

**Why has Iron Ore bucked the commodity trend in this unprecedented market?**

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# Bulk commodity ecosystem

Cash Settlement



## Iron Ore & Steel

- **Iron Ore (CFR China)**
- Coking Coal (FOB Australia, CFR China)
- HRC Steel (CFR ASEAN)



## Energy

- Fuel Oil
- Gasoil
- Naphtha
- Aromatics: BZ and PX
- Polyolefin: LLDPE and PP
- Methanol



## Thermal Coal

- Sub-bit (FOB Indonesia)



## Dry Bulk Freight

- Time Charter FFA (CV, CW, PV, SV, HV)
- Single Routes (C5, 2A, 3A)



## Electricity

- Electricity Futures

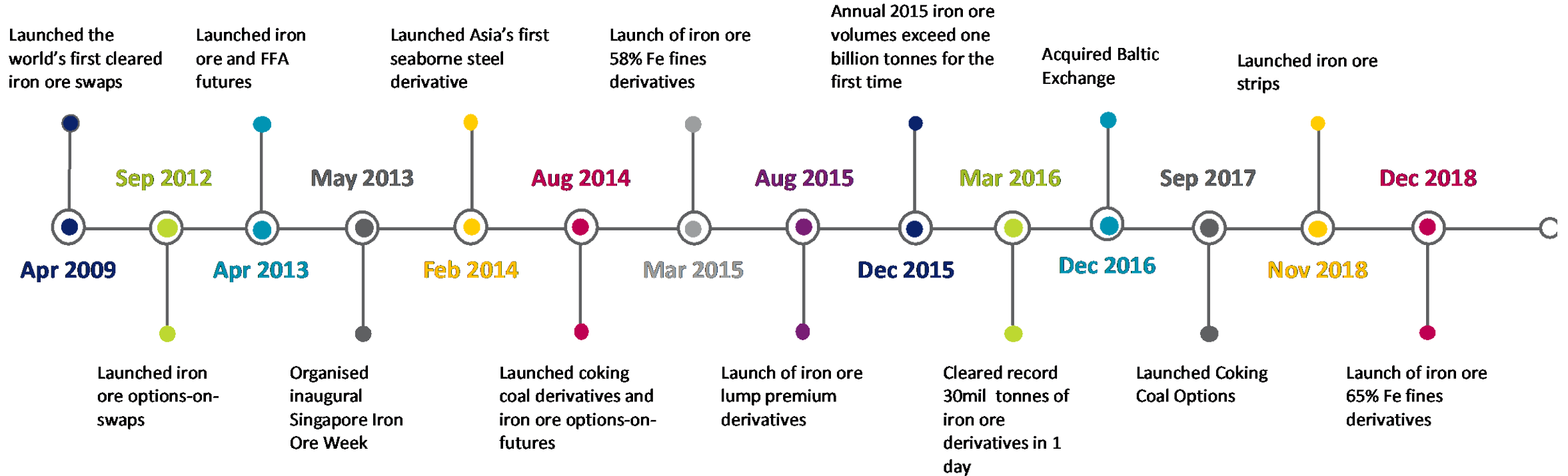
Physical Settlement



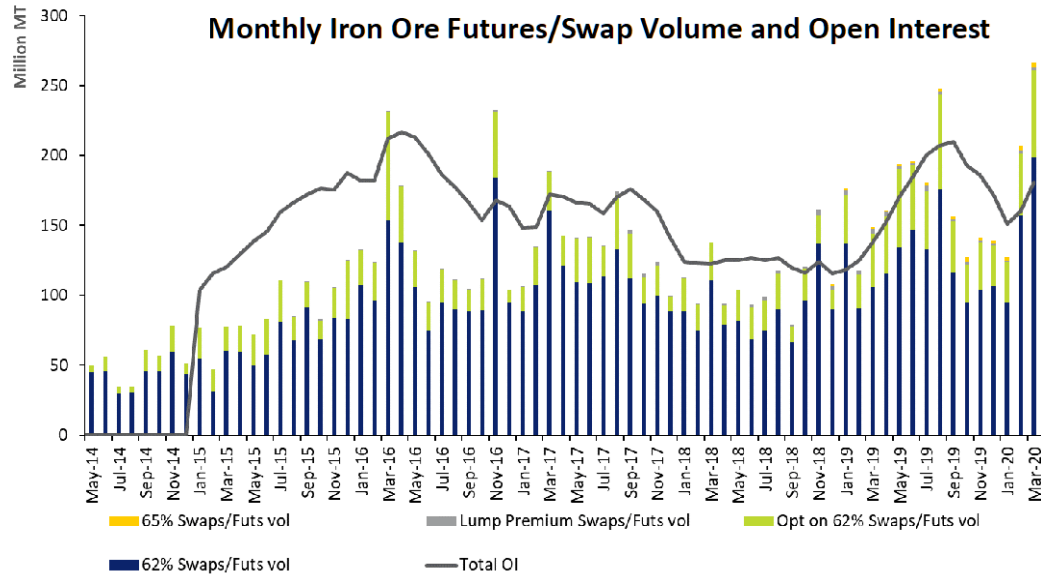
## Rubber

- SICOM Rubber Futures/Options

# Iron Ore Derivatives Evolution



# Liquidity & Diversity



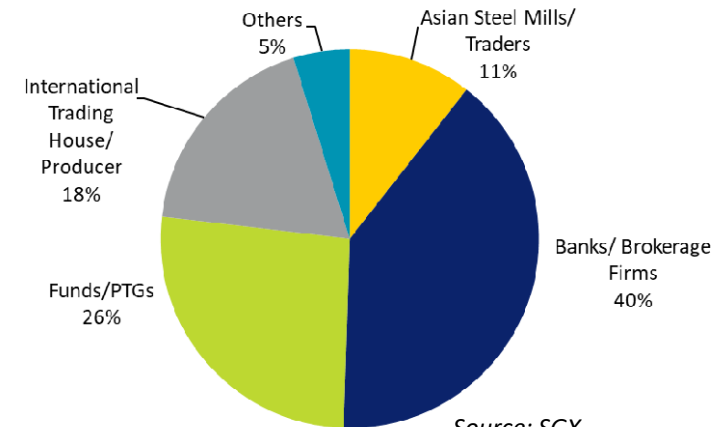
Iron Ore Swap, Futures & Options Records	Contracts	Tonnes
2012 Volume	219,767	110 mil
2013 Volume	590,846	269 mil
2014 Volume	2,825,254	579 mil
2015 Volume	7,996,210	1.05 bil
2016 Volume	15,324,256	1.67 bil
2017 Volume	16,016,160	1.65 bil
2018 Volume	13,153,401	1.32 bil
2019 Volume	19,850,916	1.99 bil
2020 Volume	5,856,991	0.59 bil

\*YTD 31 March 2020

**Global Market Share for Cleared Swaps & Options > 95%**

- **US\$ Denomination**
- **Cash settled** against monthly daily average of index prices —pricing mechanism used in physical market to ensure **highest correlation**
- Diverse market participants
- Liquidity is spread across the contract months
- Trading can be monthly, quarter or calendar
- Margin offset against FFA, coking coal and steel products on SGX

