

Brokers, Asset Managers & Exchanges

Previewing the 32nd Annual BofA Financial Services Conference next week

Industry Overview

32nd Annual BofA Financial Services Conference

Next week on February 20-22, BofA will be hosting 130+ corporates and 300 institutional investors at the 1 Hotel in Miami. The conference will include 70 fireside presentations with senior leaders across financial services including many of the largest banks and insurers and a special keynote from Bank of America's CEO Brian Moynihan.

Deep bench of asset managers, brokers & exchanges

We have 35 diversified financial services companies attending and highlight C-suite attendance from Blackstone, BlackRock, KKR, Apollo, Ares Management, Ameriprise Financial, Cboe, Intercontinental Exchange, Tradeweb, Interactive Brokers, Blue Owl, Carlyle, EQT, Brookfield Asset Management, Deutsche Boerse, TPG, Digital Bridge, BGC, Brookfield, Euronext, AMG, Cohen & Steers, Franklin Resources, Victory Capital, Virtus Investment Partners and WisdomTree.

2nd year together & 1st of many years in Florida

This is the 2nd consecutive year that the BofA conference: (1) contained all financial services industries, (2) occurred at our new time slot in mid-February, (3) had CNBC host live interviews from the event and the 1st year that our conference is in Florida. In 2025, we will host the conference at the same venue on February 10-12, 2025.

Long Alts, mixed on Trads & Brokers, cautious on Exchanges:

We are the most bullish on the Alts given their secular growth trajectory (bank retrenchment, private wealth, insurance), improving cyclical backdrop (benefit from lower interest rates) and underappreciated defensive qualities (never-forced sellers, record dry-powder, FRE rich profits) although valuations are higher. Despite improving beta, we are less positive on Trads given the sharp increase in their share prices/valuations in 2023 and challenged base fee organic growth trends. We remain near-term cautious on the interest rate sensitive brokers (SCHW, LPLA) due to lower interest rates and lingering cash sorting, but we are bullish on IBKR's robust account growth trajectory. We are still cautious on the Exchanges and expect the stocks to continue lagging if the market recovery continues due mainly to negative/low volume growth in 2023-24 while their non-exchange businesses are heating-up which drives our preference for ICE and remain very bullish on TW (both benefit from bond reallocations).

Seven cyclical & five secular themes to focus on

Fixed income reallocations, retail Alts flow recovery, lower cash sweep revs, credit quality, SEC market structure proposal, Alt fundamentals recovery, privatization of markets & bank retrenchment, Retail Alts, RIA & breakaway broker, Online brokerage, Analogue to digital conversions (ICE with mortgage tech & fixed income).

13 February 2024

Equity

United States

Brokers, Asset Managers and Exchanges

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Refer to important disclosures on page 26 to 29. Analyst Certification on page 24. Price Objective Basis/Risk on page 20.

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Timestamp: 13 February 2024 09:00AM EST

Key themes to focus on at conference

7 key cyclical themes:

1. **Fixed income reallocations:** Significant improvement in fixed income net flows (vs. deteriorating cash management flows) with 60-70% of the inflows into passive
2. **Retail Alts recovery:** Improvement in Alt flows into private wealth channel with private credit gaining momentum and real estate rebounding
3. **Lower cash sweep revs:** Fed “pause” and expectations for “cuts” drives negative revisions to the interest rate sensitive brokers (and buy-side selling)
4. **Re-accelerations at non-exchange businesses:** Deceleration in volume growth weighs on revenue growth at the exchanges (vs. acceleration in tech/info service businesses)
5. **Credit quality:** Broad-based rise in defaults creates headline risks and weighs on returns for the private market managers (while stocks can shrug this off and outperform if fundamentals heat-up, just like 2H09 and 2H20)
6. **The big reg initiative:** SEC finalizes its equity market structure proposals with a more favorable outcome for retail brokers and market makers
7. **Alt fundamentals recovering:** Lower interest rates will improve negative sentiment around private equity and real estate relative to private credit and infrastructure (private credit managers could see lower earnings through incentive fee part 1s and insurance NIMs)

5 key secular themes:

1. **Privatization of markets:** Privates & passives continue to gain share from active equities (barbell theme) while private credit, infrastructure and renewables grow faster than private equity
2. **Retail Alts:** Ultra high net worth and high net worth investors will continue to raise their allocations to privates while the Alts also increase their focus on the mass-affluent with new vehicle launches and try to crack the 401k code
3. **RIA:** Breakaway broker trend continues but decelerates modestly; supplies the RIA custodians, independent broker-dealers and RIA aggregators a consistent source of growth
4. **Online brokerage:** A high value proposition and evolving demographics (younger generations favor communicating with their smartphone vs. in-person) supports the 30Y shift to digital from human, benefiting the online brokers
5. **Analog to digital conversions:** The mortgage and fixed income businesses remain highly manual and inefficient with electrification still in the earlier innings

Update on our recommendations

How did stronger markets impact our view?

Following a strong US stock and bond market into December followed by a small pullback YTD, we wanted to update investors on our views published on 12/4/23 in our 2024 Year Ahead. We continue to be short and long-term bullish on the Alts versus short-term cautious on the Retail Brokers, which is mainly driven by our expectations of

(1) declining interest rates into 2025 and (2) investor positioning. Specifically, lower interest rates will benefit most key fundamental metrics for the Alts (fundraising, investing, returns, realizations => EPS & FRE) while it will reduce the brokers' ability to monetize their client base via cash sweep revenues (especially after Charles Schwab [SCHW, Underperform] reduced commissions to zero in 2019).

Too early to abandon our Alts vs. Brokers recommendation

While 4Q23 and December market action is reflective of an outlook for lower interest rates (asset managers outperforming the brokers and exchanges), it is still too early for us to move away from our recommendations. The first Fed rate hike is not likely until 2Q24. Additionally, a multi-year bull market will compound earnings growth and drive operating leverage at the asset managers. Note: While we are short-term cautious on the brokers, we are long-term bullish on their organic growth trajectory given multiple secular themes (breakaway broker, online brokerage).

Bond reallocation theme in Trads: AB and BLK are best-positioned

Invesco (IVZ, Neutral) outperformed both BlackRock (BLK, Buy) and AllianceBernstein (AB, Buy) over the last 90 days with investors viewing them as a cheaper way to invest in the bond reallocation theme. We instead believe AllianceBernstein (AB, Buy) is the best way to play this theme given its strong bond performance and wide offering in addition to the lack of a money market business. These reallocations make take time to start given the inverted yield curve and timing around the first Fed rate hike.

Remain bullish on Alts but equity managers should see stronger EPS revisions

We think KKR (KKR, Buy) is the best-positioned stock in our coverage for an economic recovery/bull market, and our 3-point thesis (S&P 500 add, fundraising cycle, asymmetrical upside potential in P&L) causes us to maintain our Buy rating. We also think we are too early into the current bull market to abandon our KKR Buy, even after significant outperformance. Meanwhile, CG (Carlyle, Underperform) has outperformed by a similar magnitude despite long-term organic growth challenges at CG (especially in PE with its flagship US, Asia and European buyout funds) which supports our preference for KKR. Alternatively, the leading credit managers (Ares Management [ARES, Buy], Apollo [APO, Neutral]) have underperformed lately given less upside potential to profits in a bull market in addition to interest rate headwinds via insurance NIMs and BDC incentive fee part 1s. We like ARES long-term given its all-weather business model and robust organic growth while we also appreciate APO's consistent EPS growth trajectory which drove outperformance in 2022-23 when 3rd party fundraising headwinds emerged. .

Asset vs. liability sensitivity battle in brokerage: Robinhood (HOOD, Underperform) has outperformed given its larger offsets to lower interest rates versus LPL Financial (LPLA, Neutral). While we agree with this conclusion on this single factor, we forecast much stronger long-term EPS growth at LPLA, and IBKR remains our top pick given its 20%+ account growth trajectory which has recently accelerated. SCHW which has seen its organic growth deteriorate and still has to integrate the Ameritrade activetraders in 1H24, although this is a smaller risk in our view ([see report here](#)). HOOD and Virtu Financial (VIRT, Buy) are arguable best positioned for a bull market via the recovery in retail engagement but HOOD still has to prove it can grow its account sizes (only \$3.8k on average) and avoid "graduation risk" to more established competitors.

TW is down? Good time to buy: Tradeweb (TW, Buy) lagged over the last 90 days which didn't make sense to us. We see lower interest rates and the end of QT as positive catalysts for financial market liquidity which could drive a step function increase in the market share of e-trading platforms. This will encourage more market participants to leverage its protocols and increase the comfort level with larger block trades where e-trading share is lower. We also think TW is well-positioned for increasing fixed income ETF and fund flows and longer-term we view it as a consistent grower that can grow into its higher valuation as it gains share from traditional voice dealers and e-trading competitors.



2024 will be a year of inflections & reversions

High inflation and rapidly rising interest rates created a unique backdrop of cyclical factors for our coverage including broker cash sorting, denominator-effected Alt fundraising and record active fixed income outflows (vs. record money market inflows). The Fed has been draining liquidity from financial markets, which has hurt the asset manager organic growth backdrop and has driven flows into short duration products (cash). We believe 2024 will be a year of inflections and reversions. Accordingly, we have proactively been positioning our industry/stock ratings over the last 12 months (bullish on Alts vs. more cautious on brokers & exchanges) and we are not abandoning our recommendations.

Soft landing, lower interest rates & yield curve steepening

The BofA Economics team is expecting a soft landing with a pause in Fed rate hikes followed by eventual cuts by both the Fed and the ECB in 2H24. They expect large declines in short rates (vs. long end) which will steepen the yield curve. Additionally, 60% of global GDP will be facing key elections in 2024 including the US. This could have positive implications including more favorable regulatory outcomes under a Republican administration (SEC's equity market structure package & DoL Rule) following a period of active rulemaking. We also believe artificial intelligence is in the very early innings of improving operating efficiencies within our coverage. The initial benefits can be found in the back-office and sales roles.

