

CME S&P Case Shiller Futures

December 31, 2020 Snapshot



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Overview

Objective

- The purpose of this monthly report is to compile information from a variety of sources into one place, at a point in time, to facilitate the understanding, analysis, awareness, and hopefully trading of the CME Case Shiller Home Price futures (and options) and other housing derivative products. Feel free to contact me if you have an ideas for an outright trade, calendar spread, option or inter-city theme.

Market Color/Discussion

- Resources: www.homepricefutures.com
- Market Updates: Twitter @HomePriceFuture
- LinkedIn: There is a CME Case Shiller home price futures group, but I use Twitter and blogs more often.
- Note: Almost all of the bid/ask quotes that are used here are my record of end-of-trading day prices, and thus may differ from CME closes and quotes, which are tallied an hour earlier.
- I use CUS and HCI interchangeably for the 10-city index. Different trading platforms use different symbols. Sorry for any confusion.
- Based demand for hedging products for other regions I recently launched Home Price Hedging Fund <https://www.homepricefutures.com/hphf>
Contact me with any interest in hedging Top 50 cities.



Observations for Dec 2020

- **Trading/Quotes/Spreads/Activity:**

- Only six lots traded in December, in 2 regions and 2 expirations. The 10 lots traded this quarter makes this the lowest volume quarter since Q1 2010. The rolling 12-month tally of trades remained at 270. (Page 11)
- Prices continued to surge, particularly after the Dec 28th Case Shiller numbers were updated. For example, the HCIG22 contract close rose from 231.6 on Sept 30, to 254.4.
- I've recapped price moves for 2020 in two graphs (Pages 9-10).
- The only color I can offer is that every inquiry has been from a buyer. I sense that few people see the need for hedging in such a bull market.
- Prices were much higher during the month. There were two-side quotes on 74 contracts (of 110) at month-end. (Pages 4-7)
- Bid/Ask spreads (in aggregate) tightened slightly. (Page 8)
- OI dropped to new historic lows. (Page 13)
- My thoughts on prices for the 10-city index contracts as well as the G22 contracts on the CS 10-city components, as well as for OTC agreements on the CS 20-city components get posted 2x/week. (Page 12)
- I'm quoting OTC options on 20 Case Shiller indices. (Page 14-15)
- Please feel free to DM me on ideas for trades:

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Price Changes/ Dec 31 v Nov 30

- Prices climbed and bid/ask spreads tightened, lead by stronger bids in front contracts.
- Only markets with two-sided quotes are tallied . That's typically G21, G22, G23, and G25. (That's why bid/ask spreads didn't move out so far on other regions.) I've also attempted to maintain two-sided quotes for month-end pricing in K21 and Q21.

CME S&P Case Shiller Home Price Futures: Dec 31 v Nov 30

	Bid Δ	Ask Δ	Δ	Change*			
					Bid	Ask	
CUS	82.4	90.0	-7.6	G21	64.0	70.6	-6.6
BOS	40.8	36.8	4.0	K21	95.0	77.8	17.2
CHI	31.8	27.6	4.2	Q21	99.2	93.4	5.8
DEN	48.4	45.0	3.4	X21	54.6	54.8	-0.2
LAV	42.0	33.0	9.0	G22	72.4	77.2	-4.8
LAX	55.4	48.2	7.2	X22	8.2	11.0	-2.8
MIA	48.4	44.2	4.2	G23	87.6	81.0	6.6
NYM	63.6	61.2	2.4	G24	8.4	8.4	0.0
SDG	57.6	57.6	0.0	G25	85.2	68.4	16.8
SFR	64.6	60.0	4.6	G26	9.0	8.4	0.6
WDC	48.6	47.4	1.2				
	583.6	551.0	32.6		583.6	551.0	32.6

*Change -only for 2-sided mkts

*- These prices are my best effort to collect end-of-day data and are not actual closing CME bids and offers.

