Zinc – Where is the metal

18th February, 2019

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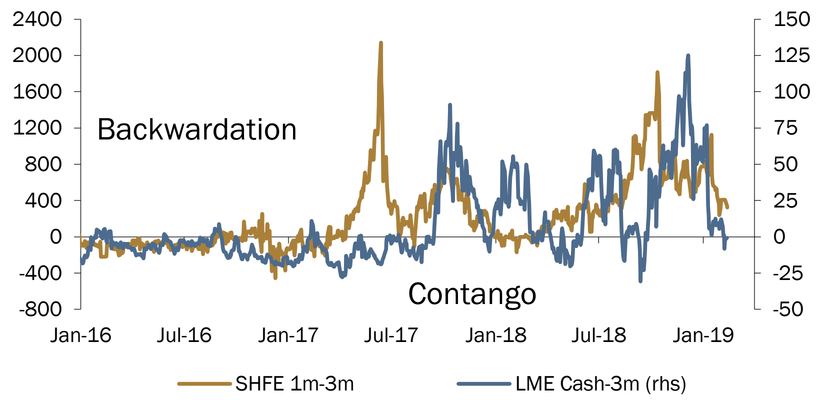
The calm before the storm...

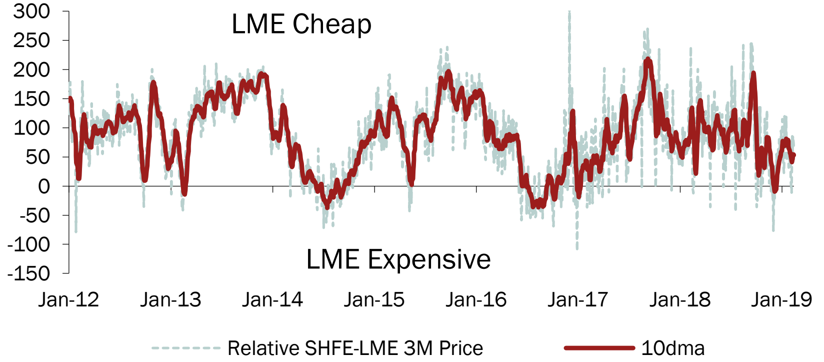
- Against a backdrop of fast depleting LME and SHFE stocks, the zinc market has already experienced a series of sharp backwardations.
- In our view, this decline in stocks reflects real rather than apparent deficits, with limited metal held off-exchange. And what metal there is, is not readily being released to the market.
- Although the concentrate market is loosening, with spot TCs back above $200/t , we expect refined deficits to persist into 2020. For stocks to be rebuilt sooner, it would likely require a significant negative demand shock, such as a full blown global recession.
- Absent this turn of events, backwardations are likely to become even more pronounced. This also creates the potential for significant outright price volatility, which should lift implied volatility and shift the volatility surface into backwardation.

Zinc spreads in and out of steep backwardations



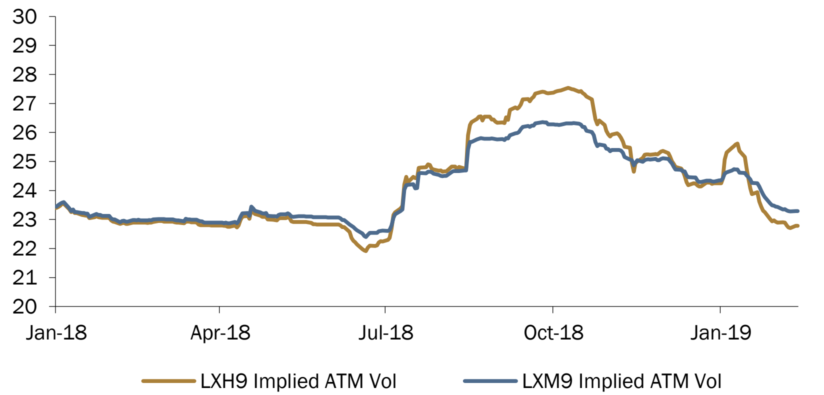
Source: ICBC Standard, Bloomberg, LME, SHFE

