BofA SECURITIES

Asia Economic Weekly

Korea: vulnerability check on PF loan exposure post-300bp hike

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GEM Fixed Income Strategy & Economics
Asia

Table of Contents

After rate hikes, vulnerability of real estate sector rises

Against the backdrop of accumulated rate hikes of 300bp in Korea, the monetary policy transmission onto the real estate sector has been materializing over the past year. We have been witnessing persistently slowing housing price trend for 16 months. In 2H22, a credit crunch event triggered by a regional construction project (Legoland) default case, revealed potential contagion risks from real estate sector to financial markets. Based on our expectation of continued downward move in the housing market next 1-2 years, we check up on Korea's construction loan (Project Financing; PF) exposure and vulnerability across local banks/non-bank financial institutions (FIs).

Exposure to real estate sector 137% of GDP, PF loans 7.0%

Overall financial exposure to the real estate sector in Korea has rapidly risen over the recent years. According to the Bank of Korea (BoK), exposure across households, real estate-related firms, and investment products stood at KRW2,697tn; 137% of GDP in 3Q22 vs 87% in 2015. More specifically, the size of pure PF loan reached KRW116tn by end-2022, 6% of GDP. Including the loan guarantees by credit-specialized institutions (capitals), total exposure reached KRW140.6tn, 7% of GDP. With average loan growth at 16%+ YoY over the past few years, we flag risk of further rise in the size of exposure.

Banks remain stable, small non-banks face increasing risks

We flag the PF loan growth has been especially accelerating among the small non-depository taking FIs. The PF loan exposure among non-banks jumped to 74% from <40% prior to 2014 while banks has reduced exposure to 26% from 60%. In a way, risks were transferred to large FIs to more vulnerable ones over the years. While banks remain well protected against potential PF defaults, we worry about those small, non-banks that have weaker recoverability and risk management capacity. These small non-banks such as saving banks and securities firms' show falling liquidity ratios, declining deposits and they hold a relatively high share of high-risk PF loans.

BoK done with rate hikes; pause/ easing to help sentiment

Against this backdrop, the fear of contagion onto financial markets in case of a default lingers. We witnessed from the same credit crunch that even a small sized default (Legoland default: KRW200mn) can trigger a wide-spread concern and fear across the financial markets and increase volatility. This implies preemptive policy moves are highly imperative. As the BoK's PF-ABCP buying program for securities firms and construction companies remains in place until end-May and in the scenario where the BoK starts signaling of easing from 3Q23 before cutting from 4Q23, we believe the PF-loan-related risks can gradually recede from here.

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As rates rose, vulnerability of real estate sector emerged

Housing market price correction and rising construction loan (PF) delinquency

The first order consequence of higher rates has most notably materialized in the housing market in Korea. As mortgage rates rose, a higher burden on interest repayment resulted in a visible contraction in home buying demand. Since the first hike in Aug 2021 by the BoK, nationwide housing price growth slowed from late-2021 and entered contraction from late-2022 (Exhibit 1). Average house price has dropped 9% from the peak as of Feb 2023. Apartment prices have decelerated further by -12.5% same period.

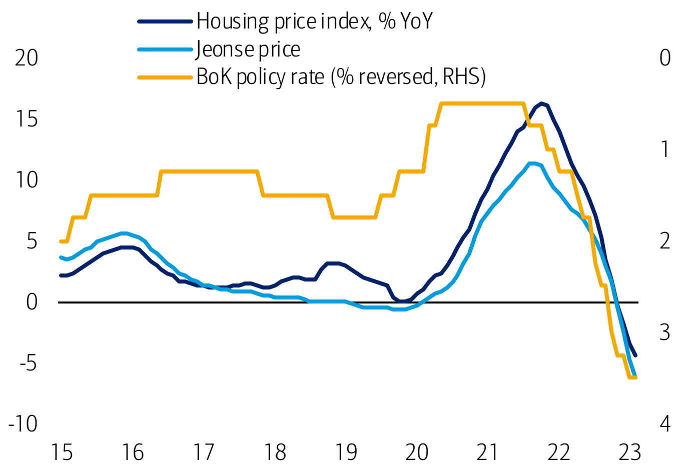
This waning demand and bearish sentiment put pressure on construction activities and consequently on its capacity to repay loans. The rapid rise in unsold houses inversely but closely co-moved with the rising trend of PF delinquency rates. As the number of unsold houses more than quadrupled to 75,400 in Jan 2023 from 18,000 in end-2021, delinquency rate on PF loans jumped from 0.25% to 0.61% same period (Exhibit 2). The delinquency rate among banks remained low at 0.2%, but the loan exposure among non-bank FIs showed faster rise to 0.8%, a dramatic jump from a year ago.