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Price Changes (1 of 3)

CME S&P Case Shiller Home Price Futures: Dec 31 v Nov 30

9	Bid	Ask	Bid	Ask	Bid Δ	Ask Δ	10	Bid	Ask	Bid	Ask	Bid Δ	Ask Δ
HCI	248.58						BOS	244.76					
HCIG21	251.0	254.8	245.0	247.4	6.0	7.4	BOSG21	247.0	251.0	240.4	244.0	6.6	7.0
HCIK21	253.4	259.0	245.2	251.4	8.2	7.6	BOSK21	249.2	255.0	239.0	247.0	10.2	8.0
HCIQ21	256.0	262.4	246.4	251.4	9.6	11.0	BOSQ21	252.0	257.8	242.8	250.0	9.2	7.8
HCIX21	255.6	262.2	246.6	251.2	9.0	11.0	BOSX21	252.6		243.6	251.6	9.0	
HCIG22	254.4	259.4	247.0	251.0	7.4	8.4	BOSG22	250.4	256.0	243.4	249.0	7.0	7.0
HCIX22	257.6	265.4	249.4	254.4	8.2	11.0	BOSX22	254.0		245.4		8.6	
HCIG23	257.2	263.8	249.0	255.4	8.2	8.4	BOSG23	252.8	259.4	245.0	252.4	7.8	7.0
HCIG24	259.4	267.4	251.0	259.0	8.4	8.4	BOSG24	255.6		248.0		7.6	
HCIG25	261.4	271.8	253.0	263.4	8.4	8.4	BOSG25	258.8	272.6	250.6	266.4	8.2	6.2
HCIG26	263.0	277.4			9.0		BOSG26	261.0					

9	Bid	Ask	Bid	Ask	Bid Δ	Ask Δ
CHI	153.88					
CHIG21	154.6	158.0	150.0	153.0	4.6	5.0
CHIK21	155.6	160.6	148.2	155.0	7.4	5.6
CHIQ21	158.0	163.0	149.4	156.0	8.6	7.0
CHIX21	159.0		150.0	159.2	9.0	
CHIG22	156.6	161.8	151.4	156.8	5.2	5.0
CHIX22	159.6		153.4		6.2	
CHIG23	157.6	163.6	151.6	158.6	6.0	5.0
CHIG24	160.2		154.6		5.6	
CHIG25	162.4	176.2	155.2	171.0	7.2	
CHIG26	164.0	178.6				

*- These prices are my best effort to collect end-of-day data and are not actual closing CME bids



Price Changes (2)

CME S&P Case Shiller Home Price Futures: Dec 31 v Nov 30

	Bid	Ask	Bid	Ask	Bid Δ	Ask Δ		Bid	Ask	Bid	Ask	Bid Δ	Ask Δ
DEN	238.85						LAV	206.78					
DENG21	242.0	246.0	237.0	240.4	5.0	5.6	LAVG21	209.2	213.0	204.0	208.0	5.2	5.0
DENK21	244.0	249.8	235.4	243.4	8.6	6.4	LAVK21	210.2	216.2	203.0	211.0	7.2	5.2
DENQ21	247.0	255.8	239.2	248.0	7.8	7.8	LAVQ21	212.2	218.4	204.2	213.0	8.0	5.4
DENX21	247.2	255.8	239.6	248.8	7.6	7.0	LAVX21	212.6		203.6	211.8	9.0	
DENG22	245.2	250.8	240.2	245.0	5.0	5.8	LAVG22	210.6	216.6	204.8	211.0	5.8	5.6
DENX22	249.2		243.4		5.8		LAVX22	213.6		205.4		8.2	
DENG23	247.8	253.8	242.0	247.0	5.8	6.8	LAVG23	212.0	217.2	204.4	212.2	7.6	5.0
DENG24	254.2		246.0		8.2		LAVG24	215.2		207.0		8.2	
DENG25	256.8	270.6	248.2	265.0	8.6	5.6	LAVG25	216.4	230.8	208.2	224.0	8.2	6.8
DENG26	258.0						LAVG26	218.0					