SHFE premium to LME currently reflects a genuine China deficit



Source: ICBC Standard, Bloomberg, LME, SHFE

Subdued implied vols in-line with recent realised levels

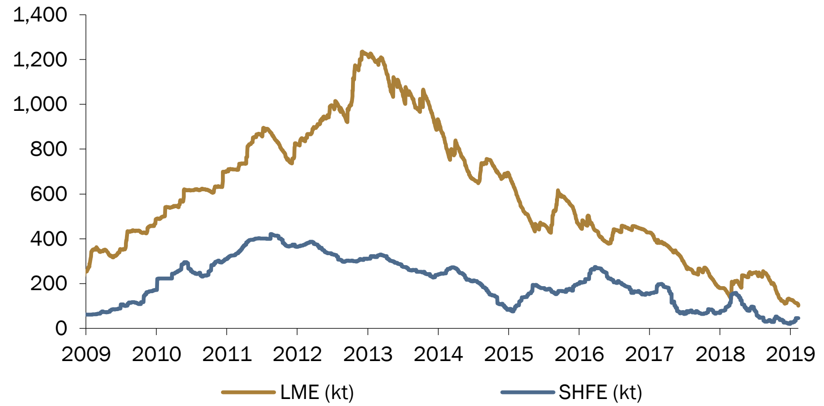


Source: ICBC Standard, Bloomberg, LME

Dwindling LME inventories beg the question of what happens at zero?

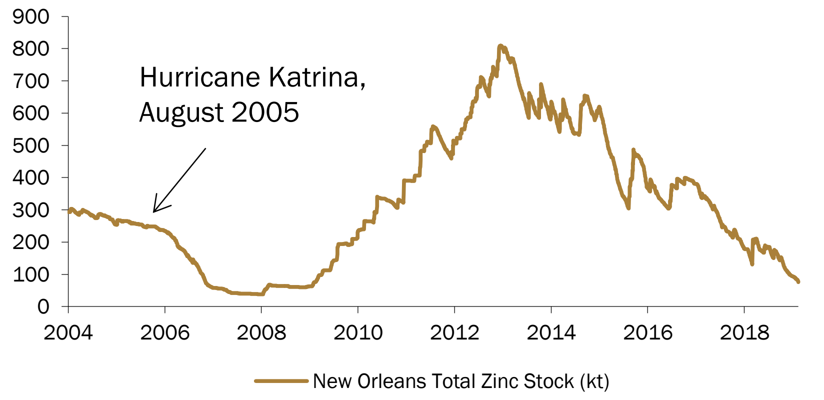
- Just as interest rate markets have fretted about the impact of the zero lower bound, dwindling LME inventories have begun to beg the question of what happens if exchange stocks go to zero?
- The most prominent example of this is zinc, where LME stocks have fallen by 1.13Mt and SHFE stocks by 400kt since their respective peaks.
- At time of writing, there is still 98kt of stock on the LME and 50kt on SHFE. However, looking at the breakdown of remaining LME stocks, the effective zero level is arguably only 15-20kt away.
- Of the 98kt on exchange, 43.2kt has already been cancelled for load out, with the residual 54.8kt of available metal primarily in New Orleans.
- New Orleans stocks previously troughed at 38.5kt in front of the financial crisis, at which point no other LME registered US warehouses appear to have held any metal.
- It is possible that this metal was left in situ – rather than cancelled by a consumer or trader – because it had been damaged by Hurricane Katrina.
- If that is the case, and this metal consequently remains within the LME stock, the effective available inventory would be just 16.3kt. That equates to less than a day of demand cover.
- This is not unprecedented – LME on warrant copper bottomed at just 22.2kt in 2005 and nickel at 870t in 2006 – but is clearly not a normal state of affairs.
- The key questions therefore are:
  - Could off-exchange stocks come back onto the LME?
  - Or, will a shift to surplus lead to a re-build of exchange stocks?
  - Until then, what is the likely impact on price and, arguably more significantly, spreads?

