



WHO PARTICIPATES IN AGRICULTURAL FUTURES MARKETS – *AND HOW?*

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OVERVIEW

OVERVIEW—*FOCUS*

“Unknown traders gain influence in commodities” (FT 2017)

- **Participant structure** in grain futures (*1st study*)
 - Who is trading what? 9 trader sub-categories vs. 4 in COT
 - Trader persistence? Core of the market
- **“Term structure”** (*1st study for ag markets*)
 - Market composition at various maturities?
- Calendar **spreading** (*1st study*)
 - Reveal the full extent
 - Key role of commercial dealers/merchants

OVERVIEW—*DATA*

CFTC's Large Trader Reporting System (*LTRS*)

- End-of-day positions by trader, commodity, maturity
- Reporting to CFTC based on regulatory position size thresholds
- = Primary source of information regarding positions
- This information forms the **basis of weekly COT reports**
- Our **sample**
 - **Daily** from Jan. 2015 to Aug. 2018
 - For the **4 largest grain & oilseed futures** markets
 - Corn, soybean, Chicago wheat (SRW), Kansas City wheat (HRW)

OVERVIEW—*MAIN FINDINGS*

- 1. There is a “market core”
 - 40%+ of open interest (OI) = 197 “permanent” traders
 - 3,854 traders reported to CFTC in 2015-2018
 - 25% of all traders account for around 80% of the open interest
 - The more “persistent” traders account for most of the OI

- 2. Granularity matters
 - Sharper insights from more homogeneous groups
 - Better sense of how different groups interact
 - AD & MMT positions are highly negatively correlated
 - Helps solve the “FT mystery”

OVERVIEW—*MAIN FINDINGS*

■ 3. Maturity structure

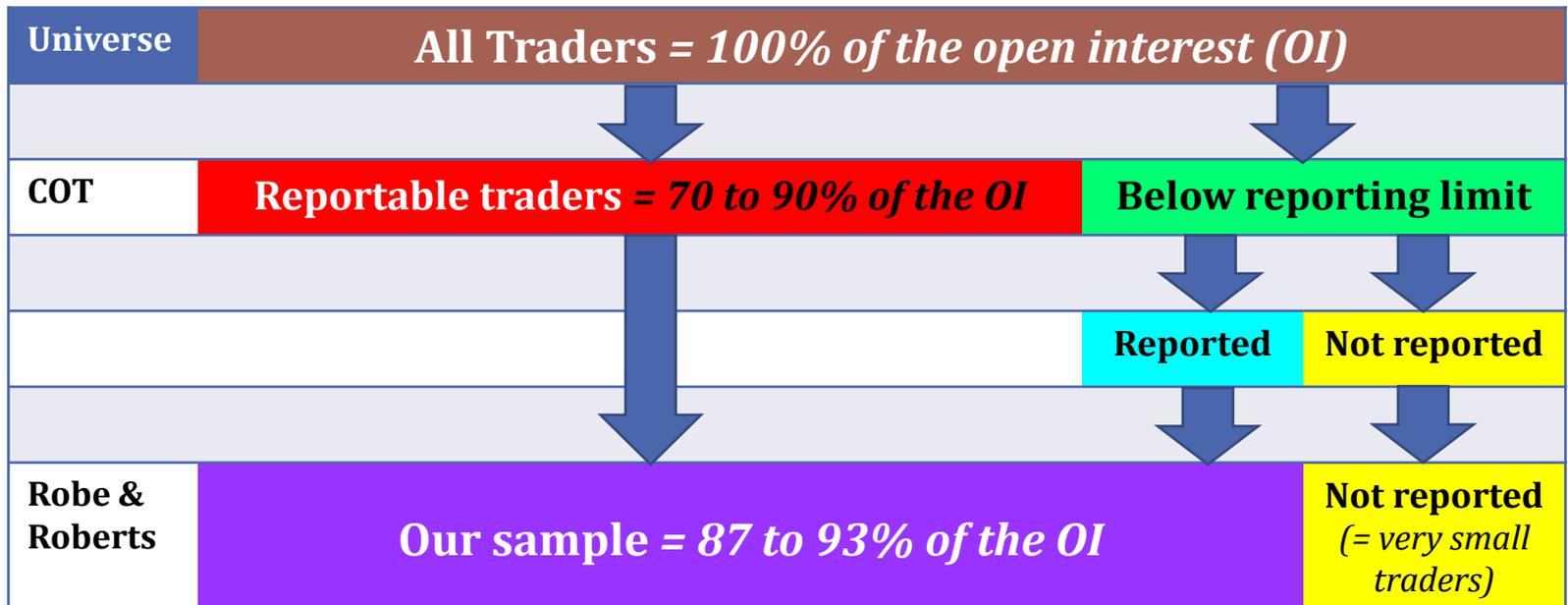
- Most (93-97%) reported positions mature in <1 year
 - *Short-term focus is especially strong for managed money*

■ 4. Calendar spreading

- Changes in spreading drive most of the OI change
- Spreads = 1/3rd of total OI vs. COT: 1/5th
- **Why the difference?**
 - Dealer/Merchant = 25 to 40% of all calendar spreads
 - COTs show spreads for swap dealers, not other commercials

DATA AND RESULTS:
MARKET CORE

OUR APPROACH – *COVERAGE*



3,854 traders

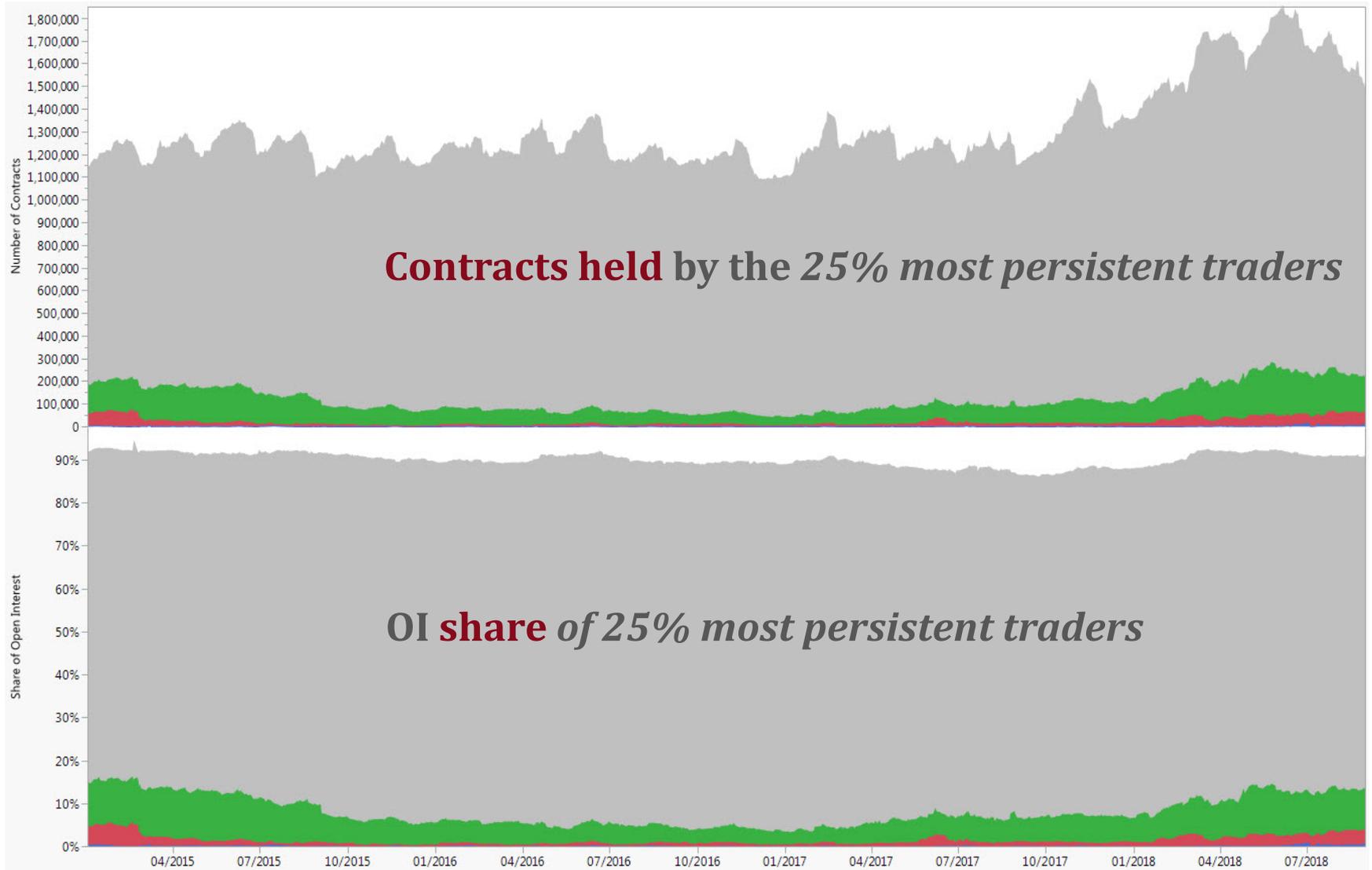
TRADER COUNTS: TOTAL *vs.* TYPICAL DAY

- Most traders are not reported most days
 - *3 to 4 times more traders in total than the daily average count*
- COTs capture the traders that matter the most
 - *Sample daily count averages = 10-20% more than COT count*

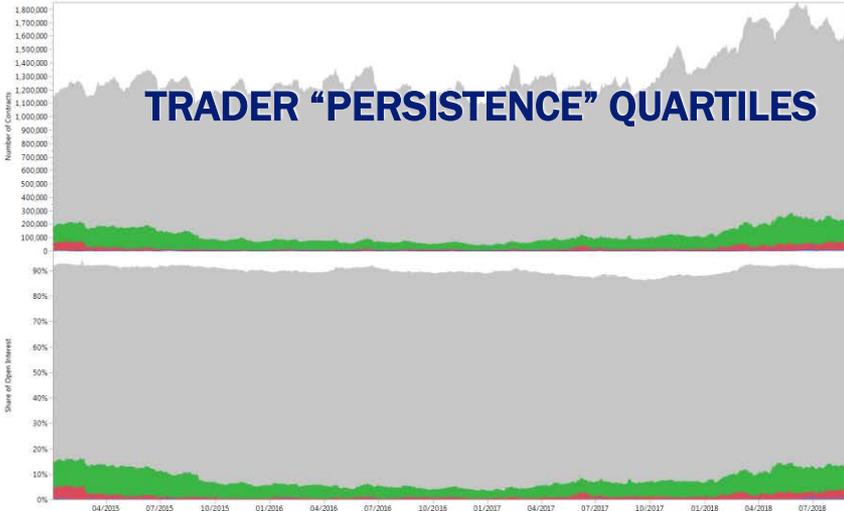
Table 1, Panel B: Trader Count

<u>Market</u>	<u>Daily Average</u>		<u>Sample Total</u>			
	Sample	COT	All	Long Only	Short Only	Mixed
Corn (002602)	771	737	2,576	439	269	1,868
Soybean (005602)	645	527	2,377	285	275	1,817
Wheat-SRW (001602)	428	385	1,744	375	199	1,170
Wheat-HRW (001612)	254	196	879	154	84	641