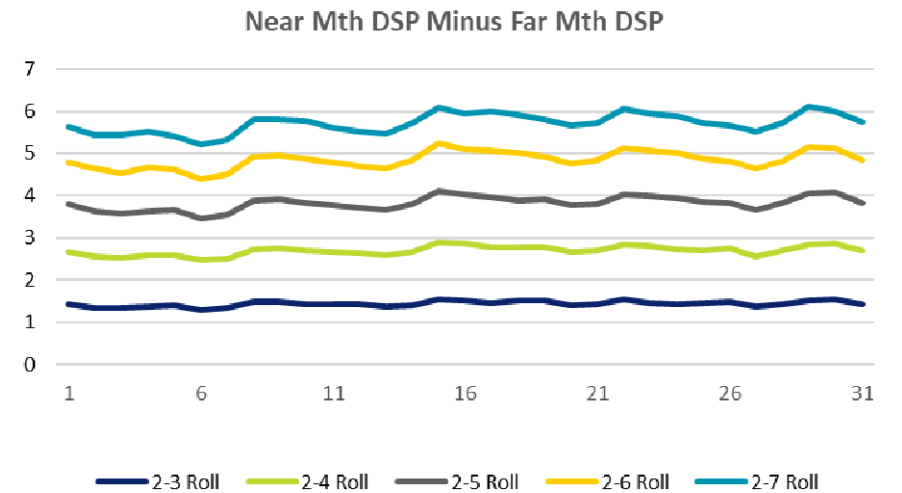
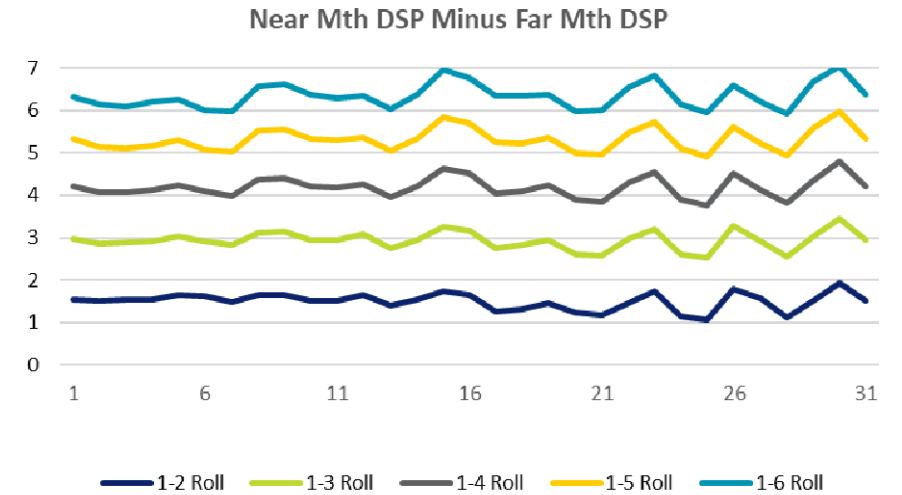
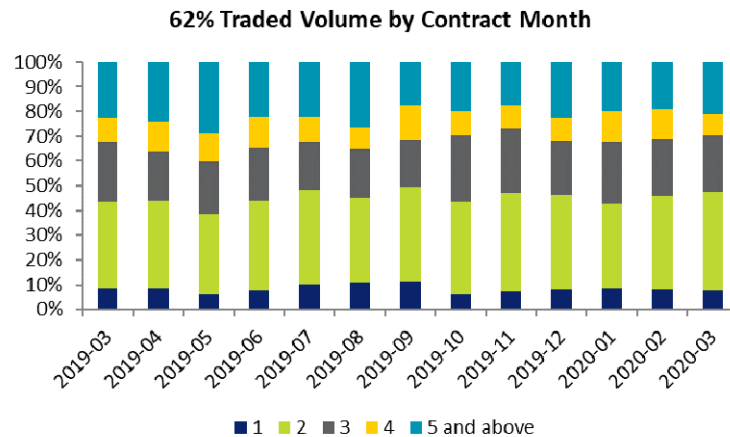
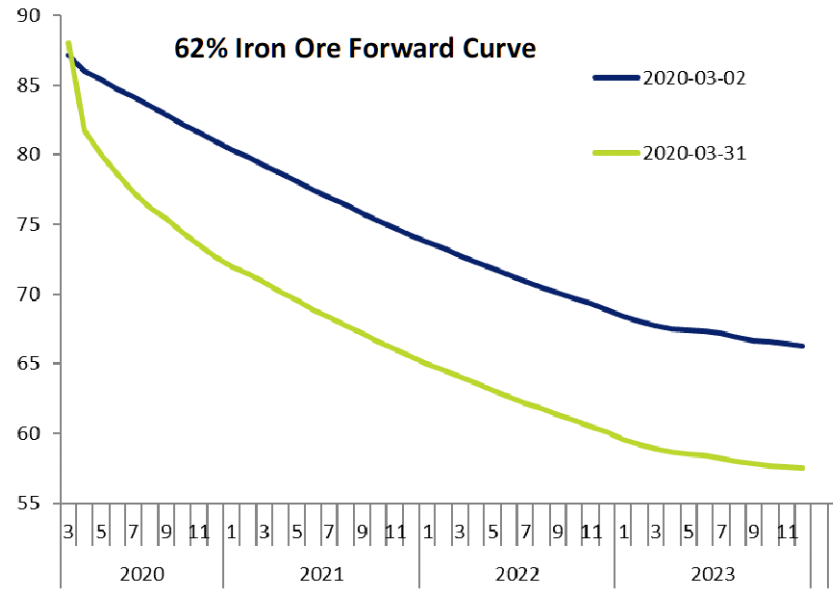
**62% Iron Ore Derivatives Customer Segments (Jan - March)**  
Showing diverse participation ecosystem



# Iron Ore Curve Structure

Monthly spread liquidity extremely important for Physical Trade

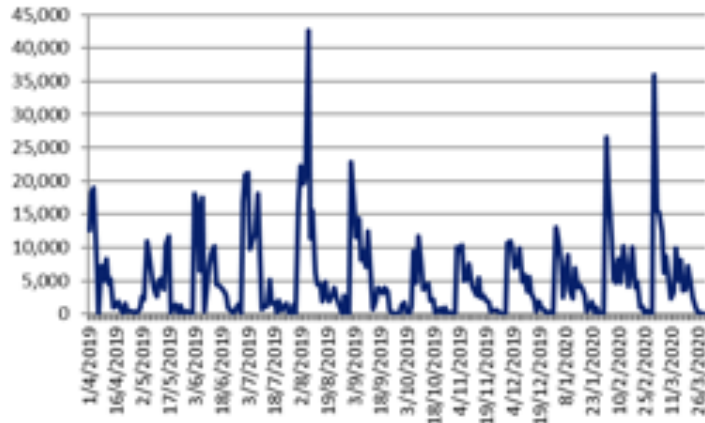
- Manage 'Quotation Period' (QP) miss-matches
- Mechanism to offset risk incurred when giving pricing flexibility
- Opportunity to trade Equities vs. Underlying



