Global steel industry overview

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World Steel Association (worldsteel)

1 December 2020

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Disclaimer

Antitrust

As worldsteel meetings are also meetings of competitors, antitrust and competition law concerns are paramount and certain areas of discussions must be totally avoided:

- No discussions on current or future pricing, pricing terms or any component of price
- No discussions on current or future production output or current or future capacity or capacity utilisation involving non-public information, or desired capacity or production output or capacity utilisation levels, or coordinated capacity, capacity utilisation or production output increases or decreases
- No discussions on allocating geographical or product markets or customers or classes of customers
- No discussions on concerted actions involving costs (including concerted actions against suppliers)
- No discussions on future raw material prices, price terms or negotiating strategies
- No discussions regarding how to respond to price increases or other charges from suppliers or whether or how to pass on any costs to customers
- No discussion on contemplated trade actions or complaints about trade flows
- No discussion on non-public company-specific forward looking commercial strategies or plans

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worldsteel – who we are

The World Steel Association (worldsteel) is a non-profit organisation.

It has headquarters in Brussels, Belgium. A second office in Beijing, China, opened in April 2006.

worldsteel represents steel producers, national and regional steel industry associations, and steel research institutes.

Members represent around 85% of global steel production.

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worldsteel – our key focus areas

worldsteel is active in key areas of interest to the steel industry:

