Junior-Subordinated Capital Securities Markets

May 2021 Updates

Credit and US Treasury prices went up in May though spreads slipped a bit. The move up in longer dated treasuries was modest as most of the market's mood was influenced by an inner voice of Chairman Powell whispering *"we need substantial further progress"*. So, bonds were narrowly range bound knowing that time, time, and more time will be needed for economic outcomes to evidence needed progress. Real rates on the front end of the curve (e.g., UST 5yr TIPS; @ -1.82%) ended the month 7bps lower -- the 5yr implied breakeven inflation rate (i.e., the difference in yields between the 5yr UST and the 5yr Treasury Inflation Protected Security) edged 1bp higher to close at 2.60% (just off the highest level in over 12yrs); and gold prices zoomed 7.80% after rising 3.60% in April. The 30yr US Treasury bond closed the month yielding 2.27% (3bps lower) and the US Treasury 10yr note closed yielding 1.59% (4bps lower). The yield differential between these two longer US Treasury terms widened just 1bp to +68bps, well off the wide for the year of +85bps. The S&P500 seemed enervated to start the month, but then reenergized to more than completely retrace its 3% pullback to close May 0.55% higher. The VIX (i.e., Chicago Board Options Exchange Volatility Index) declined 9.94% after jumping to a lower high as the share markets gained for the month in a thin range.

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 0.29% to close yielding 4.06% (6bps lower).
- Global bank credit (measured by ICE BofA ***e0ba*** index) rose 0.69% to close yielding 1.58% (11bps lower).

- The BBB rated 5-10yr corporate sector (measured by ICE BofA ***c6a4*** index) rose 0.74% to close yielding 2.32% (10bps 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 $350 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 $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 $499 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*) @ 43% *of i0cs***
   - Comprised of IG $25par and IG $1,000par (incl. US AT1)
     - The *p0p1* rose 0.35% this month to close yielding 2.26% (+33bps)
     - Headcount was unchanged, face value rose by $2.4billion
2. **ICE BofA US Capital Securities Index (*c0cs*) @ 25% of *i0cs***
   - Comprised of dated IG $1,000par hybrids (excl. US AT1)

- The *c0cs* rose 0.45% this month to close yielding 3.03% (-4bps)
- Headcount rose by 1; face value rose by $500 million

3. **ICE BofA High-Yield Capital Securities Index (*h0c*s) @ 5% of *i0cs***

- <u>Comprised of BIG $1,000par legacy Tier1 and BIG $1,000par hybrids</u>
  - The *h0cs* rose 0.68% this month to close yielding 3.49% (-5bps)
  - Headcount rose by 1; face value rose by $1.0 billion

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

- <u>Comprised of BIG $1,000par US AT1 and BIG $25par</u>
  - The *p0hy* rose 1.06% this month to close yielding 3.30% (-23bps)
  - Headcount was unchanged; face value rose by $1.0billion

Overall, the ICE BofA All US Capital Securities Index (***i0cs***) rose 0.58% in May to close yielding 2.80%, which was 7bps higher than last month's closing yield and a spread of +194bps over comparable US Treasury securities (10bps wider).

<u>Contingent Capital Securities</u>

A **"contingent capital security"** (i.e., a "CoCo") represents a capital security issued through indenture typically within the context of a "<u>going-concern</u>" 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 core capital). The ICE BofA USD Contingent Capital Index (***cdlr***) is comprised of US dollar denominated constituents (exclusively), which represent 58% of the mature master multi-currency benchmark (*coco*). We will utilize the USD benchmark (*cdlr*) as it more meaningfully reflects the contingent capital currency types held in our portfolios. The ICE

BofA USD Contingent Capital Index (***cdlr***) rose 0.74% this month to close yielding 3.46%, which was 13bps lower than last month and a spread of +280bps over comparable US Treasury securities (2bps tighter).

