

# The amazing rise and scandalous fall of wholesale power markets in our region Season 3

June 19, 2018

ETCSEE Budapest, Hungary

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TRUE IS IT THAT  
WE HAVE SEEN  
BETTER DAYS.

William Shakespeare

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# Shockingly brief (re-drafted from 2018 ETCSEE)

- Old correlations are no longer working – Status Quos changing
- Welcome new generation traders – Day of Extinction
- New types of ,commodities': *REMIT, Romania, PV*
- Gas is good, power is catastrophic, CO<sub>2</sub> is a tragedy
- Ultra-high CO<sub>2</sub>, but power is less expensive than 10 years ago
- Market trades, as if there would be no tomorrow
- Country net position is more important than ever

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# Structure of the presentation

- Main discussion with the help of a little Hungarian kinder garden song (*“Ez element vadaszni”*);
- Extra notes about HUPX and hydro
- Price drivers switching gears

# A little Hungarian kinder-garden song

*This one gas gone shooting (thumb)*

*This one has shot it down (index)*

*This one has carried it home (middle)*

*This one has roasted it (ring)*

*And this little one has eaten it all, and it has a stomach-ache now . . .  
(little finger)*

- How can this childish rhyme help to discuss CEE market developments?

# This one (liquidity) has gone shooting

Y-o-Y change

	2019*	2018	2017	2016	2015	2014	2013	2012	2011
Cal	-22%	-6%	-32%	112%	-27%	-3%	-5%	24%	36%
Q	-35%	-33%	26%	95%	-6%	35%	-19%	115%	87%
M	-18%	-27%	6%	17%	46%	19%	-8%	25%	116%
Wk	-10%	-27%	39%	14%	52%	33%	-2%	133%	113%
<b>HUPX</b>	23%	7%	5%	18%	18%	40%	43%	67%	
OTC DA	-15%	-45%	49%	-1%	27%	51%	10%	15%	45%
WkEnd	0%	-32%	8%	-4%	37%	58%	-4%	-17%	172%

2019 vs 2018 comparison

	Delivery/Trading Period							
	Jan	Feb	Mar	Apr	May	Q1	Q2	Q3
HUPX DAM	12%	32%	37%	15%	23%			
OTC DA	-30%	-21%	-19%	58%	-27%			
OTC weekend	4%	-10%	-33%	132%	9%			
Week-ahead	-43%	-51%	-50%	167%	52%			
Forward Months	-41%	-25%	-40%	8%	31%			
Forward Quarters						-58%	-32%	-10%
Cal19***	-41%	-1%	-42%	68%	-7%			
Cal20	39%	-4%	46%	-56%	-66%			

\*\*\* 2018 vs 2017

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# . . . And this one (market coupling) has shot it down

HU and RO are ,coupled', only ,some tiny' political, diplomatic, economic, cultural differences remain ...

One can show nice numbers in EU presentations, but such propaganda does not change reality

PX	Hourly Prices				24h
	2019	2018	2017	2016	Baseload
	p.c.	p.c.	p.c.	p.c.	p.c.
EPEX	15%	18%	9%	20%	13%
OTE	39%	56%	26%	56%	25%
OKTE	43%	72%	40%	60%	34%
PZU	85%	62%	81%	78%	53%
BSP	19%	20%	14%	21%	25%
SEEPEX	23%	24%	16%	40%	29%
CROPEX	19%	25%	26%	41%	25%
IBEX	6%	4%	5%	14%	6%
LAGIE	3%	5%	5%	7%	6%
GME	8%	6%	7%	6%	7%
	25.9%	29.1%	22.9%	34.3%	20.5%

# This one (country net position's daily change) has carried it home

But where is home?

- Romania is Nr. 1. ‚influencer‘ of HUPX with 400 MW average daily Base
- In 2019, Hungary is Nr.2. thanks to increased solar generation; but usually Balkan drives HUPX.

2017		+	-
AL	30	182	(168)
MK	31	136	(128)
ME	33	94	(128)
UK	57	179	(198)
BG	67	158	(164)
CRO	99	201	(209)
SI	113	188	(207)
BIH	117	226	(205)
SK	122	236	(251)
SER	136	249	(226)
HU	190	297	(319)
CR	197	280	(255)
RO	268	447	(434)

2018		+	-
AL	28	141	(201)
MK	36	171	(156)
UK	52	141	(156)
ME	53	152	(145)
CRO	75	181	(181)
BG	87	161	(176)
SI	91	183	(165)
BIH	127	206	(187)
SK	136	237	(232)
SER	138	241	(207)
HU	189	279	(301)
CR	192	260	(257)
RO	256	400	(437)

2019		+	-
MK	12	173	(156)
AL	17	209	(170)
UK	24	189	(155)
ME	24	106	(137)
SK	29	182	(195)
BG	34	152	(193)
SI	37	207	(179)
CRO	42	206	(158)
GR	45	216	(234)
SER	69	297	(247)
BIH	78	244	(217)
HU	93	269	(305)
RO	116	397	(431)

# This one (S/D change) has roasted it all

What HUPX got to do with Hungary?

