | 1 |
| CMB | 5% | 9% | 9% | 6% | 8% | (1) | 0 |
| Industrial | 1% | 7% | 7% | 5% | 8% | (3) | (1) |
| HuaXia | (0%) | 2% | 3% | (1%) | 3% | 1 | (1) |
| PAB | 5% | 8% | 8% | 5% | 8% | (0) | 0 |
| BONB | 11% | 13% | 12% | 16% | 14% | (5) | (1) |
| BONJ | 8% | 8% | 9% | 13% | 13% | (6) | (5) |
| Average | | | | | | | |
| Total | 5% | 7% | 7% | 6% | 8% | (2) | (1) |
| Large | 4% | 5% | 6% | 5% | 6% | (2) | (1) |
| Joint-stock | 3% | 6% | 7% | 4% | 7% | (2) | (1) |
| Regional | 10% | 10% | 11% | 15% | 13% | (2) | (1) |

Source: Goldman Sachs Global Investment Research

**Exhibit 23: New vs. Old: NPAT**

Rmb bn

| NPAT | | | | | | | |
|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | Change | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2023E | 2024E |
| ICBC | 370 | 383 | 397 | 383 | 404 | (3%) | (5%) |
| CCB | 333 | 347 | 364 | 327 | 342 | 2% | 2% |
| BOC | 238 | 250 | 262 | 237 | 249 | 0% | 0% |
| ABC | 268 | 279 | 290 | 264 | 275 | 2% | 1% |
| BoCom | 96 | 100 | 104 | 94 | 98 | 2% | 2% |
| PSBC | 93 | 102 | 113 | 93 | 104 | 0% | (1%) |
| CMB | 151 | 166 | 184 | 153 | 173 | (1%) | (4%) |
| Industrial | 93 | 99 | 105 | 97 | 106 | (4%) | (7%) |
| HuaXia | 26 | 27 | 28 | 26 | 26 | 1% | 2% |
| PAB | 51 | 58 | 65 | 54 | 61 | (5%) | (6%) |
| BONB | 26 | 30 | 35 | 27 | 30 | (1%) | 0% |
| BONJ | 20 | 21 | 23 | 22 | 25 | (8%) | (14%) |
| **Aggregate** | | | | | | | |
| Total | 1,765 | 1,862 | 1,970 | 1,775 | 1,893 | (1%) | (2%) |
| Large | 1,398 | 1,461 | 1,530 | 1,398 | 1,472 | (0%) | (1%) |
| Joint-stock | 321 | 350 | 382 | 329 | 367 | (2%) | (5%) |
| Regional | 46 | 51 | 58 | 48 | 55 | (4%) | (6%) |

| NPAT growth | | | | | | | |
|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | Change | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2023E | 2024E |
| ICBC | 3% | 3% | 4% | 5% | 5% | (2) | (2) |
| CCB | 3% | 4% | 5% | 4% | 5% | (1) | (0) |
| BOC | 5% | 5% | 5% | 4% | 5% | 0 | (0) |
| ABC | 3% | 4% | 4% | 4% | 4% | (1) | (0) |
| BoCom | 4% | 4% | 4% | 3% | 4% | 1 | (0) |
| PSBC | 9% | 10% | 10% | 9% | 12% | 0 | (2) |
| CMB | 9% | 10% | 11% | 11% | 13% | (2) | (3) |
| Industrial | 2% | 6% | 6% | 6% | 10% | (4) | (4) |
| HuaXia | 3% | 4% | 4% | 4% | 3% | (1) | 1 |
| PAB | 13% | 12% | 12% | 18% | 14% | (5) | (2) |
| BONB | 14% | 15% | 15% | 15% | 14% | (1) | 1 |
| BONJ | 8% | 8% | 9% | 15% | 14% | (7) | (7) |
| **Average** | | | | | | | |
| Total | 6% | 7% | 7% | 8% | 9% | (2) | (1) |
| Large | 4% | 5% | 5% | 5% | 6% | (2) | (1) |
| Joint-stock | 7% | 8% | 8% | 10% | 10% | (2) | (1) |
| Regional | 11% | 11% | 12% | 15% | 14% | (2) | (2) |

Source: Goldman Sachs Global Investment Research

**Exhibit 24: New vs. Old: DPS & div. payout ratio**

| DPS (Rmb) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | Change | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2023E | 2024E |
| ICBC | 0.31 | 0.32 | 0.26 | 0.32 | 0.34 | (3%) | (5%) |
| CCB | 0.40 | 0.42 | 0.44 | 0.39 | 0.41 | 2% | 2% |
| BOC | 0.24 | 0.25 | 0.27 | 0.24 | 0.25 | 0% | 0% |
| ABC | 0.23 | 0.24 | 0.24 | 0.23 | 0.24 | 2% | 1% |
| BoCom | 0.10 | 0.03 | 0.00 | 0.38 | 0.40 | (73%) | (93%) |
| PSBC | 0.30 | 0.33 | 0.37 | 0.30 | 0.34 | 0% | (1%) |
| CMB | 1.90 | 2.09 | 2.32 | 1.93 | 2.18 | (2%) | (4%) |
| Industrial | 1.21 | 0.97 | 0.76 | 1.26 | 1.38 | (4%) | (30%) |
| HuaXia | 0.23 | 0.20 | 0.21 | 0.37 | 0.38 | (37%) | (48%) |
| PAB | 0.32 | 0.36 | 0.40 | 0.34 | 0.38 | (5%) | (6%) |
| BONB | 0.57 | 0.65 | 0.75 | 0.58 | 0.65 | (1%) | 0% |
| BONJ | 0.57 | 0.62 | 0.67 | 0.63 | 0.72 | (9%) | (14%) |
| **Average** | | | | | | | |
| Total | 0.53 | 0.54 | 0.56 | 0.58 | 0.64 | (8%) | (15%) |
| Large | 0.26 | 0.27 | 0.26 | 0.31 | 0.33 | (15%) | (19%) |
| Joint-stock | 0.92 | 0.91 | 0.92 | 0.97 | 1.08 | (6%) | (16%) |
| Regional | 0.57 | 0.64 | 0.71 | 0.60 | 0.69 | (5%) | (7%) |

| Dividend payout ratio (%) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | Change | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2023E | 2024E |
| ICBC | 30 | 30 | 23 | 30 | 30 | (0) | (0) |
| CCB | 30 | 30 | 30 | 30 | 30 | 0 | 0 |
| BOC | 30 | 30 | 30 | 30 | 30 | (0) | (0) |
| ABC | 30 | 30 | 29 | 30 | 30 | 0 | 0 |
| BoCom | 8 | 2 | 0 | 30 | 30 | (22) | (28) |
| PSBC | 30 | 30 | 30 | 30 | 30 | 0 | (0) |
| CMB | 32 | 32 | 32 | 32 | 32 | (0) | (0) |
| Industrial | 27 | 20 | 15 | 27 | 27 | 0 | (7) |
| HuaXia | 14 | 11 | 11 | 22 | 22 | (8) | (11) |
| PAB | 12 | 12 | 12 | 12 | 12 | 0 | 0 |
| BONB | 14 | 14 | 14 | 14 | 14 | 0 | (0) |
| BONJ | 30 | 30 | 30 | 30 | 30 | 0 | 0 |
| **Average** | | | | | | | |
| Total | 24 | 23 | 21 | 26 | 26 | (3) | (4) |
| Large | 26 | 25 | 24 | 30 | 30 | (4) | (5) |
| Joint-stock | 21 | 19 | 18 | 23 | 23 | (2) | (4) |
| Regional | 22 | 22 | 22 | 22 | 22 | 0 | 0 |

Source: Goldman Sachs Global Investment Research

# Downgrade ICBC A/H to Sell from Buy on uncertainties of dividend and capital

| 1398.HK | 12m Price Target: HK$3.55 | Price: HK$4.24 | Downside: 16.3% |
|---|---|---|---|

| Sell | GS Forecast | | | | |
|---|---|---|---|---|---|
| | | 12/22 | 12/23E | 12/24E | 12/25E |
| Market cap: HK$1.5tr / $192.9bn | **Net inc. (attributable to equity** | **360,483.0** | **369,923.6** | **382,652.7** | **396,991.9** |
| 3m ADTV :HK$1.0bn/ $132.2mn | Net inc. (Rmb mn) Old | 366,367.2 | 383,241.5 | 403,635.4 | -- |
| China | **EPS (Rmb) New** | **1.01** | **1.04** | **1.07** | **1.11** |
| China Financials | EPS (Rmb) Old | 1.03 | 1.08 | 1.13 | -- |
| | EPS growth (%) | 3.5 | 2.6 | 3.4 | 3.7 |
| M&A Rank: 3 | P/E (X) | 3.6 | 3.8 | 3.7 | 3.5 |
| | P/B (X) | 0.4 | 0.4 | 0.4 | 0.4 |
| | Price/PPOP (X) | 2.3 | 2.2 | 2.1 | 2.0 |
| | Dividend yield (%) | 8.3 | 7.9 | 8.2 | 6.6 |
| | | **3/23** | **6/23E** | **9/23E** | **12/23E** |
| | EPS (Rmb) | 0.25 | 0.23 | 0.27 | 0.28 |

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 03 Jul 2023 close.

| 601398.SS | 12m Price Target: Rmb4.12 | Price: Rmb4.88 | Downside: 15.6% |
|---|---|---|---|

| Sell | GS Forecast | | | | |
|---|---|---|---|---|---|
| | | 12/22 | 12/23E | 12/24E | 12/25E |
| Market cap: Rmb1.7tr / $240.0bn | **Net inc. (attributable to equity** | **360,483.0** | **369,923.6** | **382,652.7** | **396,991.9** |
| 3m ADTV :Rmb1.6bn/ $227.9mn | Net inc. (Rmb mn) Old | 366,367.2 | 383,241.5 | 403,635.4 | -- |
| China | **EPS (Rmb) New** | **1.01** | **1.04** | **1.07** | **1.11** |
| China Financials | EPS (Rmb) Old | 1.03 | 1.08 | 1.13 | -- |
| | EPS growth (%) | 3.5 | 2.6 | 3.4 | 3.7 |
| M&A Rank: 3 | P/E (X) | 4.5 | 4.7 | 4.5 | 4.4 |
| | P/B (X) | 0.5 | 0.5 | 0.5 | 0.4 |
| | Price/PPOP (X) | 2.9 | 2.8 | 2.7 | 2.5 |
| | Dividend yield (%) | 6.7 | 6.4 | 6.6 | 5.3 |
| | | **3/23** | **6/23E** | **9/23E** | **12/23E** |
| | EPS (Rmb) | 0.25 | 0.23 | 0.27 | 0.28 |

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 03 Jul 2023 close.

We downgrade **ICBC** A/H to Sell from Buy on increasing dividend risk given the high CET1 ratio of ~13% required to maintain on the G-SIB list. Our stress-test which includes margin risk of local gov. debt and loss of credit portfolio suggests that the adjusted ROE of **ICBC** could be much lower than we previously expected at

9.2%/10.3%/9.9% or 207/56/50 bps lower vs. before adjustment in 2023E/24E/25E. This in turn could pose dividend risk to **ICBC** if the target CET1 ratio of ~13% is to be maintained in 2025E. Our new target A/H share 2024E-based P/PPOP is 2.25x/1.75x vs. 2.75x/2.25x prior, to factor in uncertainties of dividend and capital. Our new TP is Rmb 4.12/HK$ 3.55 of A/H share vs. Rmb 5.29/HK$ 4.98 prior. Since we added **ICBC-H** to our Buy list on April 5, 2018, the H-share has fallen -14% vs. Hang Seng China Ent index of -46%. Since we added the **ICBC-A** to our Buy list on March 12, 2017, it has risen +38% vs. CSI 300 index of +12%.

From our framework, we assess that:

1) **ICBC** could have a larger book of local gov. debt of Rmb 9.5tn, or 24% total IEA, vs. 18% average of large banks. As such, our stress test on margin loss from both stock and flow of local gov. debt suggests 85/69/63 bps ROE markdown and a -8%/-7%/-7% net profit decrease, with a dilution of CET1 ratio by -8bps/-15bps/-20bps, leading to an adjusted ROE of 10.5%/10.1%/9.8% in 2023E/24E/25E. We expect both the stock and flow of local gov. debt to lower rates, so with the net balance increase, the margin loss is likely to persist and hurt bank book value, ROE and CET1 ratio. (More details can be found in Part I of our series.)

2) **ICBC** has disclosed a high property NPL ratio of 6.1%, and better mix with 89% loan of property credit exposure, vs. 3.2%/79% average of covered banks (as of 2022). But given the backdrop of weak macro, we expect **ICBC** like other banks to see higher losses in their credit portfolio. We stress test the FY23E total loss and estimate it at Rmb 30bn, with Rmb 11bn from property loans and Rmb 19bn from assets under stage 3, and the provisions required would be Rmb 49bn, with Rmb 16bn from property loans and Rmb 33bn from assets under stage 3, assuming 150% coverage ratio for additional property NPL and 89%/100% (sample max) for the loan/debt portfolio. (Details for this test are in Part II.)

All in, we forecast the adjusted ROE to be 9.2%/10.3%/9.9% by taking the aforementioned margin dilution and credit loss, compared with 11.3%/10.8%/10.4% before adjustment in 2023E/24E/25E. Assuming our adjusted NPL coverage ratio and CET1 ratio, we think there is a risk to **ICBC's** current dividend payout as the risk buffer release cannot support our forecast dividend and capital in 2025E based on the target ~13% CET 1 ratio that we expect ICBC to maintain in order to remain as a G-SIB. We model a dividend payout cut by 7ppts in 2025E, assuming no new capital raise or decrease in target CET1 ratio. DPS is 3%/5% lower vs. prior in 2023E-24E.

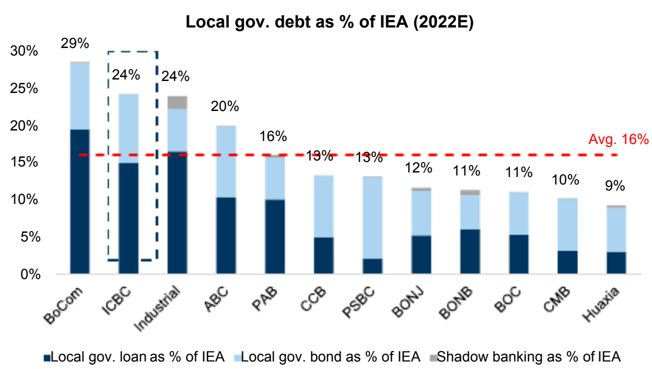
GSe NPAT in 2023E-25E is -3%/-6%/-9% below Visible Alpha consensus data, which we attribute to our more cautious view on potential margin loss from local gov. debt and credit risk.

**Upside risks and what would make us more positive:**

- Better than expected NIM to drive NII growth, which may come from more deposit cost savings: Potential factors would include a further deposit rate cut, a further policy rate cut, a smaller proportion of time deposits, and smaller margin risk from local gov. debt on less exposure or an improved macro environment.

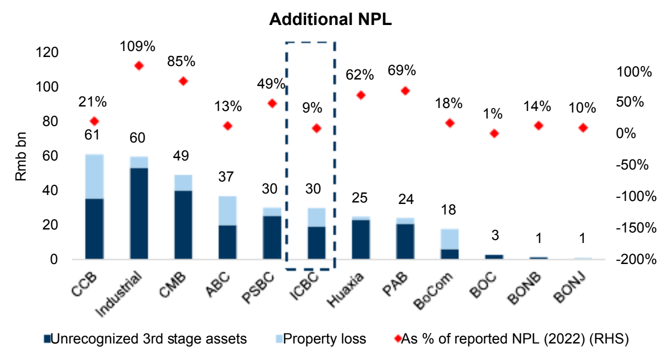
- Stronger-than-expected retail recovery to drive retail loan growth and fee income (such as fees from credit card and consumption loans): Such a recovery could be supported by more retail consumption demand and better than expected household wealth growth.
- Larger dividend payout to improve cash return of investors.

**Exhibit 25: We estimate ICBC has a larger book of local gov. debt of Rmb 9.5tn, or 24% total IEA, vs. 18% average of large banks.**



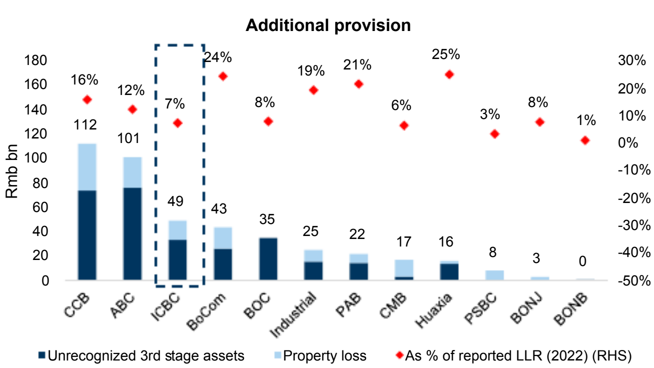

Source: Goldman Sachs Global Investment Research

**Exhibit 26: We expect ICBC to have additional NPL of Rmb 30bn, with Rmb 11bn from property loans and Rmb 19bn from assets under stage 3.**
As of 2023E



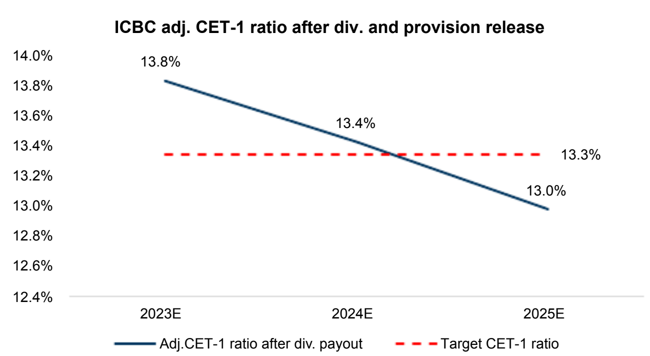

Source: Goldman Sachs Global Investment Research

**Exhibit 27: We expect ICBC to have additional provisions of Rmb 49bn, with Rmb 16bn from property loans and Rmb 33bn from assets under stage 3.**
As of 2023E




Source: Goldman Sachs Global Investment Research

**Exhibit 28: With adjusted NPL coverage ratio and CET1 ratio, we see a dividend risk for ICBC as risk buffer release cannot support dividend and capital in 2025E on a target ~13% CET 1 ratio which we expect ICBC to maintain as a G-SIB.**



