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## Implications of the macro-economic outlook for zinc

International Lead & Zinc Study Group  
Lisbon – 20 October 2022

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Concord Resources Limited

October 2022

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## Concord Resources Limited

### Who we are

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- **Founded in 2015** Concord is a global resources merchant focused on the supply chain, financing and risk management of **non-ferrous metals and related raw materials**, led by an experienced and entrepreneurial management team
- Concord is a global company, operating from its **headquarters in London** and through its principal **offices in New York and Hong Kong**. Our experienced team work with resource producers and consumers on spot transactions out to multi-year, structured agreements
- Concord's capabilities include **global sourcing, marketing and management of all the required logistics and finance** to optimise our clients' supply chains from long-term partnership marketing arrangements to single container deliveries
- Concord brings substantial cross-commodity, structuring and asset optimisation experience of its founding team to work for the **benefit of its customers and partners**
- Concord is an **independent company**, and combines its founding management's experience with the commodity and financial industry expertise of its shareholders
- For more information please visit our [website](#)

## Implications of the macro-economic outlook for zinc

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- **Demand-driven prices**
- **Macro-economic developments**
- **Zinc market observations**
- **Summary**

## Implications of the macro-economic outlook for zinc

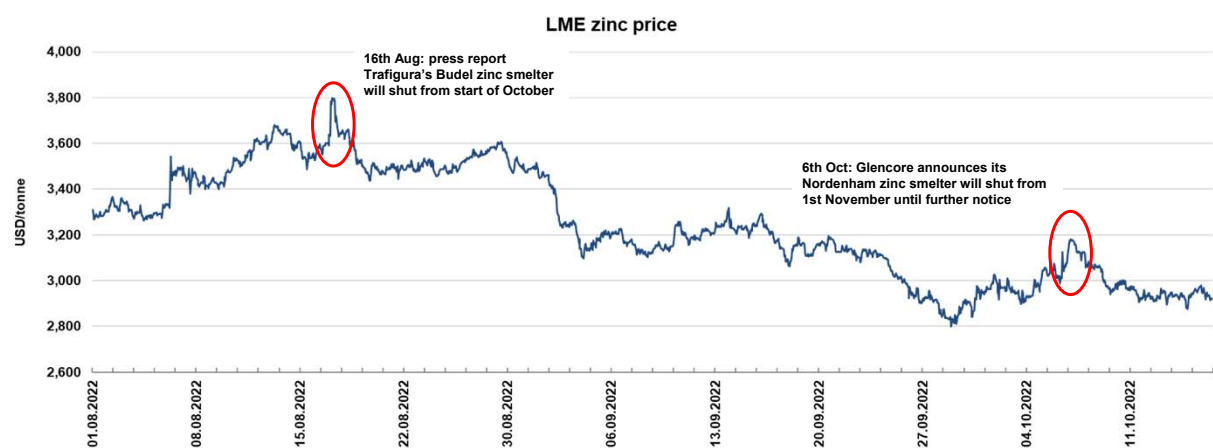
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## Demand-driven pricing

### Recent LME zinc price performance



Note: 30-minute intervals. Data to 14th October 2022  
Source: BBG, LME, Concord Resources Limited, October 2022

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## Demand-driven pricing

### Recent LME lead price performance



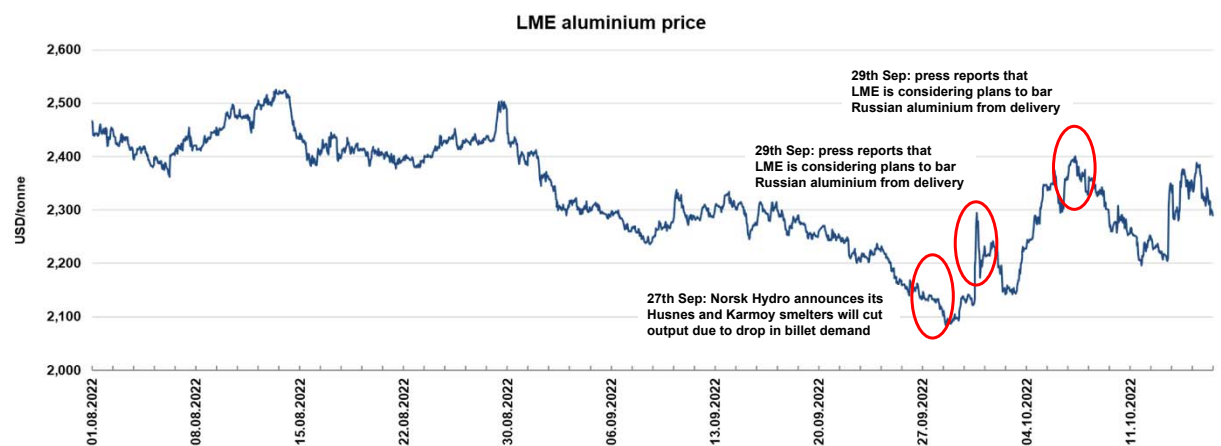
Note: 30-minute intervals. Data to 14th October 2022  
Source: BBG, LME, Concord Resources Limited, October 2022

