

## Junior-Subordinated Capital Securities Markets

### November 2022 Updates

The fixed income credit markets rallied after the Fed hiked the federal funds rate for the fourth straight time after it appeared that the pace of hikes would soon slow. The 30yr bond closed the month yielding 3.78% (39bps lower) and the 10yr note closed yielding 3.65% (41bps higher). Real rates on the front end of the treasury curve (e.g., UST 5yr TIPS) declined by 27bps (to 1.29%); the 5yr implied breakeven inflation rate (i.e., the difference in yields between the 5yr UST and the 5yr Treasury Inflation Protected Security) decreased by 19bps to close at 2.48%. The implication is that the bond market became more sanguine the Fed's inflation fighting resolve this month. The VIX (i.e., Chicago Board Options Exchange Volatility Index) fell 20.5% to 20.58 as the S&P 500 rose to 4080, up 206 points which was above its 200day moving average for the first time in 7 months.

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 1.32% to close yielding 8.62% (44bps lower).
- Global bank credit (measured by ICE BofA **e0ba** index) rose 3.58% to close yielding 5.50% (57bps lower).
- The BBB rated 5-10yr corporate sector (measured by ICE BofA **c6a4** index) rose 4.38% to close yielding 5.76% (66bps 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 \$339 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 \$152 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 \$491 billion universe of fixed-rate junior-subordinated USD capital securities with preferred securities (measured by *iocs*) being a 69% subset and contingent capital securities (measured by *cdlr*) being a 31% 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 (*p0p1*) @ 45% of *iocs***

- Comprised of IG \$25par and IG \$1,000par (incl. US AT1)
  - ❖ The *p0p1* rose 4.19% this month to close yielding 6.84% (-33bps)
  - ❖ Headcount was up 1; face value up \$0.831 bil.

**2. ICE BofA US Capital Securities Index (*c0cs*) @ 23% of *iocs***

- Comprised of dated IG \$1,000par dated hybrids (excl. US AT1)
  - ❖ The *c0cs* rose 2.93% this month to close yielding 7.16% (-32bps)

❖ Headcount was unchanged; face value up \$0.100 bil.

**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 2.15% this month to close yielding 8.06% (-37bps)

❖ 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 3.58% this month to close yielding 8.08% (-51bps)

❖ Headcount was unchanged; face value down \$1.354bil.

Overall, the ICE BofA All US Capital Securities Index (*i0cs*) rose 3.62% in November to close yielding 7.31%, which was 38bps lower than last month's closing yield and a spread of +347bps over comparable US Treasury securities (3bps 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 65% 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 3.35% this month to close yielding 8.58%,

which was 58bps lower than last month and a spread of +470bps over comparable US Treasury securities (24bps 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 of historical default in a *Real Yield Matrix* that compares hybrids, investment grade corporates and high yield bonds. Finally, we show data on prior credit cycles for each sector 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:**

S P E C T R U M  
Asset Management

	p0p4	p0p4-e0ba	stb8	stb8-e0ba	cdlr	cdlr-e0ba
Capital Securities Spread Value Matrix	(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	61	-49	250	140	333	222
Stdev	121	104	48	27	65	36
<b>Monthend</b>	<b>180</b>	<b>38</b>	<b>318</b>	<b>176</b>	<b>399</b>	<b>257</b>
<b>Spread Scores:</b>						
(monthend-ave)/stdev	0.98	0.84	1.42	1.33	1.02	0.97
Δ from Last Month	-0.31	-0.07	-0.12	0.93	-0.44	0.15

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 for hybrids was tighter across the board with retail paper leading the way followed by CoCos and NoCos. The OAS on retail paper tightened 36bps (i.e., -0.30 stdevs) as long bonds rallied along with stocks. The OAS for the institutional \$1,000par preferred securities sector (“NoCos”) tightened 3bps and still stands out statistically in green at 1.42 standard deviations. The OAS for the CoCo sector tightened by 20bps giving it the most positive relative move on the month (i.e., -0.44 stdevs). From an OAS valuation perspective, retail is a cheap *fair value*; CoCos are slightly *undervalued*; and NoCos are solidly *undervalued*.