Bond reallocations: Starting Phase 2 of credit theme now

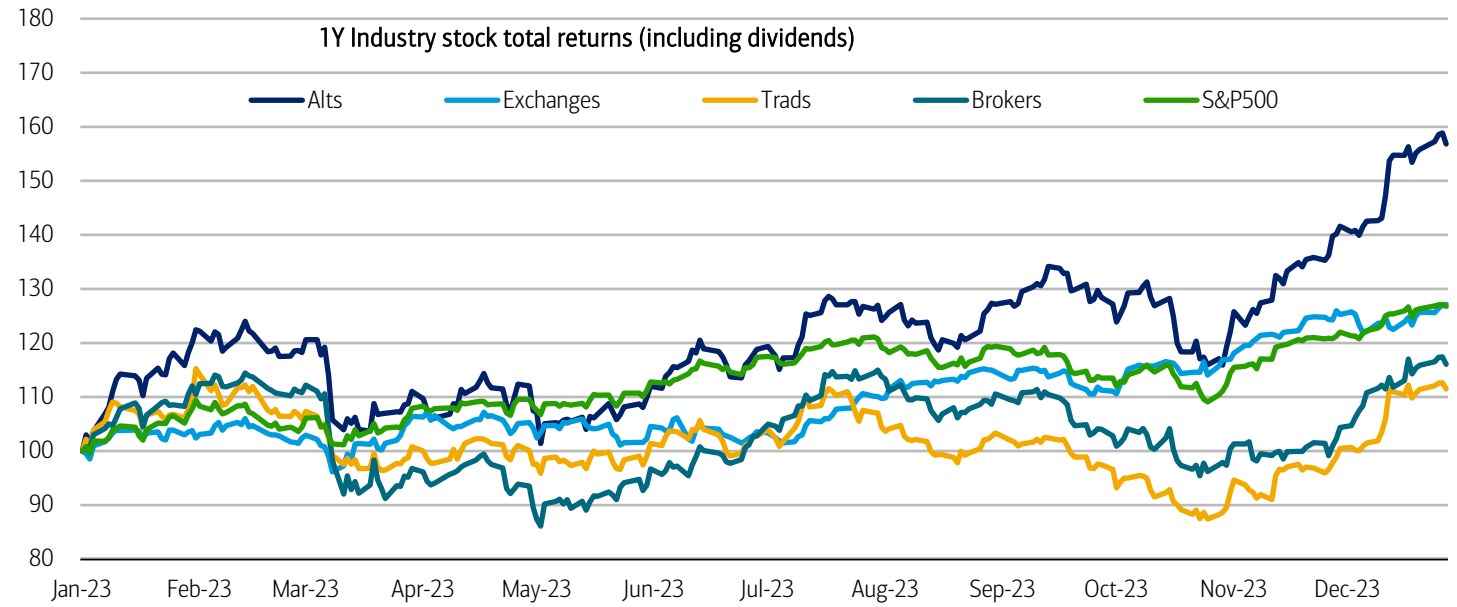
The BofA Economics team forecasts the end of Fed rate hikes with cuts anticipated in 2H24 into 2025. We expect this to cause significant AuM shifts across the asset management industry with institutional and retail investors extending duration, which should trigger record inflows into fixed income (vs. outflows in money market). We continue to expect 60-70% of the bond inflows to be derived from passive/ETF strategies (BLK) while active bond managers with strong investment performance will benefit too (AB). We view this as phase 2 of the credit reallocation theme. Phase 1 in '22-'23 was defined by large inflows into short-duration products (private credit, money market) while phase 2 will see large inflows into long-duration fixed income (vs. outflows in money market funds).

Bond reallocations: 2nd derivative plays

The second-derivative trade will be businesses that benefit from bond trading activity and growth in bond AuM. Tradeweb (TW) is the fastest growing fixed income e-trading platform with scale in both credit and rates while Intercontinental Exchange (ICE) operates a large fixed income business across execution, index, data & analytics. Both will see an acceleration in revenue growth with rising fixed income AuM. We also expect the eventual Fed rate cuts to stimulate financial market liquidity and help reaccelerate private market investing/realization activity (KKR).

Exhibit 1: Stock total returns by industry (includes dividends)

Exchanges have outperformed while the brokers and traditional have underperformed over the last 12 months

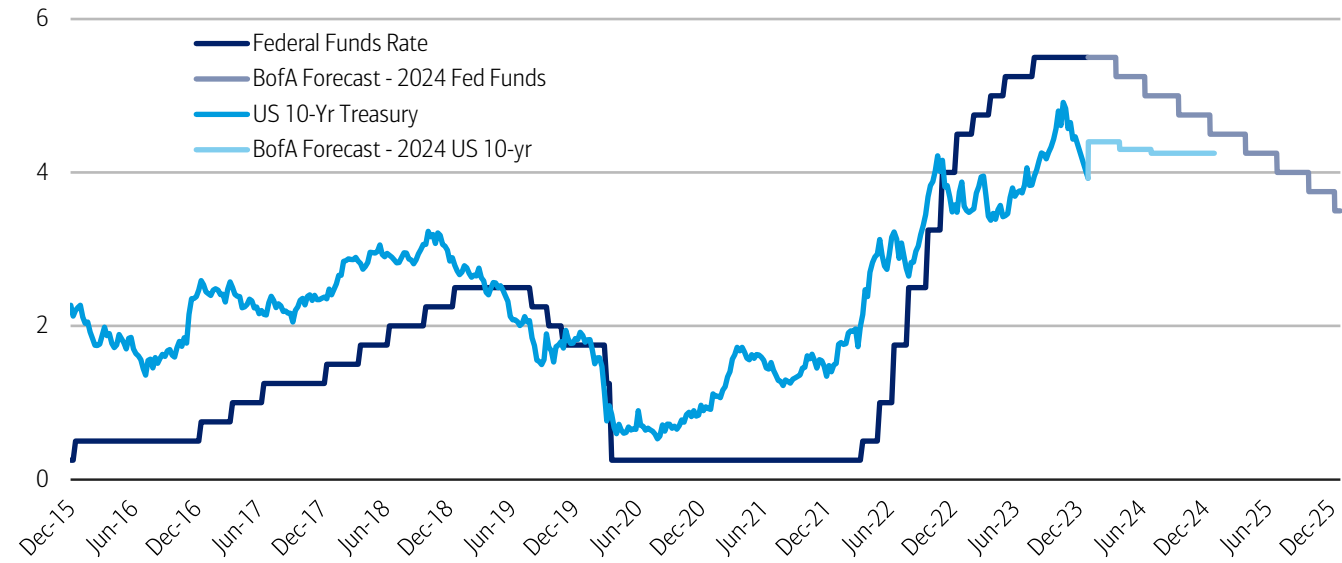


Source: Bloomberg, BofA Global Research

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Exhibit 2: Key interest rate benchmarks

Expect Fed rate cuts to now begin in March of 2024 (4 vs. 3 cuts previously)

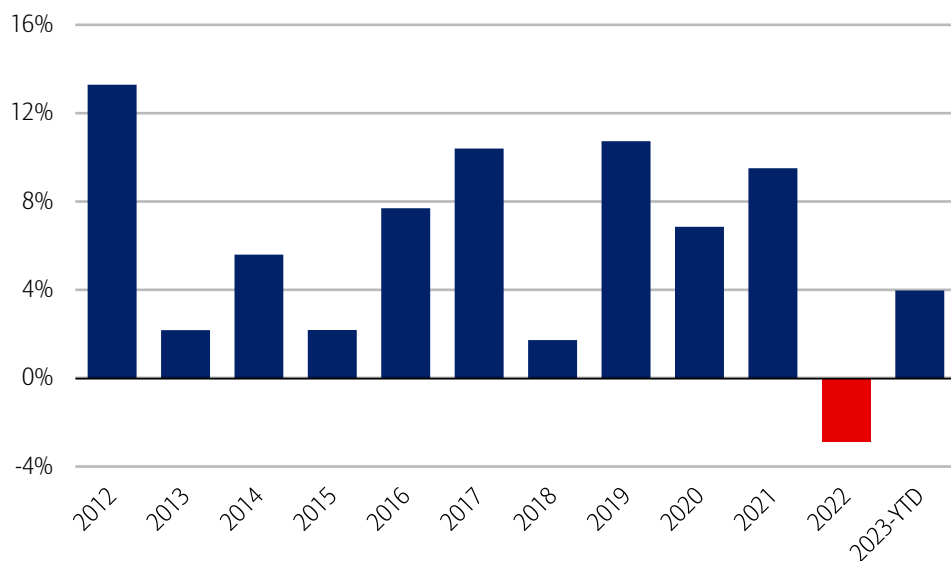


Source: Bloomberg, BofA Global Research Estimates

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Exhibit 3: Global fixed income organic growth %

Bond bear market triggered record net outflows in 2022 and weak active flows in 2023



Source: BofA Global Research, ISS Market Intelligence – Simfund Enterprise

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Exhibit 4: Debt heatmap: Migration to (1) fixed income, (2) private credit and (3) money market

Money market was phase 1 but expect a migration to traditional fixed income (majority passive) in phase 2 (2024/25)

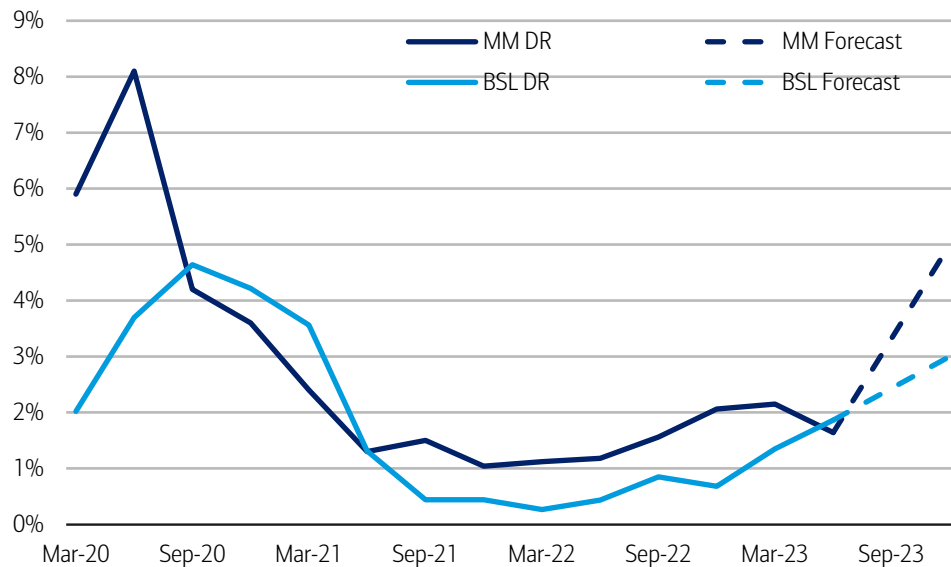
	2015	2016	2017	2018	2019	2020	2021	2022	2023-YTD	2024E	2025E
Money Market	10%	1%	10%	4%	8%	16%	7%	1%	11%	-5%	-5%
Active Fixed Income	0%	6%	8%	0%	8%	5%	8%	-6%	2%	8%	6%
Passive Fixed Income	15%	19%	22%	11%	23%	14%	15%	9%	9%	20%	15%
Private Credit	12%	8%	11%	18%	10%	11%	19%	14%	8%	10%	10%