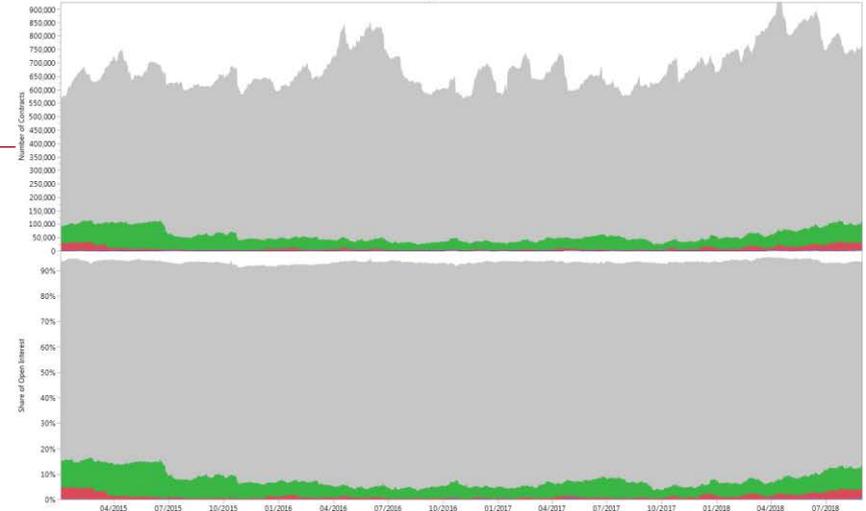
OI Shares & Trader Persistence: **CORN**, 2015—2018



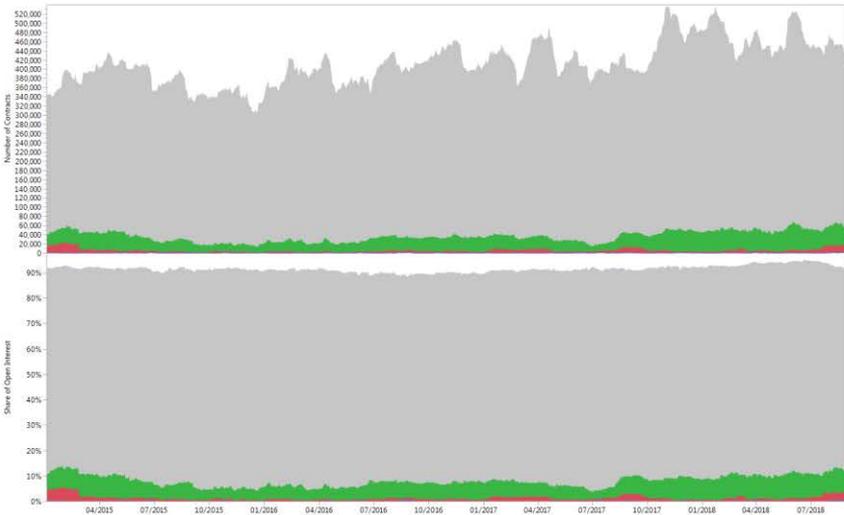
Panel A: Corn



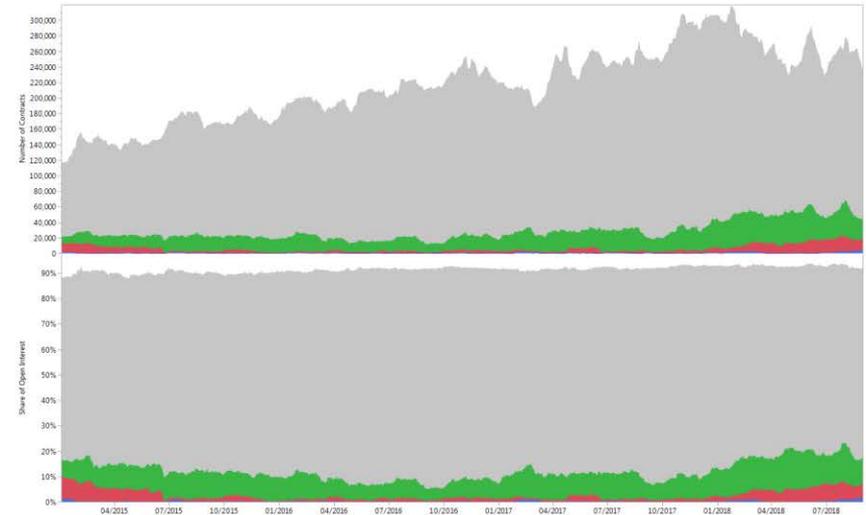
Panel B: Soybean



Panel C: Wheat-SRW



Panel D: Wheat-HRW



197 “PERMANENT” TRADERS

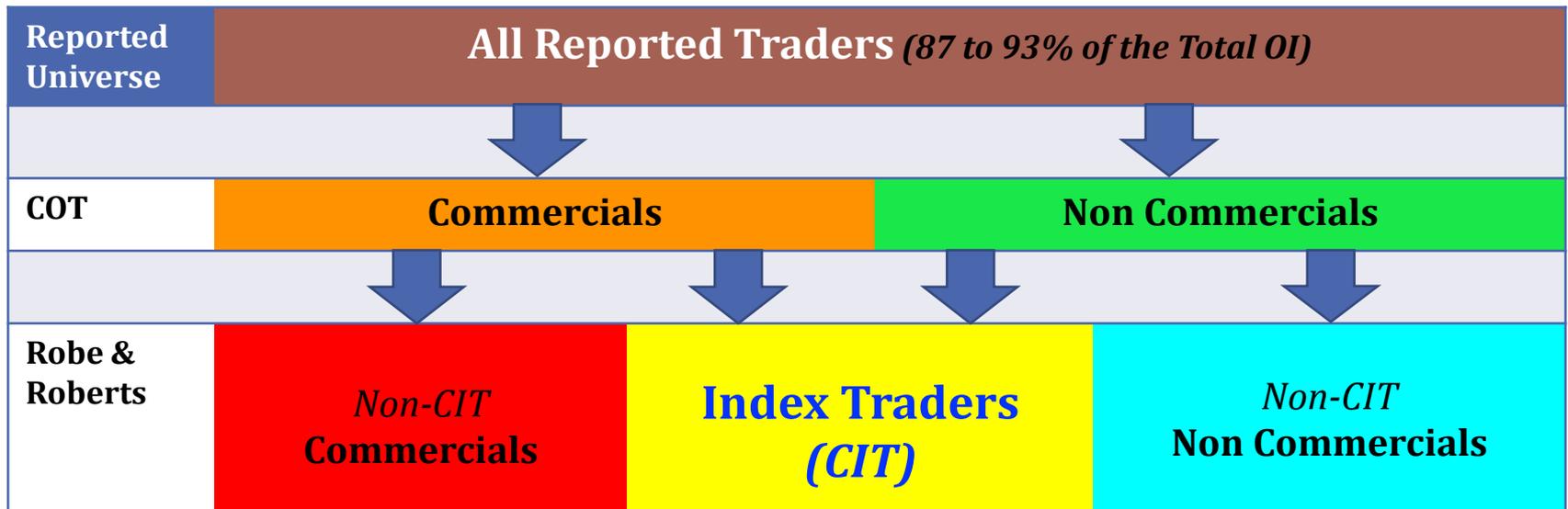
	Number of Traders Reported		
	5 or Fewer Days	6 to 925 Days	925 Days
Corn (002602)	217	2,217	142
Soybean (005602)	243	2,040	94
Wheat-SRW (001602)	223	1,441	80
Wheat-HRW (001612)	67	769	43

TAKE-AWAY #1: PERSISTENCE

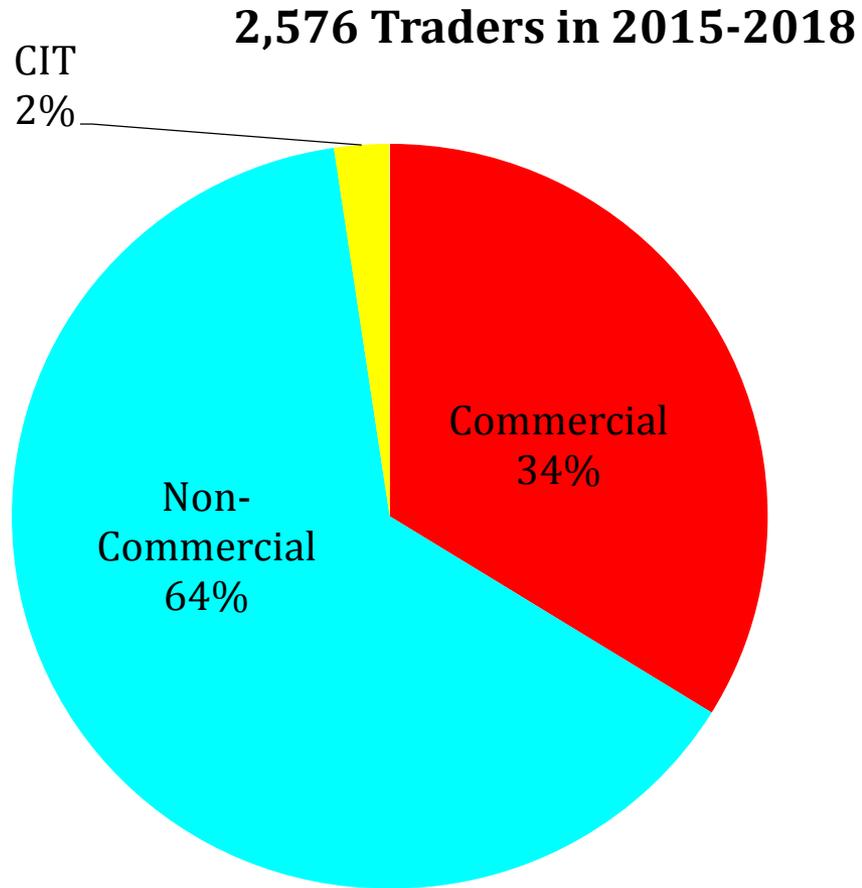
- Most traders are
 - Tiny in terms of OI contribution
 - Ephemeral (seen only a few days in 2015-2018)
 - 50% least persistently observed traders = 2% of OI
- $1/4^{\text{th}}$ of all traders = $4/5^{\text{th}}$ of reported OI
 - **197** “permanent” traders = 40%+ total OI
- Similar pattern across markets *and* over time