**Implications of Market Activity:**

**\$25par Retail Preferred Securities Sector**

The retail preferred securities sector measured by *pOp4* rose \$4.19 in November to \$83.76 on the heels of the bond and equity market rallies. The following table illustrates the retail sector's three prior credit cycles compared to month end valuations:

Retail Pfds.	Valuation Implosions			Average		Diff. to	
<u>Credit Cycle Bottoms &gt;</u>	<u>2013</u>	<u>2016</u>	<u>2018</u>	<u>Prior Bottoms</u>	<u>Current</u>	<u>Average</u>	
GA10	2.98%	1.64%	2.74%	2.45%	3.65%	1.20%	
PCE DEFY	1.48%	0.59%	1.86%	1.31%	6.00%	4.69%	
Real UST10yr	1.50%	1.05%	0.88%	1.14%	-2.35%	-3.49%	
\$25Coupon	6.64%	6.46%	6.05%	6.38%	5.42%	-0.96%	
\$25Price	\$94.06	\$98.66	\$93.09	\$95.27	\$83.57	-\$11.70	
\$25Current Yield	7.06%	6.55%	6.50%	6.70%	6.49%	-0.22%	
Mdur Worst	9.52	10.44	10.95	10.30	12.58	2.28	
CY Spread vs. T10yr	▶ 4.08%	▶ 4.91%	▶ 3.76%	▶ 4.25%	▶ 2.84%	-1.41%	
<i>Source: Bloomberg; ICE BofA Bond Indices</i>						-2.20%	Est. Price Risk to AveCY
						4.29%	Est. Price Risk + CY
						0.34	Est. Price Risk / CY
<i>Memo:</i>						-16.35%	Total Return YTD

The current yield of the retail sector closed November at 6.49%, which was 35bps lower than last month and just 22bps under than the average current yield at the bottom of the last three credit cycles. The current yield spread to the 10yr US Treasury note is 284bps which is 141bps less than the average spread of the last three credit cycle bottoms as retail preferred yields are high, but spread is squeezed by UST yields being so high, as well. A gauge to yields being high is the discount price to the sector – the dollar price of the retail sector is \$11.70 lower than the average of the prior bottoms, which means that there is significantly more convexity to the retail market during this cycle than there was during the prior cycles even though yields were higher. The implication of a 0.22% current yield increase to 6.70% (the average current yield of the prior bottoms) is an estimated 2.70% price decrease using the current modified duration of

12.58; then adding back a current book yield (assuming a 12month path) of 6.49% makes the *Comprehensive Risk Estimate* for the retail sector positive at 3.79% for the 6<sup>th</sup> time this year. The income recapture rate of the illustrated price loss (i.e., -2.70%) is 0.42yrs – when this rate is less than 1yr we view the sector as having more opportunity than risk.

There was one new issue this month in the retail sector:

- \$500 million (Baa3/BBB-) Lincoln National Group 9.00% fixed-to-refixed non-cumulative perpetual preferred stock

**\$1,000par Institutional Preferred Securities Sector**

The \$1,000 par institutional sector of the preferred securities market rose \$1.69 as yields declined 27bps to 7.68% by the end of November. The following table illustrates the institutional preferred securities sector’s three prior credit cycles compared to closing valuations this month:

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%	3.65%	1.17%	
PCE DEFY	1.17%	0.59%	1.86%	1.21%	6.00%	4.79%	
Real UST10yr	1.77%	1.16%	0.88%	1.27%	-2.35%	-3.62%	
Coupon	6.77%	6.43%	5.88%	6.36%	5.19%	-1.17%	
Price	\$103.96	\$99.62	\$97.23	\$100.27	\$89.69	-\$10.58	
Current Yield	6.51%	6.45%	6.05%	6.34%	5.79%	-0.55%	
Mdur Worst	5.90	5.23	4.64	5.26	3.88	-1.38	
CY Spread vs. T10yr	▶ 3.57%	▶ 4.70%	▶ 3.31%	▶ 3.86%	▶ 2.14%	-1.72%	
<i>Source: Bloomberg; ICE BofA Bond Indices</i>						-2.14%	Est. Price Risk to AveCY
						Comprehensive Risk Est. 3.65%	Est. Price Risk + CY
						Recapture Rate (yrs.) 0.37	Est. Price Risk / CY
Memo:						-12.43%	Total Return YTD

The current yield of the institutional preferred sector closed the month at 5.79%, which was 10bps lower than last month. This brings the current yield of the sector to 55bps less than the



average current yield at the bottom of the last three credit cycles. The implication of a 0.55% current yield increase to 6.34% (the average current yield of the prior bottoms) is an estimated 2.14% price decline using the modified duration of 3.88; then adding back a current book yield (assuming a 12month path) of 5.79% makes the *Comprehensive Risk Estimate* for the NoCo sector equal to a 3.65% horizon return to accept the risk. It would take 0.37yrs to recapture this capital loss estimate with book income. The CoCo sector continues to be in a cushioned valuation position.

New issue activity during the month was:

- \$1.00 billion (Ba1/BBB-) BNP 9.25% CoCos
- \$1.50 billion (Ba2/BB) SocGen 9.375% CoCo
- \$500 million (nr/BBB-) Lincoln National Corp. 9.25% Fixed-to-Refixed Perpetual Preferred Stock

### **Contingent Capital Securities Sector**

The CoCo sector rose \$2.40 as this month to \$87.89. The 8.5% rise in the European bank sector helped the CoCo sector go up in addition to treasuries doing well. Despite the banking sector being well capitalized and adequately reserved, the general economic outlook does not bode well for earnings momentum of European banks though balance sheets are in good shape even if earnings to weather a recession. At 6.02% net of default and inflation expectations, the CoCo sector has a 245bp advantage over high yield (i.e., junk) bonds.

The following table illustrates the contingent capital securities sector's three prior credit cycles compared to closing valuations this month:

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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%	3.65%	1.10%	
PCE DEFY	1.48%	0.59%	1.86%	1.31%	6.00%	4.69%	
Real UST10yr	1.53%	1.16%	1.02%	1.24%	-2.35%	-3.59%	
Coupon	7.63%	6.40%	6.78%	6.94%	6.23%	-0.71%	
Price	\$105.04	\$89.12	\$96.21	\$96.79	\$88.07	-\$8.72	
Current Yield	7.26%	7.18%	7.05%	7.16%	7.07%	-0.09%	
Mdur Worst	4.76	5.30	3.95	4.67	2.74	-1.93	
CY Spread vs. T10yr	▶ 4.25%	▶ 5.43%	▶ 4.17%	▶ 4.62%	▶ 3.42%	-1.19%	
<i>Source: Bloomberg; ICE BofA Bond Indices</i>						-0.25%	Est. Price Risk to AveCY
<b>Comprehensive Risk Est.</b>						6.83%	<b>Est. Price Risk + CY</b>
Recapture Rate (yrs.)						0.03	Est. Price Risk / CY
Memo:						-13.31%	Total Return YTD

The current yield of the CoCo sector closed November at 7.07%, which was 15bps lower than last month and 9bps less than the average current yield at the bottom of the last three credit cycles (i.e., 7.16%). The current yield spread to treasury 10yr notes is 119bps lower than the average of the last three credit cycle bottoms because 3yr treasury yields are high. The CoCo price average of \$88.07 is lower than any of the past three cycles, which (like the other hybrid sectors) highlights that the term structure of interest rates (i.e., high real US Treasury yields) being the primary reason for deeply discount prices. The implication of a 0.07% current yield increase to 7.16% (the average current yield of the prior bottoms) is an estimated 0.25% price decline using the modified duration of 2.74; then adding back the current book yield (assuming a 12month path) of 7.07% makes the *Comprehensive Risk Estimate* for the CoCo sector 6.83%. The recapture rate is negative because the price risk is positive. CoCo prices have underperformed performed NoCo prices by 1.58pts this year even though CoCos have 1.14yrs less duration. CoCos are not only *undervalued* on spread statistically, but in the absolute they are among the cheapest of the three credit cycle bottoms we reference.