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	421
Low	-178	-267	175	55	223	143
Range	766	518	306	146	437	278
Average	33	-77	247	136	336	225
Stdev	126	106	49	29	65	35
Monthend	**68**	**-6**	**226**	**152**	**277**	**201**
Sector Spread Score[1]	**0.47**		**0.06**		**-0.80**	
Last Month's Score[1]	**-0.01**		**-0.35**		**-1.28**	

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**	0.28		-0.43		-0.91	
****Relative**		0.67		0.55		-0.69

** 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	**-2.20**	**-0.97**	**-1.03**
Probability Estimate of Spread Benefit	**1.41%**	**16.53%**	**15.26%**
		Memo: e0ba	**4.79%**

Source: Bloomberg, ICE Bond Indices

Implications of Market Activity:

$25par Retail Preferred Securities Sector

The retail preferred securities sector rose $0.42 in May, but the sector's benchmark (*p0p4*) yield rose by 20bps to 2.20% because of the peculiarity to negative convexity. Basically, as securities are called and replaced by lower coupons, the cumulative term structure of yield-to-worst rolls out at the margin with a jump condition on yields that are added compared to the yields that were lost (some being negative yields just prior to call announcements). So, even though the coupon structure of the sector is declining in the process, resultant higher yield-to-calls can give incomplete pictures (or perhaps even false signals) on value. Overall, the coupon of the $25par sector (5.54%) declined by 14bps and spreads (+172) widened by 17bps in May. The cut in coupon helped to increase the sector's modified duration by 0.42yrs to 4.10yrs, which is more in line with a positive convexity characteristic than for the sector's actual negative convexity characteristic – the implication is that the sector's very active call-and-replace cycle is adding structural extension risk which we do not ignore. Security selection is paramount in the $25par sector to mitigate the potential capital risk from normalizing real interest rates in US treasuries and corporate credit, overall.

An example of opaque and more immediate extension risk in preferred securities (and the need for active security selection) can be found in the new $500mm Carlyle Finance 4.625% $25par 50yr subordinated notes that were issued this month. At the time, the market tone was a bit disinterested, and the paper could be bought at $24.75 after pricing – the YTW was 4.70% and the modified duration at the 1% discount was 18.18yrs. Soon, the market tone for the sector improved and the technicals for the new Carlyles improved as the authorized participants began to collect the bonds with intentions of selling them to the passive ETFs by month-end (which they did-- the volume spike at month-end is evident). As the price rose 2% back to a premium ($25 ¼) in a few days, the YTW declined to 4.47% and the modified duration collapsed to 4.42yrs. The point is that around par, the sector's yield value of a basis point is highly

skewed by 5yr call options (this is negative convexity) and the modified duration skew (13.76yrs) is pronounced on small moves. The most important question is: which way is the longer-term price trend? So, if buying continues for the Carlyles, then the YTW value of another +1/4pt would be -22bps, but at a discount the yield value of -1/4pt would be only +6bps. The implication here is that the higher the price premium (preferably from "above market" coupons) the higher the built-in price cushion if rates are to rise – well, until prices break below par. Duration skews are measures of price range risk and the market's distance from par can measure the cushion in the skews. For perpetual preferred stocks, the skews are the greatest -- for example, the new JP Morgan 4.625% that priced this month has a skew of 17.10yrs (24% higher than Carlyle) even though the coupon is the same as Carlyle. This month, the overall $25par sector (*p0p4*) skew closed at 11.37yrs, which is up 2.22yrs from the February lows when the sector's price premium was just 2.84% compared to a 6.20% market premium today. As the retail sector rises and refundings continue (over $23 billion YTD), lower replacement coupons will continue to widen the sector's duration skew and underlying extension risk to rising yields. Indeed, we select all our securities carefully.

<u>$1,000par Institutional Preferred Securities Sector</u>

The $1,000 par institutional sector of the preferred securities market slipped $0.07 in May. Relative values to more senior financials are still above average as yields on product up the capital structure have rallied to new lows with the yield compression. The chart below shows the yield-to-worst 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: 1) the aftermath of the bottom of the Taper Tantrum (2014), 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 recovery from the COVID-19 recession. NoCo spreads to comparable treasuries closed 6bps wider (+207). Relative to more senior financials, NoCos moved 8bps wider, yet have room to further tighten because at +152bps to senior financials, spreads in NoCos have a relative spread score of 0.55 standard deviations better than average. As yields compress to treasuries, the potential capital benefit to further spread tightening diminishes – for NoCos, the estimated probability of spread duration benefiting capital rose modestly to 16.53% from 15.39% due to the wider move in spread this month.