AG FUTURES POSITIONS:
SEPARATING INDEX TRADERS

OUR APPROACH – *CLASSIFICATIONS*

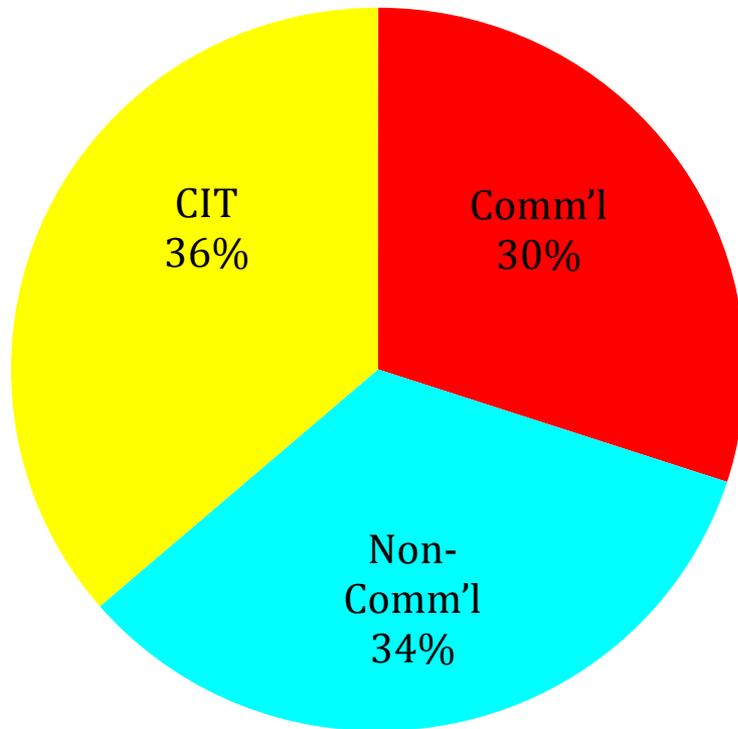


TRADER COUNTS – CORN

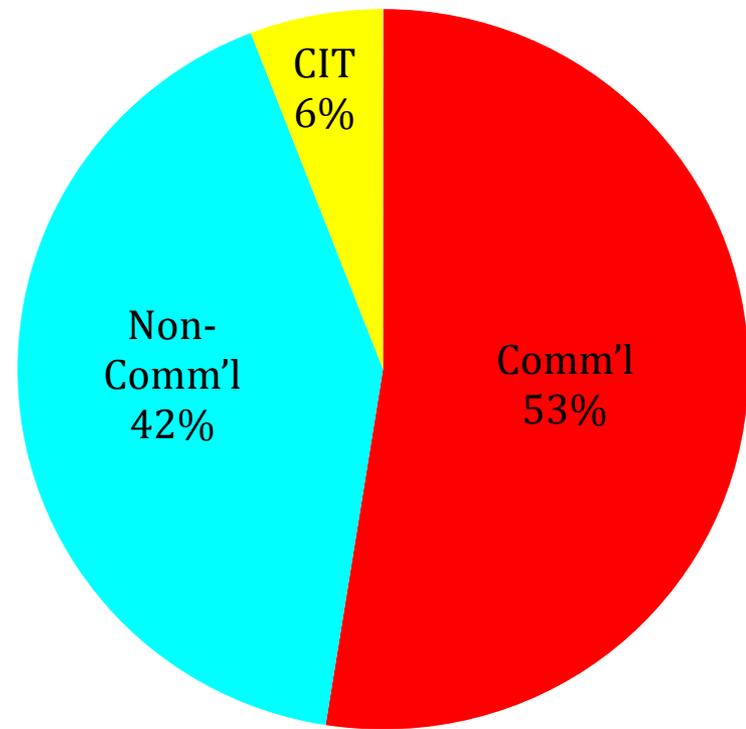


OPEN INTEREST SHARES – CORN

Long Open Interest



Short Open Interest

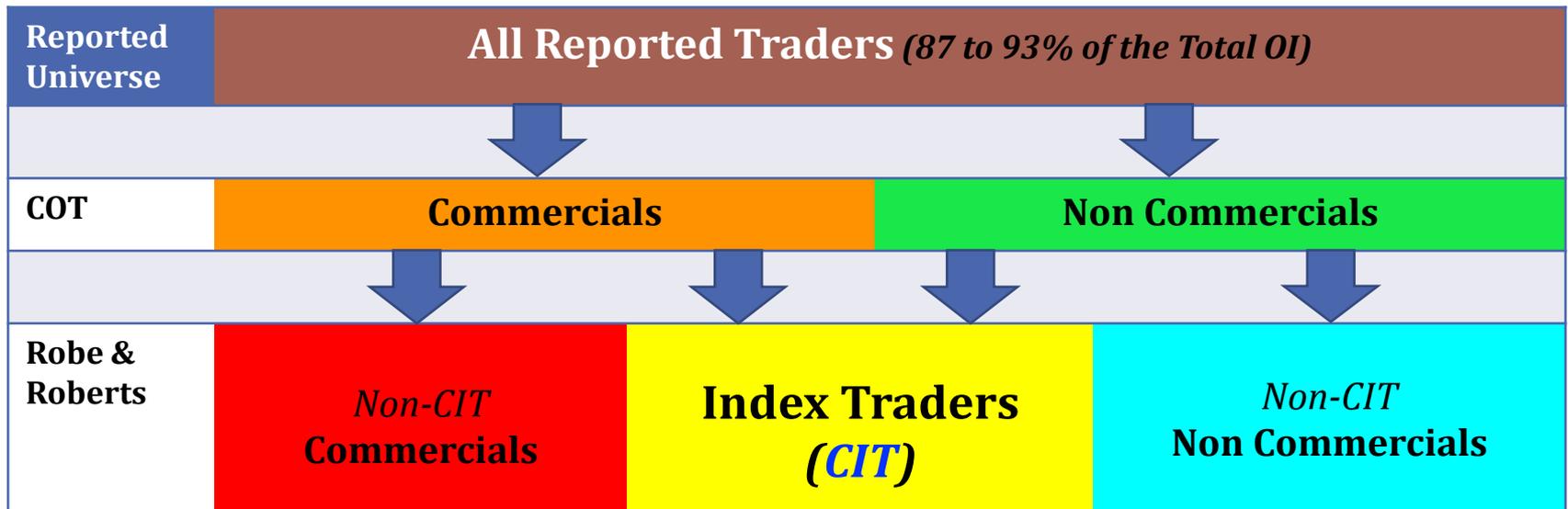


	Number of Traders		Share of Long Open Interest	Share of Short Open Interest	Share of Total Open Interest
Corn (002602)					
Commercial:	871	34%	30%	53%	41%
Non-Commercial:	1,644	64%	34%	42%	38%
CIT:	61	2%	36%	6%	21%
Soybean (005602)					
Commercial:	562	24%	39%	58%	48%
Non-Commercial:	1,752	74%	33%	38%	35%
CIT:	63	3%	29%	4%	17%
Wheat-SRW (001602)					
Commercial:	326	19%	19%	30%	24%
Non-Commercial:	1,356	78%	38%	64%	51%
CIT:	62	4%	43%	7%	25%
Wheat-HRW (001612)					
Commercial:	247	28%	30%	48%	39%
Non-Commercial:	586	67%	38%	48%	43%
CIT:	46	5%	33%	4%	18%

AG FUTURES POSITIONS:

3 BIG + 6 SMALL = 9 TRADER GROUPS

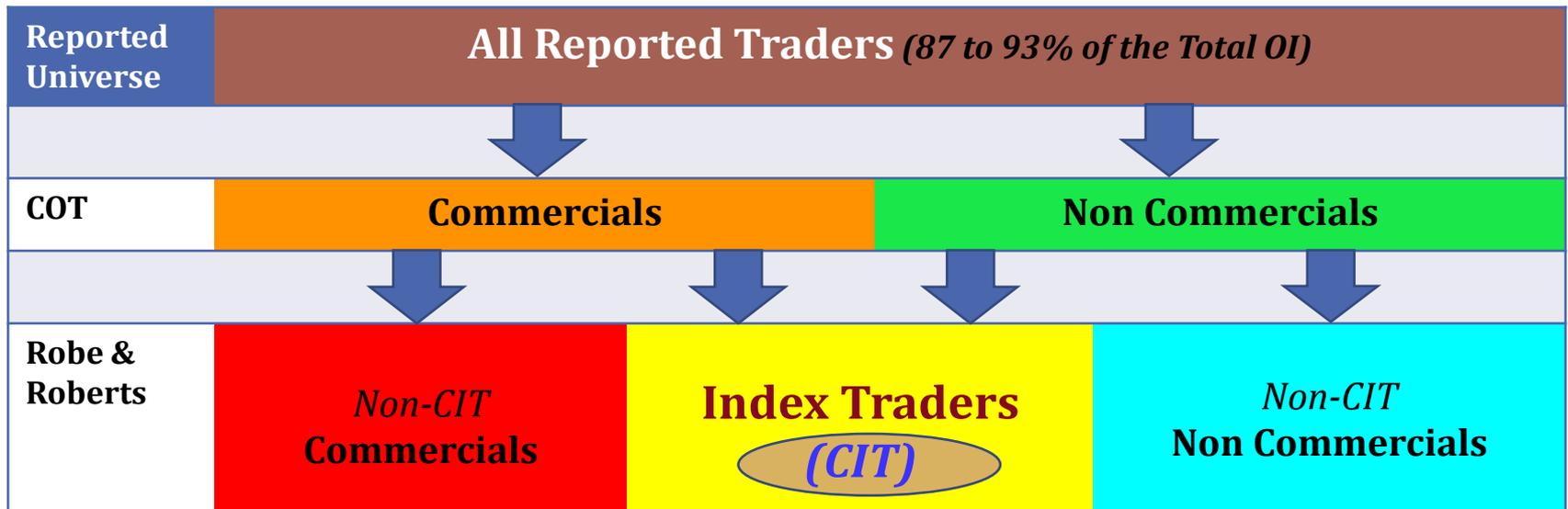
OUR APPROACH – 9 SUBGROUPS



AD = Dealers & Merchants
AS = Commodity Swap Dealers (*non-CIT*)
AT = All other commercials

