Junior-Subordinated Capital Securities Markets

September 2021 Updates

Credit performance in September was certainly mixed as the month started strong with multiple oversubscribed new issuances, but a hawkish Fed gradually damped the euphoria of every new deal being expected to move higher. According to Chairman Powell, "*the substantial further progress test for employment has all but been met*." During the last week of the month, treasuries sold off from their highs just before the Fed meeting (which was the most since March) as a taper plan "*may soon be warranted*". This statement has adjusted the bond market's expectation for the start of reductions in bond purchases to be in December rather than January. Real rates on the front end of the curve (e.g., UST 5yr TIPS) ended the month 14bps higher at -1.64%; the 5yr implied breakeven inflation rate (i.e., the difference in yields between the 5yr UST and the 5yr Treasury Inflation Protected Security) rose 2bps to close at 2.53% (still essentially bound in a 10bps channel since February). On the back end of the treasury curve, the 30yr bond closed yielding 2.05% (12bps higher) and the 10yr note closed yielding 1.49% (18bps higher) -- the yield differential between the two longer US treasuries flattened 6bps to +56bps, well under the wide for the year of +85bps. The S&P500 declined 4.8% this month after posting all-time highs early in the month. The VIX (i.e., Chicago Board Options Exchange Volatility Index) rose 40.4% after trading just off its lowest level of the year (15.83) as share markets slipped to reflect the Fed's more hawkish mood, an imminent taper and fiscal challenges for the Biden Administration.

Before we talk hybrids, let's look at performance in some of the more senior corporate credit sectors for comparative references on returns and yield changes:

- The junk market (measured by the ICE BofA High Yield ***h0a0*** index) rose 0.03% to close yielding 4.00% (6ps higher).
- Global bank credit (measured by ICE BofA ***e0ba*** index) fell 0.70% to close yielding 1.64% (12bps higher).
- The BBB rated 5-10yr corporate sector (measured by ICE BofA ***c6a4*** index) fell 0.84% to close yielding 2.30% (15bps higher).

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 $354 billion (face amount) of investment grade and below investment grade instruments in both the retail $25par market (37%) and the institutional $1,000par market (63%). The USD Contingent Capital Index of US dollar denominated junior-subordinated capital securities ***(cdlr)*** represents $156 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 $510 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 (***i0cs)*** – 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 *i0cs* benchmark that consolidate into the retail and institutional sectors of rated preferred securities are:

1. ***ICE BofA Fixed Rate Preferred Index (p0p1) @ 42% of i0cs***
    - Comprised of IG $25par and IG $1,000par (incl. US AT1)
        - ❖ The *p0p1* fell 0.05% this month to close yielding 2.39% (+7bps)
        - ❖ Headcount was down 7, but face value fell by $2.035 billion
2. **ICE BofA US Capital Securities Index (*c0cs*) @ 24% of *i0cs***
    - Comprised of dated IG $1,000par hybrids (excl. US AT1)
        - ❖ The *c0cs* fell 0.11% this month to close yielding 2.89% (+5bps)
        - ❖ Headcount was up 1; face value rose $400mm
3. **ICE BofA High-Yield Capital Securities Index (*h0cs*) @ 6% of *i0cs***
    - Comprised of BIG $1,000par legacy Tier1 and BIG $1,000par hybrids
        - ❖ The *h0cs* rose 0.17% this month to close yielding 3.31% (+5bps)
        - ❖ Headcount was unchanged; face value was unchanged
4. **ICE BofA High Yield Fixed Rate Preferred Index (*p0hy*) @ 29% of *i0cs***
    - Comprised of BIG $1,000par US AT1 and BIG $25par
        - ❖ The *p0hy* rose 0.08% this month to close yielding 3.21% (+12bps)
        - ❖ Headcount rose by 1; face value rose by $316 million

Overall, the ICE BofA All US Capital Securities Index (***i0cs***) fell 0.02% in September to close yielding 2.80%, which was 8bps higher than last month's closing yield and a spread of +189bps over comparable US Treasury securities (7bps 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 61% 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***) fell 0.26% this month to close yielding 3.53%, which was 14bps higher from last month and a spread of +266bps over comparable US Treasury securities (8bp tighter).