Source: BofA Global Research estimates, ISS Market Intelligence – Simfund Enterprise

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Exhibit 5: Middle Market vs broadly syndicated loan default rates

Middle market defaults could overtake BSL early next year in a higher for longer rate environment



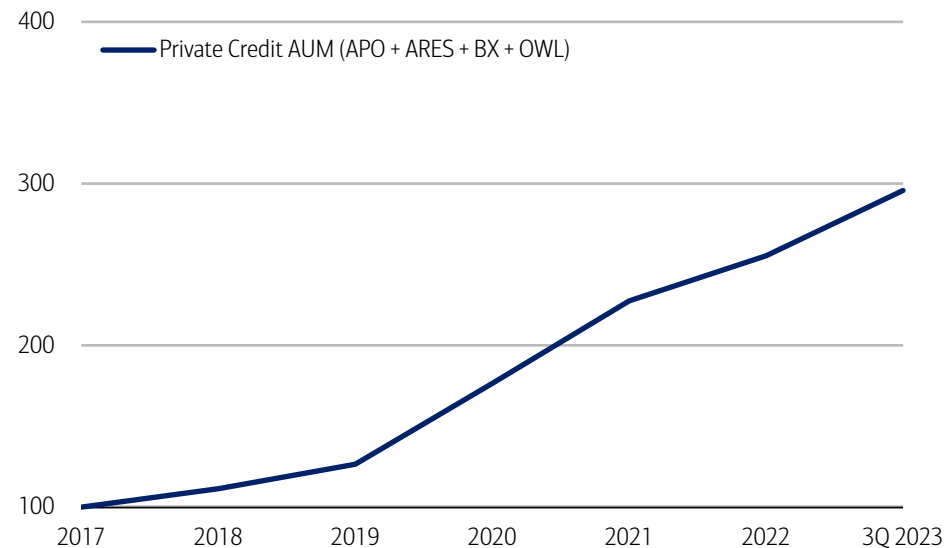
Source: BofA Global Research, LCD, Proskauer

Note: BSL = Broadly syndicated loans

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Exhibit 6: Private Credit AuM (2017-3Q23, indexed to 100)

Private credit will continue to take share from banks

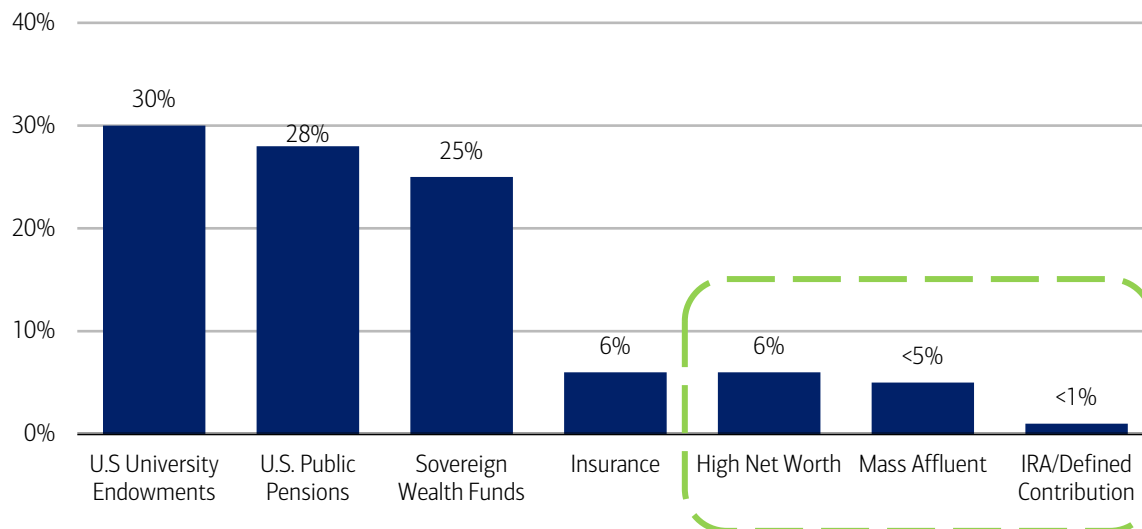


Source: BofA Global Research, company reports

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Exhibit 7: Alternative investment allocations by client segment

Expect increase in adoption rates across all segments but see the most upside in potential retail

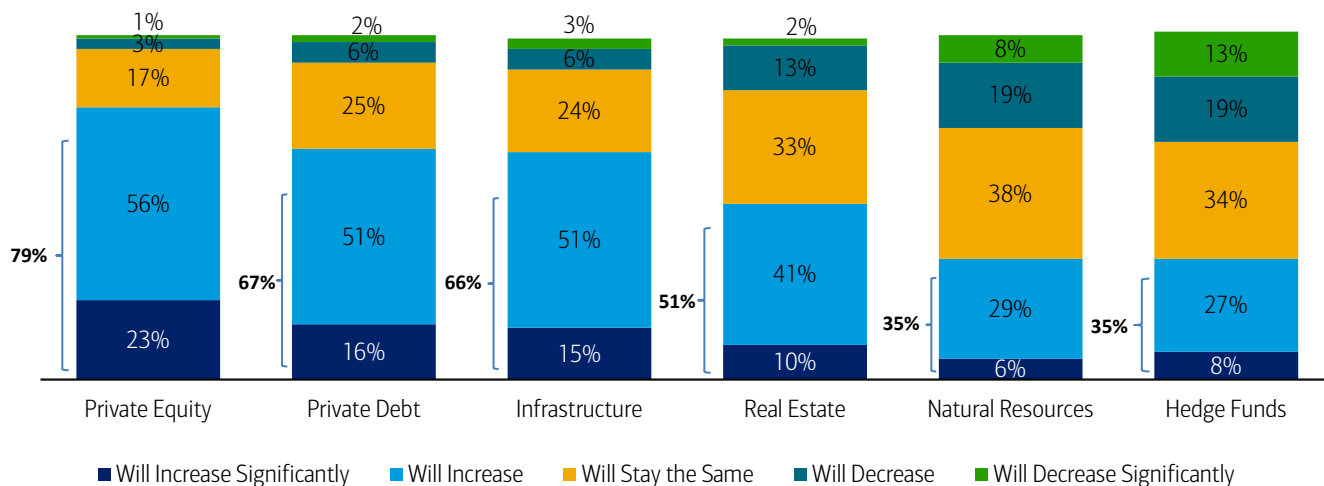


Source: BofA Global Research, Preqin

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Exhibit 8: Preqin Survey on Future Product Allocation (\$Tn)

Institutional investors are looking to allocate additional capital to private markets

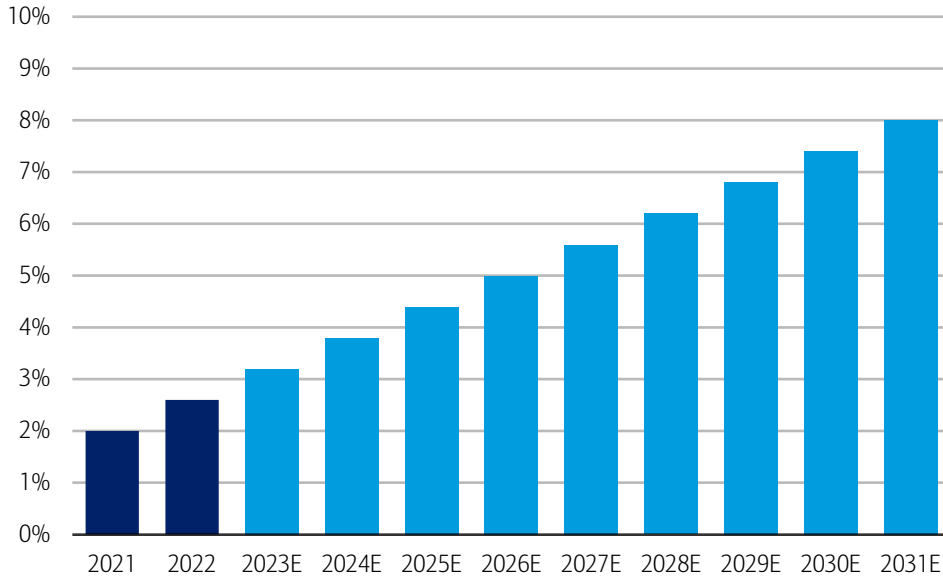


Source: BofA Global Research, Preqin

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Exhibit 9: Private Alts share of Retail Wealth