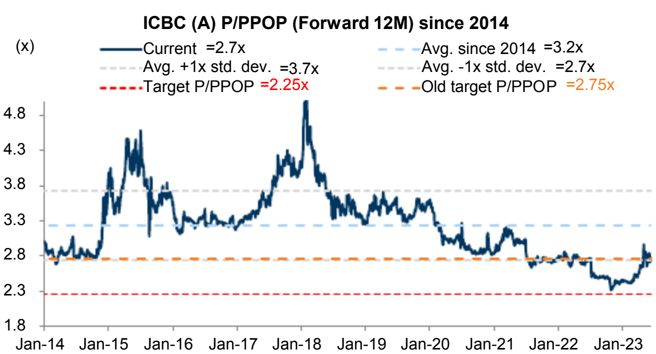

Source: Goldman Sachs Global Investment Research

**Exhibit 29: Model revisions (we introduce 2025E)**
Rmb mn

| Rmb mn | FY2023E Prior | FY2023E Revised | FY2024E Prior | FY2024E Revised | FY2025E | Changes(%) 2023E | Changes(%) 2024E |
|---|---|---|---|---|---|---|---|
| **Key items (Rmb mn)** | | | | | | | |
| Net interest income | 757,581 | 710,373 | 805,602 | 739,015 | 778,150 | (6.2) | (8.3) |
| **Non-interest income** | 174,356 | 156,584 | 179,775 | 161,606 | 167,221 | (10.2) | (10.1) |
| Net fee income | 137,367 | 129,099 | 142,418 | 133,227 | 137,699 | (6.0) | (6.5) |
| Investment income | 40,855 | 38,791 | 41,632 | 40,500 | 42,289 | (5.1) | (2.7) |
| **Operating revenues** | 931,937 | 866,957 | 985,377 | 900,621 | 945,372 | (7.0) | (8.6) |
| Operating expenses | 246,583 | 235,502 | 260,762 | 248,764 | 262,593 | (4.5) | (4.6) |
| **Preprov operating profits** | 685,354 | 631,455 | 724,615 | 651,857 | 682,778 | (7.9) | (10.0) |
| Provision charges | 227,405 | 196,389 | 242,468 | 201,749 | 215,907 | (13.6) | (16.8) |
| Pretax profits | 457,949 | 435,066 | 482,148 | 450,108 | 466,871 | (5.0) | (6.6) |
| Taxes | 72,580 | 63,142 | 76,384 | 65,455 | 67,880 | (13.0) | (14.3) |
| **Net profits** | **385,369** | **371,924** | **405,763** | **384,653** | **398,992** | **(3.5)** | **(5.2)** |
| Net profits to common shareholders | 374,495 | 355,114 | 394,889 | 367,843 | 382,182 | (5.2) | (6.8) |
| | | | | | | | |
| **Key assumptions (%)** | | | | | | | |
| Revenue growth | 5.5 | 2.6 | 5.7 | 3.9 | 5.0 | (2.8) | (1.9) |
| PPOP growth | 5.6 | 4.4 | 5.7 | 3.2 | 4.7 | (1.2) | (2.5) |
| NPAT growth | 4.6 | 3.0 | 5.3 | 3.4 | 3.7 | (1.6) | (1.9) |
| Net interest margin (bp) | 183 | 172 | 178 | 161 | 156 | (11.6) | (16.7) |
| Loan growth | 11.6 | 12.3 | 11.0 | 11.5 | 11.5 | 0.7 | 0.5 |
| Deposit growth | 10.3 | 13.0 | 9.9 | 10.0 | 10.0 | 2.7 | 0.1 |
| Earning assets growth | 11.8 | 12.6 | 9.4 | 10.6 | 9.3 | 0.8 | 1.2 |
| Non-interest income growth | 5.7 | 3.7 | 3.1 | 3.2 | 3.5 | (2.0) | 0.1 |
| Operating expenses growth | 5.2 | (1.8) | 5.8 | 5.6 | 5.6 | (7.0) | (0.1) |
| Credit cost | 0.79 | 0.72 | 0.76 | 0.66 | 0.63 | (0.1) | (0.1) |
| ROA | 0.9 | 0.8 | 0.9 | 0.8 | 0.8 | (0.0) | (0.1) |
| ROE | 11.7 | 10.9 | 11.4 | 10.4 | 10.0 | (0.9) | (1.0) |
| New NPL formation rate | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | (0.1) | (0.0) |
| NPL coverage ratio | 195.4 | 202.2 | 185.3 | 186.1 | 167.5 | 6.8 | 0.7 |
| NII growth | 5.4 | 2.4 | 6.3 | 4.0 | 5.3 | (3.0) | (2.3) |

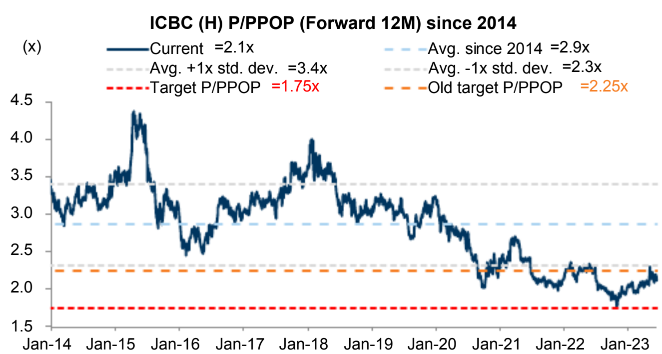
Source: Goldman Sachs Global Investment Research

**Exhibit 30: ICBC(A) P/PPOP since 2014**




Source: Wind

**Exhibit 31: ICBC(H) P/PPOP since 2014**




Source: Wind

## Exhibit 32: ICBC Summary Table

Rmb mn

| Factors driving earnings performance | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|---|---|---|
| Loans | 9.4% | 9.0% | 8.3% | 8.7% | 11.1% | 11.0% | 12.3% | 12.3% | 11.5% | 11.5% |
| Customer deposits | 9.5% | 7.9% | 11.4% | 7.3% | 9.4% | 5.2% | 13.0% | 13.0% | 10.0% | 10.0% |
| Net interest margin | 2.10 | 2.14 | 2.18 | 2.14 | 2.08 | 2.06 | 1.89 | 1.72 | 1.61 | 1.56 |
| Net interest income | -7.1% | 10.6% | 9.7% | 6.0% | 6.6% | 6.8% | 0.4% | 2.4% | 4.0% | 5.3% |
| Non-interest income | 5.7% | -9.5% | -0.8% | 10.5% | -10.1% | 12.2% | -12.3% | 3.7% | 3.2% | 3.5% |
| Investment income | 7.4% | -21.9% | 7.3% | 74.9% | 105.5% | 13.4% | -40.9% | 35.3% | 4.4% | 4.4% |
| Net fee income | 1.1% | -3.7% | 4.1% | 7.1% | -15.7% | 1.4% | -2.8% | -0.1% | 3.2% | 3.4% |
| Operating revenues | -4.0% | 5.3% | 7.3% | 7.0% | 2.9% | 7.8% | -2.1% | 2.6% | 3.9% | 5.0% |
| Operating expenses | -12.6% | -3.8% | 4.1% | 7.2% | -0.7% | 14.6% | 1.9% | -1.8% | 5.6% | 5.6% |
| **Preprovision operating profits** | **0.2%** | **9.1%** | **8.4%** | **6.9%** | **4.2%** | **5.5%** | **-3.6%** | **4.4%** | **3.2%** | **4.7%** |
| Provision charges | 1.0% | 45.4% | 26.5% | 10.7% | 13.2% | 0.0% | -10.0% | 7.7% | 2.7% | 7.0% |
| **Net profits to common shareholders** | **-0.4%** | **2.9%** | **4.1%** | **5.0%** | **-0.2%** | **10.3%** | **2.0%** | **2.7%** | **3.6%** | **3.9%** |
| Dividend | 0.4% | 2.8% | 4.1% | 4.9% | 1.2% | 10.3% | 3.5% | 2.6% | 3.4% | -19.4% |
| Average Interest earning assets | 7.7% | 8.4% | 7.8% | 8.0% | 9.4% | 7.9% | 9.7% | 12.6% | 10.6% | 9.3% |
| **CAMEL ratios (%)** | | | | | | | | | | |
| **C**: Core Tier1 CAR | 13.4 | 12.8 | 13.0 | 13.2 | 13.2 | 13.3 | 14.0 | 13.6 | 13.5 | 13.4 |
| **C**: Total CAR | 14.6 | 15.1 | 15.4 | 16.8 | 16.9 | 18.0 | 19.3 | 18.3 | 17.7 | 17.3 |
| **C**: Asset/Equity | 7.8 | 7.8 | 8.1 | 8.2 | 8.0 | 8.3 | 7.9 | 7.7 | 7.6 | 7.5 |
| **C**: RWA density | 60 | 61 | 62 | 62 | 60 | 62 | 56 | 56 | 56 | 56 |
| **A:** NPL ratio | 1.6 | 1.6 | 1.5 | 1.4 | 1.6 | 1.4 | 1.4 | 1.4 | 1.5 | 1.6 |
| **A**: LLR/NPL | 137 | 154 | 176 | 199 | 180 | 206 | 209 | 202 | 186 | 168 |
| **A**: LLR/total loans (%) | 2.2 | 2.4 | 2.7 | 2.9 | 2.8 | 2.9 | 2.9 | 2.9 | 2.8 | 2.7 |
| **A**: Credit cost (%) | 0.66 | 0.87 | 0.96 | 0.97 | 0.92 | 0.81 | 0.62 | 0.72 | 0.66 | 0.63 |
| **E**: ROA | 1.2 | 1.1 | 1.1 | 1.1 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 | 0.8 |
| **E**: ROE | 15.2 | 14.3 | 13.7 | 13.1 | 12.0 | 12.2 | 11.4 | 10.9 | 10.4 | 10.0 |
| **E**: Cost to income | 29.9 | 27.3 | 26.5 | 26.6 | 25.7 | 27.3 | 28.4 | 27.2 | 27.6 | 27.8 |
| **L**: Loan/deposits | 73.2 | 74.0 | 72.0 | 72.9 | 74.1 | 78.2 | 77.7 | 77.2 | 78.2 | 79.3 |
| **L**: Avg loans/earning assets | 55.9 | 53.8 | 54.6 | 54.5 | 54.4 | 57.0 | 56.2 | 56.3 | 57.7 | 58.8 |
| **L**: Avg. earning assets/assets | 96.8 | 93.4 | 94.8 | 94.2 | 93.1 | 95.2 | 92.7 | 93.4 | 94.7 | 94.8 |
| **ROA/ROE DuPont analysis** | | | | | | | | | | |
| **ROE** | **15.2** | **14.3** | **13.7** | **13.1** | **12.0** | **12.2** | **11.4** | **10.9** | **10.4** | **10.0** |
| / leverage (x) | 12.9 | 12.8 | 12.6 | 12.3 | 12.4 | 12.3 | 12.4 | 12.8 | 13.1 | 13.2 |
| **= ROA** | **1.18** | **1.12** | **1.09** | **1.06** | **0.97** | **0.99** | **0.92** | **0.85** | **0.79** | **0.76** |
| NII as % of assets | 2.04 | 2.08 | 2.13 | 2.10 | 2.04 | 2.02 | 1.86 | 1.69 | 1.60 | 1.54 |
| Non-interest inc. as % of assets | 0.74 | 0.62 | 0.57 | 0.59 | 0.48 | 0.50 | 0.40 | 0.37 | 0.35 | 0.33 |
| Net fee income as % of assets | 0.63 | 0.56 | 0.54 | 0.54 | 0.41 | 0.39 | 0.35 | 0.31 | 0.29 | 0.27 |
| Oper. rev. as % of assets | 2.78 | 2.70 | 2.70 | 2.69 | 2.52 | 2.52 | 2.26 | 2.07 | 1.94 | 1.87 |
| Oper. exp. as % of assets | 0.83 | 0.74 | 0.72 | 0.72 | 0.65 | 0.69 | 0.64 | 0.56 | 0.54 | 0.52 |
| **PPOP ROA** | **1.95** | **1.96** | **1.99** | **1.97** | **1.87** | **1.83** | **1.62** | **1.51** | **1.41** | **1.35** |
| Loan prov. as % of assets | 0.38 | 0.51 | 0.60 | 0.62 | 0.64 | 0.59 | 0.49 | 0.47 | 0.44 | 0.43 |
| **Pretax profits** | **1.57** | **1.45** | **1.38** | **1.36** | **1.24** | **1.24** | **1.13** | **1.04** | **0.97** | **0.92** |
| Tax | 0.36 | 0.31 | 0.27 | 0.27 | 0.23 | 0.22 | 0.16 | 0.15 | 0.14 | 0.13 |
| **Net profits** | **1.20** | **1.14** | **1.11** | **1.08** | **1.00** | **1.02** | **0.97** | **0.89** | **0.83** | **0.79** |
| **Net profits to common shareholders** | **1.18** | **1.12** | **1.09** | **1.06** | **0.97** | **0.99** | **0.92** | **0.85** | **0.79** | **0.76** |
| **Net profit/RWA** | **1.97** | **1.85** | **1.77** | **1.72** | **1.59** | **1.62** | **1.57** | **1.51** | **1.42** | **1.35** |
| **PPOP/RWA** | **3.25** | **3.23** | **3.23** | **3.19** | **3.07** | **3.00** | **2.76** | **2.68** | **2.51** | **2.41** |

| Profit and loss (Rmb mn) | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|
| Net interest income | 606,926 | 646,765 | 690,680 | 693,687 | 710,373 | 739,015 | 778,150 |
| Non-interest income | 170,547 | 153,401 | 172,105 | 151,012 | 156,584 | 161,606 | 167,221 |
| Net fee income | 155,600 | 131,215 | 133,024 | 129,265 | 129,099 | 133,227 | 137,699 |
| Investment income | 20,812 | 42,762 | 48,472 | 28,662 | 38,791 | 40,500 | 42,289 |
| Operating income | 777,473 | 800,166 | 862,785 | 844,699 | 866,957 | 900,621 | 945,372 |
| Operating expense | 206,727 | 205,372 | 235,263 | 239,715 | 235,502 | 248,764 | 262,593 |
| Preprovision operating profits | 570,746 | 594,794 | 627,522 | 604,984 | 631,455 | 651,857 | 682,778 |
| Provision charges | 178,957 | 202,668 | 202,623 | 182,419 | 196,389 | 201,749 | 215,907 |
| Pretax profits | 391,789 | 392,126 | 424,899 | 422,565 | 435,066 | 450,108 | 466,871 |
| Tax | 78,428 | 74,441 | 74,683 | 61,527 | 63,142 | 65,455 | 67,880 |
| Net profits | 313,361 | 317,685 | 350,216 | 361,038 | 371,924 | 384,653 | 398,992 |
| Minority interest | 1,137 | 1,779 | 1,878 | 555 | 2,000 | 2,000 | 2,000 |
| Dividends to preferred shareholders | 4,525 | 8,839 | 9,607 | 14,810 | 14,810 | 14,810 | 14,810 |
| Net profits to common shareholders | 307,699 | 307,067 | 338,731 | 345,673 | 355,114 | 367,843 | 382,182 |
| **Balance sheet (Rmb mn)** | | | | | | | |
| Gross lending | 16,761,319 | 18,624,308 | 20,667,245 | 23,212,312 | 26,061,695 | 29,049,175 | 32,382,263 |
| Total gross earning assets | 29,069,373 | 31,979,294 | 33,847,453 | 38,334,965 | 42,987,567 | 46,988,654 | 51,368,095 |
| Total LLR | 478,498 | 530,300 | 603,764 | 672,762 | 744,800 | 804,653 | 867,937 |
| Total interest earning assets | 29,547,871 | 32,509,594 | 34,451,217 | 39,007,727 | 43,732,367 | 47,793,307 | 52,236,032 |
| Other non-interest earning assets | 1,040,063 | 1,365,764 | 1,323,930 | 1,274,692 | 1,303,644 | 1,331,093 | 1,390,557 |
| Total assets | 30,109,436 | 33,345,058 | 35,171,383 | 39,609,657 | 44,291,211 | 48,319,747 | 52,758,652 |
| NPLs | 240,187 | 293,978 | 293,429 | 321,170 | 368,290 | 432,423 | 518,104 |
| Customer deposits | 22,977,655 | 25,134,726 | 26,441,774 | 29,870,491 | 33,753,655 | 37,129,020 | 40,841,922 |
| Total interest-bearing liabilities | 26,251,393 | 29,065,520 | 30,559,844 | 34,682,567 | 38,997,347 | 42,678,495 | 46,729,401 |
| Non-interest-bearing liabilities | 1,166,040 | 1,370,023 | 1,336,281 | 1,413,264 | 1,519,116 | 1,596,673 | 1,678,235 |
| Total liabilities | 27,417,433 | 30,435,543 | 31,896,125 | 36,095,831 | 40,516,463 | 44,275,168 | 48,407,636 |
| Share capital | 356,407 | 356,407 | 356,407 | 356,407 | 356,407 | 356,407 | 356,407 |
| Total common equity | 2,470,054 | 2,667,683 | 2,903,424 | 3,140,840 | 3,401,762 | 3,671,593 | 3,978,030 |
| Preferred share/perpetual bond | 206,132 | 225,819 | 354,331 | 354,331 | 354,331 | 354,331 | 354,331 |
| Total liabilities and equity | 30,093,619 | 33,329,045 | 35,153,880 | 39,591,002 | 44,272,556 | 48,301,092 | 52,739,997 |
| RWA | 18,616,886 | 20,124,139 | 21,690,349 | 22,225,272 | 24,852,126 | 27,112,568 | 29,603,271 |

Source: Company data, Goldman Sachs Global Investment Research

# Downgrade Industrial Bank to Sell from Buy on worsening balance sheet

| 601166.SS | 12m Price Target: Rmb12.09 | Price: Rmb15.83 | Downside: 23.6% |
|---|---|---|---|

| Sell | GS Forecast | | | | |
|---|---|---|---|---|---|
| | | **12/22** | **12/23E** | **12/24E** | **12/25E** |
| Market cap: Rmb328.9bn / $45.4bn | **Net inc. (attributable to equity** | **91,377.0** | **92,964.4** | **98,829.8** | **105,047.0** |
| 3m ADTV :Rmb1.2bn/ $168.1mn | Net inc. (Rmb mn) Old | 91,377.0 | 96,801.7 | 106,368.6 | 115,085.3 |
| China | **EPS (Rmb) New** | **4.40** | **4.48** | **4.76** | **5.06** |
| China Financials | EPS (Rmb) Old | 4.40 | 4.66 | 5.12 | 5.54 |
| | EPS growth (%) | 10.5 | 1.7 | 6.3 | 6.3 |
| M&A Rank: 3 | P/E (X) | 4.3 | 3.5 | 3.3 | 3.1 |
| | P/B (X) | 0.6 | 0.5 | 0.4 | 0.4 |
| | Price/PPOP (X) | 2.1 | 2.1 | 2.0 | 1.8 |
| | Dividend yield (%) | 6.3 | 7.6 | 6.1 | 4.8 |
| | | **3/23** | **6/23E** | **9/23E** | **12/23E** |
| | EPS (Rmb) | 1.21 | 0.91 | 1.37 | 1.28 |

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 03 Jul 2023 close.

We downgrade **Industrial Bank** to Sell, from Buy, on a worsening balance sheet, its larger exposure to local government debt vs. our other covered banks and further losses from bank credit portfolios. We estimate the adjusted ROE before dividend could be 9.4%/12.3%/11.9% in 2023E/24E/25E vs. 13.4%/12.9%/12.5% before adjustment. Based on this stressed scenario, we think dividend risk is high starting in 2024E. We have changed our PPOP estimates by -3%/-4%/-5% vs. previously, with a new target P/PPOP of 1.5x vs. 2.25x prior resulting in a new 12-month TP of Rmb 12.09 vs. Rmb 18.93 prior.

From our framework, we assess that **Industrial Bank** has:

1) Larger local government debt exposure, with Rmb 2.2tn as of 2022, or 24% of total IEA vs. avg 16% of our covered banks. The margin dilution assuming declining rates of local government debt could drive net profit to decrease by -8%/-9%/-9% in 2023E-25E, resulting in adj. ROE of 12.3%/11.9%/11.6% vs. 13.4%/12.9%/12.5% before adjustment, and the book value to change by -0.8%/-1.5%/-2.1% vs. before adjustment in 2023E-25E, all else being equal.

2) Additional losses on credit portfolio could be Rmb 60bn in total (as of 2023E), including Rmb 6bn of property loans, and Rmb 53bn of assets under stage 3. This also requires more provision to set aside against the additional losses, which we estimate to be Rmb 25bn in total, with Rmb 10bn for property loans and Rmb 15bn for assets under stage 3. Hence we calculate the adjusted NPL coverage ratio would change to 165% from 215%, with net profit further decreasing by -23%, and ROE by -300bps, and book value decreasing -2% in 2023E.

3) All in, the adjusted ROE/CET1 ratio could be 9.4%/9.6% vs. 13.4%/9.9% before

adjustment in 2023E. As a result, we think the dividend is likely to miss the target starting from 2024, as the adjusted NPL coverage ratio may not be able to support both dividend and capital maintenance.