- Hungary S/D changes move HUPX by 3-4€
- Romania S/D changes have stronger influence on HUPX (if wind blows ~6€)

2019	Nr.	Balance Change		Threshold Level: 300 MW				Threshold Level: 400 MW				Threshold Level: 500 MW			
		+	-	+	+	-	-	+	+	-	-	+	+	-	-
MK	12	173	(156)												
AL	18	209	(192)	(1.6)											
UK	24	189	(155)		0.5				0.5				0.5		
ME	24	110	(137)		(0.3)		(4.7)								
SK	29	182	(195)		2.8		3.9				3.9				
BG	35	152	(193)				1.6				1.1				1.1
SI	38	204	(179)	(0.2)				(0.2)				(0.2)			
CRO	42	206	(158)		(0.2)	(5.2)	1.5		(0.2)	(5.2)			(0.2)		
GR	45	216	(234)		(2.1)	1.3	(0.6)				(1.5)				(1.5)
SER	69	298	(247)	(2.8)	(1.5)	0.8	(3.2)	(2.8)	(1.5)		(3.2)	(2.8)	(1.0)		(1.2)
BIH	79	240	(217)	6.4	(0.7)		0.4		(0.7)				(0.7)		
HU	93	269	(305)	1.3		2.7	2.6	0.2		3.9	3.2	0.2			2.7
RO	116	397	(431)	(0.9)	(0.4)	1.1	0.6	(1.8)	(6.0)	1.8		(1.3)	(6.0)	1.1	

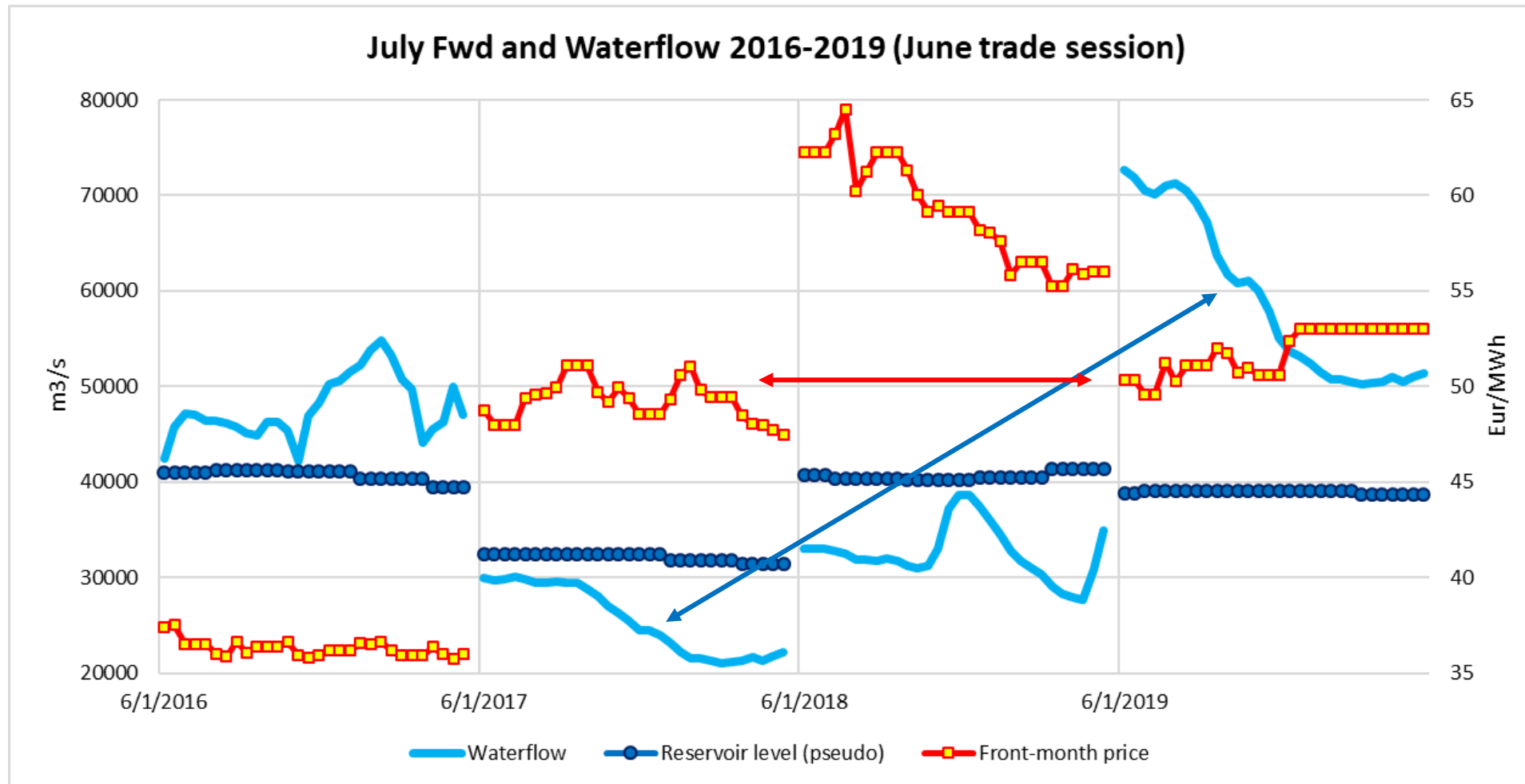


# And this little one (hydro correlation to power price) has eaten it all. . .

Jul-17 vs Jul-19: same July levels (51), but two completely different hydro scenarios