We expect the private alts' share of retail wealth to continue to grow

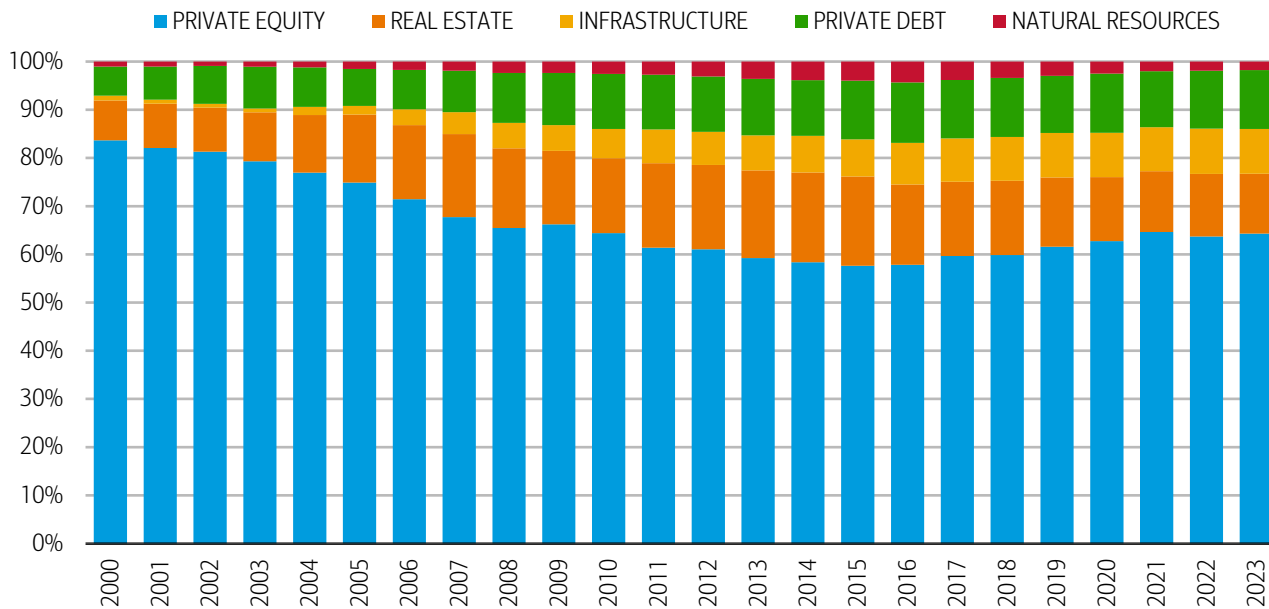


Source: BofA Global Research estimates

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Exhibit 10: Private AuM Mix

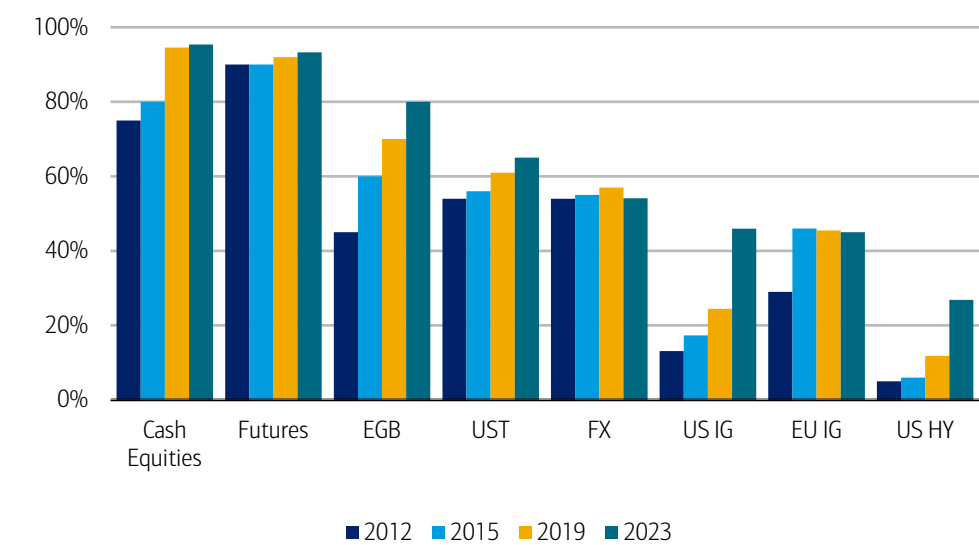
We view private debt & infrastructure as having attractive growth dynamics



Source: BofA Global Research, company reports

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Exhibit 11: Share of Electronic Trading by Asset Class
Markets continue to move to digital but significant runway remains in fixed income segments



Source: Company reports, Bloomberg, S&P Global, FINRA, Bank for International Settlements, BofA Global Research
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BofA stock recommendations

Exhibit 12: Our Rating Matrix
Favor the alts over other segments of our coverage

Coverage Universe				
	Alternative Asset Managers <i>LT Bullish</i>	Traditional Asset Managers <i>Mixed</i>	Brokers <i>Mixed</i>	Exchanges <i>LT Cautious</i>
Buy	<div>BLUE OWL</div> <div>ARES KKR</div> <div>Blackstone TPG</div>	<div>ALLIANCEBERNSTEIN</div> <div>BLACKROCK</div> <div>VictoryCapital</div>	<div>Interactive Brokers</div> <div>Ameriprise Financial</div> <div>RAYMOND JAMES</div>	<div>Cboe</div> <div>VIRTU FINANCIAL</div> <div>ICE Tradeweb</div>
Neutral	<div>PATRIA</div> <div>APOLLO</div> <div>Brookfield</div>	<div>Invesco</div> <div>AMG</div> <div>Janus Henderson</div>	<div>LPL Financial</div>	<div>CME Group</div>
Underperform	<div>CARLYLE</div>	<div>FRANKLIN TEMPLETON</div> <div>T.Rowe Price</div>	<div>Robinhood</div> <div>Charles Schwab</div>	<div>Nasdaq</div>

Source: BofA Global Research
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Buys

- **Blue Owl (OWL, Buy) ***Top Pick*** Fast growth, cheap valuation, high yield... what are we missing? Nothing.** OWL remains the fastest growing name in our coverage with qualities that we think remain underappreciated by the markets. Specifically, most of its AuM is perpetual with very little overall redemption risk and its earnings quality is high as its entirely composed of FRE (versus performance fees). We believe the main risks are incentive fee part 1 declines from lower interest rates, delays in its private BDC IPOs (triggers management fee step-up) and risk to management's aggressive '25 guidance. However, we think all these risks are already more than factored into its low valuation. We attribute its overly depressed valuation to its lack of long-only ownership following its 2021 de-SPAC. As investors meet with management, learn the story and earnings grow, OWL will outperform.
- **KKR (KKR, Buy) ***Top Pick in Large caps*** Our 4-point thesis reinforces the asymmetrical upside potential:** (1) S&P 500 Index add within six months (next after UBER); (2) Acceleration in organic growth with the beginning of its next fundraising cycle in '24 (led by Global Infrastructure Partners V, a relatively easy raise); (3) Significant asymmetrical upside potential to EPS with improving equity markets via performance fees, investment income/balance sheet and capital market transaction fees; (4) Valuation improvement given its robust organic growth opportunity. The key risk will come from potential defaults and performance as KKR has already had some defaults in 2023. Scale/brand is critical, and we view KKR as #2 in the institutional channel, top 3 in the insurance channel, #1 in Asia and improving in the retail channel (moving from Tier 3 to Tier 2). BX is #1 in institutional and retail channels while APO is #1 in insurance.
- **Tradeweb (TW, Buy) - Acceleration in growth with competitive advantages and cyclical tailwinds:** The secular migration of trading from voice to electronic is the fundamental underpinning for TW's growth trajectory over the next 10 years. Adoption rates still remain low across much of TW's businesses, and TW has also been gaining share from other e-trading competitors. This was driven by its first-mover advantage with several technology protocols (portfolio trading, net spotting), its wider product offering (rates, credit, money market, ETFs) and a desire from market participants to not create another CME-style monopoly in rates and credit (which hurt TW's large competitors). We believe TW still has a significant opportunity to improve its share with small and mid-sized buy-side firms relative to its competition. We think the cyclical factors also line-up for TW in 2024 with bond managers getting bigger, launching new funds and trading more. The rebound in liquidity by 2025 from the potential Fed cuts should help too. The key risk is its higher valuation, but we see TW's EPS easily growing into its premium multiple.
- **Intercontinental Exchange (ICE, Buy) - Reacceleration in fixed income and mortgage tech:** ICE's energy futures business regained momentum in 2023 after supply chain disruptions (Ukraine conflict) in 2022 initially depressed volumes. We see additional upside in its European rates business with interest rates normalizing after 15 years of zero rates. We also think ICE's fixed income business will benefit from the bond reallocations. Its index and execution businesses will benefit first and then eventually its data/analytics will follow (2H24). We also view significant asymmetrical upside to ICE's mortgage tech business from synergies related to the BKI deal and higher refis in 2025 which should rebound with lower rates. Note: ICE could not "sell" the deal to investors for more than 12 months due to its anti-trust dispute with the FTC which was just resolved in September. Now, the company can help educate investors on the significant long-term synergies that the deal provides.
- **AllianceBernstein (AB, Buy) - Best way to invest in the bond reallocation theme:** AB is the cleanest way to invest in the bond reallocation theme as it has a



broad fixed income offering globally and currently has strong investment performance (while also possessing zero cash management AuM, where we expect outflows). The AB stock becomes even more attractive given the sharp decline in its relative valuation in 2023 (from +1STDEV versus peers to -1STDEV) and its visible improvement in its operating margin. Specifically, in December '24, AB's expensive New York City lease at 1345 6th Avenue will roll-off its income statement and save the company \$55M per year. Plus, AB will deconsolidate its low margin research business in 1H24, which will provide a second near-term lift to its operating margin. AB is also the only Trad to have a strategic relationship with a large insurance company. This relationship provides AB with AuM, seed capital and M&A capital which enables higher organic growth.

Underperforms

- Charles Schwab (SCHW, Underperform) – forecast deposit growth & net new assets to miss expectations:** SCHW's core deposit growth (due to sorting) and its net new assets (due to dis-synergies from Ameritrade acquisition and size) both missed market expectations in 2023, and we think this will continue. We look for sorting to linger in SCHW's RIA business in 2024 with cash allocations continuing to move down into uncharted territory given the wide gap between its cash sweep offering (45bps) and other cash alternatives (5-6%). From our channel checks, we believe RIAs are more actively managing their cash to enhance their client yields, while a new focus on systemic bank risks after the March regional bank crisis was another driver. We also look for cash allocations in the retail channel to decline in 2024 (fixed income) and likely again in 2025 (equities) as markets move higher and retail chases returns. However, SCHW has a near bulletproof upward NIM trajectory as its first repays its expensive FHLB debt, then reduces its CD funding and eventually reinvests its low yielding securities portfolio. Additionally, lower interest rates will reduce SCHW's unrealized bond losses which will improve its excess capital position and could cause share buybacks to return sooner than expected. While SCHW was a very crowded long when we downgraded the stock in January 2023, it's a lot less crowded today and its valuation is also lower, reducing our conviction.
- T. Rowe Price (TROW, Underperform) – making the right decisions but against a very tough backdrop:** TROW is one of the best active equity managers in the world and commits significantly more resources to its investing effort than peers. This is why its funds have outperformed over long time periods. However, most of its revenues are derived from active equity strategies, which is a business that is still facing long-term headwinds from passive and privates. Compounded by cyclical factors (the '22 bear market) and weaker investment performance in its flagship strategies, this has driven its negative organic growth in '22 and '23. However, in 2023, those strategies as well as its growing target date strategies demonstrated strong investment performance. This was critical after the run-off of very strong 2020 performance placed its target date track records at risk. Despite its organic growth issues, the stock trades at a premium to Trad peers on a PE basis and even on an EV-to-EBITDA basis after adjusting for its significant excess capital position. TROW still has better long-only ownership than peers, but this could fade if its net outflows continue in 2024 as we expect.
- Nasdaq (NDAQ, Underperform) – see growth targets/expectations at risk:** NDAQ uses the network effect from its slow growth cash equities business to cross-sell a variety of information services and software businesses. While these businesses will outgrow its exchange business, we view expectations as high and expect growth to decelerate given channel checks. We also believe NDAQ overpaid for its recent acquisitions, which raised its financial leverage to levels which will prevent capital returns over next year. Additionally, following the decline in the VIX

throughout 2023 and several strong volume years since Covid, we believe industry equity/option volume growth will be lower and competition continues to intensify with the migration to dark venues and new exchange launches (MEMX, MIAX).

