Junior-Subordinated Capital Securities Markets

November 2021 Updates

Credit performance was negative in November as Fed jawboning over inflation frustrations grew and a new coronavirus variant (Omicron) injected new fears around the globe. The big news (though expected) was the Fed's announcement of its taper which would run-off to zero by July if the current pace it to continue. Christopher Waller (a member of the Fed Board of Governors) said that rapid improvement in the labor market and high inflation has pushed him in favor of tapering faster followed by removal of accommodation sooner – this hawkish tone trended up in November among the Fed speak. So, the taper is underway and after just one down shift, the Fed is now talking about (talking about) tapering faster as policymaker moods are getting impatient. We believe that this tempered taper may turn to be somewhat of a "temperamental taper" exposed to hawkish moods of not only the Fed, but also of investors frustrated by tyrannical lockdowns (again) and the confusion over what these variants ultimately mean for public health strategies. Real rates on the front end of the curve (e.g., UST 5yr TIPS) ended the month 9bps higher at -1.66%; the 5yr implied breakeven inflation rate (i.e., the difference in yields between the 5yr UST and the 5yr Treasury Inflation Protected Security) fell 12bps to close at 2.81% (back inside of its 20bp channel it had held since May). On the back end of the treasury curve, the 30yr bond closed yielding 1.79% (14bps lower) and the 10yr note closed yielding 1.44% (11bps lower) -- the yield differential between the two longer US treasuries flattened 3bps to +35bps, well under the wide +85bps set in February when the bond market was singularly fearful of higher inflation but not the virus. The VIX (i.e., Chicago Board Options Exchange Volatility Index) zoomed up 67% to 27.19, but the change in the S&P 500 for the month was muted -- the S&P500 declined 0.83% this month closing at off an all-time high of last month. The credit markets, however, took the rising equity volatility seriously as spread

corrected quite notably by month end in a flight-to-quality move in bond markets. Credit spreads were, in effect, first movers and reflect better values as immaculate financial conditions begin to feel the friction of the more hawkish temperament on clear and present inflation.

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) fell 1.03% to close yielding 4.75% (45bps higher).
- Global bank credit (measured by ICE BofA ***e0ba*** index) rose 0.03% to close yielding 1.88% (6bps higher).
- The BBB rated 5-10yr corporate sector (measured by ICE BofA ***c6a4*** index) fell 0.19% to close yielding 2.51% (6bps 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 $359 billion (face amount) of investment grade and below investment grade instruments in both the retail $25par market (36%) and the institutional $1,000par market (64%). The USD Contingent Capital Index of US dollar denominated junior-subordinated capital securities ***(cdlr)*** represents $157 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 $516 billion universe of fixed-rate junior-subordinated USD capital securities with preferred securities (measured by ***iocs***) being a 70% 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 (***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 1.82% this month to close yielding 3.31% (+59bps)
     - Headcount was up 2; face value grew by $1.058 billion
2. **ICE BofA US Capital Securities Index (*c0cs*) @ 23% of *i0cs***
   - Comprised of dated IG $1,000par dated hybrids (excl. US AT1)
     - The *c0cs* fell 0.58% this month to close yielding 3.28% (+16bps)
     - Headcount was up 1; face value rose by $1.312 billion
3. **ICE BofA High-Yield Capital Securities Index (*h0c*s) @ 6% of *i0cs***
   - Comprised of BIG $1,000par legacy Tier1 and BIG $1,000par hybrids
     - The *h0cs* fell 0.05% this month to close yielding 3.56% (+15bps)
     - Headcount was up 2; face value rose by $1.000 billion
4. **ICE BofA High Yield Fixed Rate Preferred Index (*p0hy*) @ 29% of *i0cs***
   - Comprised of BIG $25par and BIG 1,000par (incl. US AT1)
     - The *p0hy* fell 1.73% this month to close yielding 4.09% (+75bps)
     - Headcount was up 4; face value rose by $1.531 billion

Overall, the ICE BofA All US Capital Securities Index (***i0cs***) fell 1.39% in November to close yielding 3.54%, which was 50bps higher than last month's closing yield and a spread of +243bps over comparable US Treasury securities (50bps wider).

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 0.95% this month to close yielding 4.13%, which was 39bps higher from last month and a spread of +312bps over comparable US Treasury securities (39bps wider).