Exposure to real estate sector financing: 137% of GDP; PF loan: 7% of GDP

Overall economy's financial exposure to the real estate sector has rapidly risen over the past years. During the housing market boom period (2014-21), accumulation of PF loans jumped rapidly. The size of financial exposure to the housing market across households, real estate-related firms, and financial investment products reached KRW2,697tn, as of 3Q22, equivalent to 137% of GDP (Exhibit 3). This compares to just 87% back in 2015, nearly doubling in size over the eight years.

The exposure appears balanced across households and corporate sector. Households composed of 48% of the exposure (KRW1,297tn), including their mortgages and rental-related borrowing. Firms in the real estate sector, including developers and construction companies, accounted for 40% (KRW1,074tn), followed by real estate investment products making up 12% (KRW324tn).

Exhibit 1: BoK rate hike and housing price trend
Housing prices have started to slow the pace of increase from early 2022



Source: Korea statistics, Bank of Korea

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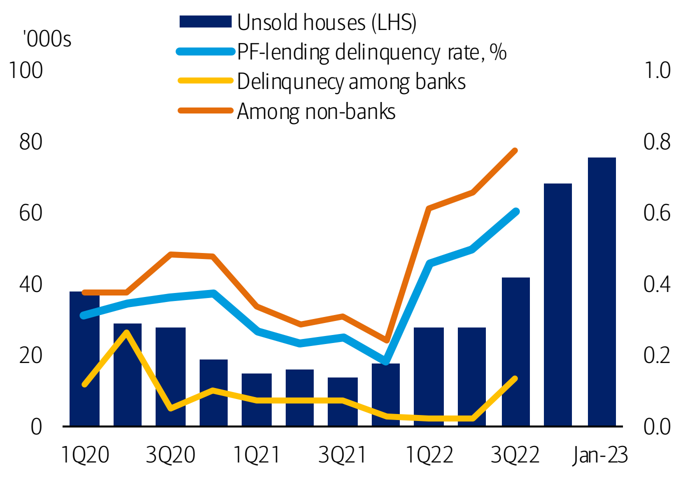
Exhibit 2: Unsold houses and delinquency rate trend on PF loan
Delinquency rate on PF loans jumped along with rise in unsold houses



Source: Bank of Korea

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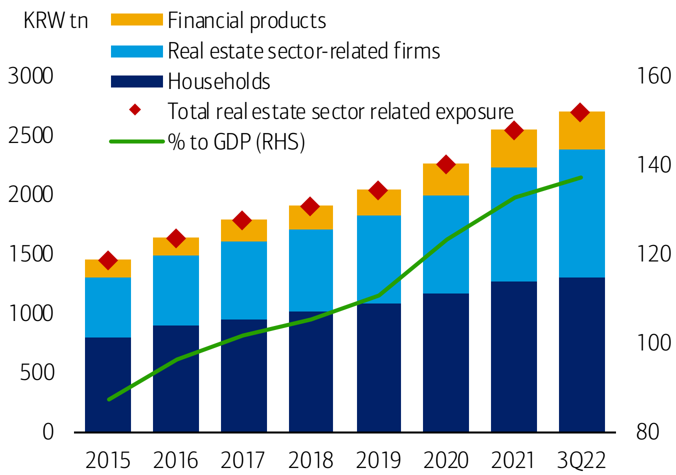
Exhibit 3: Real estate sector exposure by entities
Total exposure to real estate sector rose to 137% of GDP