LME and SHFE stocks dwindling away



Source: ICBC Standard, Bloomberg, LME, SHFE

With the remaining inventory primarily in New Orleans

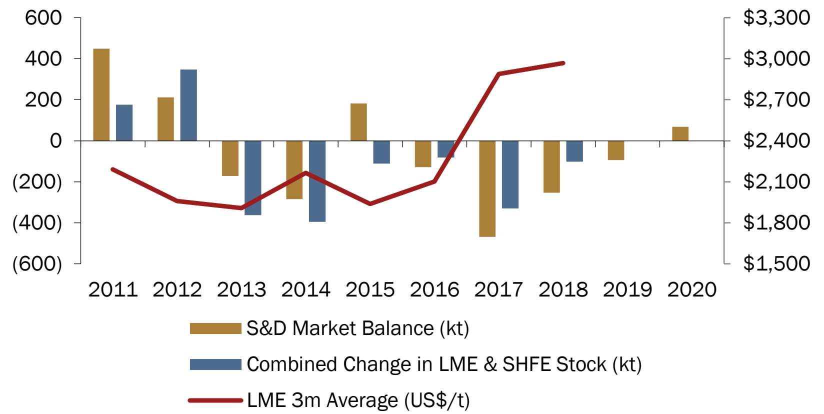


Source: ICBC Standard, Bloomberg, LME

If metal is being held off-exchange, it's not being given up easily

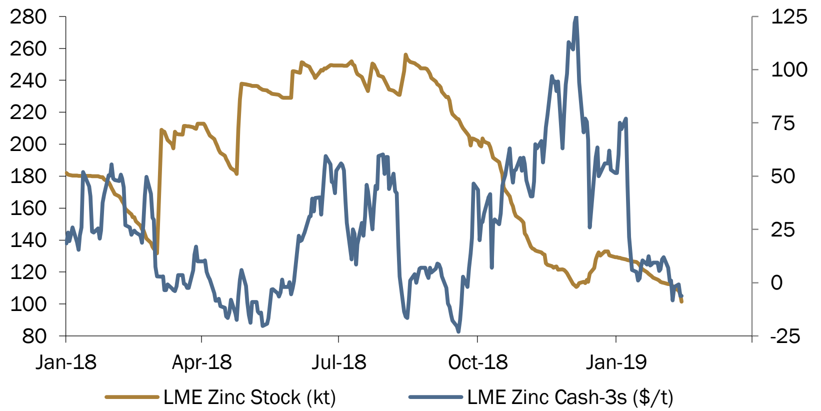
- Between the end of 2012 and 2018, total exchange inventories declined by 1,383kt. Over the same period, our supply-demand model shows an aggregate market deficit of 1,123kt.
- This indicates that 260kt of the inventory decline could be explained by metal being moved off-exchange but that by and large the apparent inventory decline is a real one.
- As to how much metal is held off-exchange, based on a post financial crisis peak figure of c.1.8Mt, we estimate something in the order of c.650kt. This is clearly a grey area and would include estimated combined bonded and onshore China stocks of c.230kt.
- Even if this c.400kt figure of ex-China off-exchange stock does exist, significant backwardations have, so far, failed to draw fresh metal onto exchange. So it seems unlikely that stocks will be rebuilt by the re-emergence of off-exchange metal.

LME + SHFE stock draw in-keeping with market deficits



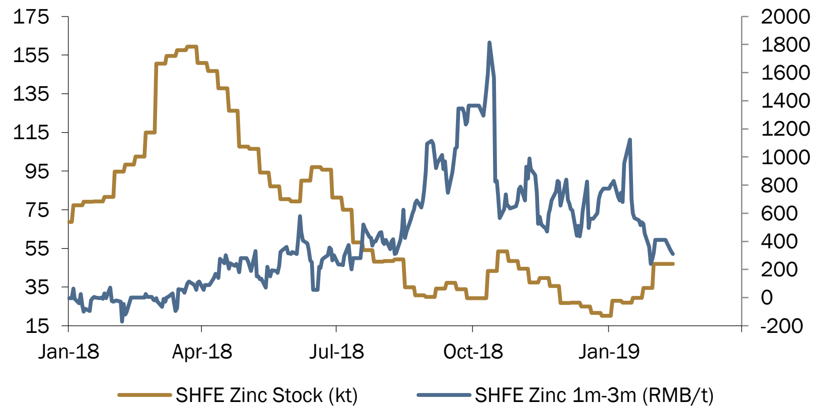
Source: ICBC Standard, Bloomberg, LME, SHFE, ILZSG, Company Reports, MBR

Backwardations have failed to unearth metal



Source: ICBC Standard, Bloomberg, LME

With limited deliveries to either the LME or SHFE



Source: ICBC Standard, Bloomberg, SHFE

The concentrate market is loosening but refined yet to follow suit

- As we have argued in our Base Metal Outlooks over the past eighteen months[1], we expect the concentrate market to return to balance in 2019 before entering a surplus from 2020 onwards.