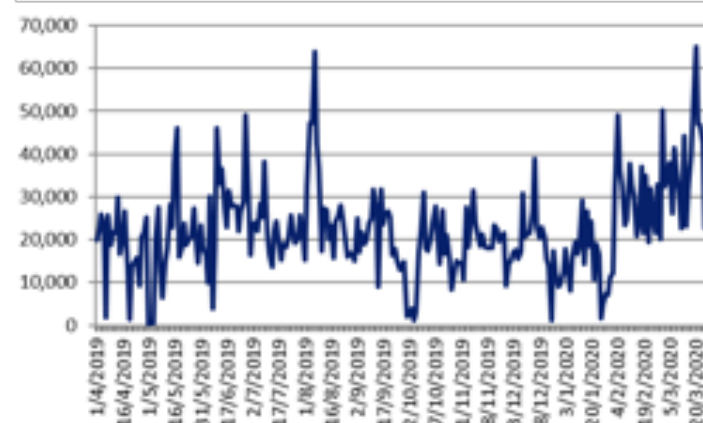
Source: SGX

# Iron Ore Curve liquidity

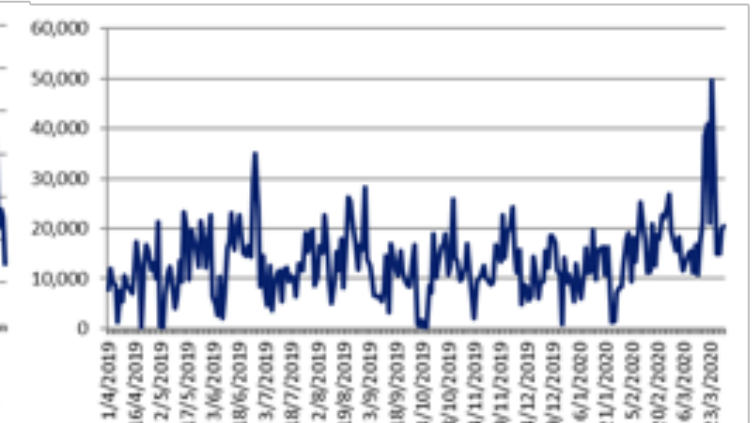
62% 1st contract month volume



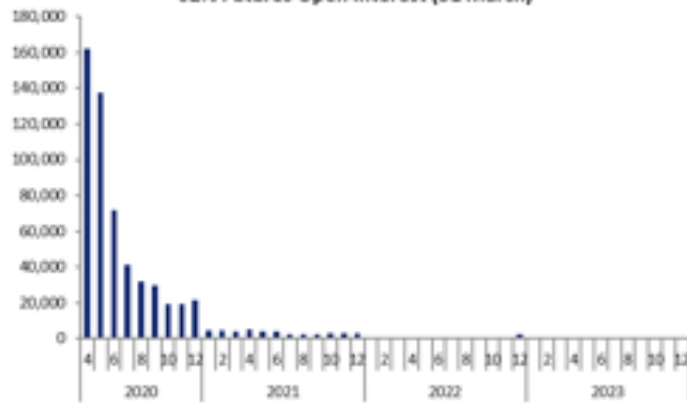
62% 2nd contract month volume



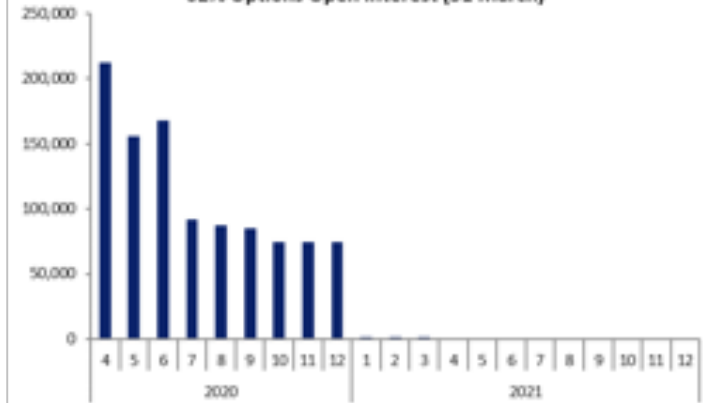
62% 3rd contract month volume



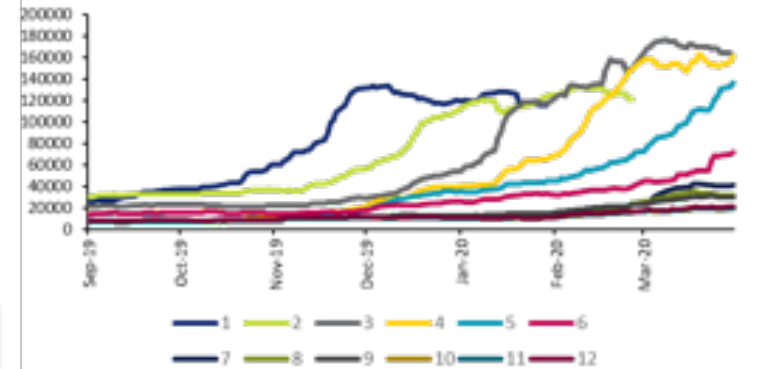
62% Futures Open Interest (31 March)



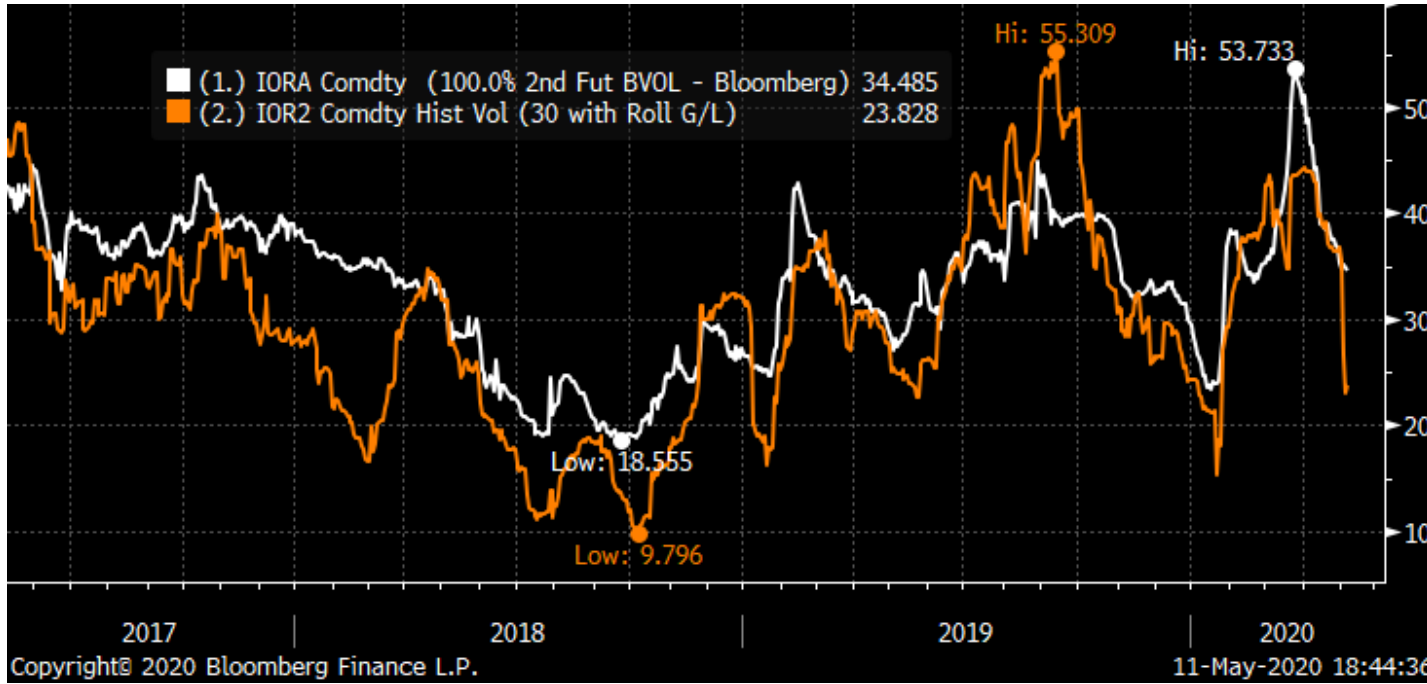
62% Options Open Interest (31 March)