MMT = CTA, CPO, MT, ... (*non-CIT*)
FBT = Floor Brokers & Traders
FDI = Financial Dealers
FMX = Other registrations
NRP = Non-registered

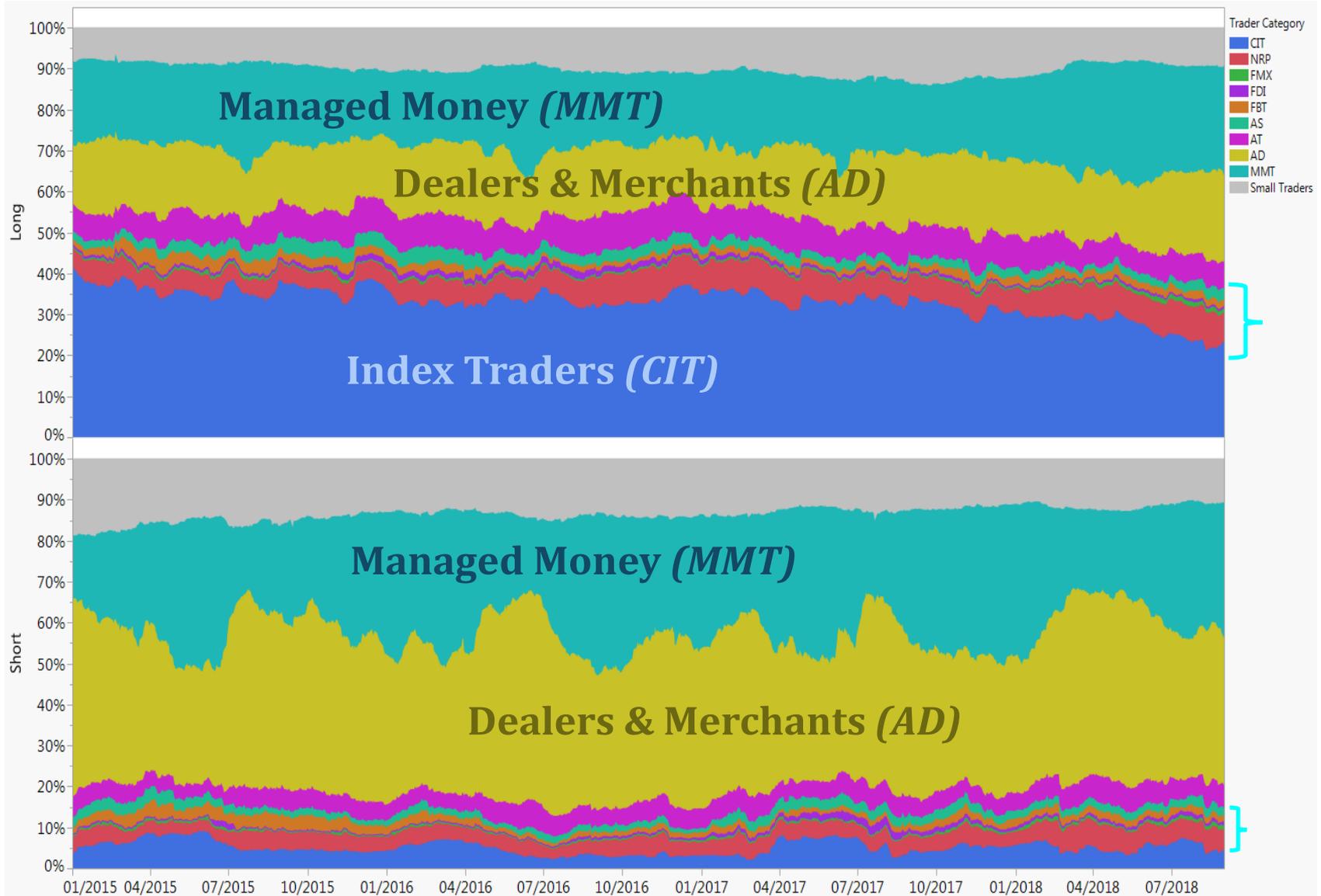
OUR APPROACH - 9 SUBGROUPS



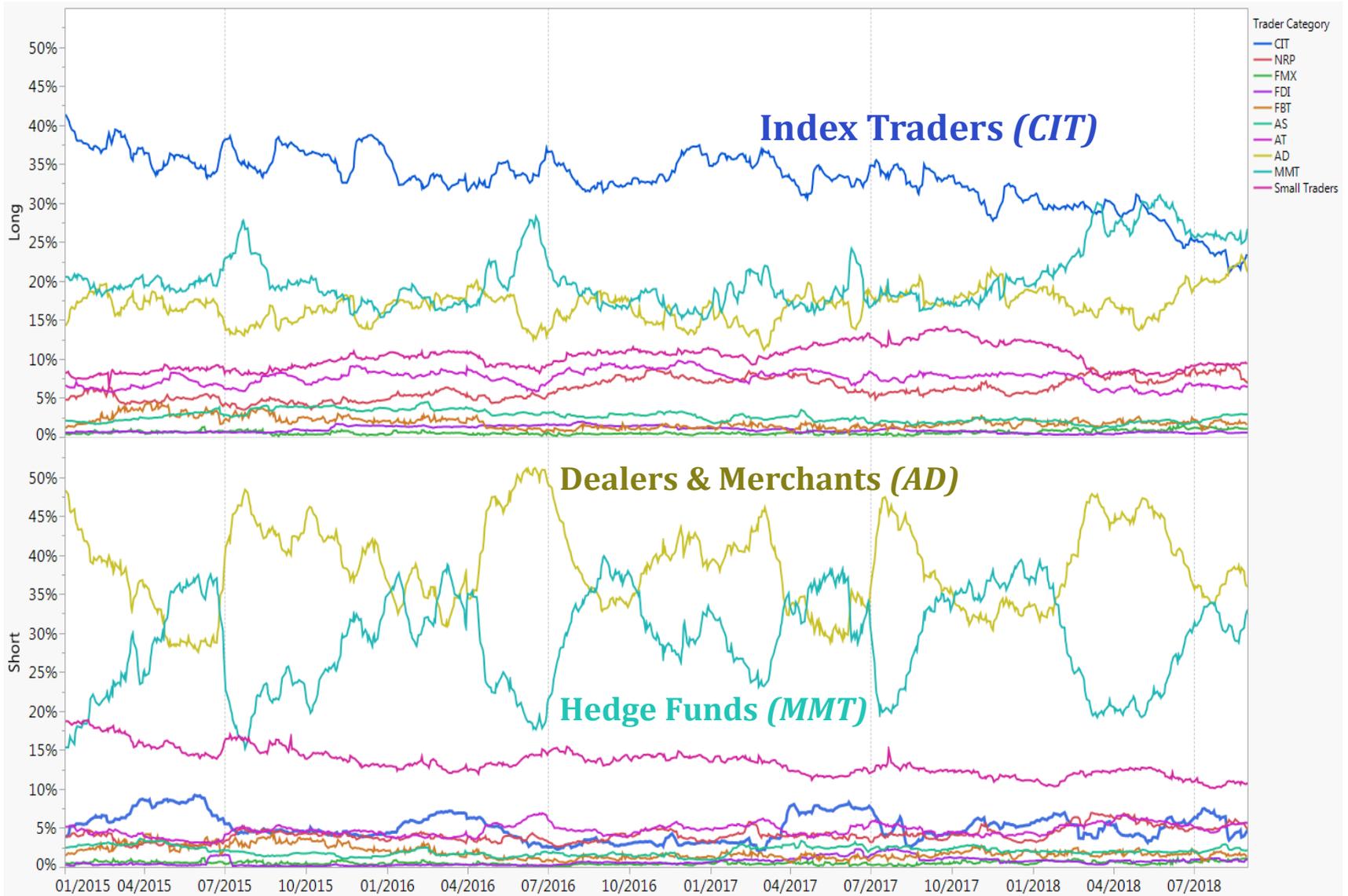
AD = *Dealers & Merchants*
AS = *Commodity Swap Dealers (non-CIT)*
AT = *All other commercials*

MMT = *Managed Money* = CTA, CPO, MT, ...
FBT = *Floor Brokers & Traders*
FDI = *Financial Dealers*
FMX = *Other registrations*
NRP = *Non-registered*

