Global Convertibles Chartbook

The halftime report

03 July 2023

Convertibles
Global

BofA Data Analytics

Michael Youngworth, CFA
CBs, Pfds & Derivs Strategist
BofAS
+1 646 855 6493
michael.youngworth@bofa.com

Matthew Welty
Equity-Linked Analyst
BofAS
+1 646 743 6023
matthew.welty@bofa.com

Primary: Lifting our global issuance forecast to $75-85bn

Though perhaps not quite as strong as investors had hoped, global CB issuance staged a healthy first half, pricing $39bn (over 3x H1 2022). We think the pace of new supply will slightly increase in the second half as (1) the looming maturity wall may encourage issuers to seek new capital in CBs relative to traditional credit as interest rates remain higher-for-longer, (2) H1's better-than-expected equity market performance should be supportive and may trigger more opportunistic issuance, and (3) it's becoming harder for issuers to wait out an economic downturn as recession expectations continue to be pushed further out. This considered, we've lifted our global issuance forecast to $75-85bn globally, a 7% expansion from our initial forecast. We expect the bulk of the pickup to come from the US, while we've marginally cut our European and Asian new supply expectations to mark-to-market for the disappointing first half volumes in each region.

Secondary: H2 performance to be more modest than H1's

It's been bumpy, but converts globally gained in the first half (G300 +6.9%), led by the US (+8.6%), and they're outperforming global fixed income assets year-to-date. Gains were driven by economic resilience, positioning, the rally in tech/AI, and the rebound in cruise lines. However, we expect that returns will cool in the second half relative to the first given weak CB performance trends in the periods leading up to historical recessions and stretched valuations, particularly among tech names and HY bonds. Regardless, we think elevated buyback and buyout activity and improved convexity may provide support. To account for H1's better-than-expected returns and our anticipation of a slowdown in H2, we've modestly boosted our 2023 return forecasts globally (US 7-9%, Europe 4-6%).

Global CBs shared in June's cross-asset rally, led by the US

Amid a broad-based cross-asset rally, global converts (the ICE BofA G300) gained 3.3% last month, led by the US's +5.2%. High delta and high yield names led returns. Year-to-date, global CBs are now up 6.9%, ahead of all fixed income though behind equities.

June issuance underwhelmed, but Japan volumes surprised

While H1's overall volumes were solid, the pace of new supply underwhelmed last month as just $6.0bn was priced globally (historically, June has been the best month for global CB issuance). Though the US led with $4.2bn, Japan offered the biggest surprise with nearly $800mn of new supply, the best month for the region since November 2021.

US CB funds saw inflows last month, topped by ETFs

US CB funds saw the most net inflows last month since September 2021, led by ETFs. However, US CB mutual funds and funds that invest outside the US saw net outflows.

Chartbook access

To view the Excel Chartbook, which includes a variety of data on returns, markets characteristics, and supply and demand, among others, please refer to the link here.

Chartbook access:

Access the Chartbook here.

Exhibit 1: Global converts performance
Local currency terms

Region	Code	Jun '23	YTD
G300	VG00	3.34%	6.90%
US	VXA0	5.18%	8.55%
Europe	VE00	1.57%	5.10%
Asia-ex Japan	VASI	2.03%	5.85%
Japan Domestic	VJDM	-0.07%	-0.18%
Japan Euro	VJEU	2.48%	6.15%
Emerging Markets	VEMK	1.91%	6.18%

Source: ICE Data Indices, LLC
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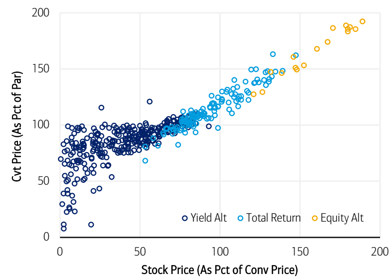
Exhibit 2: Global convertibles Tableau visualization tool
Click the chart to access the tool



Source: BofA Global Research, ICE Data Indices, LLC. Universe capped at names which are trading at less than 200% of par. Mandatories are excluded.
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List of abbreviations on page 23.

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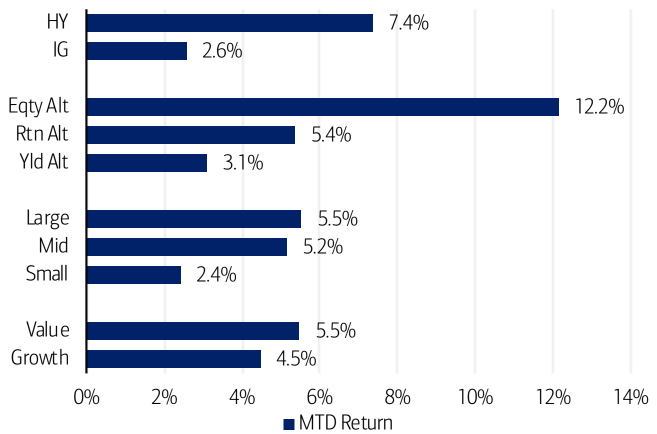
CBs topped fixed-income in broad rally

Risk assets enjoyed a broad-based rally last month as the long-awaited recession remains elusive despite the facts that inflation is still elevated and central bank policy remains tight (and Fed Chair Powell suggested it may further tighten). In fact, after trailing for most of the year, the small cap Russell 2000 index shared in the upside and even outperformed the Nasdaq and the S&P 500, which is important for CBs given the smaller-cap nature of many converts issuers (see Exhibit 34 in our main section). In light of the rally, the ICE BofA Global G300 added 3.3% last month, led by the US's +5.2% return. Europe and Asia realized returns of +1.6% and +2.0%, respectively, while Japan Euro returned +2.5% (Exhibit 1). In the US, high-delta equity alternatives benefited the most from the rally, followed by high yield (Exhibit 3). Sector-wise, materials and consumer discretionary outperformed, though all sectors realized gains (Exhibit 4). On a hedged basis, according to the HFRX CB Arbitrage Index, CBs added 1.7% last month.

Notably, last month's strong performance accounted for about half of the total year-to-date return for global converts. Indeed, Global CBs are now up 6.9% year-to-date, topped by the US's +8.6% (Exhibit 1).

Exhibit 3: US convertible bond performance by bucket
High-delta equity alt names largely outperformed, followed by HY



Source: ICE Data Indices, LLC

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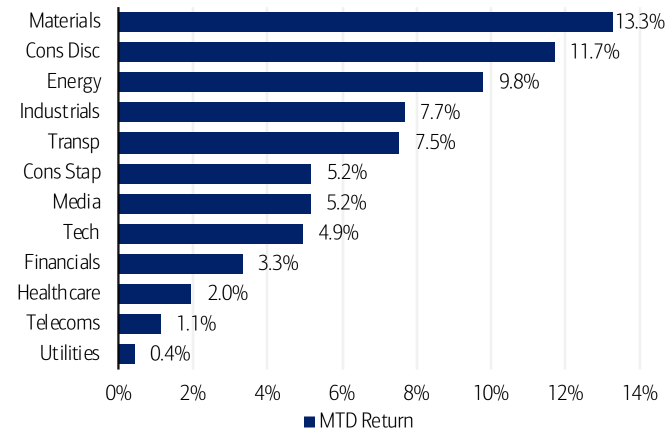
Exhibit 4: US convertible bond performance by sector
Materials and consumer led gains while utilities underperformed



Source: ICE Data Indices, LLC

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Relative to other asset classes, global equities (as represented by the MSCI World Index) were the best performer last month (+5.5%) and rank as the top asset class year-to-date with a +14.4% return on a local currency basis (Exhibit 5). Global CBs ranked second last month (+3.3%), followed by global HY (+1.4%) and IG (less than +0.1%) corporate debt and sovereign debt (-0.4%). Year-to-date, all asset classes we track have seen positive returns, led by global equities and global convertibles (Exhibit 5).

Exhibit 5: Global cross asset returns
Both USD and local currency terms

Asset Class	Code	Jun '23 USD	Jun '23 LOC	YTD USD	YTD LOC
Global Govt Bonds	W0G1	-0.37%	-0.41%	0.47%	1.69%
Global IG Index	G0BC	0.77%	0.03%	3.48%	2.73%
Global HY Index	HW00	1.98%	1.43%	5.27%	4.67%
MSCI World Equity Index	GDUEACWF	5.85%	5.49%	14.26%	14.36%
Global Convertibles (G300)	VG00	3.65%	3.34%	7.03%	6.90%

Source: ICE Data Indices, LLC

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For comprehensive data on returns, including detailed breakouts by structure and sector, heat maps, and single names, please refer to section 1 of the attached Excel Chartbook.

The halftime report

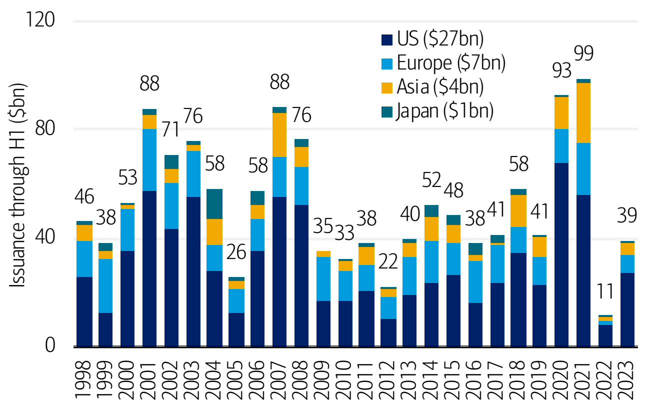
Primary: Lifting our global issuance target to $75-85bn

New issuance volumes logged a solid first half, particularly in the US…

Though perhaps not quite as strong as CB investors had hoped (see our 03-Apr Global Convertibles Chartbook), global convertible bond primary volumes staged a healthy start to 2023. In all, $39bn was priced globally, more than triple the $11bn that came to market in the dismal first half of 2022, led by the US's $27bn (Exhibit 6). The global pace was nearly identical to the average between 2012 and 2019, though needless to say it trailed the record pace experienced during the pandemic era, when close to $100bn priced during the first half of each 2020 and 2021 (Exhibit 7).

Exhibit 6: First half global converts issuance since 1998

Global convertibles issuance totaled about $39bn in the first half, more than triple last year's H1 total, led by the US's $27bn



Source: BofA Global Research. Data as of 30-Jun-2023.

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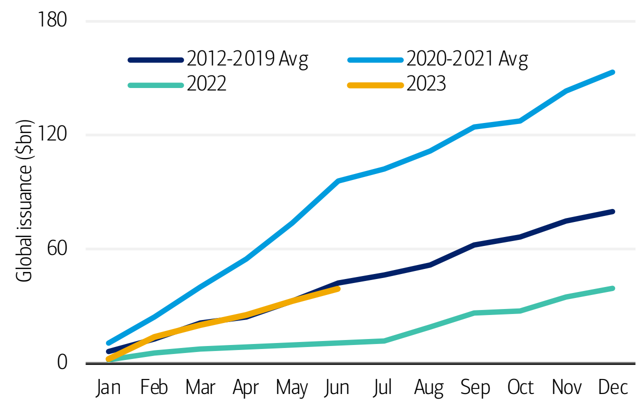
Exhibit 7: Global convertibles issuance cumulative pace

The cumulative pace of global convertibles issuance is in-line with the 2012-2019 average pace, though well below the 2020-2021 average pace



Source: BofA Global Research. Data as of 30-Jun-2023.

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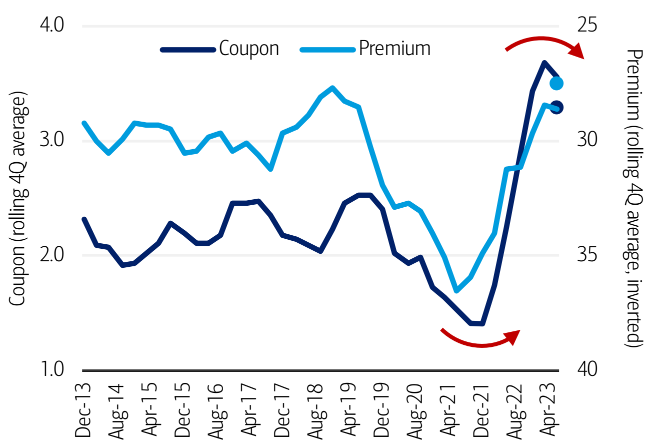
The hallmark features of 2023's new deals are that they've priced at more investor-friendly terms, and they've come from a higher-quality set of issuers than in the pandemic years. Specifically, average coupons well exceeded 3% globally while average premiums collapsed to 27%, versus around 1% and 39%, respectively, in mid-2021 (Exhibit 8). What's more, just 7% of volumes were from young companies (defined as those whose stock has been listed publicly for 3 years or less), and 29% attained an IG credit rating, a record high since 2013, driven mostly by large US utilities (Exhibit 9).

Exhibit 8: Global convertibles average new deal pricing terms

Global CB coupons averaged about 3.3% in the first half, while average initial conversion premiums averaged about 27%



Source: BofA Global Research. Excludes mandatories. Data as of 30-Jun-2023.

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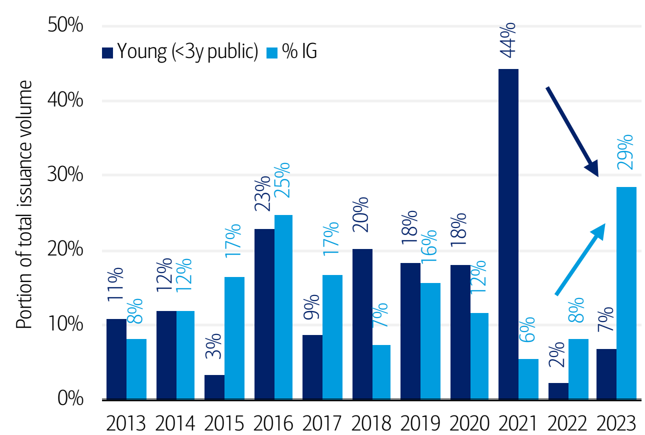
Exhibit 9: Portion of US CB issuance from young and IG issuers

Just 7% of primary volumes in the first half were from young companies (publicly listed for 3y or less), while a record 29% were IG-rated



Source: BofA Global Research. Data as of 30-Jun-2023.