On the next page we show a snapshot of junior subordinate spreads and some statistical data to put current valuations into some historical perspective:

Snapshot of Junior Subordinated Spread Sector Moves:

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	481	201	660	313
Low	-178	-267	175	55	223	143
Range	766	518	306	146	437	170
Average	35	-72	244	137	329	222
Stdev	121	104	48	28	63	35
Monthend	**84**	**12**	**206**	**134**	**263**	**191**
Sector Spread Score[1]	**0.61**		**-0.45**		**-0.97**	
Last Month's Score[1]	**0.49**		**-0.34**		**-1.13**	

1: Sector Spread Score = {[Monthend(a)-Ave(a)]/Stdev(a)+[Monthend(b)-Ave(b)]/Stdev(b)}/2

Monthend statistical position to average per unit of standard deviation

	p0p4	p0p4-e0ba	stb8	stb8-e0ba	cdlr	cdlr-e0ba
***Absolute**	0.40		-0.79		-1.05	
****Relative**		0.81		-0.11		-0.89

** Absolute = Option Adjusted US Government Spread*

*** Relative = spread to global financials measured by e0ba ICE Bond Index*

Monthend estimate of spread duration benefit (units of stdev.)

	p0p4	stb8	cdlr
Spread/mdurMat	**-2.09**	**-0.23**	**-0.84**
Probability Estimate to Spread Benefit	**1.82%**	**40.89%**	**20.02%**
		Memo: e0ba	**0.06%**

Source: Bloomberg, ICE Bond Indices

Implications of Market Activity:

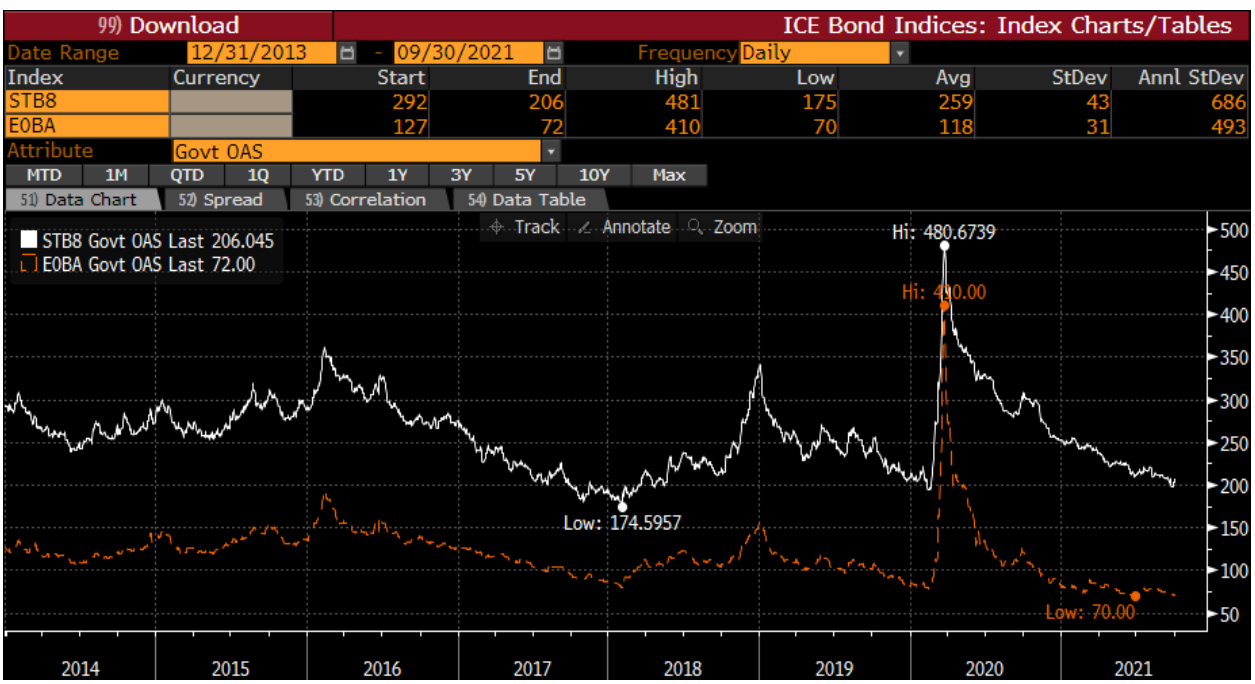
$25par Retail Preferred Securities Sector