	Bid	Ask	Bid	Ask	Bid Δ	Ask Δ		Bid	Ask	Bid	Ask	Bid Δ	Ask Δ
LAX	312.49						MIA	263.20					
LAXG21	316.0	320.0	309.0	313.0	7.0	7.0	MIAG21	265.8	269.8	259.6	263.0	6.2	6.8
LAXK21	318.2	324.2	308.4	316.6	9.8	7.6	MIAK21	267.2	273.2	258.8	266.0	8.4	7.2
LAXQ21	321.6	329.8	311.2	320.0	10.4	9.8	MIAQ21	269.2	276.2	260.2	267.0	9.0	9.2
LAXX21	321.0		311.0	320.4	10.0		MIAX21	269.0		260.0	269.2	9.0	
LAXG22	319.0	324.8	312.0	317.2	7.0	7.6	MIAG22	268.4	274.4	261.0	267.2	7.4	7.2
LAXX22	323.0		312.4	318.0	10.6		MIAX22	271.4		263.2		8.2	
LAXG23	321.2	327.8	311.8	319.8	9.4	8.0	MIAG23	270.0	275.8	261.6	269.0	8.4	6.8
LAXG24	322.8		313.0		9.8		MIAG24	271.6		264.0		7.6	
LAXG25	324.0	336.2	312.2	328.0	11.8	8.2	MIAG25	274.4	288.2	265.4	281.2	9.0	7.0
LAXG26	325.0						MIAG26	275.0					

*- These prices are my best effort to collect end-of-day data and are not actual closing CME bids



Price Changes (3)

CME S&P Case Shiller Home Price Futures: Dec 31 v Nov 30

	Bid	Ask	Bid	Ask	Bid Δ	Ask Δ		Bid	Ask	Bid	Ask	Bid Δ	Ask Δ
NYM	215.09						SDG	292.85					
NYMG21	216.8	220.8	209.8	213.0	7.0	7.8	SDGG21	296.0	300.0	290.0	293.0	6.0	7.0
NYMK21	218.6	224.4	208.4	216.0	10.2	8.4	SDGK21	298.8	304.4	289.8	296.8	9.0	7.6
NYMQ21	221.0	227.6	211.0	218.0	10.0	9.6	SDGQ21	301.8	307.6	292.0	299.0	9.8	8.6
NYMX21	220.6	227.8	210.8	217.0	9.8	10.8	SDGX21	300.6	310.0	291.6	299.8	9.0	10.2
NYMG22	219.4	225.4	211.4	217.2	8.0	8.2	SDGG22	299.0	305.0	292.4	298.0	6.6	7.0
NYMX22	222.6		213.4		9.2		SDGX22	303.0		293.4		9.6	
NYMG23	221.4	227.8	211.6	218.2	9.8	9.6	SDGG23	302.0	309.0	294.0	300.0	8.0	9.0
NYMG24	223.2		215.0		8.2		SDGG24	303.2		295.0		8.2	
NYMG25	226.0	239.8	217.2	233.0	8.8	6.8	SDGG25	305.4	319.2	296.2	311.0	9.2	8.2
NYMG26	227.0						SDGG26	306.4					

	Bid	Ask	Bid	Ask	Bid Δ	Ask Δ		Bid	Ask	Bid	Ask	Bid Δ	Ask Δ
SFR	286.45						WDC	253.47					
SFRG21	288.8	292.6	283.0	286.0	5.8	6.6	WDCG21	256.4	260.4	251.8	255.0	4.6	5.4
SFRK21	291.2	297.2	282.2	289.2	9.0	8.0	WDCK21	258.2	264.2	251.2	258.0	7.0	6.2
SFRQ21	294.2	300.6	285.0	291.0	9.2	9.6	WDCQ21	261.8	268.6	254.2	261.0	7.6	7.6
SFRX21	294.4	300.6	283.4	292.0	11.0	8.6	WDCX21	262.0	268.6	253.8	261.4	8.2	7.2
SFRG22	293.6	299.6	285.4	290.2	8.2	9.4	WDCG22	260.0	265.4	255.2	259.4	4.8	6.0
SFRX22	297.2		286.4	292.0	10.8		WDCX22	263.6		257.2		6.4	
SFRG23	295.6	300.8	285.8	292.8	9.8	8.0	WDCG23	262.0	268.8	255.2	261.4	6.8	7.4
SFRG24	297.4		286.0		11.4		WDCG24	266.4		258.6		7.8	
SFRG25	298.8	312.8	287.2	303.0	11.6	9.8	WDCG25	268.8	282.6	259.2	275.0	9.6	7.6
SFRG26	301.0						WDCG26	269.0					