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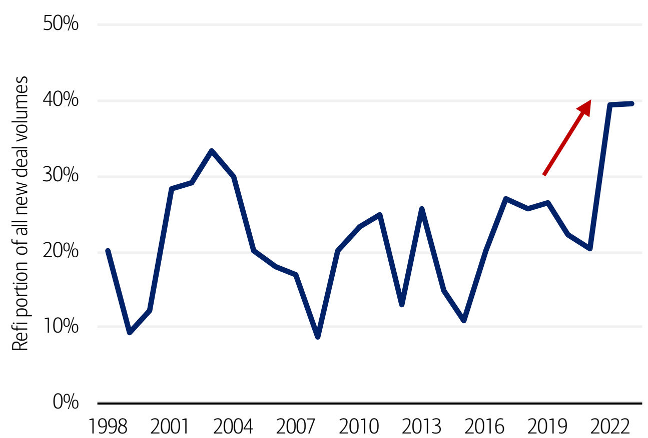
…driven heavily by refinancing activity as opportunistic issuance has dried up

Volumes have been driven overwhelmingly by refinancing activity—indeed, close to 40% of global proceeds year-to-date have been slated for refis, a record since 1998 (Exhibit 10). As we discussed in a recent piece (see our 22-May-2023 Global Convertibles note), companies have been more eager to repurchase and refinance existing CBs to capitalize on their CBs' depressed secondary market pricing (on average, CB prices remain below par) and to preempt the impending maturity wall (more on this later—see Exhibit 15). By the same token, less than 30% of new deals came from first time CB issuers in the first half, in sharp contrast to the period between 2018 and 2021 when numerous rookie issuers came to the space in a more opportunistic fashion (Exhibit 11).

Exhibit 10: Refinancing portion of total new deal proceeds
Year-to-date, convertible bond issuers have slated close to 40% of all new deal proceeds for refinancing, a record since 1998



Source: BofA Global Research. Data as of 30-Jun-2023.

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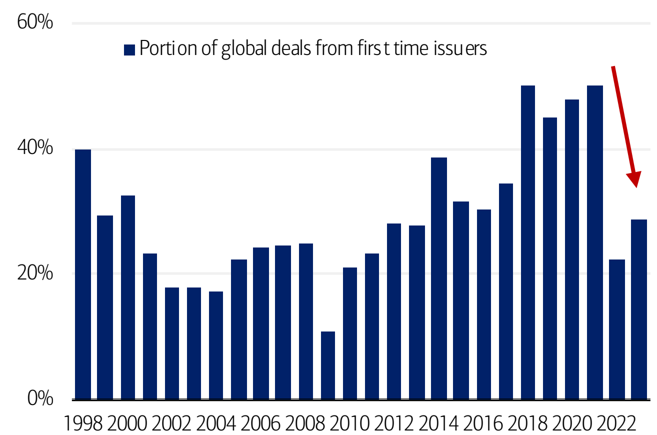
Exhibit 11: Portion of deals from first time issuers of convertibles
Under 30% of new deals were from CB rookies in the first half, in sharp contrast to recent years, as fewer names have come to CBs opportunistically



Source: BofA Global Research. Data as of 30-Jun-2023.

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We slightly revise our global forecast to $75-85bn and US forecast to $50-55bn

In the second half, though we're not calling for an especially large increase, we anticipate the pace of global new supply will pick up modestly relative to what we experienced in the first half. In particular, we now expect to see $75-85bn come to market by year-end, a 7% expansion relative to our initial forecast of $70-80bn, which we proposed in last November's 2023 global convertibles outlook. We think the bulk of the pickup will come from the US (we lift our US forecast from $45-48bn to $50-55bn, a 13% increase), while in contrast, based on cooling tailwinds, we've revised marginally lower both our European ($14-16bn, -9%) and Asian ($9-11bn, -5%) new supply forecasts (Exhibit 12 and Exhibit 13).

Exhibit 12: Global convertibles revised new issuance forecasts
Our new global forecast of $75-85bn suggests a small 7% pickup versus our original forecast

Issuance ($bn)	**US**	**Europe**	**Asia**	**Japan**	**Global**
Original forecast (Nov '22)	45 - 48	15 - 18	9 - 12	1 - 2	70 - 80
Revised forecast (Jul '23)	50 - 55	14 - 16	9 - 11	2 - 3	75 - 85
2023 YTD realized	27.3	6.7	4.3	1.0	39.3
Comparative stats	**US**	**Europe**	**Asia**	**Japan**	**Global**
Current v. original	+13%	-9%	-5%	+67%	+7%
YTD % of revised forecast	52%	45%	43%	41%	49%

Source: BofA Global Research. Data as of 30-Jun-2023.

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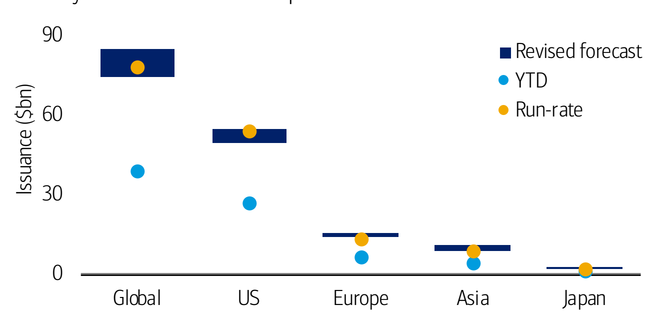
Exhibit 13: 2023 global convertibles issuance forecast versus realized
To reach our new forecasted range, issuance volumes would need to rise just modestly in the second half compared to the first



Source: BofA Global Research. Data as of 30-Jun-2023.

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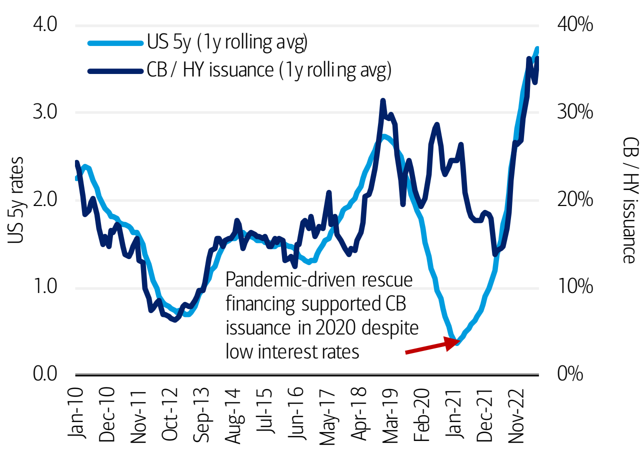
Pace to expand amid higher-for-longer rates paired with the maturity wall…
Our optimism that the global pace will increase slightly in the second half is based on three main points: (1) the looming maturity wall may encourage issuers to seek new capital in CBs relative to traditional credit as interest rates remain higher-for-longer, (2) H1's better-than-expected equity market performance should be supportive and may trigger more opportunistic issuance, and (3) it's becoming harder for issuers to wait out an economic downturn as recession expectations continue to be pushed further out.

Heading into the year, we had written that the surge in financing costs would serve as a relative benefit to the CB primary market as higher costs of capital would force borrowers to seek out cheaper costs—a benefit CBs can provide. Although we have seen this play out (the ratio of US CB to HY issuance rose to over 36% during the past year, a post-Global Financial Crisis record—see Exhibit 14), absolute volumes have remained somewhat depressed across both convertible and non-convertible credit. Why? During the pandemic-era, issuers took advantage of rock-bottom rates to fill their coffers (in global CBs for example, over $300bn priced in 2020 and 2021, the best-ever two-year stretch), and as a result today's financing needs have been relatively low. Therefore, many names have been able to avoid raising new, more expensive capital (nonetheless, as mentioned earlier, refis have been 2023's top use of proceeds—see Exhibit 10).

While elevated interest rates have yet to trigger a mass exodus from higher-cost traditional debt into CBs, we think the looming maturity wall may prove to be the catalyst. Indeed, globally over $630bn of global HY debt will come due in 2025 and 2026 (nearly one-third of the market), and 2025's bonds will start to become current liabilities early next year, suggesting CFOs may be more willing to refinance their obligations despite higher borrowing costs. With rates expected to remain higher-for-longer (see our global rates strategists' mid-year forecast revisions in their 16-Jun Global Rates Weekly), we expect there will be demand for less expensive capital—a need CBs can meet.

What's more, more than half of outstanding global CBs are also set to retire in 2025 and 2026 (almost $190bn) and will also "go current" starting next year (Exhibit 15). Much of this likely will need to be refinanced as well as embedded warrants remain far out-of-the-money, on average (indicating few will be converted to shares), and issuers may wish to refi sooner rather than later to lock-in better pricing (see a detailed discussion in our 22-May-2023 Global Convertibles note). While we still expect CFOs sitting on zero or low coupon debt will hold off as long as they can, the approaching maturity walls in both CBs and HY should, regardless, put upward pressure on CB new issuance later in 2023.

Exhibit 14: CB v. HY issuance with respect to interest rates
Historically, CB issuance rises versus HY issuance during periods when borrowing costs are elevated



Source: BofA Global Research, Bloomberg. Data as of 30-Jun-2023.

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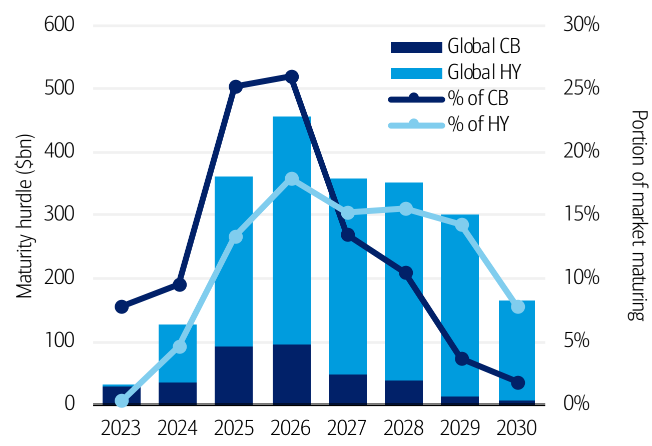
Exhibit 15: Global convertibles and high yield maturity hurdles
The majority of the converts market and a sizable portion of the high yield market are set to mature in 2025 and 2026



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.

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...while higher stock prices and easing recession concerns may provide support

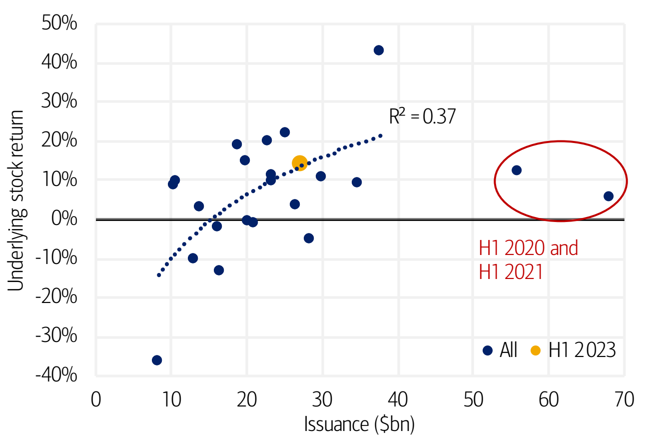
Besides the maturity hurdle and interest rate backdrop, we also think that H1's improved stock market performance will be supportive of the CB issuance pace in the second half. Indeed, US CB underlying stocks have added more than 16% year-to-date (+13% alone since the end of April), and our equity strategists think the new bull market may have legs—they noted that since the 1950s, after crossing the +20% mark from the bottom, the S&P 500 continued to rise over the next 12 months 92% of the time (see their 09-Jun note Bye bye, bear). They've also lifted their S&P 500 target mostly due to improved investor sentiment, valuation, and price momentum (see their 21-May S&P 500 Target Update note). However, the S&P has already exceeded their new target (4,300 by year-end), suggesting further upside may be somewhat limited from here.

Regardless, we've found that in the past, US CB new issuance has been closely-tied to the performance of its underlying stocks as issuers are able to command better terms and are more willing to tap their equity after their stocks have rallied, while the opposite holds true in downward trending markets (Exhibit 16). In fact, though CB issuer stock performance has improved meaningfully in May and June, it was much more volatile from February through April (then, CB stocks realized a loss of more than 10%), which we think weighed on total volumes in the first half—see our 03-Apr Global Convertibles Chartbook for a more detailed discussion. Not only is improved equity performance we've realized year-to-date supportive of total primary market volumes, but also it is suggestive of more opportunistic new supply, and it may ease company management concerns about the negative market impact of a new CB on the issuer's share price. Nonetheless, we expect refis will persist as the leading driver of volumes.

Finally, we think that issuers who were sitting on their hands waiting to see the outcome of banks crisis and the debt ceiling standoff and who expected to see a recession in the first half now may be incentivized to act sooner rather than later. Indeed, recession expectations continue to ease, and they've been pushed further out in the future, making it more difficult for would-be borrowers to delay new financing until we're on the other side of an economic downturn or until interest rates decline. Specifically, in a recent note (see their 15-June Global Economic Weekly), our BofA economists said they currently do not expect a recession until Q1 2024, and they expect the US real GDP to contract only 1%, as the economy has proved more resilient than they initially anticipated and labor supply has rebounded. Previously, they saw a sharper recession (peaking with a 2% GDP contraction) starting in the second half of 2023 (Exhibit 17).

Exhibit 16: US CB issuance v. underlying stock performance by half

Historically, convertible bond issuance is better during periods of strong CB underlying issuer performance



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023. Dots represent halves since H1 2012. Trendline excludes pandemic-era outliers.

