

Junior-Subordinated Capital Securities Markets

July 2022 Updates

The fixed income credit markets zoomed all month after the Fed set up what seemed to be a more dovish tone to policy in June despite inflation still being out of control. The Fed hiked another 75bps at the end of July and indicated that the outsized moves higher would be waning – perhaps that is viewed as “dovish”. Equity broke through its 50day moving average and inched above its 100day moving average for the first time since April. The S&P 500 closed 9.1% higher this month but still 13.8% lower on the year. Credit prices soared across the board from a combination of duration benefits and spread tightening. Indeed, the Fed does not think we are in a recession yet – according to Chairman Powell, *“The labor market is sending a **signal of economic strength** that it makes you question the GDP data.”* This month, the price performance between the IG & BIG hybrid sectors reversed with below investment grade preferreds outperforming investment grade preferreds by 71bps.

The 30yr bond closed June yielding 3.01% (11bps lower). The 10yr note closed yielding 2.65% (32bps lower). Real rates on the front end of the curve (e.g., UST 5yr TIPS) went negative again ending the month 54bps lower at -0.12%; the 5yr implied breakeven inflation rate (i.e., the difference in yields between the 5yr UST and the 5yr Treasury Inflation Protected Security) rose 19bps to close at 2.81%. The VIX (i.e., Chicago Board Options Exchange Volatility Index) fell 25.7% to 21.33 as the S&P 500 finished the month at 4130, up 346 points and well above the 3800 line which is indicative of a recession.

Before we talk hybrids, the performance in some of the more senior corporate credit sectors for comparative references on returns and yield changes is shown below:

- The junk market (measured by the ICE BofA High Yield **h0a0** index) rose 6.02% to close yielding 7.65% (129bps lower).

- Global bank credit (measured by ICE BofA **e0ba** index) fell 1.95%% to close yielding 4.23% (26bps higher).
- The BBB rated 5-10yr corporate sector (measured by ICE BofA **c6a4** index) fell 2.62% to close yielding 4.77% (44bps lower).

Review of Market Structure:

The market for hybrids or **global junior-subordinated capital securities** (*i.e.*, “**Jsubs**”) as we call them is comprised of two core sectors:

1. Preferred Securities, and
2. Contingent Capital Securities

Each sector has evolved with unique technical, structural, and fundamental features that are discussed and updated below:

Global junior subordinated capital securities are comprised of two sub-sets that represent a broad group of global junior-subordinated capital securities, which can be referenced by two ICE BofA indexes: 1) The ICE BofA US All Capital Securities Index (**i0cs**) and 2) The ICE BofA US Dollar Contingent Capital Index (**cdlr**).

Our litmus test for hybrids satisfies two core characteristics:

- 1)** any non-payment of distributions would not accelerate an event of default (*i.e.*, distributions are “junior-subordinated” to ordinary interest obligations) and,
- 2)** balance sheet classification is something other than common stock under GAAP disclosure.

The US All Capital Securities (**i0cs**) benchmark of preferred securities represents \$346 billion (face amount) of investment grade and below investment grade instruments in both the retail \$25par market (34%) and the institutional \$1,000par market (66%). The USD Contingent Capital Index of US dollar denominated junior-subordinated capital securities (**cdlr**) represents \$149 billion (face amount) of investment grade and below investment grade fixed-rate instruments

with contractual triggers that could subordinate them to common stock in a reorganization that would not fall into a receivership after the bail-in. These two benchmarks combine for a \$496 billion universe of fixed-rate junior-subordinated USD capital securities with preferred securities (measured by *iocs*) being a 62% subset and contingent capital securities (measured by *cdlr*) being a 30% subset of the total global USD junior subordinated group.