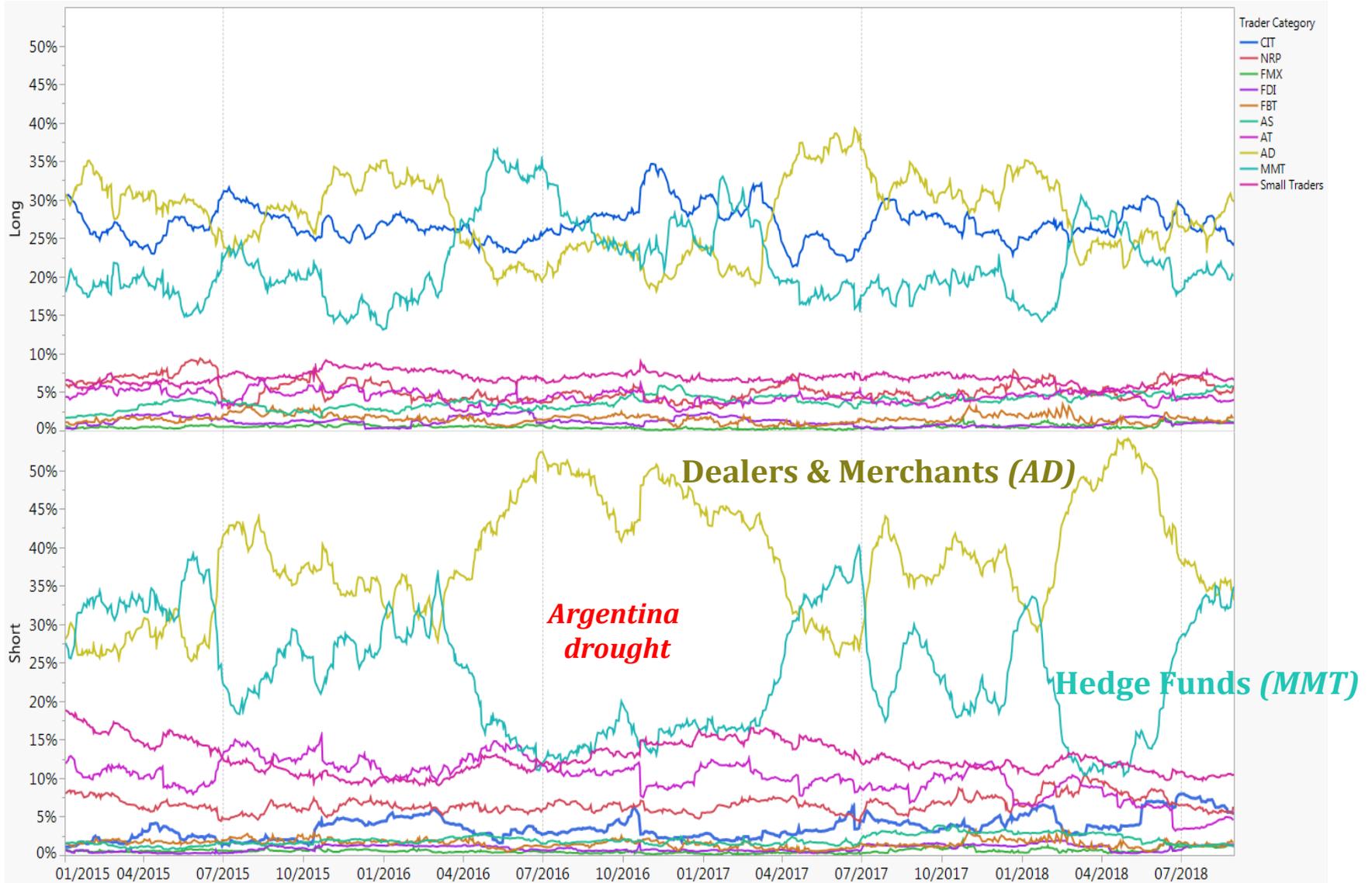
LONG & SHORT OI SHARES – CORN



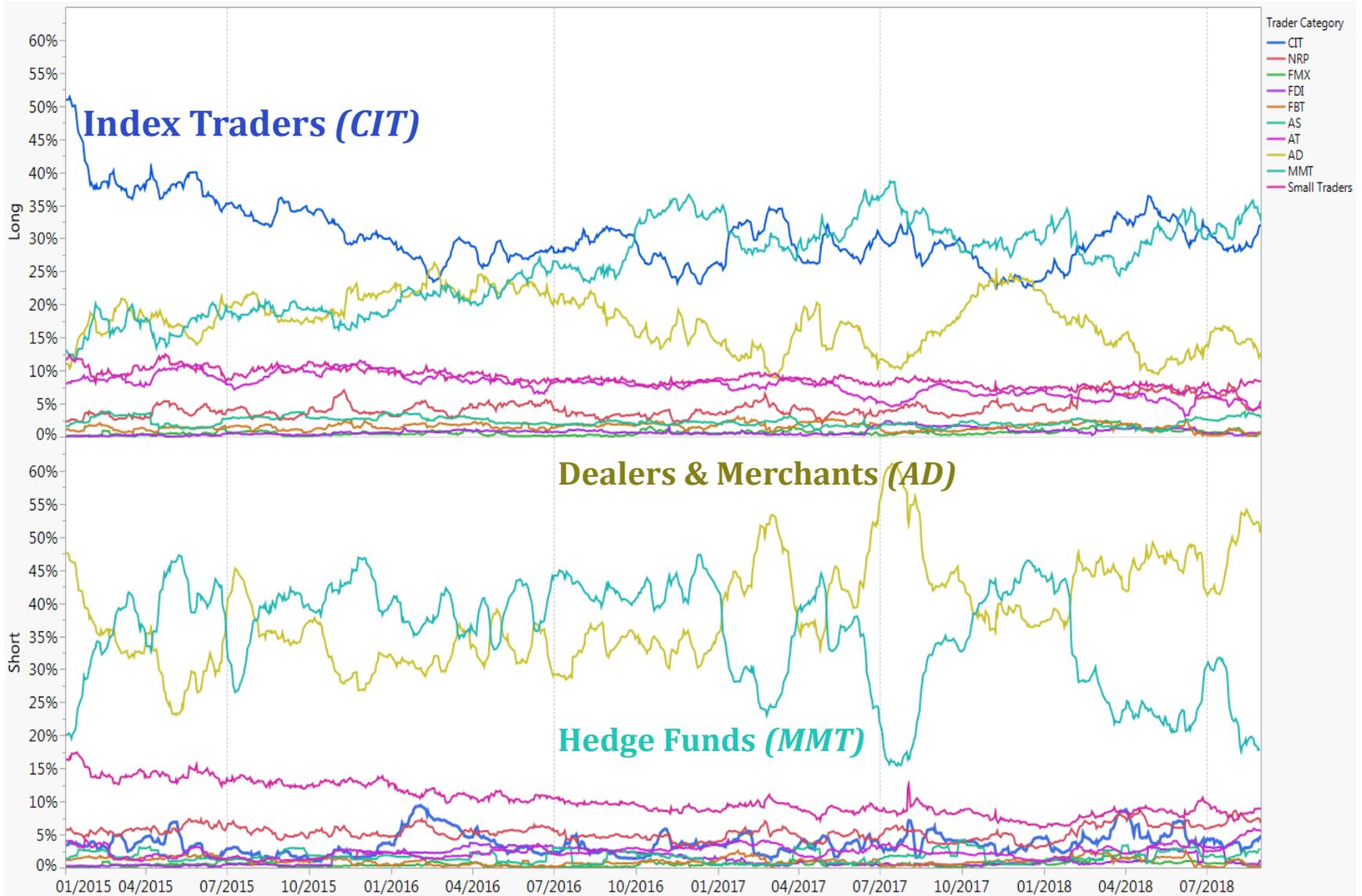
LONG & SHORT OI SHARES – CORN



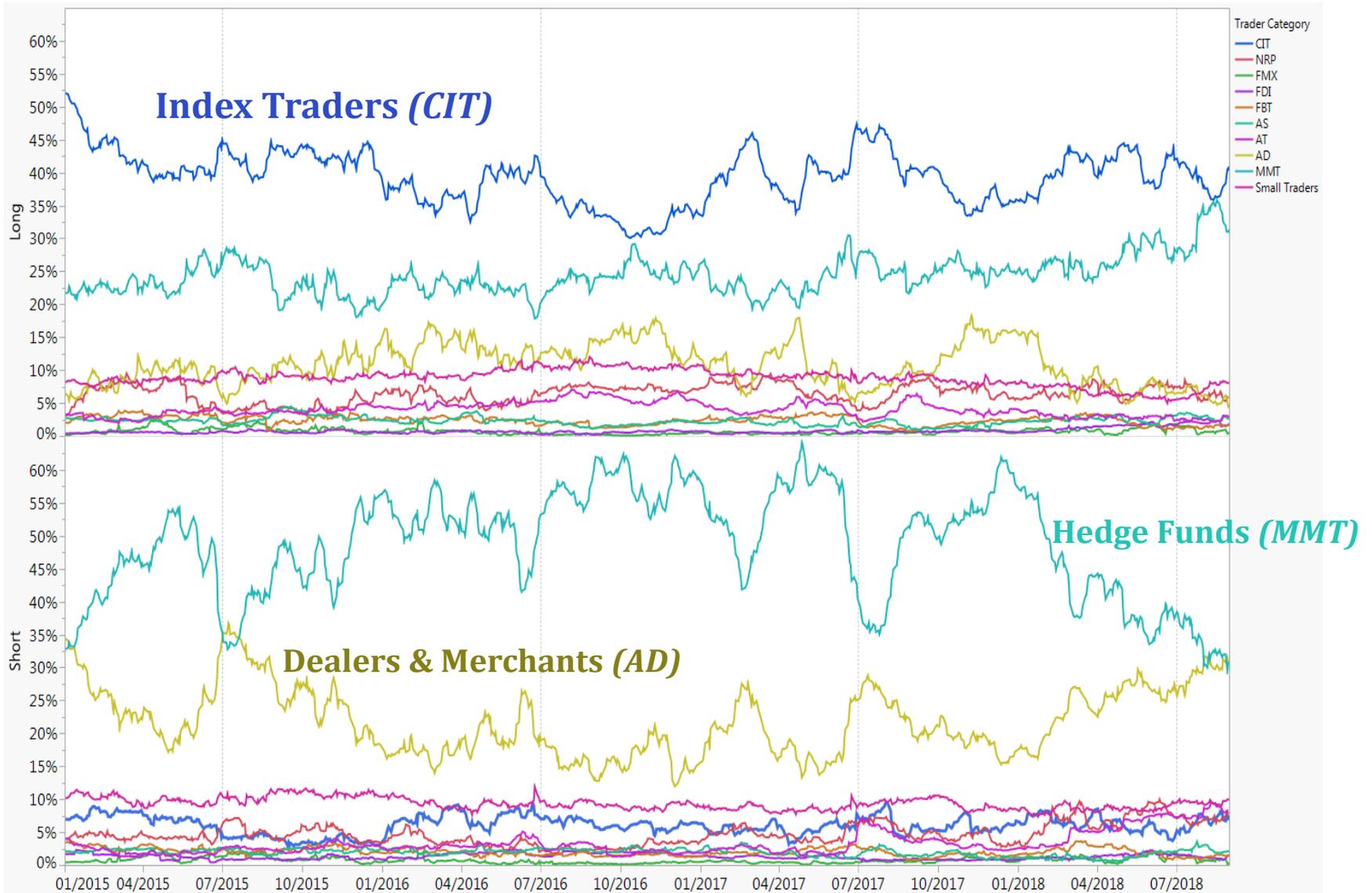
LONG & SHORT OI SHARES – SOYBEAN



LONG & SHORT OI SHARES – HRW WHEAT



LONG & SHORT OI SHARES – SRW WHEAT



TAKE-AWAY #2: TRADER TYPES

- **3 huge groups**
 - Hedge Funds (**MMT**), Dealer/Merchant (**AD**), *and* Index Traders (**CIT**)
 - All the other categories have small OI shares
- Our disaggregation shows how the different trader groups interact
 - **CIT** share of the long OI is stable
 - **MMT** and **AD** shares of short OI
 - Are negatively correlated, so the sum of the two is quite stable
 - **Show connection to** physical **market fundamentals**