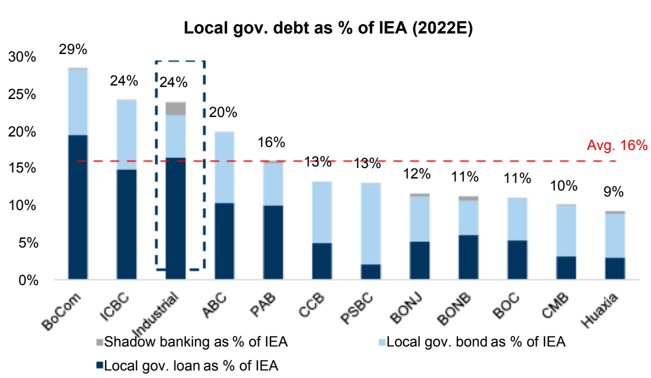
Thus, we have changed the PPOP by -3%/-4%/-5% vs. previously in 2023E/24E/25E. Our new target P/PPOP is 1.5x vs. 2.25x prior, and our new TP is Rmb 12.09 vs. Rmb 18.93 previously, implying -24% downside vs. average -6% downside of our A-share covered banks. Since being added to the Buy list on 8 June 2018, the stock has gained 31% vs the CSI300 up 0.3%. We model dividend payout to cut by 7ppts/12ppts in 2024/25E, assuming no new capital raise or lowering target CET1 ratio. DPS will be -4%/-30% vs. prior in 2023E-24E.

Our NPAT estimates for 2023E-25E are -2%/-4%/-5% below Visible Alpha consensus as we take into account Industrial's larger exposure to local government debt vs. our other covered banks and further losses from bank credit portfolios.

**Upside risks and what could make us turn positive again:**

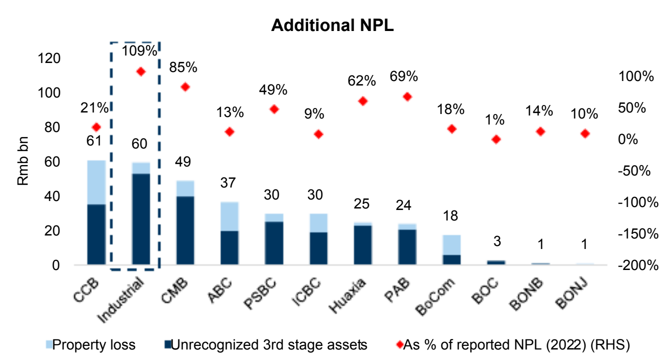
- Better than expected asset quality, especially in property and local government debt, which offer more room to release profit by lowering NPL coverage ratio.
- Better than expected NIM on deposit cost saving and improving funding mix: Potential factors would include a further deposit rate cut, a further policy rate cut, or a smaller proportion of time deposits.
- Stronger than expected retail finance growth supported by retail lending balance increase and fee income growth: This growth could be driven by more retail consumption demand and better than expected household wealth growth.

**Exhibit 33: We calculate Industrial Bank has larger local gov. debt exposure, with Rmb 2.2tn, or 24% of total IEA vs. avg 16% of our covered banks**



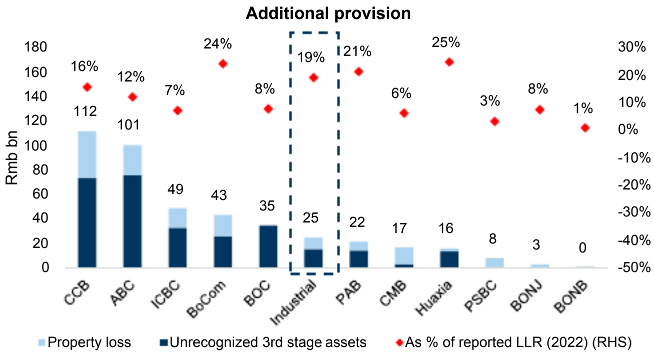

Source: Goldman Sachs Global Investment Research

**Exhibit 34: We estimate Industrial Bank to have Rmb 60bn additional losses on credit portfolio in total, including Rmb 6bn of property loans and Rmb 53bn of assets under stage 3...**
As of 2023E



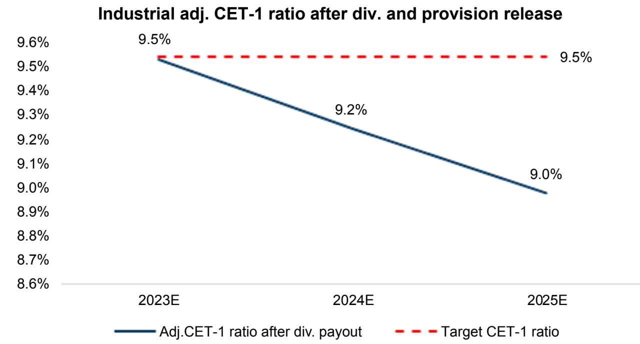

Source: Goldman Sachs Global Investment Research

**Exhibit 35: ...and additional provision of Rmb 25bn in total, with Rmb 10bn for property loans and Rmb 15bn for assets under stage 3**
As of 2023E




Source: Goldman Sachs Global Investment Research

**Exhibit 36: All in, the adjusted CET1 ratio/ROE could be 9.4%/9.6% vs. 13.4%/9.9% before adjustment in 2023E; So we think the dividend is likely to miss target starting in 2024**



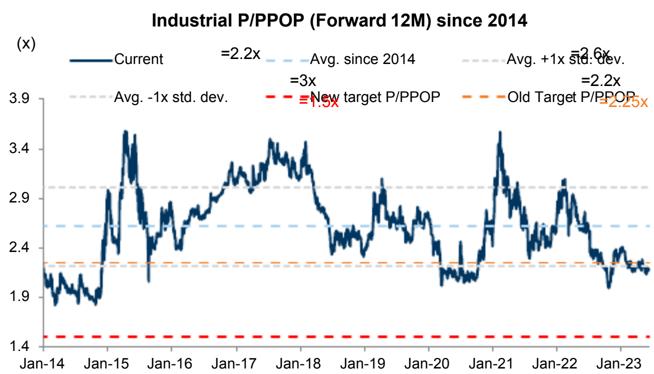

Source: Goldman Sachs Global Investment Research

**Exhibit 37: Model revision**
Rmb mn

| | FY2023E | | FY2024E | | FY2025E | | Changes(%) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Prior | Revised | Prior | Revised | Prior | Revised | 2023E | 2024E | 2025E |
| **Key items (Rmb mn)** | | | | | | | | | |
| Net interest income | 151,492 | 146,914 | 161,577 | 155,441 | 172,773 | 166,331 | (3.0) | (3.8) | (3.7) |
| Non-interest income | 81,145 | 78,352 | 89,248 | 84,893 | **99,231** | **92,005** | (3.4) | (4.9) | (7.3) |
| Net fee income | 48,225 | 42,084 | 53,116 | 45,228 | 59,567 | 48,615 | (12.7) | (14.8) | (18.4) |
| **Operating revenues** | **232,637** | **225,266** | **250,825** | **240,334** | 272,004 | 258,336 | **(3.2)** | **(4.2)** | (5.0) |
| Operating expenses | 70,492 | 68,376 | 76,006 | 72,876 | 82,472 | 78,423 | (3.0) | (4.1) | (4.9) |
| **PPOP** | **162,145** | **156,890** | **174,818** | **167,458** | 189,532 | 179,913 | **(3.2)** | **(4.2)** | (5.1) |
| Provision charges | 49,429 | 48,589 | 51,100 | 52,412 | 55,796 | 57,722 | (1.7) | 2.6 | 3.5 |
| Pretax profits | 112,716 | 108,301 | 123,718 | 115,045 | 133,736 | 122,190 | (3.9) | (7.0) | (8.6) |
| Taxes | 14,648 | 14,071 | 16,083 | 14,949 | 17,385 | 15,877 | (3.9) | (7.1) | (8.7) |
| **NPAT** | **98,068** | **94,230** | **107,635** | **100,096** | **116,351** | **106,313** | **(3.9)** | **(7.0)** | (8.6) |
| | | | | | | | | | |
| **Key assumptions (%)** | | | | | | | | | |
| Revenue growth | 4.8 | 1.5 | 7.8 | 6.7 | 8.4 | 7.5 | (3.3) | (1.1) | (1.0) |
| PPOP growth | 4.7 | 1.3 | 7.8 | 6.7 | 8.4 | 7.4 | (3.4) | (1.1) | (1.0) |
| NPAT growth | 6.1 | 2.0 | 9.8 | 6.2 | 8.1 | 6.2 | (4.2) | (3.5) | (1.9) |
| Net interest margin (bp) | 159.1 | 154.0 | 154.8 | 148.1 | 151 | 144 | (5.2) | (6.7) | (6.7) |
| Loan growth | 12.3 | 11.2 | 12.4 | 11.4 | 12.6 | 11.7 | (1.2) | (1.1) | (1.0) |
| Deposit growth | 11.8 | 11.1 | 12.1 | 11.5 | 12.5 | 11.8 | (0.7) | (0.6) | (0.7) |
| Earning assets growth | 8.7 | 9.0 | 9.6 | 10.0 | 9.8 | 10.0 | 0.2 | 0.4 | 0.2 |
| Non-interest income growth | 5.8 | 2.2 | 10.0 | 8.3 | 11.2 | 8.4 | (3.6) | (1.6) | (2.8) |
| Operating expenses growth | 5.0 | 1.9 | 7.8 | 6.6 | 8.5 | 7.6 | (3.2) | (1.2) | (0.9) |
| Credit cost | 0.6 | 0.6 | 0.5 | 0.6 | 0.52 | 0.55 | (0.0) | 0.0 | 0.0 |
| ROA | 0.95 | 0.91 | 0.96 | 0.88 | 0.9 | 0.9 | (0.0) | (0.1) | (0.1) |
| ROE | 13.4 | 12.8 | 13.3 | 12.4 | 13.0 | 12.0 | (0.5) | (0.9) | (1.0) |
| New NPL formation rate | 1.0 | 0.9 | 1.0 | 0.9 | 1.1 | 0.9 | (0.1) | (0.1) | (0.2) |
| NPL coverage ratio | 199.1 | 215.3 | 150.8 | 185.1 | 104.5 | 150.4 | 16.2 | 34.2 | 45.9 |
| NII growth | 4.3 | 1.1 | 6.7 | 5.8 | 6.9 | 7.0 | (3.2) | (0.9) | 0.1 |

Source: Goldman Sachs Global Investment Research

### Exhibit 38: Industrial P/PPOP since 2014




Source: Wind

### Exhibit 39: Industrial Bank Summary Table

Rmb mn

| Factors driving earnings performance | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|
| Loans | 17% | 15% | 12% | 13% | 11% | 11% | 12% |
| Customer deposits | 15% | 8% | 7% | 10% | 11% | 12% | 12% |
| Net interest margin | 1.53 | 1.96 | 1.81 | 1.66 | 1.54 | 1.48 | 1.44 |
| Net interest income | 8% | 39% | 2% | 0% | 1% | 6% | 7% |
| Non-interest income | 25% | -24% | 26% | 3% | 2% | 8% | 8% |
| Investment income | -9% | -25% | 54% | -3% | 17% | 10% | 10% |
| Net fee income | 16% | -24% | 13% | 6% | -7% | 7% | 7% |
| Operating revenues | 15% | 12% | 9% | 1% | 1% | 7% | 7% |
| Operating expenses | 11% | 4% | 15% | 16% | 2% | 7% | 8% |
| **Preprovision operating profits** | **16%** | **15%** | **7%** | **-5%** | **1%** | **7%** | **7%** |
| Provision charges | 25% | 30% | -11% | -27% | 0% | 8% | 10% |
| **Net profits to common shareholders** | **9%** | **1%** | **24%** | **11%** | **2%** | **6%** | **6%** |
| Dividend | 10% | 5% | 29% | 15% | 2% | -20% | -22% |
| Average Interest earning assets | 6% | 9% | 10% | 9% | 9% | 10% | 10% |
| **CAMEL ratios (%)** | | | | | | | |
| C: Core Tier1 CAR | 9.5 | 9.3 | 9.8 | 9.8 | 9.9 | 9.9 | 10.0 |
| C: Total CAR | 13.4 | 13.5 | 14.4 | 14.4 | 14.1 | 13.8 | 13.5 |
| C: Asset/Equity | 6.8 | 6.7 | 6.9 | 7.1 | 7.1 | 7.2 | 7.3 |
| C: RWA density | 72 | 72 | 71 | 73 | 73 | 73 | 73 |
| A: NPL ratio | 1.5 | 1.3 | 1.1 | 1.1 | 1.0 | 1.0 | 0.9 |
| A: LLR/NPL | 199.1 | 218.8 | 268.7 | 236.4 | 215.3 | 185.1 | 150.4 |
| A: LLR/total loans (%) | 3.1 | 2.7 | 3.0 | 2.6 | 2.2 | 1.8 | 1.4 |
| A: Credit cost (%) | 1.4 | 1.2 | 1.0 | 0.8 | 0.6 | 0.6 | 0.6 |
| E: ROA | 0.9 | 0.9 | 1.0 | 1.0 | 0.9 | 0.9 | 0.9 |
| E: ROE | 13.9 | 12.6 | 13.9 | 13.9 | 12.8 | 12.3 | 11.8 |
| E: Cost to income | 26.7 | 24.9 | 26.2 | 30.2 | 30.4 | 30.3 | 30.4 |
| L: Loan/deposits | 90.7 | 97.1 | 101.7 | 104.1 | 104.1 | 104.0 | 103.9 |
| L: Avg loans/earning assets | 45.7 | 48.3 | 49.8 | 51.8 | 52.6 | 53.3 | 54.0 |
| L: Avg. earning assets/assets | 94.5 | 92.8 | 93.6 | 94.5 | 93.6 | 93.7 | 93.5 |
| **ROA/ROE DuPont analysis** | | | | | | | |
| **ROE** | **13.9** | **12.6** | **13.9** | **13.9** | **12.8** | **12.3** | **11.8** |
| / leverage (x) | 15.0 | 14.8 | 14.7 | 14.3 | 14.1 | 13.9 | 13.8 |
| **= ROA** | **0.93** | **0.85** | **0.95** | **0.98** | **0.91** | **0.88** | **0.86** |
| NII as % of assets | 1.49 | 1.91 | 1.77 | 1.63 | 1.51 | 1.45 | 1.41 |
| Non-interest inc. as % of assets | 1.12 | 0.78 | 0.90 | 0.86 | 0.81 | 0.79 | 0.78 |
| Net fee income as % of assets | 0.72 | 0.50 | 0.52 | 0.50 | 0.43 | 0.42 | 0.41 |
| Oper. rev. as % of assets | 2.61 | 2.69 | 2.67 | 2.48 | 2.32 | 2.25 | 2.19 |
| Oper. exp. as % of assets | 0.70 | 0.67 | 0.70 | 0.75 | 0.70 | 0.68 | 0.67 |
| **PPOP ROA** | **1.91** | **2.02** | **1.97** | **1.73** | **1.61** | **1.57** | **1.53** |
| Loan prov. as % of assets | 0.84 | 1.00 | 0.81 | 0.54 | 0.50 | 0.49 | 0.49 |
| **Pretax profits** | **1.08** | **1.02** | **1.16** | **1.19** | **1.11** | **1.08** | **1.04** |
| Tax | 0.11 | 0.12 | 0.14 | 0.15 | 0.14 | 0.14 | 0.13 |
| **Net profits** | **0.96** | **0.90** | **1.02** | **1.03** | **0.97** | **0.94** | **0.90** |
| **Net profits to common shareholders** | **0.93** | **0.85** | **0.95** | **0.98** | **0.91** | **0.88** | **0.86** |
| **Net profit/RWA** | **1.31** | **1.19** | **1.33** | **1.36** | **1.25** | **1.21** | **1.18** |
| **PPOP/RWA** | **2.69** | **2.82** | **2.76** | **2.41** | **2.22** | **2.15** | **2.10** |

| Profit and loss (Rmb mn) | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|
| Net interest income | 102,988 | 143,515 | 145,679 | 145,273 | 146,914 | 155,441 | 166,331 |
| Non-interest income | 77,924 | 58,897 | 74,316 | 76,689 | 78,352 | 84,893 | 92,005 |
| Net fee income | 49,679 | 37,710 | 42,680 | 45,041 | 42,084 | 45,228 | 48,615 |
| Investment income | 26,614 | 19,887 | 30,656 | 29,591 | 34,559 | 37,874 | 41,513 |
| Operating income | 180,912 | 202,412 | 219,995 | 221,962 | 225,266 | 240,334 | 258,336 |
| Operating expense | 48,313 | 50,348 | 57,675 | 67,121 | 68,376 | 72,876 | 78,423 |
| Preprovision operating profits | 132,599 | 152,064 | 162,320 | 154,841 | 156,890 | 167,458 | 179,913 |
| Provision charges | 58,096 | 75,427 | 67,010 | 48,620 | 48,589 | 52,412 | 57,722 |
| Pretax profits | 74,503 | 76,637 | 95,310 | 106,221 | 108,301 | 115,045 | 122,190 |
| Tax | 7,801 | 8,956 | 11,494 | 13,807 | 14,071 | 14,949 | 15,877 |
| Net profits | 66,702 | 67,681 | 83,816 | 92,414 | 94,230 | 100,096 | 106,313 |
| Minority interest | 834 | 1,055 | 1,136 | 1,037 | 1,266 | 1,266 | 1,266 |
| Dividends to preferred shareholders | 1,482 | 2,549 | 4,260 | 4,212 | 4,212 | 4,212 | 4,212 |
| Net profits to common shareholders | 64,386 | 64,077 | 78,420 | 87,165 | 88,752 | 94,618 | 100,835 |
| **Balance sheet (Rmb mn)** | | | | | | | |
| Gross lending | 3,441,451 | 3,965,674 | 4,428,183 | 4,982,887 | 5,540,250 | 6,171,319 | 6,892,361 |
| Total gross earning assets | 6,875,583 | 7,566,514 | 8,297,494 | 8,952,310 | 9,882,500 | 10,879,839 | 11,995,875 |
| Total LLR | 105,581 | 108,661 | 130,909 | 128,834 | 119,653 | 110,060 | 98,049 |
| Total interest earning assets | 6,981,164 | 7,675,175 | 8,428,403 | 9,081,144 | 10,002,153 | 10,989,899 | 12,093,924 |
| Other non-interest earning assets | 270,098 | 327,486 | 305,530 | 314,361 | 307,911 | 324,403 | 346,824 |
| Total assets | 7,145,681 | 7,894,000 | 8,603,024 | 9,266,671 | 10,190,411 | 11,204,242 | 12,342,699 |
| NPLs | 53,022 | 49,656 | 48,714 | 54,488 | 55,572 | 59,473 | 65,191 |
| Customer deposits | 3,794,832 | 4,084,242 | 4,355,748 | 4,788,754 | 5,321,263 | 5,933,209 | 6,633,327 |
| Total interest-bearing liabilities | 6,481,866 | 7,112,850 | 7,721,874 | 8,300,530 | 9,138,465 | 10,055,787 | 11,085,712 |
| Non-interest-bearing liabilities | 114,163 | 156,347 | 186,852 | 208,843 | 224,219 | 240,838 | 258,810 |
| Total liabilities | 6,596,029 | 7,269,197 | 7,908,726 | 8,509,373 | 9,362,684 | 10,296,625 | 11,344,522 |
| Share capital | 20,774 | 20,774 | 20,774 | 20,774 | 20,774 | 20,774 | 20,774 |
| Total common equity | 485,518 | 529,784 | 595,151 | 657,227 | 727,423 | 807,313 | 897,873 |
| Preferred share/perpetual bond | 55,842 | 85,802 | 88,960 | 88,960 | 88,960 | 88,960 | 88,960 |
| Total liabilities and equity | 7,137,389 | 7,884,783 | 8,592,837 | 9,255,560 | 10,179,067 | 11,192,898 | 12,331,355 |
| RWA | 5,123,362 | 5,663,756 | 6,102,620 | 6,746,229 | 7,418,721 | 8,156,800 | 8,985,608 |

Source: Company data, Goldman Sachs Global Investment Research

# Downgrade ABC-A/H to Sell on relative valuation and risk

| 1288.HK | 12m Price Target: HK$2.45 | Price: HK$3.12 | Downside: 21.5% |
|---|---|---|---|

| Sell | GS Forecast | | | | |
|---|---|---|---|---|---|
| | | 12/22 | 12/23E | 12/24E | 12/25E |
| Market cap: HK$1.1tr / $139.4bn | **Net inc. (attributable to equity** | **259,140.0** | **267,868.3** | **278,705.9** | **289,993.3** |
| 3m ADTV :HK$416.3mn/ $53.1mn | Net inc. (Rmb mn) Old | 253,435.5 | 263,782.0 | 275,086.0 | -- |
| China | **EPS (Rmb) New** | **0.74** | **0.77** | **0.80** | **0.83** |
| China Financials | EPS (Rmb) Old | 0.72 | 0.75 | 0.79 | -- |
| | EPS growth (%) | 7.4 | 3.4 | 4.0 | 4.0 |
| M&A Rank: 3 | P/E (X) | 3.1 | 3.8 | 3.6 | 3.5 |
| | P/B (X) | 0.4 | 0.4 | 0.4 | 0.4 |
| | Price/PPOP (X) | 2.2 | 2.2 | 2.1 | 2.0 |
| | Dividend yield (%) | 9.5 | 8.0 | 8.3 | 8.4 |
| | | **3/23** | **6/23E** | **9/23E** | **12/23E** |
| | EPS (Rmb) | 0.20 | 0.18 | 0.20 | 0.19 |

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 03 Jul 2023 close.

| 601288.SS | 12m Price Target: Rmb2.59 | Price: Rmb3.62 | Downside: 28.5% |
|---|---|---|---|

| Sell | GS Forecast | | | | |
|---|---|---|---|---|---|
| | | 12/22 | 12/23E | 12/24E | 12/25E |
| Market cap: Rmb1.3tr / $174.8bn | **Net inc. (attributable to equity** | **259,140.0** | **267,868.3** | **278,705.9** | **289,993.3** |
| 3m ADTV :Rmb1.7bn/ $239.2mn | Net inc. (Rmb mn) Old | 253,435.5 | 263,782.0 | 275,086.0 | -- |
| China | **EPS (Rmb) New** | **0.74** | **0.77** | **0.80** | **0.83** |
| China Financials | EPS (Rmb) Old | 0.72 | 0.75 | 0.79 | -- |
| | EPS growth (%) | 7.4 | 3.4 | 4.0 | 4.0 |
| M&A Rank: 3 | P/E (X) | 4.0 | 4.7 | 4.5 | 4.4 |
| | P/B (X) | 0.5 | 0.5 | 0.5 | 0.5 |
| | Price/PPOP (X) | 2.8 | 2.7 | 2.6 | 2.5 |
| | Dividend yield (%) | 7.6 | 6.3 | 6.6 | 6.7 |
| | | **3/23** | **6/23E** | **9/23E** | **12/23E** |
| | EPS (Rmb) | 0.20 | 0.18 | 0.20 | 0.19 |

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 03 Jul 2023 close.

