

Fastmarkets

US Special Bar Quality (SBQ)

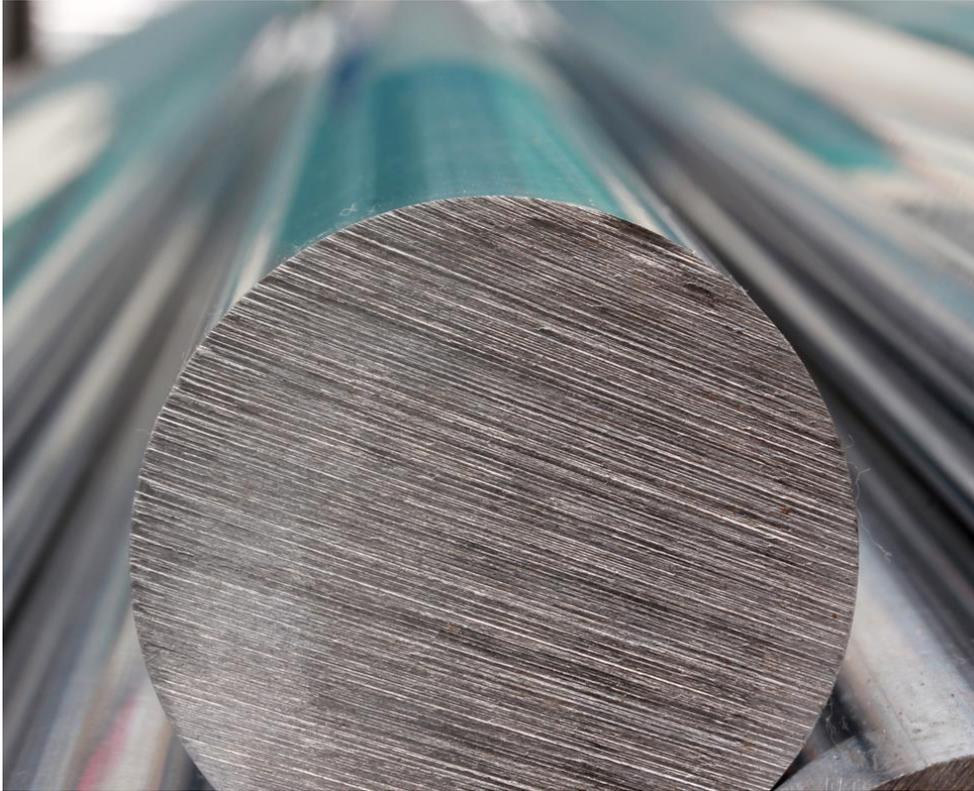
Drivers of Volatility



February 23, 2023



SBQ is used to make *tougher* engineered steels



- SBQ exhibits high resilience and tolerance for metal fatigue in moving parts in machinery and vehicles
- Made in a range of carbon and alloy grades
- Can be shaped into round, flat, square and hexagonal bars
- Used for more demanding processing and end-use applications than merchant bar quality (MBQ) steel

SBQ used to manufacture equipment materials and parts

- Used in **hot and cold forging, machining and cold drawing** industries
- Used to make **bearings, gears, electric motor shafts, valves, crankshafts, automotive hand tools and drill-string components**



- Suppliers to OEMs make parts from SBQ bars for the **automotive, oil & gas, construction, agricultural, industrial, and aerospace** original equipment manufacturers

Fastmarkets assesses monthly SBQ spot prices for 5 round bar grades

Hot-Rolled SBQ

MB-STE-0208

Steel bar hot-rolled SBQ 1-inch round [1000 series \(carbon\)](#)

MB-STE-0207

Steel bar hot-rolled SBQ 1-inch round [4100 series \(alloy\)](#)

Cold-Finished SBQ

MB-STE-0205

Steel bar cold-finished 1-inch round [1018 \(carbon\)](#)

MB-STE-0206

Steel bar cold-finished 1-inch round [12L14 \(carbon\)](#)

MB-STE-0204

Steel bar cold-finished 1-inch round [4140 \(alloy\)](#)

Fastmarkets SBQ Specifications

- **Quantity:** Min 10 tons
- **Location:** fob US mill
- **Unit:** USD per hundredweight (cwt)
- **Publication:** Monthly, third Friday
- **Raw materials surcharges** included

'Google'
Fastmarkets Steel
Methodology

<https://www.fastmarkets.com/about-us/methodology>

SBQ Pricing

Transaction Price = Base Price + Scrap + Alloys + Energy

Scrap surcharges are calculated by a variety of methods

- **Nucor's Methodology**

Two-month rolling average of Fastmarkets' No1 Busheling index, delivered Midwest mill, including current and prior month.

