

## Asia FI &amp; FX Strategy Watch

## Hong Kong's aggregate balance: breaking through the 2019 low

**Aggregate balance falls below the 2019 low of HK\$ 54bn**

April 18<sup>th</sup> 2023 saw the triggering of the weak-side CU which will officially push the HKMA's aggregate balance to HK\$ 49bn, below the terminal level of HK\$ 54bn seen in the 2019 cycle. With the HONIA-SOFR spread remaining very wide, recently at -300bps, the aggregate balance will likely continue to drain until a level where the demand for HK\$ will exceed the supply of aggregate balancing resulting in a sharp upward move in the overnight HIBOR fixing. However, with the Fed likely on hold for higher-for-longer, on average, the HONIA-SOFR spread should remain wide and negative.

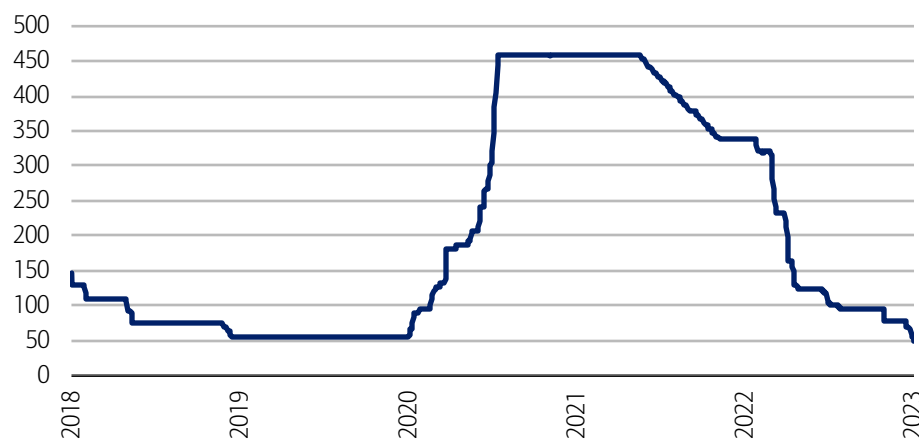
**Policy trade-offs of low aggregate balance becomes clear**

As the aggregate balance continues shrink, the classic policy trade-off of maintaining a fixed exchange rate, an open financial account and the lack of monetary policy autonomy should become increasingly clear. As aggregate balance approaches zero, HK\$ settlement should increasingly see friction where overnight funding cost should see occasional blow-outs and the Hong Kong banking system will likely increase the use of the HKMA's discount window to access overnight liquidity.

Key to watch would be whether EFB auctions see continued interest. An inverted HIBOR curve can bias Hong Kong banks to switch from holding EFB to aggregate balance resulting the HKMA net reducing EFB issuance. Thought this step remains consistent with the LERS regime, this step would introduce policy uncertainty from the HKMA and we see the threshold for reducing net issuance for EFB to remain quite high.

**Exhibit 1: Aggregate balance (HK\$ Bn)**

The aggregate balance has pushed below the low reached in the 2019 cycle



Source: Bloomberg

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20 April 2023

GEM FI & FX Strategy  
Asia

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LERS – Linked Exchange Rate System

HIBOR - Hong Kong Interbank Offered Rate

EFB – Exchange Fund Bills

HKMA – Hong Kong Monetary Authorities

CU - convertibility undertaking

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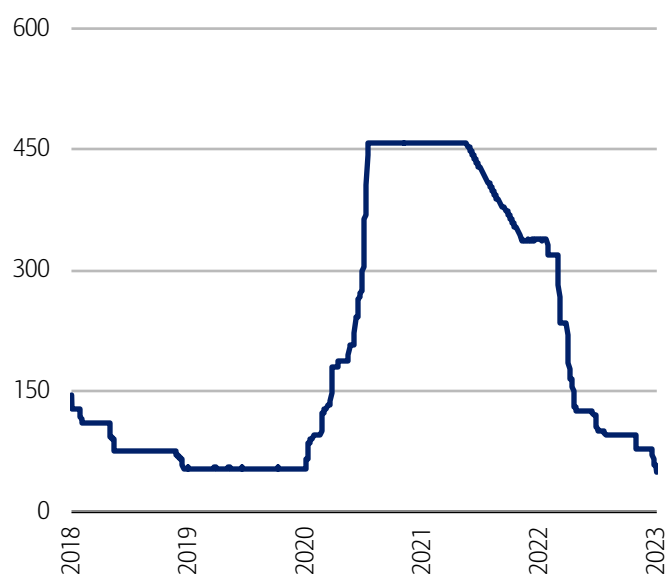
# Hong Kong's aggregate balance: Breaking through the 2019 low

**Aggregate balance pushes below the level seen in 2019.** The trigger of the HKMA's weak-side convertibility undertaking (CU) on 18 April 2023 would push the aggregate balance to its lowest level since the Great Financial Crisis. By 20 April, the aggregate balance will settle at HK\$49bn, lower than the terminal level reached in the 2019 cycle when the then aggregate balance settled at HK\$54bn (**Exhibit 2**).