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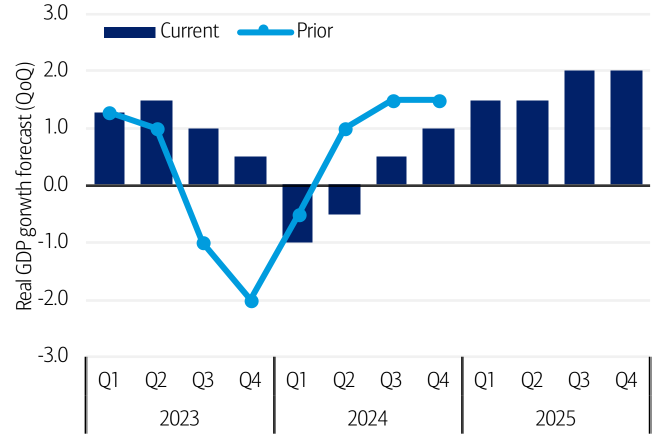
Exhibit 17: BofA economists' real GDP growth forecasts

Our economists have both pushed out and softened their expectations for the slowdown in economic activity



Source: BEA, Haver Analytics, BofA Global Research Note: 1Q 23 reflects the BEA's second estimate of 1Q 23 real GDP growth.

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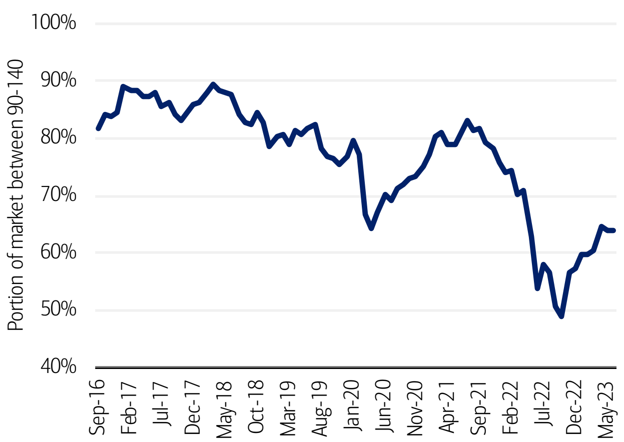
As Europe's outperformance trend has faded, we expect issuance may cool

The pace of European CB issuance started off strong as a number of sizable deals priced during February and March (Rheinmetall, Delivery Hero, and Wendel stand out). However, the pace has slowed, and as of the end of H1, just $6.7bn has come to market (that's the worst first half on record except for only last year, when just over $1bn priced).

Heading into the year, we had hoped the dearth of crucially important index-eligible "balanced" paper in the European CB market would entice issuers, who would be able to capitalize on strong demand for new deals (see our 2023 global convertibles outlook). Additionally, we expected that European CBs would see relatively attractive performance compared to their US counterparts (a theme underscored by CB investor sentiment in Q1—see our February 2023 Global Convertibles Investor Survey), which we took to be supportive of the region's CB primary market. Though both trends persisted for some time during the first half of 2023, recently these trends have been fading. Specifically, the portion of "balanced" paper (priced at 90-140) in the European space has climbed to 64%, still low versus history though well off the nadir of sub-50% (Exhibit 18). On returns, after being up by about 6% at the end of April, European converts now trail US CBs by about 3.5% on a rolling 6-month basis (Exhibit 19). Marking-to-market for the first half's disappointing volumes and the dwindling tailwinds, we've revised lower our European issuance forecast to $14-16bn, a 9% cut versus our original target (Exhibit 12).

Exhibit 18: Balanced portion of European CB market
The portion of "balanced" paper in Europe has increased to about 64%, but remains well below the historical average



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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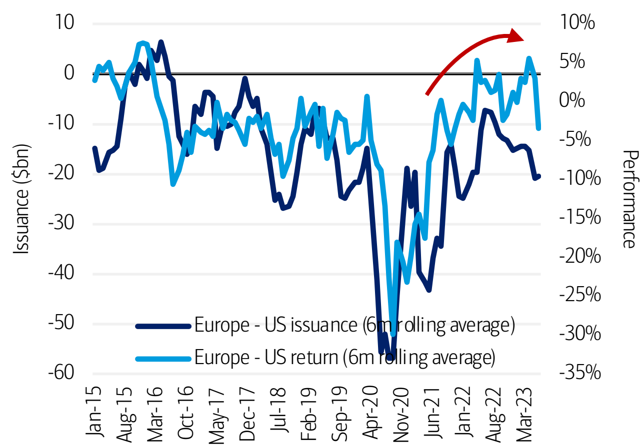
Exhibit 19: Europe versus US CB issuance and performance
As the European outperformance trend has begun to fade, we expect the pace of European CB issuance will slow



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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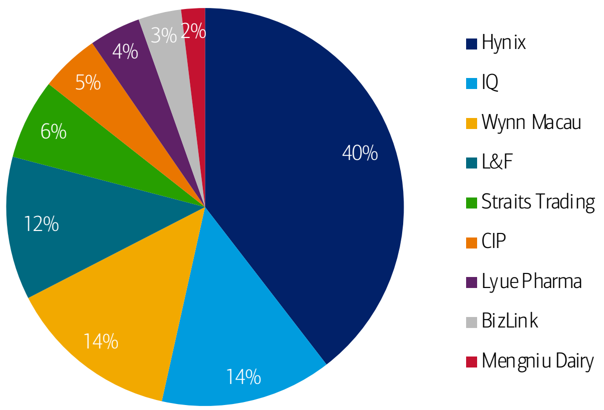
Asia issuance lower as China's recovery disappoints and ADRs are not refi'ed

Asia has seen $4.3bn of convertible new issuance year-to-date. While about double the amount we saw though June last year, the total is heavily single-name driven—indeed, Korean chipmaker SK Hynix launched a $1.7bn offering, Asia's largest since Sea Ltd's $2.9bn deal from September 2021, comprising about 40% of the region's year-to-date volume (Exhibit 20).

In our year ahead (2023 global convertibles outlook), we wrote that the Asia primary market would benefit in 2023 from improved performance in underlying equities (given the China reopening story and cooling ADR regulatory concerns) and the wave of ADR puts set to occur throughout the year, sparking refinancing. However, the China post-reopening recovery has been weaker than expected (see our economist's 16-Jun Asia Economic Weekly), and though a number of ADRs have been put so far (Bilibili, Joyy, and Hello totaling $1.5bn), they have not been refinanced in the CB space. In fact, just one ADR came to market in H1 (IQ's $600mn 6.5% '28s), comprising just 14% of total Asia volume—the lowest ADR portion since 2018 (Exhibit 21). This considered, we've revised our Asian issuance forecast to $9-11bn by year-end, a small 5% target cut (Exhibit 12).

Exhibit 20: Asia CB new supply breakdown by issuer
SK Hynix's $1.7bn offering has made up about 40% of Asia's total primary market volumes year-to-date



Source: BofA Global Research. Data as of 30-Jun-2023.

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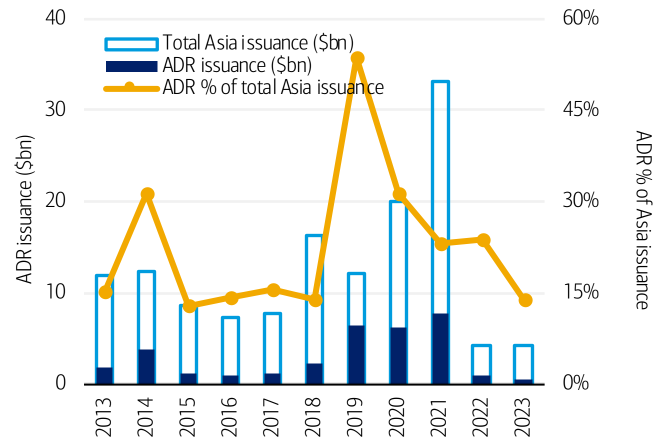
Exhibit 21: ADR portion of Asia total convertibles issuance
ADRs have comprised just 14% of Asia's $4.3bn of convertibles issuance year-to-date, the lowest portion since 2018



Source: BofA Global Research. Data as of 30-Jun-2023.

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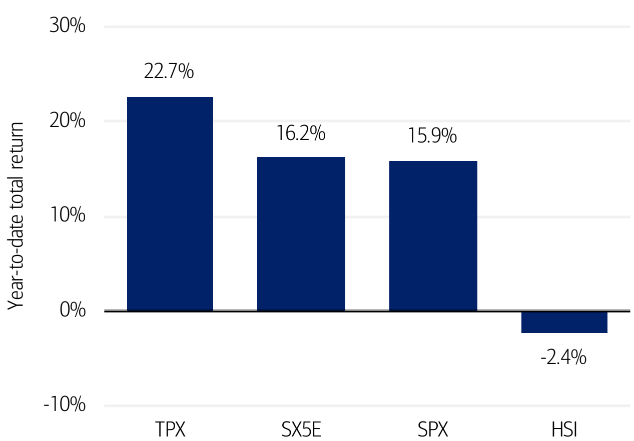
Japan's issuance remains inconsequential, but equity rally may be a tailwind

Though Japan's primary market continues to be just a fraction of the global space (year-to-date, Japanese CB issuance has totaled slightly over $1bn, under 3% of the full global volume), the recent rally in Japan shares has been an issuance tailwind. Indeed, Japanese shares have moved sharply upward year-to-date (Topix +23% year-to-date) as low equity valuations have re-rated higher, inflation has strengthened, corporate earnings have improved, and tourism in the region has picked up (Exhibit 22). Alongside this rally, Japan CB issuance has shown signs of life—June saw almost $800mn in new supply, the best month since November 2021 (Exhibit 23), driven by the region's largest deal in over 18 months (Tokyu Corp's ¥60bn, or $430mn, two-tranche offering). Our Japan equity strategists think the rally could persist over the next few months (see their 22-Jun Japan Equity Strategy note), and as such we think this may help sustain the modest boost in Japanese CB primary. This in mind, we've slightly lifted our Japanese issuance target to $2-3bn by year-end, up from $1-2bn (Exhibit 12).

Exhibit 22: Global broad-market equity performance year-to-date
Japan's Topix index (TPX) has rallied almost 23% year-to-date, ahead of other regional broad-market equity indices



Source: Bloomberg. Data as of 30-Jun-2023.

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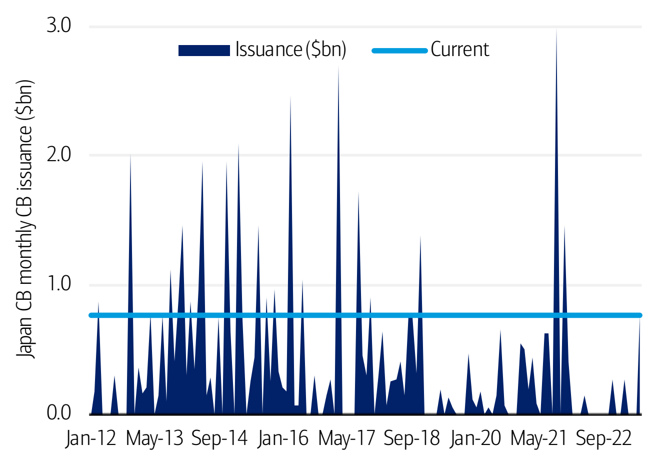
Exhibit 23: Japan CB monthly issuance volumes
Japan priced nearly $800mn of new CBs in June, the best month for new supply since November 2021



Source: BofA Global Research. Data as of 30-Jun-2023.

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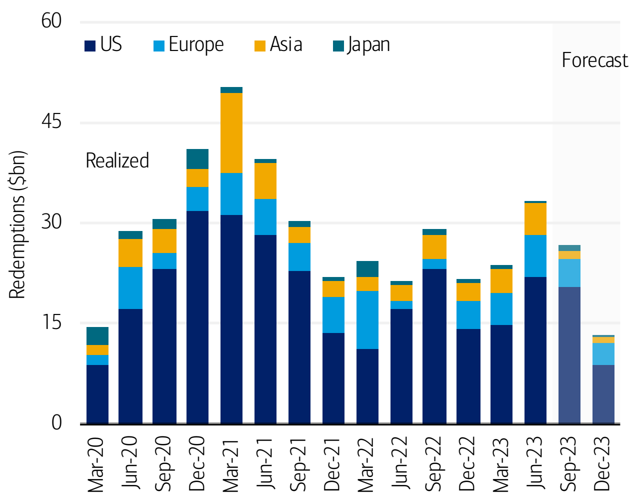
Net new supply is negative, though less severe than 2022's net-contraction

During the first half of the year, global redemptions from the convertibles market have totaled about $57bn due to conversions to stock, maturities, calls, puts, partial repurchases, and defaults (Exhibit 24). The bulk of the redemptions were from a number of large maturities and mandatory conversions, including those of the Danaher mandos, NextEra mandos, T-Mobile US mandos, to name a few. However, other notable redemptions were due to company buy-backs, exchanges, and tenders (EDF and IQ), calls (Silicon Labs), and M&A activity (Coupa Software and Oak Street Health). A month ago, we discussed the landscape for early CB redemptions in depth (see our 22-May-2023 Global Convertibles note). The year-to-date redemption activity plus our estimates for redemptions in the second half (about $39bn) puts us right in-line with our call for $85-100bn of redemptions globally by year-end (Exhibit 24).

On a net basis, the $57bn in redemptions has more than offset H1's issuance for a net contraction of around $18bn. Though a fairly sizable net-decline, this remains meaningfully lower than 2022's net-contraction of over $57bn, the worst since 2005 (Exhibit 25). Our new issuance forecast ($75-85bn globally) portends roughly $40bn of new supply in H2, a bit more than our $39bn redemptions forecast—suggesting essentially net-flat to very modest net-expansion in the second half.

Exhibit 24: Global CB redemptions history and H2 2023 forecast

Realized redemptions total about $57bn year-to-date, and we're expecting $39bn in H2, bringing us in range of our $85-100bn forecast



Source: BofA Global Research. Data as of 30-Jun-2023.