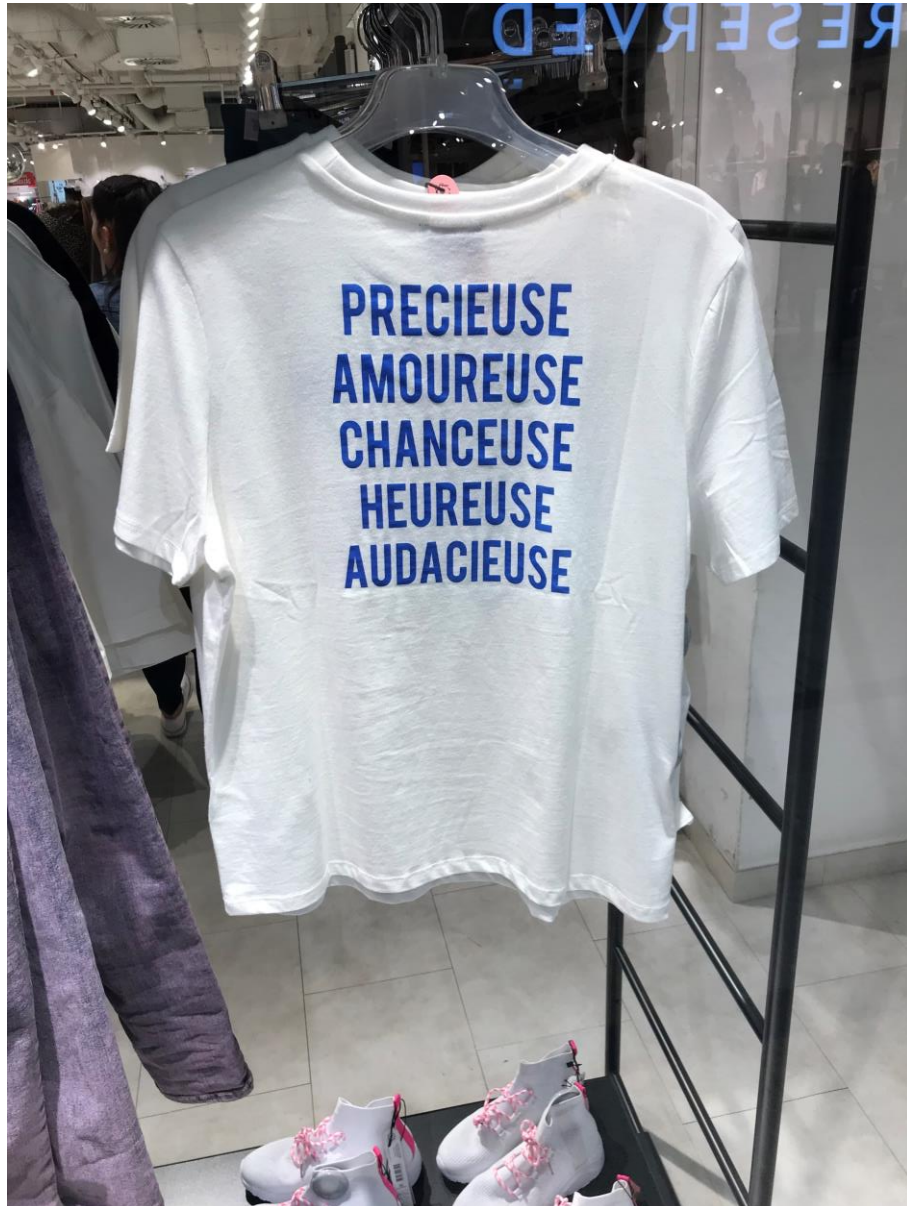
Jul-16: ~45k m<sup>3</sup>/s vs +35€; but we did not have hysterical' commodities (like CO<sub>2</sub> and Trumpism)

Jul-19: ~57k m<sup>3</sup>/s vs +51€; we should have July below 30, but . . . the little one has eaten it all