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## Demand-driven pricing

### Recent LME aluminium price performance



Note: 30-minute intervals. Data to 14th October 2022  
Source: BBG, LME, Concord Resources Limited, October 2022

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## Macro-economic developments

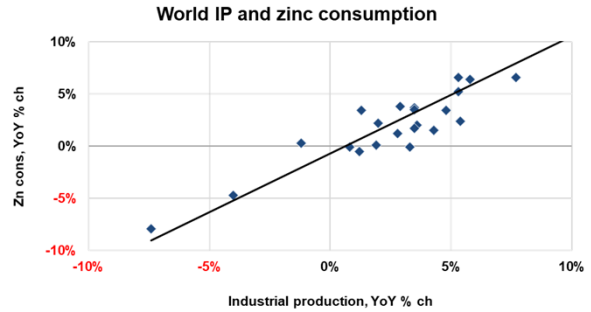
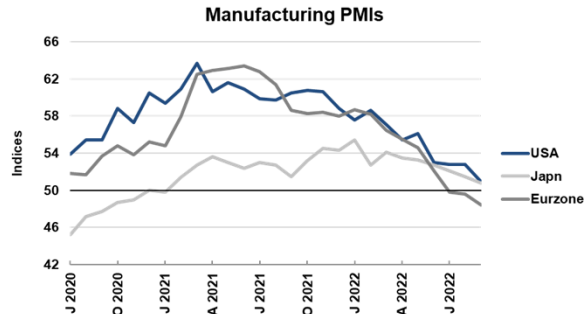
Three key developments bearing down on prices for zinc and other metals

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1. High inflation and rising interest rates, led by US Fed
2. Surge in energy and power prices, especially in Europe
3. Covid lockdowns, property market downturn in China

## Macro-economic developments

### Ex-China leading indicators point to continuing slowdown in industrial cycle over coming months



- Ex-China Manufacturing PMIs mainly declining since late 2021; September data down, USA at 28-month low, EZ < 50 pts (output falling)
- Statistically close relationships between PMIs & IP, and IP and zinc consumption in turn

Note: Chart on right shows annual data 1998-2021;  $r^2 = 0.75$   
Source: CPB, CRU, ISM, S&P, Concord Resources Limited, October 2022

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## Macro-economic developments

### Headline US inflation rate has surged higher; hugely important policy implications



- US CPI still running at 40-year highs and ~4x Fed's long-run target at +8.2% YoY, despite small dip in September
- Few people in work today have firsthand experience of high inflation, its monetary policy implications and financial market impacts

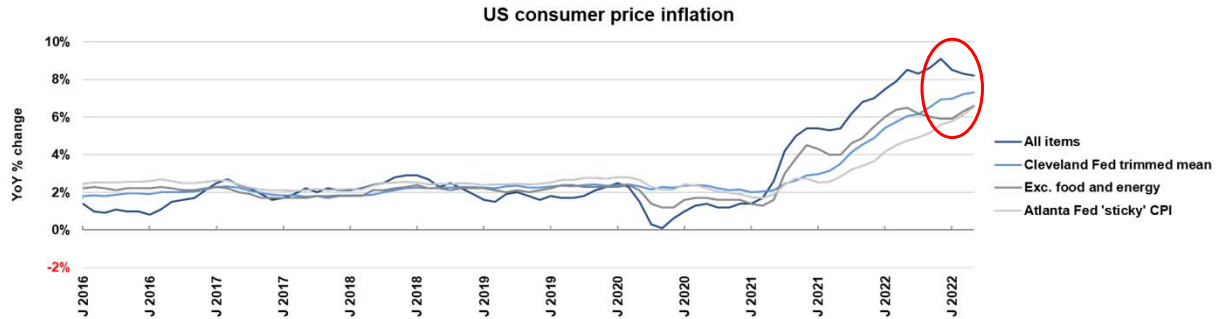
Note: Inflation for urban consumers, all items, not seasonally adjusted  
Source: US BLS, Concord Resources Limited, October 2022