We downgrade **ABC** A/H to Sell, from Neutral, as we believe relative outperformance YTD (+21%/+15% vs. +3.2%/+4.2% average of covered A/H banks) does not take into account increasing uncertainties around dividend and capital. Given the structural headwinds the banking system is facing, namely local government debt risk and a credit downcycle on weaker macro, we think ABC's relatively large local government debt exposure (20% of IEA), in addition to more losses to digest in its credit portfolio

(Rmb37bn estimated additional loss, or 13% of reported losses) and below average CET1 ratio among large banks, will increase its challenges maintaining its dividend, and thus a dividend payout miss is likely in 2025E. Our new target P/PPOPs for the A/H shares are 1.875x/1.6x vs. 2x/1.6x prior, and our PPOP growth forecasts are 2%/5%/5% in 2023E/24E/25E. Based on these, we revise our 12m TPs for the A/H shares to Rmb2.59/HK$2.45, from Rmb2.85/HK$2.62 prior. We consider A/H valuations stretched, with our TPs offering -28%/-21% downside vs. banks coverage averages of -7%/-6%, respectively. GSe NPAT in 2023E-25E is -0%/-3%/-6% below Visible Alpha consensus, which we attribute to our more cautious view on potential margin loss from local gov. debt and credit risk.

Based on our framework, we estimate that **ABC** could have Rmb6.8tn of local government debt on its balance sheet, with Rmb3.5tn of loans and Rmb3.3tn of bonds. Our test is based on the margin loss from 1) debt rollover on 1% lower rates each year; and 2) the opportunity cost due to a spread existing between the weighted bank loan rate and the local government debt yield. Also, assuming that 20% of existing local government debt will roll over and that new local government debt growth will be in line with the pace of balance sheet expansion, we model adjusted ROE for ABC in 2023E/24E/25E at 10.6%/10.4%/10.0%.

To adjust the book value, we stress test **ABC**'s balance sheet by including potential losses from property loans and assets under stage 3. Our analysis suggests a potential Rmb37bn total loss, which would mark down book value by -2%. In this scenario, adjusted ROE would be 8.0% vs. 11.6% before adjustment in 2023E.

Thus, with a target CET 1 ratio set at 11.5%, we believe the bank could face dividend risk in 2025E, as provision release from the adjusted NPL coverage ratio is unlikely to support capital and the dividend. We do not see **ABC** dividend at risk until 2025E, with DPS increases of 2%/1% vs. prior in 2023E/24E on provision release, but dividend payout cut in 2025E. With increasing target CET1 ratio (11.5% for ABC as G-SIB vs. 13.3% for ICBC), **ABC** will face more dividend risk.

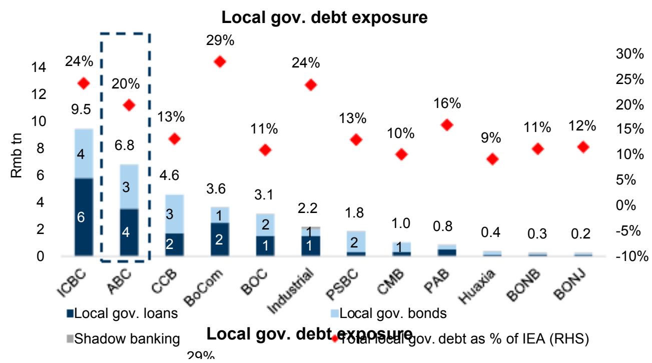
Revising down our PPOP estimates by -8%/-9% for 2023E/24E and adjusting our target P/PPOPs for the A/H shares to 1.875x/1.6x vs. 2x/1.6x prior, we arrive at new 12m TPs of Rmb2.59/HK$2.45 vs. Rmb 2.85/HK$ 2.62 prior.

**Upside risks and what could make us more constructive**

- Better than expected NIM to drive NII growth, which may come from deposit cost saving and improving the funding structure: Potential factors would include a further deposit rate cut, a further policy rate cut, and a smaller proportion of time deposits.
- Lower than expected local government debt rollover risk: This could be driven by a lower than expected local gov. debt rate cut, and/or less than expected rollover scale.
- Better than expected asset quality on improving macro: Potential drivers would include less than expected property NPL formation and fewer than expected assets moved to stage 3, which would require less additional provisioning and allow more room for provision release to boost earnings.

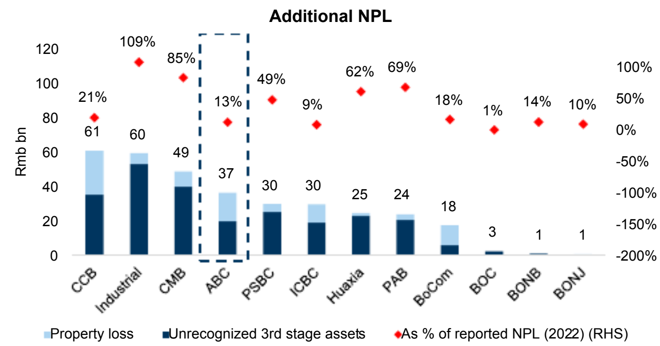
- Stronger-than-expected retail recovery to drive retail loan growth and fee income (such as fees from credit card and consumption loans): Such a recovery could be supported by more retail consumption demand and better than expected household wealth growth.

**Exhibit 40: We estimate that ABC could have Rmb6.8tn of local gov. debt on its balance sheet, with Rmb3.5tn of loans and Rmb3.3tn of bonds**
As of 2022, GSe



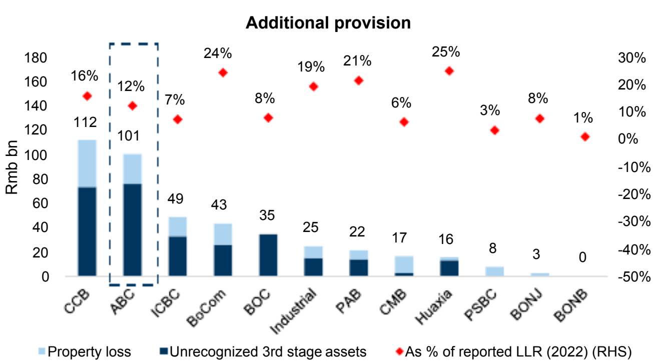

Source: Goldman Sachs Global Investment Research

**Exhibit 41: We estimate that ABC has Rmb37bn of additional losses in the credit portfolio in total, comprising Rmb17bn of property loans and Rmb20bn of assets under stage 3...**
As of 2023E



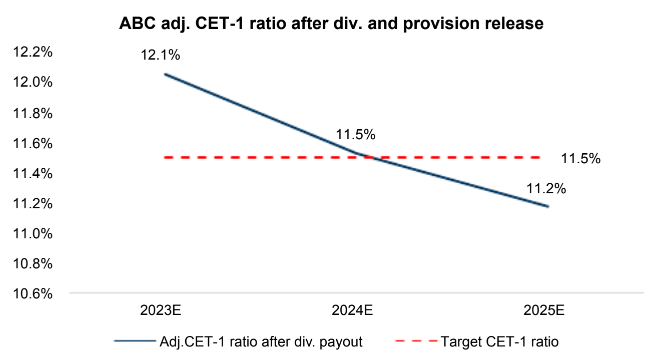

Source: Goldman Sachs Global Investment Research

**Exhibit 42: ...and additional provisions of Rmb101bn in total, comprising Rmb25bn for property loans and Rmb76bn for assets under stage 3**
As of 2023E




Source: Goldman Sachs Global Investment Research

**Exhibit 43: We believe ABC could face dividend risk in 2025E, as provision release from the adjusted NPL coverage ratio is unlikely to support capital and the dividend**



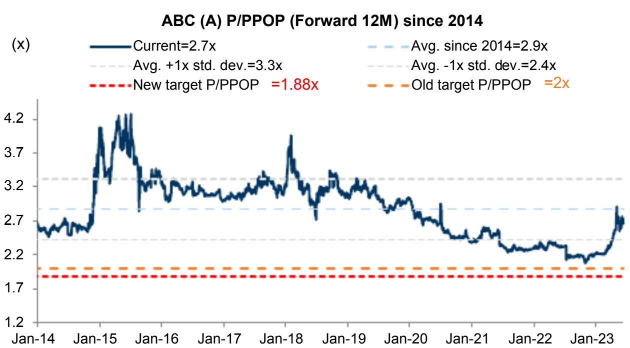

Source: Goldman Sachs Global Investment Research

**Exhibit 44: Model revisions (we introduce 2025E)**
Rmb mn

| | FY2023E | | FY2024E | | FY2025E | Changes(%) | |
|---|---|---|---|---|---|---|---|
| **Rmb mn** | **Prior** | **Revised** | **Prior** | **Revised** | **Revised** | 2023E | 2024E |
| **Key items (Rmb mn)** | | | | | | | |
| Net interest income | 651,965 | 592,576 | 695,535 | 625,017 | 660,403 | (9.1) | (10.1) |
| Non-interest income | 91,831 | 109,674 | 95,105 | 111,747 | **116,213** | **19.4** | **17.5** |
| Net fee income | 84,954 | 82,571 | 88,170 | 85,692 | 88,946 | (2.8) | (2.8) |
| Investment income | 7,926 | 22,735 | 7,926 | 20,966 | 21,385 | 186.8 | 164.5 |
| **Operating revenues** | **743,796** | **702,250** | **790,640** | **736,764** | 776,617 | (5.6) | (6.8) |
| Operating expenses | 236,341 | 241,398 | 250,929 | 254,250 | 268,199 | 2.1 | 1.3 |
| **PPOP** | **507,455** | **460,851** | **539,711** | **482,514** | 508,418 | (9.2) | (10.6) |
| Provision charges | 181,489 | 144,855 | 199,608 | 153,802 | 166,370 | (20.2) | (22.9) |
| Pretax profits | 317,510 | 315,997 | 331,126 | 328,712 | 342,048 | (0.5) | (0.7) |
| Taxes | 53,718 | 49,042 | 56,030 | 50,921 | 52,968 | (8.7) | (9.1) |
| **NPAT** | **263,792** | **266,954** | **275,096** | **277,792** | **289,079** | **1.2** | **1.0** |
| | | | | | | | |
| **Key assumptions (%)** | | | | | | | |
| Revenue growth | 6.6 | 2.2 | 6.3 | 4.9 | 5.4 | (4.46) | (1.38) |
| PPOP growth | 6.4 | 2.1 | 6.4 | 4.7 | 5.4 | (4.32) | (1.66) |
| NPAT growth | 4.1 | 3.2 | 4.3 | 4.1 | 4.1 | (0.89) | (0.23) |
| Net interest margin (bp) | 182 | 163 | 176 | 154 | 147 | (18.40) | (22.00) |
| Loan growth | 12.7 | 14.3 | 11.3 | 12.0 | 10.9 | 1.64 | 0.74 |
| Deposit growth | 11.9 | 15.0 | 11.0 | 12.0 | 11.0 | 3.12 | 1.05 |
| Earning assets growth | 13.5 | 14.9 | 10.3 | 12.0 | 10.6 | 1.40 | 1.73 |
| Non-interest income growth | (3.3) | 12.6 | 3.6 | 1.9 | 4.0 | 15.93 | (1.68) |
| Operating expenses growth | 7.2 | 2.4 | 6.2 | 5.3 | 5.5 | (4.81) | (0.85) |
| Credit cost | 0.79 | 0.61 | 0.78 | 0.58 | 0.56 | (0.18) | (0.20) |
| ROA | 0.7 | 0.7 | 0.7 | 0.6 | 0.6 | (0.02) | (0.03) |
| ROE | 11.2 | 10.8 | 10.8 | 10.5 | 10.1 | (0.38) | (0.35) |
| New NPL formation rate | 0.5 | 0.7 | 0.6 | 0.7 | 0.7 | 0.15 | 0.14 |
| NPL coverage ratio | 264.0 | 296.1 | 243.3 | 284.7 | 273.6 | 32.12 | 41.46 |
| NII growth | 8.2 | 0.4 | 6.7 | 5.5 | 5.7 | (7.76) | (1.21) |

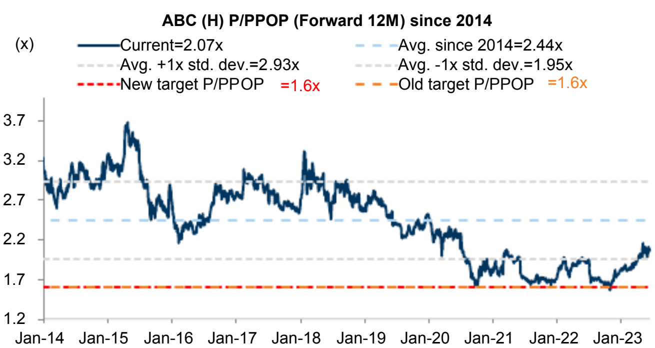
Source: Goldman Sachs Global Investment Research

**Exhibit 45: ABC (A) P/PPOP since 2014**




Source: Wind

**Exhibit 46: ABC (H) P/PPOP since 2014**




Source: Wind

## Exhibit 47: ABC Summary Table

Rmb mn

| Key items growth yoy | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|
| Loans | 12% | 14% | 13% | 15% | 14% | 12% | 11% |
| Customer deposits | 7% | 10% | 8% | 15% | 15% | 12% | 11% |
| Net interest margin | 2.06 | 2.10 | 2.06 | 1.87 | 1.63 | 1.54 | 1.47 |
| Net interest income | 2% | 12% | 6% | 2% | 0% | 5% | 6% |
| Non-interest income | 12% | -28% | 32% | -11% | 13% | 2% | 4% |
| Investment income | 11% | -75% | 261% | -1% | 0% | -8% | 2% |
| Net fee income | 11% | -14% | 8% | 1% | 2% | 4% | 4% |
| Operating revenues | 4% | 4% | 10% | 0% | 2% | 5% | 5% |
| Operating expenses | 2% | 1% | 14% | 4% | 2% | 5% | 5% |
| **Preprovision operating profits** | **4%** | **6%** | **7%** | **-2%** | **2%** | **5%** | **5%** |
| Provision charges | 1% | 19% | 1% | -12% | 0% | 6% | 8% |
| **Net profits to common shareholders** | **5%** | **2%** | **12%** | **7%** | **3%** | **4%** | **4%** |
| Dividend | 5% | 2% | 12% | 7% | 3% | 4% | 2% |
| Average Interest earning assets | 9% | 10% | 8% | 12% | 15% | 12% | 11% |
| **CAMEL ratios (%)** | | | | | | | |
| **C**: Core Tier1 CAR | 11.2 | 11.0 | 11.4 | 11.2 | 10.7 | 10.4 | 10.2 |
| **C**: Total CAR | 16.1 | 16.6 | 17.1 | 17.2 | 16.1 | 15.3 | 14.6 |
| **C**: Asset/Equity | 7.0 | 6.9 | 7.1 | 6.6 | 6.3 | 6.1 | 6.0 |
| **C**: RWA density | 62 | 62 | 61 | 59 | 59 | 59 | 59 |
| **A:** NPL ratio | 1.4 | 1.6 | 1.4 | 1.4 | 1.3 | 1.3 | 1.4 |
| **A**: LLR/NPL | 288.8 | 260.6 | 299.7 | 302.6 | 296.1 | 284.7 | 273.6 |
| **A**: LLR/total loans (%) | 4.1 | 4.1 | 4.3 | 4.2 | 4.0 | 3.8 | 3.7 |
| **A**: Credit cost (%) | 1.0 | 0.9 | 1.0 | 0.7 | 0.6 | 0.6 | 0.6 |
| **E**: ROA | 0.9 | 0.8 | 0.8 | 0.8 | 0.7 | 0.6 | 0.6 |
| **E**: ROE | 12.4 | 11.4 | 11.5 | 11.3 | 10.8 | 10.5 | 10.1 |
| **E**: Cost to income | 32.7 | 31.5 | 32.8 | 34.3 | 34.4 | 34.5 | 34.5 |
| **L**: Loan/deposits | 71.9 | 74.3 | 78.2 | 78.5 | 78.0 | 78.0 | 78.0 |
| **L**: Avg loans/earning assets | 50.8 | 52.5 | 55.4 | 54.1 | 54.8 | 55.9 | 56.5 |
| **L**: Avg. earning assets/assets | 95.2 | 95.5 | 96.7 | 93.1 | 94.6 | 95.6 | 96.0 |
| **ROA/ROE DuPont analysis** | **2019** | **2020** | **2021** | **2022** | **2023E** | **2024E** | **2025E** |
| **ROE** | **12.4** | **11.4** | **11.5** | **11.3** | **10.8** | **10.5** | **10.1** |
| / leverage (x) | 14.2 | 14.3 | 14.3 | 14.7 | 15.6 | 16.2 | 16.6 |
| **= ROA** | **0.87** | **0.79** | **0.81** | **0.77** | **0.69** | **0.65** | **0.61** |
| NII as % of assets | 2.05 | 2.09 | 2.05 | 1.87 | 1.64 | 1.55 | 1.48 |
| Non-interest inc. as % of assets | 0.49 | 0.32 | 0.39 | 0.31 | 0.30 | 0.28 | 0.26 |
| Net fee income as % of assets | 0.37 | 0.29 | 0.29 | 0.26 | 0.23 | 0.21 | 0.20 |
| Oper. rev. as % of assets | 2.54 | 2.41 | 2.44 | 2.18 | 1.94 | 1.82 | 1.74 |
| Oper. exp. as % of assets | 0.83 | 0.76 | 0.80 | 0.75 | 0.67 | 0.63 | 0.60 |
| **PPOP ROA** | **1.71** | **1.65** | **1.64** | **1.43** | **1.28** | **1.19** | **1.14** |
| Loan prov. as % of assets | 0.58 | 0.63 | 0.59 | 0.46 | 0.40 | 0.38 | 0.37 |
| **Pretax profits** | **1.12** | **1.02** | **1.05** | **0.97** | **0.87** | **0.81** | **0.77** |
| Tax | 0.23 | 0.19 | 0.19 | 0.15 | 0.14 | 0.13 | 0.12 |
| **Net profits** | **0.90** | **0.83** | **0.86** | **0.82** | **0.74** | **0.69** | **0.65** |
| **Net profits to common shareholders** | **0.87** | **0.79** | **0.81** | **0.77** | **0.69** | **0.65** | **0.61** |
| **Net profit/RWA** | **1.42** | **1.27** | **1.31** | **1.28** | **1.18** | **1.10** | **1.04** |
| **PPOP/RWA** | **2.78** | **2.65** | **2.65** | **2.39** | **2.18** | **2.04** | **1.94** |