# Extra notes about HUPX and hydro

# Is this me or HUPX ?



Precieuse = HUPX is good, but light-years from a mature trading platform

Amoureuse = No one is a lover of HUPX

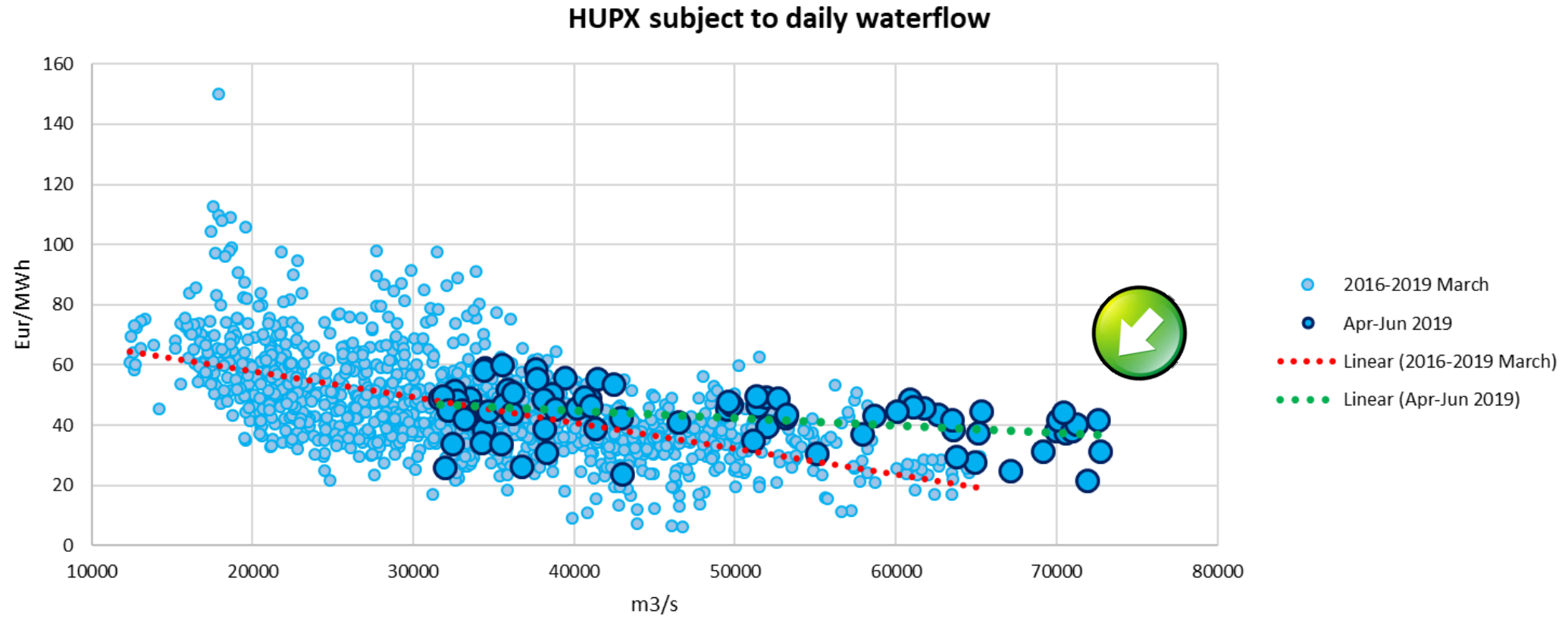
Chanceuse = Uncertain, risky platform

Heureuse = Not many of us is happy

Audacieuse = Well, I can not be too brave/audacious otherwise my boss will kick me out

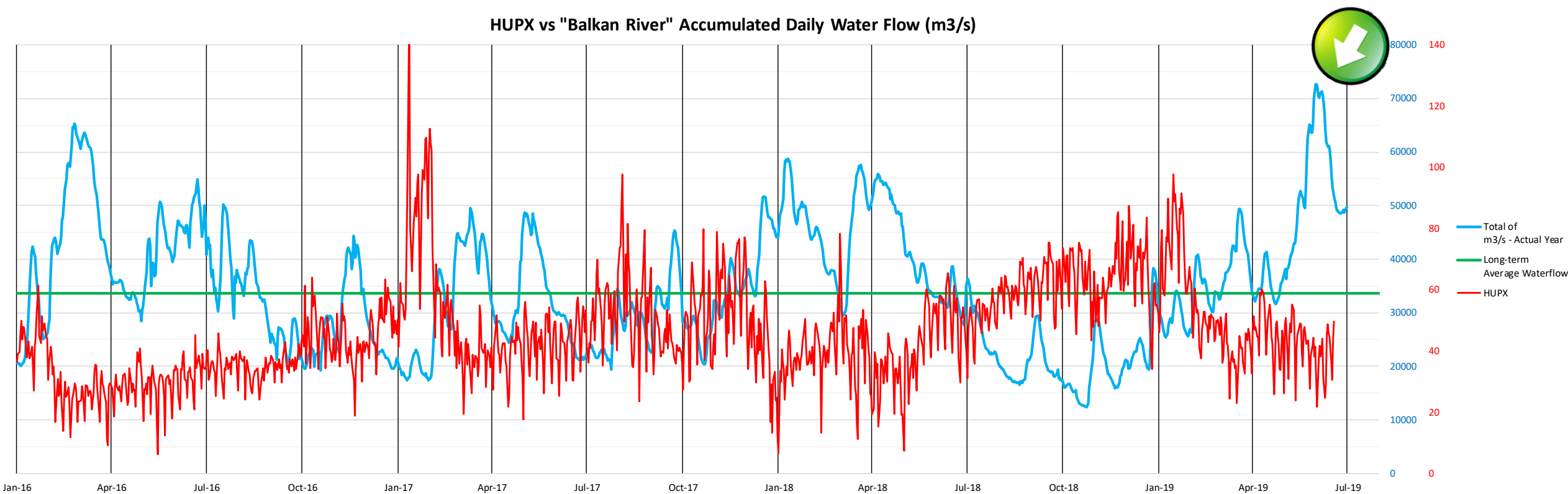
# New 'Hydro World' order: traditional correlation is the past...