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## Macro-economic developments

### US 'core' inflation is still climbing on many measures



- Headline US inflation has recently started moving in the 'right' direction but 'core' inflation
- Exc food and energy +6.6% YoY in September; Atlanta Fed 'sticky' CPI +6.5% YoY; Cleveland Fed trimmed mean +7.3% YoY

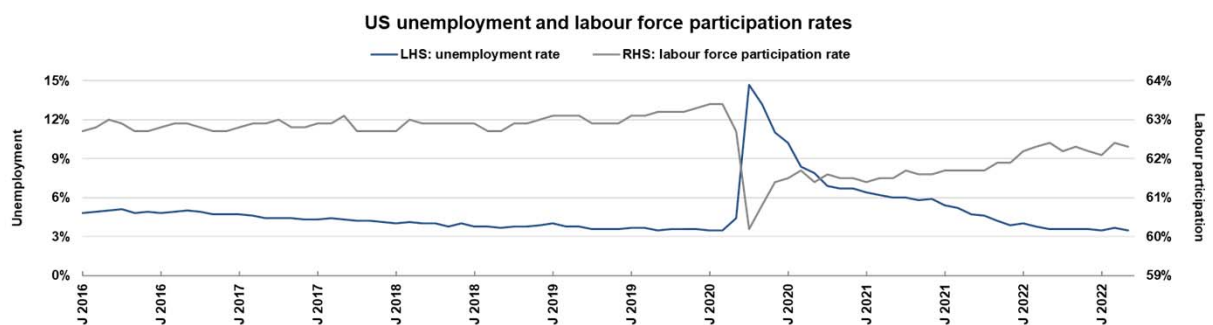
Note: Inflation for urban consumers, not seasonally adjusted, except data from Cleveland Fed  
Source: Atlanta Fed, Cleveland Fed, US BLS, Concord Resources Limited, October 2022

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## Macro-economic developments

### US labour market still looks strong; important implications for inflation



- US unemployment rate dropped back to cyclical low of 3.5% in September; vacancy ratio only 0.6 vs 10-year average of 1.4
- US labour force participation rate has not recovered to pre-covid levels; dipped back to 62.3% in September

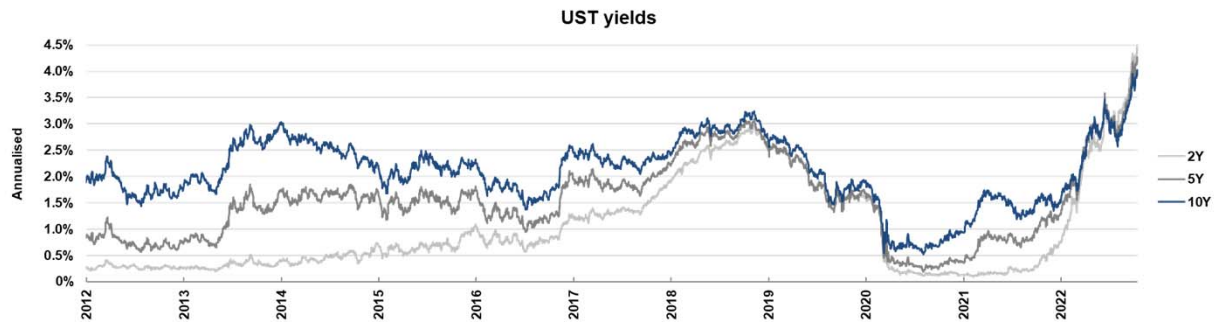
Note: Data are seasonally adjusted  
Source: US BLS, Concord Resources Limited, October 2022

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## Macro-economic developments

### UST yields rising, curve inverted



- Responding to rising policy rates, short-dated UST yields have jumped; 2-year yield up > 6x since start of 2022, highest in over a decade
- Longer-dated yields have also risen to levels last seen in 2000s, but to lesser extent, leaving curve inverted with important implications