Automotive

Climate change and environment

Communications

Construction

Education and training

Life cycle assessment

Raw materials

Safety and health

Sustainability

Steel market analysis

Technology

COVID-19 impact on steel output and demand in 2020 and in the short-run

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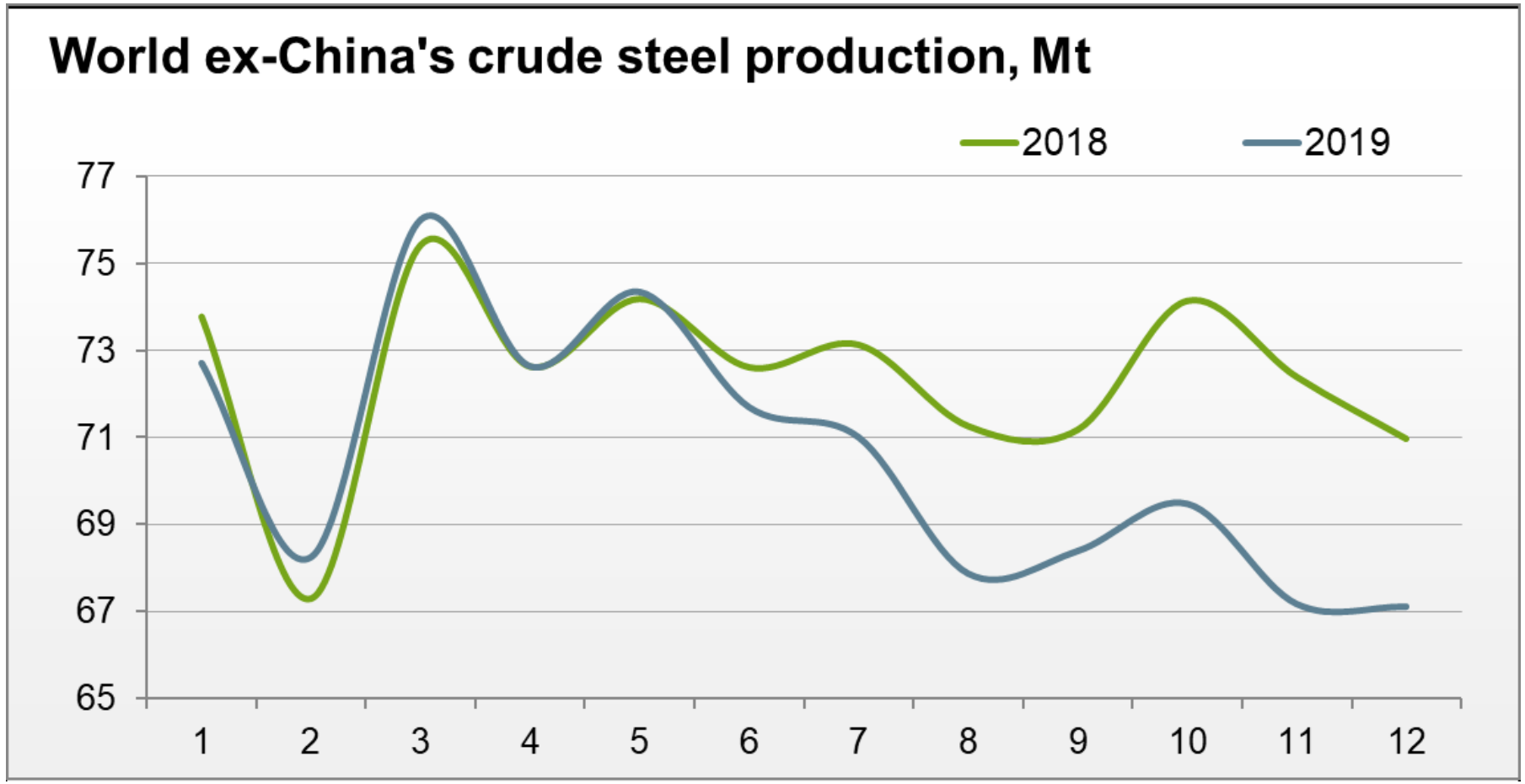
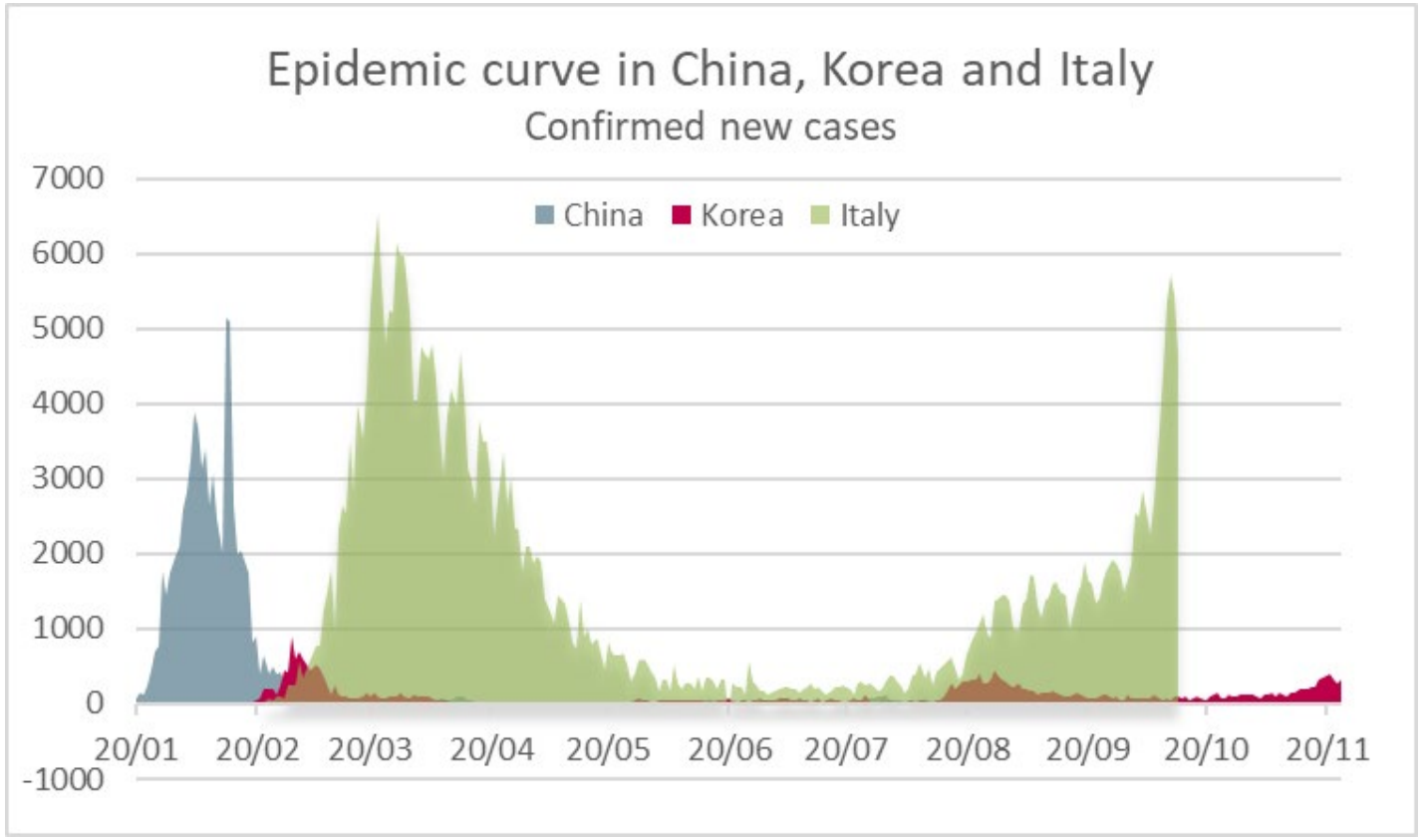
End-2019: The global steel industry felt considerable recessionary pressures in 2019 and was hoping for a mild recovery in 2020