- **SDI's Methodology**

Current month's average of Fastmarkets' No1 bundles price for Chicago, Cleveland and Pittsburgh.

- **Baselines**

Mills typically have a baseline amount that is subtracted from scrap price.

Nucor's Methodology

Calculating Nucor's Scrap Surcharge

Two-month rolling average January-February 2023:

\$430 per ton

Subtract Program Baseline

\$170 per ton

March Monthly Surcharge

\$260 per ton or \$13 per hundredweight



SDI's Methodology

Calculating SDI's Scrap Surcharge

Average of January 2023 No1 Bundles

Chicago, Cleveland and Pittsburgh

\$413.67 per ton

Subtract Program Baseline

\$115 per ton

February Monthly Surcharge

\$298.67 per ton (\$14.93 per hundredweight)



SBQ Pricing

Transaction Price = Base Price + Scrap + Alloys + Energy

Alloy surcharges calculated by a variety of methods

Producers subtract baselines, multiply by 70-85% yields, and take other steps to smooth price shifts.

Base price shifts can move transaction prices

Producers may adjust spot market base prices on a periodic basis.

Energy surcharges

Some producers add energy or natural gas charges.

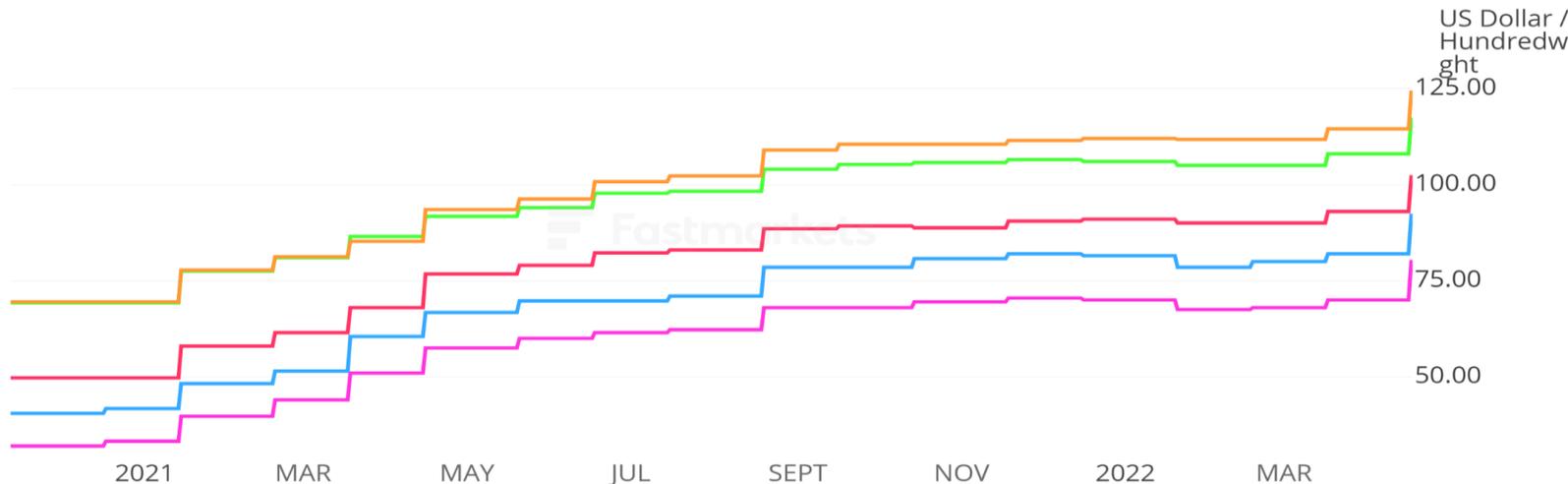
SBQ grades all moved higher Nov 2020-April 2022

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SBQ Hot-Rolled & Cold Finished Grades Nov 2020-April 2022