62% Open Interest for 2020 Contracts



# Iron Ore Volatility



## Options market has grown significantly

- Diverse participation ecosystem
  - Liquidity
  - Bid/Offer spreads have eroded
- Worth keeping an eye on the historical vs. implied
  - The 'surface' tells a story – but be careful

A healthy options market is a good indication of the overall health of the market and the underlying derivative contract.

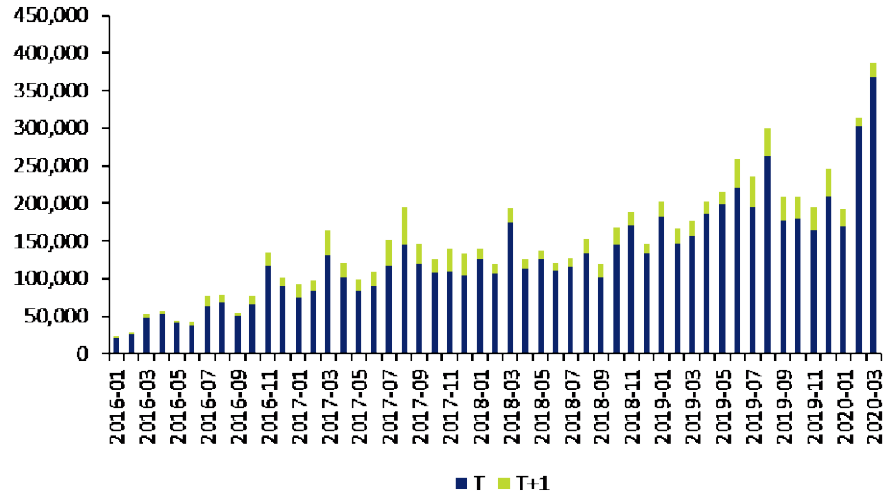
straddles value			
	Strike	Value (\$)	Gamma B/E
jun	85	6.65	\$1.79
Q3	82	10.95	\$1.70
Q4	79	14.50	\$1.59
Q1	77	16.80	\$1.51
Cal 21	74	18.40	\$1.36

	10d Put	25d Put	ATM	25d Call	10d Call
May	40.8%	38.2%	35.2%	35.6%	37.5%
Jun	39.0%	36.5%	33.7%	34.0%	35.5%
Jul	38.4%	35.9%	33.4%	33.6%	34.9%
Aug	37.7%	35.7%	33.2%	33.7%	35.0%
Q3'20	37.7%	35.7%	33.2%	33.7%	35.0%
Q4'20	36.2%	34.5%	32.3%	32.9%	34.1%
Q1'21	34.7%	32.9%	31.3%	31.7%	32.9%
Q2'21	33.6%	31.9%	30.1%	30.9%	32.1%
Cal 21	32.7%	31.2%	29.5%	30.4%	31.6%