**HONIA remains low despite the reduced supply of HK\$ liquidity.** Since the beginning of 2023, aggregate balance fell from HK\$96bn to HK\$49bn. However, despite falling more than half, HONIA has stayed at 1.6% while SOFR has risen by 50bps. The result is that the HONIA-SOFR spread has widened to -300bps and remains at these levels since late-March. The reduction in surplus HK\$ liquidity has not resulted in an increase in overnight funding rates in Hong Kong.

## Exhibit 2: Aggregate balance (HK\$ Bn)

The aggregate balance has pushed below the low reached in the 2019 cycle

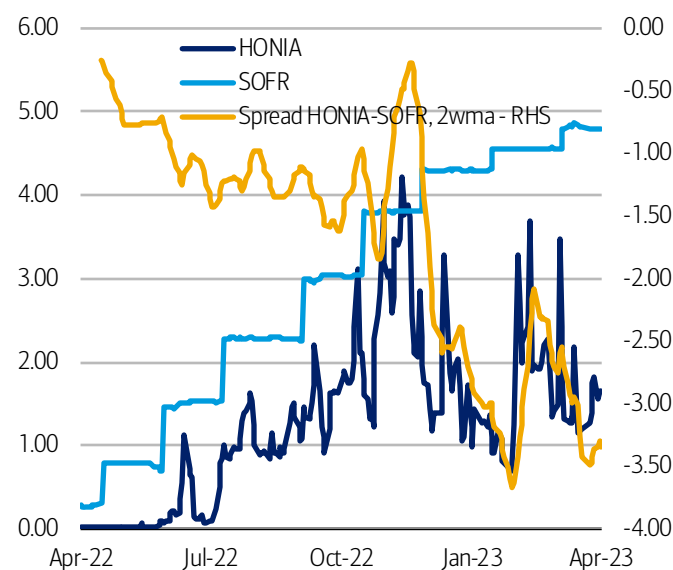


Source: Bloomberg

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## Exhibit 3: HK (HONIA) and US (SOFR) overnight rates (%)

The HONIA-SOFR spread remains very wide at over -300 bps



Source: Bloomberg

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## Wide front-end interest rate differential should keep spot US\$HKD near 7.85.

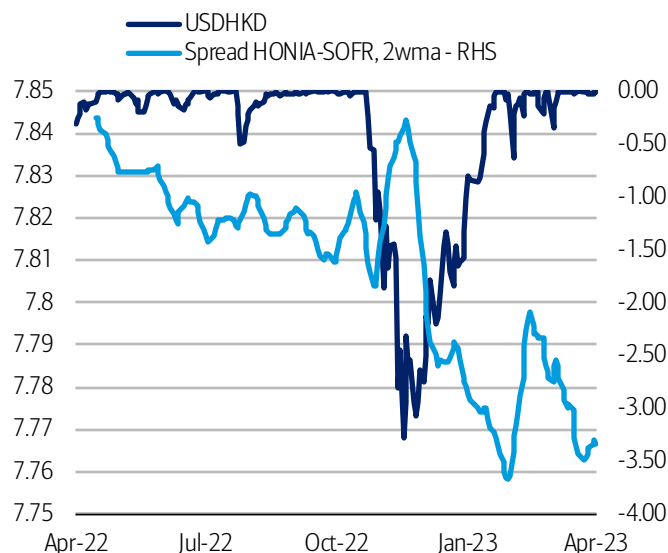
The large gap between SOFR and HONIA should keep Hong Kong Dollar Tomorrow-Next forward points (HKDTN) deep and continue to incentivize the market to buy US\$ and sell HK\$, resulting in additional trigger of the weak-side CU. So far, despite the reduced level of aggregate balance, HKDTN continues to yield close to -6 pips/day, reflecting the -300bps spread between HONIA and SOFR. The wide interest rate differential expressed via forward points should ensure that the market remains on net long US\$ until the ratio of demand to supply of HK\$ rises high enough to force HONIA to meaningfully close the gap with SOFR.