Preferred Securities

In the preferred securities sleeve, there are four sub-component indexes in the US All Capital Securities Index (*iocs*) – this entire index is comprised of global “preferred securities”. A “**preferred security**” can represent a capital security issued either through charter amendment (i.e., as a stock) or through indenture (i.e., as a bond) typically within the context of a “gone-concern” statutory authority (e.g., US banks). As a gone concern, a company reorganization would be processed through a bankruptcy court. Preferred security payments are in priority to common stock dividends, yet can be deferred (i.e., payments are cumulative) or eliminated (i.e., payments are non-cumulative) without causing an immediate event of default; any principal loss absorption on a preferred security would be forced only *ex-post* through a statutory resolution in a bankruptcy proceeding.

The four sub-components of the *iocs* benchmark that consolidate into the retail and institutional sectors of rated preferred securities are:

1. ICE BofA Fixed Rate Preferred Index (*pOp1*) @ 44% of *iocs*

- Comprised of IG \$25par and IG \$1,000par (incl. US AT1)
 - ❖ The *pOp1* rose 6.13% this month to close yielding 5.28% (-95bps)
 - ❖ Headcount was down 2; face value down \$1.2billion

2. ICE BofA US Capital Securities Index (*cOcs*) @ 24% of *iocs*

- Comprised of dated IG \$1,000par dated hybrids (excl. US AT1)
 - ❖ The *cOcs* rose 2.69% this month to close yielding 5.69% (-29bps)
 - ❖ Headcount was down 1; face value down \$863mil.

3. ICE BofA High-Yield Capital Securities Index (*h0cs*) @ 5% of *i0cs*

- Comprised of BIG \$1,000par legacy Tier1 and BIG \$1,000par hybrids
 - ❖ The *h0cs* rose 4.55% this month to close yielding 6.71% (-51bps)
 - ❖ Headcount unchanged; face value unchanged

4. ICE BofA High Yield Fixed Rate Preferred Index (*p0hy*) @ 27% of *i0cs*

- Comprised of BIG \$25par and BIG 1,000par (incl. US AT1)
 - ❖ The *p0hy* rose 6.35% this month to close yielding 6.17% (-100bps)
 - ❖ Headcount down 3; face value down \$1.18billion

Overall, the ICE BofA All US Capital Securities Index (*i0cs*) rose 5.24% in July to close yielding 5.69%, which was 77bps lower than last month's closing yield and a spread of +290bps over comparable US Treasury securities (58bps tighter).

Contingent Capital Securities

A “contingent capital security” (i.e., a “CoCo”) represents a capital security issued through indenture typically within the context of a “going-concern” type regulatory regime for banking, which would reorganize a potentially insolvent bank through the contracts of its capital before falling into a conservatorship proceeding. CoCos payments are non-cumulative and *pari passu* to common stock dividends and can be reduced or eliminated without causing an event of default. Principal loss absorption on a CoCo could be forced ex-ante through a regulatory action in advance of any bankruptcy proceeding (note that an actual bankruptcy may not happen because enough loss absorbing bail-in capital, including tier-2 capital, could be available through the “living will” of the entity's core capital). The ICE BofA USD Contingent Capital Index (*cdlr*) is comprised of US dollar denominated constituents (exclusively), which represent 62% of the mature master multi-currency benchmark (*coco*). We will utilize the USD benchmark (*cdlr*) as it more meaningfully reflects the contingent capital currency primarily held in our portfolios. The ICE BofA USD Contingent Capital Index (*cdlr*) rose 4.13% this month to close yielding 6.77%, which was 84bps lower from last month and a spread of +392bps over comparable US Treasury securities (69bps tighter).