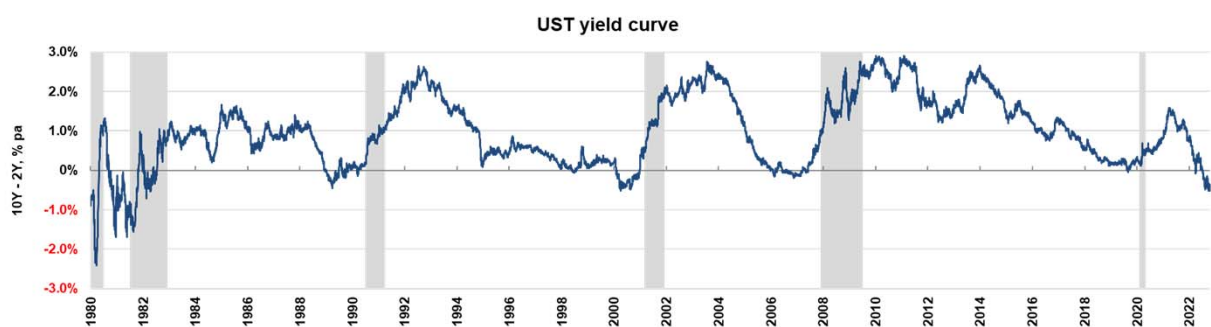
Note: Data to 14th October 2022  
Source: FRED, Concord Resources Limited, October 2022

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## Macro-economic developments

### Inverted yield curve raises worries over economic outlook



- All US recessions over last 40 years preceded by flattening / inversion of UST yield curve; latest 10Y - 2Y -0.5%, long-run average ~1%
- However, yield curve inversion has not always been followed by recession; where it has, recession has often not arrived immediately

Note: Data to 14th October 2022. Shaded areas show US recessions  
Source: FRED, Concord Resources Limited, October 2022

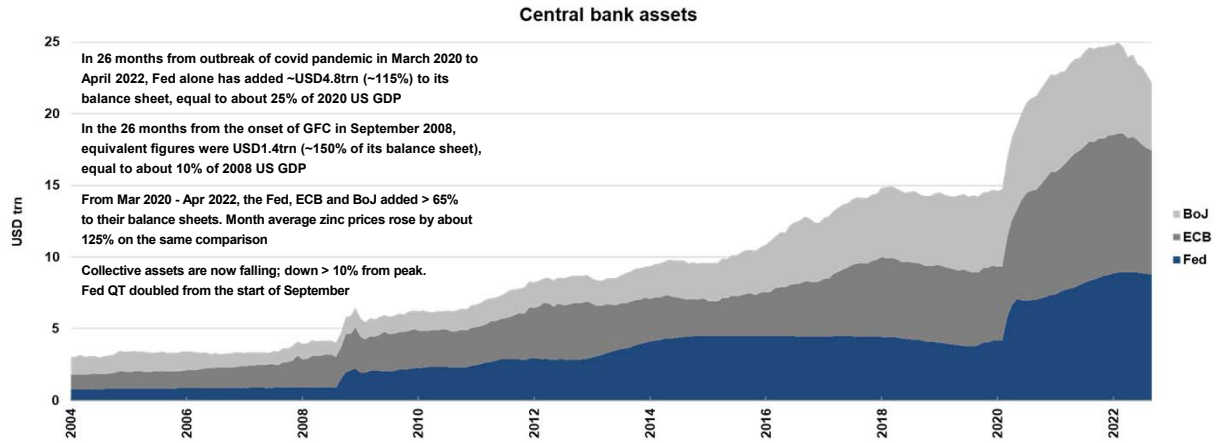
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## Macro-economic developments

From QE to QT, central banks also running down balance sheets



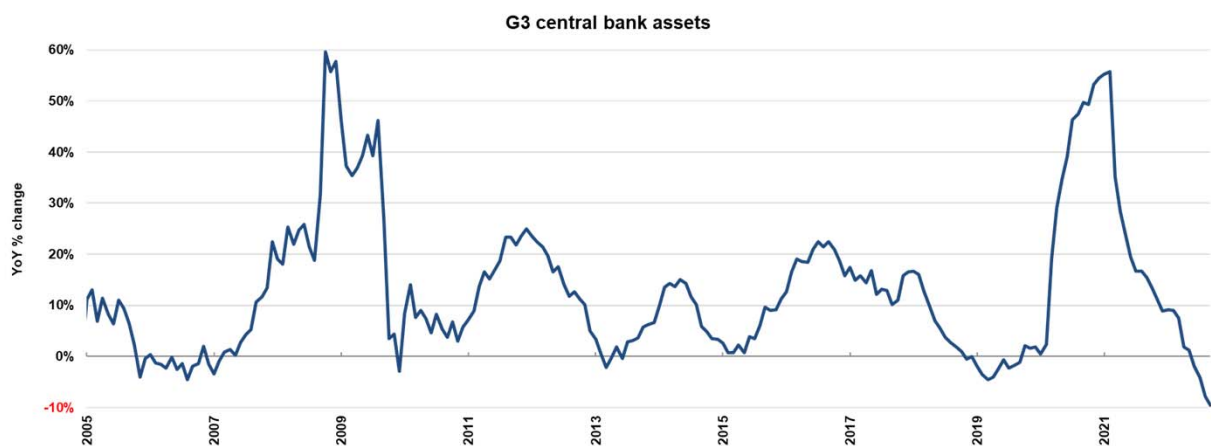
Note: Month end data to September 2022  
Source: BoJ, ECB, Fed, Oanda, Concord Resources Limited, October 2022

