

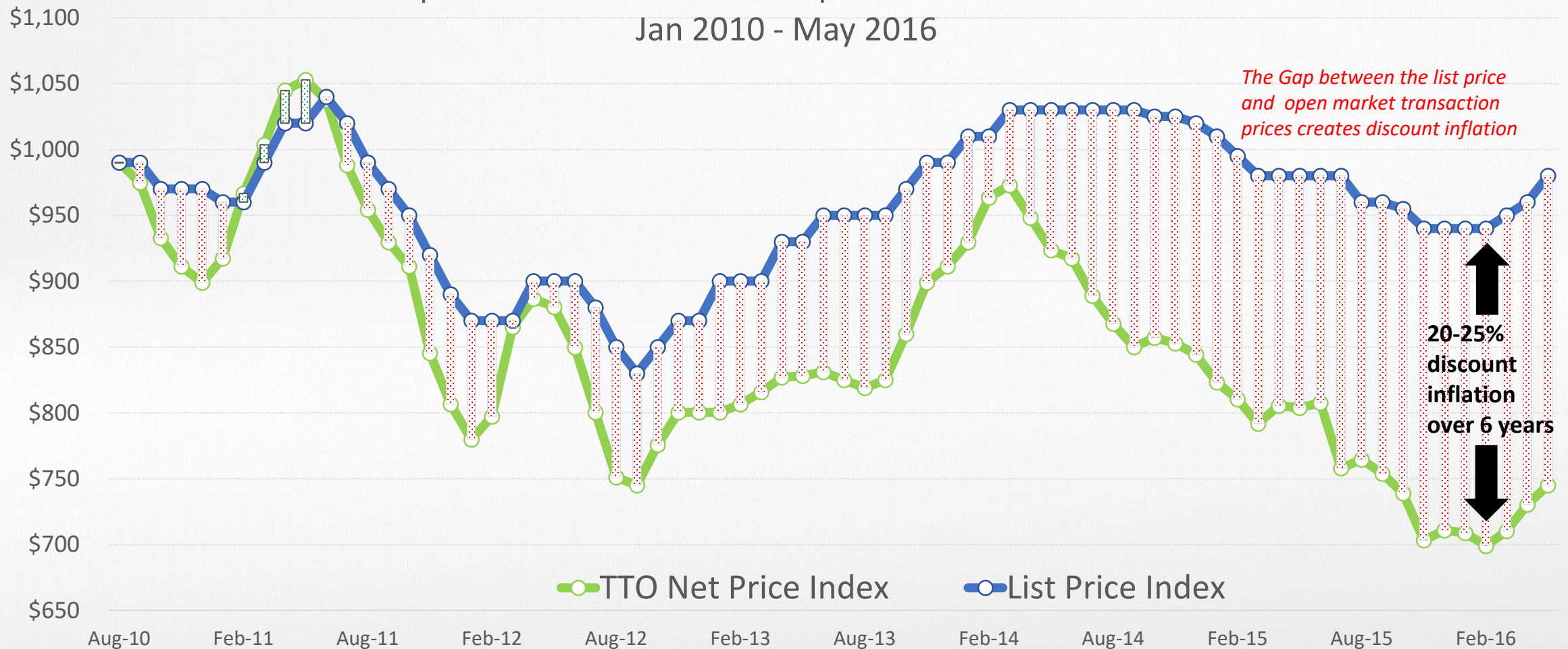
TradeTree

ONLINE

Barcelona 2018

WHY DISCOUNT INFLATION HAPPENS

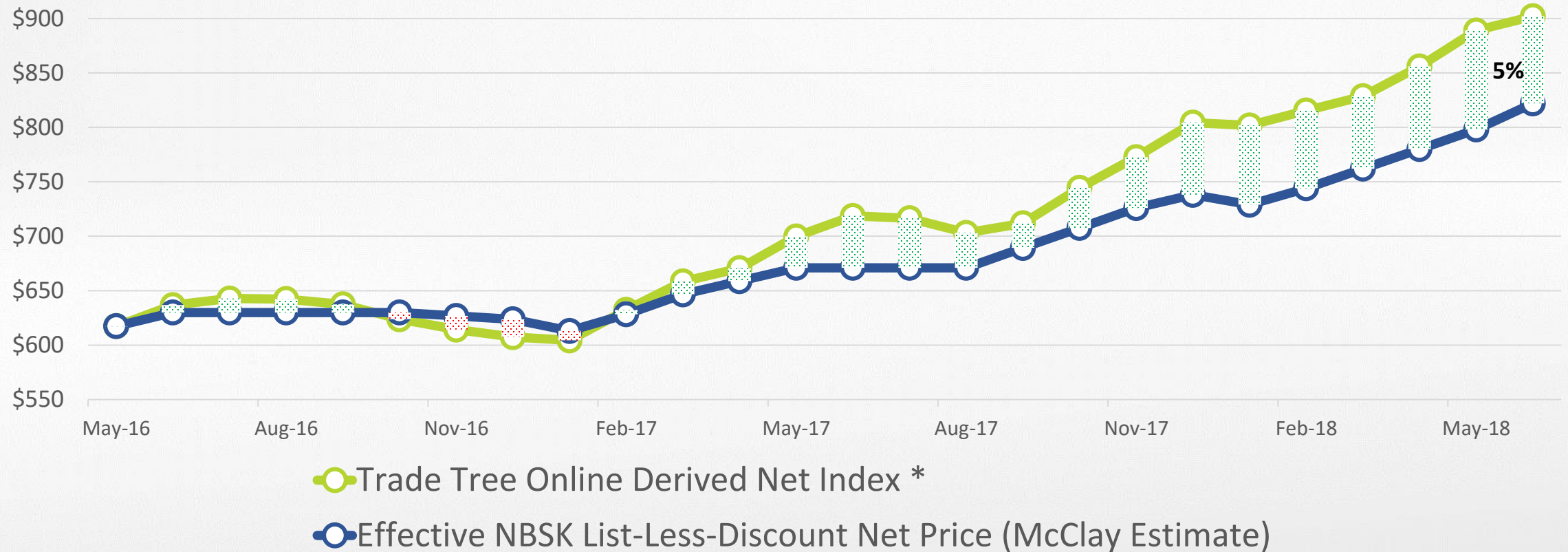
Comparison Trade Tree Online Spot Index vs List Price Index
Jan 2010 - May 2016



DISCOUNT DEFLATION?