**The main theme for HONIA for the rest of 2023: Volatility.** With the Fed not expressing any indication of cutting in 2023, naturally the HK-US interest rate differential will on average remain wide and HKDTN should remain deep. However, a sudden increase in demand for HK\$ settlement can rise on a rapid rise in HONIA and overnight HIBOR. **Exhibit 5** shows that the volume of trading on the Hang Seng Index adjusted by the size of the aggregate balance is a good proxy for where the overnight HIBOR is moving.

**The settlement of equities transaction in Hong Kong represents the biggest demand for HK\$ settlement.** In November 2022, when news of China's reopening first broke out, volumes traded on the Hang Seng significantly increased. In the subsequent months, trading volumes slowed and this was represented by an overall decline in demand for HK\$ settlement, resulting in lower HONIA and overnight HIBOR despite gradual drains from the aggregate balance. **Exhibit 5** shows that this ratio has recently increased but is mostly driven by the decline in the aggregate balance. Over- time, we do expect the relationship between HONIA/overnight HIBOR and this ratio to hold, and overnight funding rates in Hong Kong to catchup, despite weak-side CU continuing to occur.

#### Exhibit 4: Spot USDHKD and front-end interest rate differential

The wide interest rate differential will keep spot USDHKD close to 7.85

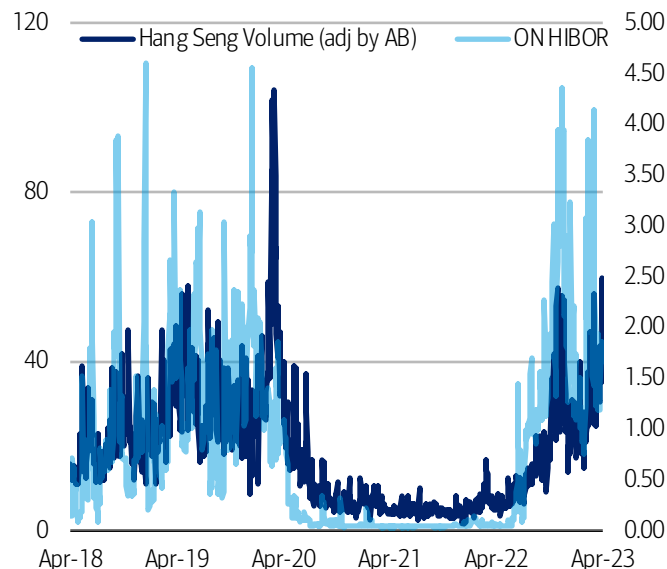


Source: Bloomberg

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#### Exhibit 5: Supply and demand of HK\$ liquidity and overnight HIBOR

Overnight HIBOR is the balance of the supply and demand of HK\$ liquidity



Source: Bloomberg

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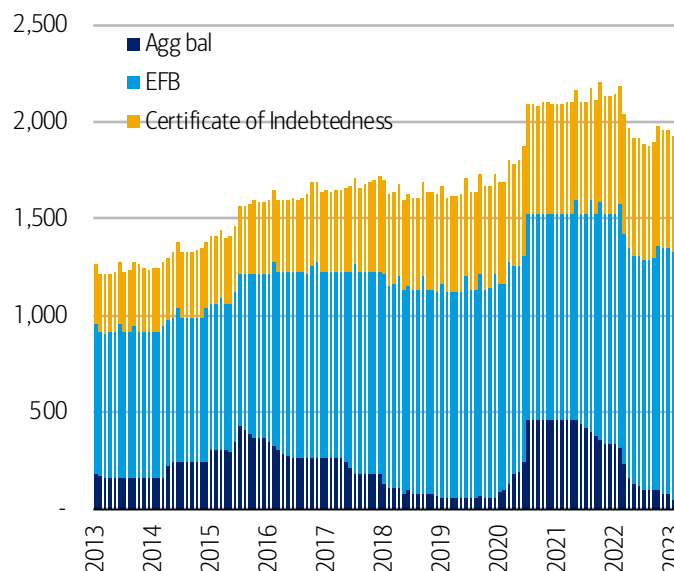
**Will aggregate balance go to zero?** We believe it is highly unlikely that the aggregate balance will go to zero as this would place too much settlement pressure on the Hong Kong banking system. Before aggregate balance went towards zero, the most likely event that would occur is the frequent inversion of the HIBOR curve where the incentive of Hong Kong banks is to hold aggregate balance versus other components of the monetary base. Currently, Hong Kong's monetary base stands at HK\$1.88tn (~US\$240bn) where the aggregate balance just represents HK\$49bn of this total (US\$6.2bn). The vast majority of Hong Kong's monetary base is in exchange funds bills (EFB at HK\$1.3tn) and certificate of indebtedness (HK\$ 603bn), which the former can easily unwind and turn back into aggregate balance if the demand for HK\$ settlement exceeds the demand to hold an interest paying asset.