- Mid MB-STE-0208 - Steel bar hot-rolled special bar quality (SBQ) 1-inch round 1000 series (carbon), fob mill US, \$/cwt
- Mid MB-STE-0207 - Steel bar hot-rolled special bar quality (SBQ) 1-inch round 4100 series (alloy), fob mill US, \$/cwt
- Mid MB-STE-0206 - Steel bar cold-finished 1-inch round 12L14 (carbon), fob mill US, \$/cwt
- Mid MB-STE-0205 - Steel bar cold-finished 1-inch round 1018 (carbon), fob mill US, \$/cwt
- Mid MB-STE-0204 - Steel bar cold-finished 1-inch round 4140 (alloy), fob mill US, \$/cwt



- Grades moved higher together
- Leap in prices in March and April amid a surge in demand in a "buyer panic" after Russian invasion of Ukraine raised supply chain concerns.
- Controlled order entry with extended lead times for hot-rolled SBQ
- Supply more constricted in hot-rolled SBQ than cold-finished

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SBQ grades, lower May-December 2022, now rising again

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SBQ Hot-Rolled & Cold Finished Grades Feb 2022-Feb 2023

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- Mid MB-STE-0207 - Steel bar hot-rolled special bar quality (SBQ) 1-inch round 4100 series (alloy), fob mill US, \$/cwt
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Prices moved lower in line with falling raw materials cost from May to December

Balance of supply and demand improving

Prices moving higher in January and February 2023 in line with rising scrap costs

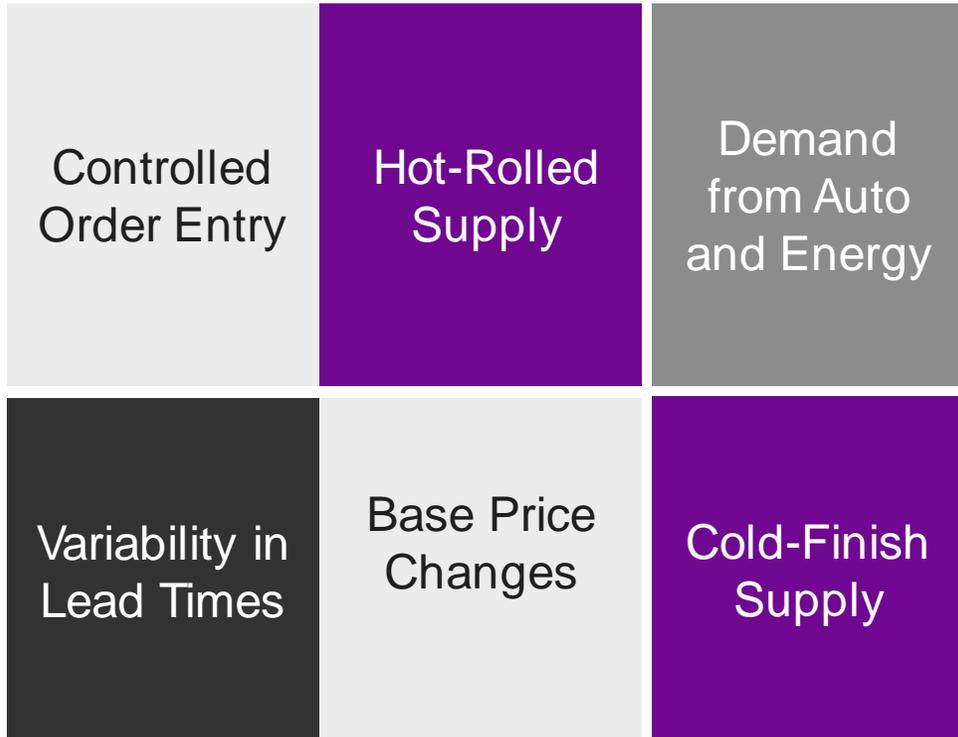
Contract base prices for 2023 reflect 2022 spot market gains

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Factors shaping US SBQ spot market prices over the past year



SBQ price trends primarily shaped by:

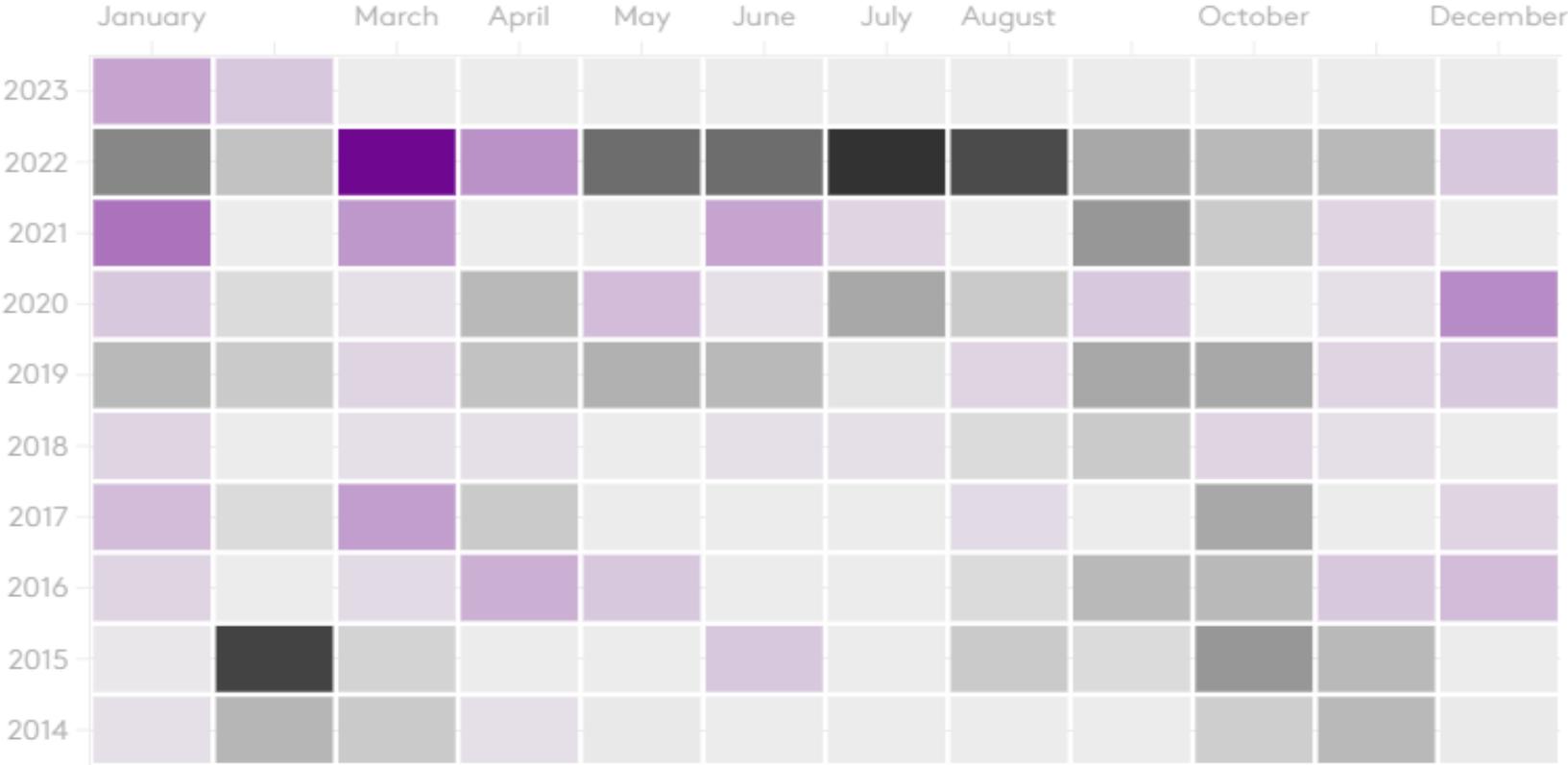
- ❑ Volatile scrap and alloy prices
- ❑ Controlled order entry for hot rolled SBQ spring 2022
- ❑ Hot-rolled supply increasing, lead times shrinking starting in summer 2022
- ❑ Base prices rising in early 2022, stabilizing by year and now falling at some mills
- ❑ Cold finished supply tightened in spring 2022 but had improved with shorter lead times by the end of the year.
- ❑ Steady automotive and recovering energy demand

Busheling prices have been extremely volatile

Monthly price changes in No1 Busheling Chicago 2014-2023



USD/gross ton -110 200



- Biggest gain March 2022
- Biggest drop July 2022
- First increase during the month of February since 2010