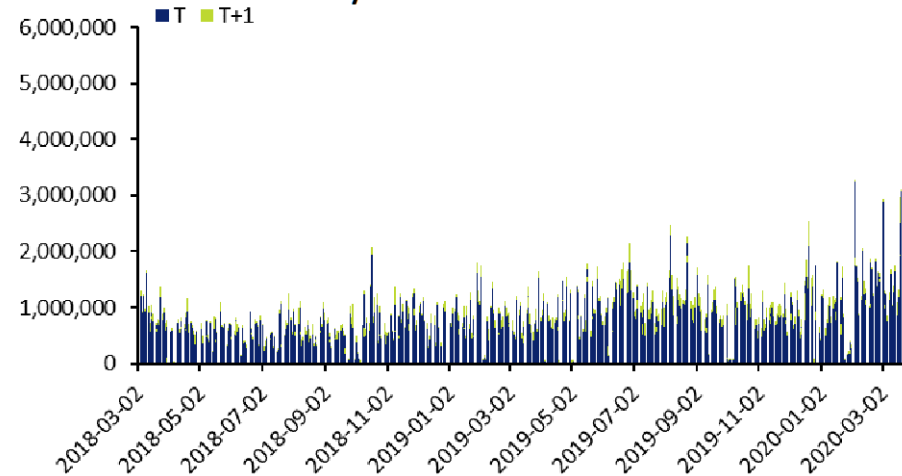


# Screen Liquidity Increasing

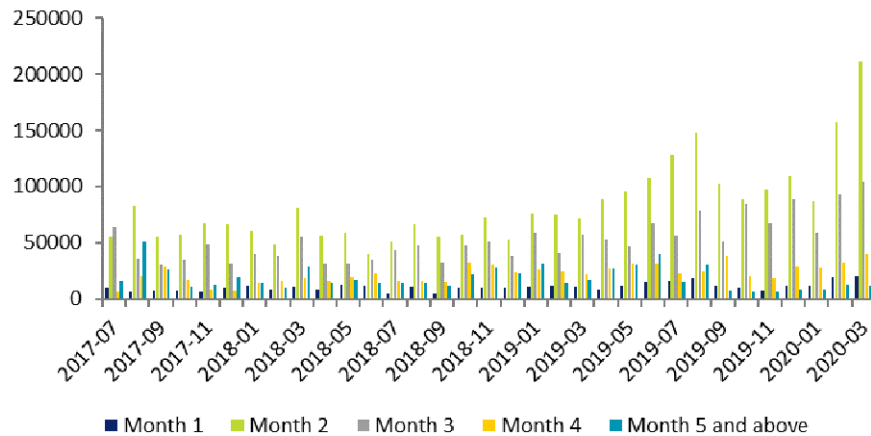
Monthly 62% Iron Ore Screen Volumes



Daily 62% Iron Ore Screen Volumes

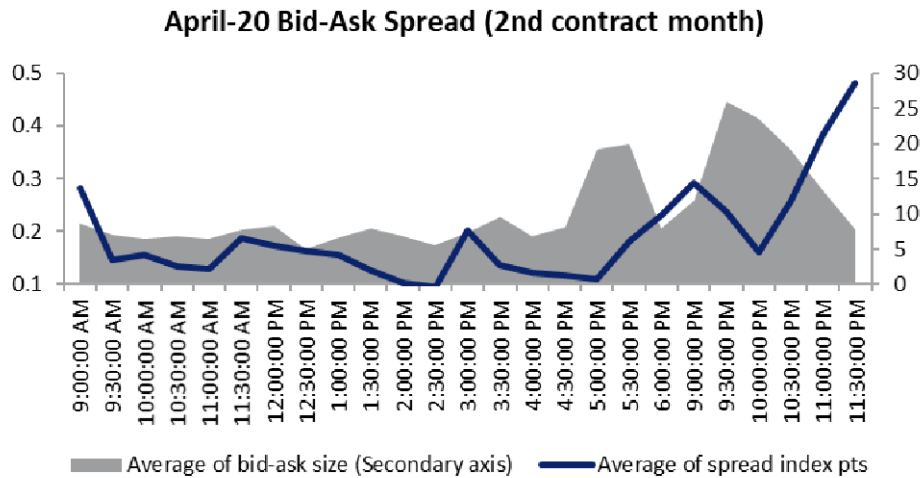


Monthly 62% Volumes by Contract Month

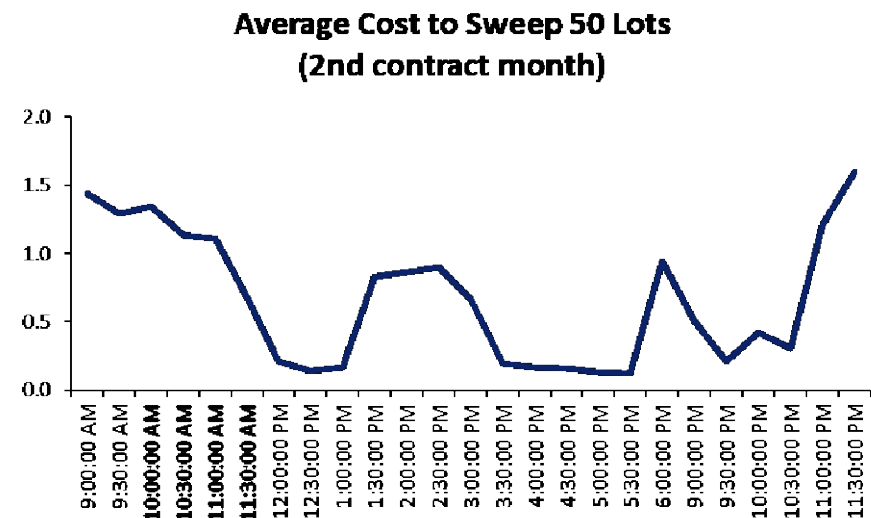
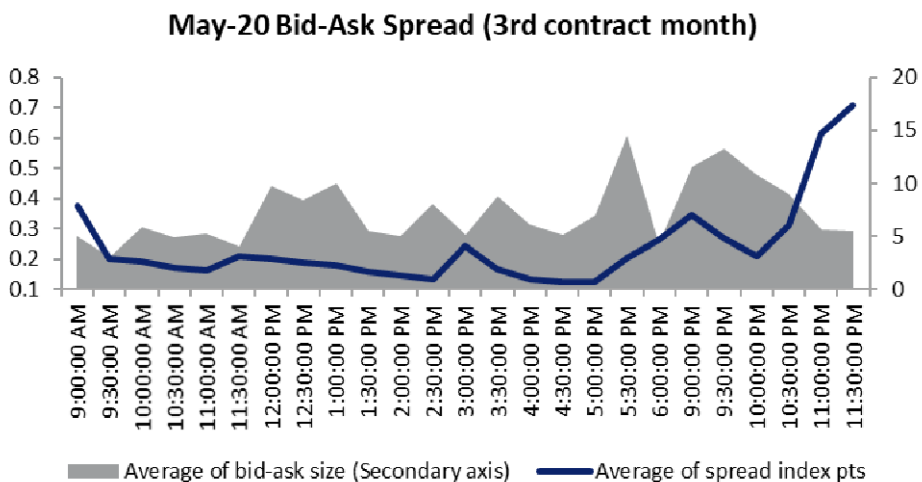


- Iron ore screen futures are fully fungible with NLT futures.
- In March-20, 38.8 mil mt of iron ore was traded on screen, approximately 20% of all iron ore swaps/futures cleared on SGX
- T+1 volume averaged 5% of total screen volumes
- The 2<sup>nd</sup> to 4<sup>th</sup> contract months account for 92% of traded volumes.

# Bid/Ask spread



- Between 9am-6pm in the T session, bid-ask spread averages below US\$0.20/MT for the 2<sup>nd</sup> to 4<sup>th</sup> contract months
- Between 9pm to 11:00pm in the T+1 session, bid-ask spread averages below US\$0.30/MT for the 2<sup>nd</sup> to 4<sup>th</sup> contract months
- Quote size for the best price is around 25 lots (2.5kt)
- Market depth for 2<sup>nd</sup> contract during active hours are between 600-1000 lots (60-100kt)
- Cost to sweep 50 lots is 40c from best bid/ask during active hours