There were two notable new deals this month in the NoCo sector: 1) $1 billion Southern Company (Baa3/BBB) 3.75% fixed-to-refixed jr. subordinated bonds @+292 vs. the 5yr US treasury note, and 2) $2bil. JPMorgan (Baa2/BBB-) 3.65% fixed-to-refixed non-cumulative

perpetual preferred stock @+285 vs. the 5yr US treasury note – the Southern Company bonds did well in trading up to $101.50 by the end of the month, but JPMorgan pushed their deal very aggressively causing it to break to $99.00 – it took most of the month for it to inch to $99.75 by month end.

It is certainly interesting to compare the JPM 3.65% capital security to the JPM 4.625% $25par – at month end: the capital security yielded 3.67% ($99.75) and the $25par yielded 3.57% ($26.25). When issued, the yield differential between the two was 98bps -- note that the UST curve differential between 5s & 30s was +153bps, so it appears that JPM received its 5yr call option for free, yet the market still took the retail deal up as the yield curve slope allowed plenty of clearance. JPM's capital security will reset off the 5yr treasury @+285bps five years from now – so, assuming the UST5yr currently spotted 5yrs forward @2.26% proves to be clairvoyant, then the JPM 3.65% would be a par bond yielding 5.11% by that time (all else being equal). Now, if the $25par security is (say) trading at parity with the $1,000par issue (though it traded 10bps ahead at month end) it would be trading at a 9.5% discount given its 4.625% dividend (4.625/.0511=$22.63; -13.8% from $26.25) – this is a clear example of the skew risk to modified duration explained earlier. The additional income carry on the coupon differentials for the next 5yrs favors the $25par by 4.9% -- adjusting for this pickup, the JPM $25par would underperform the $1,000 par issue by 8.9% over the next 5yrs as rates rise (more on the front end) and spreads stay constant. In fact, if the $25par spread 5yrs from now was the same as at issue (+223), then that would imply that the UST 30yr bond would be yielding 2.88% and that the US treasury yield curve would be flatter than it is today by 91bps – this is a reasonable assumption with a Fed lift off on the federal funds rate sometime over the next few years. The punchlines here are: 1) add NoCo capital securities to your $25par preferred securities portfolio to mitigate overall price risk, and 2) switch passive $25par ETFs for $1,000 par preferred securities ETFs to completely avoid the retail market's duration skew risk and preserve capital with improving income opportunities over the longer term.

Contingent Capital Securities Sector

The CoCo sector closed $0.26 higher this month as European bank equities sector rallied 6.7% to new highs for the year. The rising equity values in the sector (off chronic long-term lows) are helping to tighten CoCo spreads as loan quality has stayed resilient to chronically lackluster growth. 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

The relative OAS differential between CoCos and more senior financials tightened by 1bp to close the month with a difference 197bps in favor of CoCos. The relative value opportunity in CoCos compared to more senior financials is below average, but still appears reasonable given how much market spreads continue to be compressed in other financial sectors. Despite CoCos' overall sector spread score of -0.80 being the lowest of the three junior subordinated sectors, CoCos still provide 51bps of additional spread to NoCos and 209bps of additional

spread to retail preferred securities; and CoCos offer the highest absolute yields in additional tier-1 capital securities. We believe that supportive regulation, improved capital, and sustained loan quality since the 2015-2016 high spread zones skews the data sample to over-test downside risk that was greatly mitigated by these core improvements – in effect, there is an improved new normal for CoCo credits, so the poor CoCo sector spread score that includes legacy risk is not as "bad" as it appears relative to our more sanguine forward expectations, nonetheless, the data is the data. Importantly, the incremental yield available in the sector reflects the second-best probability estimate of spread benefit at 15.26%, which is 3.2x higher than the estimate for more senior financials (*e0ba*). The CoCo sector also has the lowest modified duration (3.26yrs) of the three junior subordinated sectors (and like NoCos, no duration skew risk). There were a few notable CoCos issued this month: $750mm (nr/BB+/BBB-) Danske Bank 4.375% contingent capital securities priced +339bps to the UST5yr; $1.0 billion (Ba1/nr/nr) Santander 4.75% contingent capital securities priced +375bps to the UST5yr; and $1.0 billion (Ba2/BB/BB+) SocGen 4.75% contingent capital securities priced +393bps to the UST5yr – all closed the month above par.