Source: Fastmarkets MB, STE 0232 Steel scrap, No1 Busheling, consumer buying price, delivered mill

SBQ-busheling spread significantly widened in 2021-2022

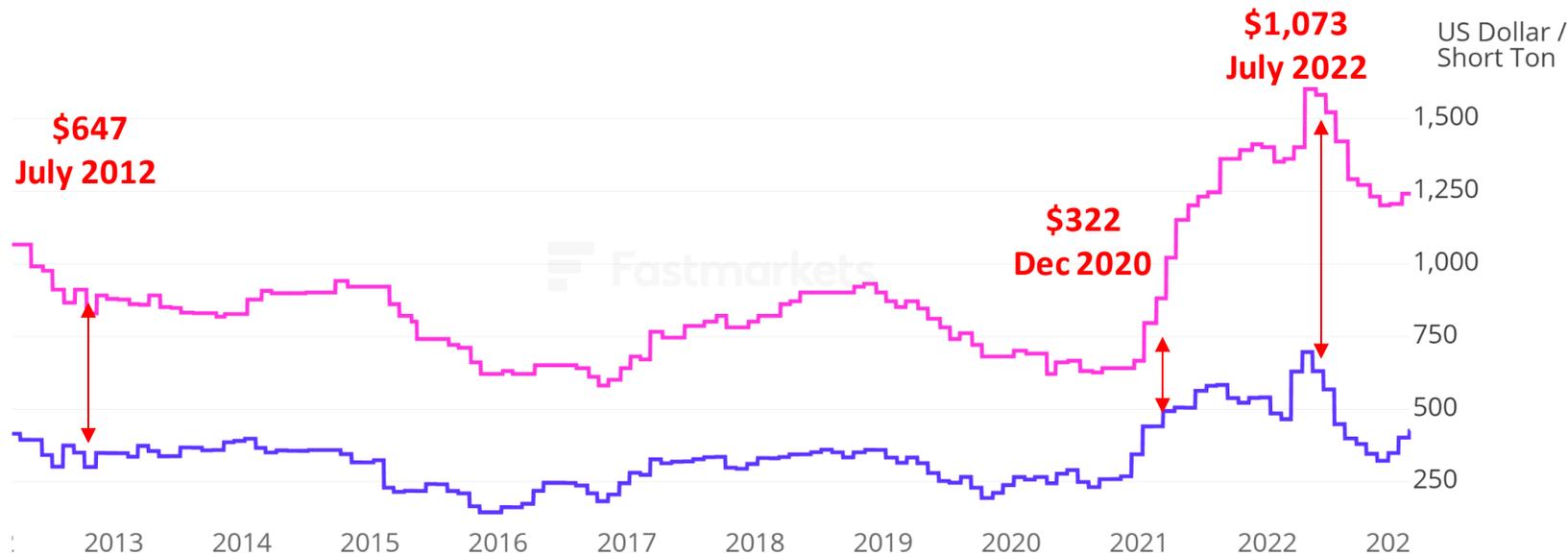
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SBQ and No1 Busheling

- Mid MB-STE-0208 - Steel bar hot-rolled special bar quality (SBQ) 1-inch round 1000 series (carbon), fob mill US, \$/cwt
- Mid MB-STE-0422 - Steel scrap No1 busheling, index, delivered Midwest mill, \$/gross ton

Unit conversion has been applied to the values in this document. All compatible prices are in [Short Ton]



- Highest spread in past 10 years was July 2022: \$1,073/t
- Lowest spread in 10 years was December 2020: \$322/t
- From 2012-2019, the spread fluctuated within a narrower range

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SBQ-busheling spread has narrowed since July 2022 peak