AG FUTURES POSITIONS:
HORIZON

CORN SHARE OF OI – BY CONTRACT EXPIRY

	1 to 130 Days	130 Days to 1 Year	1 to 3 Years	3+ Years	Total
Commercial:					
AD	16.2	12.9	2.5	0.0	31.5
AT	3.5	3.0	0.4	0.0	6.9
AS	1.3	1.2	0.2	0.0	2.6
	20.9	17.1	3.1	0.0	41.1
Non-Commercial:					
MMT	19.0	8.0	1.0	0.0	28.0
FBT	0.8	1.1	0.1	0.0	2.1
FDI	0.5	0.4	0.1	0.0	0.9
FMX	0.3	0.3	0.0	0.0	0.6
NRP	3.4	2.2	0.3	0.0	5.9
	24.0	12.0	1.6	0.0	37.5
Commodity Index:					
CIT	12.7	7.6	1.1	0.0	21.4
	12.7	7.6	1.1	0.0	21.4
	57.6	36.7	5.7	0.0	100.0

TAKE-AWAY #3: MATURITY

- Maturity structure:
 - Grain/oilseed OI is concentrated in first 12 months
 - 94.3%+ is 12 months max, almost no OI or traders beyond 3 years
 - ≠ other products (e.g., WTI crude oil, Natural gas)
 - NC traders focus on ST contracts
 - Non Commercial OI is 2 to 3 times bigger ST than LT
 - Biggest difference is for MMTs (3-4 times)
 - Not true for Commercials or for CITs

SOYBEAN SHARE OF OI

– BY CONTRACT EXPIRY

	1 to 130 Days	130 Days to 1 Year	1 to 3 Years	3+ Years	Total
Commercial:					
AD	19.8	15.7	1.4	0.0	36.9
AT	5.4	2.4	0.1	0.0	8.0
AS	2.0	1.1	0.1	0.0	3.2
	27.3	19.2	1.6	0.0	48.1
Non-Commercial:					
MMT	17.0	7.4	0.7	0.0	25.1
FBT	0.8	0.7	0.1	0.0	1.7
FDI	0.7	0.4	0.1	0.0	1.1
FMX	0.4	0.2	0.0	0.0	0.6
NRP	4.1	2.3	0.2	0.0	6.6
	22.9	11.1	1.1	0.0	35.1
Commodity Index:					
CIT	10.4	6.0	0.4	0.0	16.9
	10.4	6.0	0.4	0.0	16.9
	60.7	36.3	3.1	0.0	100.0

HRW WHEAT SHARE OF OI

– BY CONTRACT EXPIRY

	1 to 130 Days	130 Days to 1 Year	1 to 3 Years	3+ Years	Total
Commercial:					
AD	17.1	13.1	1.0	0.0	31.2
AT	2.0	3.1	0.4	0.0	5.5
AS	1.3	0.7	0.1	0.0	2.1
	20.4	16.9	1.5	0.0	38.8
Non-Commercial:					
MMT	25.3	8.5	0.3	0.0	34.1
FBT	0.7	0.6	0.0	0.0	1.4
FDI	0.8	0.4	0.1	0.0	1.2
FMX	0.2	0.4	0.1	0.0	0.7
NRP	3.1	2.1	0.2	0.0	5.4
	30.1	11.9	0.7	0.0	42.7
Commodity Index:					
CIT	11.8	6.4	0.2	0.0	18.5
	11.8	6.4	0.2	0.0	18.5
	62.4	35.2	2.4	0.0	100.0

SRW WHEAT SHARE OF OI

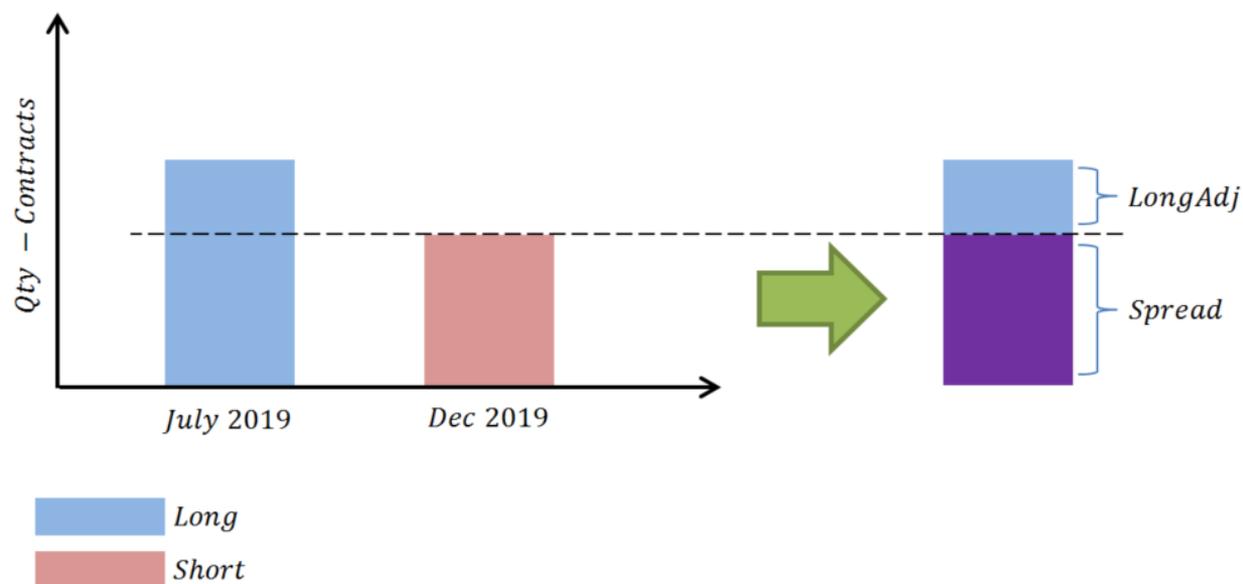
– BY CONTRACT EXPIRY

	1 to 130 Days	130 Days to 1 Year	1 to 3 Years	3+ Years	Total
Commercial:					
AD	9.9	7.4	0.6	0.0	17.9
AT	2.0	1.8	0.2	0.0	4.0
AS	1.4	0.8	0.1	0.0	2.3
	13.3	10.1	0.9	0.0	24.3
Non-Commercial:					
MMT	28.8	11.0	0.6	0.0	40.4
FBT	1.1	1.1	0.2	0.0	2.4
FDI	0.7	0.3	0.1	0.0	1.1
FMX	0.4	0.4	0.0	0.0	0.8
NRP	3.9	2.0	0.3	0.0	6.2
	35.0	14.8	1.1	0.0	50.9
Commodity Index:					
CIT	15.5	8.6	0.7	0.0	24.9
	15.5	8.6	0.7	0.0	24.9
	63.8	33.5	2.6	0.0	100.0

AG FUTURES POSITIONS: ***SPREAD ACTIVITY***

DIRECTIONAL *VS.* SPREAD OI SHARES?

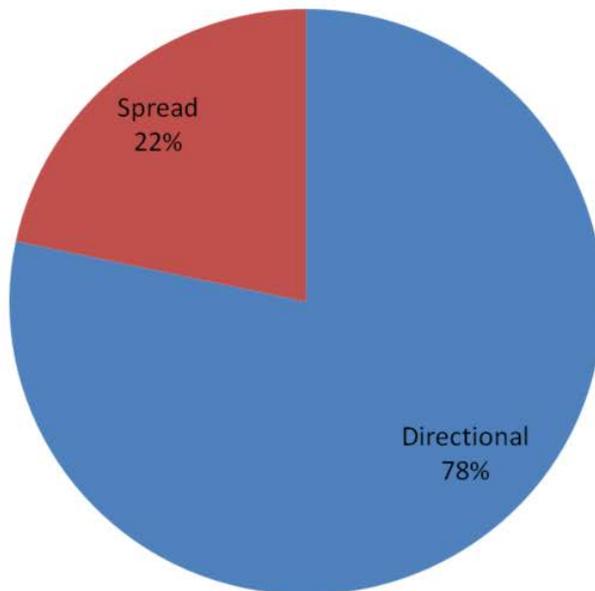
- First, **estimate spreading** for each trader



- Next, **aggregate** across traders by category

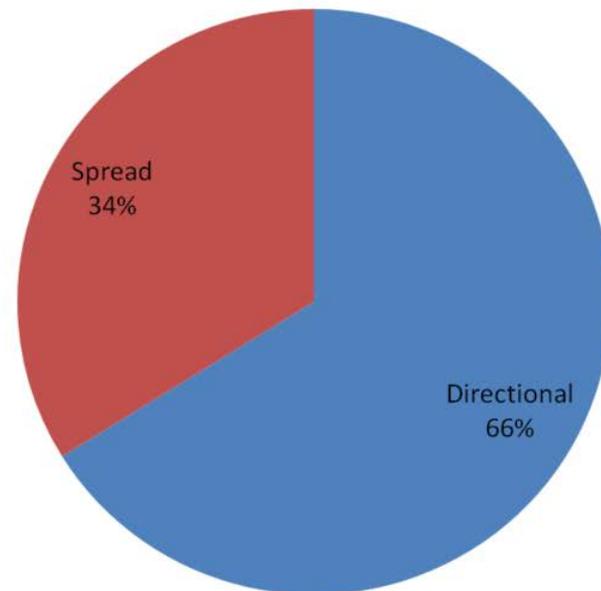
CONTRIBUTION OF CALENDAR SPREADS TO TOTAL OI