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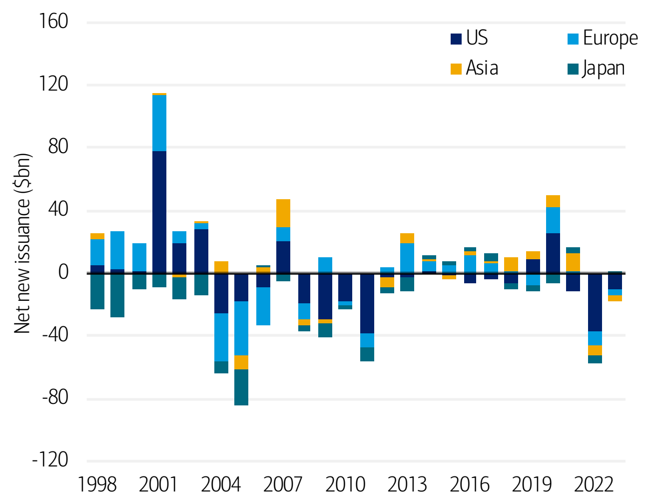
Exhibit 25: Global convertibles net new supply history

Net new supply is about -$18bn globally so far in 2022 as redemptions have more than offset the new issuance



Source: BofA Global Research. Data as of 30-Jun-2023.

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H1 2023 primary appendix: issuance breakdowns, sectors, and proceeds

Please refer to the exhibits below for the aggregate details of 2022's new issuance (Exhibit 26), new issuance by sector (Exhibit 27), and use of proceeds trends (Exhibit 28).

Exhibit 26: Global new issuance breakdown ($mn)

The majority of 2023's new supply is not rated by credit ratings agencies (though 28% is IG), unsecured, non-mandatory, and from large cap issuers

		Rating			Seniority				Mandatory		Company Size			144a	
Region	**Total**	**IG**	**HY**	**NR**	**Secured**	**Unsecured**	**Sub**	**Preferred**	**N**	**Y**	**Small Cap**	**Mid Cap**	**Large Cap**	**N**	**Y**
US	27,252	8,758	381	18,114	639	26,613	0	0	27,252	0	1,984	6,392	18,876	1,209	26,043
Europe	6,709	534	0	6,174	27	6,682	0	0	6,709	0	116	1,412	5,181	6,709	0
Asia	4,300	1,906	0	2,394	281	4,019	0	0	4,300	0	83	536	3,681	3,700	600
Japan	1,033	0	0	1,033	0	1,033	0	0	1,033	0	0	603	430	1,033	0
Global	39,294	11,198	381	27,715	946	38,347	0	0	39,294	0	2,182	8,942	28,169	12,650	26,643
% of Total	100%	28%	1%	71%	2%	98%	0%	0%	100%	0%	6%	23%	72%	32%	68%

Source: BofA Global Research. Data as of 30-Jun-2023.

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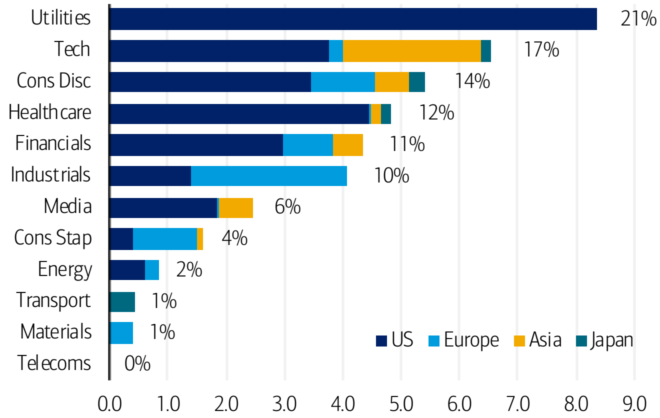
Exhibit 27: Global new issuance by sector ($mn)
Utilities and tech are 2023's top primary market sectors



Source: BofA Global Research. Data as of 30-Jun-2023.

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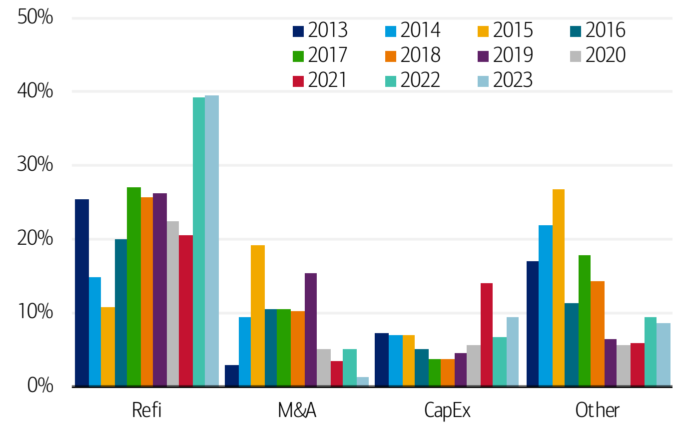
Exhibit 28: Global use of proceeds historical comparison ($mn)
Excluding general corporate purposes, refi is the top use of proceeds to-date



Source: BofA Global Research. Data as of 30-Jun-2023.

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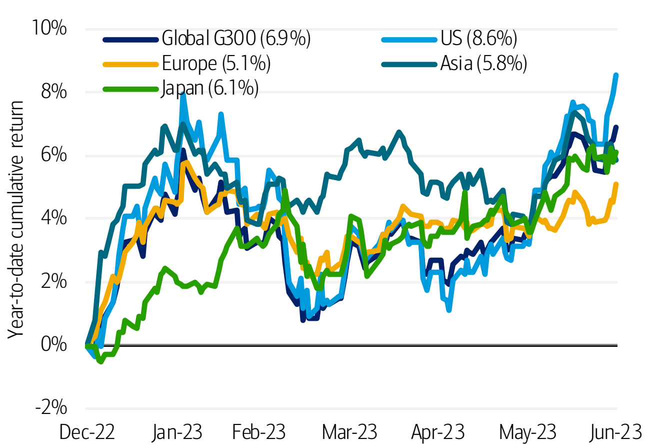
Secondary: H2 performance to be more modest than H1's

Though leadership has wavered, global CBs have gained on economic resilience

It's been a bit of a bumpy ride, but converts globally logged gains in the first half (G300 +6.9%), led by the US (+8.6%). However, regional leadership shuffled regularly throughout H1 (Exhibit 29). After surging in January, US converts dragged compared to their European and Asian counterparts (indeed, the "world over the US" theme was prominent early in the year), though since May, US names have outperformed, powered by the resilience of the US economy (the impact of much higher rates has yet to make a notable dent in economic activity), better-than-feared corporate earnings, light investor positioning, and the rally in tech (more on this below—see Exhibit 31). Notably, though Asian CBs led for much of the first half on the China reopening story, their performance stalled as China's recovery has proved weaker than anticipated, prompting new policy cuts and weaker growth expectations (see our economist's 15-Jun China Watch).

Relative to other asset classes, CBs have trailed only stocks, while they've led both corporate and government bonds (Exhibit 30). Though many had expected bonds would lead stocks in 2023 amid a recession and peaking interest rates, the economic resilience we've experienced in the first half has proved otherwise—at least for now (Exhibit 30).

Exhibit 29: Convertible bond year-to-date cumulative performance
Converts across regions have rebounded year-to-date, though leadership has shuffled considerably throughout the first half



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.

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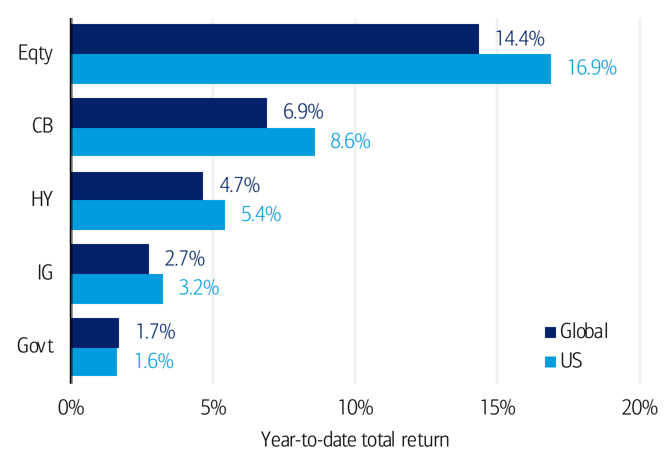
Exhibit 30: Global and US cross-asset year-to-date performance
On a cross-asset basis, only stocks have outperformed both global and US convertible bonds



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.

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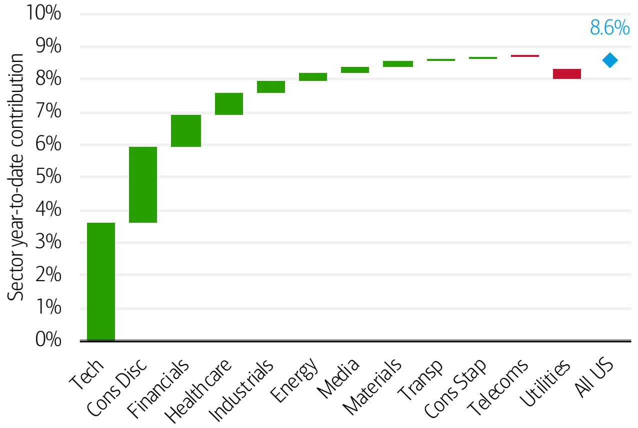
The rally in tech and recovery in cruise lines has powered CB returns…

Under the hood, it is evident that a handful of sectors have driven the CB market gains—namely tech (mostly software and semis) and consumer (in particular cruise lines and online retailers). In fact, tech and consumer discretionary alone have comprised about 5.9% of the full US market's 8.6% year-to-date gain, while in contrast utilities have had a -33bps contribution to top-line returns (Exhibit 31). At the single name level, global performance has been fairly concentrated as the top 10 names have accounted for about 40% of all gains, but still the current concentration is not nearly as significant as we've seen at times in the past (in 2020, for example, Tesla's three tranches alone made up over 40% of the US market's historic rally). Among the top global contributors year-to-date are the CBs from Palo Alto Networks, Wayfair, and Royal Caribbean, while leading negative contributors are those from DISH Networks, Wolfspeed, and Etsy (Exhibit 32).

Exhibit 31: US convertible bond sector contribution year-to-date

Higher-growth sectors, including tech and consumer discretionary, have been the leading contributors to the year-to-date rally



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.

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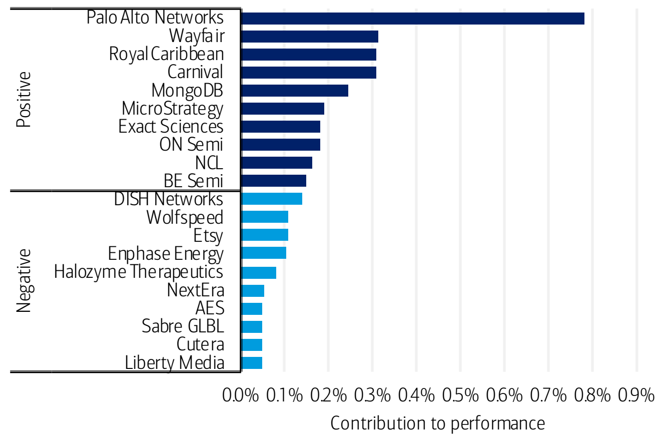
Exhibit 32: Top and bottom contributors to global CB performance

Global CB performance has been moderately concentrated as the top 10 names (mostly tech and cruise lines) have comprised 40% of the gain



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.

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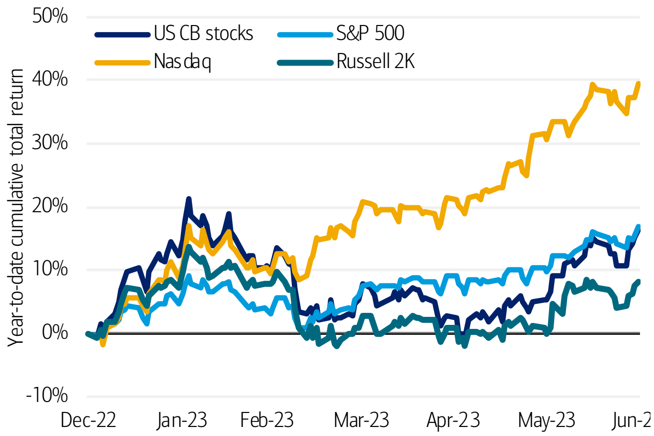
…though absent mega-cap tech, they still trail broad market equities

With tech the leading driver of both equity market and CB performance, we're regularly asked why CBs, a notoriously tech-heavy market, have not captured more of the equity upside year-to-date. The answer lies with the facts that (1) the CB space lacks the outperforming mega-cap tech issuers, (2) is overweight underperforming small cap names, and (3) currently has a low average delta relative to history.

Comparing US equity index performance to US CB underlying stock returns (to strip out structure differences and present a more direct comparison) illustrates that the Nasdaq and S&P 500 have topped CB issuer stocks in 2023—Nasdaq in particular (Exhibit 33). Indeed, both stock indices have heavy concentrations in the mega-cap tech names that have propelled equities skyward (AAPL, META, AMZN, MSFT, NVDA, GOOG, and TSLA make up over one-quarter of the S&P and over one-half of the Nasdaq), whereas there are currently no CBs outstanding from any of these issuers.

What's more, CB issuers tend to be smaller cap names (the median equity market cap of US issuers is around $3bn versus the S&P's $30bn), which have trailed the broader space—indeed, the Russell 2000 index has added just 8.1% year-to-date (Exhibit 33). Heading into the year, we had expected small caps would lead an equity rebound in 2023, to the benefit of CB issuers, amid a period of slower growth and higher inflation (see our 2023 global convertibles outlook). However, this has so far failed to play out as economic activity has proved to be more resilient than we had anticipated, and mega-cap tech got a boost from the AI boom. Nonetheless, small caps had begun to catch up in June (see our strategists' 16-Jun Small/Mid Cap Strategy note), and as a result the gap between CB underlying stock and S&P 500 performance has been narrowing (Exhibit 34).