Source: worldsteel

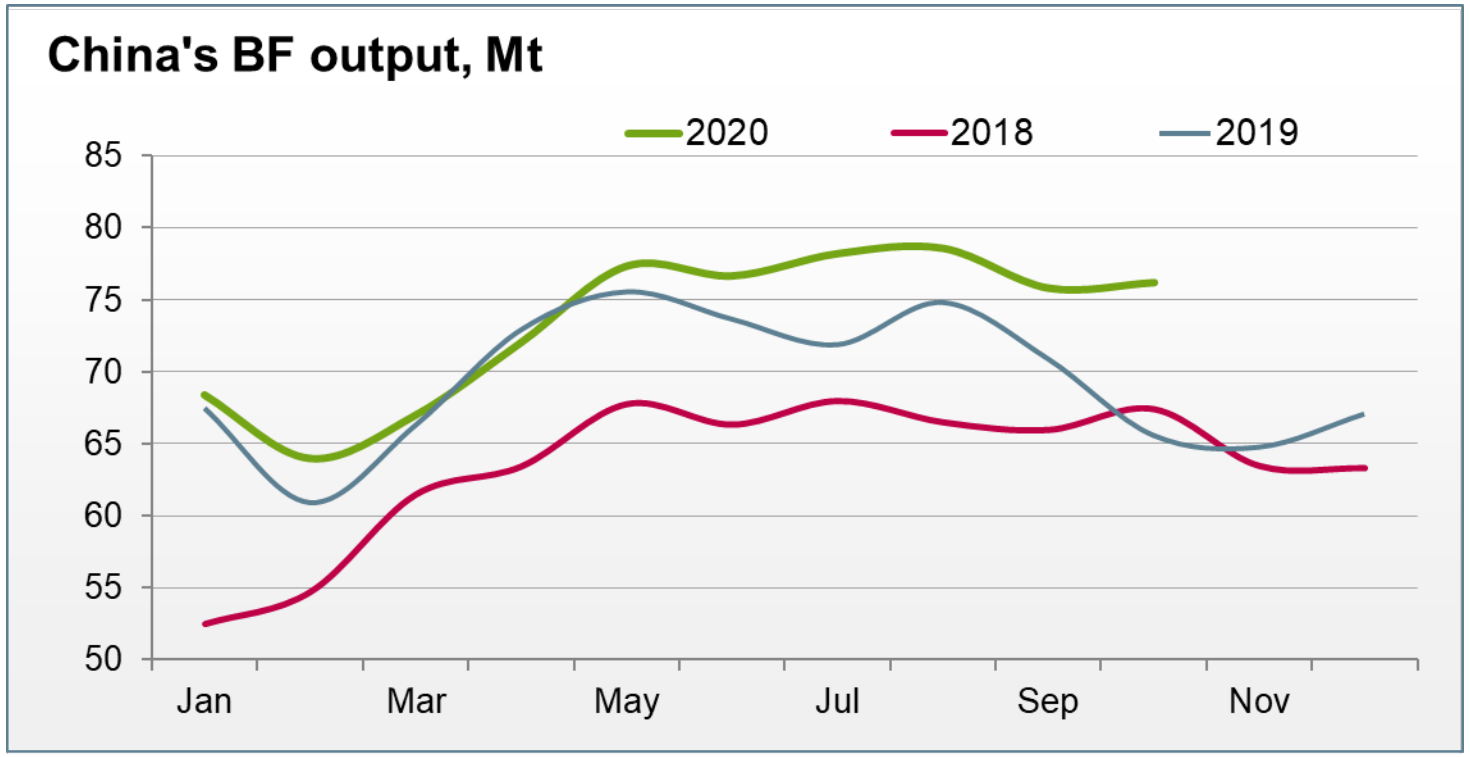
2020: the COVID impact



Source: CEIC

Many countries still having difficulty in containing the pandemic and saw number of new cases increasing again since mid-August