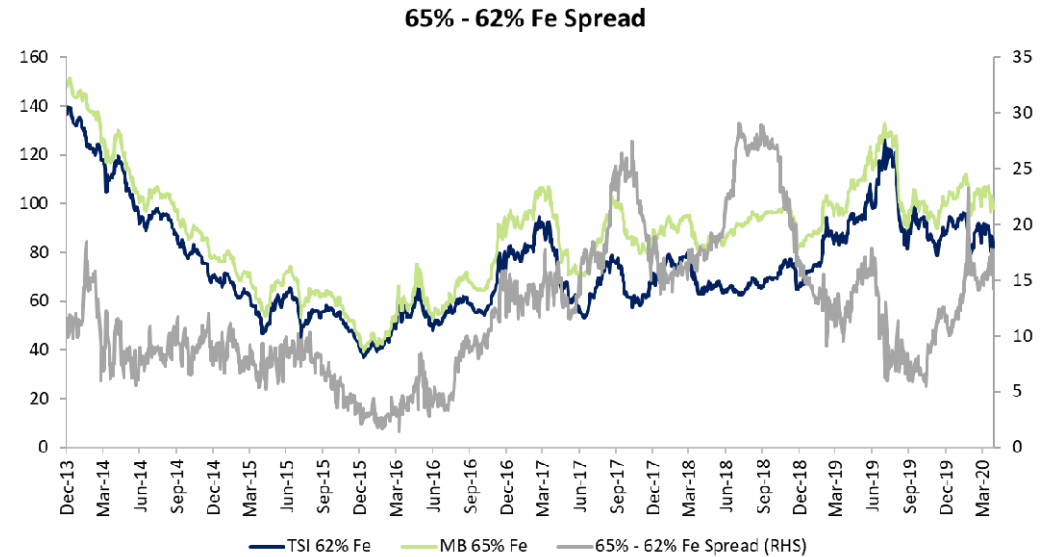


Source: SGX

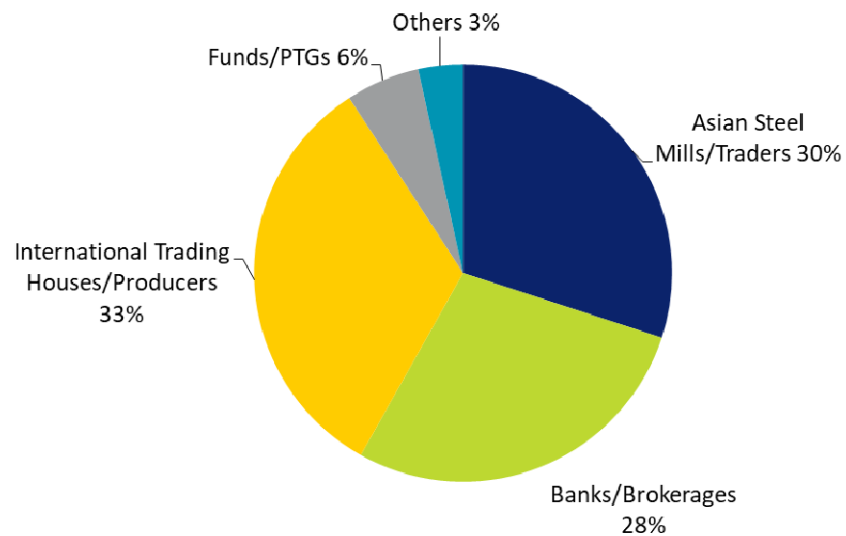
# High Grade 65Fe Contract

- 20.5 mil MT volume traded since Dec 18' launch
- > 60 market participants
- Record monthly volume of 3.69 mil MT in March 20

## The Ore Spread



SGX 65% Fe Customer Breakdown (Jan-March)



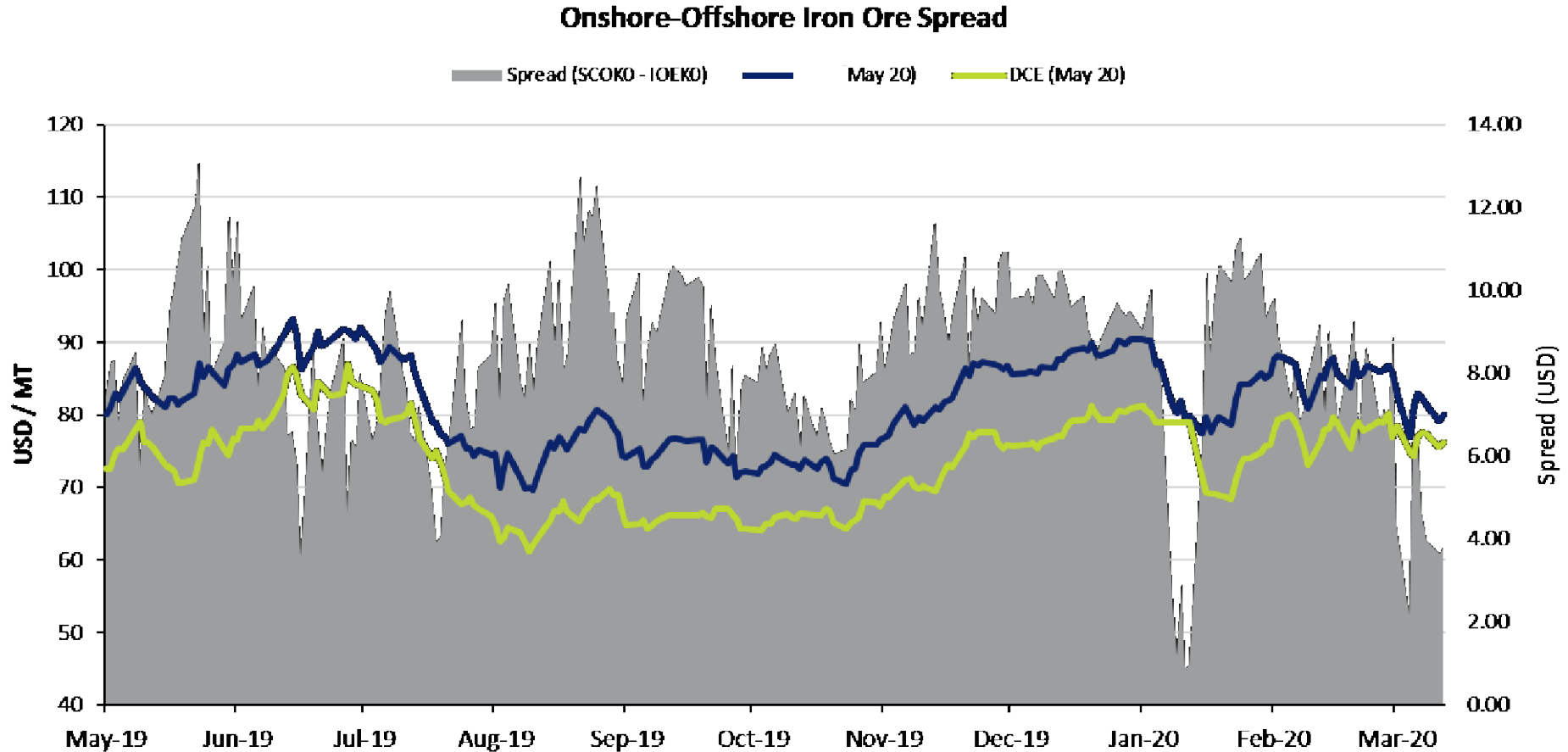
## Drivers of the spread :

- Quality differential
- Environment-friendly policies in China
- Locational peculiarities eg. weather, politics
- Freight differential, especially post Jan 20 after IMO implements stricter fuel limits on on fuel oil