Exhibit 33: CB underlying equity versus broad market stock returns
Year-to-date, US CB stocks have trailed most major broad market equity indices, particularly the Nasdaq, which is heavily overweight mega-cap tech



Source: BofA Global Research, ICE Data Indices, LLC, Bloomberg. Data as of 30-Jun-2023.
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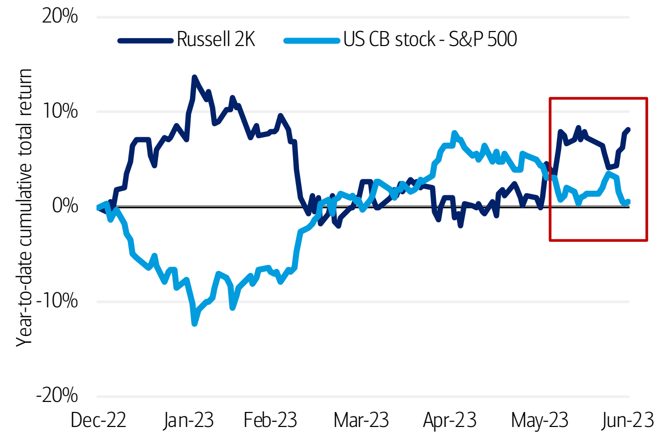
Exhibit 34: CB underlying equity - S&P 500 versus Russell 2K returns
Since small cap stocks had begun to play catch up, the gap between US CB issuer and S&P 500 performance has meaningfully narrowed



Source: BofA Global Research, ICE Data Indices, LLC, Bloomberg. Data as of 30-Jun-2023.
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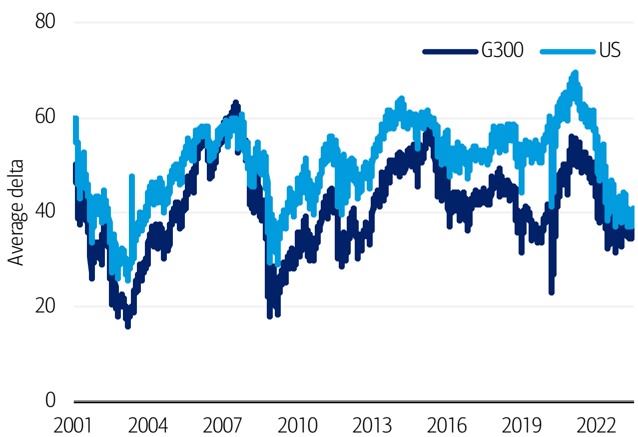
What's more, a byproduct of last year's dramatic selloff in 2021's aggressively priced deals, today's CB market trades much closer to bond levels, and as a result average deltas are low versus history (Exhibit 35). In particular, the US CB market average delta is now just 41, in its 15th percentile since 2001, though other regions are closer to historical medians (Exhibit 36). This relative lack of equity sensitivity has also made it more challenging for CB outright performance to keep pace with the rally in stocks.

Exhibit 35: Global G300 CB and US CB average delta history
CB market deltas have declined significantly since the pandemic-era bubble has deflated



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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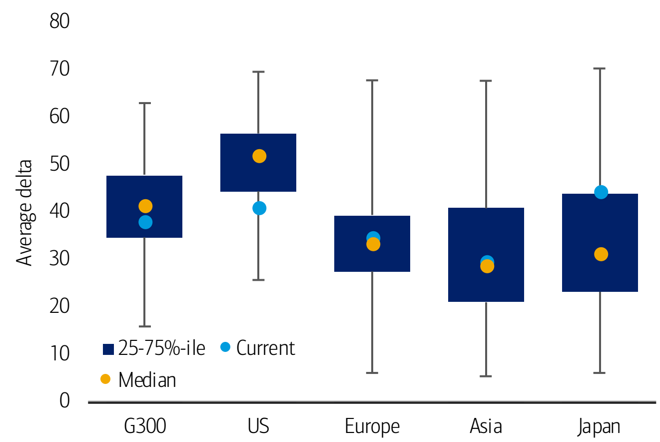
Exhibit 36: CB average delta distributions since 2001 by region
Globally, CB average deltas remain low versus history, driven heavily by the US, whose average delta is now just 41, in its 15th percentile since 2001



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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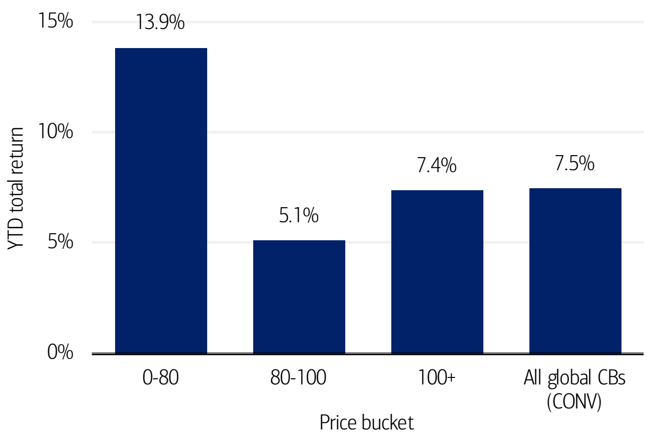
Busted, too, has outperformed, though watch for rising defaults

In our year ahead, we had also discussed our view that busted CBs (those whose embedded options are so deep out-of-the-money that they trade like pure bond instruments) offered investors value opportunities as the majority of issuers had clean balance sheets with little other debt, allowing investors to chase significant yield at a relative discount (see our 2023 global convertibles outlook). Indeed, participating in busted CBs has proved fruitful year-to-date as global names trading below 80 cents on the dollar have outperformed their counterparts in the first half (Exhibit 37), fueled by crypto-linked names (MSTR, MARA, and COIN), pharma companies (BBIO), and fintech (AFRM, OPEN, and RDFN).

While busted names remain compelling amid rebounding shares and both buyback and buyout potential (more on this below), we caution that defaults have been rising, and we expect to see more in the second half. In fact, our trailing 12-month global convertible bond issuer default rate has climbed to 3% (the US rate is now over 2%) as we've seen more frequent missed interest payments and bankruptcies, including those from Invacare, Avaya, and Lannett, for example (Exhibit 38). According to our BofA Global Research Convertibles Default Rate Framework (which we introduced in January—refer to our 25-Jan Global Convertibles Quick Note), we expect the US CB default rate may continue to increase to about 4% over the next 6 months—aligned with previous cycle highs. This considered, we think it's likely that busted CB's leadership over the broader market will fade in the second half unless busted CB buybacks and buyouts are more active than our expectations.

Exhibit 37: All global CB year-to-date performance by price bucket
Busted CBs, defined here as trading below 80 cents on the dollar, have outperformed the broader global CB market year-to-date



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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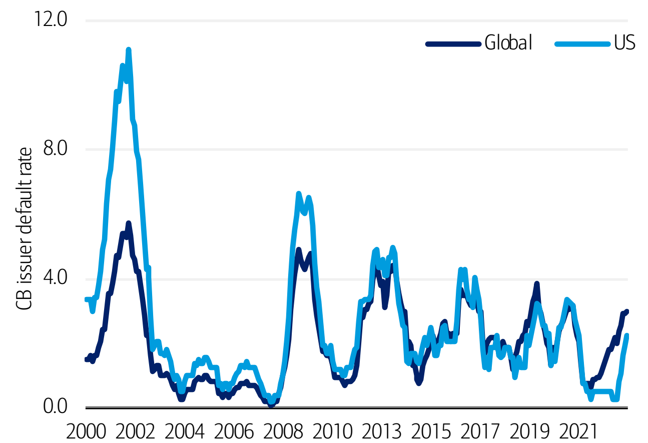
Exhibit 38: Global and US CB issuer default rates
CB issuer defaults have continued to rise (the last 12-months global issuer default rate has risen to 3%), and we expect to see more in the second half



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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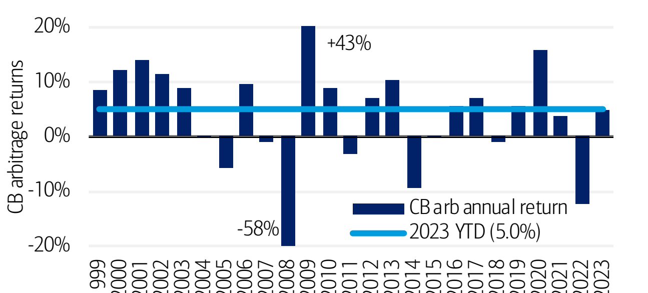
Convertible arbitrage has rebounded on credit and primary activity

Similar to owning converts outright, holding converts on a delta-hedged basis has also yielded better returns year-to-date than last year. According to data from Hedge Fund Research (HFR), convertible arbitrage has added 5.0% so far in 2023, a marked turnaround from last year's 12.5% loss, the weakest year since the Global Financial Crisis (Exhibit 39). Perhaps more notably, HFR data suggests that CB arb has logged the best returns relative to other popular fund strategies, also a significant departure from last year, when CB arb funds struggled versus their hedge fund peers (Exhibit 40).

Exhibit 39: Convertible arbitrage annual performance
CB arb has returned +5.0% year-to-date, just modest versus history but a striking turnaround from last year's 12.5% decline



Source: Hedge Fund Research, Inc. Data as of 30-Jun-2023.
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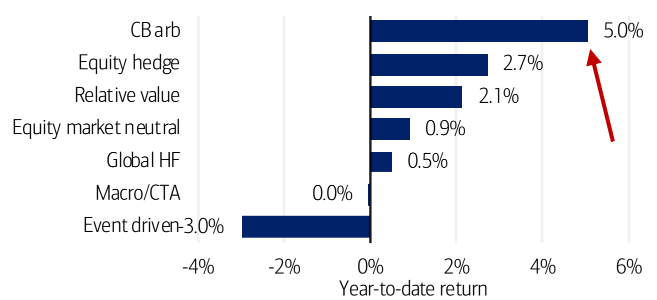
Exhibit 40: Hedge fund strategy performance year-to-date
According to data from Hedge Fund Research (HFR), CB arb has outperformed other popular hedge fund strategies year-to-date



Source: Hedge Fund Research, Inc. Data as of 30-Jun-2023.
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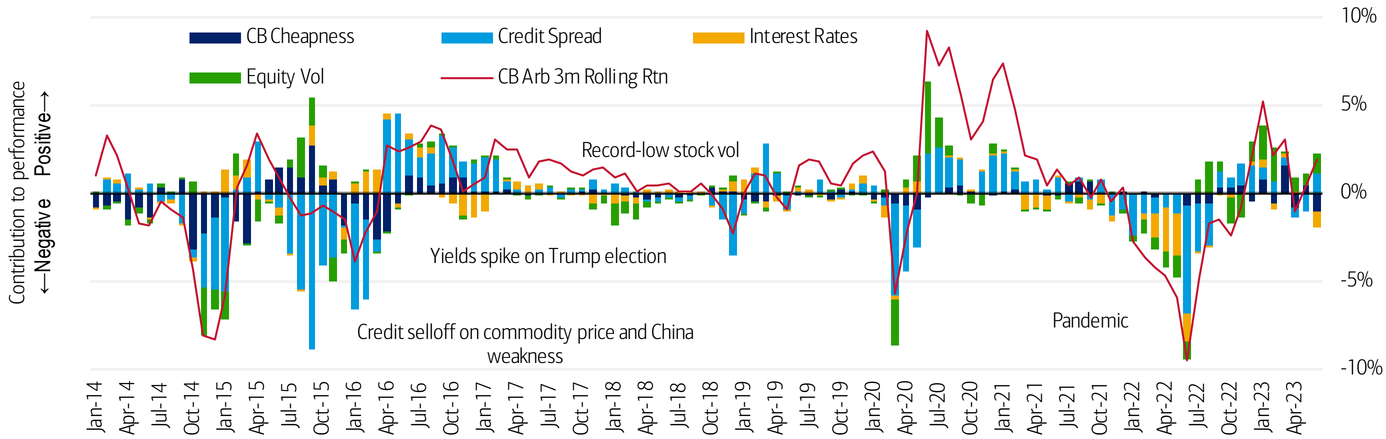
What's driven the turnaround in CB arb? We think that the improved credit market backdrop (HY spreads have tightened about 75bps since the start of the year and almost 150bps since the start of Q4 2022) and equity vol environment are among the top contributors (Exhibit 41). Furthermore, as we discussed in our [Convertible Arbitrage Primer](), the strategy also benefits from an active convertible bond primary market as funds profit from the embedded cheapness in new deals and the technical trading opportunities that arise as holders frequently rebalance their portfolios to participate in the new names. This considered, we think this year's improved primary market has also aided in CB arb's positive year-to-date return.

Exhibit 41: Drivers of convertible arbitrage performance historically

CB arb's pickup in performance have been driven mainly by credit spreads and stock vol, though we also think improved issuance has played a role



Source: BofA Global Research, Hedge Fund Research, Inc, ICE Data Indices, LLC. Data as of 30-Jun-2023. Unexplained factors that drive performance are excluded. Factors are displayed on a 3m rolling average basis. We use SPX 1m realized vol, HY OAS, and US 10y rates.

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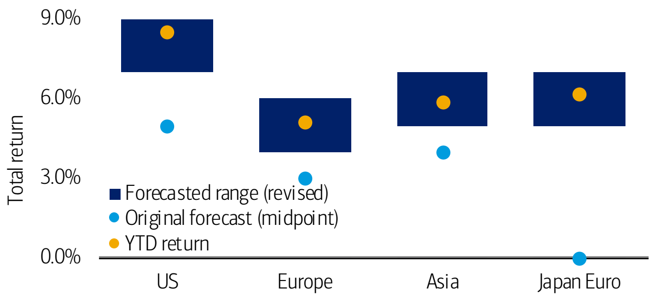
Marking-to-market and bearing our H2 outlook, we've lifted our forecasts

Heading into 2023, we expected global converts performance would be positive, yet modest, given the elevated likelihood of an economic downturn, risks surrounding inflation and central bank policy, and potential for more credit events (see our [2023 global convertibles outlook]()). However, the magnitude of the gains has been better than we anticipated, driven by the economy's resilience, tech/AI boom, and light positioning. Marking-to-market for H1's rally and considering our thoughts for H2 (discussed below), we've revised our return forecasts higher across regions. Specifically, we're now calling for 7-9% total returns for US CBs, while we expect 4-6%, 5-7%, and 5-7% for European, Asian, and Japanese CBs, respectively (Exhibit 42). These forecasts generally suggest a slower second half following H1's better-than-expected performance.