*- These prices are my best effort to collect end-of-day data and are not actual closing CME bids



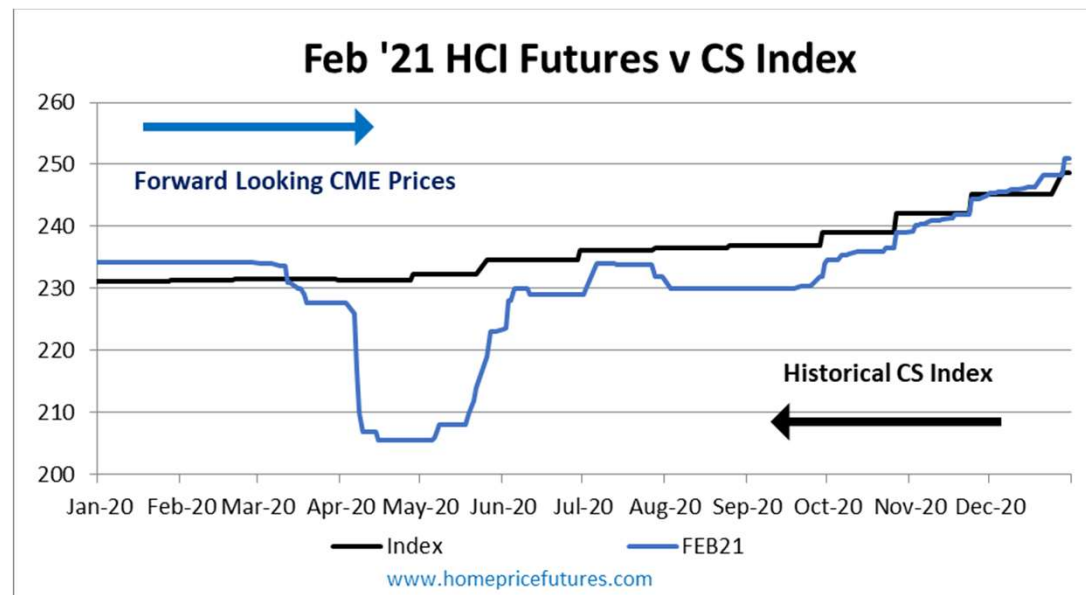
Bid/Ask Spreads

- Tightest two bid/ask spreads (by expiration) in green/ widest two in red.
 - CUS (aka HCI, 10-city index) is often the tightest market
 - LAV, LAX and MIA continue to be the widest
 - G21, G22, G23, G25 often have two-sided quotes. (K21, Q21 added for month-end.
 - G21 Bid/Ask = 3.9 points, is above LT average with 2 months to expiration, but tighter than during Covid market.
 - Quoted spreads are often posted GTC markets for 1x1 (one bid vs one ask). DM to discuss better prices, or increased sizes.
 - I see no reason to aggressively quote G26 until interest picks up in G24, G25.

		BID/ASK Spread										
		CUS	BOS	CHI	DEN	LAV	LAX	MIA	NYM	SDG	SFR	WDC
Feb '21	G21	3.8	4.0	3.4	4.0	3.8	4.0	4.0	4.0	4.0	3.8	4.0
May '21	K21	5.6	5.8	5.0	5.8	6.0	6.0	6.0	5.8	5.6	6.0	6.0
Aug '21	Q21	6.4	5.8	5.0	8.8	6.2	8.2	7.0	6.6	5.8	6.4	6.8
Nov '21	X21	6.6			8.6				7.2	9.4	6.2	6.6
Feb '22	G22	5.0	5.6	5.2	5.6	6.0	5.8	6.0	6.0	6.0	6.0	5.4
Nov '22	X22	7.8										
Feb '23	G23	6.6	6.6	6.0	6.0	5.2	6.6	5.8	6.4	7.0	5.2	6.8
Feb '24	G24	8.0										
Feb '25	G25	10.4	13.8	13.8	13.8	14.4	12.2	13.8	13.8	13.8	14.0	13.8
Feb '26	G26	14.4		14.6								