Source: SGX

# China onshore v. Seaborne Spread

Iron Ore May-20 contract – DCE Iron Ore May-20 contract\*

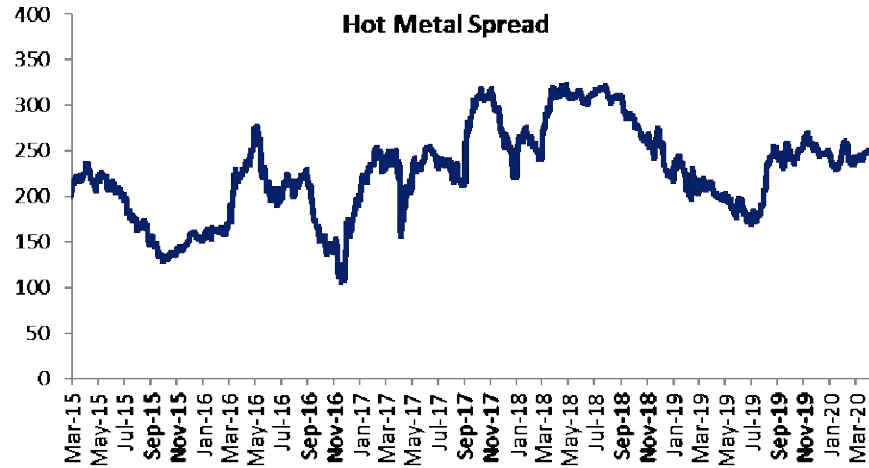


# Chinese Steel vs. Iron Ore

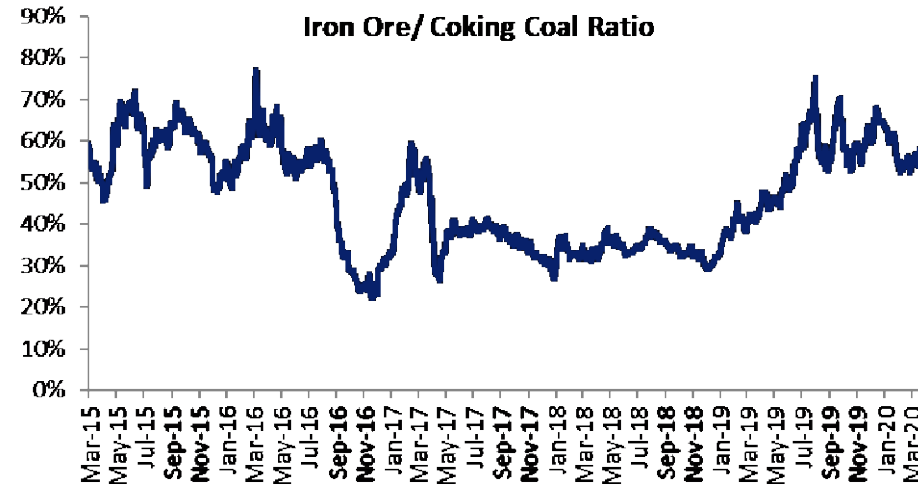
SHFE Rebar March-20 contract – Iron Ore March-20 contract



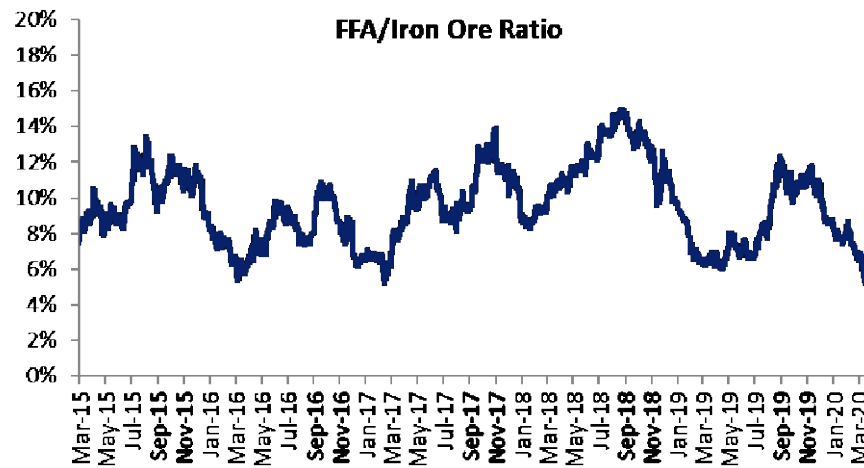
# Efficient Commodity Spreads



Hot Metal Spread = HRC Steel Price – (1.6 x Iron Ore 62% Price) – (0.77 x Coking Coal FOB Australia Price)