To help develop these forecasts, we employed several methods—two with a fundamental focus, and one with a technical focus. Our first methodology uses a traditional top-down factor framework. As inputs, we use our BofA strategists' 2023 forecasts for equity, credit spreads, and rates, and we compare these against convert returns by region. Next, we look at a market value weighted delta-adjusted return based on our BofA equity analysts' twelve-month stock price forecasts of the underlying equities of the constituents in each region. We find this bottom-up approach typically offers more optimistic forecasts than the factor framework provides, and we discount it somewhat relative to the factor framework. Finally, we use a more technical approach based on mean reversion of the ICE BofA indices. Specifically, we forecast future returns by determining the number of standard deviations (z-score) the current twelve-month return is away from the historical average. Note that we put the least amount of weight on this last method as it ignores the macro backdrop (Exhibit 43). Please keep in mind that we use these frameworks as guidelines, and we determine our final forecasts using not only the quantitative approaches discussed here, but also our fundamental opinions based on our outlook.

Exhibit 42: CB revised versus original total return forecasts
Despite our expectations for a modest second half, we've revised up our CB total return forecasts to mark-to-market for H1's rally



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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Exhibit 43: Convertible bond revised total return forecasts
Our final forecast blends the outputs of the three approaches and reflects our fundamental opinions for each region

		H2 2023 Estimates			
Region	**YTD**	**Delta Adjusted**	**Macro Factor**	**Momentum**	**2023 YE Forecast**
US	8.6%	2.0%	1.0%	2.8%	7 - 9%
Europe	5.1%	1.9%	-0.2%	1.2%	4 - 6%
Asia	5.8%	2.0%	NA	4.6%	5 - 7%
Japan Euro	6.1%	-1.9%	1.7%	-1.7%	5 - 7%

Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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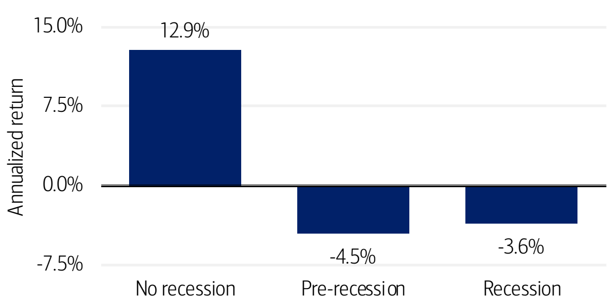
Second half returns to be more modest as risks are skewed to the downside…

Our view that global CB returns will cool in the second half relative to the first is based primarily on our belief that while easing concerns about a deep recession may provide support, the period before recessions has historically been the weakest for CB performance, and valuations (especially in tech names and HY bonds) are beginning to look stretched. To us, this suggests risks to performance may be to the downside in the next 6 months.

As we discussed previously, our BofA economists have pushed out and softened their recession expectations, and they now expect a shallower recession to begin in Q1 2024 versus their original call for a deeper downturn beginning in Q3 2023 (see Exhibit 17 and their 15-June Global Economic Weekly). Though a narrower recession would be supportive of risk-asset performance (relative to a larger recession), we caution that historical data since 1985 illustrates that CB average returns have been weakest in the 6-month periods leading up to recessions, as defined by Federal Reserve (Exhibit 44). This is consistent with our previous findings on convertible performance during the various phases of the business cycle (see our 2023 global convertibles outlook).

What's more, our macro strategists have cautioned that certain pockets of the market, including tech stocks and HY bonds (which are both closely tied to CBs), are looking bubbly amid investor crowding and stretched valuations, suggesting more room for downside than upside (see the 22-June Flow Show). Indeed, both stock and HY bond returns have been concentrated in just a handful of names, and the yields offered by HY bonds hasn't been this low relative to that of US Treasuries since before the pandemic (Exhibit 45). While these stats do not suggest that further upside is impossible, we think the case for downside in these key markets for CBs seems more likely at this juncture.

Exhibit 44: US CB performance with respect to recessions
Based on data since 1985, convertible bonds have realized their weakest average annualized performance in the 6 months before a recession



Source: BofA Global Research, ICE Data Indices, LLC, FRED. Data as of 30-Jun-2023. Based on annualized average monthly performance. Excludes mandatories.
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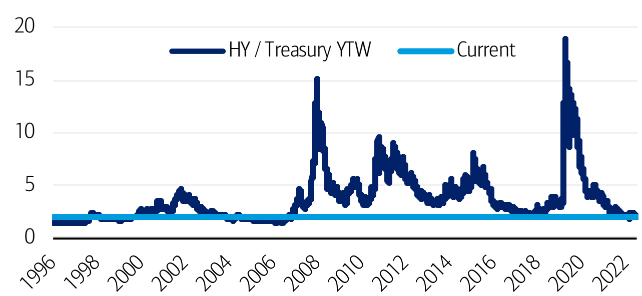
Exhibit 45: Ratio of HY bond versus US treasury YTW
The ratio of HY YTW versus Treasury bond YTW has not been this low since before the pandemic



Source: ICE Data Indices, LLC. Data as of 30-Jun-2023.
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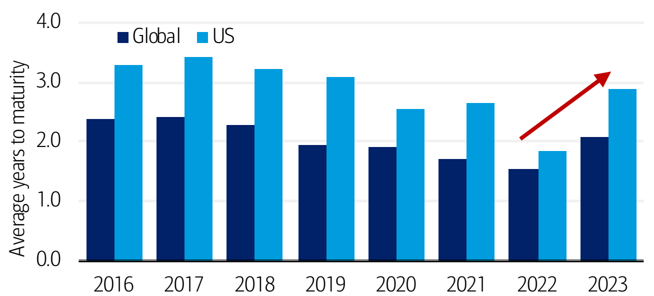
...though, elevated buybacks and buyouts may provide technical support

Although historical performance trends and lofty valuations indicate that second half performance may be more muted than what we saw in H1, we think that the increase in buyback and buyout activity we've witnessed in 2023 can provide technical support to CB performance. Indeed, as we discussed a few weeks ago (see our [22-May-2023 Global Convertibles note]), we've found that issuers have been opting to fully redeem more of their CBs early as prices remain low (globally, CB average prices remain just below par) and look to avoid their debt "going current" with the maturity wall quickly approaching (see Exhibit 15 from earlier). Specifically, of converts that have been fully redeemed, their average years until their stated maturity has risen to 2.1 globally and 2.9 in the US, near multi-year highs, suggesting that CBs have been taken out sooner than in the past (Exhibit 46).

Importantly, we've found that owning bought-back or bought-out CBs has generated consistent positive returns for investors. In fact, on a weighted-average basis, holding every such name from the year's start until it was fully taken-out has yielded a gain in each year since 2014, and it has outperformed the ICE BofA Global G300 index by 1.3% per annum, on average (Exhibit 47). We believe this benefit stems from the fact that when a company repurchases its own CB debt, it is typically at a premium to the current market price, and when an acquirer takes over a CB issuer, holders are usually well compensated. This considered, we're hopeful that elevated buyback activity will continue to boost convertible bond performance in the second half.

Exhibit 46: Average years until maturity of fully redeemed CBs

Of converts that are fully redeemed, their average years until maturity has risen to multiyear highs, suggesting names have been redeemed sooner



Source: BofA Global Research, Bloomberg. Data as of 30-Jun-2023. We consider a name to be fully redeemed if the amount outstanding falls below $25mn.

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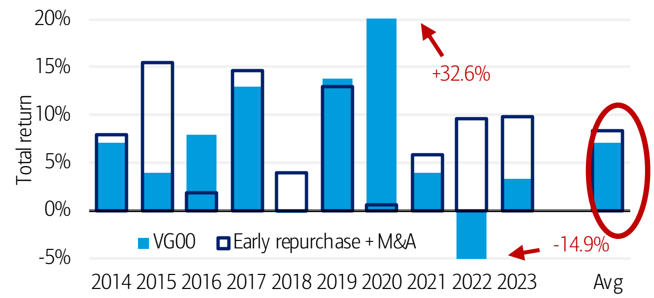
Exhibit 47: Early repurchased and M&A CB v. index returns

Holding CBs which have been redeemed early due to either a company buyback or M&A has generated consistent positive returns



Source: BofA Global Research, Bloomberg, ICE Data Indices, LLC. Data as of 30-Jun-2023. We assume each early bought-back or bought-out CBs was held from the start of the year until it was fully redeemed. Total return is market weighted based on value just prior to final redemption.

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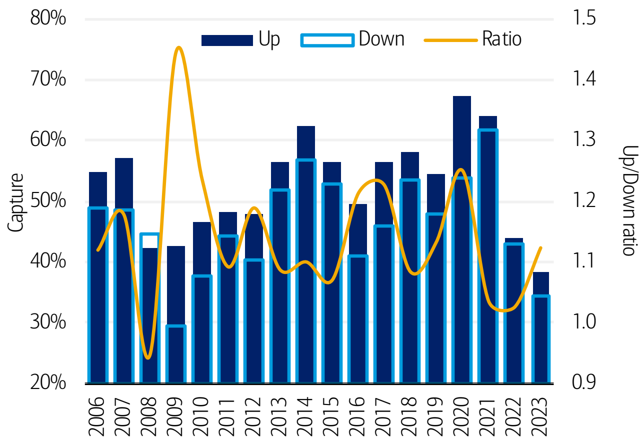
Improved convexity encourages using CBs to chase upside with less risk

While we think risks are skewed to the downside, rising price action and muted cross-asset and equity volatility in 2023 (the VIX recently dipped below 13, its lowest print since January 2020) has suggested that assets have the ability to look past the litany of macro risks—recession, inflation, banks, and geopolitical, to name a few. Indeed, though the downside case is now quite compelling, remaining on the sidelines and risk missing further upside is not a feasible option for many managers.

This in mind, we think that CBs still offer investors a nice opportunity to stay long risk with more downside protection. Specifically, we've found that relative to last year, when CB convexity broke down as bond values faltered under the weight of soaring interest rates, asymmetry with respect to underlying stocks has meaningfully improved. Year-to-date, US converts have captured 39% of their underlying stocks' upside, on average, versus just 34% of the downside (Exhibit 48). As a result, CBs have maintained their risk-adjusted performance advantage over other asset classes. Based on daily average annualized performance over the last 5 years, US converts have delivered the best Sharpe ratios versus both their stock and bond counterparts, while their absolute performance has also bested other fixed income assets' returns (Exhibit 49).

Exhibit 48: CB convexity relative to underlying common stock
Year-to-date, converts have been capturing more of their underlying stocks' upside returns than downside returns, an indication of improved convexity



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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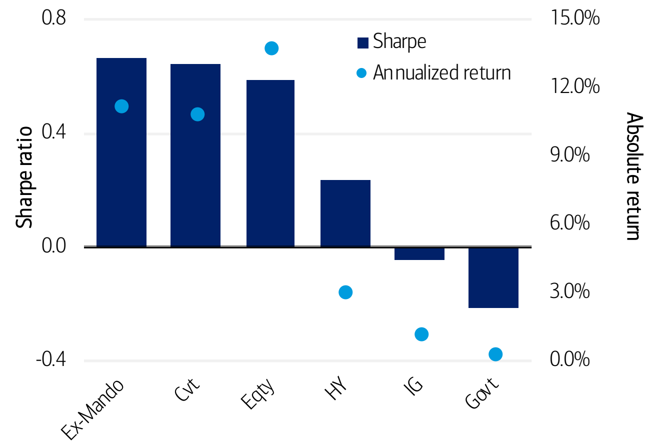
Exhibit 49: Cross-asset Sharpe ratios and returns since 2018
Over the past 5 years, convertibles (particularly ex-mandatories) have realized the best risk-adjusted performance on a cross-asset basis



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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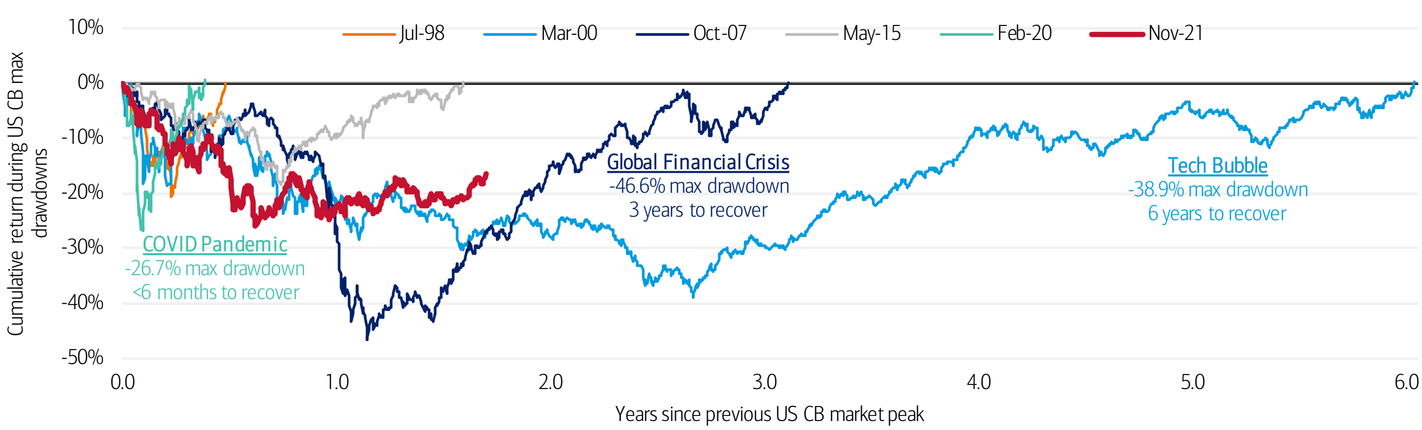
Despite CB higher forecasts and momentum, a full recovery will take more time

Regardless of the recent momentum and our higher forecasts for year-end, we still believe that the recovery in converts from the most recent drawdown will be slow moving. Unlike during the pandemic-induced selloff of February 2020 (-26.7%, the third-largest on record), which rebounded in just 6 months amid an avalanche of both monetary and fiscal policy support, today central banks remain constrained in their ability to provide assistance amid stubbornly high inflation. In fact, our economists now expect another two 25bps rate hikes before year-end, bringing the terminal rate to 5.50-5.75%, and they aren't calling for a rate cut until May 2024 (see their 15-June Global Economic Weekly).