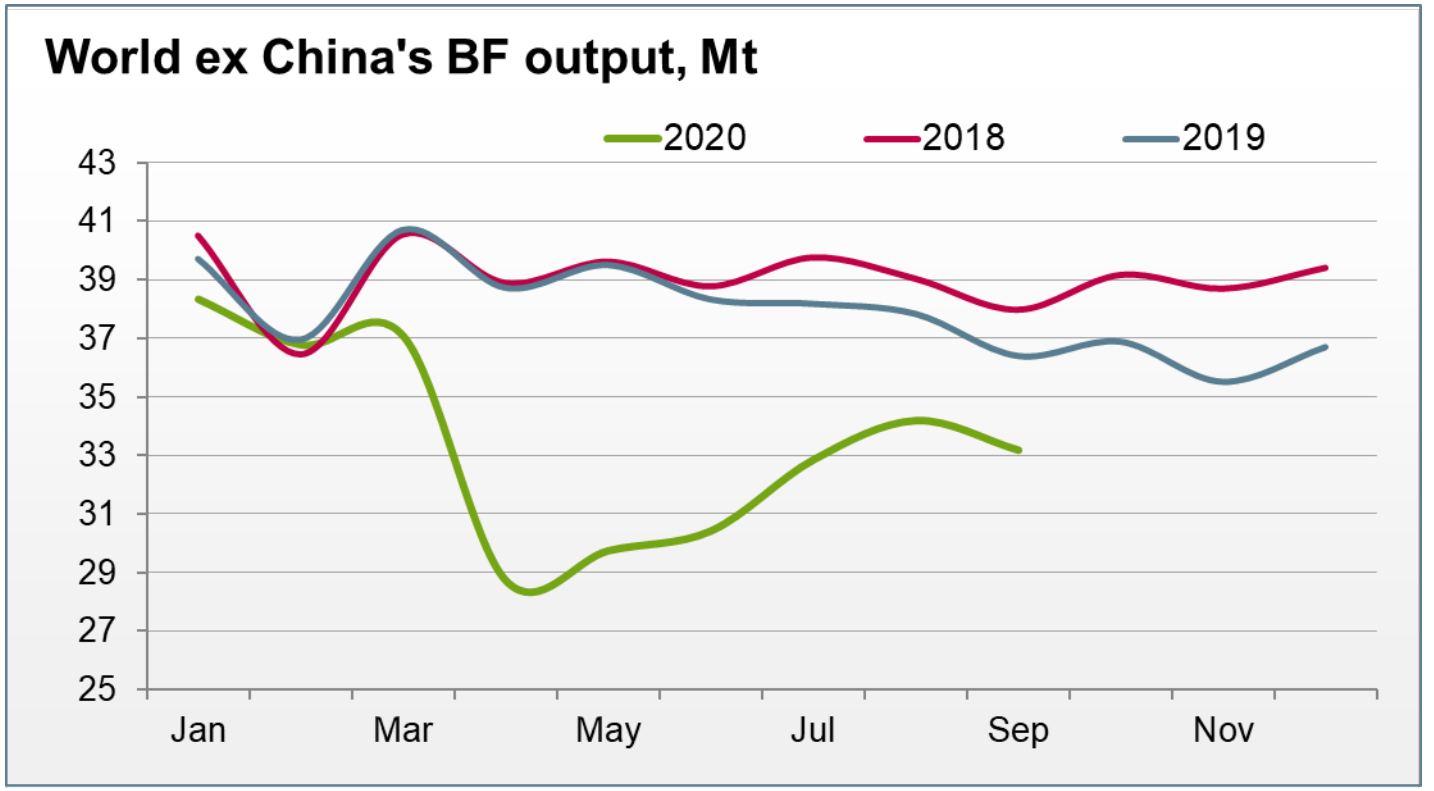
The COVID impact – China BFs



Source: worldsteel

Continued BF output surge in China: up 4.9% yoy in 10m-20

The COVID impact – world ex-China BFs



Source: worldsteel

World ex-China BF output down 13% in 9m-20: EU, US, Japan down about 20%, India down 14%, Korea down 6%, CIS up 2% yoy

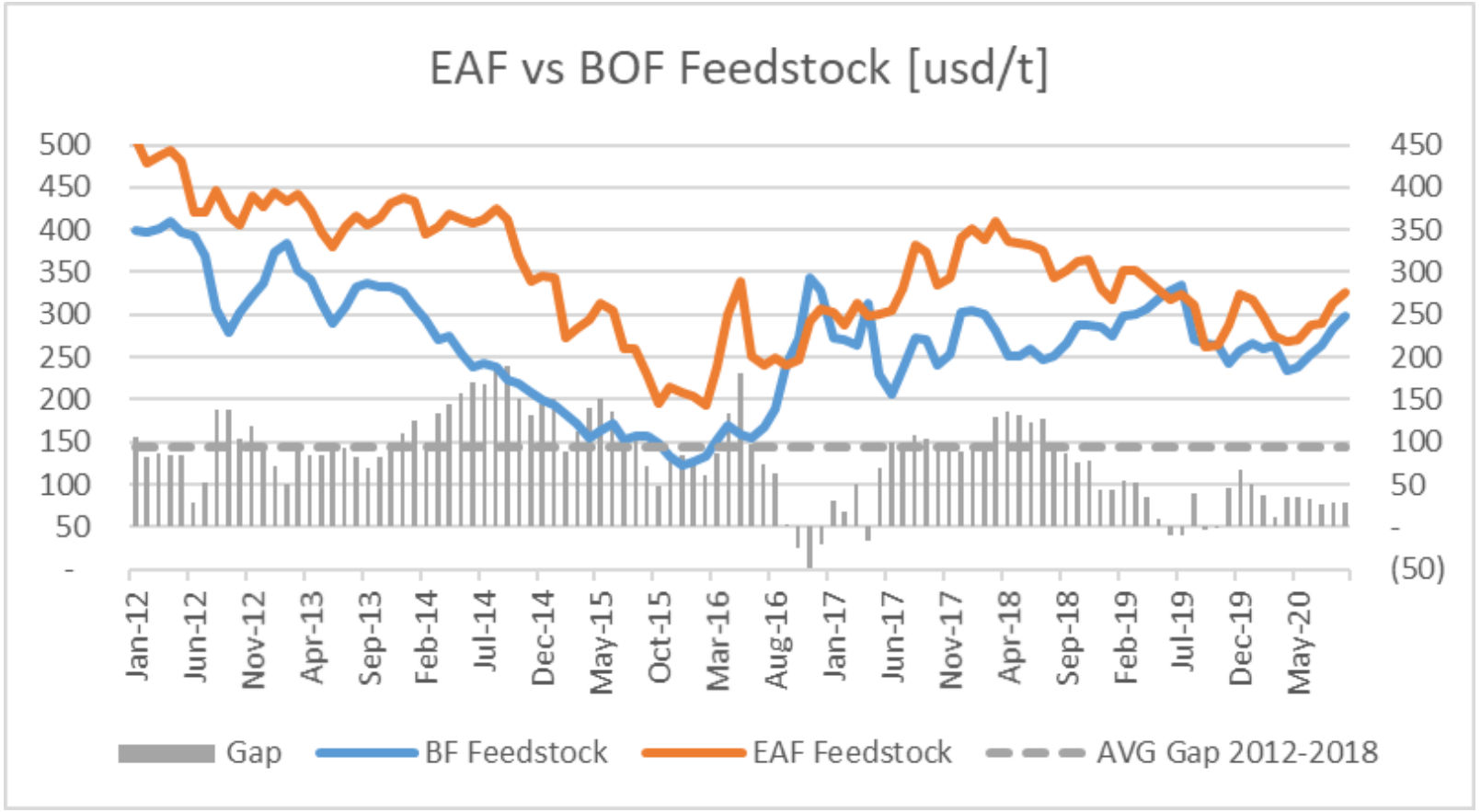
The COVID impact – steel demand

Steel demand, finished steel (SRO October 2020)