Iron Ore 62% Price/ Coking Coal FOB Australia Price

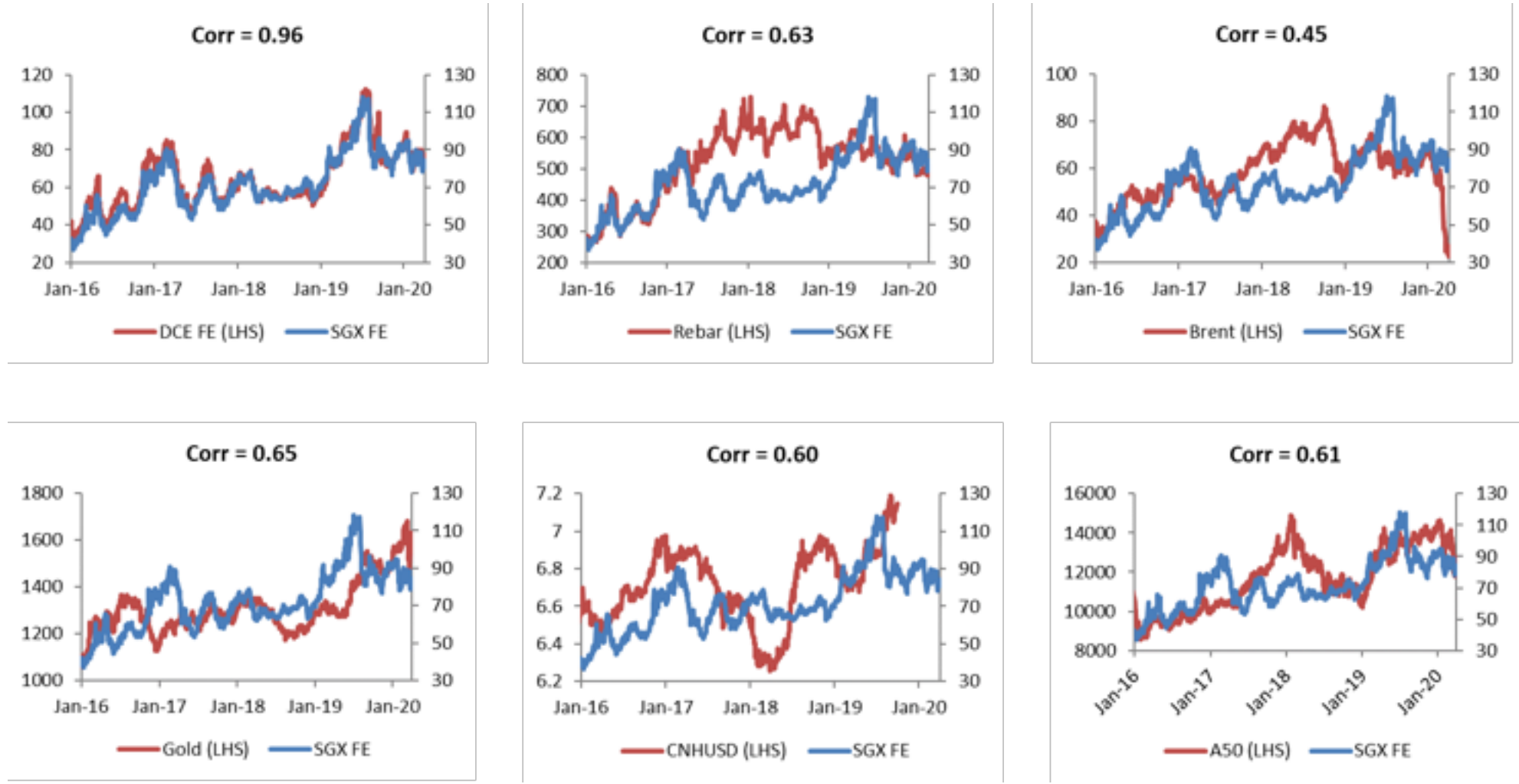


C5 Voyage Price / Iron Ore 62% Price

## Inter-commodity Margin Offsets

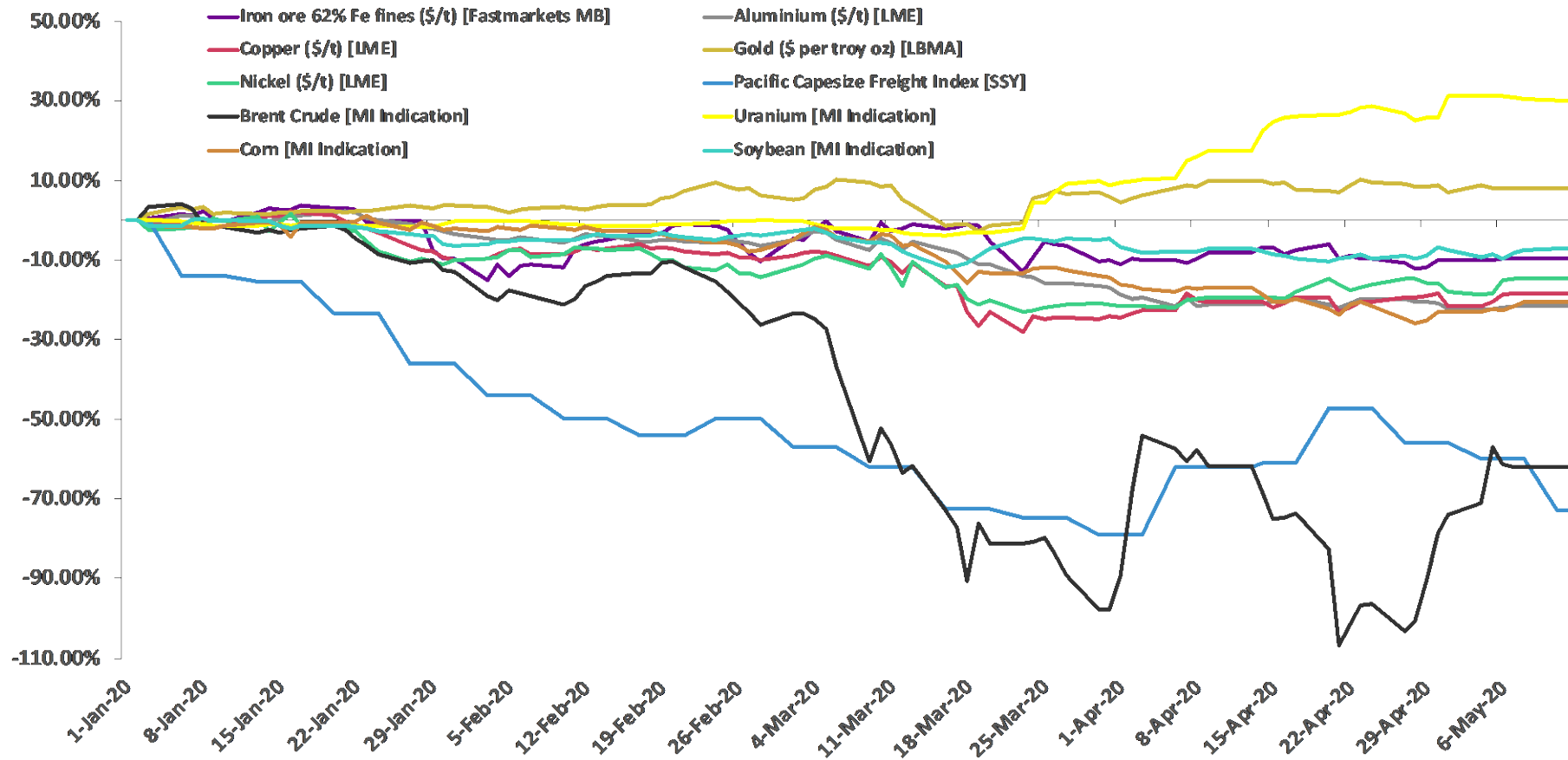
	Iron Ore	Coking Coal	HRC Steel	Freight
Iron Ore	Up to 63%		Up to 8%	Up to 26%
Coking Coal	Up to 28%	Up to 25%	Up to 24%	Up to 37%
HRC Steel	Up to 12%			Up to 16%
Freight	Up to 38%		Up to 23%	Up to 50%

# Iron Ore Correlations



# Commodities performance 2020

Accumulative percentage change in commodity prices - Y2020 to date



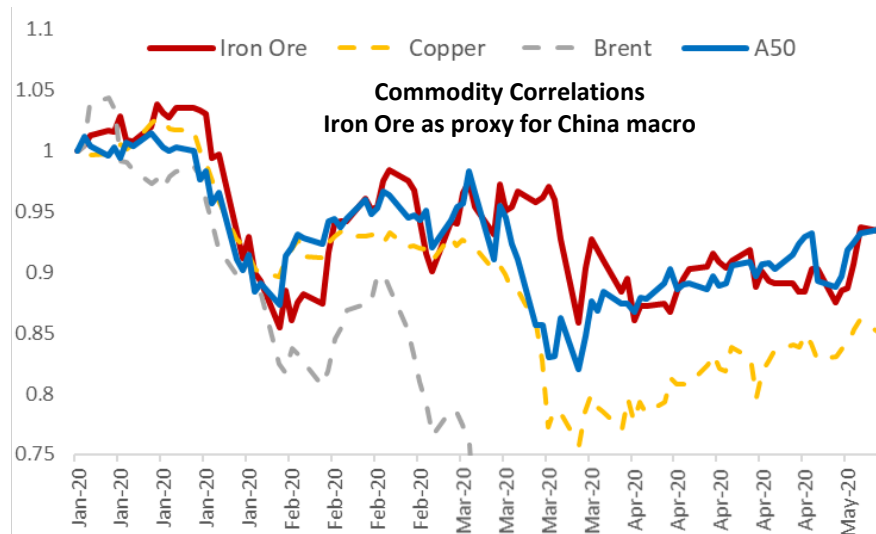


# Current Market – How, Why, Where to & When?



## Market Discussion

- What will be the Covid 19 impact for Iron Ore?
- Iron Ore is a bell weather for the Chinese economic story
  - The steel value chain is a critical part of China
    - Stimulus expectations
  - Rest of World (RoW) demand for Iron Ore
    - 'Fear' vs. 'Fundamentals'
      - Trade War impact
      - Geopolitical impact
- How much risk premium is baked into price
  - Asymmetric price risk?
    - Timing?
  - How to play this?



Source: SGX, LME, ICE

# Iron Ore Derivatives

## Key Takeaways

### Iron Ore

- Asian hub at center of the trade
- USD, Transparency, Credibility, Regulation & Jurisdiction
  - Liquidity, Volatility & Diversity
    - Inter-commodity spreads
  - High Correlation with physical underlying
- High correlation with macro environment & other commodities
  - High participation of physical business participants
  - Diversity of Iron Ore contracts (62, 65, LP, Options)
    - Very active spread markets
      - Price discovery

# Bloomberg Tickers

Outright: SCOA Comdty CT <Go>



Outright: SCOA Comdty MDM <Go>



Calendar Spreads: SCOJ0K0 COMB Comdty CT <Go>





# THANK YOU

Andrew Glass – Founder & MD

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