Feb '21 (G21) contracts

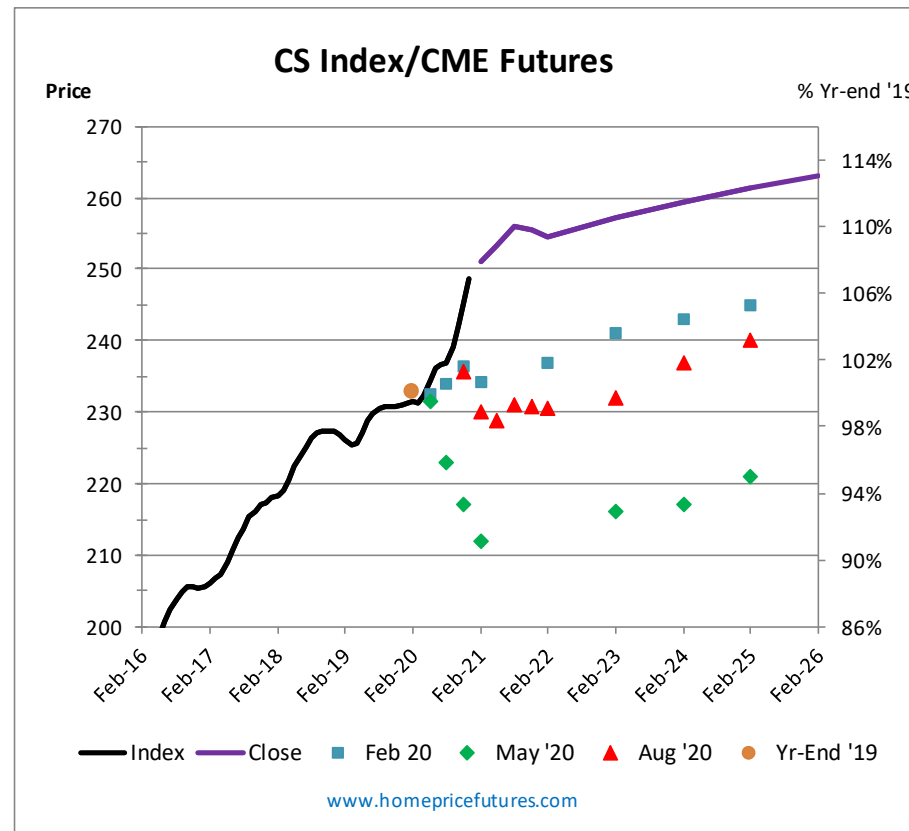
- Quotes on the Feb '21 contract are indicative of changes in sentiment during 2020. Prices started the year at a premium to spot, consistent with rising prices, then collapsed in April as selling overwhelmed my budget for a long exposure. G21 rose in June on light trading but I kept bids below spot out of concern for post-election economic slowdown. Only after Labor Day did prices begin to chase (and eventually exceed) spot levels, consistent with continued price gains.
- With the measurement period for Dec index done, I'd expect less volatility in G21 prices going forward.



Forward Curves: Feb, May, Aug, Dec

- As with the G21 contract (prior page) curves of forward contract prices collapsed in May, rallied in Aug, and since have begun to steepen at levels far above pre-Covid (Feb) levels.

HCI



Trading Activity: Dec/Rolling-12 mon

- Six lots traded in December in two regions and in two expirations.
- Q4 2020 was the lowest volume trading quarter since 2010 Q1, and contrasts sharply when traders were moving positions from Nov to Feb cycle, and away from FCMs that raised margins to >10+ CME minimum.
- My tallies may differ from CME by 1-2 lots in 2020 YTD and rolling 12.