	Mt			%			
	2019	2020	2021	19/18	20/19	21/20	2021 as % of 2007
World	**1 766.7**	**1 726.4**	**1 795.1**	**3.5/ 1.3***	**-2.3**	**4.0**	**146.5**
European Union (28)	158.3	134.5	149.2	-5.5	-15.1	10.9	73.5
Other Europe	33.8	35.2	39.3	-10.0	4.0	11.9	130.0
CIS	58.9	53.6	56.5	5.9	-9.0	5.5	99.1
NAFTA	135.3	114.6	122.2	-4.0	-15.3	6.7	86.7
Central & South America	41.6	35.4	38.8	-3.0	-15.1	9.8	91.1
Africa	36.4	30.6	33.4	0.4	-16.0	9.3	146.5
Middle East	47.9	38.5	40.9	-3.5	-19.5	6.2	93.8
Asia & Oceania	1 254.5	1 284.1	1 314.7	6.6/ 3.4*	2.4	2.4	192.0
China	907.5	980.1	980.1	8.5/ 4.0*	8.0	0.0	234.2
Developing Asia excl. China	201.7	176.4	200.3	5.1	-12.5	13.6	204.4
Developed Asia	138.7	121.5	127.9	-2.4	-12.4	5.3	80.0
World excl. China	859.2	746.3	815.1	-1.4	-13.1	9.2	101.0

* World growth rates based on adjusted Chinese growth rates

Relationship between feed costs



Source: Platts
Note: Note: BF basket is 1.6 x IODEX and 0.735 x (PLV HCC Premium Low Vol FOB AUS+Panamax AUS-CHN)
*EAF basket: Scrap HMS CFR Turkey*1.1.*

Scrap has remained at relatively low cost levels

To conclude on the short-run impact

- Stark contrast between China and the RoW:
  - 2020 steel demand: China 8%, RoW -13.3%
- Recovery in 2021 expected to be partial only
  - Projected steel demand for 2021 for the RoW 815 Mt, 45 Mt lower than 2019
- Possibility of sustained demand loss over several years…
- Also expectations for long-term impact from the pandemic

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Potential impact of COVID-19 pandemic in the long-run

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Categorising megatrends

Source: Adapted from Blackrock, 2019, "Megatrends: the forces shaping our future", report accessed here on 18 June 2020.

Impact on steel business

How we make

What we make

How we position our industry & products and communicate

Steelmaking materials markets

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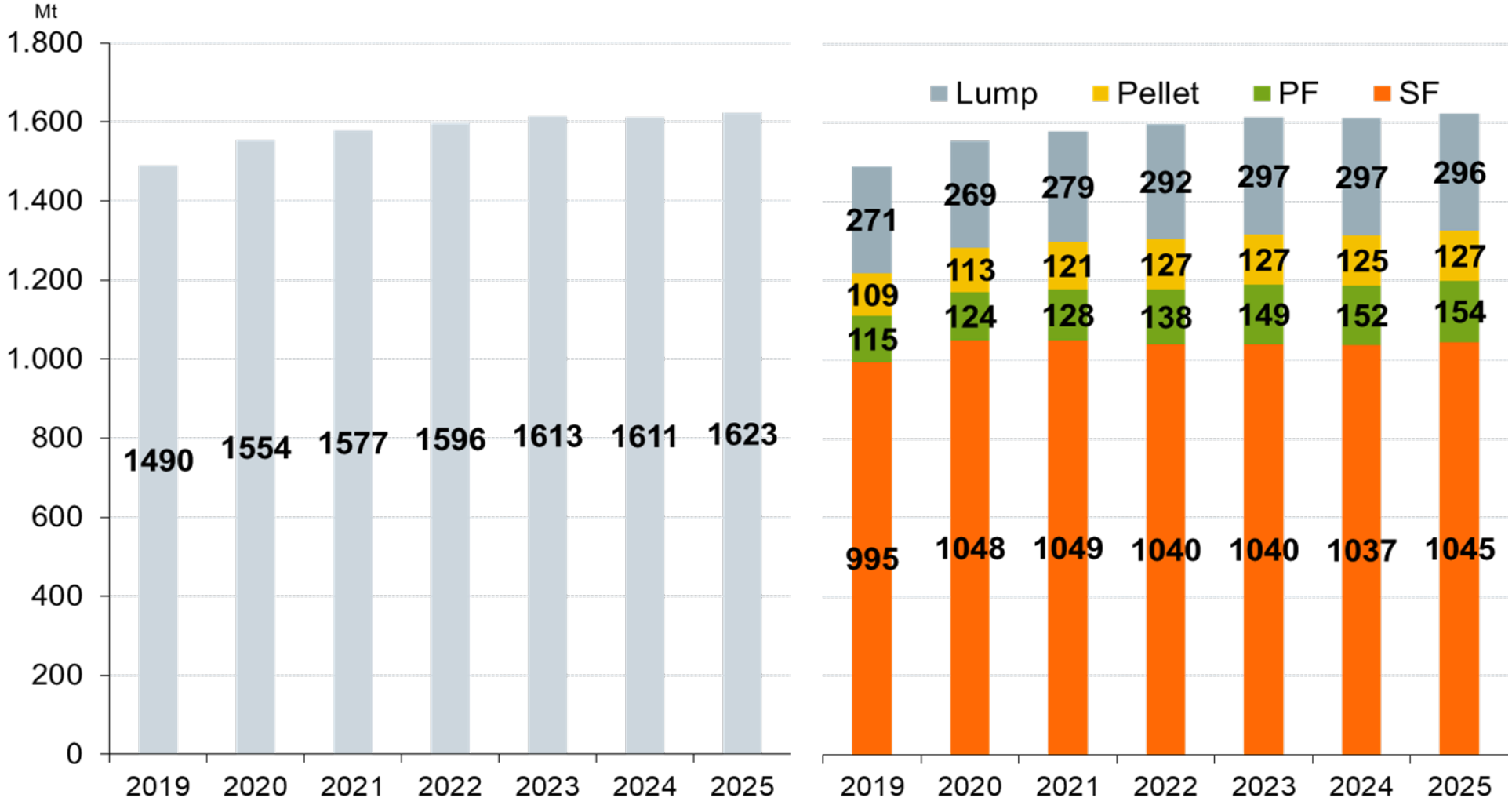
Global SB IO supply to grow by about 130 Mt over 2019 (85 Mt over 2018)