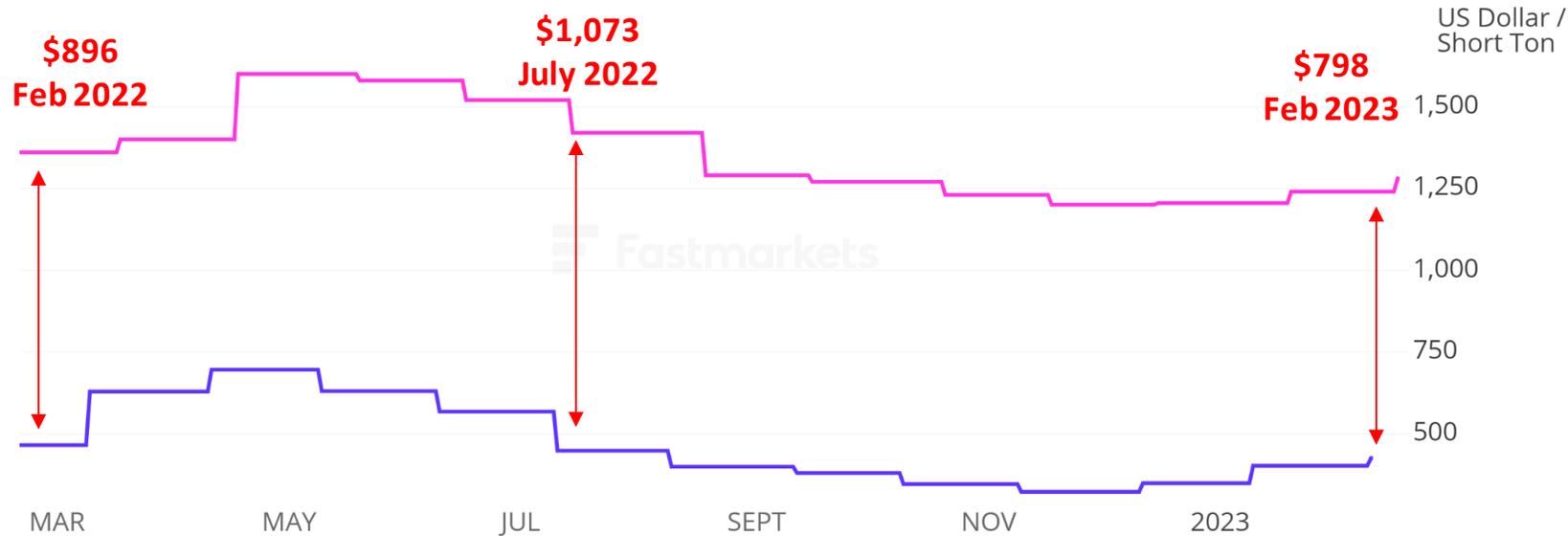
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SBQ and No1 Busheling

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- Mid MB-STE-0422 - Steel scrap No1 busheling, index, delivered Midwest mill, \$/gross ton

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Trend reversal led by:

- Sliding surcharge costs
- Base price stabilization
- Shorter lead times
- Margins remain wide by historic norms

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SBQ is a less volatile and more comprehensive measure

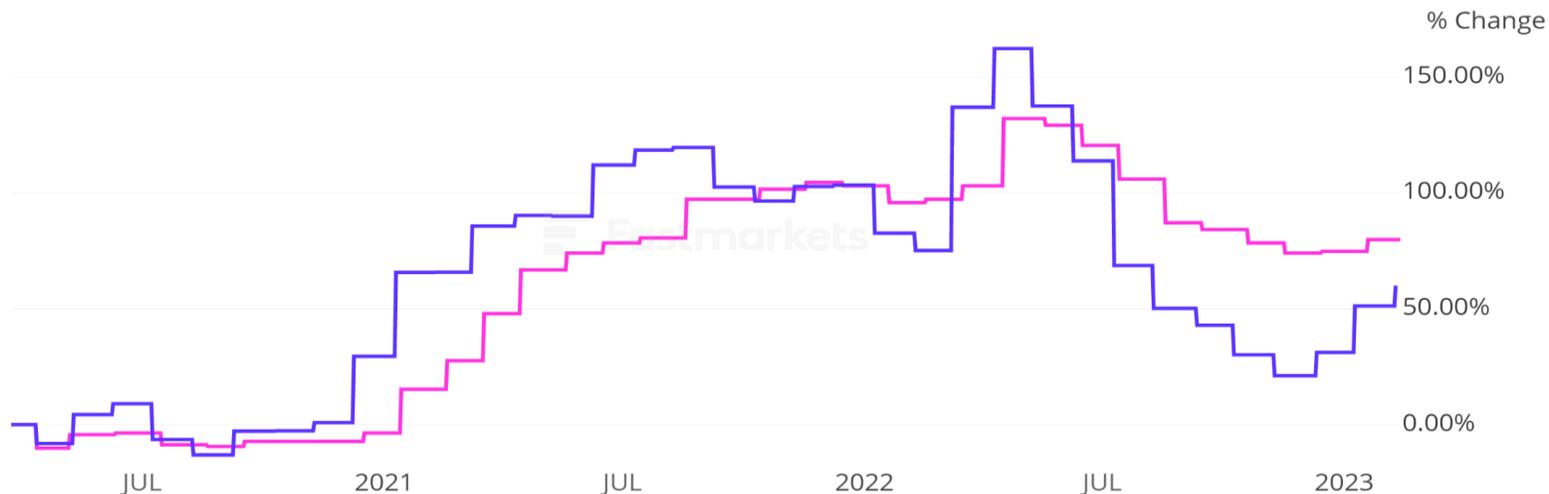
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SBQ and No1 Busheling