Source: Bank of Korea

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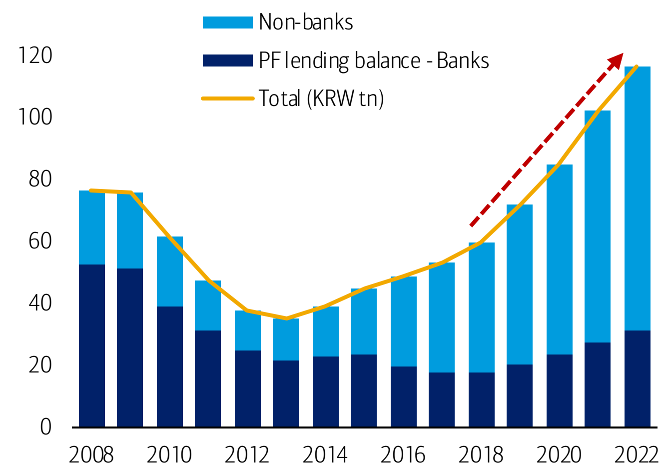
Exhibit 4: Balance of PF lending among local FIs
PF exposure among FIs jumped for non-banks incl. savings banks, capitals



Source: Bank of Korea

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More specifically, looking into the exposure to pure PF loans, the exposure also jumped during the boom period. The size of pure PF loans came to KRW116tn as of end-2022, 6% of GDP. Including the PF guarantees by credit specialized FIs (capitals), the total exposure reached KRW140.6tn, around 7% of GDP. It is notable its size tripled over the past eight years as well, surging from KRW93.9tn in 2019 and KRW55.3tn in 2015.

Breaking down by product, more than 80% are linked to PF loans and the rest 16% are bridge loans. Bridge loans provide financing during the initial period of the construction project, funding from the purchase of land to subscription of apartments. Because of high level of business uncertainty these loans are provided for less than a year. In the next PF lending stage, loans are provided for covering the funding cost of actual construction activity, and financial fees and overall management cost of the project.

Because of the need to diversify risks as each project faces high level of uncertainty, this has led to short-term exposure of securitized products among banks, securities brokers, and capitals or savings banks. Such PF loans are funded by structured products such as PF-asset-backed short-term bonds (PF-ABSTB) or PF-asset-backed commercial paper (PF-ABCP) in Korea.

Concern on PF loan exposure across small non-bank FIs

Exposure faced by non-banks 74%, growing fastest among small non-bank FIs

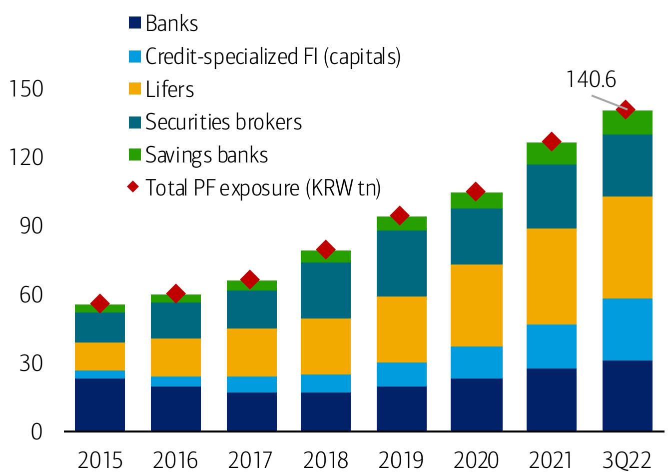
What appears concerning to us in this backdrop is that the PF loan growth has been largely accelerating among the small, non-depository taking FIs. Looking at the PF loan exposure by FIs, we observe risks were transferred from large FIs to more vulnerable ones. While the share of total lending by banks dropped to 26% of total in 2022 to KRW30.8tn, the PF lending exposure among non-banks, including lifers, capitals, savings banks, and securities brokerage firms jumped to 74% in 3Q22 (Exhibit 4). This is a significant jump compared to less than 40% prior to 2014.