| Profit and loss (Rmb mn) | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|
| Net interest income | 486,871 | 545,079 | 577,987 | 589,966 | 592,576 | 625,017 | 660,403 |
| Non-interest income | 115,340 | 83,035 | 109,807 | 97,374 | 109,674 | 111,747 | 116,213 |
| Net fee income | 86,926 | 74,545 | 80,329 | 81,282 | 82,571 | 85,692 | 88,946 |
| Investment income | 25,480 | 6,375 | 23,025 | 22,704 | 22,735 | 20,966 | 21,385 |
| Operating income | 602,211 | 628,114 | 687,794 | 687,340 | 702,250 | 736,764 | 776,617 |
| Operating expense | 196,912 | 198,161 | 225,914 | 235,798 | 241,398 | 254,250 | 268,199 |
| Preprovision operating profits | 405,299 | 429,953 | 461,880 | 451,542 | 460,851 | 482,514 | 508,418 |
| Provision charges | 138,723 | 164,903 | 166,000 | 145,326 | 144,855 | 153,802 | 166,370 |
| Pretax profits | 266,576 | 265,050 | 295,880 | 306,216 | 315,997 | 328,712 | 342,048 |
| Tax | 53,652 | 48,650 | 53,944 | 47,528 | 49,042 | 50,921 | 52,968 |
| Net profits | 212,924 | 216,400 | 241,936 | 258,688 | 266,954 | 277,792 | 289,079 |
| Minority interest | 826 | 475 | 753 | -452 | -914 | -914 | -914 |
| Dividends to preferred shareholders | 4,600 | 9,530 | 13,798 | 17,239 | 17,239 | 17,239 | 17,239 |
| Net profits to common shareholders | 207,498 | 206,395 | 227,385 | 241,901 | 250,629 | 261,467 | 272,754 |
| **Balance sheet (Rmb mn)** | | | | | | | |
| Gross lending | 13,329,546 | 15,136,121 | 17,135,752 | 19,722,721 | 22,541,141 | 25,247,092 | 28,009,415 |
| Total gross earning assets | 24,286,341 | 26,499,104 | 28,378,985 | 33,218,003 | 37,645,133 | 41,791,190 | 46,088,231 |
| Total LLR | 540,578 | 618,009 | 736,687 | 820,233 | 891,504 | 963,278 | 1,038,835 |
| Total interest earning assets | 24,826,919 | 27,117,113 | 29,115,672 | 34,038,236 | 38,536,637 | 42,754,468 | 47,127,066 |
| Other non-interest earning assets | 591,947 | 705,943 | 690,170 | 709,530 | 696,781 | 721,998 | 741,002 |
| Total assets | 24,878,288 | 27,205,047 | 29,069,155 | 33,927,533 | 38,341,915 | 42,513,188 | 46,829,233 |
| NPLs | 187,210 | 237,113 | 245,782 | 271,062 | 301,044 | 338,294 | 379,623 |
| Customer deposits | 18,542,861 | 20,372,901 | 21,907,127 | 25,121,040 | 28,889,196 | 32,355,900 | 35,915,048 |
| Total interest-bearing liabilities | 22,142,078 | 24,376,278 | 26,111,501 | 30,728,266 | 34,937,313 | 38,882,257 | 42,960,349 |
| Non-interest-bearing liabilities | 776,448 | 618,023 | 536,295 | 524,816 | 555,120 | 587,295 | 621,466 |
| Total liabilities | 22,918,526 | 24,994,301 | 26,647,796 | 31,253,082 | 35,492,433 | 39,469,552 | 43,581,815 |
| Share capital | 349,983 | 349,983 | 349,983 | 349,983 | 349,983 | 349,983 | 349,983 |
| Total common equity | 1,748,469 | 1,884,914 | 2,054,733 | 2,228,412 | 2,402,811 | 2,596,965 | 2,800,747 |
| Preferred share/perpetual bond | 199,886 | 319,875 | 359,872 | 440,000 | 440,000 | 440,000 | 440,000 |
| Total liabilities and equity | 24,866,881 | 27,199,090 | 29,062,401 | 33,921,494 | 38,335,244 | 42,506,517 | 46,822,562 |
| RWA | 15,485,352 | 16,989,668 | 17,849,566 | 19,862,505 | 22,446,857 | 24,888,883 | 27,415,665 |

Source: Company data, Goldman Sachs Global Investment Research

# Upgrade PSBC to Buy from Sell on robust balance sheet to maintain dividend

| 1658.HK | 12m Price Target: HK$5.8 | Price: HK$4.87 | Upside: 19.1% |
|---|---|---|---|

| Buy | GS Forecast | | | | |
|---|---|---|---|---|---|
| | | 12/22 | 12/23E | 12/24E | 12/25E |
| Market cap: HK$482.9bn / $61.7bn | **Net inc. (attributable to equity** | **85,224.0** | **93,162.6** | **102,326.8** | **112,992.4** |
| 3m ADTV :HK$232.1mn/ $29.6mn | Net inc. (Rmb mn) Old | 85,224.0 | 92,914.0 | 103,823.1 | 115,116.7 |
| China | **EPS (Rmb) New** | **0.92** | **1.01** | **1.11** | **1.22** |
| China Financials | EPS (Rmb) Old | 0.92 | 1.01 | 1.12 | 1.25 |
| | EPS growth (%) | 11.9 | 9.3 | 9.8 | 10.4 |
| M&A Rank: 3 | P/E (X) | 5.0 | 4.5 | 4.1 | 3.7 |
| | P/B (X) | 0.6 | 0.6 | 0.5 | 0.5 |
| | Price/PPOP (X) | 3.5 | 3.3 | 3.0 | 2.8 |
| | Dividend yield (%) | 6.0 | 6.7 | 7.4 | 8.1 |
| | | **6/22** | **12/22** | **6/23E** | **12/23E** |
| | EPS (Rmb) | 0.51 | 0.41 | 0.55 | 0.46 |

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 03 Jul close.

| 601658.SS | 12m Price Target: Rmb6.03 | Price: Rmb4.98 | Upside: 21.1% |
|---|---|---|---|

| Buy | GS Forecast | | | | |
|---|---|---|---|---|---|
| | | 12/22 | 12/23E | 12/24E | 12/25E |
| Market cap: Rmb493.8bn / $68.1bn | **Net inc. (attributable to equity** | **85,224.0** | **93,162.6** | **102,326.8** | **112,992.4** |
| 3m ADTV :Rmb887.3mn/ $127.0mn | Net inc. (Rmb mn) Old | 85,224.0 | 92,914.0 | 103,823.1 | 115,116.7 |
| China | **EPS (Rmb) New** | **0.92** | **1.01** | **1.11** | **1.22** |
| China Financials | EPS (Rmb) Old | 0.92 | 1.01 | 1.12 | 1.25 |
| | EPS growth (%) | 11.9 | 9.3 | 9.8 | 10.4 |
| M&A Rank: 3 | P/E (X) | 5.4 | 4.9 | 4.5 | 4.1 |
| | P/B (X) | 0.7 | 0.6 | 0.6 | 0.5 |
| | Price/PPOP (X) | 3.9 | 3.7 | 3.3 | 3.0 |
| | Dividend yield (%) | 5.6 | 6.1 | 6.7 | 7.4 |
| | | **3/23** | **6/23E** | **9/23E** | **12/23E** |
| | EPS (Rmb) | 0.27 | 0.27 | 0.32 | 0.14 |

Source: Company data, Goldman Sachs Research estimates, FactSet. Price as of 03 Jul 2023 close.

We upgrade **PSBC** A/H share to Buy, despite sector headwinds. Based on our framework, we expect PSBC to maintain its dividend and healthy ROE due to its robust balance sheet. We forecast an adjusted 2023E ROE before dividends of 11.1%, or -187bps vs. prior. With 292% adjusted NPL coverage ratio and 9.1% adjusted CET1 ratio, we believe **PSBC** should be able to maintain dividends in our forecast years. We also estimate 6%/10%/9% PPOP growth vs. 4%/5%/6% of large banks in 2023E/24E/25E, to factor in **PSBC**'s growth potential. Our new TP of A/H share is Rmb 6.03/HK$ 5.8 vs. Rmb 4.31/HK$ 4.06 prior. Since our Sell rating in March 2023, PSBC A/H share prices changed by +10%/+4% vs. +4%/+3% average of covered A/H share banks, mainly due to greater than expected deposit cost savings leading to upbeat NIMs. Since we added **PSBC-H** to our Sell list on March 2, 2023, its return has been -0.2% vs. Hang Seng China Ent index at -7%. Since we added the A-share to our Sell list on March 2, 2023, it has returned +6.5% vs. CSI 300 index of -7%. We think the outperformance was mainly due to funding cost saving with deposit rate cut, given its large deposits (96% of total liability).

From the framework we built in to assess the adjusted ROE of banks, we find that **PSBC's** robust balance sheet is due to:

1) The smaller gov. debt exposure, which we estimate at Rmb 1.8tn, or 13% of total IEA with Rmb 0.3tn local gov. loans and Rmb 1.5tn local gov. bonds. Our analysis shows that the margin dilution could lead to a 92/83/76 bps ROE markdown in 2023E/24E/25E vs. 77/67/61bps average of large banks, if we treat local gov. bonds and loans equally, meaning no tax and capital benefits of local gov. bonds.

As we estimate **PSBC** holds more local gov. bonds (83% of total vs. 52% average of large banks) than loans, the tax and capital benefits could be larger and thereby offset the negative impact of margin risk of local gov. debt.

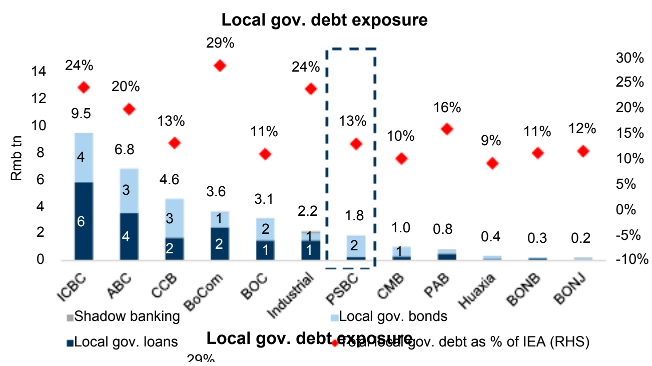
2) The smaller property exposure and likely recognition of a small loss. We estimate that **PSBC** could have additional losses of Rmb 30bn to digest in total, with Rmb 5bn from property loans and Rmb 25bn from assets under stage 3, and will set aside Rmb 8bn in provisions with all of it for the property loan losses and Rmb 0bn against the assets under stage 3. With this, we have adjusted our FY23E NPL coverage ratio and ROE for **PSBC** to 292%/12%, -78ppts/-97bps vs. before adjustment, and this compares with -6ppts/-245bps change on average of large banks.

Taking into account our adjusted key drivers, namely ROE, NPL coverage ratio and target CET1 ratio, we note that **PSBC** should be able to continue to pay dividends in outer years, provided the target CET1 ratio remains at the historical average. We forecast the adjusted dividend yield in 2023E/24E/25E to be 5.2%/6.2%/6.9% vs. 4.5%/6.3%/6.6% of larger banks' average for A-share, and 5.8%/7.0%/7.7% vs. 5.8%/8.0%/8.4% of larger banks' average for H-share. We think **PSBC**'s robust balance sheet will enable it to maintain its trading P/PPOP valuation multiple, despite sector headwinds. Our PPOP growth is 6%/10%/9% yoy vs. 4%/5%/6% average of large banks in 2023E/24E/25E. We increase our estimated PPOP by +2%/+3%/+3% vs. prior to factor in its robust balance sheet, and apply target P/PPOPs of A/H to 3.75x/3.25x, slightly above the historical avg, to reflect both its robust balance sheet due to lower local gov. debt exposure and fewer additional losses to recognize in its credit portfolio, vs. 2.75x/2.25x prior. Our target price of A/H rises to Rmb 6.03/HK$ 5.8 vs. Rmb 4.31/HK$ 4.06 prior, implying 21%/19% upside.

**Downside Risk:**

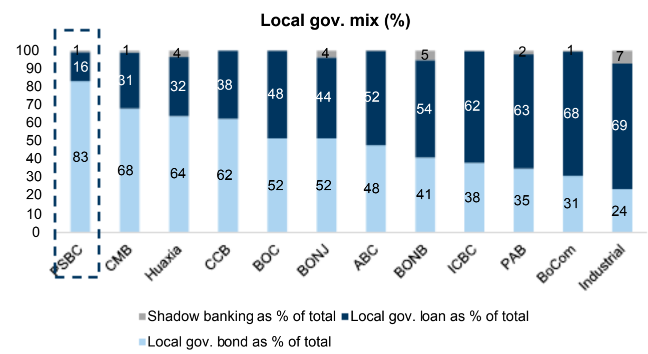
- Worsening asset quality, especially in property sector, which will require more provisions and thus less room to release profit.
- Greater than expected NIM dilution, which may come from further LPR cuts, faster than expected mortgage repricing, higher than expected mortgage early repayments and weaker than expected retail loan demand.
- Weaker fee income growth due to a weaker than expected retail recovery.
- Recapitalization risk which dilutes ROE and poses downward pressure on share price.

**Exhibit 48: We estimate PSBC has smaller gov. debt exposure, which we estimate Rmb 1.8tn, or 13% of total IEA with Rmb 0.3tn local gov. loans and Rmb 1.5tn local gov. bonds.**
As of 2022, GSe



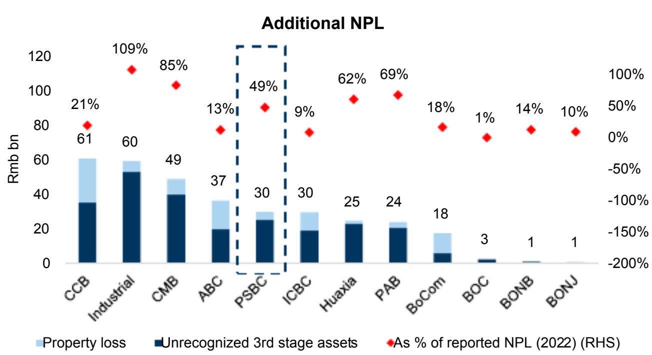

Source: Goldman Sachs Global Investment Research

**Exhibit 49: As PSBC holds more local gov. bonds per our estimation (83% of total vs. 52% average of large banks) than loans, the tax and capital benefits could be larger to offset the negative impact of margin risk of local gov. debts.**
As of 2022



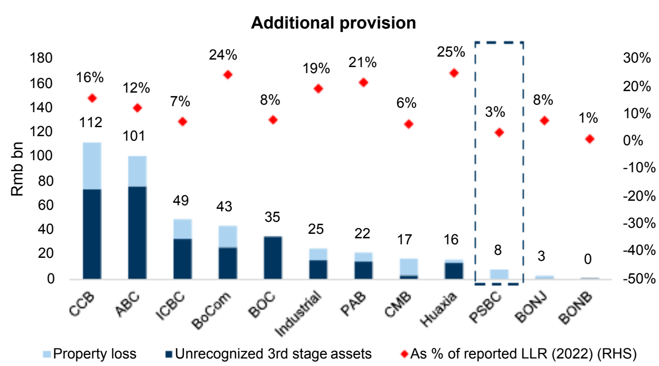

Source: Goldman Sachs Global Investment Research

**Exhibit 50: We estimate that PSBC could have Rmb 30bn more loss to digest in total, with Rmb 5bn from property loans and Rmb 25bn from assets under stage 3...**
As of 2023E



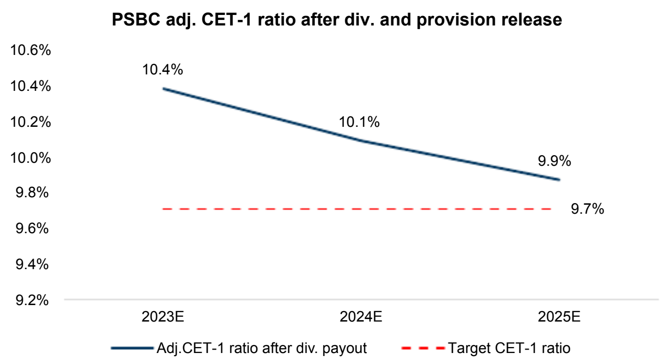

Source: Goldman Sachs Global Investment Research

**Exhibit 51: ...and Rmb 8bn provision to beef up in total, with Rmb 8bn set aside against the property loan loss and Rmb 0bn against the asset under stage 3.**
As of 2023E




Source: Goldman Sachs Global Investment Research

**Exhibit 52: Taking the adjusted key drivers, namely ROE, NPL coverage ratio and target CET1 ratio, we note that PSBC could continue to pay dividends in outer years, provided the target CET1 ratio remains at historical average.**




Source: Goldman Sachs Global Investment Research

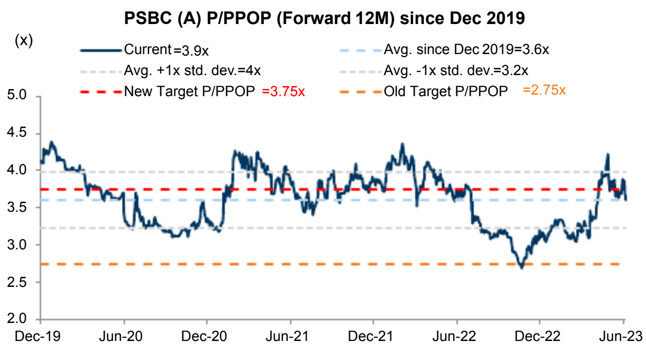
**Exhibit 53: Model revisions**

Rmb mn

| | FY2023E | | FY2024E | | FY2025E | | Changes(%) | | |
|---|---|---|---|---|---|---|---|---|---|
| **Rmb mn** | **Prior** | **Revised** | **Prior** | **Revised** | **Prior** | **Revised** | 2023E | 2024E | 2025E |
| **Key items (Rmb mn)** | | | | | | | | | |
| Net interest income | 280,865 | 288,893 | 304,442 | 316,718 | 328,729 | 345,210 | 2.9 | 4.0 | 5.0 |
| Non-interest income | 72,585 | 65,521 | 81,525 | 73,575 | 91,657 | 81,458 | (9.7) | (9.8) | (11.1) |
| Net fee income | 34,633 | 34,220 | 38,528 | 38,154 | 42,911 | 42,590 | (1.2) | (1.0) | (0.7) |
| Investment income | 32,991 | 28,909 | 37,658 | 31,800 | 42,996 | 34,980 | (12.4) | (15.6) | (18.6) |
| **Operating revenues** | **353,450** | **354,414** | **385,968** | **390,294** | **420,386** | **426,668** | **0.3** | **1.1** | **1.5** |
| Operating expenses | 220,909 | 219,634 | 241,144 | 241,828 | 262,571 | 264,319 | (0.6) | 0.3 | 0.7 |
| **PPOP** | **132,541** | **134,779** | **144,823** | **148,466** | **157,815** | **162,349** | **1.7** | **2.5** | **2.9** |
| Provision charges | 32,997 | 34,972 | 33,626 | 38,826 | 34,520 | 41,330 | 6.0 | 15.5 | 19.7 |
| Pretax profits | 99,544 | 99,807 | 111,197 | 109,640 | 123,295 | 121,019 | 0.3 | (1.4) | (1.8) |
| Taxes | 6,480 | 6,494 | 7,224 | 7,113 | 8,028 | 7,827 | 0.2 | (1.5) | (2.5) |
| **NPAT** | **93,064** | **93,313** | **103,973** | **102,527** | **115,267** | **113,192** | **0.3** | **(1.4)** | **(1.8)** |
| Attributable profit | 86,206 | 86,455 | 97,115 | 95,619 | 108,409 | 106,284 | 0.3 | (1.5) | (2.0) |
| | | | | | | | | | |
| **Key assumptions (%)** | | | | | | | | | |
| Revenue growth | 5.5 | 5.8 | 9.2 | 10.1 | 8.9 | 9.3 | 0.3 | 0.9 | 0.4 |
| PPOP growth | 4.6 | 6.4 | 9.3 | 10.2 | 9.0 | 9.4 | 1.8 | 0.9 | 0.4 |
| NPAT growth | 9.0 | 9.3 | 11.7 | 9.9 | 10.9 | 10.4 | 0.3 | (1.8) | (0.5) |
| Net interest margin (bp) | 189 | 194 | 185 | 192 | 180 | 189 | 5.4 | 7.5 | 9.1 |
| Loan growth | 11.5 | 11.5 | 10.9 | 10.9 | 11.0 | 11.0 | 0.0 | (0.1) | 0.1 |
| Deposit growth | 11.5 | 11.5 | 11.0 | 11.0 | 10.9 | 10.9 | 0.0 | 0.0 | 0.0 |
| Earning assets growth | 11.5 | 11.5 | 10.9 | 10.9 | 10.7 | 10.7 | 0.0 | (0.0) | 0.0 |
| Non-interest income growth | 18.1 | 6.6 | 12.3 | 12.3 | 12.4 | 10.7 | (11.5) | (0.0) | (1.7) |
| Operating expenses growth | 6.0 | 5.4 | 9.2 | 10.1 | 8.9 | 9.3 | (0.6) | 0.9 | 0.4 |
| Credit cost | 0.39 | 0.41 | 0.36 | 0.41 | 0.33 | 0.40 | 0.0 | 0.1 | 0.1 |
| ROA | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.0 | (0.0) | (0.0) |
| ROE | 12.0 | 12.1 | 12.4 | 12.2 | 12.6 | 12.3 | 0.0 | (0.2) | (0.2) |
| New NPL formation rate | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | (0.0) | (0.0) | (0.0) |
| NPL coverage ratio | 361.9 | 370.8 | 352.3 | 359.0 | 332.8 | 351.6 | 8.9 | 6.7 | 18.8 |
| NII growth | 2.7 | 5.6 | 8.4 | 9.6 | 8.0 | 9.0 | 2.9 | 1.2 | 1.0 |