The retail preferred securities sector declined $0.29 in September to $106.48 which marks the first time since late 2018 that the retail sector has declined in price for three straight months. Interestingly, the retail sector tends to decline sequentially from August into December in each year when the Fed is expected to raise the federal funds rate -- it did this in 2016, 2017, and 2018. We do not expect the Fed to lift-off this year, but the combination of a more immediate hawkish tones for a lift-off next year and the likely taper, could makes this year follow in that pattern. In the year of the taper tantrum (2013), even though real rates had already risen by 110bps through October (and $25par preferred prices had fallen 7.74% from April), the price of retail paper still declined another 2.59% from November thru December as real rates went up another 35bps (for a total of +145bps in 2013). The real rate on the US Treasury 10yr note has risen by 20bps so far this year, while retail preferred prices have fallen by 1.27%. As the bond market stands now, the real rate on the US Treasury 10yr note (-0.90%) is 20bps lower than where it was (-0.70%) before the infamous taper fears overwhelmed bonds in 2013; and the retail coupon today is 1.23% less (and the price $2.80 higher) than in 2013. The translation here is that the raw duration differential (i.e., 1/[coupon/price]) of +3.92yrs implies that dollar risk today is higher, in front of the coming post COVID taper, than what played through in the 2013 tantrum – and OAS spreads being 58bps tighter today in retail preferreds could add more potential risk to the downside. We highlight this because the Fed has all but guaranteed the market that a taper is coming. The timing of the first cut potentially being in December may pull ahead risk adjustments from the 1st quarter of 2022 into this year for tax paring reasons – that is, looking for fixed income losses to offset equity gains. Certainly, not every $25par issue will be trading under par (i.e., a discount being only indicative of a book loss) but the newer fixed-forever issues from this summer like First Republic 4.00, JPM 4.20 and Capital One 4.25 already are trading at a discount, while the rare fixed-to-variable issue of Western Alliance

(4.25) trades at a premium despite UST long bonds being 6 points lower. Consequently, the near-term outlook for the retail market weighs to the downside because the real rate adjustment (manipulated by the Fed's pandemic induced QE4) has 90bps or so to rise just to break even in real terms, underlying raw modified durations in the sector are quite elevated and OAS spreads are relatively tight (evidenced by only a 1.82% probability of spread benefiting the retail price).

$1,000par Institutional Preferred Securities Sector

The $1,000 par institutional sector of the preferred securities market fell $0.58 in September. Relative values to more senior financials are just below average now as spreads on junior subordinated paper continue to tighten in more than on product up the capital structure. The chart below shows the option adjusted spread of NoCos (i.e., *stb8*: a custom weighted combination of ICE BofA's *cips* and *hips*) vs. Eurodollar Banking Index spread (i.e., *e0ba*) since 2013:



Source: Bloomberg

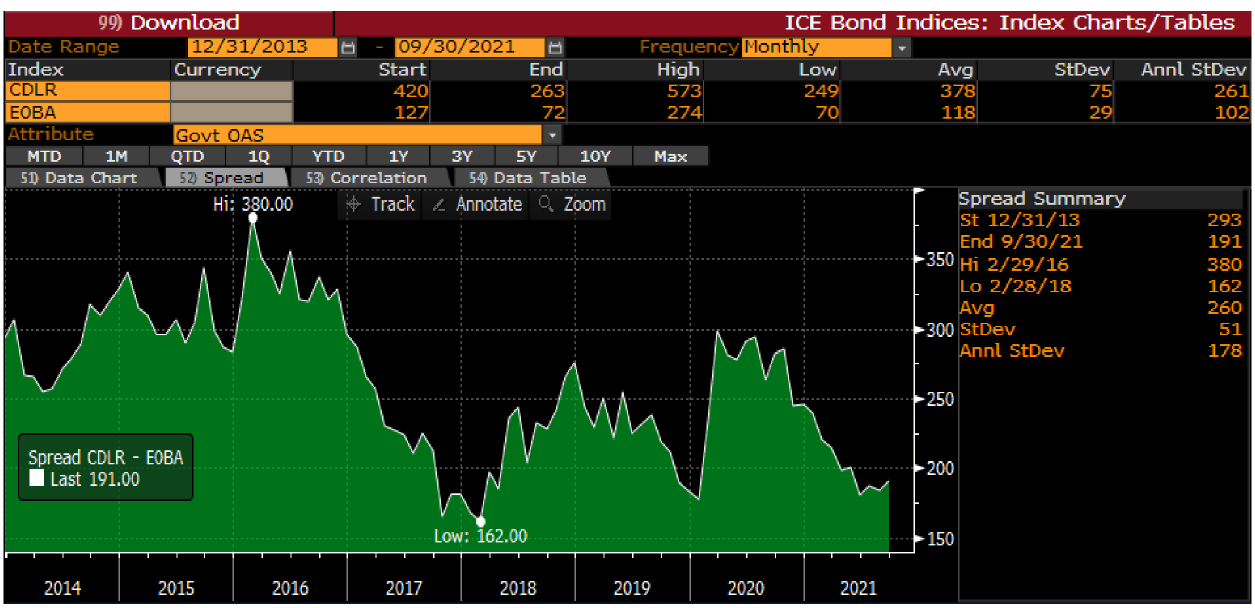
We look back to 2013 to include three intra-cycle sparks or shocks within the broader economic cycle from 2013's QE-III to 2020's QE-IV: 1) the aftermath (2014) of the bottom of QE3's Taper Tantrum (2013), 2) the commodity implosion and high yield (oil) market bust (2016) and 3) the market's revolt to the Fed's overshoot on rates (2018) – and now, the ongoing fear of and recovery from the COVID-19 pandemic and associated variants (2020+). NoCo spreads to comparable treasuries closed 6bps tighter (+206). Relative to more senior financials, NoCos moved 3bps tighter and have room to further tighten because at +132bps to senior financials, spreads for NoCos are -0.29 standard deviations less than average or 1.87 standard deviations off the tightest spread set in late 2017. We expect the yield compression on junior subordination to more senior credit to continue grinding tighter though there is likely to be some correction along the way from the excesses created by the Fed's massive balance sheet expansion and the likelihood of the taper announcement coming this November. From an historical relative spread perspective, the position of the junior subordinated spread differential looks like where it was in late 2016 as credit climbed out of the commodities crisis – the similarities to the Fed lift-off cycle appear on cue with a delay though 2016 (i.e., 2022) and then a series of increases in 2017 (i.e., 2023). So, as we do not expect the Fed to raise the funds rate for some time, the likelihood of junior subordinated spreads making a move tighter is plausible and NoCos still do have a statistical runway to tighten though it's likely to be a bear tightener – the estimated probability of spread duration benefiting NoCo capital rose modestly from 35.96% to 40.89% this month as yields moving up nudged duration to decline.

Relevant new issuance in NoCos this month was again more active than in the retail sector. There were three highlights: 1) $1.5 billion of (baa2/BBB-) PNC 3.40% 5yr fixed-to-refixed preferred stock, 2) $900mm of (a3/A-) Nippon Life 2.90% 10yr fixed-to-refixed 30yr junior subordinated debt, and 3) $500mm of (baa3/BBB-) Duke Energy 3.25% 5yr fixed-to-refixed junior subordinated debt. Aftermarket performance was mixed by month end.

Contingent Capital Securities Sector

The CoCo sector fell $0.82 this month under the weight of interest rate concerns more than anything related to its credit sector. European bank equities rallied 3.7% to new highs for the year to finish the month up and poised to move above the momentum the sector had before the pandemic caused a slam stop last year. Basically, this year's rally in European banks has elevated the sector back up (i.e., 81% from last year's pandemic low) to the low breakout zones of the triple bottoms (excluding the pandemic which was well beyond cyclical) posted in 2012 (the sovereign debt default), 2016 (the commodities crisis) and 2019 (the global growth squeeze from the Fed's overshoot).

The graph below shows the spreads in CoCos (i.e., *cdlr*) relative to the spreads measured in Eurodollar bank credit that is not CoCo (i.e., *e0ba*) since the benchmark's inception (Dec-13) – note that CoCos were improved in 2016 after the Pillar-2 capital stack was redefined, thus reducing payment trigger risks for CoCos:



Source: Bloomberg

As Pillar-2 regulations remain improved, core capital has expanded and loan quality has been stable -- which lead us to conclude that our data sample over-tests downside risks in CoCos. As we emphasized last month, there is an improved "normal" since 2016 for CoCo credits that not even the pandemic could break – the junior subordinated differential spike from the pandemic being lower than the spike in 2016 suggests that the market agrees. This month, the relative OAS differential between CoCos and more senior financials widened by 7bps with a difference of 191bps in favor of CoCos as the senior sector tightened and the CoCo sector widened. The relative value opportunity in CoCos compared to more senior financials is below average, but still appears reasonable given how much credit spreads are compressed in other sectors. Despite the CoCo sector's spread score of -0.97 being the lowest of the three junior subordinated sectors, CoCos still provide 57bps of additional spread to NoCos (10bps more than last month) and 179bps of additional spread to retail preferred securities (9bps less than last month); and CoCos offer the highest absolute yields in additional tier-1 capital securities and the lowest durations. Importantly, the incremental yield available in the sector reflects the second-best probability estimate of spread benefit at 20.02% (up from 15.11% in August), which is still multiple times higher than what we estimate is available for more senior financials (*e0ba*) – the implication here is that the defensive down in capital structure play in CoCos can still defend the goal with income.

<u>Outlook:</u>

The Fed has convincingly reiterated that its policies will be **outcome-based** – that is, until more recently. That notwithstanding, the Fed has two desired outcomes: 1) a significantly improved labor market, and 2) inflation maintaining a track above 2%. But there have still been mixed messages over inflation views coming from the Fed since June (i.e., that it would move rates up sooner based on expectations not outcomes). The Fed meeting this month (the first since June) brought more concerns that a lift-off is getting closer and the taper even closer. The Fed's famous dots report that graphs the committee's views on the federal funds rate pulled ahead a rate increase into next year as 2 members moved from unchanged; and there were 4 members shifting from unchanged in 2023 so the median rate suggestion increased from 0.625% up to 1.00%. This change in the dots is challenging the Fed's flexible average inflation targeting policy and suggesting that the Fed is becoming increasingly concerned about inflation – especially as there was not one mention of the word "transitory" during the press conference. Also of concern, is ongoing quantitative easing as *"QE is now longer as useful as it was at the start…so long as the recovery remains on track, a gradual tapering process that concludes around the middle of next year is likely to be appropriate.",* according to Fed Chairman Powell. That was the statement that market believes all but guarantees a taper to start this December (announced in November) and should complete by July next year. Importantly, Chairman Powell was still compelled to walk back concerns of a lift-off happening too soon because he said, *"You are going to be well away from satisfying the lift-off test when we begin taper."* So, low for longer on the target funds is still the message but that may mean an extension between the first move late next year and the second move the same way we saw the Fed move in 2015 and then wait for 1 year until the end of 2016 for the second move. Again, our clues to a lift-off getting nearer will be first for the 10yr TIPS rate to hold a positive yield and then for the 2yr treasury note yield to sustain a breakout far enough above the federal funds rate upper bound to give the Fed the lift-off room it will need.

No doubt, ongoing coronavirus fears, resurging global conflicts and social changes (among other things) will likely challenge the Fed to engineer a landing a bit shy of perfect – especially if markets are surprised by a new Fed Chair appointment, the odds of which, have risen lately. The progressive wing of the Democrat Party is gaining increasing control over the Biden Administration. Randall Quarles' seat as Vice Chair for Supervision is up this month. Elizabeth Warren has already emphatically voiced her desire to appoint a new member. Chairman Powell's term is up in February. Senator Warren has called Chairman Powell "dangerous". Representative Alexandria Ocasio-Cortez (AOC) has called on President Biden to replace

Chairman Powell with a member more focused on climate change. Trading scandals at the regional levels have further enraged Elizabeth Warren, in particular, who is calling for an audit of trading practices inside the Fed; and there is a vacant seat up for nomination to fill out the 7 seat Board of Governors. So clearly, the membership and philosophy of the Fed is in flux and could change dramatically if Biden's nomination to head the Office of the Comptroller of the Currency (OCC), Saule Omarova is any indication. After a quick review of some writings of Professor Omarova, a graduate of Moscow State University, University of Wisconsin and Northwestern one can see her desires for grander state controls and a new digital currency that fosters "social equity" among other things – something she describes as not being inflationary. Ultimately, her nomination is viewed as highly controversial because some critique her views as highly "leftist" perhaps bordering communism.

All that said, we expect the fourth quarter to be rather choppy as markets adjust to the reality that the Fed will very likely be winding down its QE4 next year. As interest rates rise to adjust for more normalized real risks, hybrid structures can allow for income to rise over time. The junior subordinated capital securities sector can offer quality credit, act as an effective longer-term inflation hedge and book positive real rates of return today rather than the negative real rates guaranteed by the entire TIPS curve and intermediate corporates.

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