Within the non-banks, lifers held the largest exposure of KRW44.6tn (32% of total), and smaller FIs such as capitals and securities firms had exposure of 19% each, while savings banks around 8% (Exhibit 5). These vulnerable FIs such as capitals and savings banks also showed the fastest increase in PF loan exposure (Exhibit 6). During the pandemic, PF exposure among capitals jumped 92% from KRW14tn to KRW27tn, while savings banks saw KRW10.6tn in 3Q22, vs KRW7tn in 2020. The combined exposure to the smaller non-bank entities was KRW65.2tn, as of 3Q22, around 3.3% of GDP.

This is largely due to stricter macroprudential measures adapted by the banks and lifers post-Global Financial Crisis (GFC). The regulatory measures around domestic banks' stability and recoverability have intensified especially after the local savings bank crisis in 2011, lenders have intensified their credit standards. This has led to construction firms to look for alternative lenders, where the capitals and savings banks came in looking for business expansion. From 2015 onwards, these small, non-bank FIs outpaced major banks in becoming the new provider of guarantees for PF loans by taking more than half the share of PF loans.

Exhibit 5: Financial institution exposure to PF lending

PF exposure among local FIs tripled over the past eight years, 7% of GDP



Source: Bank of Korea

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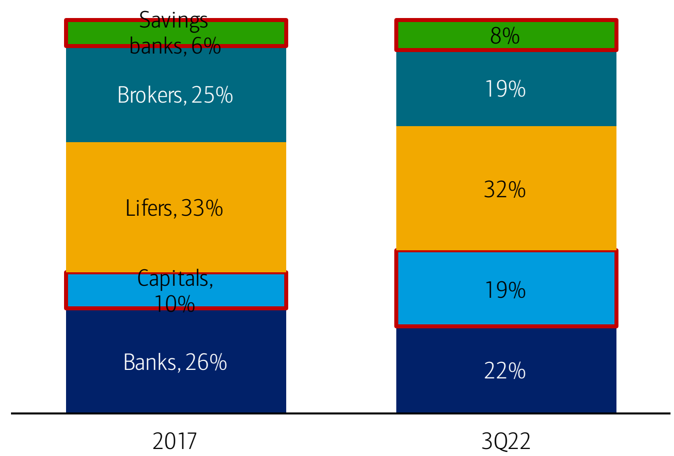
Exhibit 6: Share of PF loan exposure by entity

PF loan exposure among local capitals and savings banks rose the most



Source: Bank of Korea

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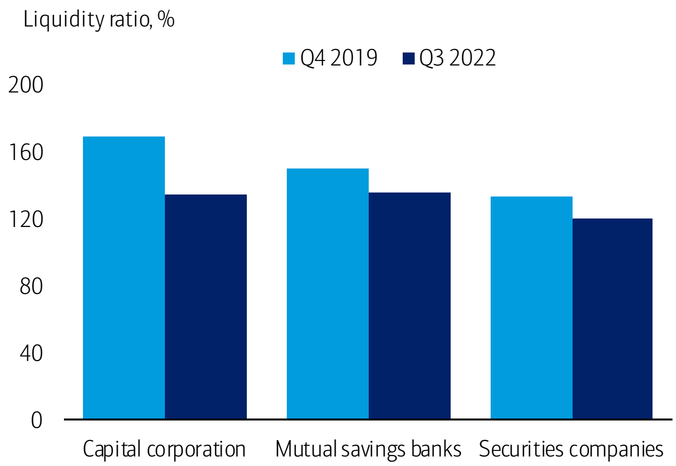
Down-trending liquidity, up-trending in high-risk exposure

Meanwhile, we see deteriorating financial soundness of these non-bank FIs. Looking at liquidity conditions, risks among small and medium-sized securities firms, capitals, and savings banks are rising. \According to the latest Monetary Policy Report by the BoK, the liquidity coverage ratios among local brokerage firms recorded 120.6%, as of 3Q22, down from 133.7%, in 2019 (Exhibit 7). For capitals too, short-term liquid asset coverage ratio dropped to 134.4% from 169% during the same period. Savings banks also recorded a solid 135.3%, while around 16 out of 79 savings banks saw the ratio dropping below 120%.