Snapshot of Junior Subordinated Spread Sector Moves:

Capital Securities Spread Value Matrix	p0p4 (a) Retail	p0p4-e0ba (b) Retail	stb8 (a) NoCo	stb8-e0ba (b) NoCo	cdlr (a) CoCo	cdlr-e0ba (b) 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	36	-69	243	137	327	221
Stdev	120	103	47	28	63	35
Monthend	149	62	236	149	300	213
Sector Spread Score[1]	1.11		0.14		-0.33	
Last Month's Score[1]	0.40		-0.35		-1.01	

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 (a)	p0p4-e0ba (b)	stb8 (a)	stb8-e0ba (b)	cdlr (a)	cdlr-e0ba (b)
*Absolute	0.94		-0.15		-0.43	
**Relative		1.27		0.43		-0.23

** 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.)

	Retail	NoCo	CoCo
Spread/mdurMat	-1.26	0.62	0.32
Probability Estimate to Spread Benefit	10.45%	73.20%	62.60%
		Memo: e0ba	0.29%

Source: Bloomberg, ICE Bond Indices

Implications of Market Activity:

$25par Retail Preferred Securities Sector

The retail preferred securities sector declined $2.96 in November to $103.78 which was one of the bigger down moves for a November in 10 years. Interestingly, November has now been a negative price month 70% of the time in the past 10 years; December has the same record and has also been negative 6 out of the 7 times November has been negative – perhaps November tends to be an early read on retail tax appetites for December. The $25par market had basically run up 6pts from February into July to completely recover its losses impelled by the bond market's inflation fears in the first quarter – fears that were largely erased by the Fed's repeated (and repeated…) "transitory" narratives on inflation after its March meeting. The bonds markets became doubtful that the Fed's narrative would be true as prices for retail paper and US Treasury 10yr bonds slipped almost in lockstep until the end of the 3rd quarter. The renewed equity rally in October and the UST10yr note's resistance to breaking above 1.70% again (the March high was 1.74%) gave a boost the retail paper that carried into early November. But the momentum quickly reversed after the first week this month with a distinct flight-to-quality move by the money flows before month end, which sent the sector back to early March when the US Treasury bond market had blown up and took other fixed income classes with it – OAS spreads for retail paper widened by 86bps in November. This left retail prices are significantly less elevated yet the price risk to spread widening is still quite high because the duration to maturity is chronically high as the sector's coupon is chronically low compared to any prior year – this is simply a function of the fixed-for-life 5yr call options favoring issuers to redeem and replace at ever lower costs over the course of the year. So, if we factor out the call options and assume the low yield-to-calls are "false" and yield-to-perpetuity (or maturity) are true (i.e., more reflective of chronically elevating inflation), then the amount of potential spread benefit (to tighten in a rising rate environment) is better this

month as the improved z-score of 10.45% reflects – this can be interpreted as meaning that there is another 39.55% probability move toward the mean on spread before there is a 50/50 chance of duration risk in the retail sector being neutral on average. That notwithstanding, the retail sector's fair value improved when looking at OAS spreads, but keep in mind that the wider spread range due to the sector's negative convexity is why the Z-score on spread duration benefit is still low. Ultimately, the retail sector has de-risked and is more of a fair value, but equity volatility may still impel more absolute downside risk for retail than for the institutional sectors.

Relevant new issuance in the retail sector this month were: 1) $350 million of (Ba2/nr) Bank of the Ozarks 4.625% fixed-for-perpetuity preferred stock, 2) $400 million of (Baa3/BB) Hudson Pacific Properties 4.75% fixed-to-perpetuity preferred stock and 3) $435 million of (A3/nr) Public Storage 4.00% fixed-to-perpetuity preferred stock. Fixed rate non-refixing issuance continues to be the predominant issuance for retail product.

$1,000par Institutional Preferred Securities Sector

The $1,000 par institutional sector of the preferred securities market fell $1.42 in November. Relative values to more senior financials are just above average now as spreads on junior subordinated paper has widened 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 25bps wider (+236). Relative to more senior financials, NoCos moved 13bps wider closing at +149bps; spreads for NoCos are 0.35 standard deviations more than average. As we have said, we expect the yield compression on junior subordination to more senior credit to continue grinding tighter though not without some disruption along the way from the excesses created by the Fed's massive balance sheet expansion and the uncertain risks that inflation will have to a rates policy lift-off now that the taper is underway – this month was one of those disruptions and the fear of the omicron variant exacerbated the move. From an historical relative spread perspective, the junior subordinated spread differential looks positioned similar to 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 2016 as well as the Fed is now talking

of advancing a lift-off with multiple moves up next year (much like 2017). Nonetheless, we do not expect the Fed to raise the funds rate for at least a couple of months after the taper is complete – the question now is: when will the taper be complete? We expect that the taper will accelerate because the Fed needs policy flexibility to combat inflation which it has clearly misjudged given the pressure on the belly of the curve which has increased NoCo spreads. The estimated probability of spread duration benefiting NoCo capital rose from 51.63% to 73.20% this month as yields spreads and yield spiked up during the flight-to-quality move this month.

