



is a leading steel information service in Englewood Cliffs, N.J., USA

WSD's steel experience, steel database and availability of steel statistics are the principles for performing steel forecasts, studies and analysis for international clients. WSD seeks to understand how the "pricing power" of steel companies the world over will be impacted by changes in the steel industry's structure. The views and opinions expressed in this article are solely those of World Steel Dynamics and not necessarily those of AIST.



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WSD Macro and Micro Chinese steel-consuming activity indices: Not as precise as wished.

WSD employs two monthly indices that seek to track activity levels in China's steel-consuming sectors. The Macro Index consists of four weighted macro-economic data series. The Micro Index consists of 12 weighted activity figures for industries or sectors of the economy. The Macro Index consists of items that are reported on a revenue basis. The Micro Index consists of items that are reported on a unit basis, including a 25% weighting for building square meters under construction.

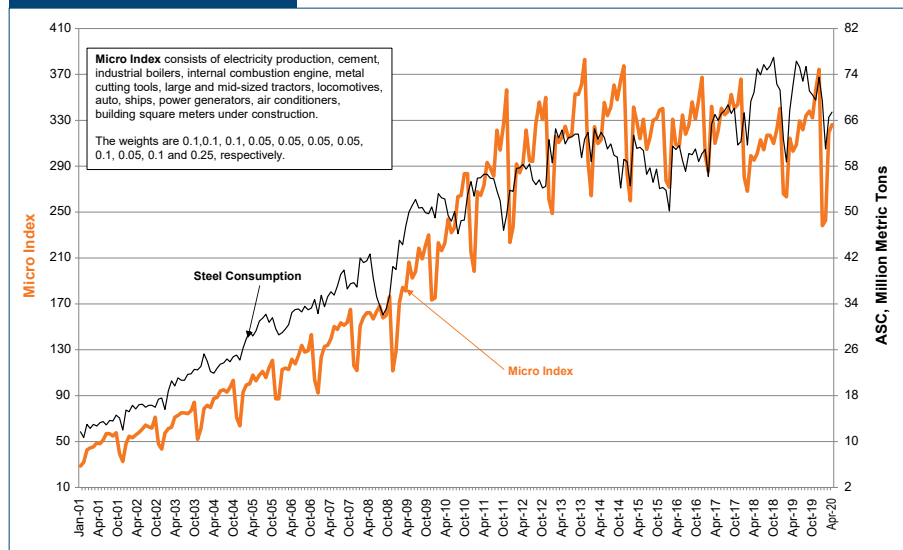
The Macro Index is particularly unreliable, as noted in prior reports. The index consists of WSD's 6- or 12-month moving average figures for: (1) fixed asset investment (FAI) (which includes the figures for the value of land sales and mergers and acquisitions (M&A) transactions); (2) retail sales; (3) the M2 money supply; and (4) value added by industry. The weighting of these items, respectively, is 35%, 25%, 20% and 20%. The data is submitted to the central government by local officials who, WSD observes, have an incentive

to report favorable results (in order to keep their jobs).

The Macro and Micro Indices, at times, have a life of their own. And at times they don't move in sync with one another — or with the monthly figures for apparent steel demand:

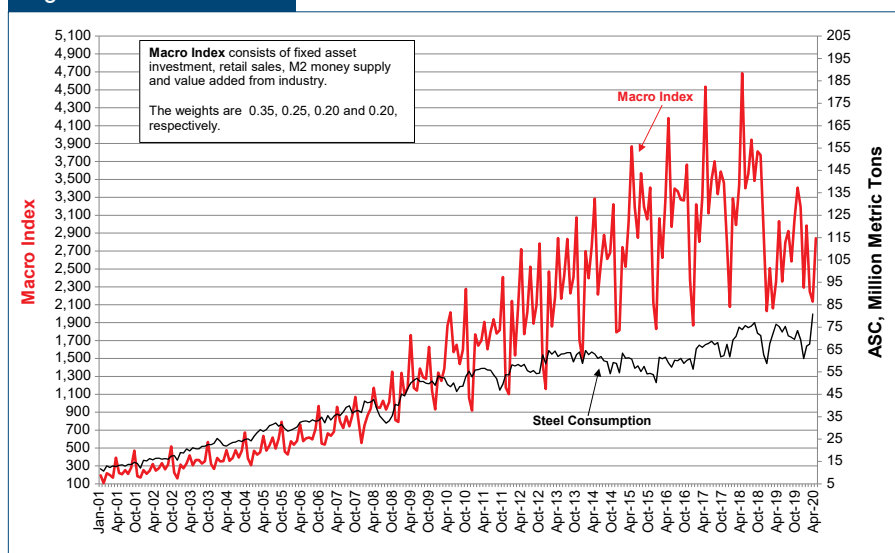
- From 2001 to mid-2019, the Macro Index rose from 5 times to 12.5 times the Micro Index. Since then, it's fallen to about 8 times the Micro Index (Fig. 1).
- The Macro Index since mid-2019 to the present has fallen more than 50%.
- Apparent steel consumption (ASC) tracked fairly closely with the Micro Index from 2001 to 2009, but over the next 8 years, it fell about 40% relative to the Micro Index. Yet, since 2017, ASC is up about 26%; and the Micro Index is up 6% (Fig. 2).

Figure 1



WSD China Micro-Economic Steel Index (non-moving average) vs. Apparent Steel Consumption (ASC). Source: WSD estimates.

Figure 2



WSD China Macro-Economic Steel Index (non-moving average) vs. Apparent Steel Consumption (ASC). Source: WSD estimates.

How does one explain, since 2017, the far greater rise in apparent steel consumption compared to the Micro and Macro Indices? Much of the reason is the strength in both residential construction activity and infrastructure spending — each of which account for about 12% of GDP. These activities are included in China's fixed asset investment figure that accounts for about 45% of the country's GDP (when excluding the imbedded, and unknown, figures for land sales and M&A activity). FAI accounts for about 92% of steel consumption.

Chinese apparent steel demand in 2020 may rise about 5% after an 8% increase in 2019. Looking ahead to 2021, assuming significant carryover of the Chinese government's economic stimulation programs, apparent steel demand

may increase a further 2%.

Table 1 presents figures on a year-to-year change basis for June 2020 that indicate the discrepancy between the Micro and Macro Indices' figures and apparent steel consumption.

Table 1

Discrepancy Between Micro and Macro Indices' Figures and Apparent Steel Consumption

Item for June 2020	Year-to-year % change
Macro index	(6.3)
Fixed asset investment	(29.3)
Retail sales	(1.0)
M2 money supply	15.1
Value added by industry	5.0
Micro index	7.1
Electricity production	8.1
Cement	(4.2)
Industrial boilers	(2.3)
Internal combustion engines	(2.9)
Metal-cutting tools	(20.9)
Large- and mid-sized tractors	72.3
Locomotives	(33.6)
Automotive output	22.4
Ships	(2.5)
Power generators	40.0
Air conditioners	0.8
Building square meters	8.8
Apparent steel consumption	8.3

This report includes forward-looking statements that are based on current expectations about future events and are subject to uncertainties and factors relating to operations and the business environment, all of which are difficult to predict. Although WSD believes that the expectations reflected in its forward-looking statements are reasonable, they can be affected by inaccurate assumptions made or by known or unknown risks and uncertainties, including, among other things, changes in prices, shifts in demand, variations in supply, movements in international currency, developments in technology, actions by governments and/or other factors. ♦