CME Case Shiller Trading					
Futures					
Contract	Dec 6	Trailing 12 270	Region	Dec 6	Trailing 12 270
X19	0	0	HCI	4	84
G20	0	12	BOS	0	23
K20	0	62	CHI	0	17
Q20	0	34	DEN	0	20
X20	0	61	LAV	0	8
G21	3	38	LAX	2	13
K21	0	3	MIA	0	8
Q21	0	6	NYM	0	11
X21	0	0	SDG	0	24
G22	0	0	SFR	0	43
X22	3	33	WDC	0	17
G23	0	3	TBA	0	2
G24	0	16			
G25	0	0			
TBA	0	2			

Volume: CME S&P Case Shiller

Contracts Traded							
By Month							
2013	2014	2015	2016	2017	2018	2019	2020
8	15	8	9	25	9	3	16
7	21	4	8	8	3	2	38
26	10	12	2	13	9	42	79
11	14	14	14	5	9	19	50
17	52	6	16	12	7	3	13
4	2	2	3	13	15	2	21
18	2	5	9	6	5	10	9
12	19	5	5	18	8	9	18
29	1	3	11	22	2	19	16
68	15	9	17	9	22	19	2
23	10	15	46	2	11	14	2
7	5	10	7	3	10	6	6
230	166	93	147	136	110	148	270

Running 12

270

red =tentative/ my tally

Open Interest (OI)

- OI fell from 27 to 25, the lowest since contracts started trading in 2006.
- Two regions (BOS, and WDC) have no OI. (I'd be very open to accommodating inquires on those regions).
- Four expirations (X21, G22, G25 and new G26) have no OI.

12/31/2020												
Contract	BOS	CHI	DEN	HCI	LAV	LAX	MIA	NYM	SDG	SFR	WDC	Total
Feb 21			1	3	1	1	1		1			8
May 21		1	1	1			1					4
Aug 21			1		1	1			1			4
Nov 21												0
Feb 22												0
Nov 22	0			2		2		0		2	0	6
Feb 23				0				1				1
Feb 24	0			2								2
Feb 25												0
Feb 26												0
SUM	0	1	3	8	2	4	2	1	2	2	0	25

Average Expiration (yrs) 0.81

Open Interest: 2013-2020								
	2013	2014	2015	2016	2017	2018	2019	2020
Jan	109	89	63	44	53	36		54
Feb	89	86	57	37	54	37		49
Mar	102	95	64	37	66	33	56	41
Apr	109	107	71	51	69	40	59	42
May	85	88	57	42	48	35	45	34
June	85	88	58	43	51	39	45	35
July	96	89	58			44	51	36
Aug	83	77	49	36	61	48	45	42
Sept	105	78		42	45	47	53	49
Oct	149	85	52	46	51	49	60	50
Nov	81	54	35	38	34	32	53	27
Dec	85	57	40	41	34	37	54	25



Price Discovery -CME Contracts

- I continue to update price thoughts to the MyQuotes page on the HPF website: <https://www.homepricefutures.com/quotes> where I share indications of HCI (10-city index) contracts, G22 quotes on other regions, levels on HPHF Relative Performance for other regions (highlighted in yellow), and recent activity.
- I try to update 2-3 days/week.

				Feb 2022 (G22)					
				Relative Performance ("RP") Levels (vs. 10-city index)			CME Contracts		
		2019 Year-							
		End	Spot		Bid	Ask	B/A	Bid	Ask
HCI	10-city	231.53	248.58	HCI				254.4	259.4
www.homepricefutures.com									
							OTC HPHF		
					Bid vs HCI	Ask vs HCI	B/A	Bid	Ask
HCI2	20-city	218.67	235.77	HCI2	1.59%	2.60%	1.01%	248.0	255.3
ATX	Atlanta	154.81	165.24	ATX	0.50%	1.50%	1.00%	170.9	176.0
CEX	Cleveland	126.68	139.83	CEX	1.50%	2.75%	1.25%	143.9	148.4
CRX	Charlotte	167.40	180.93	CRX	2.00%	3.00%	1.00%	191.0	196.6
DAX	Dallas	192.85	205.50	DAX	-0.50%	0.50%	1.00%	208.9	215.1
DEX	Detroit	127.51	0.00	DEX	0.50%	1.75%	1.25%	142.1	146.6
MINX	Minneapolis	178.66	194.81	MINX	1.50%	2.75%	1.25%	202.9	209.3
PHX	Phoenix	199.52	222.80	PHX	4.00%	5.00%	1.00%	237.9	244.6
POX	Portland, Ore.	240.58	261.33	POX	1.50%	2.75%	1.25%	273.5	282.2
SEX	Seattle	254.26	283.41	SEX	3.50%	4.50%	1.00%	300.7	309.3
TPX	Tampa	224.89	242.67	TPX	1.50%	1.50%	0.00%	252.5	257.4