Absent new policy support, we expect the pace of the recovery will maintain its slow pace—today, 1.7 years since the market's top in November 2021, US CBs remain about 17% below their previous peak. For context, the selloff following the Global Financial Crisis (-46.6%) required about 3 years to recover, while the Tech Bubble unwind (-38.9%) took around 6 years to reach its pre-selloff peak. Of course, neither situation is perfectly analogous to today, but broadly speaking we think this suggests it's likely it will take time before converts return to pre-drawdown highs (Exhibit 50).

Exhibit 50: US convertible bond recoveries from top 5 historical peak-to-trough drawdowns and the present drawdown
Although the pandemic-driven peak-to-trough selloff took less than 6 months to fully recover, the other largest US converts drawdowns (March 2000's Tech Bubble unwind and Oct 2007's Global Financial Crisis) took several years to reach their pre-drawdown peaks



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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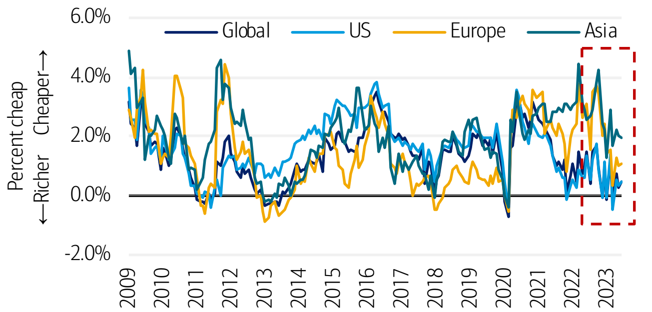
Globally, CB valuations have richened in 2023, but we expect cheapening in H2

A consequence of the performance rally and the ongoing decline in net new supply (see Exhibit 25 from the previous section), converts across regions richened in the first half. According to data from ICE Data Indices, US and European CBs now trade slightly cheap to fair value, while Asian CBs are a bit cheaper at a roughly 2.0% discount to fair value (Exhibit 51). On sectors, commodity-linked energy and materials remain the richest in light of their small size and crowded positioning following last year's gains (Exhibit 52).

In the second half, we expect CB valuations will become cheaper as we expect returns will be relatively muted, as discussed previously, and we anticipate very modest net expansion, limiting further richening from supply contraction (Exhibit 43 and Exhibit 25). As evident from our survey, CB investors agree that converts will cheapen in H2 across all regions, particularly in Asia (see our May 2023 Global Convertibles Investor Survey).

Exhibit 51: CB percent cheap history by region (since 2009)
After cheapening in 2022, CB valuations across regions have richened year-to-date amid the performance rally and net supply contraction



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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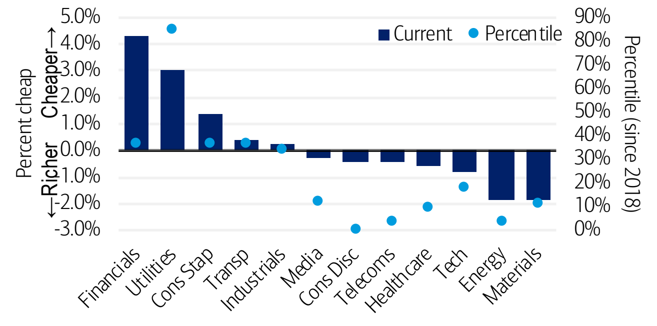
Exhibit 52: CB percent cheap by US sector
In light of their small size and crowded positioning following last year's gains, commodity-linked sectors (energy and materials) remain rich to fair value



Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.
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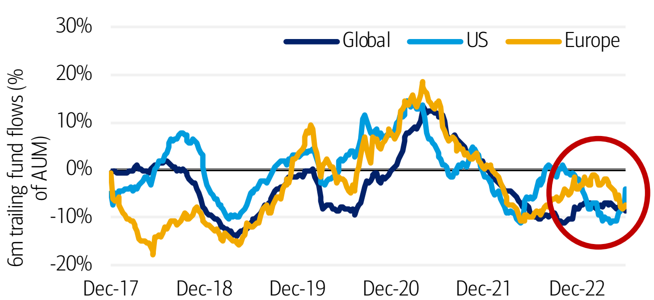
Fund flows may remain challenged, though relative returns may boost inflows

Inflows into CB funds have been challenged year-to-date as investors instead have flocked to cash and IG bonds (see the 29-June Flow Show). Indeed, global (-8.7% of AUM) and European (-7.6% of AUM) CB funds have suffered the most outflows over the last 6 months, while US funds have fared better (Exhibit 53). Specifically, though US CB ETFs have experienced sharp outflows (-7.9% of AUM), mutual fund outflows (-2.5% of AUM) were much less severe (Exhibit 54).

However, with rates expected to remain higher-for-longer (see the 16-Jun Global Rates Weekly), CBs may continue to outperform longer duration credit (IG, HY, and sovereign) and cash in the second half, which we think would be supportive of additional inflows. Notably, we've found that relative returns are the most consistent predictor of retail demand (see our Mar-2021 Global Convertibles Chartbook for details).

Exhibit 53: 6-month trailing fund flows (as a percentage of AUM)
Modest outflows have persisted over the last 6 months



Source: EPFR Global. Data as of 28-Jun-2023.
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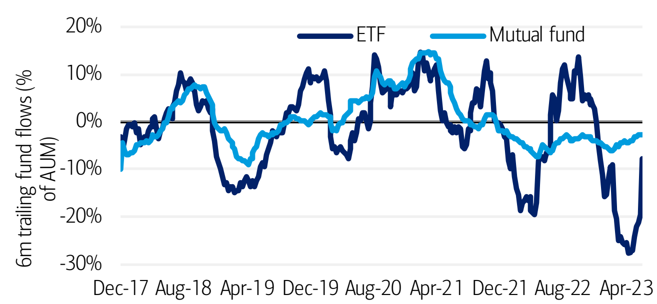
Exhibit 54: 6-month trailing fund flows (ETF v. mutual funds)
US outflows have been driven heavily by convertible bond ETFs



Source: EPFR Global. Data as of 28-Jun-2023.
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H1 2023 secondary appendix: year-to-date heat maps and trading volumes

Please refer to the exhibits below for global YTD performance heat maps (Exhibit 55), US CB TRACE volumes history (Exhibit 56), and trading volumes by sector (Exhibit 57).

Exhibit 55: Global convertible market year-to-date performance heat maps

Top performers include tech across regions, Asia small caps, equity alternatives and US consumer discretionary

USD

Region

	Global	US	Europe	Asia	Japan
Region	7.03%	8.55%	7.29%	5.86%	-3.01%

Credit Quality

	Global	US	Europe	Asia	Japan
IG	3.69%	1.10%	8.70%	4.88%	
HY	7.79%	1.08%	6.69%	5.55%	-3.01%

Investment Objective

	Global	US	Europe	Asia	Japan
Eqty Alt	16.83%	17.96%	14.89%	-2.76%	-12.51%
Rtn Alt	2.91%	3.68%	6.61%	3.27%	2.05%
Yld Alt	7.01%	7.72%	6.33%	7.50%	-6.23%

Company Size

	Global	US	Europe	Asia	Japan
Small	14.22%	6.70%	15.27%	18.61%	-7.98%
Mid	7.17%	10.19%	5.50%	9.54%	-6.17%
Large	6.43%	7.58%	7.13%	4.27%	0.04%

Sector

	Global	US	Europe	Asia	Japan
Cons Disc	10.02%	18.02%	8.04%	0.99%	-4.49%
Cons Stap	2.25%	1.44%	4.50%	2.33%	-7.40%
Energy	1.53%	7.07%	7.45%		
Financials	3.90%	8.00%	2.40%	1.32%	
Healthcare	2.13%	3.70%	-1.80%	10.15%	-13.95%
Industrials	10.01%	6.14%	9.97%	10.18%	-0.14%
Materials	7.95%	9.78%	5.02%	3.73%	2.79%
Media	2.52%	3.13%	3.67%	10.97%	-10.11%
Tech	13.71%	14.78%	18.20%	15.52%	1.71%
Telecoms	4.02%	0.85%	6.08%	-2.41%	
Transp	3.58%	5.43%	10.23%	3.26%	-1.27%
Utilities	0.78%	-4.50%	3.71%	0.00%	-13.81%

Local

Region

	Global	US	Europe	Asia	Japan
Region	6.90%	8.55%	5.10%	5.85%	6.11%

Credit Quality

	Global	US	Europe	Asia	Japan
IG	2.97%	1.10%	6.56%	5.07%	
HY	7.80%	1.08%	4.44%	5.53%	6.11%

Investment Objective

	Global	US	Europe	Asia	Japan
Eqty Alt	16.06%	17.96%	12.66%	-2.67%	-4.15%
Rtn Alt	3.04%	3.68%	4.86%	2.97%	11.80%
Yld Alt	6.88%	7.72%	4.06%	7.55%	2.47%

Company Size

	Global	US	Europe	Asia	Japan
Small	13.98%	6.70%	12.80%	19.69%	0.81%
Mid	7.23%	10.19%	2.96%	9.99%	2.49%
Large	6.22%	7.58%	5.05%	4.09%	9.59%

Sector

	Global	US	Europe	Asia	Japan
Cons Disc	9.53%	18.02%	5.75%	0.98%	4.63%
Cons Stap	2.13%	1.44%	2.23%	2.33%	1.44%
Energy	1.53%	7.07%	6.46%		
Financials	3.83%	8.00%	0.16%	1.39%	
Healthcare	2.30%	3.70%	-3.15%	9.70%	-5.74%
Industrials	9.11%	6.14%	7.31%	10.59%	7.76%
Materials	8.86%	9.78%	2.42%	2.89%	12.60%
Media	3.04%	3.13%	2.63%	10.98%	-1.53%
Tech	13.66%	14.78%	16.28%	15.52%	11.42%
Telecoms	2.72%	0.85%	3.77%	-2.41%	
Transp	4.20%	5.43%	7.44%	3.67%	8.15%
Utilities	-0.10%	-4.50%	1.57%	0.00%	-5.59%

Source: BofA Global Research, ICE Data Indices, LLC. Data as of 30-Jun-2023.

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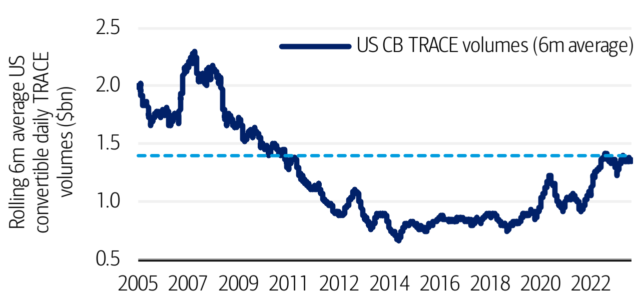
Exhibit 56: US convertibles daily average TRACE volumes (6m average)

US CB daily average trading volumes are $1.4bn, near the highest since 2011



Source: TRACE. Data as of 30-Jun-2023.

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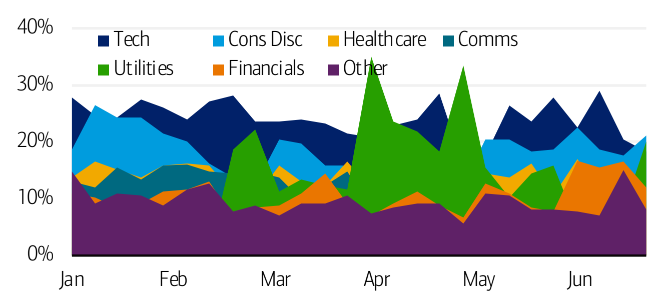
Exhibit 57: US convertible market trading volume sector breakdown

Tech has mostly led volumes, but utilities led around the issuance spikes



Source: TRACE, BofA Global Research. Data as of 30-Jun-2023.

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Issuance

Last month, global new convertible bond issuance totaled just under $6.0bn—over two-thirds of which came from the US ($4.2bn). Europe realized $740mn, Asia $263mn, and Japan $767mn—an exceptional pace for the region (the most in a single month since November 2021), in part driven by the record set in June for Japanese equities with the Nikkei reaching its highest level in over two decades (Exhibit 58). Despite the improved volumes in Japan, global issuance underperformed the historical average for June ($11.3bn), typically the hottest month of the year for new deals (Exhibit 59). Year-to-date, global volumes have totaled just over $39bn, led by the US's $27bn (Exhibit 58).

Exhibit 58: Global convertible issuance ($mn)
Global convertibles issuance totaled just under $6.0bn last month with the majority from the US ($4.2bn)

	US	Europe	Asia	Japan	Total
Jun	4,193	740	263	767	5,964
May	7,304	598	0	0	7,902
Apr	2,822	638	2,200	0	5,661
Mar	3,948	815	1,200	0	5,963
2023 YTD	27,252	6,709	4,300	1,033	39,294
2022 YTD	8,348	1,170	1,554	145	11,217
2022	28,684	6,215	4,218	417	39,535
2021	84,332	22,912	33,208	7,373	147,824
2020	105,809	31,113	20,059	1,723	158,704

Source: BofA Global Research

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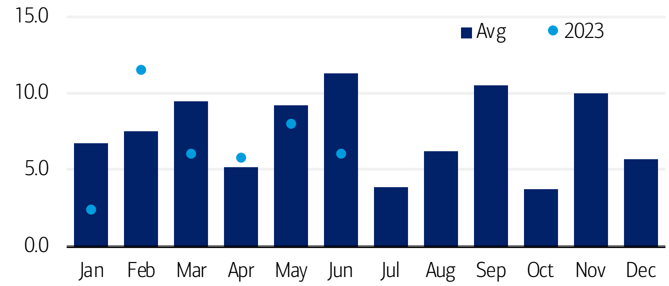
Exhibit 59: Average global issuance by month ($bn)
In contrast with historical trends, convertible bond issuance volumes dropped in June relative to those in May



Source: BofA Global Research

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At the single-name level, June's largest deal was the over $1bn American Water Capital 3.625% up 22.5% CBs due in 2026. The Baa1-rated notes continued 2023's wave of new IG-rated paper from high quality utilities names (indeed, about one-third of US new paper year-to-date has an IG credit rating). Proceeds from the deal were slated to repay outstanding commercial paper, in-line with the broader trend of refis we've seen this year (see Exhibit 10 from our main section).