Discussion of Retail and Institutional Sectors:

We report on the retail and institutional sectors using statistical tables in a *Spread Value Matrix* to provide readers with data on absolute and relative spread positionings. The data samples are sourced from ICE BofA benchmarks starting in March 2017, which is when retail benchmark calculations on yield-to-worst for currently callable \$25par preferred securities were improved to reflect actual yields, even if negative. We provide measures of inflation coverage in a *Purchasing Power Matrix*; and a table for yield-to-worst, net of inflation and historical default in a *Real Yield Matrix* that compares hybrids, investment grade corporates and high yield bonds. Finally for each sector, we show data on prior credit cycles to give you a *Comprehensive Risk Estimate* to the average bottom of the last 3 credit cycles (2013, 2016 and 2018) -- the rationale here is to illustrate risk measures relative to prior down credit cycles, but not necessarily an outlook to that direction. By following these tables monthly (and sometimes as “pop-outs” in flash reports), investors should gain consistent insights to assist in making more informed and supportive asset allocation decisions using junior subordinated capital securities.

Snapshot of Junior Subordinated Spread Sector Moves vs. Global Financials:

Capital Securities Spread Value Matrix	p0p4	p0p4-e0ba	stb8	stb8-e0ba	cdlr	cdlr-e0ba
	(a)	(b)	(a)	(b)	(a)	(b)
	Retail	Retail	NoCo	NoCo	CoCo	CoCo
Sample Periods	03/31/2017 to Date		03/31/2017 to Date		03/31/2017 to Date	
Jr-Subs	*Absolute	**Relative	*Absolute	**Relative	*Absolute	**Relative
High	588	251	486	205	660	313
Low	-178	-267	176	60	223	143
Range	766	518	310	145	437	170
Average	54	-54	247	139	327	219
Stdev	121	106	41	28	61	34
Monthend	114	-28	298	156	357	215
Spread Scores:						
(monthend-ave)/stdev	0.50	0.25	1.24	0.61	0.49	-0.12
Δ from Last Month	-0.82	-0.86	-0.65	-1.06	-0.77	-1.15

Source: Bloomberg; ICE BofA Bond Indices

* Absolute = Option Adjusted US Government Spread; (current-ave)/stdev

** Relative = spread to global financials measured by e0ba ICE Bond Index; (current-ave)/stdev

The way we interpret the above option adjusted spread table is by the statistical positioning of the *Spread Scores* where, **zero** = “fair value”, **+/- 1stdev.** = “undervalued”/ “overvalued”, respectively and **+/- 2stdevs** = “very undervalued”/ “very overvalued”, respectively.

Spread performance this month was stellar for hybrids, after last month having all three sectors flagging as being *undervalued*. All three hybrid sectors tightened significantly with the retail sector moving the most (i.e., -0.82 standard deviations) followed by CoCos and then NoCos. In fact, the NoCo sector still flags as being *undervalued* at in the absolute at 1.24 standard deviations. Global financials appear somewhat cheap to CoCos as they flag as being a bit *overvalued* relative to more senior financials.

Implications of Market Activity:

\$25par Retail Preferred Securities Sector

The retail preferred securities sector measured by *pOp4* rose \$5.37 in July to \$93.21, breaking with force the sector’s heavy trend this year after 5 of the last 6 months were negative. Using the *pOp2* to look back more than 12yrs (and, also striking the Financial Crisis), the retail sector had a +3.0 standard deviation move up in July after a 2.5 standard deviation move down last month and what was the worst 2-quarter streak (ending in June) since the Financial Crisis for the retail sector. The following table illustrates the retail sector’s 3 prior credit cycles compared to month end valuations:

S P E C T R U M
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Retail Pfds.	Valuation Implosions			Average		Diff. to		
Credit Cycle Bottoms >	2013	2016	2018	Prior Bottoms	Current	Average		
GA10	2.98%	1.64%	2.74%	2.45%	2.64%	0.19%		
PCE DEFY	1.48%	0.59%	1.86%	1.31%	6.80%	5.49%		
Real UST10yr	1.50%	1.05%	0.88%	1.14%	-4.16%	-5.30%		
\$25Coupon	6.64%	6.46%	6.05%	6.38%	5.45%	-0.93%		
\$25Price	\$94.06	\$98.66	\$93.09	\$95.27	\$92.52	-\$2.75		
\$25Current Yield	7.06%	6.55%	6.50%	6.70%	5.89%	-0.81%		
Mdur Worst	9.52	10.44	10.95	10.30	10.63	0.33		
CY Spread vs. T10yr	▶ 4.08%	▶ 4.91%	▶ 3.76%	▶ 4.25%	▶ 3.25%	-1.00%		
						-8.30%	Est. Price Risk to AveCY	
						Comprehensive Risk Est.	-2.41%	Est. Price Risk + CY
						Recapture Rate (yrs.)	1.41	Est. Price Risk / CY
						Memo:	-9.69%	Total Return YTD