Source: worldsteel seaborne iron ore supply model

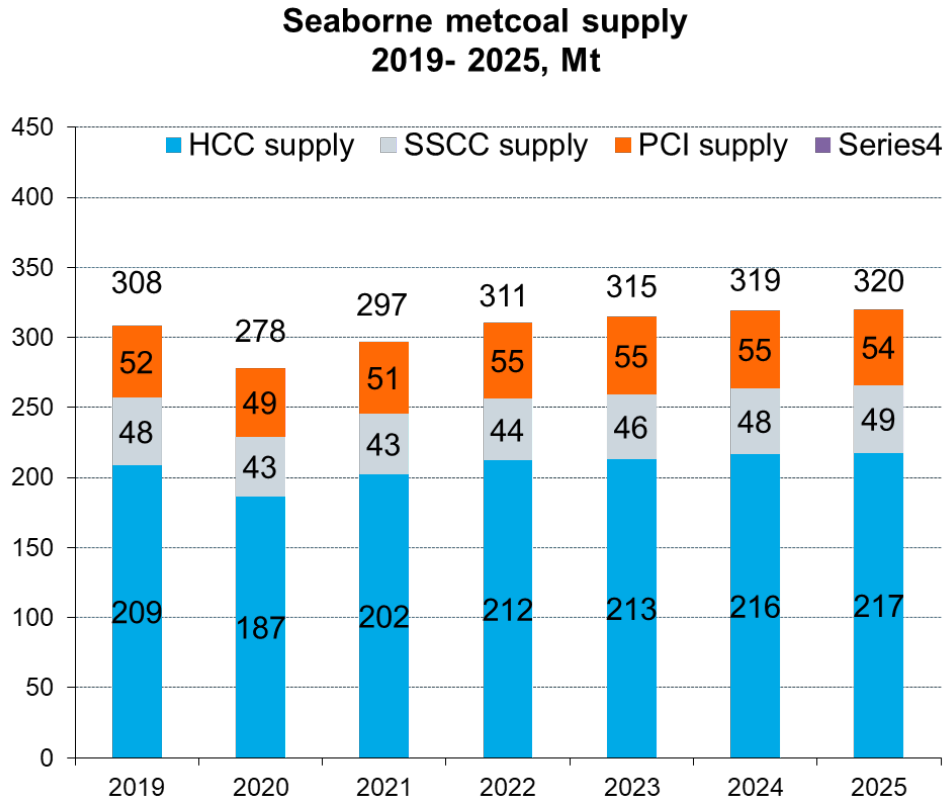
Issues in iron ore supply

- Questions over Brazilian supply: risk of delays in return of operations
  - Brumadinho dam disaster posing continued regulatory risk
  - Stricter use of wet processing of fines causing quality deterioration
  - Continued process on regulation of tailings dams and dry stacking
  - Continued disruption risk from the pandemic, particularly in Brazil
- Questions over Australian supply
  - Quality issues faced by Rio Tinto in 2019, BHP reduced Fe content
  - Impact of growing importance of ESG scrutiny

Issues in iron ore supply

- Questions over Chinese supply: sustainability of domestic supply
  - Lower quality reserves, increasing environmental costs limiting low-Al supply growth
- Questions over new supply areas
  - China's interest in developing projects in Africa appears to increase
- Responsible procurement practices gaining ground
  - Impact of harm caused by Rio Tinto project on aboriginal caves
  - CO_2 emission for beneficiation at mine sites vs CO_2 emission at the steelmaking sites