Liquidity risks remain particularly around those savings banks as they face a drop in deposits. With savings banks offering higher deposit rates than major banks since 2020, they have enjoyed a rapid rise in deposits, exceeding the government-guaranteed size of KRW50mn (USD45,000). Large-sized deposits linked to retirement pension recorded more than 10x growth than guaranteed deposits at KRW500mn, which led to combined size of the deposits recording the record size of KRW32.5tn in early 2022. However, more recently with the latest trend of falling time deposit interest rates vs major banks, the share of large sized deposits dropped to 27.4% from 30% previously.

Moreover, these smaller non-bank FIs hold a higher share of high-risk PF loans vs banks and lifers, which expose them to higher risk cases. While the average share of exposure to high-risk PF loan across FIs reached 18% of total PF loan exposure, compared with just 8% among banks and 17% for lifers, securities brokers recorded 24% while savings banks the highest share of 29% (Exhibit 8). Relative to banks, these smaller entities have lower equity value and hence have smaller capacity to managing risks.

Exhibit 7: Liquidity ratio trend across small, non-bank FIs
Liquidity coverage ratios among small FIs on a downtrend



Source: Bank of Korea

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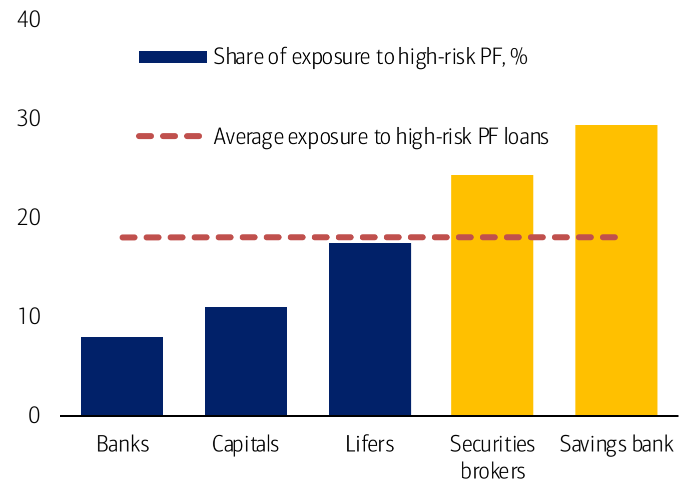
Exhibit 8: Exposure to high-risk PF loans across local FIs
Securities brokers and savings banks hold larger share of high-risk PF loans



Source: Bank of Korea

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Policy capacity to cover insolvency, containing fear key

Against this backdrop, the fear of contagion onto financial markets in case of a default lingers. We witnessed from the same credit crunch that even a small sized default (Legoland default: KRW200mn) can trigger a wide-spread concern and fear across the financial markets and increase volatility. This implies preemptive policy moves are highly imperative. Only when the policy support came into stabilize sentiment the market distress eased.

We believe our expectation of no further hikes by the BoK can help gradually easing distress on the sentiment front first. Further, when upside risks to CPI inflation subsides by 3Q23 amid slowing consumption growth, signaling of removing of tightening bias can help with preemptively ease the sentiment against the fear of contagion of construction sector distress onto other financial markets.

In this context, we see no more hikes by the BoK as domestic inflation falls closer to the target and a cut starting from 4Q23 through 2024. As the BoK's PF-ABCP buying program for securities firms and construction companies remains in place until end-May and in the scenario where the BoK starts signaling of easing from 3Q23 before cutting from 4Q23, we believe the PF-loan-related risks can gradually recede from here.