Options

- In September, I launched an effort to facilitate OTC options using HPHF agreements. See <https://www.homepricefutures.com/options> for details.
- I've started with quotes on puts with slightly-below-spot strikes, and calls with slightly-above spot strikes, for the Feb '22 release of the year-end Case Shiller index values for all 20 public indices. (Only CS 10 shown here).
- Note that puts have a floor to cap risk/ pay-outs.
- Quotes will be posted on the Options page (see above).
- Calls also available.

PÜTS

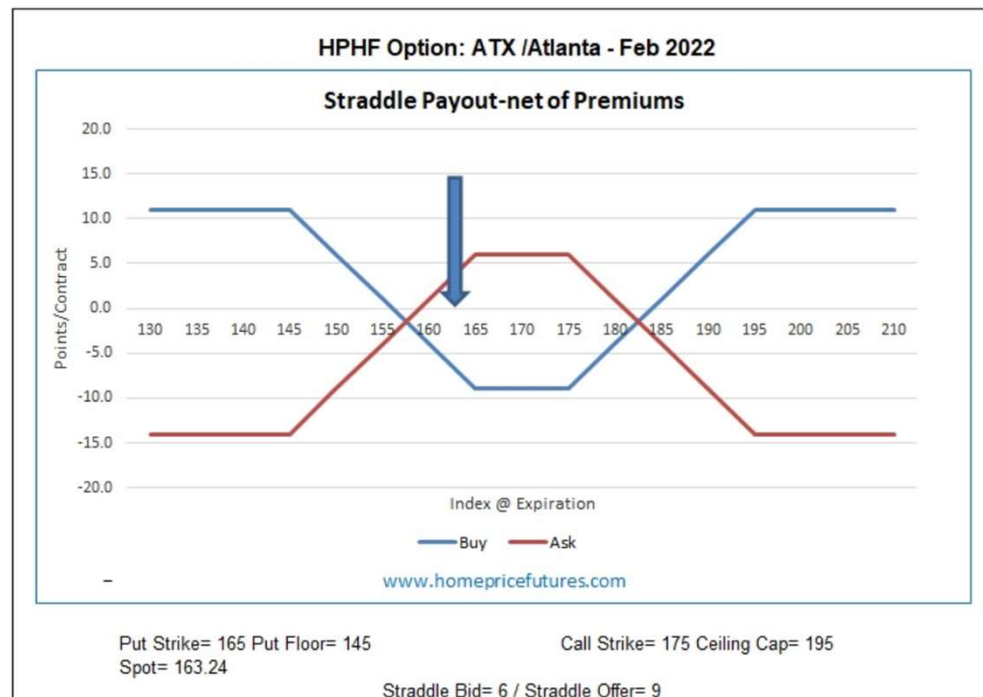
Expiration: 2/28/2022 Index			a/o: Puts a/o 31-Dec-20				Premium/ Max Payout
Index	Region	Spot	Strike	Floor	Ask	Ask as % Spot	
HCI	CS 10-city	248.6	250	230	5.6	2.3%	28.1%
BOS	Boston	244.8	245	220	6.9	2.8%	27.7%
CHI	Chicago	153.9	155	140	4.8	3.1%	31.7%
DEN	Denver	238.9	235	210	5.9	2.5%	23.8%
LAV	Las Vegas	206.8	205	175	7.1	3.4%	23.7%
LAX	Los Angeles	312.5	310	280	8.1	2.6%	27.1%
MIA	Miami	263.2	260	230	6.8	2.6%	22.7%
NYM	New York	215.1	215	190	6.7	3.1%	26.9%
SDG	San Diego	292.9	285	260	6.5	2.2%	25.9%
SFR	San Francisco	286.5	290	260	9.3	3.3%	31.1%
WDC	Washington,	253.5	250	225	6.3	2.5%	25.1%
ATX	Atlanta	165.2	165	145	4.6	2.8%	22.9%
CEX	Cleveland	139.8	140	125	4.0	2.8%	26.5%
CRX	Charlotte	180.9	180	160	4.3	2.4%	21.5%
DAX	Dallas	205.5	205	180	6.3	3.1%	25.3%
DEX	Detroit	0.0	140	130	3.8	#DIV/0!	37.6%
MNX	Minneapolis	194.8	195	180	4.5	2.3%	30.2%
PHX	Phoenix	222.8	230	200	7.5	3.4%	25.0%
POX	Portland, Ore.	261.3	265	240	7.6	2.9%	30.3%
SEX	Seattle	283.4	290	260	10.1	3.6%	33.8%
TPX	Tampa	242.7	245	220	6.5	2.7%	26.0%
HCI2	CS 20-city	235.8	240	220	5.5	2.3%	27.3%