- The refined market, however, should remain in deficit until 2020. We expect a 2019 deficit between 100-200kt, within which China should post a 600-700kt deficit vs. an ex-China surplus. We therefore expect the SHFE-LME arb to remain open for much of the year, pulling international metal and concentrate into China.

- Given the paucity of spare smelting capacity ex-China, for this deficit to be reduced would require either an increase in Chinese refined production or a drop in demand.

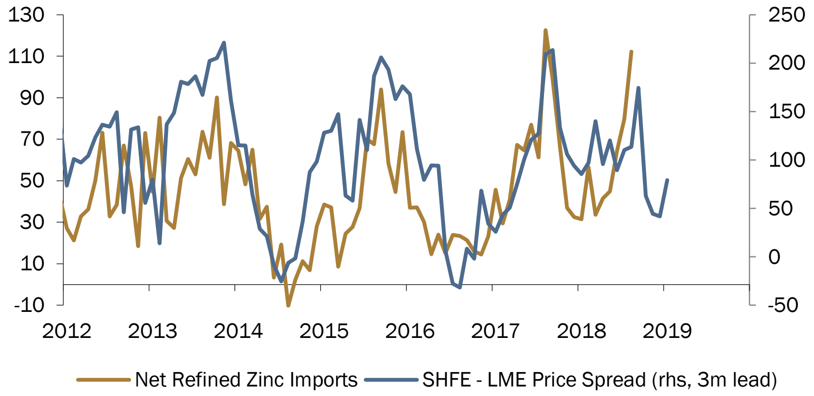
- Regarding the former, spot treatment charges above $200/t show that concentrate availability is clearly increasing on the back of much publicised new mine ramp-ups (Dugald River, Gamsberg etc.) and Glencore's incremental capacity restarts.

- To date, however, refined production is yet to react. There is a natural seasonal element to this, with any reaction delayed beyond lunar new year holidays, but the late 2018 production response to higher TCs was fairly muted, with greater environmental scrutiny an ongoing headwind.

- As for weaker demand to rebuild stocks, as followed in the wake of the financial crisis, it would arguably require a full blown global recession for this to occur.

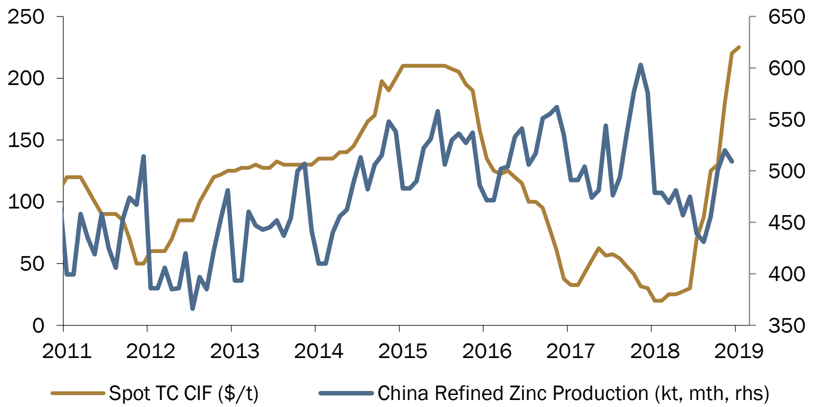
- Clearly this is not a zero probability risk – the New York Fed's yield curve implied model of 12 month forward recession probability is now above 20% – but it remains outside of our base case. All the more so in light of the FOMC's dovish tilt and recent Chinese credit data, which tentatively indicates a loosening of policy around non-bank deleveraging.