Source: Bloomberg; ICE BotA Bond Indices

The current yield of the retail sector closed July at 5.89%, which was 50bps lower than last month and 81bps lower than the average current yield at the bottom of the last three credit cycles. The current yield spread to the 10yr is 100bps less than the average of the last three credit cycle bottoms. The implication of an 0.81% yield increase to 6.70% (the average current yield of the prior bottoms) is an estimated 8.3% price decline using the average modified duration of 10.30; then adding back a current book yield (assuming a 12month path) of 5.89% makes the *Comprehensive Risk Estimate* for the retail sector negative again (for the second time this year) at -2.41% after returning to a positive position in June from being negative in May. So again, our signal for being undervalued proved to be short lived as the June retail valuations offer a cushioned or mitigated risk opportunity that was soaked up though the entire month of July. It would take 1.41yrs to recapture this assumed capital loss with book income, which implies that there is more risk than value in the retail sector (again).

\$1,000par Institutional Preferred Securities Sector

The \$1,000 par institutional sector of the preferred securities market rose \$3.59 as yields declined by 48bps to 6.19% by the end of July. The following table illustrates the institutional preferred securities sector's 3 prior credit cycles compared to closing valuations in July:

Institutional Pfds.	Valuation Implosions			Average		Diff. to		
Credit Cycle Bottoms >	2013	2016	2018	Prior Bottoms	Current	Average		
GA10	2.94%	1.75%	2.74%	2.48%	2.64%	0.16%		
PCE DEFY	1.17%	0.59%	1.86%	1.21%	6.80%	5.59%		
Real UST10yr	1.77%	1.16%	0.88%	1.27%	-4.16%	-5.43%		
Coupon	6.77%	6.43%	5.88%	6.36%	5.19%	-1.17%		
Price	\$103.96	\$99.62	\$97.23	\$100.27	\$94.89	-\$5.38		
Current Yield	6.51%	6.45%	6.05%	6.34%	5.47%	-0.87%		
Mdur Worst	5.90	5.23	4.64	5.26	3.98	-1.28		
CY Spread vs. T10yr	▶ 3.57%	▶ 4.70%	▶ 3.31%	▶ 3.86%	▶ 2.83%	-1.03%		
<i>Source: Bloomberg; ICE BofA Bond Indices</i>						-3.46%	Est. Price Risk to AveCY	
						Comprehensive Risk Est.	2.01%	Est. Price Risk + CY
						Recapture Rate (yrs.)	0.63	Est. Price Risk / CY
Memo:						-9.18%	Total Return YTD	

The current yield of the institutional preferred sector closed July at 5.47%, which was 19bps lower than last month. This brings the current yield of the sector to 87bps less than the average current yield at the bottom of the last three credit cycles. The current yield spread to the treasury 10yr note is 103bps lower than the average of the last three credit cycle bottoms. The implication of an 0.87% yield increase to 6.34% (the average current yield of the prior bottoms) is an estimated 3.46% price decline using the modified duration of 3.98; then adding back a current book yield (assuming a 12month path) of 5.47% makes the *Comprehensive Risk Estimate* for the NoCo sector equal to a 2.01% horizon return to accept the risk. It would take 0.63yrs to recapture this capital loss estimate with book income. The combination of lower yields and some spread tightening has moved the NoCo sector into a shallower cushioned valuation than last month, nonetheless, the sector is still cushioned with a *Comprehensive Risk Estimate* that is positive.