**Outlook:**

This month was focused on the Fed rate move and the press conference which appeared to suggest that it will slowing down the rate hikes come December and nearing its terminal rate objective early next year.

- Three key questions for Fed policy on federal funds:
  1. How high?
    - ✓ Answer: 4.75% - 5.00%
    - ❖ Risk: 5.25% - 5.50%
  2. How fast?
    - ✓ Answer: by March 2023
    - ❖ Risk: by June 2023
  3. How long?
    - ✓ Answer: hold for 1yr = March 2024
    - ❖ Risk: hold for 6 months = December 2023

The Federal Reserve Bank's preferred measure of inflation is the PCE Deflator – Chairman Powell wants to sustain a positive real federal funds rate. We know that The Fed always gets what the Fed wants, and the Fed wants a PCE Deflator-to-federal funds rate gap to show a positive real rate. We do not expect the Fed to stop raising rates until the PCE deflator crosses into the federal funds bound – then, there should be one more 25bp hike to complete the cycle and anchor its desired disinflation goal – a positive real federal funds rate is the path to that goal. The terminal federal funds rate will probably end up at 4.75% - 5.00% bound.

Here's a look at the multiples of 5yr average implied inflation 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)	12.58	6.76	2.48	⚠ 2.73	⊗ 0.22
NoCos (stb8)	3.88	7.71	2.48	✓ 3.11	⚠ 0.80
CoCos (cdlr)	2.74	8.61	2.48	✓ 3.47	✓ 1.27
More Sr. Fins (e0ba)	4.87	5.50	2.48	⊗ 2.22	⊗ 0.46

Source: Bloomberg; ICE BotA Bond Indices

The inflation coverages are a bit tighter this month, but nonetheless hybrids cover inflation by almost 3x. 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. The retail sector measures up too, but one must accept the highest duration risk to get the coverage.

Defense continues to be our primary investment objective this year and positive real yields for hybrids helps us run the playbook. Real yields are quite attractive in 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):

S P E C T R U M  
Asset Management

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	3.88	2.74	6.22	4.31
Yield-to-Worst	7.71	8.61	5.51	8.62
Inflation <sup>1</sup> Adjustment	2.48	2.48	2.48	2.48
Real Yields	5.23	6.13	3.03	6.14
Default <sup>2</sup> Adjustment	-0.11	-0.11	-0.04	-2.57
YTW, net, net adj.	5.12	6.02	2.99	3.57
Composite Rating	<i>BBB2</i>	<i>BB1</i>	<i>BBB1</i>	<i>B1</i>
Last Month End:	Hybrids		Corporates	
	Preferreds	CoCos	IG Corps	BIG Corps
YTW, net, net adj.	5.18	6.38	3.46	3.83
Change from Last	★ -0.06	★ -0.36	★ -0.47	★ -0.26

*Source: Bloomberg; ICE BofA Bond Indices*

Hybrids offer the most positive double-net real yield opportunity in credit. As the Fed's balance sheet reduction operates on high-speed cruise control, yields have rallied lower this month along with lower inflation expectations according to the US treasury breakevens. The Fed will focus more on labor (i.e., one of its policy objectives) than it will on recession and will keep at its restrictive policy until its job is done – Hybrid yields rates are likely to stay elevated for some time, which should keep the window of opportunities in Hybrids open for longer too.

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December 9, 2022

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