The SHFE-LME premium continues to pull metal into China



Source: ICBC Standard, Bloomberg, LME, SHFE, Customs Data

Rising TCs indicate a rapidly loosening concentrate market



Source: ICBC Standard, Bloomberg, China NBS, CNIA, MBR

1:https://www.icbcstandardbank.com/CorporateSite/ResearchStrategy/Reports

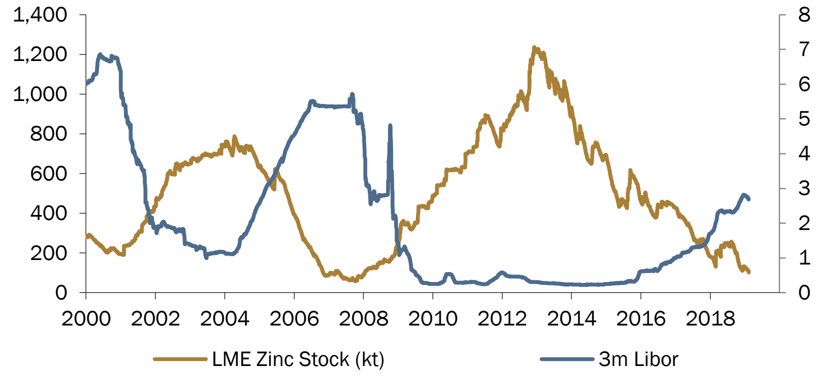
Do low stocks mean we are at the end of the business cycle?

- Nevertheless, we do think it will take a macro downturn to truly rebuild zinc stocks. A looser concentrate market will feed through to increased refined supply and enable stocks to bottom out but we doubt that supply alone will be sufficient for them to be rebuilt.

- Looking at the relationship between metal stocks and the business cycle – proxied here with interest rates, which also clearly have an impact on people's ability to finance inventory – it is logical that stocks should bottom (peak) around the end (start) of an economic expansion, which is preceded by commensurate interest rate rises (cuts).

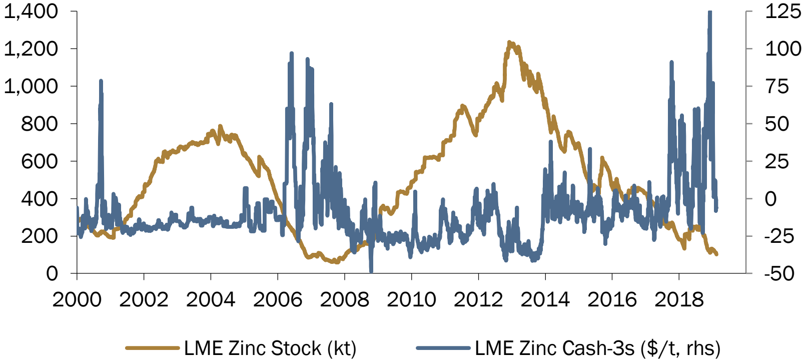
- Until that macro turning point is reached, however, we expect zinc prices to remain supported and spreads to trade in backwardation. Moreover, we think that backwardations will become increasingly volatile and, if stocks do hit an absolute or effective zero level, liquidity could diminish significantly.

Zinc stocks maintain a negative correlation with interest rates



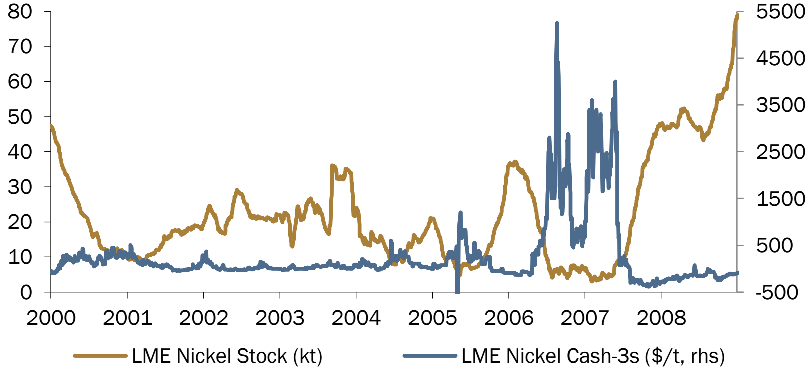
Source: ICBC Standard, Bloomberg, LME, ICE

Zinc spreads marking a return to 2006-8 levels



Source: ICBC Standard, Bloomberg, LME

But nothing compared to Nickel, albeit on a higher base price



Source: ICBC Standard, Bloomberg, LME

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