Data Preview

Exhibit 9: Week of Mar 26 to Apr 1

Data calendar for next week with BofA estimates and Bloomberg consensus

	Local time	Country	Data/Event	BofAe	Cons.†	Previous	Comments
Monday, 27 Mar							
**	16:30	Hong Kong	Exports (Feb, yoy)			-36.7%	
Tuesday, 28 Mar							
**	10:30	Australia	Retail Sales (Feb, mom)		-0.1%	1.9%	
Wednesday, 29 Mar							
***	10:30	Australia	CPI (Feb, yoy)		7.1%	7.4%	
***	14:00	Thailand	BoT Benchmark Interest Rate		1.75%	1.5%	
Thursday, 30 Mar							
*	12:00	New Zealand	ANZ Activity Outlook (Mar)			-9.2%	
*	12:00	New Zealand	ANZ Business Confidence (Mar)			-43.3%	
Friday, 31 Mar							
**	8:30	Japan	Tokyo CPI Ex-Fresh Food (Mar, yoy)	+3.2%	3.30%	3.3%	In the March Tokyo CPI, we expect Japan-style core CPI (ex fresh food) to edge lower by 0.1ppt to +3.2% YoY mainly because of lower base effects and a continued slowdown of energy CPI. In the meantime, we expect BoJ-style core CPI (ex fresh food and energy) to increase further by 0.1ppt to +3.3% YoY. While price developments of other components including durable goods and services will likely be muted, non-perishable food will likely rise further, pushing up the underlying inflation measures.
**	8:30	Japan	Jobless Rate (Feb)	2.4%		2.4%	We expect Japan's jobless rate to remain unchanged at 2.4% SA in February. While the jobless rate will continue to decline as a trend with the backdrop of ongoing economic reopening, the pace of decline will likely remain moderate given an already tight labor market.
***	8:50	Japan	Retail Sales (Feb, yoy)	6.1%		6.3%	
**	8:50	Japan	Industrial Production (Feb, mom)	3.4%		-5.3%	
*	9:00	New Zealand	ANZ consumer confidence index (Mar)			79.8%	
***	9:30	China	Manufacturing PMI (Mar)	51.2		52.6	We expect the NBS manufacturing PMI to stay in expansion zone at 51.2 in March, after rebounding strongly to 52.6 in February. High-frequency data, such as the tire operation rates, coal consumption at major power plants and cement shipment ratio, seem to hold up well and indicate robust production activities in recent weeks.
**	10:30	Australia	Private sector credit (Feb, yoy)			8.0%	

Notes: †Bloomberg consensus; * = level of importance; A = advanced; F = final; P = preliminary; sa = seasonally adjusted; saar = seasonally adjusted annualized rate; nsa = not seasonally adjusted; wda = working-day adjusted; n.a. = not available; mom = month-on-month; qoq = quarter-on-quarter; yoy = year-on-year. Source: BofA Global Research, Bloomberg, Central banks * denotes previous month. Source: BofA Global Research, Bloomberg

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Exhibit 10: Bond Auction Calendar
Auction calendar for the week of Mar 26 to Apr 1

	Country	Event	Comments
Monday, 27 March			
	Korea	Korea to sell KRW 2.2tn worth of 5y KTB	Generally bullish due to the increased concerns about global financial stability risks and G10 central banks to slow their pace of hikes.
Tuesday,28 March			
	Indonesia	Indonesia to sell 5, 10, 15, 20 and 30 year govt bonds	
	Korea	Korea to sell KRW 1.1tn worth of 20y KTB	Generally bullish due to the increased concerns about global financial stability risks and G10 central banks to slow their pace of hikes.
	Philippines	Philippines to sell PHP 25bn of 7y govt bond	
Wednesday,29 March			
	Singapore	Singapore to sell 15 year govt bond	
	Thailand	Thailand to sell 14.75y (20 bn) govt bonds	

Source: BofA Global Research, Bloomberg, Bureau of Treasury Philippines, MoF China, Thai BMA, DMO Indonesia, Korea MoEF,MAS

Macro Forecasts

Exhibit 11: Key Macroeconomic Indicators
BofA estimates for important indicators

23 March, 2023 — BofA Global Research Forecasts

GDP Growth (yoy)	2022 F'cst	2023 F'cst	2024 F'cst
Asia	**3.8**	**4.7**	**4.6**
China	3.0	5.5	5.3
Hong Kong	(3.5)	4.0	3.5
India	6.8	6.0	5.5
Indonesia	5.4	5.1	5.4
Korea	2.5	1.9	2.2
Malaysia	8.2	4.3	4.7
Philippines	7.6	4.5	5.3
Singapore	3.6	1.9	2.3
Taiwan	2.4	2.0	2.4
Thailand	3.2	3.6	3.4
Vietnam	8.0	6.5	6.8
Australia	3.6	1.8	1.4
Japan	1.1	1.0	1.2