2019 sees ultra-high waterflow with something higher HUPX as well



# Back to raw fundamentals: waterflow never lies...

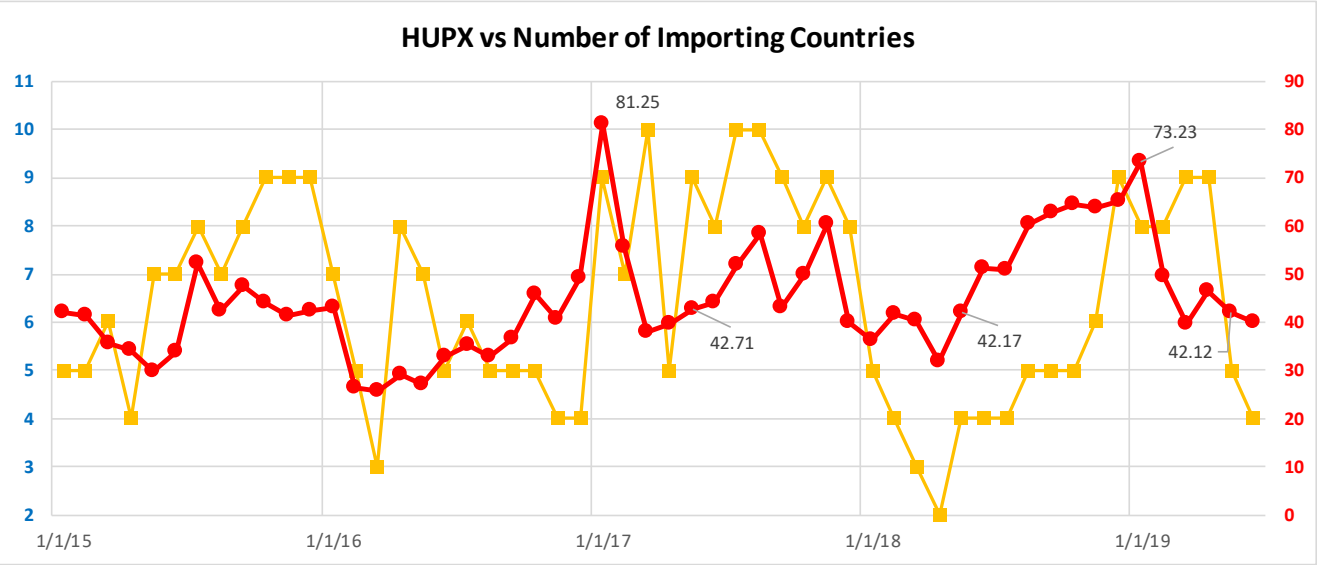
Strong correlation between water flow and HUPX; but  
Waterflow is not all, other factors also influence HUPX (*see above, market coupling*)



From	To	Avg HUPX	Avg WF	From	To	Avg HUPX	Avg WF
2/9/2016	4/3/2016	25.09	53023	4/17/2016	6/7/2016	28.88	39685
12/19/2017	2/24/2018	36.81	46867	4/17/2017	6/7/2017	42.11	46867
3/12/2018	5/23/2018	35.32	48394	4/17/2018	6/7/2018	40.59	48394
3/4/2019	4/2/2019	39.50	41402	4/17/2019	6/7/2019	41.14	41402
4/17/2019	6/7/2019	41.14	48775				