#### The incentive to hold EFB declines as the demand for settlement increases.

When the aggregate balance was flush and there were no constraints on settling payments, Hong Kong banks had incentive to hold EFBs as EFBs were interest-paying assets that tracked the front-end of the HIBOR curve and qualified as a form of government debt for the purpose of Basel requirements. As such, when the aggregate balance was flush, the HKMA increased net issuance of EFB (i.e. during September 2021 to February 2022), which reduced the level of the aggregate balance to satisfy the demand set out by Hong Kong banks. However, with the situation now in reverse where the aggregate balance is small. If frequent inversion of the HIBOR curve occurs, end the incentive would be to skew towards holding aggregate balance over EFB which is an interest paying asset (**Exhibit 7**).

**Exhibit 6: Hong Kong's monetary base (HK\$ Bn)**

Aggregate balance represents a very small portion of Hong Kong's monetary base

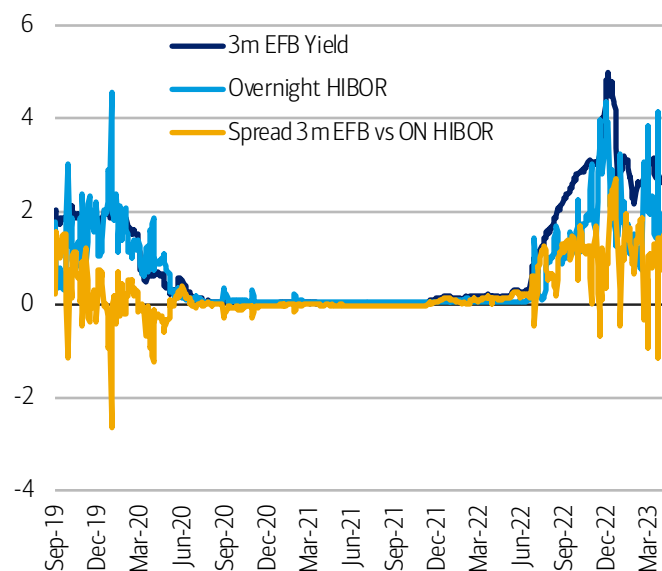


Source: Bloomberg

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**Exhibit 7: Yield spread between 3-month EFB and overnight HIBOR**

The incentive of Hong Kong banks to hold EFB decreases as the HIBOR curve inverts



Source: Bloomberg

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**The trilemma trade-offs the HKMA faces will become increasingly clear.** The classic trilemma of macroeconomics is that central banks can choose among an open financial account, a fixed exchange rate and independent monetary policy. Historically and until now, the HKMA has firmly chosen to maintain a fixed exchange rate and an open financial account. The HKMA delegated monetary policy to the FX market where interest rate differential will narrow upon maintenance of the 7.75-7.85 USDHKD band. However, as aggregate balance pushes towards zero, the HKMA will have to consider whether it can tolerate extremely volatile front-end interest rates.

On their website, the HKMA notes their four main functions are:

- maintaining currency stability within the framework of the Linked Exchange Rate System;
- promoting the stability and integrity of the financial system, including the banking system;
- helping to maintain Hong Kong's status as an international financial centre, including the maintenance and development of Hong Kong's financial infrastructure; and
- managing the Exchange Fund.

If and when the aggregate balance is drained to a very low level, the policy trade-off between maintaining the first and the second goal would become increasingly clear. To maintain a stable currency within the framework of the LERS, the HKMA would need to maintain sufficiently high level of FX reserves and allow local interest rates to rise to dissuade outflows and the carry trade. To optimally achieve this goal, the HKMA would require aggregate balance to be low and front-end HIBOR to be volatile.

However, very volatile front-end HIBOR fixing would complicate the settlement of HK\$ transaction which does not advance the goal promoting the stability and integrity of the

financial system. If aggregate balance falls to a sufficiently low level, the Hong Kong banking system would increasingly be dependent on HKMA liquidity provided via the discount window. To prevent a high level of friction in HK\$ settlement, aggregate balance is preferred to be high and overnight cost of borrowing to be low.