Global seaborne metcoal supply



Source: worldsteel seaborne metcoal supply model

very limited growth of about 10 Mt till 2025 (CAGR: 0.7%), insufficient to mitigate weather or operational disruptions

Issues in metcoal supply

- Outlook for new projects still insufficient to mitigate increasing risks of supply disruptions
  - Some companies avoiding coal investments, some financial institutions ceased support for coal investments
  - Severe price volatility and increasing trade frictions might also be taking a toll on interest in project development
  - Metcoal demand growth expected from India, especially considering large room for increasing PCI rate
  - Relocation of steel mills to coastal areas in China might support growth in China's demand for seaborne metcoal
  - Steel industry's CO_2 emission reduction efforts might have a growing impact on metcoal demand in the medium to long-term

China scrap import bans

- Chinese ferrous scrap imports have fallen drastically since 2017, as China has taken steps towards tightening solid waste material imports since end-2016
- Imports of some scrap were banned from 2019:
  - Steel slag with Mn>25% or Fe>80%, Jan 1, 2019
  - White goods for steel scrap collection, Jan 1, 2019
  - End of life ships for breaking, Jan 1. 2019
  - Compressed piece of scrap automobiles, Jan 1. 2019
  - Stainless steel scrap, July 1, 2019
- China scrap imports 2.3 Mt in 2017, 1.3 Mt in 2018, less than 200 th tons in 2019, remained negligible so far in 2020

Source: ArgusMedia, https://www.argusmedia.com/en/news/2119661-china-on-track-to-revive-ferrous-scrap-imports

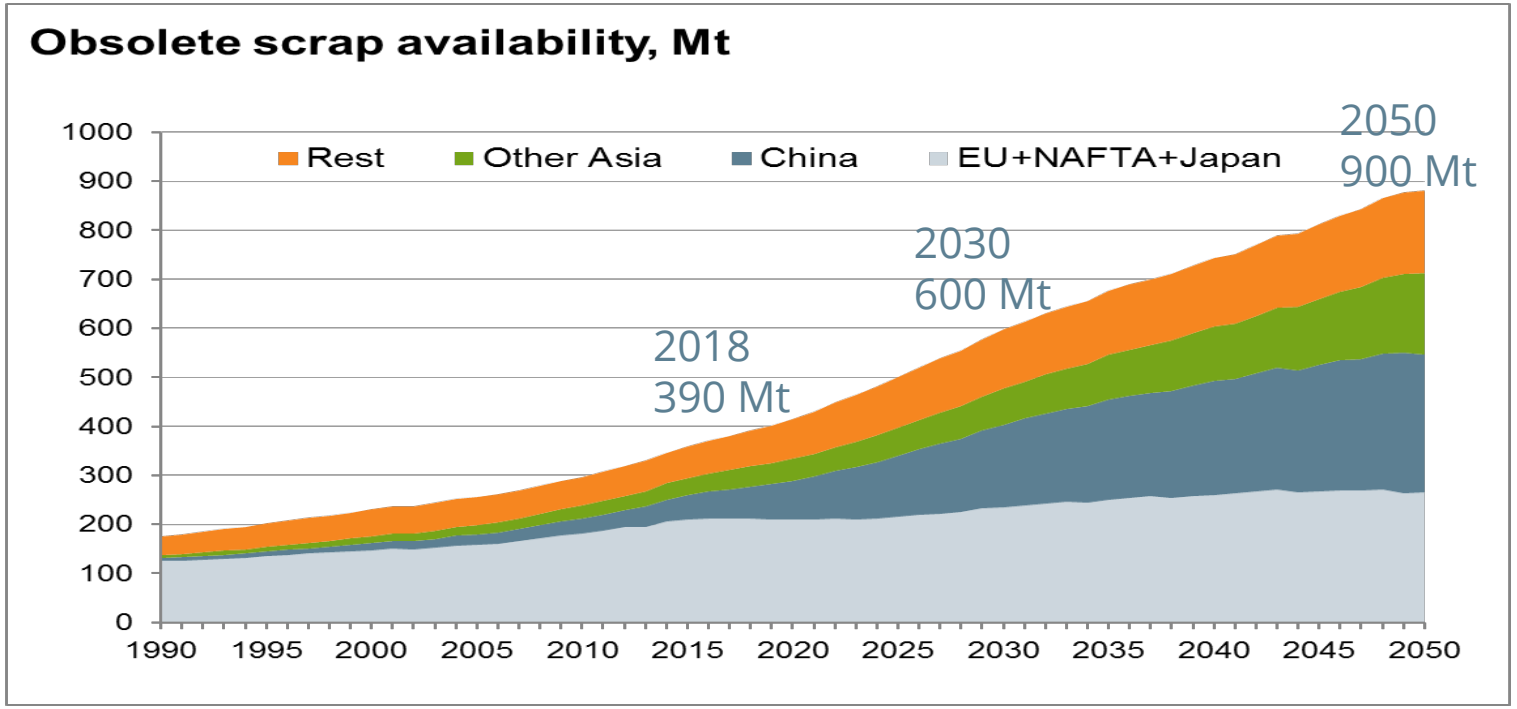
China scrap import bans

- Work underway to exempt ferrous scrap from the ban on solid waste imports effective next year, renaming it as the recycled steel material*
- China association of metal scrap utilisation (Camu) and the China metallurgical information and standardisation institute working on compiling a new standard for foreign scrap imports
- The new standard to specify the definition, category, technology requirements, quality examination and transportation among other features.*
- Scrap imports might resume in 2021 according to market reports, considering the lead time required to finalise the standardisation, ratification by authorities and so on**