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## Macro-economic developments

QT now running faster than at any time since start of commodity 'supercycle'



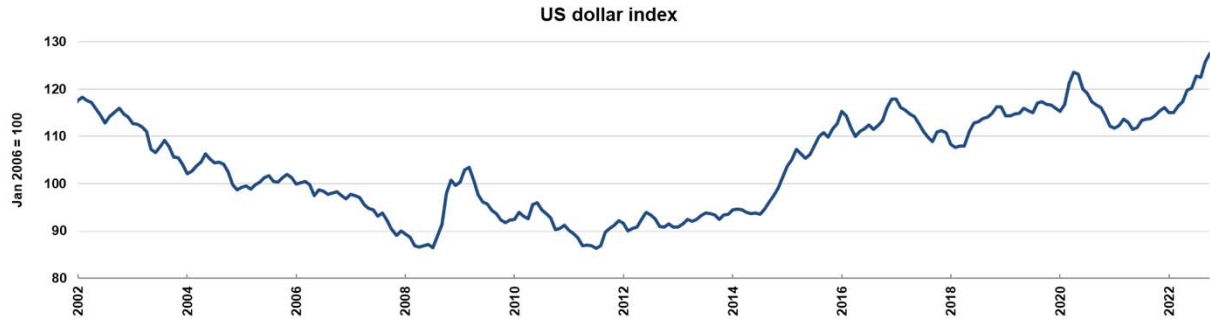
Note: Month end data to September 2022. G3 - USA, Eurozone, Japan  
Source: BoJ, ECB, Fed, Oanda, Concord Resources Limited, October 2022

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## Macro-economic developments

US monetary policy, economic resilience and flight to 'safety' driving strong rally in dollar



- US dollar's trade-weighted value has risen ~10% since the start of 2022 to trade at its highest level in two decades
- Ordinarily US dollar's value is inversely correlated with price of zinc (and other commodities) owing to opex effects

Note: US Fed trade-weighted index for goods and services. Month average data; latest to 14th October 2022  
Source: FRED, Concord Resources Limited, October 2022

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## Macro-economic developments

Money supply matters for economic activity, asset values; bearish picture here



- G3 M2 money supply fell -6% YoY in Aug 2022 in USD terms vs growth of > 20% YoY in early 2021
- Scale and duration of downturn in money supply growth today is steepest since start of commodity 'supercycle'

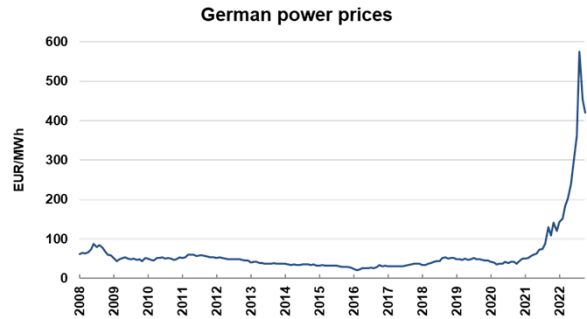
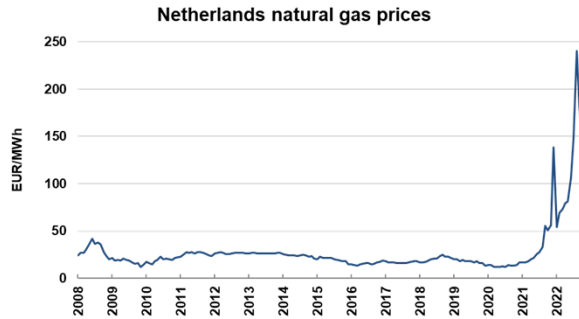
Note: Month end data to August 2022  
Source: BoJ, ECB, Fed, Oanda, Concord Resources Limited, October 2022

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## Macro-economic developments

### European gas and power prices surge, raising expectations of recession



- Latest Netherlands' natural gas prices > 5x level of last ten years. German power prices > EUR400/MWh, up ~6½x on same comparison
- Recession risk obvious but may yet be overstated; European govts are now formulating substantial fiscal policy response (ex UK!)