www.homepricefutures.com



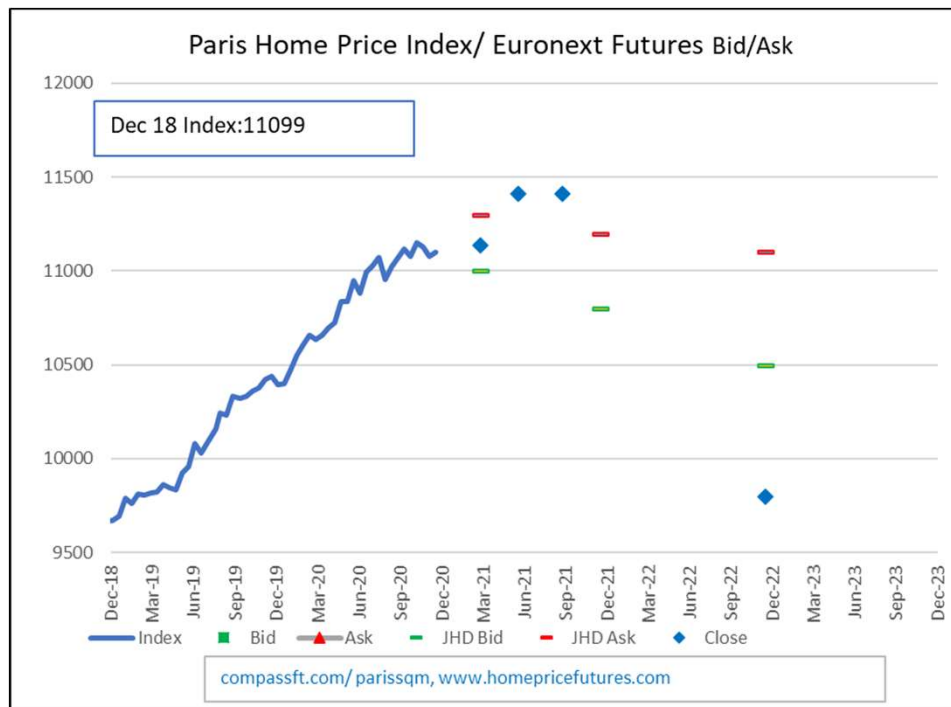
Options

- I'm open to inquiries on option strategy trades. For example, in early December, I posted an illustration on a straddle (long and short) on Atlanta CS index (ATX).
- I'm open to most any other combinations of puts, calls and forwards that have price boundaries.



Paris Home Price Index Futures

- The Euronext Paris Compass home price index futures contract has also had limited volume. I'd like to trade but there are challenges either for US Citizens, or when FCM risk departments see limited liquidity.
- I have a \$100 reward for a lead to any broker that will allow me to open an account to trade these contracts.
- In the meantime, I'm happy to facilitate those looking to add/reduce exposure via OTC trades (on HPHF platform).



Disclosures

Risk Factors/Disclosure

- This report was prepared by an independent market maker of the CME Case Shiller futures contracts. The views expressed are his own and should not be construed to represent the views of the CME, S&P , CoreLogic, or any other entity.
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