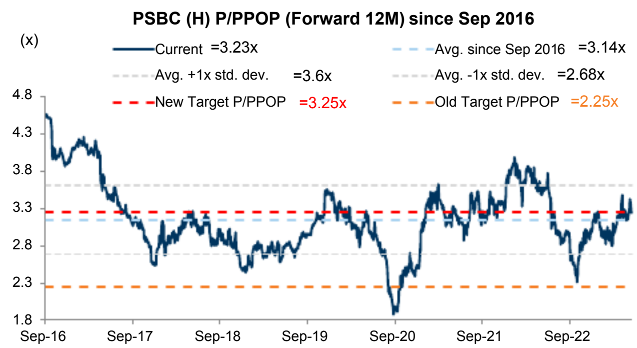
Source: Goldman Sachs Global Investment Research

### Exhibit 54: PSBC (A) P/PPOP since 2019




Source: Wind

### Exhibit 55: PSBC (H) P/PPOP since 2016




Source: Wind

### Exhibit 56: PSBC Summary Table

Rmb mn

| Key items growth yoy | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|
| Loans | 16% | 15% | 13% | 12% | 11% | 11% | 11% |
| Customer deposits | 8% | 11% | 10% | 12% | 12% | 11% | 11% |
| Net interest margin | 2.44 | 2.35 | 2.25 | 2.05 | 1.94 | 1.92 | 1.89 |
| Net interest income | 3% | 5% | 6% | 2% | 6% | 10% | 9% |
| Non-interest income | 38% | -12% | 49% | 25% | 7% | 12% | 11% |
| Investment income | 332% | 18% | 41% | -3% | 11% | 10% | 10% |
| Net fee income | 18% | -3% | 33% | 29% | 20% | 11% | 12% |
| Operating revenues | 6% | 3% | 11% | 5% | 6% | 10% | 9% |
| Operating expenses | 4% | 6% | 14% | 9% | 5% | 10% | 9% |
| **Preprovision operating profits** | **9%** | **0%** | **8%** | **-1%** | **6%** | **10%** | **9%** |
| Provision charges | 0% | -9% | -7% | -24% | -1% | 11% | 6% |
| **Net profits to common shareholders** | **16%** | **5%** | **19%** | **12%** | **9%** | **10%** | **10%** |
| Dividend | 16% | 5% | 19% | 12% | 9% | 10% | 10% |
| Average Interest earning assets | 7% | 9% | 11% | 11% | 12% | 11% | 11% |
| **CAMEL ratios (%)** | | | | | | | |
| C: Core Tier1 CAR | 9.9 | 9.6 | 9.9 | 9.4 | 9.2 | 9.1 | 9.1 |
| C: Total CAR | 13.5 | 13.9 | 14.8 | 13.8 | 13.2 | 12.8 | 12.3 |
| C: Asset/Equity | 4.9 | 4.8 | 5.1 | 4.9 | 4.8 | 4.7 | 4.7 |
| C: RWA density | 49 | 50 | 51 | 52 | 52 | 52 | 52 |
| A: NPL ratio | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| A: LLR/NPL | 387.7 | 404.8 | 411.7 | 383.2 | 370.8 | 359.0 | 351.6 |
| A: LLR/total loans (%) | 3.3 | 3.6 | 3.4 | 3.2 | 3.0 | 2.8 | 2.7 |
| A: Credit cost (%) | 1.0 | 0.9 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 |
| E: ROA | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| E: ROE | 12.7 | 11.8 | 12.0 | 11.9 | 12.1 | 12.2 | 12.3 |
| E: Cost to income | 57.1 | 58.6 | 59.8 | 62.2 | 62.0 | 62.0 | 61.9 |
| L: Loan/deposits | 53.4 | 55.2 | 56.8 | 56.7 | 56.7 | 56.6 | 56.7 |
| L: Avg loans/earning assets | 45.3 | 47.1 | 48.4 | 48.5 | 48.7 | 48.9 | 49.1 |
| L: Avg. earning assets/assets | 96.4 | 94.9 | 95.1 | 94.7 | 95.0 | 95.2 | 95.2 |
| **ROA/ROE DuPont analysis** | **2019** | **2020** | **2021** | **2022** | **2023E** | **2024E** | **2025E** |
| **ROE** | **12.7** | **11.8** | **12.0** | **11.9** | **12.1** | **12.2** | **12.3** |
| / leverage (x) | 21.4 | 20.7 | 20.3 | 20.2 | 20.7 | 21.0 | 21.2 |
| **= ROA** | **0.59** | **0.57** | **0.59** | **0.59** | **0.58** | **0.58** | **0.58** |
| NII as % of assets | 2.43 | 2.35 | 2.25 | 2.05 | 1.94 | 1.92 | 1.89 |
| Non-interest inc. as % of assets | 0.38 | 0.31 | 0.41 | 0.46 | 0.44 | 0.45 | 0.45 |
| Net fee income as % of assets | 0.17 | 0.15 | 0.18 | 0.21 | 0.23 | 0.23 | 0.23 |
| Oper. rev. as % of assets | 2.81 | 2.66 | 2.66 | 2.51 | 2.39 | 2.37 | 2.34 |
| Oper. exp. as % of assets | 1.61 | 1.56 | 1.59 | 1.56 | 1.48 | 1.47 | 1.45 |
| **PPOP ROA** | **1.21** | **1.10** | **1.07** | **0.95** | **0.91** | **0.90** | **0.89** |
| Loan prov. as % of assets | 0.56 | 0.47 | 0.39 | 0.27 | 0.24 | 0.24 | 0.23 |
| **Pretax profits** | **0.65** | **0.63** | **0.68** | **0.69** | **0.67** | **0.67** | **0.66** |
| Tax | 0.03 | 0.04 | 0.04 | 0.05 | 0.04 | 0.04 | 0.04 |
| **Net profits** | **0.62** | **0.60** | **0.64** | **0.64** | **0.63** | **0.62** | **0.62** |
| **Net profits to common shareholders** | **0.59** | **0.57** | **0.59** | **0.59** | **0.58** | **0.58** | **0.58** |
| **Net profit/RWA** | **1.26** | **1.16** | **1.18** | **1.15** | **1.13** | **1.12** | **1.13** |
| **PPOP/RWA** | **2.57** | **2.23** | **2.13** | **1.85** | **1.76** | **1.74** | **1.72** |

| Profit and loss (Rmb mn) | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
|---|---|---|---|---|---|---|---|
| Net interest income | 240,224 | 253,378 | 269,382 | 273,593 | 288,893 | 316,718 | 345,210 |
| Non-interest income | 37,511 | 33,011 | 49,300 | 61,443 | 65,521 | 73,575 | 81,458 |
| Net fee income | 17,085 | 16,495 | 22,007 | 28,434 | 34,220 | 38,154 | 42,590 |
| Investment income | 16,323 | 19,181 | 26,973 | 26,155 | 28,909 | 31,800 | 34,980 |
| Operating income | 277,735 | 286,389 | 318,682 | 335,036 | 354,414 | 390,294 | 426,668 |
| Operating expense | 158,595 | 167,836 | 190,570 | 208,325 | 219,634 | 241,828 | 264,319 |
| Preprovision operating profits | 119,140 | 118,553 | 128,112 | 126,711 | 134,779 | 148,466 | 162,349 |
| Provision charges | 55,395 | 50,417 | 46,658 | 35,347 | 34,972 | 38,826 | 41,330 |
| Pretax profits | 63,745 | 68,136 | 81,454 | 91,364 | 99,807 | 109,640 | 121,019 |
| Tax | 2,709 | 3,818 | 4,922 | 6,009 | 6,494 | 7,113 | 7,827 |
| Net profits | 61,036 | 64,318 | 76,532 | 85,355 | 93,313 | 102,527 | 113,192 |
| Minority interest | 103 | 119 | 362 | 131 | 150 | 200 | 200 |
| Dividends to preferred shareholders | 2,501 | 2,584 | 5,276 | 6,708 | 6,708 | 6,708 | 6,708 |
| Net profits to common shareholders | 58,432 | 61,615 | 70,894 | 78,516 | 86,455 | 95,619 | 106,284 |
| **Balance sheet (Rmb mn)** | | | | | | | |
| Gross lending | 4,974,186 | 5,716,258 | 6,454,099 | 7,210,433 | 8,039,115 | 8,911,894 | 9,894,796 |
| Total gross earning assets | 10,039,377 | 11,148,851 | 12,362,836 | 13,845,013 | 15,402,950 | 17,070,339 | 18,905,258 |
| Total LLR | 166,124 | 203,897 | 216,900 | 232,723 | 244,102 | 253,393 | 264,908 |
| Total interest earning assets | 10,205,501 | 11,352,748 | 12,579,736 | 14,077,736 | 15,647,052 | 17,323,732 | 19,170,166 |
| Other non-interest earning assets | 177,329 | 204,412 | 225,037 | 222,269 | 240,115 | 253,725 | 269,127 |
| Total assets | 10,216,706 | 11,353,263 | 12,587,873 | 14,067,282 | 15,643,065 | 17,324,063 | 19,174,385 |
| NPLs | 42,844 | 50,367 | 52,685 | 60,736 | 65,830 | 70,574 | 75,340 |
| Customer deposits | 9,314,066 | 10,358,029 | 11,354,073 | 12,714,485 | 14,176,651 | 15,741,753 | 17,464,216 |
| Total interest-bearing liabilities | 9,582,751 | 10,583,080 | 11,684,832 | 13,146,325 | 14,650,535 | 16,253,548 | 18,018,022 |
| Non-interest-bearing liabilities | 89,076 | 97,253 | 107,492 | 95,143 | 101,359 | 107,524 | 114,086 |
| Total liabilities | 9,671,827 | 10,680,333 | 11,792,324 | 13,241,468 | 14,751,895 | 16,361,073 | 18,132,108 |
| Share capital | 86,203 | 86,979 | 92,384 | 92,384 | 92,384 | 92,384 | 92,384 |
| Total common equity | 495,998 | 543,941 | 636,236 | 684,239 | 749,595 | 821,416 | 900,702 |
| Preferred share/perpetual bond | 47,869 | 127,858 | 157,855 | 139,986 | 139,986 | 139,986 | 139,986 |
| Total liabilities and equity | 10,215,694 | 11,352,132 | 12,586,415 | 14,065,693 | 15,641,476 | 17,322,474 | 19,172,796 |
| RWA | 4,969,658 | 5,651,439 | 6,400,338 | 7,266,134 | 8,080,069 | 8,948,350 | 9,904,092 |

Source: Company data, Goldman Sachs Global Investment Research

# Appendix I: Various bank indicators

### Exhibit 57: New vs. Old: NIM and Loan growth

| NIM (%) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | | Change(bps) | | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E |
| ICBC | 1.72 | 1.61 | 1.56 | 1.83 | 1.78 | | (12) | (17) | |
| CCB | 1.78 | 1.69 | 1.62 | 1.87 | 1.81 | | (9) | (12) | |
| BOC | 1.51 | 1.46 | 1.42 | 1.65 | 1.61 | | (14) | (15) | |
| ABC | 1.63 | 1.54 | 1.47 | 1.82 | 1.76 | | (18) | (22) | |
| BoCom | 1.27 | 1.22 | 1.19 | 1.32 | 1.27 | | (5) | (5) | |
| PSBC | 1.94 | 1.92 | 1.89 | 1.89 | 1.85 | 1.80 | 5 | 7 | 9 |
| CMB | 2.20 | 2.16 | 2.14 | 2.20 | 2.16 | 2.14 | (0) | - | - |
| Industrial | 1.54 | 1.48 | 1.44 | 1.59 | 1.55 | 1.51 | (5) | (7) | (7) |
| HuaXia | 1.79 | 1.72 | 1.67 | 1.83 | 1.75 | | (4) | (3) | |
| PAB | 2.44 | 2.43 | 2.40 | 2.45 | 2.42 | 2.39 | (0) | 1 | 2 |
| BONB | 1.71 | 1.68 | 1.66 | 1.78 | 1.75 | 1.74 | (6) | (7) | (8) |
| BONJ | 1.37 | 1.33 | 1.31 | 1.45 | 1.42 | | (8) | (9) | |
| **Average** | | | | | | | | | |
| Total | 1.74 | 1.69 | 1.65 | 1.81 | 1.76 | | (6) | (7) | |
| Large | 1.64 | 1.57 | 1.52 | 1.73 | 1.68 | | (6) | (6) | |
| Joint-stock | 1.99 | 1.95 | 1.91 | 2.02 | 1.97 | | (6) | (6) | |
| Regional | 1.54 | 1.51 | 1.49 | 1.61 | 1.58 | | (5) | (5) | |

| Loan growth | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | | Change(ppts) | | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E |
| ICBC | 12% | 11% | 11% | 12% | 11% | | 1 | 0 | |
| CCB | 11% | 11% | 10% | 11% | 10% | | 0 | 1 | |
| BOC | 11% | 9% | 8% | 11% | 9% | | 1 | 0 | |
| ABC | 14% | 12% | 11% | 13% | 11% | | 2 | 1 | |
| BoCom | 11% | 10% | 10% | 12% | 10% | | (1) | (1) | |
| PSBC | 11% | 11% | 11% | 11% | 11% | 11% | - | (0) | 0 |
| CMB | 11% | 11% | 11% | 11% | 11% | 11% | - | - | - |
| Industrial | 11% | 11% | 12% | 12% | 12% | 13% | (1) | (1) | (1) |
| HuaXia | 5% | 5% | 5% | 6% | 5% | | (0) | (0) | |
| PAB | 11% | 10% | 10% | 11% | 10% | 10% | - | - | - |
| BONB | 15% | 16% | 16% | 21% | 21% | 21% | (6) | (5) | (5) |
| BONJ | 15% | 15% | 15% | 18% | 16% | | (3) | (2) | |
| **Average** | | | | | | | | | |
| Total | 12% | 11% | 11% | 12% | 12% | | (1) | (1) | |
| Large | 12% | 11% | 10% | 11% | 11% | | (1) | (1) | |
| Joint-stock | 9% | 9% | 10% | 10% | 10% | | (1) | (1) | |
| Regional | 15% | 15% | 15% | 19% | 19% | | (1) | (1) | |

Source: Goldman Sachs Global Investment Research

### Exhibit 58: New vs. Old: Credit cost and Provisions

| Credit cost (%) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | | Change(bps) | | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E |
| ICBC | 0.72 | 0.66 | 0.63 | 0.79 | 0.76 | | (7) | (10) | |
| CCB | 0.60 | 0.57 | 0.56 | 0.74 | 0.72 | | (15) | (15) | |
| BOC | 0.72 | 0.66 | 0.63 | 0.48 | 0.47 | | 24 | 19 | |
| ABC | 0.61 | 0.58 | 0.56 | 0.79 | 0.78 | | (18) | (20) | |
| BoCom | 0.75 | 0.72 | 0.70 | 0.85 | 0.81 | | (10) | (9) | |
| PSBC | 0.41 | 0.41 | 0.40 | 0.39 | 0.36 | 0.33 | 2 | 6 | 7 |
| CMB | 0.75 | 0.70 | 0.65 | 0.75 | 0.64 | 0.55 | 0 | 6 | 9 |
| Industrial | 0.58 | 0.56 | 0.55 | 0.58 | 0.54 | 0.52 | (0) | 2 | 3 |
| HuaXia | 1.17 | 1.11 | 1.07 | 1.19 | 1.16 | | (2) | (5) | |
| PAB | 1.80 | 1.70 | 1.59 | 1.72 | 1.59 | 1.46 | 8 | 12 | 13 |
| BONB | 0.72 | 0.66 | 0.63 | 0.69 | 0.67 | 0.66 | 3 | (1) | (2) |
| BONJ | 0.84 | 0.80 | 0.77 | 1.02 | 0.98 | | (19) | (18) | |
| **Average** | | | | | | | | | |
| Total | 0.80 | 0.76 | 0.73 | 0.83 | 0.79 | | (3) | (3) | |
| Large | 0.63 | 0.60 | 0.58 | 0.67 | 0.65 | | (4) | (5) | |
| Joint-stock | 1.07 | 1.02 | 0.96 | 1.06 | 0.98 | | 1 | 4 | |
| Regional | 0.78 | 0.73 | 0.70 | 0.86 | 0.82 | | (8) | (10) | |

| Provision charges | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Company | New | | | Old | | | Change | | |
| | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E | 2023E | 2024E | 2025E |
| ICBC | 208 | 228 | 254 | 227 | 242 | | -9% | -6% | |
| CCB | 148 | 158 | 171 | 184 | 198 | | -20% | -20% | |
| BOC | 110 | 116 | 123 | 96 | 103 | | 15% | 12% | |
| ABC | 145 | 154 | 166 | 181 | 200 | | -20% | -23% | |
| BoCom | 64 | 67 | 72 | 73 | 76 | | -12% | -12% | |
| PSBC | 35 | 39 | 41 | 33 | 34 | 35 | 6% | 15% | 20% |
| CMB | 53 | 55 | 56 | 53 | 50 | 48 | 0% | 10% | 16% |
| Industrial | 49 | 52 | 58 | 49 | 51 | 56 | -2% | 3% | 3% |
| HuaXia | 29 | 29 | 30 | 31 | 32 | | -5% | -8% | |
| PAB | 70 | 73 | 75 | 67 | 68 | 69 | 4% | 8% | 9% |
| BONB | 11 | 12 | 13 | 12 | 14 | 16 | -12% | -17% | -23% |
| BONJ | 10 | 10 | 11 | 12 | 13 | | -19% | -21% | |
| **Aggregate** | | | | | | | | | |
| Total | 930 | 993 | 1,070 | 1,018 | 1,081 | | -9% | -8% | |
| Large | 709 | 761 | 827 | 794 | 853 | | -11% | -11% | |
| Joint-stock | 201 | 209 | 219 | 200 | 201 | | 0% | 4% | |
| Regional | 20 | 22 | 24 | 24 | 28 | | -15% | -19% | |