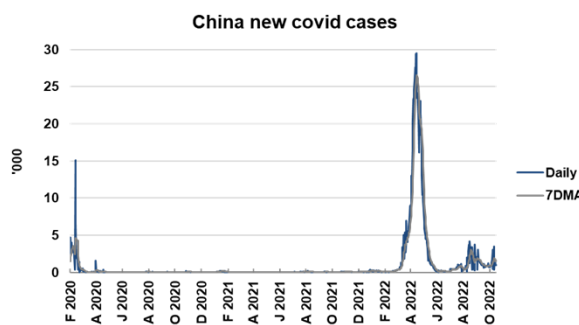
Note: All data month end. Netherlands natural gas prices: Year 1 forward physical prices delivered to virtual trading point title transfer facility (TTF). German power prices: Generic 1st Phelix (Physical Electricity Index) base year future.  
Source: BBG, Concord Resources Limited, October 2022

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## Macro-economic developments

### China's economic slowdown compounded by 'zero' covid control; residential property market in recession



- Over 30 cities recently under some level of restrictions; dogged pursuit of 'zero' covid may have delayed stronger policy stimulus
- Property prices falling YoY, undermining confidence; land sales, construction new starts and completions all down sharply YoY YTD

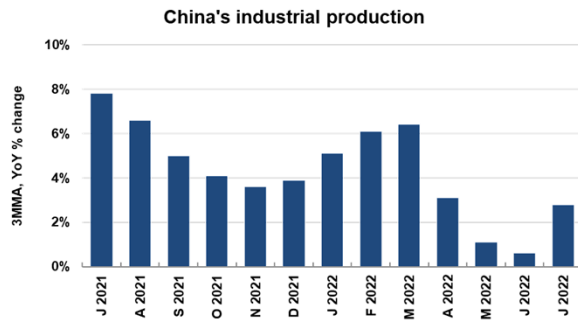
Note: Covid caseload data to 16th October 2022. Residential property price data are averages across 70 Chinese cities  
Source: NBS, Our World In Data (from John Hopkins University), Concord Resources Limited, October 2022

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## Macro-economic developments

China's economy has recently shown signs of a modest upturn



- China's economy had been slowing in H2 2021; emerging recovery early this year stalled by widespread covid lockdowns in Q2 2022
- China's credit impulse has recently turned positive (+1.5% YoY in August), reflecting moderately increasing govt policy stimulus

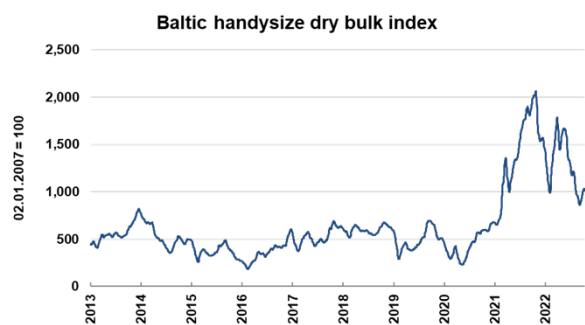
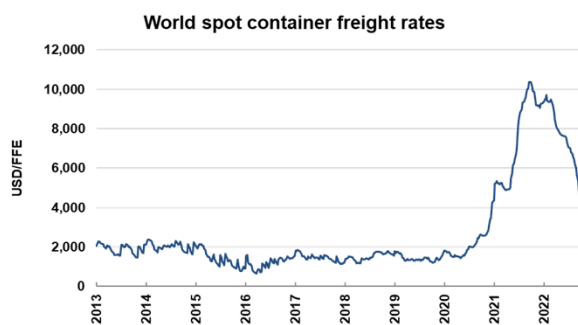
Note: China credit impulse calculated as net change in credit as proportion of nominal GDP  
Source: BBG, CPB, NBS, Concord Resources Limited, October 2022

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## Macro-economic developments

Freight rates have recently been falling as demand moderates, supply chain strains ease



- Spot container freight rates down about -65% from peak but still ~1.3x long-run average; BHSI -50% and ~1.6x on same comparisons
- Lower freight rates should help flow of metal from regions of surplus (Asia) to regions of shortage (N.America, Europe)

Note: Data to 14th October 2022  
Source: Baltic Exchange, Drewry, Concord Resources Limited, October 2022