# Price drivers switching gears

# Country balance is still the Price Driver King, but with some interesting exceptions



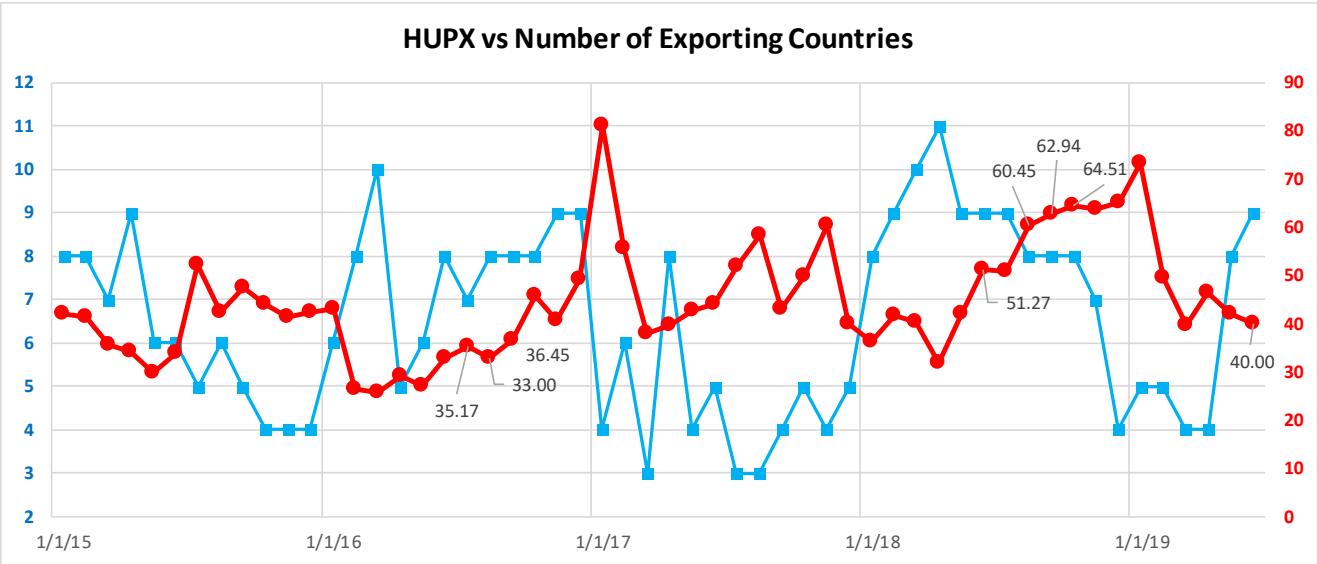
January: 2017+19 very cold+very high  
HUPX 81 vs 73 😊

February: 2017+19 high import and  
high HUPX 56 vs 50 😊

May: HUPX ~42

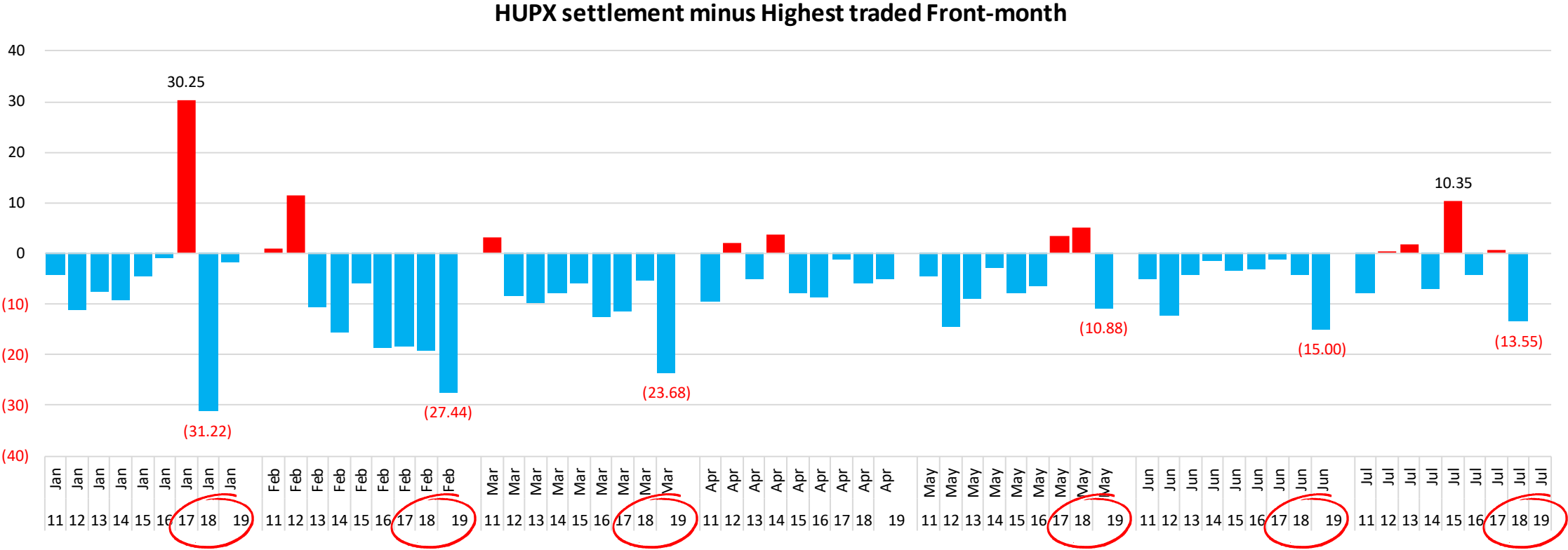
June: 2018-19 high export and HUPX  
51 vs 40 😞