Relevant new issuance is NoCos this month were: 1) $1.3 billion of (Baa1/BBB) Bank of New York Mellon 3.75% 5yr fixed-to-refixed preferred stock, 2) $750 million of (Baa3/BBB) American Electric Power 3.875% 5yr fixed-to-refixed junior subordinated debt, and 3) $1.0 billion of (Baa3/BBB-) Sempra Energy 4.125% 5yr fixed-to-refixed junior subordinated debt.

Contingent Capital Securities Sector

The CoCo sector fell $1.54 this month primarily under the weight of equity volatility that spiked at the end of the month due to omicron fears. European bank equities fell 8.65% -- mostly over the last few days of November. Despite CoCos having a duration that is 1yr lower than NoCos, the CoCo sector underperformed NoCos due to the influence of volatility on spreads. Indeed, the higher volatility had a more effect on European banks and CoCos than it did for US banks and NoCos this month.

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

Since the 2015-2016 high spread zones reflected higher pre-Pillar-2 risks that weakened payment probabilities. But since then, Pillar-2 regulations have improved, loan quality is stable and core capital is much improved -- which leads us to conclude that this data sample over-tests extreme downside risks in CoCos given those fundamental improvements. 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 with the lower risk assessment. This month, the relative OAS differential between CoCos and more senior financials tightened by 4bps with a difference of 187bps 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 the over-risked average and appears reasonable given how much credit spreads are compressed in other sectors. Despite the CoCo sector’s spread score of -0.33 being the lowest of the three junior subordinated sectors, CoCos provide 64bps of additional spread to NoCos (13bps more than last month) and 151bps of additional spread to

retail preferred securities (45bps less than last month); and CoCos offer the highest absolute yields in additional tier-1 capital securities and the lowest duration. Importantly, the incremental yield available in the sector reflects the second-best probability estimate of spread benefit at 62.60% (up from 34.30% in October), 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 – especially as CoCo paper is turning out to effectively be more expensive tier2 capital from a payment priority perspective as the regulators have allowed CoCos to pay because the rules to maximum distributable amounts were a low enough bar to enable payments while capital was being restored off the income savings extracted from common shareholders.

Outlook:

The Fed is changing its narrative on inflation being transitory to inflation being more of a chronic concern that needs attention. It still affirms its policies as being **outcome based**, but the reasons for inflation are getting blamed more on supply chains than admitting to it being caused by sudden, massive, and prolonged growth in the money stock (i.e., the Fed's $9 trillion balance sheet)**.** The US Federal Reserve Bank has two desired outcomes: 1) a significantly improved labor market, and 2) inflation maintaining a stable track above 2%. After months constructive data, it is apparent that the Fed now is beginning to feel the pressure of inflation (e.g., the PCE deflator at 5%) and must act because it's mandate orders it to fight – hopefully, before expectations for inflation get out of control and prices rise because they are supposed to rise. So, the Fed has announced the taper and started is $15 billion knock-off this month with another$ 15 billion cut set for mid-December. But now as inflation has reached a 30yr high, there is pressure on the Fed to do more and do it faster, so Chairman Powell has recently signaled that the taper can be done faster. This is intended to set up options for the federal funds lift-off to strike sooner than later – perhaps as early as May next year. The St. Louis Fed president, James Bullard says he's in favor of "2 for 2022". More Fed governors appear willing

to trade off some progress on the labor markets and adjust their views on maximum employment to build a lane for signaling its willingness to fight inflation sooner – as Chairman Powell recently stated, "We have to balance those two goals when they're in tension as they are now."

Indeed, the omicron variant is adding more uncertainty to the markets as countries are responding with more mandates and lockdowns before the data provides a clear picture, which is peculiar because science ordinarily waits for more conclusive data to form opinions. But now, policymakers are the "scientists" in politician's clothes making their own snap judgements well in advance of medical peer reviewed norms. This is what has caught markets by surprise as the "act now; review the data later" actions by policymakers have impelled investors to re-evaluate the economic and political risks that central banks will have to navigate next year – we'll talk more of this in our upcoming Outlook for 2022.

All that said, we expect the fourth quarter to continue being rather choppy as markets adjust to the reality that the Fed will likely be tapering even faster than it originally announced at the beginning of November. As interest rates rise to adjust for more normalized real risks, hybrids can allow for income to rise over time given their reset abilities that are gauged over the belly of the curve. Junior subordination can offer quality credit, cheap inflation hedges, and positive real rates of return rather than the negative real rates guaranteed by the entire TIPS curve and most intermediate investment grade corporate bonds. The cheaper spreads become in junior subordination, the more compelling their absolute yields become and the more help they can offer to build a preservation of capital opportunity on the income accruals – that, against the backdrop of the Fed pushing rates even higher next year.

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