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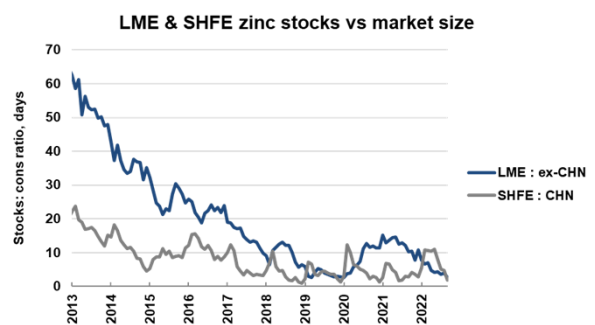
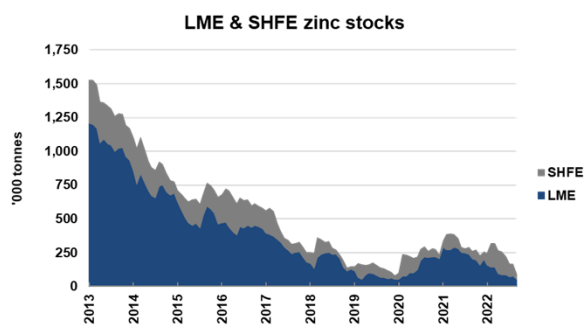
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## Zinc market observations

Visible zinc metal stocks are very low, especially when measured vs market size

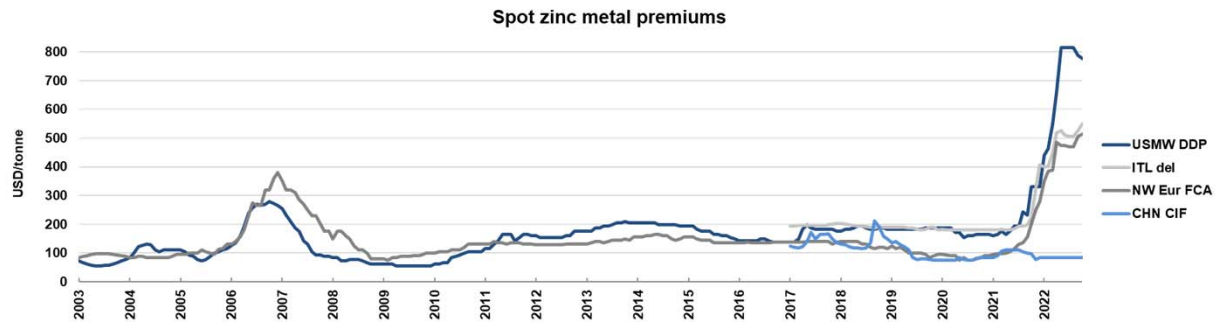


- Latest LME & SHFE zinc metal stocks only ~90kt vs > 1.5m tonnes ten years ago; world zinc market > 25% larger today than in 2013
- There's always speculation about 'hidden' stocks but price signals, physical market experience suggests stocks really are low

Note: Month end stock data to September 2022  
Source: ILZSG, LME, SHFE, Concord Resources Limited, October 2022

## Zinc market observations

Spot zinc premiums around record highs in USA, Europe but much lower in Asia



- High US, European premiums reflect tight regional balances and low stock levels, but don't forget impact of high freight rates
- Latest news of zinc smelter production cuts in Europe have prompted further rise in spot premiums

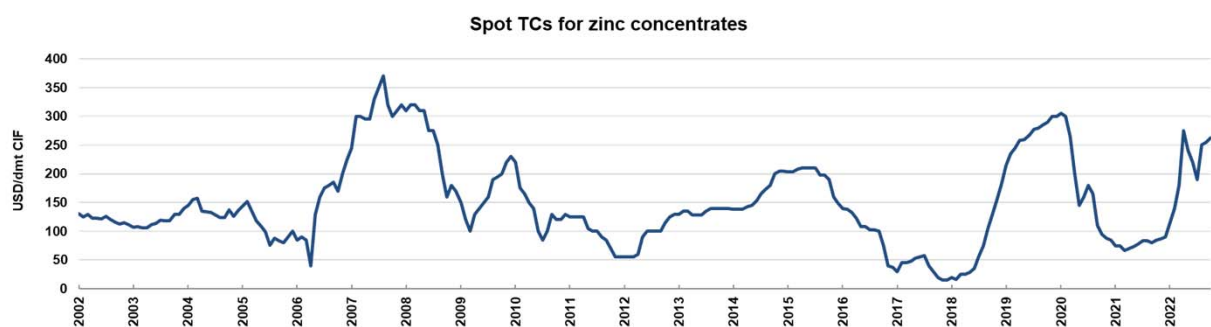
Note: SHG ingot premiums. Month average data to October 2022  
Source: CRU, Fastmarkets, Concord Resources Limited, October 2022