Q3: 2016+18 high export and HUPX 35  
vs 58 😞



# Forward and spot are not walking hand in hand...

2017 to date is the Age of extreme forward to spot settlement spreads





# Only one question left: how and when will price drivers switch in CEE electricity trading?

## Central question is

- „when, not at what level”

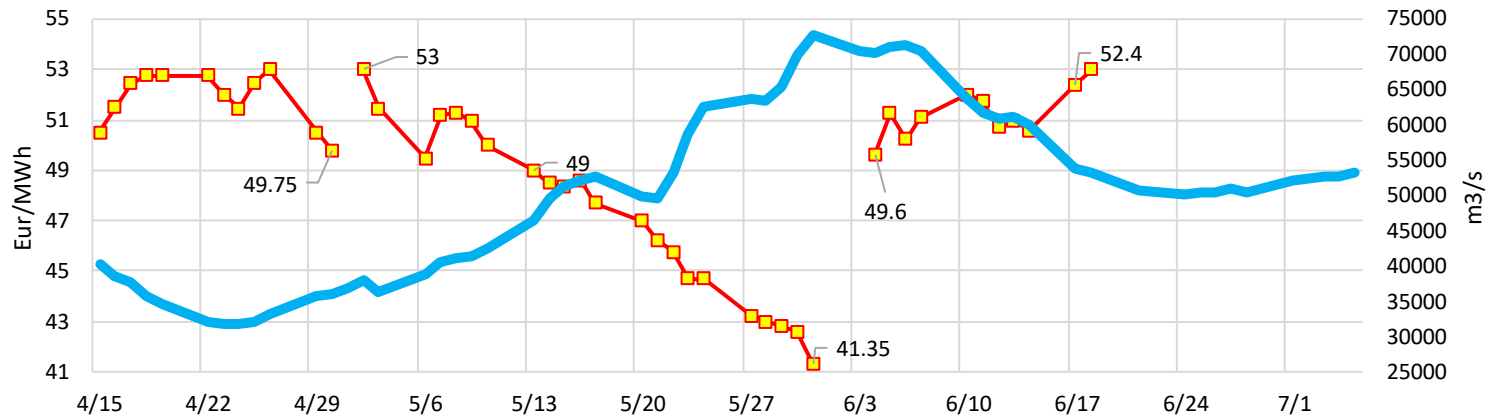
Multi rainfall-waves hit Balkan during May, Fwd contracts lost significant value, even though CO<sub>2</sub> and Germany went up

- Hydrology is the dominant price driver (for the time being)

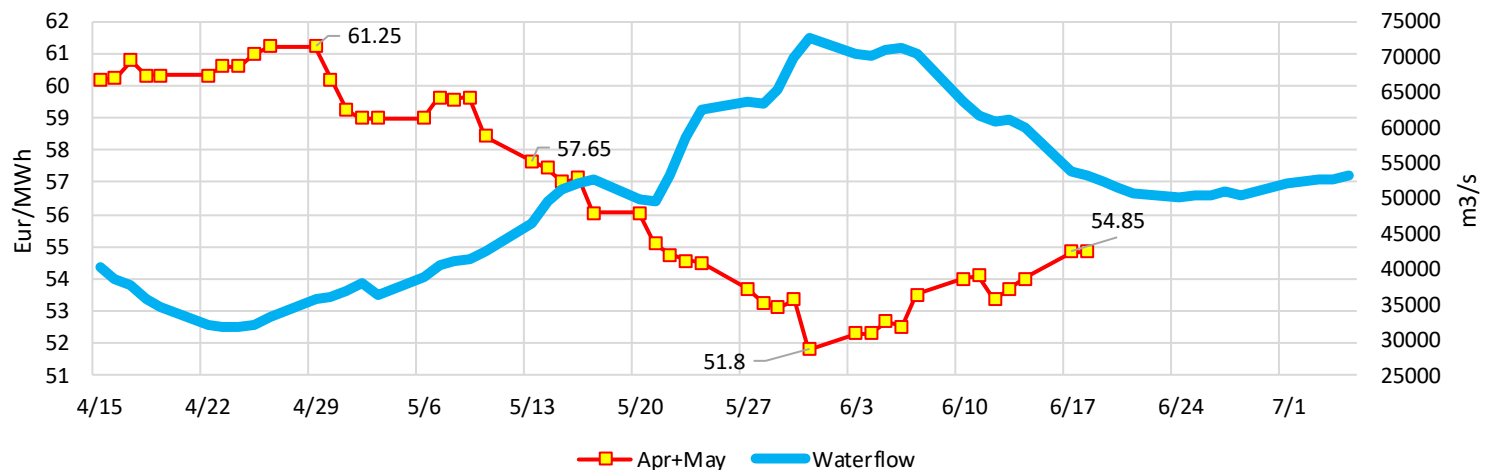
## Next question is

- when will the market change gear from hydro to one of the other price-drivers (weather/CO<sub>2</sub>/gas/German prices, etc) ?
- It will switch for sure: only when and to which one?
- And will it be a smooth (double-clutch) gear change or a manual, hard one with a worn-out clutch (like, January 2018)?