Contingent Capital Securities Sector

The CoCo sector rose \$3.28 as even as the European bank stocks fell over 8% by mid-month only to gain it all back by the end of the month. The rally in high yield bonds and the general excess tightening of below investment grade paper relative to investment grade paper added to the constructive moods in CoCos this month.

The following table illustrates the contingent capital securities sector's 3 prior credit cycles compared to closing valuations in July:

CoCo Securities	Valuation Implosions			Average		Diff. to	
Credit Cycle Bottoms >	2013	2016	2018	Prior Bottoms	Current	Average	
GA10	3.01%	1.75%	2.88%	2.55%	2.64%	0.09%	
PCE DEFY	1.48%	0.59%	1.86%	1.31%	6.80%	5.49%	
Real UST10yr	1.53%	1.16%	1.02%	1.24%	-4.16%	-5.40%	
Coupon	7.63%	6.40%	6.78%	6.94%	6.14%	-0.80%	
Price	\$105.04	\$89.12	\$96.21	\$96.79	\$93.49	-\$3.30	
Current Yield	7.26%	7.18%	7.05%	7.16%	6.57%	-0.60%	
Mdur Worst	4.76	5.30	3.95	4.67	2.94	-1.73	
CY Spread vs. T10yr	▶ 4.25%	▶ 5.43%	▶ 4.17%	▶ 4.62%	▶ 3.93%	-0.69%	
<i>Source: Bloomberg ICE BofA Bond Indices</i>						-1.75%	Est. Price Risk to AveCY
Comprehensive Risk Est.						4.81%	Est. Price Risk + CY
Recapture Rate (yrs.)						0.27	Est. Price Risk / CY
<i>Memo:</i>						-10.00%	Total Return YTD

The current yield of the institutional preferred sector closed July at 6.57%, which was 24bps lower than last month and 60bps lower than the average current yield at the bottom of the last three credit cycles. The current yield spread to treasury 10yr notes is 69bps lower than the average of the last three credit cycle bottoms. The implication of a 0.60% yield increase to 7.16% (the average current yield of the prior bottoms) is an estimated 1.75% price decline using the modified duration of 2.94; then adding back the current book yield (assuming a 12month path) of 6.57% makes the *Comprehensive Risk Estimate* for the NoCo sector 4.81% -- 96bps lower (i.e., higher risk) than last

month. It would take 0.27yrs to recapture this assumed capital loss with book income. CoCo prices have performed in line with NoCo prices even though CoCos have about 1yr less duration risk.

Outlook:

The month ended with another Fed meeting and a unanimous vote to hike the federal funds rate another 75bps, which was again very well baked into the market as the Fed broadcasted its intentions and the markets discounted the broadcast. The Fed is certainly not going to affirm that we are in a recession because it does not want to create any alarm if it can help it – which, Chairman Powell did during the press conference by saying that he doesn't think it is likely that the US economy is in a recession. He said, *"A recession is a broad-based decline among many industries that's sustained for a couple of months, and what we have now doesn't seem like that."* Indeed, despite the past two quarters of GDP "growth" being negative which meets the minimum requirement that defines a recession, the markets have a very interesting dichotomy in play – the US Treasury bond market has rallied (still is) and the stock market has too (still is). Furthermore, the US Treasury curve between 2yr notes and 10yr notes inverted in July, which indicates expectations from UST market participants that it believes the Fed's policy path will slow growth. The stock market, on the other hand is not believing in recession (like Chairman Powell) despite the Fed saying that it does not care about the yield curve inverting, which means the Fed does not care if the necessary tightening causes a recession. But what the Fed does care about is tightening financial conditions enough to create the needed reduction in demand functions that are bidding against restricted supplies and helping to raise costs. Chairman Powell stated that the Fed thinks that demand is moderating but it's unclear by how much. The balance sheet will be an important tool to further tighten financial conditions once the full force of the reductions gets underway in September.