Outlook:

The Fed has convincingly reiterated that its policies will be **outcome-based**. It has two desired outcomes: 1) a significantly improved labor market, and 2) inflation maintaining a track above 2% once it gets there. According to Chairman Powell, "*Substantial further progress toward its goals is needed*" and the Fed "*will signal well in advance that it believes its outcomes have been met*." For the near term, the Fed will be very accommodative as *"the ongoing health crisis continues to weigh on the economy, and risks to the economic outlook remain"*. The Fed meeting in June may downgrade the pandemic's ongoing impact and be a step toward talking about talking about the otherwise much talked about (by the market, that is) balance sheet taper. Payrolls this month were up meaningfully, but expectations were significantly tempered by the lackluster April report that was such a surprise. There are only 2 more reports before

the annual Jackson Hole event when many folks (us included) believe that the Fed will introduce the taper idea as members of the Fed board have recently started to hint about talking about discussing the inevitable process.

The $6 trillion Biden budget proposal for next year will run a $1.8 trillion deficit next year. It proposes to raise the top individual tax rate back to 39.6% (from 37%). The administration also seeks to increase the long-term capital gains tax rate and qualified dividend income tax rate to 39.6% for incomes over $1million. It also proposes to raise the corporate income tax rate from 21% to 28%, which is a 33% tax hike on corporations. Among other things, it would also provide a first-time home buyer's tax credit of $15,000 to assist potential homeowners having difficulty affording record home prices engendered by the Fed's support of the pandemic recovery among other things. Overall, the budget (which includes a $3 trillion tax hike) will elevate government debt to the highest levels as percent of GDP since World War II and run annual deficits of at least $1.3 trillion for the next 10 years – this could be a 5% annual growth rate pushed into the US government securities market. Despite the ongoing narrative that immediate inflation is transitory, dogma and change are usually cloaked in a spirit of denial – and continuing disinflation is dogma in denial. A cumulative $13 trillion deficit is the size of the entire US government bond market in 2013 – remember the taper tantrum. Frankly, we do not believe that the Fed can taper this time at the same pace that it tapered in 2013-2104 when the time comes – it can probably taper only ½ as fast given the tax hike plans. The ongoing massive budget deficits embed an effective "reverse taper" into the government market from a chronic supply challenge. Indeed, there is risk of a "fiscal fit" if the Fed stops buying. In fact, we wonder if the Fed can ever stop buying lest enabling a fiscal fit – Modern Monetary Theory is quietly growing into the norm. We doubt that the Fed can allow its balance sheet to run-off even a little bit without creating a recession under the current game rules.

Yet, the macro backdrop for now is still positively anchored by the Fed bond bully. Hybrid financials should continue to be among the expansion's top credit beneficiaries, and we expect

hybrid spreads to tighten somewhat further along an ultimate path of rising 10yr TIPS rates (our "bond bully index"). We believe that the Fed will achieve its goals and that a long-term trend reversal is underway switching rising US Treasury bond rates, a steeper yield curve (until the federal funds lift-off) and sustained desired inflation above 2%. If the shift to progressive policies in America takes stronger hold over the next three years, the implication should be for sustained higher rates (viewed as a "plus" by US Treasury Secretary, Janet Yellen) and lower spreads as inflation flows through to support longer run higher equity prices. The risk is that the mid-term elections next year put pause and change to massive fiscal spending and equity corrects from is extraordinary heights (discussed in last month's report), as economies can keep on growing but stocks can get overpriced. Importantly, the relative performance path for hybrids would be supported by enhanced yield (and lower duration) compared to investment grade corporate bonds; and enhanced credit (and lower default risk) compared to junk bonds. But sector values in the retail sector do measure up to be fully priced so, to prepare for the long haul, we recommend diversifying retail portfolios into $1,000par NoCos and CoCos to mitigate capital risk and potentially soften the landing.

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