Source: Goldman Sachs Global Investment Research

### Exhibit 59: Time series: PPOP growth

| | PPOP growth | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
| **Large banks** | | | | | | | | | | | | |
| ICBC | 11% | 8% | 0% | 9% | 8% | 7% | 4% | 6% | -4% | 4% | 3% | 5% |
| BOC | 18% | 4% | 7% | 0% | 6% | 7% | 4% | 4% | 2% | 5% | 5% | 5% |
| CCB | 12% | 9% | -1% | 10% | 7% | 7% | 7% | 4% | -2% | 3% | 5% | 5% |
| ABC | 12% | 5% | -1% | 8% | 15% | 4% | 6% | 7% | -2% | 2% | 5% | 5% |
| BoCom | 9% | 7% | 1% | -1% | 13% | 8% | 6% | 9% | -1% | 3% | 4% | 5% |
| PSBC | 37% | 12% | -11% | 30% | 40% | 9% | 0% | 8% | -1% | 6% | 10% | 9% |
| **Joint stock banks** | | | | | | | | | | | | |
| CMB | 34% | 28% | 8% | 4% | 11% | 7% | 5% | 14% | 4% | 5% | 9% | 9% |
| Industrial | 19% | 25% | 6% | -13% | 14% | 16% | 15% | 7% | -5% | 1% | 7% | 7% |
| PAB | 53% | 44% | 29% | -4% | 10% | 20% | 12% | 12% | 7% | 5% | 8% | 8% |
| HuaXia | 24% | 13% | 17% | 9% | 9% | 21% | 17% | -1% | -4% | 0% | 2% | 3% |
| **Regional banks** | | | | | | | | | | | | |
| BONB | 27% | 24% | 27% | 9% | 15% | 21% | 11% | 31% | 9% | 11% | 13% | 12% |
| BONJ | 60% | 52% | 21% | -9% | 11% | 20% | 4% | 18% | 8% | 8% | 8% | 9% |
| **Aggregate** | | | | | | | | | | | | |
| **Total** | 26% | 19% | 9% | 4% | 13% | 12% | 8% | 10% | 1% | 5% | 7% | 7% |
| **Large** | 16% | 7% | -1% | 9% | 15% | 7% | 4% | 6% | -1% | 4% | 5% | 6% |
| **Joint-stock** | 33% | 28% | 15% | -1% | 11% | 16% | 12% | 8% | 1% | 3% | 6% | 7% |
| **Regional** | 43% | 38% | 24% | 0% | 13% | 21% | 8% | 24% | 8% | 10% | 10% | 11% |

| | Change (yoy, ppts) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
| **Large banks** | | | | | | | | | | | |
| ICBC | (3) | (7) | 9 | (1) | (2) | (3) | 1 | (9) | 8 | (1) | 2 |
| BOC | (15) | 3 | (7) | 6 | 2 | (4) | 1 | (2) | 3 | (0) | 0 |
| CCB | (3) | (10) | 11 | (2) | (1) | 1 | (4) | (6) | 5 | 2 | 0 |
| ABC | (7) | (6) | 8 | 7 | (11) | 2 | 1 | (10) | 4 | 3 | 1 |
| BoCom | (2) | (5) | (3) | 14 | (5) | (2) | 3 | (10) | 5 | 1 | 1 |
| PSBC | (24) | (23) | 41 | 10 | (31) | (10) | 9 | (9) | 7 | 4 | (1) |
| **Joint stock banks** | | | | | | | | | | | |
| CMB | (6) | (20) | (4) | 8 | (5) | (1) | 9 | (11) | 1 | 4 | 0 |
| Industrial | 6 | (19) | (19) | 27 | 2 | (1) | (8) | (11) | 6 | 5 | 1 |
| PAB | (9) | (15) | (33) | 14 | 10 | (8) | (0) | (4) | (3) | 3 | (1) |
| HuaXia | (11) | 4 | (8) | (0) | 12 | (4) | (18) | (3) | 3 | 3 | 0 |
| **Regional banks** | | | | | | | | | | | |
| BONB | (3) | 3 | (18) | 6 | 6 | (10) | 20 | (22) | 2 | 2 | (0) |
| BONJ | (9) | (30) | (31) | 21 | 9 | (16) | 14 | (10) | (0) | 0 | 1 |
| **Aggregate** | | | | | | | | | | | |
| **Total** | (7) | (10) | (5) | 9 | (1) | (5) | 2 | (9) | 4 | 2 | 0 |
| **Large** | (9) | (8) | 10 | 6 | (8) | (3) | 2 | (8) | 5 | 1 | 0 |
| **Joint-stock** | (5) | (12) | (16) | 12 | 5 | (4) | (4) | (7) | 2 | 4 | 0 |
| **Regional** | (6) | (14) | (25) | 14 | 8 | (13) | 17 | (16) | 1 | 1 | 0 |

Source: Company data, Goldman Sachs Global Investment Research

## Exhibit 60: Time series: NIM

| | NIM | | | | | | | | | | | | Change (yoy, bps) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
| **Large banks** | | | | | | | | | | | | | | | | | | | | | | | |
| ICBC | 2.55 | 2.43 | 2.10 | 2.14 | 2.18 | 2.14 | 2.08 | 2.06 | 1.89 | 1.72 | 1.61 | 1.56 | (12) | (33) | 4 | 4 | (4) | (6) | (2) | (17) | (17) | (10) | (6) |
| BOC | 2.30 | 2.15 | 1.84 | 1.87 | 1.83 | 1.59 | 1.67 | 1.58 | 1.57 | 1.51 | 1.46 | 1.42 | (15) | (31) | 4 | (4) | (24) | 8 | (9) | (1) | (6) | (5) | (4) |
| CCB | 2.76 | 2.65 | 2.17 | 2.15 | 2.17 | 2.11 | 2.17 | 2.09 | 1.99 | 1.78 | 1.69 | 1.62 | (11) | (48) | (2) | 3 | (6) | 5 | (8) | (10) | (22) | (9) | (7) |
| ABC | 2.85 | 2.61 | 2.16 | 2.20 | 2.20 | 2.06 | 2.10 | 2.06 | 1.87 | 1.63 | 1.54 | 1.47 | (23) | (45) | 4 | (0) | (15) | 4 | (4) | (19) | (24) | (10) | (7) |
| BoCom | 2.28 | 2.23 | 1.80 | 1.52 | 1.45 | 1.51 | 1.52 | 1.48 | 1.41 | 1.27 | 1.22 | 1.19 | (5) | (43) | (28) | (7) | 6 | 1 | (4) | (7) | (14) | (5) | (3) |
| PSBC | 2.85 | 2.66 | 2.05 | 2.20 | 2.54 | 2.44 | 2.35 | 2.25 | 2.05 | 1.94 | 1.92 | 1.89 | (19) | (62) | 15 | 34 | (10) | (9) | (10) | (20) | (11) | (2) | (3) |
| **Joint stock banks** | | | | | | | | | | | | | | | | | | | | | | | |
| CMB | 2.60 | 2.71 | 2.38 | 2.39 | 2.48 | 2.46 | 2.37 | 2.35 | 2.28 | 2.20 | 2.16 | 2.14 | 12 | (33) | 1 | 9 | (2) | (9) | (2) | (7) | (8) | (4) | (2) |
| Industrial | 2.42 | 2.55 | 2.04 | 1.46 | 1.50 | 1.53 | 1.96 | 1.81 | 1.66 | 1.54 | 1.48 | 1.44 | 13 | (51) | (58) | 4 | 2 | 43 | (15) | (15) | (12) | (6) | (4) |
| PAB | 2.70 | 2.94 | 2.93 | 2.52 | 2.35 | 2.51 | 2.43 | 2.62 | 2.58 | 2.44 | 2.43 | 2.40 | 24 | (1) | (41) | (18) | 16 | (8) | 19 | (3) | (14) | (2) | (2) |
| HuaXia | 2.64 | 2.39 | 2.25 | 1.95 | 1.99 | 2.27 | 2.55 | 2.25 | 1.97 | 1.79 | 1.72 | 1.67 | (25) | (14) | (29) | 4 | 27 | 29 | (30) | (28) | (18) | (7) | (5) |
| **Regional banks** | | | | | | | | | | | | | | | | | | | | | | | |
| BONB | 2.67 | 2.49 | 2.17 | 1.77 | 1.85 | 1.66 | 1.95 | 1.84 | 1.74 | 1.71 | 1.68 | 1.66 | (18) | (32) | (40) | 8 | (20) | 29 | (11) | (11) | (2) | (3) | (2) |
| BONJ | 2.71 | 2.77 | 2.30 | 1.85 | 1.84 | 1.67 | 1.67 | 1.67 | 1.42 | 1.37 | 1.33 | 1.31 | 6 | (47) | (45) | (1) | (17) | (0) | 0 | (25) | (5) | (4) | (2) |
| **Average** | | | | | | | | | | | | | | | | | | | | | | | |
| **Total** | 2.61 | 2.55 | 2.18 | 2.00 | 2.03 | 2.00 | 2.07 | 2.01 | 1.87 | 1.74 | 1.69 | 1.65 | (6) | (37) | (18) | 3 | (4) | 7 | (6) | (14) | (13) | (6) | (4) |
| **Large** | 2.60 | 2.46 | 2.02 | 2.01 | 2.06 | 1.98 | 1.98 | 1.92 | 1.80 | 1.64 | 1.57 | 1.52 | (14) | (44) | (0) | 5 | (9) | 1 | (6) | (12) | (15) | (7) | (5) |
| **Joint-stock** | 2.59 | 2.65 | 2.40 | 2.08 | 2.08 | 2.19 | 2.33 | 2.26 | 2.12 | 1.99 | 1.95 | 1.91 | 6 | (25) | (32) | (0) | 11 | 14 | (7) | (13) | (13) | (5) | (3) |
| **Regional** | 2.69 | 2.63 | 2.24 | 1.81 | 1.84 | 1.66 | 1.81 | 1.76 | 1.58 | 1.54 | 1.51 | 1.49 | (6) | (40) | (43) | 4 | (18) | 15 | (5) | (18) | (4) | (4) | (2) |

Source: Company data, Goldman Sachs Global Investment Research

## Exhibit 61: Time series: Loan growth

| | Loan growth | | | | | | | | | | | | Change (yoy, ppts) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
| **Large banks** | | | | | | | | | | | | | | | | | | | | | | | |
| ICBC | 11% | 8% | 9% | 9% | 8% | 9% | 11% | 11% | 12% | 12% | 11% | 11% | (3) | 1 | (0) | (1) | 0 | 2 | (0) | 1 | (0) | (1) | 0 |
| BOC | 12% | 8% | 9% | 9% | 8% | 10% | 9% | 11% | 12% | 11% | 9% | 8% | (4) | 1 | 0 | (1) | 2 | (1) | 2 | 1 | (0) | (2) | (1) |
| CCB | 10% | 11% | 12% | 10% | 7% | 9% | 12% | 12% | 13% | 11% | 11% | 10% | 0 | 1 | (2) | (3) | 3 | 3 | 0 | 1 | (1) | 0 | (1) |
| ABC | 12% | 10% | 9% | 10% | 11% | 12% | 14% | 13% | 15% | 14% | 12% | 11% | (2) | (1) | 1 | 1 | 1 | 2 | (0) | 2 | (1) | (2) | (1) |
| BoCom | 5% | 8% | 10% | 9% | 9% | 9% | 10% | 12% | 11% | 11% | 10% | 10% | 3 | 2 | (2) | 0 | 0 | 1 | 2 | (1) | (1) | (1) | (0) |
| PSBC | 26% | 32% | 22% | 21% | 18% | 16% | 15% | 13% | 12% | 11% | 11% | 11% | 6 | (10) | (1) | (3) | (2) | (1) | (2) | (1) | (0) | (1) | 0 |
| **Joint stock banks** | | | | | | | | | | | | | | | | | | | | | | | |
| CMB | 14% | 12% | 15% | 9% | 10% | 14% | 12% | 11% | 9% | 11% | 11% | 11% | (2) | 3 | (6) | 1 | 4 | (2) | (1) | (2) | 2 | 0 | 0 |
| Industrial | 17% | 12% | 17% | 17% | 21% | 17% | 15% | 12% | 13% | 11% | 11% | 12% | (6) | 5 | (0) | 4 | (3) | (2) | (4) | 1 | (1) | 0 | 0 |
| PAB | 21% | 19% | 21% | 15% | 17% | 16% | 15% | 15% | 9% | 11% | 10% | 10% | (2) | 3 | (6) | 2 | (1) | (2) | 0 | (6) | 2 | (1) | 0 |
| HuaXia | 14% | 14% | 14% | 15% | 16% | 16% | 13% | 5% | 3% | 5% | 5% | 5% | (0) | 0 | 1 | 1 | 0 | (3) | (8) | (2) | 3 | (0) | 0 |
| **Regional banks** | | | | | | | | | | | | | | | | | | | | | | | |
| BONB | 23% | 22% | 18% | 14% | 24% | 23% | 30% | 25% | 21% | 15% | 16% | 16% | (1) | (3) | (4) | 9 | (1) | 7 | (5) | (4) | (6) | 1 | (0) |
| BONJ | 19% | 44% | 32% | 17% | 23% | 18% | 19% | 17% | 20% | 15% | 15% | 15% | 25 | (12) | (15) | 6 | (5) | 0 | (1) | 3 | (5) | 0 | 0 |
| **Aggregate** | | | | | | | | | | | | | | | | | | | | | | | |
| **Total** | 12% | 11% | 12% | 11% | 10% | 11% | 12% | 12% | 12% | 12% | 11% | 10% | 1 | (1) | (3) | 1 | (0) | 0 | (1) | (1) | (1) | (0) | (0) |
| **Large** | 11% | 10% | 11% | 10% | 9% | 10% | 11% | 12% | 13% | 12% | 11% | 10% | 0 | (1) | (1) | (1) | 1 | 1 | 0 | 0 | (1) | (1) | (1) |
| **Joint-stock** | 16% | 13% | 17% | 13% | 15% | 16% | 14% | 11% | 9% | 10% | 10% | 10% | (3) | 3 | (3) | 2 | (0) | (2) | (3) | (2) | 1 | (0) | 0 |
| **Regional** | 21% | 32% | 25% | 16% | 24% | 21% | 24% | 21% | 21% | 15% | 15% | 15% | 12 | (8) | (9) | 8 | (3) | 3 | (3) | (1) | (6) | 1 | 0 |

Source: Company data, Goldman Sachs Global Investment Research

## Exhibit 62: Time series: NPAT growth

| | NPAT growth | | | | | | | | | | | | Change (yoy, ppts) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
| **Large banks** | | | | | | | | | | | | | | | | | | | | | | | |
| ICBC | 5% | 0% | 0% | 3% | 4% | 5% | 1% | 10% | 3% | 3% | 3% | 4% | (5) | (0) | 2 | 1 | 1 | (4) | 9 | (7) | (1) | 1 | 0 |
| BOC | 8% | 1% | -4% | 5% | 4% | 4% | 3% | 12% | 5% | 5% | 5% | 5% | (7) | (4) | 8 | (0) | (0) | (1) | 9 | (7) | (0) | 0 | (0) |
| CCB | 6% | 0% | 1% | 5% | 5% | 5% | 2% | 12% | 7% | 3% | 4% | 5% | (6) | 1 | 3 | 0 | (0) | (3) | 10 | (5) | (4) | 2 | 0 |
| ABC | 8% | 1% | 2% | 5% | 5% | 5% | 2% | 12% | 7% | 3% | 4% | 4% | (7) | 1 | 3 | 0 | (0) | (3) | 10 | (4) | (4) | 1 | 0 |
| BoCom | 6% | 1% | 1% | 4% | 5% | 5% | 1% | 12% | 5% | 4% | 4% | 4% | (5) | (0) | 3 | 0 | 0 | (4) | 11 | (7) | (1) | (0) | 0 |
| PSBC | 10% | 7% | 14% | 20% | 10% | 16% | 5% | 19% | 12% | 9% | 10% | 10% | (3) | 7 | 6 | (10) | 7 | (11) | 13 | (7) | (3) | 1 | 1 |
| **Joint stock banks** | | | | | | | | | | | | | | | | | | | | | | | |
| CMB | 8% | 3% | 8% | 13% | 15% | 15% | 5% | 23% | 15% | 9% | 10% | 11% | (5) | 4 | 5 | 2 | 0 | (10) | 18 | (8) | (6) | 1 | 1 |
| Industrial | 14% | 7% | 7% | 6% | 6% | 9% | 1% | 24% | 11% | 2% | 6% | 6% | (8) | 1 | (1) | (0) | 3 | (8) | 23 | (14) | (9) | 5 | (0) |
| PAB | 30% | 10% | 3% | 3% | 7% | 14% | 3% | 26% | 25% | 13% | 12% | 12% | (20) | (7) | (1) | 4 | 7 | (11) | 23 | (0) | (12) | (1) | 0 |
| HuaXia | 16% | 5% | 4% | 1% | 5% | 5% | -3% | 11% | 6% | 3% | 4% | 4% | (11) | (1) | (3) | 5 | (0) | (8) | 13 | (4) | (3) | 1 | (0) |
| **Regional banks** | | | | | | | | | | | | | | | | | | | | | | | |
| BONB | 16% | 16% | 19% | 20% | 20% | 23% | 10% | 30% | 18% | 14% | 15% | 15% | 0 | 3 | 0 | 0 | 3 | (13) | 20 | (12) | (4) | 1 | (0) |
| BONJ | 25% | 25% | 18% | 17% | 15% | 12% | 5% | 21% | 16% | 8% | 8% | 9% | 0 | (7) | (1) | (2) | (2) | (7) | 16 | (5) | (9) | 0 | 1 |
| **Aggregate** | | | | | | | | | | | | | | | | | | | | | | | |
| **Total** | 13% | 6% | 6% | 8% | 8% | 10% | 3% | 18% | 11% | 6% | 7% | 7% | (6) | (0) | 2 | 0 | 1 | (7) | 15 | (7) | (5) | 1 | 0 |
| **Large** | 7% | 2% | 3% | 7% | 6% | 7% | 2% | 13% | 7% | 4% | 5% | 5% | (5) | 1 | 4 | (1) | 1 | (4) | 10 | (6) | (2) | 1 | 0 |
| **Joint-stock** | 17% | 6% | 6% | 6% | 8% | 11% | 1% | 21% | 14% | 7% | 8% | 8% | (11) | (1) | 0 | 3 | 2 | (9) | 19 | (7) | (7) | 1 | 0 |
| **Regional** | 20% | 21% | 19% | 18% | 17% | 18% | 7% | 25% | 17% | 11% | 11% | 12% | 0 | (2) | (0) | (1) | 0 | (10) | 18 | (8) | (6) | 1 | 1 |