Note: FY22/23, FY23/24, FY24/25 for India

BofA Global Research Forecasts

Exchange rate (vs USD, eop)	Current	Dec-23 F'cst	Dec-24 F'cst
Asia	-	-	-
China	6.82	6.90	6.40
Hong Kong	7.85	7.85	7.75
India	82.16	81.00	80.00
Indonesia	15345	15000	14800
Korea	1278	1175	1135
Malaysia	4.42	4.35	4.15
Philippines	54.43	59.00	56.00
Singapore	1.33	1.32	1.28
Taiwan	30.35	29.50	29.30
Thailand	34.05	31.00	30.00
Vietnam	23524	24500	25200
Australia	0.67	0.74	0.76
Japan	130.73	140.00	125.00

CPI inflation (yoy, avg)	2022 F'cst	2023 F'cst	2024 F'cst
Asia	**3.5**	**3.3**	**3.0**
China	2.0	2.3	2.7
Hong Kong	1.9	1.8	2.4
India	6.7	5.2	4.5
Indonesia	4.2	4.2	3.6
Korea	5.0	3.6	1.2
Malaysia	3.4	3.1	2.7
Philippines	5.8	6.5	3.0
Singapore	6.1	4.9	2.9
Taiwan	2.9	2.0	1.6
Thailand	6.1	3.3	1.7
Vietnam	3.2	4.2	3.0
Australia	6.6	5.6	3.1
Japan	2.5	3.2	2.4

Note: FY22/23, FY23/24, FY24/25 for India

Fiscal balance (% of GDP)	2022 F'cst	2023 F'cst	2024 F'cst
Asia	-	-	-
China	-2.8	-3.0	-3.0
Hong Kong	-5.3	0.4	1.0
India	-6.4	-5.8	-4.3
Indonesia	-2.9	-2.9	-2.6
Korea	-2.7	-2.6	-2.6
Malaysia	-5.8	-5.5	-5.0
Philippines	-9.0	-7.5	-7.0
Singapore	-0.3	-0.1	0.5
Taiwan	-1.0	-2.3	-1.8
Thailand	-7.6	-4.0	-4.4
Vietnam	-4.0	-3.0	-3.0
Australia	-	-	-
Japan	-	-	-

Note: FY22/23, FY23/24, FY24/25 for India

Policy rate (%, eop)	Current	2023 F'cst	2024 F'cst
Asia	-	-	-
China	3.65	3.65	3.65
Hong Kong	3.75	5.00	4.25
India	6.50	6.75	6.50
Indonesia	5.75	5.75	4.75
Korea	3.50	3.25	2.50
Malaysia	2.75	2.75	2.75
Philippines	6.00	6.50	6.00
Singapore	4.19	4.19	3.00
Taiwan	1.75	1.75	1.75
Thailand	1.50	2.25	2.00
Vietnam	6.00	6.00	5.00
Australia	3.60	4.10	4.10
Japan	-0.10	-0.10	0.05

Note: FY22/23, FY23/24, FY24/25 for India. 3M interbank rate forecast for Singapore

CA balance (% of GDP)	2022 F'cst	2023 F'cst	2024 F'cst
Asia	-	-	-
China	2.3	0.7	0.3
Hong Kong	8.9	6.7	6.7
India	-3.0	-3.2	-
Indonesia	1.0	0.0	-1.1
Korea	1.7	2.5	2.5
Malaysia	2.4	1.8	2.0
Philippines	-4.3	-4.1	-4.8
Singapore	20.8	20.7	21.5
Taiwan	11.7	10.1	10.6
Thailand	-3.5	1.3	4.0
Vietnam	-2.4	-0.4	2.2
Australia	3.4	2.1	1.2
Japan	2.9	0.2	0.2

Note: FY22/23, FY23/24, FY24/25 for India

Source: BofA Global Research, Bloomberg

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