NBSK North America Realized Contract List Prices vs Spot Prices



What is the Function of a Price Index?

- A pricing index serves many functions:
 - Settles physical contracts
 - Settles financial contracts
 - Guides finished product pricing
 - Serves as basis for forecasting/hedging measurement
- For all of the functions above – if the index does not accurately reflect the market, you will be subject to basis risk

How Are Gold Prices Set?



We are announcing a gold price increase to \$1,300 per ounce?

No! The market sets the price.



Today's Share Price: \$46
Market Cap: \$1.35B

In Virtually Every Commodity the SPOT market sets price movements.



Spot prices are open market prices for delivery in the very short term.

Isn't Spot a Small % of overall Volume?



Supply = Demand: Prices Stable



Increase in Demand?



Increase in Supply Restores Balance



Marginal Unit

The Spot Market is where the marginal unit of supply or demand is allocated to its highest and best use.

The power of the open market leads to efficient price discovery.



Oil Market



- > long-term supply contracts
- > contract is 90-95% of market
- > pricing based on spot

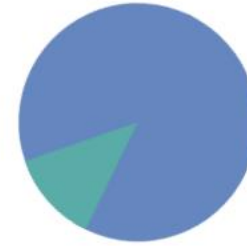


Oil Market



90-95% is
contract

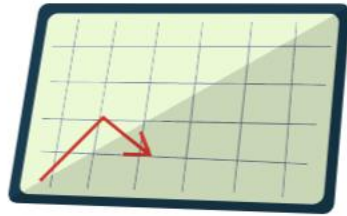
Only 5-10% is
traded as spot



- > long-term supply contracts
- > contract is 90-95% of market
- > pricing based on spot



Oil Market



Oil is \$70/barrel!

- > long-term supply contracts
- > contract is 90-95% of market
- > pricing based on spot



Pulp Market

- > long-term supply
- > most volume contracted
- > price discovery in contract

Principles of Trade Tree Online Indices



1. Transaction (data) based

- Volume weighted-average of confirmed net transactions
- Representative sample size
- Individual customers and locations are isolated to prevent differences in location or quality from skewing price movement data

2. Integrity of Data

- Submitted transaction data must follow pre-established criteria
- All data subject to spot check third party audit to ensure reliability and validity of data

3. Confidentiality of Net Prices

- Companies do not need to submit prices, only % change
- Net Prices are never published, only % change

4. Only transactions that are competitively negotiated

- No prices tied to indices (including ours)
- Negotiations must involve risk of loss-of-sale for both parties
- Examples of markets that fit this definition are most of the Chinese market, parts of southern Europe, and the spot market in North America

Principles of Trade Tree Online Indices



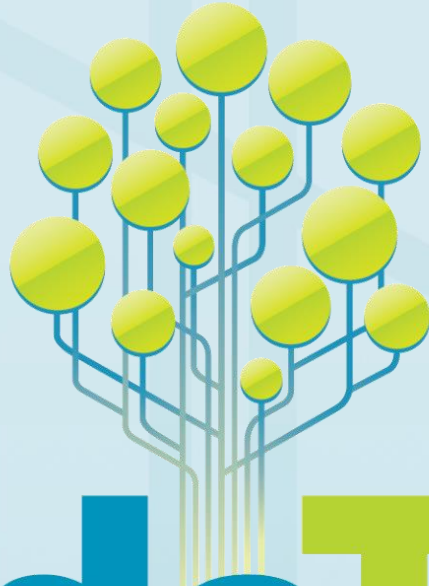
NORTHERN BLEACHED SOFTWOOD KRAFT (NBSK) – CHINA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2017	98.41	101.96	107.17	107.80	107.50	105.11	104.24	108.78	119.40	130.91	143.97	146.23
% change m/m	0.04	3.60%	5.12%	0.59%	-0.27%	-2.23%	-0.83%	4.36%	9.77%	9.64%	9.98%	1.57%
2018	146.59	146.52	146.26	146.41	146.36	146.07	145.43	139.57				
% change m/m	0.25%	-0.05%	-0.18%	0.10%	-0.03%	-0.20%	-0.44%	-4.03%				

NORTHERN BLEACHED SOFTWOOD KRAFT (NBSK) – NORTH AMERICA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2017	97.89	102.42	106.66	108.62	113.36	116.40	116.06	113.88	115.30	120.58	125.15	130.27
% change m/m	-0.51%	4.63%	4.14%	1.84%	4.36%	2.68%	-0.29%	-1.88%	1.25%	4.58%	3.79%	4.09%
2018	129.86	132.07	134.21	138.64	143.98	146.10	150.54	150.90				
% change m/m	-0.31%	1.70%	1.62%	3.30%	3.85%	1.47%	3.04%	0.24%				

Next steps: China BEK, European Indices



TradeTree

ONLINE