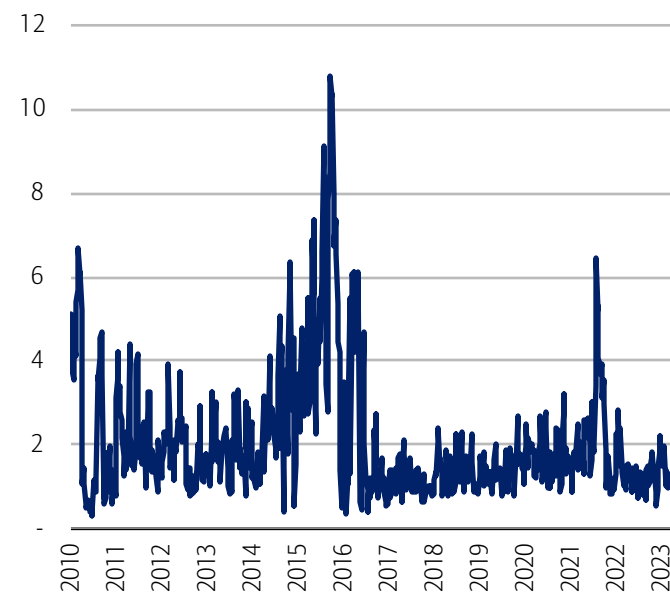
**The threshold for the HKMA to reduce net issuance of EFB remains high.** Until aggregate balances fall to a very low level, for example around HK\$ 10bn, there remains little incentive for the HKMA to reduce net issuance of EFB. The reason is that the HKMA wants to perfectly control FX stability (hence the US\$HKD band at 7.75-7.85) but the inevitable trade-off is very high interest rate volatility at times when outflows are strong. However, in the recent past, the HKMA has shown flexibility in terms of providing domestic liquidity. At the height of COVID in March 2020, the HKMA did reduce net issuance of EFB by HK\$ 20bn to accommodate strained liquidity conditions. However, that was a one-off event and the COVID panic in the financial sector quickly subsided.

**Reducing net issuance of EFB will set the expectation of additional easing.** The current situation is different as the outflows are triggered by the HONIA-SOFR spread remaining very wide. And with the US data increasingly suggesting the Fed will hold for higher-for-longer, the pressure to further drain the aggregate balance will likely remain constant and present. However, if the HKMA reduces net issuance of EFB even once this cycle, this would place strong downward pressure across the entire FX forward curve as the HKMA will introduce policy uncertainty of how much additional aggregate balance it can unleash. Further widening on HKD forward points would encourage the market to conduct carry trade (buy US\$, see **Exhibit 9**), further draining the HKMA's reserves, and will overtime, impact the pursuit of their primary goal of FX stability.

**Watch the results of the EFB auctions.** An early indication that the HKMA may net reduce issuance of EFB is by examining the times oversubscribed in EFB auctions. Using the 3-month EFB as representative, the latest data on auctions in March 2023 shows Hong Kong banks' interest for EFB averaged at 1.16x oversubscribed or in the 27<sup>th</sup> percentile of the series since 2010 (**Exhibit 8**) and should not be interpreted as overly strong. However, in March 2023, aggregate balance was still HK\$ 76bn. Once aggregate balance lowers to HK\$ 46bn, the subsequent auction results will test whether Hong Kong banks will continue to hold EFB when the HIBOR curve begins inverts and settlement demand relative to the supply of aggregate balance increases.

**Exhibit 8: Times oversubscribed in 3-month EFB auctions**

Recent 3-month EFB auctions does not show strong interest to hold EFB

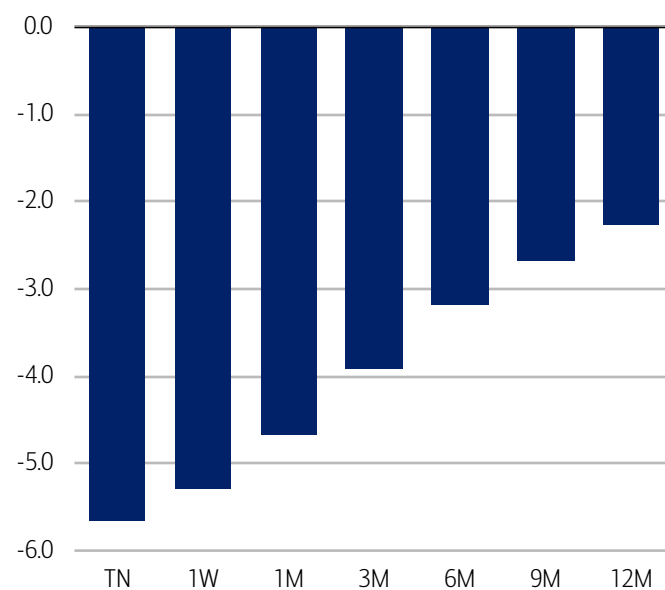


Source: HKMA

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**Exhibit 9: HKD spot FX forward curve (pips per day)**

Net reduction EFB issuance will put downward pressure on the FX forward curve



Source: Bloomberg

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