The bond market and the stock markets are boasting a significant relief rally after an historic blow-off in the first half that made hybrids undervalued as we stated in last month's letter. Hybrids can be a constructive way to help offset inflation when spreads are above average (like now). Here's a

look at the multiples of 5yr average inflation (by today's measure) that are available in hybrids compared to more senior financials:

	A	B	C	D=B/C	E=D/A
Purchasing Power Matrix: Financials	Mdur	YTW%	5yrBE Inflation%	Inflation Coverage	Inflation Coverage/Mdur
Retail \$25par (p0p4)	10.63	4.90	2.81	⊗ 1.74	⊗ 0.16
NoCos (stb8)	3.98	6.22	2.81	⊕ 2.21	⊙ 0.56
CoCos (cdlr)	2.94	6.83	2.81	⊕ 2.43	⊕ 0.83
More Sr. Fins (e0ba)	5.13	4.25	2.81	⊗ 1.51	⊗ 0.29

Source: Bloomberg; ICE BofA Bond Indices

The coverages are not as high as they were last month when hybrids were clearly undervalued. Nonetheless, the contingent convertible sector (CoCos) is still the winner on *Inflation Coverage* and risk adjusted coverage when factoring in duration. The Noco sector wins the silver medal again on both scores, but the retail sector shares the bronze with more senior financials because of the split between inflation coverage and duration risk adjusted inflation coverage.

Defense continues to be our primary investment objective this year and positive real yields for hybrids helps us run the playbook. Despite the big rally this month, real yields are still quite attractive for most hybrids and even more so when we adjust historical default risks from real yields. Below we assess a more comprehensive view of real yields net of inflation and net of default in a *Real Yield Matrix* to double risk adjusted yield comparisons in hybrids, investment grade corporates and below investment grade corporates (i.e., junk bonds):

SPECTRUM
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Real Yield Matrix	Hybrids		Corporates	
	Preferreds	CoCos	IG Corps	BIG Corps
Bloomberg Index	<i>cips+hips</i>	<i>cdlr</i>	<i>c6c0</i>	<i>h0a0</i>
Mod.Duration	3.98	2.94	6.36	4.50
Yield-to-Worst	6.22	6.83	4.51	7.73
Inflation ¹ Adjustment	2.81	2.81	2.81	2.81
Real Yields	3.41	4.02	1.70	4.92
Default ² Adjustment	-0.11	-0.11	-0.04	-2.57
YTW, net, net adj.	3.30	3.91	1.66	2.35
Composite Rating	BBB2	BB1	BBB1	B1
Last Month End:	Hybrids		Corporates	
	Preferreds	CoCos	IG Corps	BIG Corps
YTW, net, net adj.	3.90	4.88	2.26	3.75
Change from Last	★ -0.60	★ -0.97	★ -0.60	★ -1.40

Source: Bloomberg; ICE BofA Bond Indices

¹ Inflation assumption based on the UST5yr breakeven inflation rate

² Sprectrum's 10yr annual default study through 2020

Hybrids offer the most positive double-net real yield opportunity in credit. The changes from June are noteworthy with below investment grade corporates (BIG corps) yields moving down the most and CoCos moving down the second to most as they offered almost 5% YTW, net-net last month. Granted, yields moved down significantly in July (we're happy they did because that proved our undervalued call in June to be quite actionable). The positive real yield opportunities that made hybrids very worthy inflation combatants last month have waned a bit; nonetheless, the real yields are still quite compelling. As the Fed begins to accelerate the balance sheet moves in September, yields are likely to elevate somewhat as spreads retrace into yearend. The Fed will focus more on labor (i.e., one of its policy objectives) than it will on recession. In the press conference Chairman Powell said, when asked of lowering inflation, "There is a path for us to get there while maintaining a strong labor market." No doubt, the Fed's objective is a "soft landing".

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