Current COT



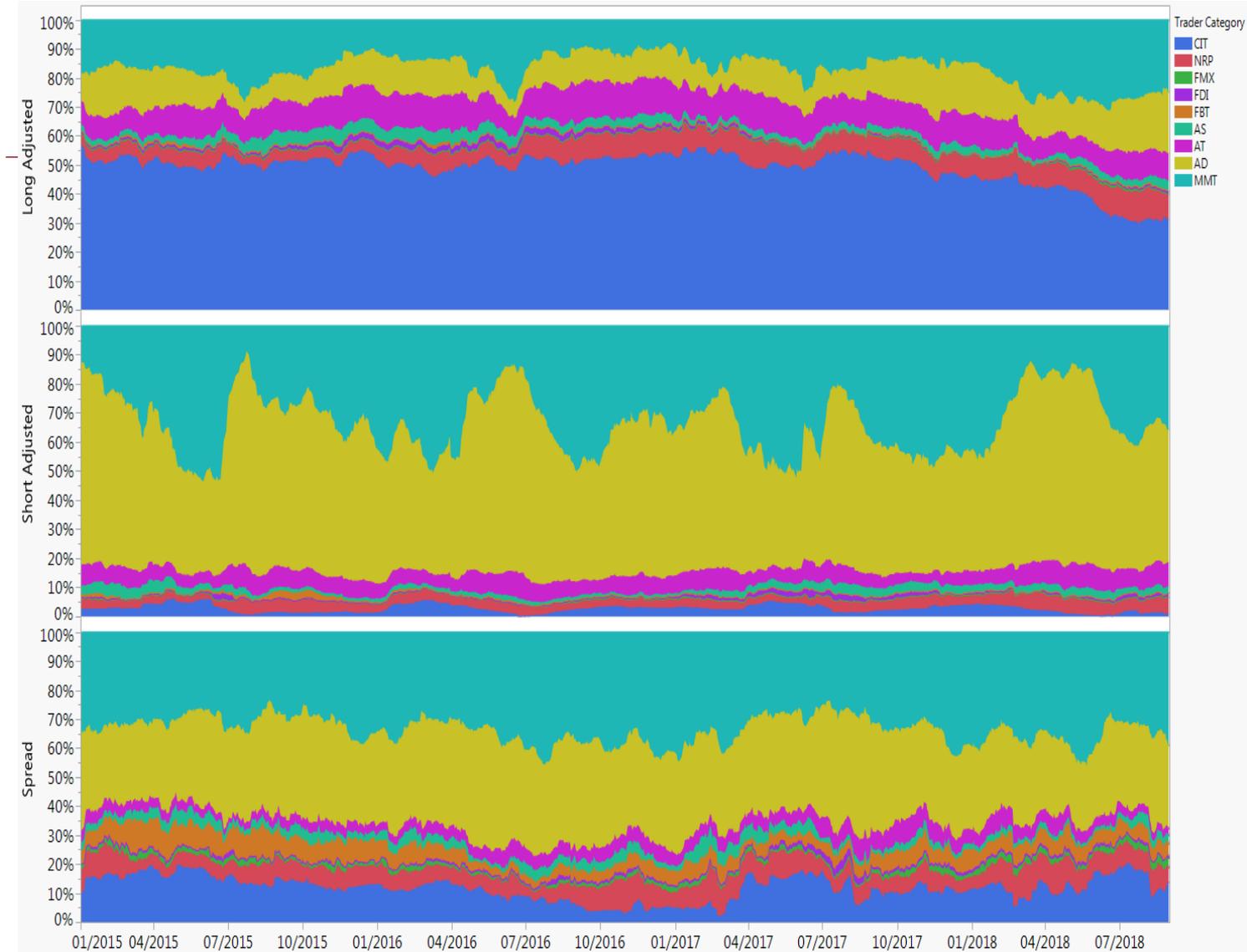
COT show spreads for swap dealers
but not for other commercials

Robe & Roberts

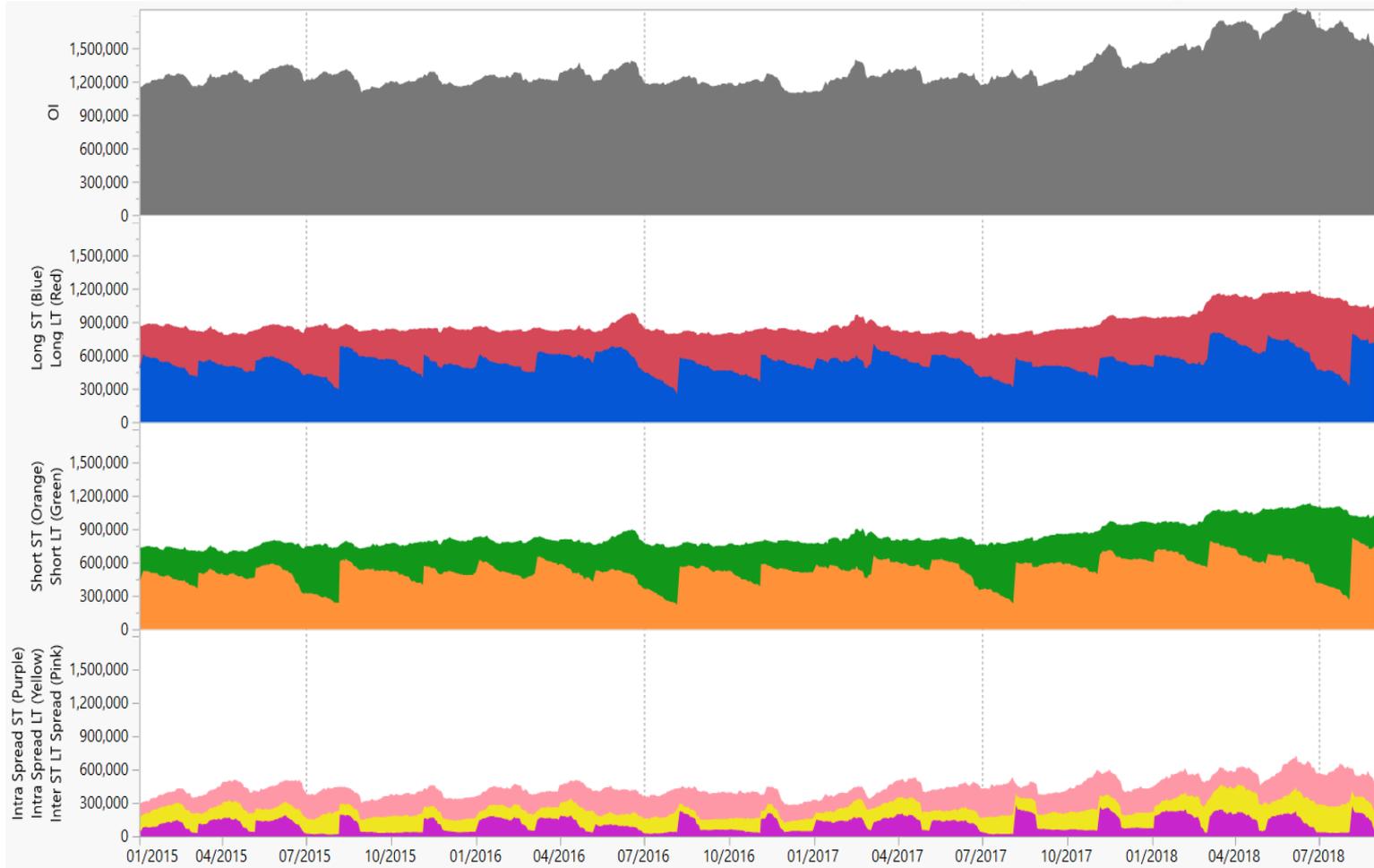


1/3rd of all positions exposed to
basis risk *rather than* price risk

AGGREGATE LONG/SHORT/SPREAD OI SHARES – CORN



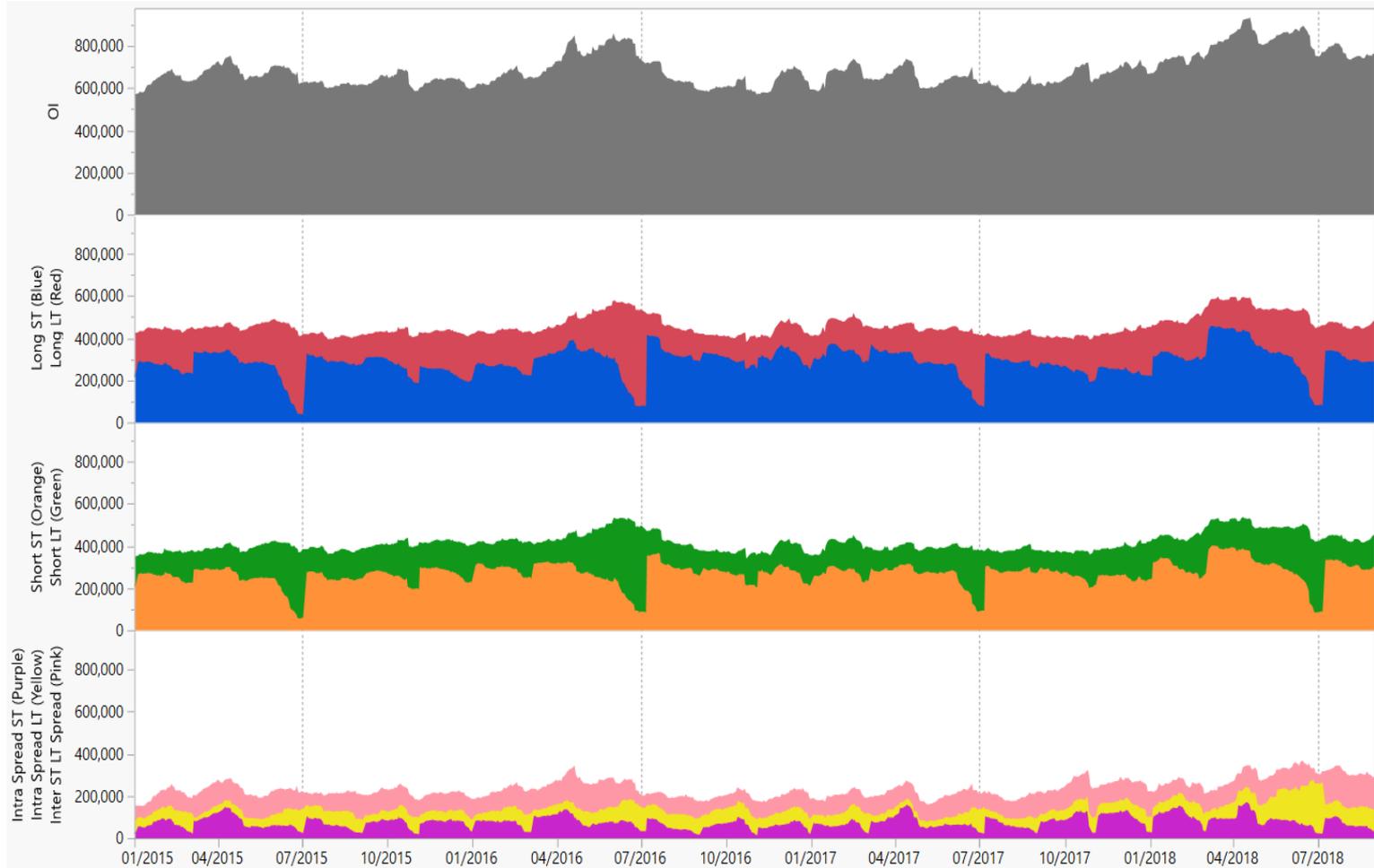
CORN – AVERAGE POSITIONS ('000)