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## Zinc market observations

Spot TCs for zinc concentrates have been rising, reflection of surplus market



- Spot TCs heading into high USD200s / dmt, quality differential widening; well above 2022 BM of USD230/dmt
- Zinc concentrates demand will fall further following latest smelter production cuts in Europe

Note: TCs for standard clean concentrate. Month average data to October 2022  
Source: CRU, Fastmarkets, Concord Resources Limited, October 2022

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## Implications of the macro-economic outlook for zinc

### Summary

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- Since April, zinc (down > 30%) and other metal prices have fallen under pressure from key macro-economic developments:
  - High inflation, rising interest rates and strong USD
  - Surging energy and power prices, especially in Europe
  - China's covid lockdowns and residential property market recession
- Financial markets appear overwhelming focused on further downside risks to demand; this is still driving price dynamics
- Notwithstanding, physical zinc metal market appears to be in better shape than suggested by present financial sentiment
  - Visible zinc metal stocks are very low, especially versus market size
  - Physical metal price signals still strong in N.America, Europe; concs market softening
  - Some zinc metal output remains at risks, especially in Europe; other producers underperforming
- Given current confluence of circumstances, zinc market could react strongly when (eventually) demand narrative changes

## Concord Resources Limited

Our markets: every step of the supply chain

	Aluminum	Copper	Zinc, lead, nickel	Alumina, bauxite	Precious metals
<b>Metals</b>					
<b>Products</b>	<ul style="list-style-type: none"> <li>P1020</li> <li>Billets</li> <li>Alloys</li> <li>Rod</li> </ul>	<ul style="list-style-type: none"> <li>Cathode</li> <li>Copper rod</li> <li>Concentrates</li> </ul>	<ul style="list-style-type: none"> <li>SHG &amp; CGG zinc</li> <li>397 &amp; 49s lead</li> <li>Primary nickel</li> <li>Concentrates</li> </ul>	<ul style="list-style-type: none"> <li>SGA</li> <li>Raw bauxite</li> </ul>	<ul style="list-style-type: none"> <li>Gold</li> <li>Silver</li> <li>PGMs</li> </ul>
<b>Origination</b>	<ul style="list-style-type: none"> <li>Consignments</li> <li>Prepays/financing</li> <li>Off-take/marketing</li> <li>Tolling</li> </ul>	<ul style="list-style-type: none"> <li>Consignments</li> <li>Prepays/financing</li> <li>Off-take/marketing</li> <li>Tolling</li> </ul>	<ul style="list-style-type: none"> <li>Consignments</li> <li>Prepays/financing</li> <li>Off-take/marketing</li> <li>Tolling</li> </ul>	<ul style="list-style-type: none"> <li>Swaps</li> <li>Prepays/financing</li> <li>Off-take/marketing</li> <li>Tolling</li> </ul>	<ul style="list-style-type: none"> <li>Off-take/marketing</li> <li>By-products from concentrates</li> </ul>
<b>Storage / logistics</b>	<ul style="list-style-type: none"> <li>LME system</li> <li>Warehousing</li> <li>Shipping</li> </ul>	<ul style="list-style-type: none"> <li>LME system</li> <li>Warehousing</li> <li>Shipping</li> <li>Blending</li> </ul>	<ul style="list-style-type: none"> <li>LME system</li> <li>Warehousing</li> <li>Shipping</li> <li>Blending</li> </ul>	<ul style="list-style-type: none"> <li>Warehousing</li> <li>Shipping</li> <li>Blending</li> </ul>	<ul style="list-style-type: none"> <li>Vaulting</li> </ul>
<b>Consumers</b>	<ul style="list-style-type: none"> <li>Aerospace</li> <li>Automotive</li> <li>Construction</li> <li>Packaging</li> </ul>	<ul style="list-style-type: none"> <li>Wire and cable</li> <li>Tubing</li> <li>Brass</li> <li>Smelters</li> </ul>	<ul style="list-style-type: none"> <li>Galvanizers</li> <li>Battery makers</li> <li>Stainless &amp; alloy steelmakers</li> </ul>	<ul style="list-style-type: none"> <li>Refineries</li> <li>Smelters</li> </ul>	<ul style="list-style-type: none"> <li>Banks</li> <li>Smelters</li> </ul>

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