Exhibit 13: SCHW Liquidity Uses – 4Q23 (\$B)

While it is impossible to perfectly calculate client cash realignment, net MMF flows offer a good proxy to track liquidity needs

Liquidity Uses	
ETFs	42.8
MMFs	36.4
Cash & Cash Equivalents	23.2
Equities	11.0
Bonds	7.5
FHLB	5.4
Total	126.2

Source: BofA Global Research, company filings

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Exhibit 14: SCHW Liquidity Sources – 4Q23 (\$B)

Seasonality activities (rebalancing, advisory fees, distributions) drove higher cash balances in 4Q23, we expect lower levels in 1Q24 as clients redeploy

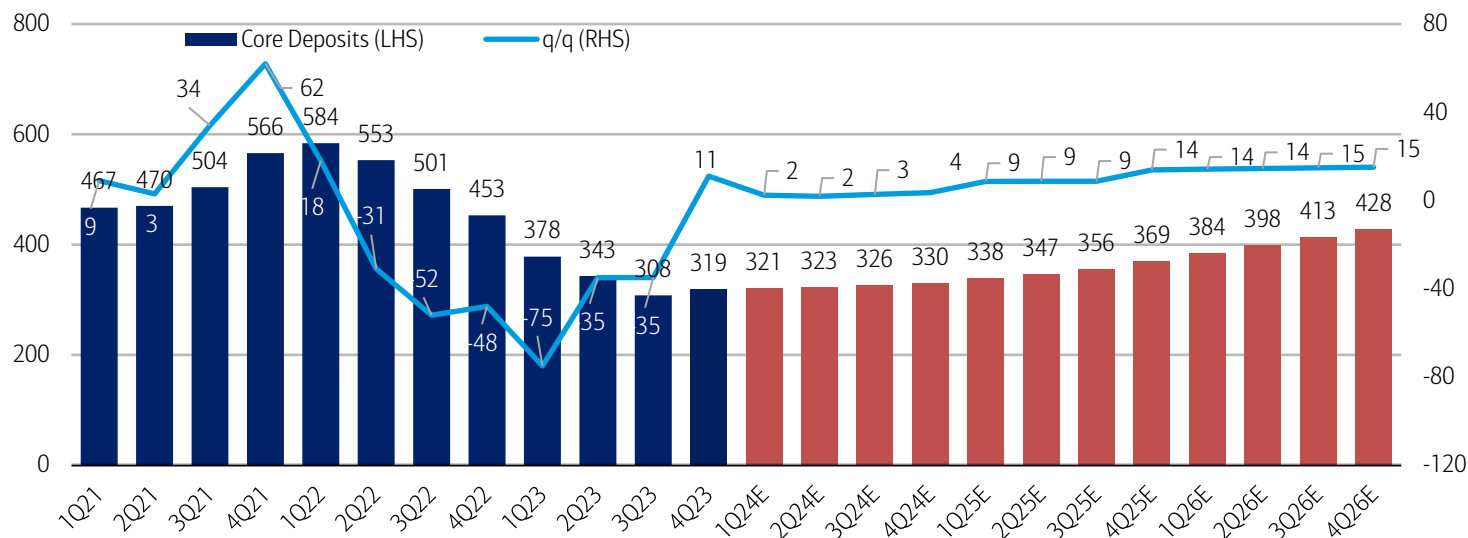
Liquidity Sources	
NNAs	66.3
Mutual Funds	28.9
Hybrids	4.5
CDs	2.8
BDA	2.1
AFS/HTM Proceeds	?
Total	104.6

Source: BofA Global Research, company filings

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Exhibit 15: SCHW Core deposits (\$B)

Core deposits declined \$36B q/q in 3Q23 and subsequently rebounded in 4Q23 due to seasonality factors; while we believe core deposits will grow organically in 1H24, we think sorting will remain at elevated levels limiting growth and extending the time-period SCHW will have to rely on supplemental funding and this pushes back the securities reinvestment bull thesis.

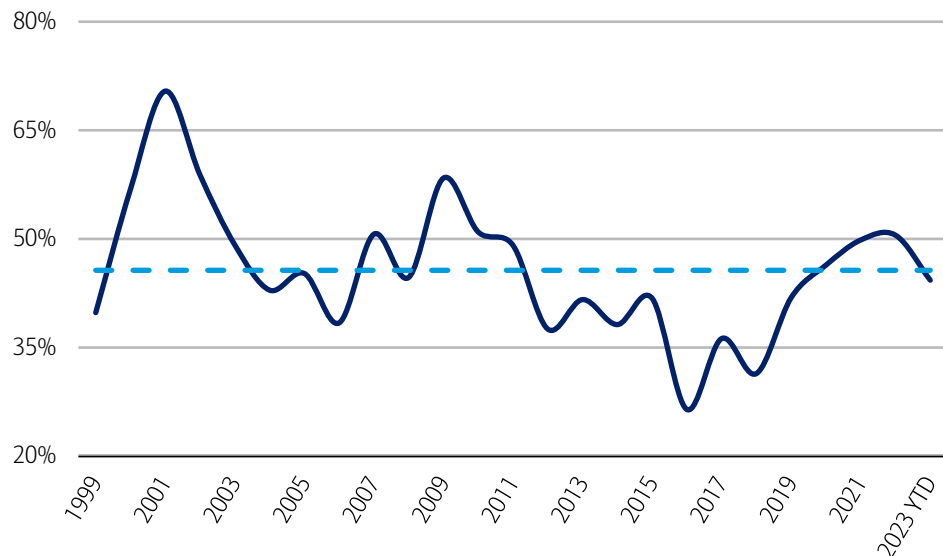


Source: BofA Global Research, company filings

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Exhibit 16: % of total industry US active equity AuM outperforming benchmark (3Y, net of fees)

Investment performance is at its long-term average; this implies >50% of fund managers have underperformed

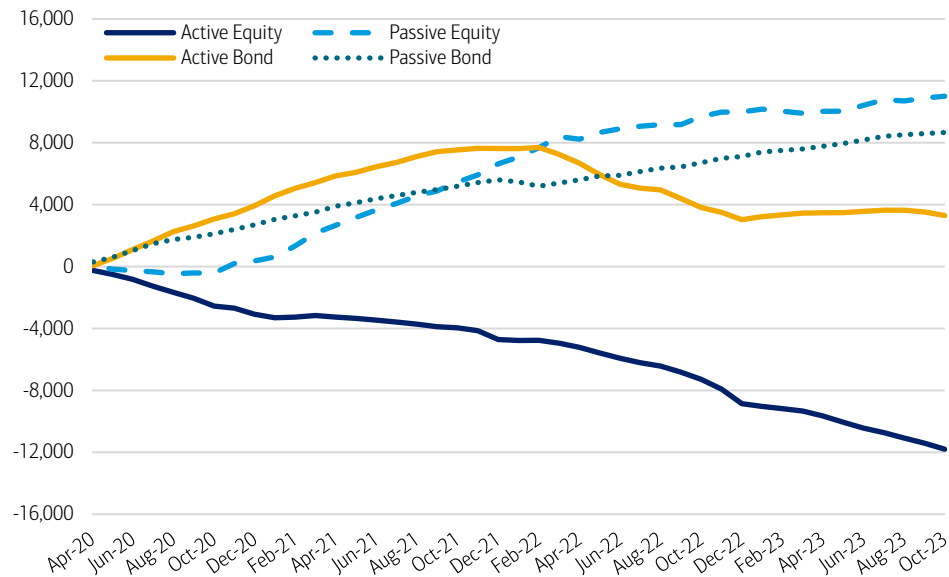


Source: BofA Global Research, Morningstar US domiciled active funds rolling performance as of 11/13/2023; Calculation on a rolling 3Y basis

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Exhibit 17: Cumulative industry US net flows by asset class (\$B)

Passive has been dominant since the COVID pandemic started; active equity continues to shrink

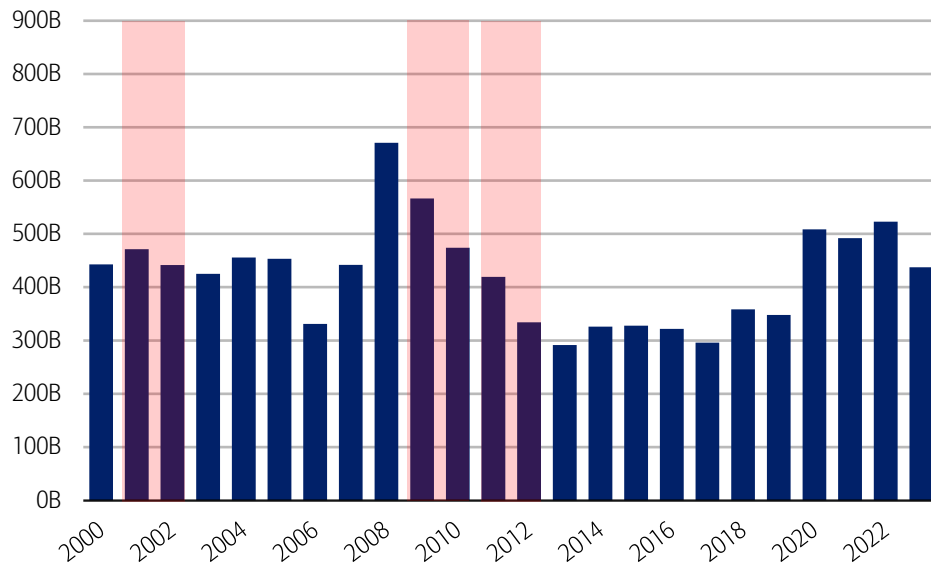


Source: BofA Global Research, ISS Market Intelligence – Simfund Enterprise

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Exhibit 18: Nasdaq's total cash equity volume

History indicates that 2023 will be a tough year for volumes given softness during recoveries



Source: World Federation of Exchanges, CBOE Global Markets, BofA Global Research

Note: Market troughs in 2002, 2009, 2011, 2018, 2020

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Names with very high buyside interest

- **Blackstone (BX, Buy): Expect a rebound in retail flows:** We believe BREIT's redemptions will continue to decline in 2024 and expect its redemption limits in the next few months. Several months after the limits end, we then expect to see a significant pick-up in sales from key retail platforms as financial advisors reallocate to BREIT once its open again after significant outperformance over the last five years. We think this could also signal that BPP (Blackstone Property Partners, Core+ real estate) is on a similar but delayed net flow trajectory while we believe BPP has been halting redemptions since mid-2022. We also look for BXPE (Blackstone's new retail private equity fund) to become a category leader in private equity with BX's retail sales engine running on four cylinders and having a strong track record already. BCRED (BX's retail credit fund) is already flowing well and we expect momentum to continue increasing given the reallocation of retail cash into higher yielding strategies.
-
- **LPL Financial (LPLA, Neutral)** – Robust long-term organic growth trajectory and ROCA (revenue over client AuA) stability but crowded and visible near-term negative catalyst: We look for buyside selling in shares of LPLA in front of the upcoming Fed rate cutting cycle. This is due to the large contribution from spread revenues at LPLA in combination with a high percentage of hedge fund ownership. However, LPLA has been gaining share and widening its offering, and we believe this supports a robust organic growth trajectory over the next five years.