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Percentage shifts in prices for SBQ & busheling

- No1 busheling scrap moved up at a faster rate than SBQ and declined more rapidly.
- SBQ moved in smaller increments because it starts as a larger number and it captures a broader array of raw material surcharges (scrap and alloys), as well as base price shifts.

Methodology



Methodology overview

- Fastmarkets' methodology and expertise has defined our status as a market-leading Price Reporting Agency for more than 130 years.
- Our procedures align with core IOSCO principles and we complete external audits for our key benchmarks annually. We are independent of the markets we serve so users can be confident that our pricing processes are impartial, market-reflective and market-aligned.
- All of our pricing methodologies and related procedures may be viewed by anyone at any time on the Fastmarkets website:
<https://www.fastmarkets.com/methodology>
- The following slides detail and explain the main methodological steps following during our assessment process



We have invested in process and technology that enhances the reliability of our data



Trained price reporters



Market data is collected



Data analysis



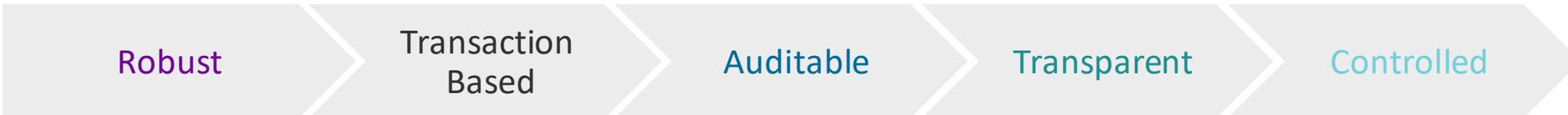
Pricing data into MInD



Our integrated peer-review system



Data published



Assessment interpretation



- The assessor's goal, as stated in our methodologies, is to reflect:

'The prevailing level at which a commodity of stated specification has, or could be expected to have transacted in the 'open and competitive' market over a defined period of time'



The reporter's confidence in the data's reliability

The **confidence** level is judged by the assessor and may vary according to market norms, but would typically be based on factors such as:

For deals, bids or offers:

- 1 Transparency of the activity,
- 2 Whether reported directly or 'heard'
- 3 Corroboration by other participants
- 4 Level of detail provided

For indication data:

- 1 Justification provided
- 2 Visibility and activity level in the market
- 3 Prior reliability.



The significance of the data in determining the tradeable level

The **significance** of a data point is determined based the following hierarchy:

- 1 Deals
- 2 'Tight' bids/offers offers (*within range of deal and/or indication data*)
- 3 Indications of a tradeable level
- 4 'Wide' bids/offers (*outside range of deal and/or indication data*)

** firm bids higher than deals or offers lower than deals may be considered high significance if deemed to demonstrate a clear directional change in market floor or ceiling levels.*

Assessment interpretation (cont'd)

- Considered together, the **confidence** and **significance** principles allow us to filter down a set of input price data received from the market to arrive at a reasoned assessment that realizes our pricing objective
- The assessment will represent what we consider to have been the tradeable level of the open/competitive market over the assessed period (e.g., daily, weekly, monthly) based on the data we consider to be most credible and most instructive
- Full pricing window approach



**Final Assessment
High/Low**

“the prevailing tradeable level of the ‘open/competitive’ market”



Thank you



Contact us:
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