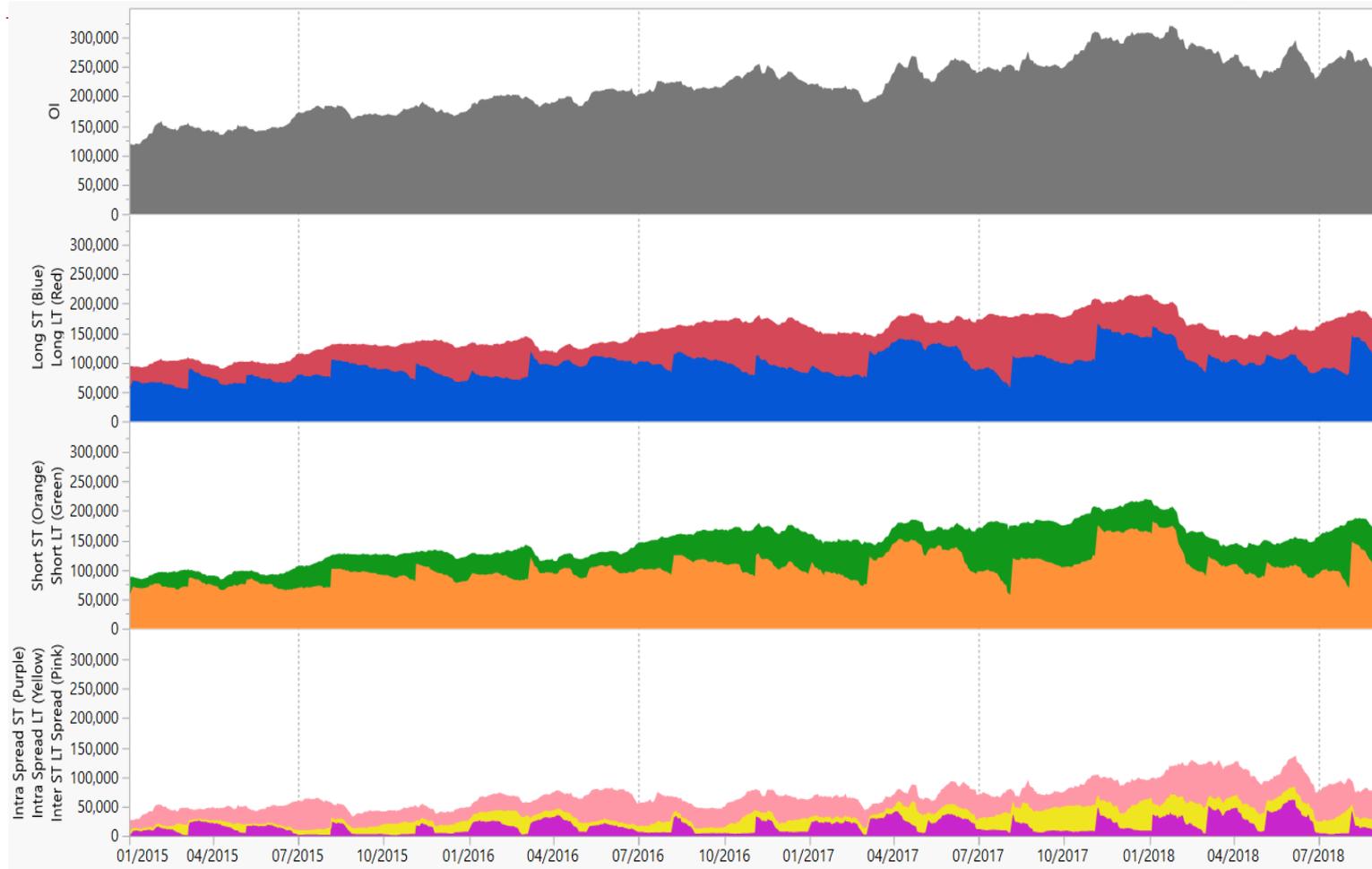
TAKE-AWAY #4: SPREADS

- Changes in spreading drive most OI changes
- Spreads ~ 1/3rd of total OI vs. COTs ~ 1/5th
 - Why the difference?
 - Dealer & Merchant spreading = 25 to 40% of all spread activity
 - COT show spreads for swap dealers but not for other commercials
 - Does it matter?
 - Interpretation of directionality
 - 1/8th of the OI
 - that outside observers believe is exposed to the absolute price level
 - is in fact only exposed to the basis risk

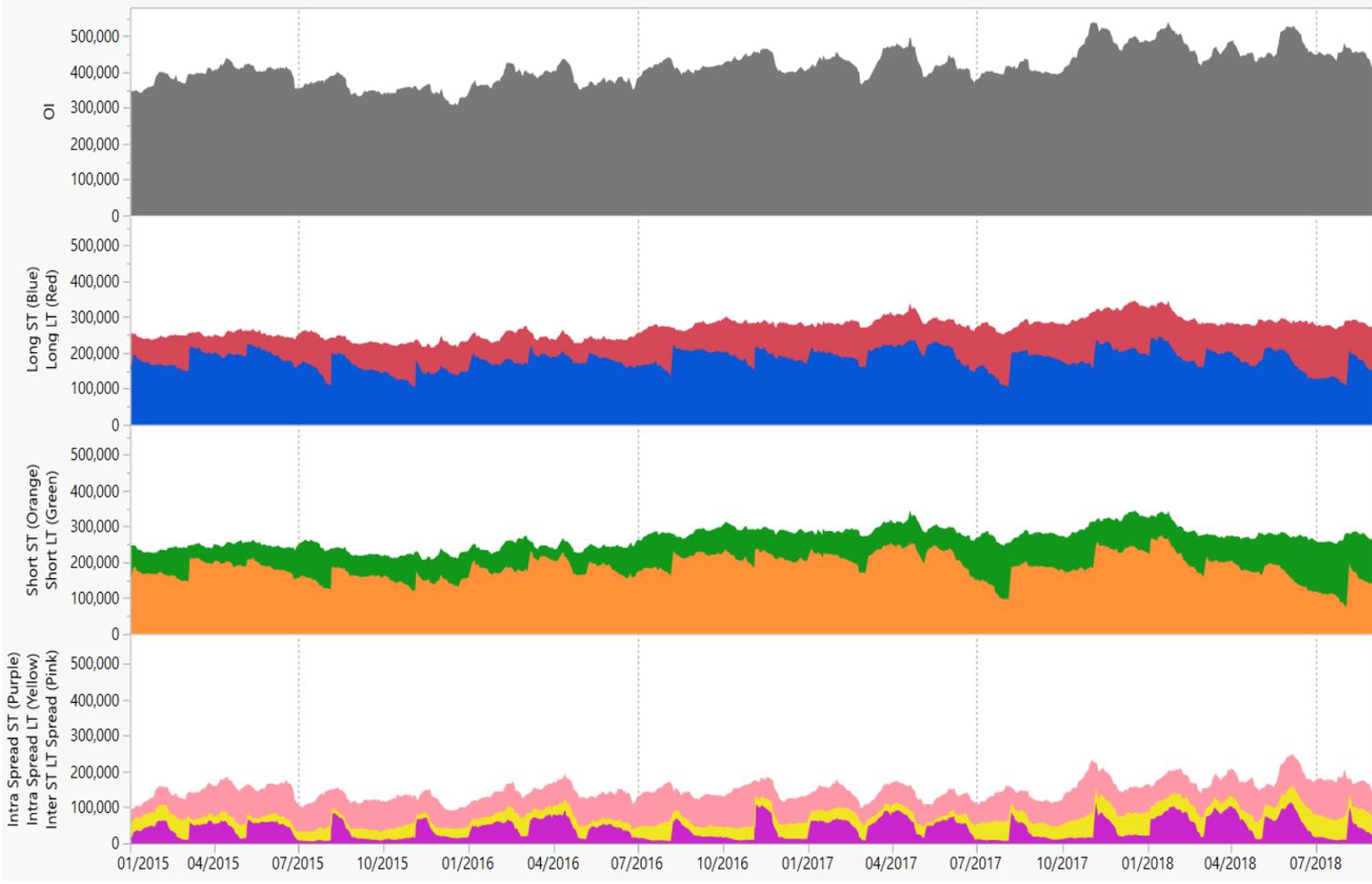
BEANS – AVERAGE POSITIONS ('000)



HRW WHEAT – AVERAGE POSITIONS ('000)



SRW WHEAT – AVERAGE POSITIONS ('000)



CONCLUSION

OVERVIEW—*MAIN FINDINGS*

- 1. There is a “market core”
- 2. Granularity matters
 - *There is no “FT mystery”*
- 3. Maturity structure
 - Most positions mature in <1 year
- Calendar spreading is a big deal
 - And commercials do a lot of it

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to foster market transparency by disseminating its research to market participants and the general public; and

to partner with other CFTC divisions and offices to integrate economic reasoning and data analysis into Commission policy and cost-benefit considerations.