May, June and July contracts vs Waterflow

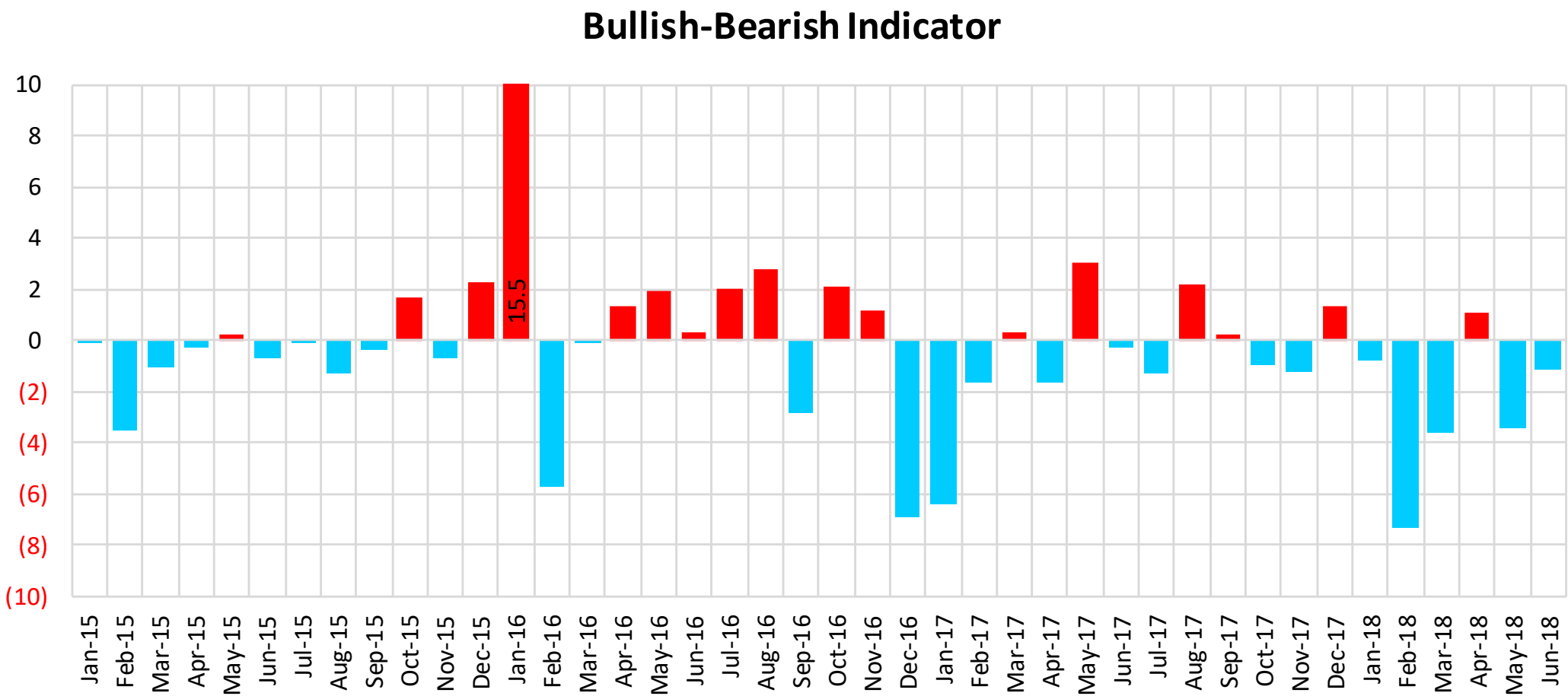


Q3 contract vs Waterflow



# Leading us to the logical conclusion: Nothing...is...what it seems

Since 2016 market is on average 1.5€ bullish versus 2.8€ bearish



BB-indicator: calculated from various price-price differences (FM vs FW, FW vs DA, FM vs DA)

# Conclusions – we wrote in 2018

- We all like (market) coupling, but (in electricity trading) it is a means, and not a goal
  - Too many forced coupled exchanges do not necessary mean good trading >>> propaganda is strong in energy portals
  - The case of Albanian goatherder >>> TRUE but this is now Romania
- Liquidity is down
  - With the exception of spot. v-o-v traded volumes are down in 2018 >>> TRUE, but financial trading is getting stronger in the total volume
- Hungary is the regional hub, yet it is not fundamentally traded
  - Whatever happens in the Balkan and/or in Germany, it is bullish for HUPX;
  - The Hungarian Cal19 is “mirroring” the German contract (and not trading) >>> soft transformation has started with Hungarian PV generation

# Conclusions – we write in 2019



Retarded  
HUPX

Manipulation  
&  
Sorrow

Are we  
Parking now  
or are  
shareholders  
Pessimistic  
to continue ?

Panic

No move:  
holidays

Drive:  
Hydro  
Germany  
Solar  
Trumpism  
CO2

Pizza Guys  
carbon-  
game  
CO1  
CO2  
CO3