Exhibit 19: Our BREIT Model

Redemptions peaked in January and have continued to improve q/q through November; we estimate the limits will end in 3Q24 followed by a sales acceleration

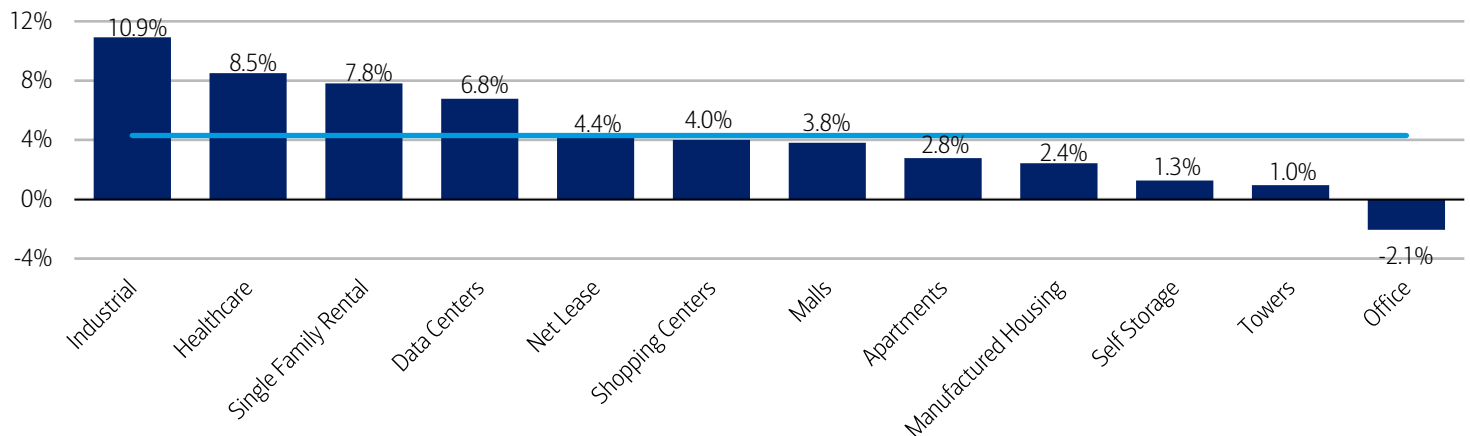
	2023			2024											
(\$M)	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
BofP NAV	65,964	64,178	63,775	63,780	63,352	62,928	63,121	62,782	62,557	62,480	62,454	62,513	62,651	63,735	64,893
Sales	119	116	125	125	125	125	125	125	125	125	125	125	1000	1000	1000
DRIP	84	84	85	85	85	85	85	85	85	85	85	85	85	85	85
Redemption Requests	2,200	1,800	1,800	1,620	1,458	1,312	1,181	1,063	957	861	775	697	628	565	508
% of NAV	3.3%	2.8%	2.8%	2.5%	2.3%	2.1%	1.9%	1.7%	1.5%	1.4%	1.2%	1.1%	1.0%	0.9%	0.8%
Redemptions Filled	1,300	1,200	798	1,276	1,267	646	1,181	1,063	912	861	775	697	628	565	508
% of NAV	2.0%	1.9%	1.3%	2.0%	2.0%	1.0%	1.9%	1.7%	1.5%	1.4%	1.2%	1.1%	1.0%	0.9%	0.8%
% of redemptions filled	59%	67%	44%	79%	87%	49%	100%	100%	95%	100%	100%	100%	100%	100%	100%
Net flow	(1,097)	(1,000)	(588)	(1,066)	(1,057)	(436)	(971)	(853)	(702)	(651)	(565)	(487)	457	520	577
Organic Growth	-1.7%	-1.6%	-0.9%	-1.7%	-1.7%	-0.7%	-1.5%	-1.4%	-1.1%	-1.0%	-0.9%	-0.8%	0.7%	0.8%	0.9%
Ann. Organic Growth	-20.0%	-18.7%	-11.1%	-20.0%	-20.0%	-8.3%	-18.5%	-16.3%	-13.5%	-12.5%	-10.9%	-9.4%	8.8%	9.8%	10.7%
Mark	-1.0%	0.9%	0.9%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
EofP NAV	64,178	63,775	63,780	63,352	62,928	63,121	62,782	62,557	62,480	62,454	62,513	62,651	63,735	64,893	66,118

Source: BofA Global Research estimates, company reports

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Exhibit 20: Market weighted Earnings growth by sector (2023-2024)

We forecast the highest one-year FFO growth in Industrial, Healthcare and Single-Family Rentals



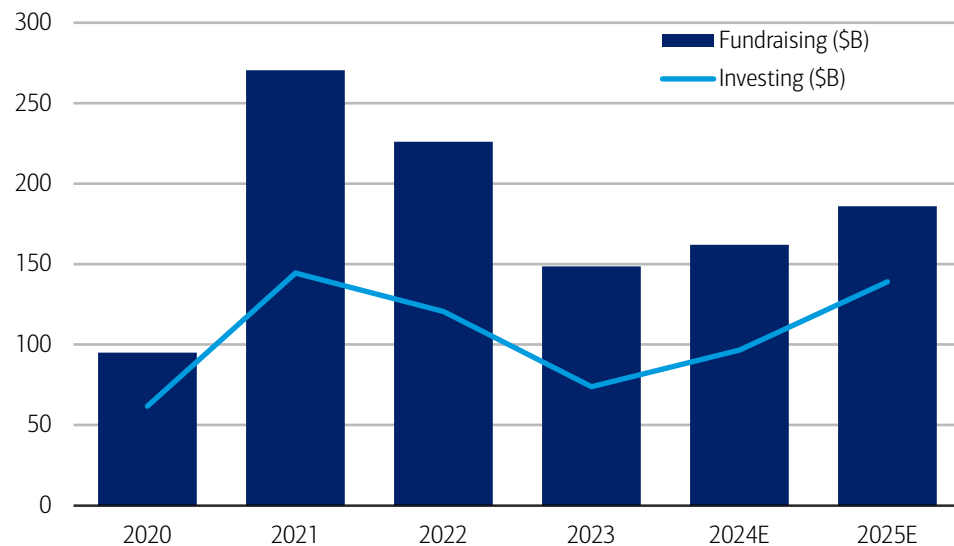
Source: BofA Global Research Estimates

Note: Our estimates use normalized FFO growth estimates. Net Lease, Cold Storage, Data Centers and Towers use AFFO.

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Exhibit 21: BX Fundraising vs. Investing (\$B)

View 2023 as the cyclical trough for both; Implies another LT buying opportunity (similar to 2020)

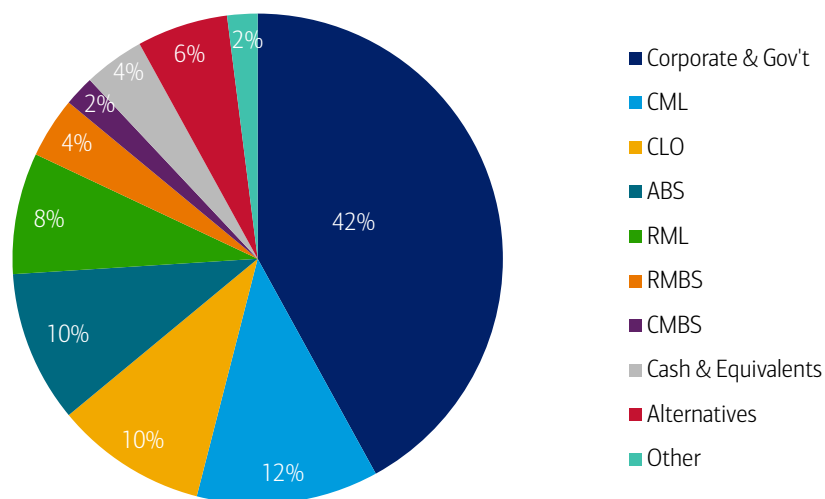


Source: BofA Global Research Estimates, company reports

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Exhibit 22: Athene AuM Mix by Asset Class

Corporate & Gov't, CML, CLO & ABS are the top contributors to AuM; Rising defaults could increase Athene's impairment levels in 2024



Source: BofA Global Research, company reports

Note: Corporate includes public and private debt

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Exhibit 23: Asset manager - Insurer partnerships

Blackstone (BX) and Apollo (APO) have multiple partnerships with insurers, while other asset managers only have one partnership

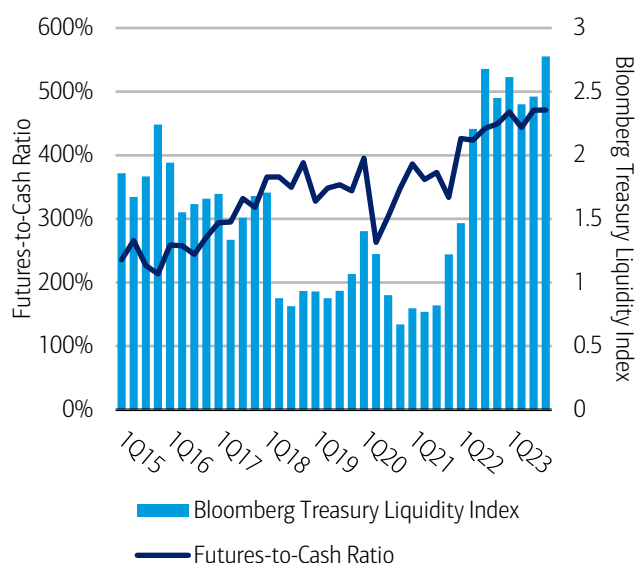
Company	Partnership Agreement	Insurance Partner
APO	Apollo owns 100% of Athene	Athene
	Apollo has a 23.5% economic interest in the equity share capital of Athora	Athora
AB	Strategic partnership with EQH	EQH
BX	BX owns 9.9% of Corebridge (AIG Life & Retirement)	Corebridge (AIG Life & Retirement)
	Strategic partnership with Everlake (Allstate Life & Retirement)	Everlake (Allstate Life & Retirement)
	BX owns ~6% of Resolution life and has a strategic partnership	Resolution Life
	Strategic partnership with F&G Annuities & Life	F&G Annuities & Life
KKR	KKR owns 63% of Global Atlantic and is expected to acquire the remaining 37% by 1Q24	Global Atlantic
ARES	Wholly owned portfolio company of Ares Capital Corporation	Aspida
CG	CG owns 10.5% of Fortitude RE and has a strategic advisory services agreement	Fortitude RE