The second-largest deal was Ventas Realty LP's $863mn 3.75% up 22.5% '26s, which also attained an IG credit rating. The company will use the proceeds from the offering for general purposes, including the repayment of outstanding debt (Exhibit 60).

Exhibit 60: Global convertibles issued during June
Last month's largest deal was the American Water Capital 3.625% up 22.5% '26 notes

Region	Date	Cusip	Issuer	Description	Coupon	Issue Amt (USD)	Issue Amt (LOC)	Currency	Initial Cv Prem	Seniority	Rating	Mandatory	Cvt Sector
US	6/27/2023	03040WBB0	AMERICAN WATER CAPITAL C	AWK 3 5/8 06/15/26	3.625	1,035.00	1,035.00	USD	22.50	Unsecured	IG	N	Utilities
US	6/9/2023	92277GAY3	VENTAS REALTY LP	VTR 3 3/4 06/01/26	3.750	862.50	862.50	USD	22.50	Unsecured	IG	N	Financials
Europe	6/1/2023	ZK8577312	LAGFIN SCA	LAGFNC 3 1/2 06/08/28	3.500	577.38	536.40	EUR	30.00	Unsecured	NR	N	Consumer Staples
US	6/8/2023	462222AE0	IONIS PHARMACEUTICALS IN	IONS 1 3/4 06/15/28	1.750	575.00	575.00	USD	32.50	Unsecured	NR	N	Healthcare
US	6/14/2023	55024UAG4	LUMENTUM HOLDINGS INC	LITE 1 1/2 12/15/29	1.500	525.00	525.00	USD	30.00	Unsecured	NR	N	Technology
US	6/22/2023	85571BBA2	STARWOOD PROPERTY TRUST	STWD 6 3/4 07/15/27	6.750	380.75	380.75	USD	12.50	Unsecured	HY	N	Financials
US	6/22/2023	98149GAA8	WORLD KINECT GROUP	WKC 3 1/4 07/01/28	3.250	350.00	350.00	USD	27.50	Unsecured	NR	N	Energy
US	6/9/2023	018581AM0	BREAD FINANCIAL HLDGS	BFH 4 1/4 06/15/28	4.250	275.00	275.00	USD	25.00	Unsecured	NR	N	Financials
Japan	6/12/2023	ZK9590173	TOKYU CORP	TOKYU 0 09/29/28	0.000	215.16	30,000.00	JPY	17.02	Unsecured	NR	N	Transportation
Japan	6/12/2023	ZK9586957	TOKYU CORP	TOKYU 0 09/30/30	0.000	215.16	30,000.00	JPY	12.01	Unsecured	NR	N	Transportation
US	6/22/2023	156727AC3	CERENCE INC	CRNC 1 1/2 07/01/28	1.500	190.00	190.00	USD	22.50	Unsecured	NR	N	Technology
Asia	6/28/2023	ZJ3443679	LUYE PHARMA GROUP LTD	LUYEPA 6 1/4 07/06/28	6.250	180.00	180.00	USD	26.10	Unsecured	NR	N	Healthcare
Japan	6/7/2023	ZK9152453	FERROTEC CORP	FERTEC 0 06/23/28	0.000	178.98	25,000.00	JPY	27.01	Unsecured	NR	N	Technology
Japan	6/1/2023	ZK8470468	TOHO HOLDINGS CO LTD	TOHPHA 0 06/16/28	0.000	157.66	22,000.00	JPY	9.99	Unsecured	NR	N	Healthcare
Europe	6/21/2023	ZJ0585951	SGL CARBON SE	SGLGR 5 3/4 06/28/28	5.750	130.30	118.70	EUR	25.00	Unsecured	NR	N	Materials
Asia	6/8/2023	ZK9392414	CHINA MENGNIU DAIRY	CHMEDA 4 1/2 06/15/26	4.500	82.93	650.00	HKD	30.00	Unsecured	NR	N	Consumer Staples
Europe	6/5/2023	ZK9618354	ATARI SA	ATAFP 6 1/2 07/31/26	6.500	32.76	30.00	EUR	15.00	Unsecured	NR	N	Media

Source: BofA Global Research

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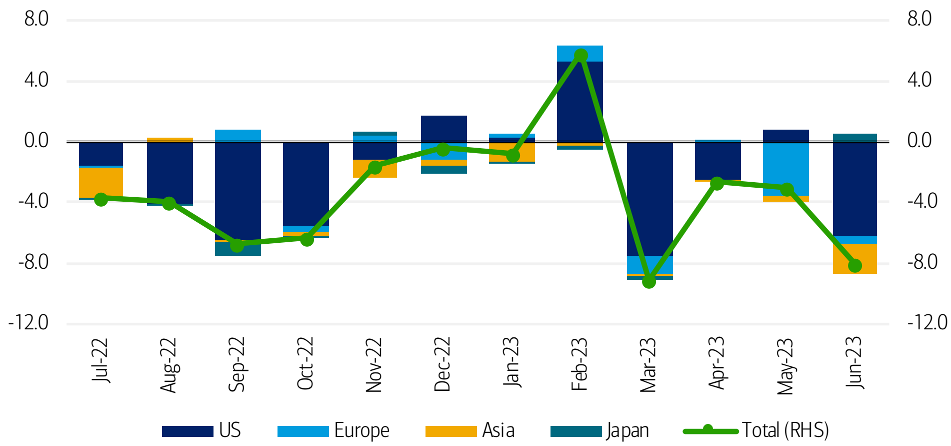
On redemptions, the global CB market realized nearly $14.0bn, mainly from the US's $10.4bn, while Asia saw $2.1bn, Europe saw $1.3bn, and Japan saw less than $200mn. Redemptions were mostly concentrated in the $8.4bn of maturities (in particular the $2.1bn T-Mobile 2020 Cash Exchange Trust 5.25% mandos) and to a lesser extent in debt repurchases/conversion to shares, totaling over $2.8bn (PG&E bought-back nearly $800mn in its soon to mature 5.5% mandos). On a net-new issuance basis, the global market contracted just over $8.0bn last month, heavily driven by the US (-$6.2bn), while Japan was the only region to realize a small net-new supply gain (Exhibit 61).

Exhibit 61: Global net supply by month (last 12 months)
Global net supply totaled -$8.0bn last month as redemptions outpaced new issuance



Source: BofA Global Research

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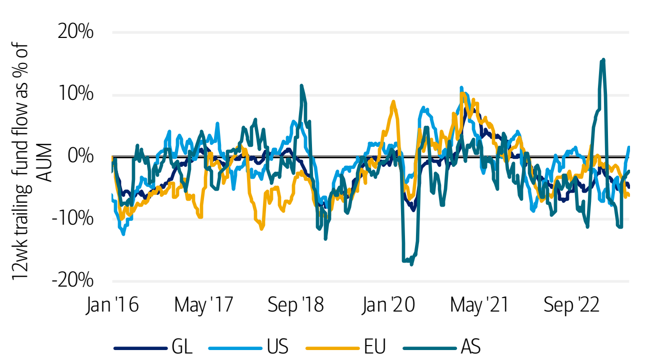
For comprehensive data on issuance and redemptions trends, including net supply totals, sector and structure trends, and use of proceeds information, please refer to section 3 of the attached Excel Chartbook.

Fund flows

Weekly fund flows aggregated to monthly totals show that converts funds which invest globally (-$742mn, -2.1% of AUM), in Europe (-$246mn, -3.5% of AUM), and Asia-ex Japan (-$2mn, -0.4% of AUM) all saw net outflows in June, while funds that invest in the US (+$536mn, +2.6% of AUM) realized net inflows (Exhibit 63). In fact, the monthly inflow into US CB funds was the largest we've seen since September 2021. On a 12-week trailing basis, all regions have seen modest net outflows except for US funds, which have seen moderate net inflows (Exhibit 62).

Exhibit 62: 12-week trailing flows as a percentage of AUM
On a trailing 12-week basis, converts funds across all regions have seen net outflows as a percentage of AUM except for US funds



Source: EPFR Global

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Exhibit 63: Aggregated weekly flows from June
Weekly fund flows show that global, Europe, and Asia CB funds suffered net outflows in June, while US funds saw inflows (most since September 2021)

	Flows $mn	Flow % AUM	Total Assets	NAV %
Global	-742	-2.1	36,741	2.1
US	536	2.6	20,820	3.5
Europe	-246	-3.5	6,939	0.4
Asia-ex Japan	-2	-0.4	533	2.8

Source: EPFR Global

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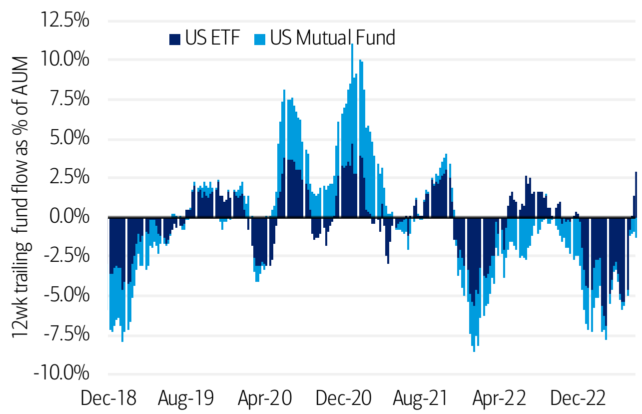
Digging into US convertible flows in more detail, over the last 12 weeks, CB mutual funds have seen small net outflows, while ETFs saw modest inflows (Exhibit 64). Specifically, after a wave of elevated and volatile outflows, over the last 12-week window ETFs realized net inflows (+11.9% of ETF AUM) for the first time this year (Exhibit 65). In contrast, mutual funds have seen more muted activity and were slightly net negative over the last 12 weeks (-1.8% of mutual fund AUM).

Exhibit 64: US ETF v. mutual fund breakdown of 12wk trailing flows
Over the past 12 weeks, US convertible bond mutual funds saw net outflows while US CB ETFs saw inflows



Source: EPFR Global

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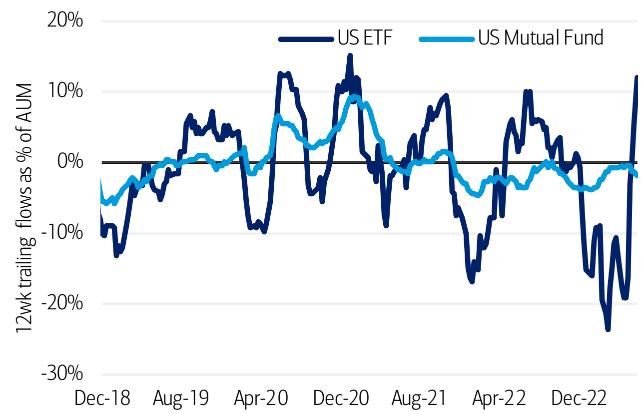
Exhibit 65: US ETF and mutual fund trailing 12-week fund flows
Last month, CB ETFs saw net inflows for the first time this year on a 12-week trailing basis, while mutual funds were slightly net negative



Source: EPFR Global

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Monthly fund flow data, which is reported on a one-month lag, indicates that funds that invest in CBs in all regions saw net outflows in May (Exhibit 66). Specifically, global funds suffered outflows of $470mn (-1.3% of AUM), US funds experienced outflows of $74mn (-0.3% of AUM), European funds realized net outflows of $101mn (-1.4% of AUM), and Asia-ex Japan funds lost $4mn (-0.7% of AUM). Year-to-date, CB funds across all regions have seen net outflows. Global funds have lost the most in absolute dollar terms, while Asia-ex Japan funds have seen the most outflows as a percentage of AUM.

Exhibit 66: Monthly flow breakdown for 2023
Convertible bond funds across all regions saw net outflows during May

	Global		US		Europe		Asia-ex Jap	
	% AUM	Flows $mn	% AUM	Flows $mn	% AUM	Flows $mn	% AUM	Flows $mn
October	-2.7	-984	-0.6	-161	-0.8	-51	-2.5	-13
November	-0.3	-121	-0.7	-192	1.1	74	1.1	5
December	-1.3	-493	-2.7	-796	-0.9	-63	7.3	37
January	-0.3	-107	-4.5	-1,229	-1.0	-75	2.3	13
February	-1.4	-565	1.1	311	0.8	58	-0.4	-2
March	-2.3	-885	-3.9	-1,073	-2.2	-168	-9.4	-54
April	-1.7	-654	-0.7	-178	-0.7	-48	-1.4	-8
May	-1.3	-470	-0.3	-74	-1.4	-101	-0.7	-4
YTD	-7.1	-2,681	-8.1	-2,242	-4.5	-334	-9.7	-55

Source: EPFR Global

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For additional charts and data on flow trends, please refer to the Fund Flows slide on tab 3.01 to the attached Excel Chartbook.

Chartbook access

To view the Excel Chartbook, which includes a variety of data, tables, and charts focused primarily on returns, markets characteristics, and supply and demand, among other topics, please refer to the link here.

Abbreviations

- CB: Convertible bond
- AUM: Assets under management
- IG: Investment grade
- HY: High yield
- NR: Not rated
- GDP: Gross domestic product
- EFT: Exchange traded fund
- AI: Artificial intelligence
- CFO: Chief financial officer
- YTD: Year to date
- YTW: Yield to worst

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