Source: *ArgusMedia, https://www.argusmedia.com/en/news/2119661-china-on-track-to-revive-ferrous-scrap-imports

**https://www.mysteel.net/article/5014542-05/FEATURE--CAMU-calls-for-re-opening-scrap-import-routes.html

Obsolete scrap wave approaching

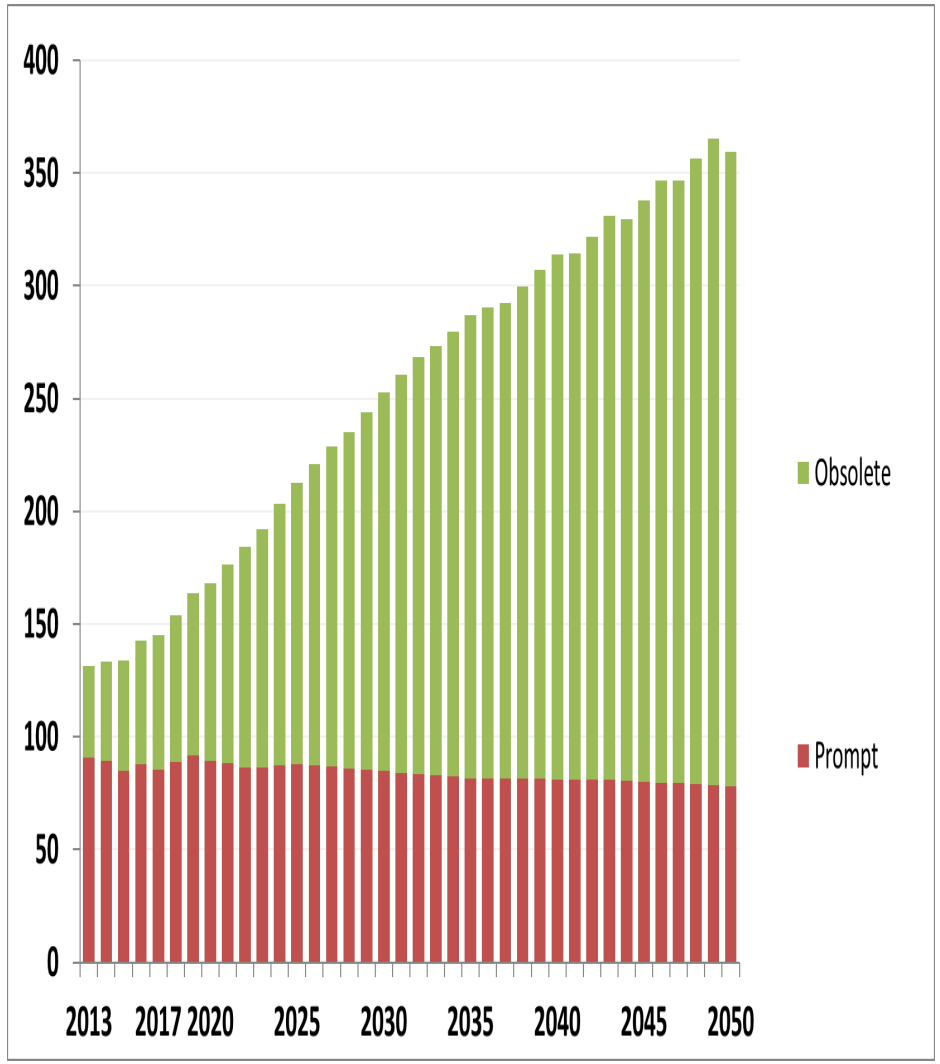


Source: worldsteel

Availability estimates from Sep-19 and hence do not reflect the impact of pandemic

China scrap availability

- Obsolete scrap availability: ~60 Mt in 2018; ~125 Mt by 2025; ~280 Mt by 2050
- China has the potential to become a scrap exporter
- Increase in scrap availability seem to be increasing scrap charge ratios and usage



Source: worldsteel

China is consuming almost all of scrap availability domestically

Higher uncertainty both for availability and usage of scrap due to the pandemic

- Steel demand might see sustained negative impact due to pandemic and this can have an impact on future scrap availability
  - Impact on employment & income
    - Might lead to delays of purchases of white goods, auto, housing
  - Might lead to reduced office, schooling, hospitality activity space and this might have an impact on demolishment activity

Concluding remarks on steelmaking materials markets

- Impact of growing importance of ESG scrutiny
- Very limited growth of metcoal, insufficient to mitigate weather or operational disruptions
- Obsolete scrap availability should continue to grow
- The pandemic brought new uncertainties over the future of scrap demand and availability
- Increasing scrap availability and environmental pressures should support EAF growth and increasing demand for metallics

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