Source: BofA Global Research, company reports

BofA GLOBAL RESEARCH

Exhibit 24: Treasury market liquidity vs futures-to-cash ratio

Hawkish monetary policy is draining liquidity from cash markets and driving investors toward derivatives



Source: Bloomberg, company reports, BofA Global Research

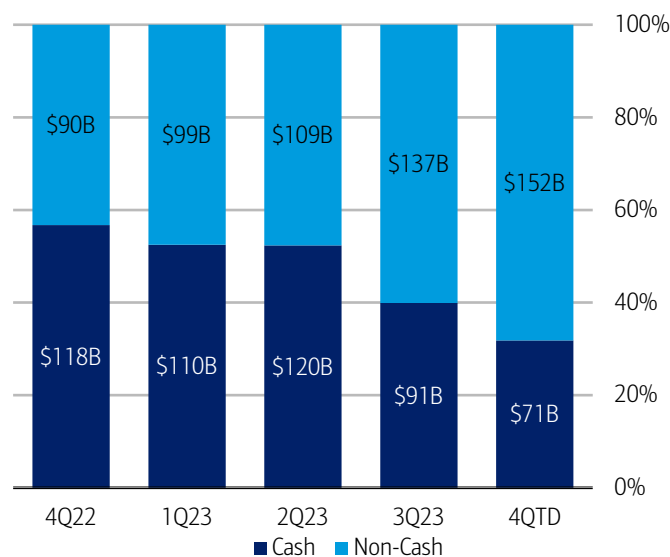
Note: A lower index value = more liquidity;

Futures-to-cash ratio is derived from 10Yr Treasury data

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Exhibit 25: CME Clearinghouse cash vs non-cash margin

Higher yields are driving clients' cleared margin into treasuries, which is lower margin for CME



Source: Company reports, BofA Global Research

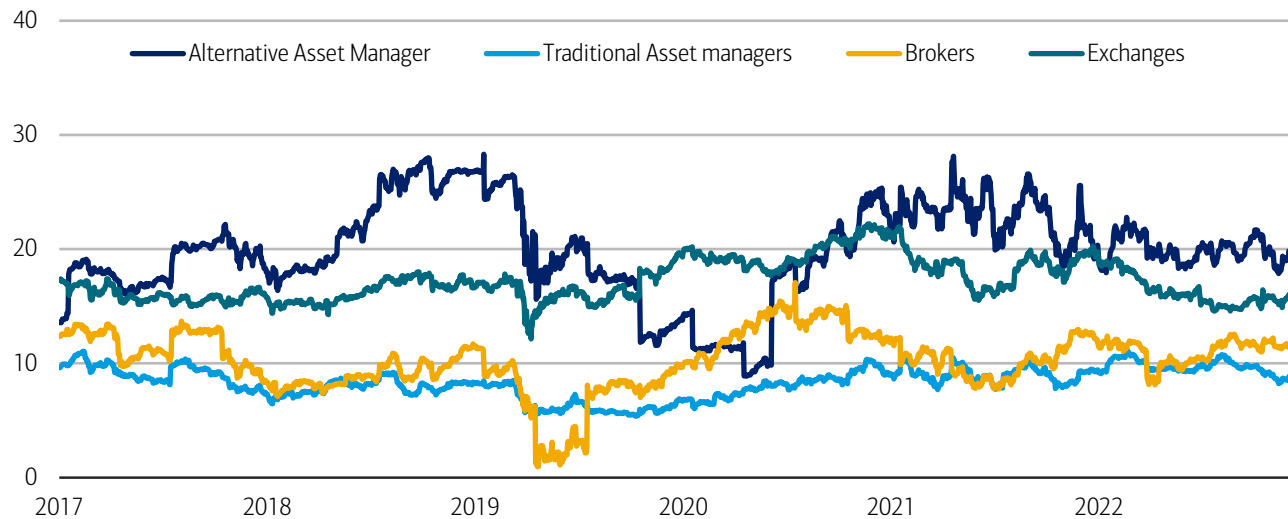
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BofA recent rating changes- Buying Alts vs. downgrading Exchanges & rate sensitive Brokers

IBKR removed from BofA's US-1 List in November '23; OWL added to BofA's US-1 List in September '23; AB upgrade to Buy on 9/4/23; SCHW downgraded to Underperform 1/19/23; IBKR Buy added to BofA's US-1 List in January '23; ICE upgraded to Buy on 11/17/22; KKR upgraded to Buy on 11/1/22; NDAQ downgraded to Underperform on 10/14/22; APO upgrade to Neutral on 9/23/22

Exhibit 26: EV to NTM EBITDA Valuations

Alts and exchanges have re-rated down over the prior two years

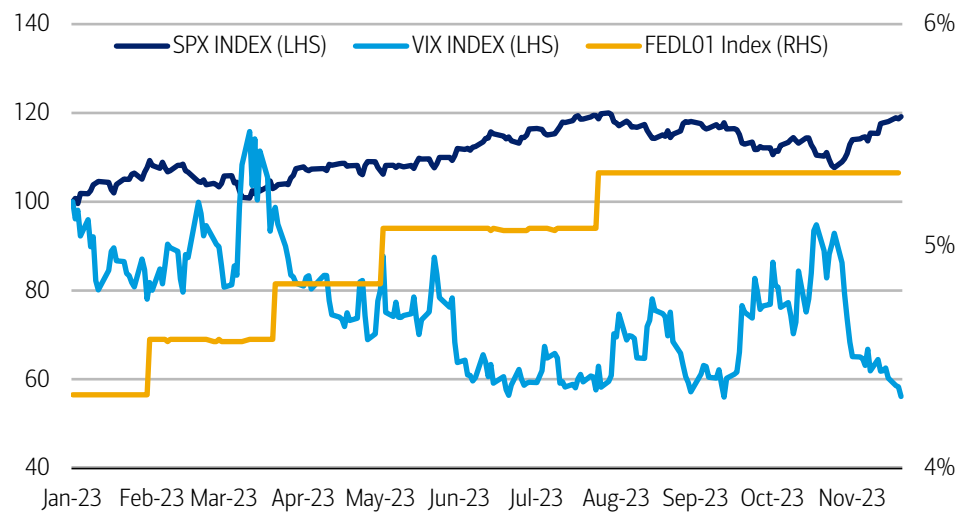


Source: Bloomberg, BofA Global Research

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Exhibit 27: Key macro variables in 2023 = Markets, Volatility and Rates

Higher interest rates & volatility benefited the brokers and exchanges while lower equity markets hurt the asset managers



Source: Bloomberg, BofA Global Research

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Exhibit 28: Stocks mentioned

Prices and ratings for stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
AB	AB US	AllianceBernstein	US\$ 34.16	B-1-7
APO	APO US	Apollo	US\$ 108.88	B-2-8
ARES	ARES US	Ares Management Corp	US\$ 137.06	B-1-7
BLK	BLK US	BlackRock, Inc.	US\$ 801.76	B-1-7
BX	BX US	Blackstone	US\$ 130.08	B-1-7
OWL	OWL US	Blue Owl Capital	US\$ 17.69	B-1-7
SCHW	SCHW US	Charles Schwab	US\$ 64.5	B-3-7
IBKR	IBKR US	Interactive Brokers	US\$ 98.16	B-1-7
ICE	ICE US	Intercontinental	US\$ 135.46	B-1-7
IVZ	IVZ US	Invesco	US\$ 16.37	B-2-7
KKR	KKR US	KKR & Co. Inc.	US\$ 97.62	B-1-7
LPLA	LPLA US	LPL Financial	US\$ 251.44	B-2-7
NDAQ	NDAQ US	Nasdaq	US\$ 56.83	B-3-7
HOOD	HOOD US	Robinhood Markets	US\$ 12.01	C-3-9
TROW	TROW US	T. Rowe Price	US\$ 109.99	B-3-7
CG	CG US	The Carlyle Group	US\$ 45.31	B-3-7
TW	TW US	Tradeweb	US\$ 100.07	B-1-7
VIRT	VIRT US	Virtu	US\$ 16.66	B-1-7

Source: BofA Global Research

BofA GLOBAL RESEARCH

Price objective basis & risk**AllianceBernstein (AB)**

Our price objective (PO) is derived from a price to earnings method. We apply a 12.5x multiple on our 2026E EPS to obtain our \$50 PO. 12.5x is in line with the company's five-year average but represents a premium to its traditional/active peer group excluding BlackRock. We think that AB's improving business mix/organic growth trajectory could support a higher valuation in the future if AB's total net flows rebound in 2024.

Downside risks to AB: (1) active to passive rotation + industry fee pressure, (2) AB's business model is procyclical and is impacted from market prices, (3) Bernstein's research business faces secular pressures relating to industry consolidation, (4) AB has soft investment performance in its active equity business, (5) its large APAC franchise faces risks related to a potential US-China decoupling and a China-Taiwan conflict.

Upside risks: (1) improving net flows, (2) investment performance (improving since June 16), and (3) favorable markets.

Apollo Global Management (APO)

Our \$114 price objective for Apollo is derived from a 12.5x multiple on APO's adjusted 26E cash earnings. We estimate APO will continue to trade below the industry mean (7-25x) given its high mix of insurance earnings.

Upside risks are S&P 500 index addition (estimate 2023), inorganic growth announcements for Athene, rate sensitivity of Athene's variable rate assets, and defensive organic growth.

Downside risks are credit risk at Athene and a pick-up in annuity surrenders with higher long-term interest rates.