Source: Company data, Goldman Sachs Global Investment Research

## Exhibit 63: Time series: Credit cost

| | Credit cost | | | | | | | | | | | | Change (yoy, bps) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
| **Large banks** | | | | | | | | | | | | | | | | | | | | | | | |
| ICBC | 0.51 | 0.72 | 0.66 | 0.87 | 0.96 | 0.97 | 0.92 | 0.81 | 0.62 | 0.72 | 0.66 | 0.63 | 21 | (6) | 21 | 8 | 1 | (4) | (11) | (20) | 10 | (6) | (3) |
| BOC | 0.55 | 0.61 | 0.87 | 0.77 | 0.91 | 0.76 | 0.73 | 0.63 | 0.53 | 0.72 | 0.66 | 0.63 | 6 | 26 | (10) | 14 | (16) | (3) | (10) | (10) | 19 | (6) | (3) |
| CCB | 0.63 | 0.88 | 0.76 | 0.96 | 1.04 | 0.99 | 1.00 | 0.85 | 0.66 | 0.60 | 0.57 | 0.56 | 26 | (12) | 19 | 8 | (5) | 0 | (14) | (19) | (7) | (2) | (1) |
| ABC | 0.80 | 0.92 | 0.81 | 0.87 | 1.09 | 0.99 | 0.92 | 0.99 | 0.71 | 0.61 | 0.58 | 0.56 | 12 | (11) | 5 | 23 | (10) | (7) | 7 | (27) | (10) | (3) | (1) |
| BoCom | 0.60 | 0.73 | 0.69 | 0.67 | 0.88 | 0.93 | 0.96 | 0.97 | 0.79 | 0.75 | 0.72 | 0.70 | 13 | (4) | (3) | 21 | 5 | 4 | 1 | (17) | (4) | (3) | (2) |
| PSBC | 1.09 | 1.04 | 0.67 | 0.58 | 1.01 | 0.95 | 0.92 | 0.45 | 0.52 | 0.41 | 0.41 | 0.40 | (5) | (36) | (9) | 43 | (5) | (4) | (47) | 8 | (11) | 0 | (2) |
| **Joint stock banks** | | | | | | | | | | | | | | | | | | | | | | | |
| CMB | 1.24 | 2.04 | 1.98 | 1.68 | 1.51 | 1.21 | 0.93 | 0.66 | 0.75 | 0.75 | 0.70 | 0.65 | 79 | (6) | (29) | (18) | (30) | (28) | (27) | 8 | 1 | (5) | (5) |
| Industrial | 1.23 | 2.08 | 2.23 | 1.18 | 1.30 | 1.36 | 1.24 | 1.03 | 0.76 | 0.58 | 0.56 | 0.55 | 85 | 15 | (105) | 12 | 6 | (12) | (21) | (27) | (18) | (2) | (1) |
| PAB | 1.43 | 2.46 | 3.08 | 2.39 | 2.19 | 2.29 | 1.62 | 1.94 | 1.93 | 1.80 | 1.70 | 1.59 | 103 | 62 | (68) | (21) | 11 | (68) | 32 | (1) | (13) | (9) | (11) |
| HuaXia | 0.56 | 0.82 | 1.10 | 1.18 | 1.25 | 1.56 | 1.72 | 1.16 | 1.19 | 1.17 | 1.11 | 1.07 | 27 | 28 | 8 | 7 | 31 | 16 | (56) | 3 | (2) | (6) | (4) |
| **Regional banks** | | | | | | | | | | | | | | | | | | | | | | | |
| BONB | 1.15 | | 1.67 | 1.65 | 0.92 | 1.23 | 1.12 | 1.12 | 1.02 | 0.72 | 0.66 | 0.63 | (115) | 167 | (2) | (73) | 32 | (12) | 1 | (10) | (30) | (6) | (3) |
| BONJ | 1.47 | 2.50 | 2.15 | 0.97 | 1.37 | 1.41 | 1.14 | 1.01 | 1.05 | 0.84 | 0.80 | 0.77 | 103 | (35) | (118) | 40 | 4 | (28) | (12) | 3 | (21) | (4) | (3) |
| **Average** | | | | | | | | | | | | | | | | | | | | | | | |
| **Total** | 0.94 | 1.35 | 1.39 | 1.15 | 1.20 | 1.22 | 1.10 | 0.97 | 0.88 | 0.80 | 0.76 | 0.73 | 30 | 16 | (24) | 5 | 2 | (12) | (13) | (9) | (7) | (4) | (3) |
| **Large** | 0.70 | 0.82 | 0.75 | 0.79 | 0.98 | 0.93 | 0.91 | 0.78 | 0.64 | 0.63 | 0.60 | 0.58 | 12 | (7) | 4 | 19 | (5) | (2) | (13) | (14) | (1) | (3) | (2) |
| **Joint-stock** | 1.11 | 1.85 | 2.10 | 1.61 | 1.56 | 1.61 | 1.38 | 1.20 | 1.16 | 1.07 | 1.02 | 0.96 | 74 | 25 | (49) | (5) | 4 | (23) | (18) | (4) | (8) | (6) | (6) |
| **Regional** | 1.31 | 2.50 | 1.91 | 1.31 | 1.15 | 1.32 | 1.13 | 1.07 | 1.03 | 0.78 | 0.73 | 0.70 | (6) | 66 | (60) | (16) | 18 | (20) | (6) | (4) | (26) | (5) | (3) |

Source: Company data, Goldman Sachs Global Investment Research

## Exhibit 64: Time series: NPL coverage ratio

| | NPL coverage ratio | | | | | | | | | | | | Change (yoy, ppts) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
| **Large banks** | | | | | | | | | | | | | | | | | | | | | | | |
| ICBC | 207 | 156 | 137 | 154 | 176 | 199 | 180 | 206 | 209 | 202 | 186 | 168 | (51) | (20) | 17 | 21 | 24 | (19) | 25 | 4 | (7) | (16) | (19) |
| BOC | 188 | 153 | 163 | 159 | 182 | 183 | 178 | 187 | 189 | 189 | 187 | 184 | (34) | 10 | (4) | 23 | 1 | (5) | 9 | 2 | 0 | (2) | (3) |
| CCB | 222 | 151 | 150 | 171 | 208 | 227 | 213 | 240 | 242 | 228 | 216 | 205 | (71) | (1) | 21 | 37 | 19 | (14) | 27 | 2 | (14) | (12) | (11) |
| ABC | 287 | 189 | 173 | 208 | 252 | 289 | 261 | 300 | 303 | 296 | 285 | 274 | (97) | (16) | 35 | 44 | 37 | (28) | 39 | 3 | (6) | (11) | (11) |
| BoCom | 179 | 156 | 151 | 153 | 173 | 172 | 144 | 166 | 181 | 176 | 164 | 152 | (23) | (5) | 3 | 20 | (1) | (28) | 23 | 14 | (5) | (12) | (12) |
| PSBC | 364 | 298 | 272 | 325 | 345 | 388 | 405 | 412 | 383 | 371 | 359 | 352 | (65) | (26) | 53 | 20 | 43 | 17 | 7 | (29) | (12) | (12) | (7) |
| **Joint stock banks** | | | | | | | | | | | | | | | | | | | | | | | |
| CMB | 233 | 179 | 180 | 262 | 358 | 427 | 438 | 484 | 451 | 437 | 428 | 403 | (54) | 1 | 82 | 96 | 69 | 11 | 46 | (33) | (14) | (9) | (24) |
| Industrial | 250 | 210 | 211 | 212 | 207 | 199 | 219 | 269 | 236 | 215 | 185 | 150 | (40) | 0 | 1 | (5) | (8) | 20 | 50 | (32) | (21) | (30) | (35) |
| PAB | 201 | 166 | 155 | 151 | 155 | 183 | 201 | 288 | 290 | 262 | 216 | 173 | (35) | (10) | (4) | 4 | 28 | 18 | 87 | 2 | (29) | (46) | (43) |
| HuaXia | 233 | 167 | 159 | 157 | 159 | 140 | 146 | 151 | 160 | 147 | 134 | 122 | (66) | (8) | (2) | 2 | (19) | 6 | 5 | 9 | (13) | (13) | (12) |
| **Regional banks** | | | | | | | | | | | | | | | | | | | | | | | |
| BONB | 285 | 309 | 351 | 493 | 522 | 524 | 506 | 526 | 505 | 476 | 455 | 441 | 23 | 43 | 142 | 29 | 2 | (19) | 20 | (21) | (28) | (21) | (14) |
| BONJ | 326 | 431 | 457 | 463 | 463 | 418 | 392 | 397 | 397 | 368 | 355 | 335 | 105 | 26 | 5 | 0 | (45) | (26) | 6 | (0) | (29) | (12) | (20) |
| **Average** | | | | | | | | | | | | | | | | | | | | | | | |
| **Total** | 248 | 214 | 213 | 242 | 267 | 279 | 274 | 302 | 295 | 281 | 264 | 247 | (34) | (1) | 29 | 24 | 12 | (5) | 29 | (7) | (15) | (16) | (18) |
| **Large** | 241 | 184 | 174 | 195 | 223 | 243 | 230 | 252 | 251 | 244 | 233 | 222 | (57) | (10) | 21 | 28 | 20 | (13) | 22 | (1) | (7) | (11) | (10) |
| **Joint-stock** | 229 | 181 | 176 | 195 | 220 | 237 | 251 | 298 | 284 | 265 | 241 | 212 | (49) | (4) | 19 | 24 | 17 | 14 | 47 | (14) | (19) | (24) | (29) |
| **Regional** | 305 | 370 | 404 | 478 | 492 | 471 | 449 | 461 | 451 | 422 | 405 | 388 | 64 | 35 | 74 | 14 | (21) | (22) | 13 | (10) | (29) | (17) | (17) |

Source: Company data, Goldman Sachs Global Investment Research

## Exhibit 65: Time series: CET-1 ratio

| | CET-1 Ratio | | | | | | | | | | | | Change (yoy, ppts) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023E | 2024E | 2025E |
| **Large banks** | | | | | | | | | | | | | | | | | | | | | | | |
| ICBC | 11.9% | 12.9% | 12.9% | 12.8% | 13.0% | 13.2% | 13.2% | 13.3% | 14.0% | 13.6% | 13.5% | 13.5% | 0.9 | 0.0 | (0.1) | 0.2 | 0.2 | (0.0) | 0.1 | 0.7 | (0.4) | (0.1) | 0.0 |
| BOC | 10.6% | 11.1% | 11.4% | 11.2% | 11.4% | 11.2% | 11.3% | 11.3% | 11.8% | 11.6% | 11.6% | 11.6% | 0.5 | 0.3 | (0.2) | 0.3 | (0.2) | 0.1 | 0.0 | 0.5 | (0.2) | 0.0 | 0.0 |
| CCB | 12.1% | 13.1% | 13.0% | 13.1% | 13.8% | 14.4% | 13.6% | 13.6% | 13.7% | 13.4% | 13.2% | 13.2% | 1.0 | (0.2) | 0.1 | 0.7 | 0.6 | (0.8) | (0.0) | 0.1 | (0.3) | (0.2) | 0.0 |
| ABC | 9.1% | 10.2% | 10.4% | 10.6% | 11.6% | 11.2% | 11.0% | 11.4% | 11.2% | 10.7% | 10.4% | 10.4% | 1.2 | 0.1 | 0.3 | 0.9 | (0.3) | (0.2) | 0.4 | (0.3) | (0.5) | (0.3) | 0.0 |
| BoCom | 11.3% | 11.1% | 11.0% | 10.8% | 11.2% | 11.2% | 10.9% | 10.6% | 10.1% | 10.2% | 10.4% | 10.4% | (0.2) | (0.1) | (0.2) | 0.4 | 0.1 | (0.4) | (0.3) | (0.6) | 0.2 | 0.2 | 0.0 |
| PSBC | 8.4% | 8.5% | 8.6% | 8.6% | 9.8% | 9.9% | 9.6% | 9.9% | 9.4% | 9.2% | 9.1% | 9.1% | 0.1 | 0.1 | (0.0) | 1.2 | 0.1 | (0.3) | 0.3 | (0.6) | (0.1) | (0.1) | 0.0 |
| **Joint stock banks** | | | | | | | | | | | | | | | | | | | | | | | |
| CMB | 10.4% | 10.8% | 11.5% | 12.1% | 11.8% | 12.0% | 12.3% | 12.7% | 13.7% | 13.5% | 13.8% | 13.8% | 0.4 | 0.7 | 0.5 | (0.3) | 0.2 | 0.3 | 0.4 | 1.0 | (0.2) | 0.3 | 0.0 |
| Industrial | 8.5% | 8.4% | 8.6% | 9.1% | 9.3% | 9.5% | 9.3% | 9.8% | 9.8% | 9.9% | 9.9% | 9.9% | (0.0) | 0.1 | 0.5 | 0.2 | 0.2 | (0.1) | 0.5 | 0.0 | 0.0 | 0.1 | 0.0 |
| PAB | 8.6% | 9.0% | 8.4% | 8.3% | 8.5% | 9.1% | 8.7% | 8.6% | 8.6% | 8.5% | 8.6% | 8.6% | 0.4 | (0.7) | (0.1) | 0.3 | 0.6 | (0.4) | (0.1) | 0.0 | (0.2) | 0.1 | 0.0 |
| HuaXia | 8.5% | 8.9% | 8.4% | 8.3% | 9.5% | 9.3% | 8.8% | 8.8% | 9.2% | 9.4% | 9.7% | 9.7% | 0.4 | (0.5) | (0.2) | 1.2 | (0.2) | (0.5) | (0.0) | 0.5 | 0.2 | 0.2 | 0.0 |
| **Regional banks** | | | | | | | | | | | | | | | | | | | | | | | |
| BONB | 10.1% | 9.0% | 8.6% | 8.6% | 9.2% | 9.6% | 9.5% | 10.2% | 9.8% | 9.4% | 9.3% | 9.3% | (1.0) | (0.5) | 0.1 | 0.6 | 0.5 | (0.1) | 0.6 | (0.4) | (0.3) | (0.1) | 0.0 |
| BONJ | 8.6% | 9.4% | 8.2% | 8.0% | 8.5% | 8.9% | 10.0% | 10.2% | 9.7% | 9.7% | 9.5% | 9.5% | 0.8 | (1.2) | (0.2) | 0.5 | 0.4 | 1.1 | 0.2 | (0.4) | (0.1) | (0.1) | 0.0 |
| **Average** | | | | | | | | | | | | | | | | | | | | | | | |
| **Total** | 9.8% | 10.2% | 10.1% | 10.1% | 10.6% | 10.8% | 10.7% | 10.9% | 10.9% | 10.8% | 10.8% | 10.8% | 0.4 | (0.1) | 0.0 | 0.5 | 0.2 | (0.1) | 0.2 | 0.1 | (0.2) | 0.0 | 0.0 |
| **Large** | 10.6% | 11.2% | 11.2% | 11.2% | 11.8% | 11.9% | 11.6% | 11.7% | 11.7% | 11.5% | 11.4% | 11.4% | 0.6 | 0.0 | (0.0) | 0.6 | 0.1 | (0.3) | 0.1 | (0.0) | (0.2) | (0.1) | 0.0 |
| **Joint-stock** | 9.0% | 9.3% | 9.2% | 9.4% | 9.8% | 9.9% | 9.8% | 10.0% | 10.3% | 10.3% | 10.5% | 10.5% | 0.3 | (0.1) | 0.2 | 0.4 | 0.2 | (0.2) | 0.2 | 0.4 | (0.0) | 0.2 | 0.0 |
| **Regional** | 9.3% | 9.2% | 8.4% | 8.3% | 8.8% | 9.2% | 9.7% | 10.2% | 9.7% | 9.5% | 9.4% | 9.4% | (0.1) | (0.8) | (0.1) | 0.5 | 0.4 | 0.5 | 0.4 | (0.4) | (0.2) | (0.1) | 0.0 |

Source: Company data, Goldman Sachs Global Investment Research

# Appendix II: Updated Investment Theses for 4 banks

### Investment Thesis - Industrial and Commercial Bank of China

ICBC (Industrial and Commercial Bank of China) is a state-owned commercial bank, providing corporate and personal banking, asset management and financial market business services. We are Sell rated on increasing dividend risk. That said, our stress-test including margin risk of local gov. debt and loss of credit portfolio suggests that the adjusted ROE of ICBC could be much lower than we previously expected, which in turn could pose dividend risk to ICBC if the target CET1 ratio of ~13% is to be maintained in 2025E. Upside risks include better than expected NIM to drive NII growth, stronger-than-expected retail recovery to drive retail loan growth and fee income and larger dividend payout to improve cash return of investors.

### Investment Thesis - Industrial Bank

Industrial Bank is one of the first joint-stock commercial banks in China, with businesses including trust, financial lease, funds, futures, asset management, consumer finance, research and consulting, and digital finance. We are Sell rated on a worsening balance sheet, its larger exposure to local government debt and further losses from bank credit portfolios. Upside risks include better than expected asset quality especially in property and local government debt, better than expected NIM on deposit cost saving and improving funding mix, and stronger than expected retail finance growth.

### Investment Thesis - Agricultural Bank of China

Agricultural Bank of China (ABC) is one of China's big four banks providing corporate and retail banking products and services, asset management, while conducting treasury operations. ABC is well-positioned in the fast-growing county areas of China, in our view, with a strong deposit franchise. We are Sell rated on ABC A/H shares on increasing dividend and capital uncertainties, on top of year-to-date share price outperformance. That said, we think ABC's relatively large local government debt exposure, in addition to more losses to digest in its credit portfolio and below average CET1 ratio among large banks, will increase its challenges maintaining its dividend. Upside risks include better than expected NIM to drive NII growth, lower than expected local government debt rollover risk, better than expected asset quality on improving macro and stronger-than-expected retail recovery to drive retail loan growth and fee income.

### Investment Thesis - Postal Savings Bank of China

Postal Savings Bank of China (PSBC) is a commercial retail bank strategically focused on providing financial services to Sannong (agriculture, rural areas and rural residents) customers, urban and rural residents and SMEs. We are Buy-rated on PSBC A/H on peer-leading earnings forecasts within the large bank group, a strong risk buffer and better NIM trajectory. Downside risks include worsening asset quality especially in property sector, greater than expected NIM dilution, faster than expected mortgage repricing, higher than expected mortgage early repayments, weaker than expected retail recovery and recapitalization risk.

### Price Target Risks and Methodology - Bank of China

**Valuation:** We are Neutral rated on BOC H/A shares with 12-month target prices of HK$2.83/Rmb3.46. Our 2024E-based target P/PPOP multiples are 1.75x/2.375x for H/A shares.

**Key risks:** Weaker/stronger-than-expected funding cost control; worse/better-than-expected NPLs; slower/faster-than-expected NIM expansion, lower/higher-than-expected tax rate; FX volatility due to high overseas exposure.

### Price Target Risks and Methodology - China Merchants Bank

**Valuation methodology:** We are Neutral rated on CMB H/A shares with 12m TPs of HK$36.24/Rmb32.65. Our 2024E-based target P/PPOP multiple for both H/A shares is 3.25x. **Upside risks:** Better than expected NIM; stronger-than-expected retail recovery; better than expected asset quality; larger dividend payout. **Downside risks:** Worsening asset quality; greater than expected NIM dilution; faster than expected mortgage repricing; weaker fee income growth; recapitalization risk.

### Price Target Risks and Methodology - Bank of Communications

**Valuation:** We are Sell rated on BoCom H/A shares with 12-month target prices of HK$3.88/Rmb3.79. Our 2024E-based target P/PPOP multiples for BoCom H/A are 1.5x/1.625x.

**Key risks:** Lower-than-expected funding cost; better-than-expected asset quality; higher operating efficiency with lower CIR

### Price Target Risks and Methodology - Bank of Ningbo

**Valuation:** We are Buy rated on BONB with a 12-month target price of Rmb30.52. Our 2024E-based target P/PPOP multiple is 4.5x.

**Key risks:** Worse-than-expected NIM, asset quality and more-than-expected investment loss. Deposit outflow.

### Price Target Risks and Methodology - Bank of Nanjing

**Valuation:** We are Neutral rated on BONJ with a 12-month target price of Rmb8.61. Our 2024E-based target P/PPOP multiple is 2.5x.

**Key risks:** 1) developer risk moderates, 2) greater-than-expected loan growth; 3) margin dilution; 2) worsening asset quality.

### Price Target Risks and Methodology - Hua Xia Bank

**Valuation:** We are Sell rated on Hua Xia with a 12-month target price of Rmb4.25. Our 2024E-based target P/PPOP multiple is 1x.

**Key risks:** better-than-expected asset quality, margin expansion and trading income recovery.

### Price Target Risks and Methodology - Ping An Bank Co.

**Valuation:** We are Buy rated on PAB with a 12-month target price of Rmb13.12. Our 2024E-based target P/PPOP multiple is 1.75x.

**Key risks:** 1) worse-than-expected asset quality and fee income; 2) margin dilution; 3) developer risk.

### Price Target Risks and Methodology - China Construction Bank

**Valuation:** We are Buy rated on CCB H/A shares with 12-month target prices of HK$5.81/Rmb6.4. Our 2024E-based target P/PPOP multiples for CCB H/A are 2.25x/2.75x.

**Key risks:** 1) Weakening NIMS; 2) credit costs becoming more sensitive to net profit given increasingly large loan book due to strong loan growth.

# Disclosure Appendix

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