Ares Management Corp (ARES)

Our \$146 price objective for Ares Management is derived from 22.5x 2026E cash earnings. Our definition of cash earnings uses the company's distributable earnings metric and adds back stock-based comp. Our multiple is in-line with the stock's current valuation and at the higher end of the range of Alt peers (9-20x on corporate definition). However, it is higher than ARES's historical range (5Y average = 18x) as the stock was undervalued before 2020, partly due to its partnership structure (pre C-Corp conversion) and lack of long-only/passive ownership. Risks to our PO: investing backdrop more challenging, adverse macroeconomic scenarios, US and international tax reform and succession planning.

BlackRock, Inc. (BLK)

Our PO of \$1025 is based on a 20x 2026E EPS multiple. This is slightly lower than the mid-point of where the stock has traded over the last 12-18 months (17 to 24x range on next 12 month EPS). The asset manager stocks are currently trading at a wide range (5-42x) with an average of 15x EPS and our PO assumes BLK maintains its historical premium (especially relative to the traditional asset managers given BLK's higher growth prospects).

Risks to our PO are (1) capacity and regulatory issues created by size, (2) negative markets or market-driven mix shift (divergent beta), (3) fee pressure (pricing cuts).

Blackstone (BX)

Our price objective (PO) for Blackstone is \$146 and is derived from 22.5x 2026E cash earnings. Our definition of cash earnings uses the company's distributable earnings metric and adds back stock-based comp expense. Risks to our PO are a weaker macro and capital markets backdrop, legal and political risk, increased regulation and tax reform, key person risk and a unique corporate structure.

Blue Owl Capital (OWL)

Our \$23 price objective for Blue Owl is derived from 20x 2026E cash earnings. Our definition of cash earnings uses the company's distributable earnings metric and adds back stock-based comp. Our multiple is in line with the mid-point of the industry range (7-25x). We view OWL's earnings quality as higher than peers given its very high mix of fee-related earnings, permanent capital AuM composition and higher growth trajectory.

Risks to our PO: investing backdrop more challenging (intensifying competition in private debt), lending to technology companies, Part 1 fees included in FRE, variable dividend payout, tax receivable agreement, secondary sale risks from large owners (Neuberger Berman), corporate structure (voting rights), merger integration (Oak Street), adverse macroeconomic scenarios and US and international tax reform.

Charles Schwab Corp. (SCHW)

Our price objective (PO) for SCHW is \$58 and is derived from a price to earnings method. We apply a 12.5x multiple on our 2026E EPS to obtain our PO. We use 12.5x given (1) elevated sorting will continue through mid-2023, (2) "bank" risks would weigh on SCHW's multiple and (3) forecast net new assets to slow over the near-term.

Risks to our PO are an extension of the Fed hiking cycle positively affecting SCHW's securities portfolio reinvestment opportunity and muted sorting activity.

Interactive Brokers (IBKR)

Our price objective (PO) for IBKR is \$139 and is derived from a price to earnings method. We apply a 17.5x multiple to our 2026E EPS to obtain our PO. Our multiple of 17.5x was chosen as we are valuing IBKR off of cyclically peak profits, and compares to the low end of IBKR's historical valuation range (17.5-30x).

Risks to our PO are: changing industry dynamics in China and US regulatory risks with regard to payment for order flow.

Intercontinental Exchange (ICE)

Our primary valuation metric for US Exchanges is price to long-term earnings (2026E). We focus on long-term EPS because we prefer to normalize for any near-term factors, and it also provides credit for an additional two years of growth. We apply a 20x multiple on our 2026E EPS to derive our \$152 PO. Our multiple is equal to ICE's historical average and a small premium to peers in light of ICE's superior growth prospects. We look for ICE's valuation to re-rate higher from current levels as mortgage origination volumes bottom. Additionally, ICE's accelerating earnings growth and improve earnings quality support a higher valuation.

Risks are: (1) elevated financial leverage, (2) subdued listings activity, (3) contrarian capital allocation decisions (eBay, BKI).

Invesco (IVZ)

Our price objective (PO) for IVZ is \$19 and is derived from a price to earnings method. We apply a 10x multiple to our 2026E EPS to obtain our PO, which is modestly above its five-year average (7.5x). We think 10x being modestly above the five year average is reasonable given our estimate for solid organic growth in '24/25 and that IVZ should trade in line with its large cap traditional peer group (excluding BLK).

Risks to our PO are (1) fee rate pressures, (2) sustainability of positive net flows, (3) dis-synergy risk arising from future M&A transactions, (4) elevated financial leverage, and (5) soft investment performance in its traditional business.

KKR & Co. Inc. (KKR)

Our price objective for KKR is \$111 and is derived from 17.5x 2026E cash earnings. Our definition of cash earnings uses the company's distributable earnings metric and adds back stock-based comp. We apply the multiple on our normalized cash earnings forecast for KKR's asset management business.

Downside risks: Strong capital deployment activity in the frothy years (2020-21), valuation complexity with FRE, expense allocations, insurance business and capital intensive model, business model is private equity heavy and this business is experiencing multiple cyclical headwinds (returns - inflation & bear market, fundraising - crowded backdrop, denominator effect), insider-selling potential, KKR's voting structure may prevent an S&P 500 Index add.

LPL Financial Holdings (LPLA)

Our price objective (PO) for LPLA is \$285 and is derived from a price to earnings method. We apply a 11x multiple to our 2026E to obtain our PO. Its closest public comps currently trade at 8-11x consensus EPS. but we think that LPLA offers a higher growth trajectory and its business model is less capital intensive.

Risks to our PO are sustainability of its long-term growth, revenue pressure from maturing fixed contracts, soft deposit demand from third party banks, risk of Fed rate cuts, and elevated financial leverage.

Nasdaq (NDAQ)

Our primary valuation metric for US Exchanges is price to long-term earnings (2026E). We focus on long-term EPS because we prefer to normalize for any near-term factors, and it also provides credit for an additional two years of growth. We apply a 15x multiple on our 2026E EPS to derive our \$55 PO on NDAQ. Our multiple reflects a slight discount on NDAQ's recent historical average given the recent earnings quality reduction and our expectation for decelerating growth.

Upside risks are (1) a bull market could revive listings activity and drive revenue gains in indexing from beta, (2) a prolonged Democratic administration could enable SEC Chair Gensler to complete his equity market structure reforms and move volumes back onto exchanges, (3) the secular trend toward derivatives (vs. cash) could offset the downward normalization in options trading, and (4) NDAQ's new crypto custody business could enhance growth.

Downside risks are (1) NDAQ's premium valuation, (2) MEMX's entrance into the options market, (3) retail investor disengagement, (4) decelerating Market Tech sales, (5) SEC Chair Gensler's inability to complete his market structure agenda during his administration, and (6) volume headwinds as we transition toward a bull market.

Robinhood Markets (HOOD)

Our price objective (PO) of \$12 for Robinhood is derived from a EBITDA multiple method: We apply a 7x multiple to forecasted 2026 EBITDA to obtain a valuation which we then discount back one year to obtain our PO. Our multiple is based on peers. We also no longer include excess cash as we are including net interest revenue generation from that cash and wish to avoid double counting.

Upside risks to our PO are: expansion of cryptocurrency offering, entrance into international markets, and new product launches.

Downside risks to our PO are: US regulatory risks regarding payment for order flow, continued reversal of pandemic related tailwinds, and decelerating growth potential given its high market share within its addressable market.

T. Rowe Price (TROW)

Our price objective (PO) for TROW is \$101 and is derived from a price to earnings method. We apply a 10.0x multiple on our 2026 EPS estimate plus \$11 for TROW's excess capital (and zero debt) to obtain our PO. 10.0x is lower than TROW's 5Y average multiple of 15.0x, which is due to our reduced forward growth estimate for EPS/AuM.

Upside risks to our PO are (1) strong fundraising activity at Oak Hill which would improve TROW's future organic growth, (2) acceleration in international expansion which would help net flows, (3) improving margins following the new partnership with FIS, (4) reversal in the negative net flow trend following the formation of TRPIM.

Downside risks to our PO are (1) pricing pressure, (2) elevated net redemptions in its 401k business, (3) deterioration in investment performance, or (4) disruption to the company's investment culture.

The Carlyle Group (CG)

Our \$37 price objective for the Carlyle Group is derived from a 10x multiple on our 2026E cash earnings estimate. Our cash earnings definition reduces stock-based comp from the company's distributable earnings definition. Our multiple is lower than peers due to an expected deceleration in growth and emerging fundraising challenges.

Upside risks to our PO include (1) \$80B+ of dry-powder which CG can deploy into a cheaper asset backdrop, (2) earnings quality improvement (FRE was 50% of EPS in 1H22), (3) future acquisitions of FRE rich & scalable platforms, (4) visibility into near-term EPS given announced exits and record accrued carry, and (5) Fortitude's deployment of \$4B in excess capital.

Tradeweb Markets Inc. (TW)

Our price objective (PO) for Tradeweb is derived from a price to earnings valuation method. We apply a 30x multiple on our 2026E EPS to derive our \$111 PO. Our multiple

is supported by TW's recent valuation range and assumes TW maintains a premium to the US exchanges due to higher visibility into its long-term growth trajectory combined with its defensive qualities.

Risks are (1) competitive pressures intensifying (MKTX, Bloomberg, ICE, Trumid), (2) a high mix of transactional revenues, (3) secular pressure to trading commissions (although TW's commissions are still a low % of bid-ask), and (4) a high valuation relative to slower-growth peers.

Virtu Financial (VIRT)

Our \$20 PO is formed using a 5.5x EV-to-EBITDA multiple on our 2026 EBITDA forecast. Over the last 5 years, VIRT has traded at a multiple of 5-10x and its exchange peers currently trade at a rich premium of 15x. Risks to our thesis include: (1) Intensifying competition in equities and strong rivals (including powerhouse Citadel Securities), (2) Continued cyclical pressures from tight monetary conditions, (3) Extreme volatility that dampens opportunities or drives losses, (4) Adverse regulatory outcomes, (5) Lack of scale in options markets and (6) Elevated financial leverage.

Analyst Certification

I, Craig Siegenthaler, CFA, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

Special Disclosures

BofA Securities is currently acting as the manager to the open offer by Pegasus Holdings III, LLC in connection with its acquisition of Federal-Mogul Goetze (India) Limited, which was announced on February 23, 2022.

BofA Securities is currently acting as buy-side advisor to Frontier Tower Associates Philippines Inc, a regional telecom infrastructure platform backed by KKR to acquire a portion of telecoms towers from Smart Communications, a wholly owned subsidiary of PLDT Inc, which was announced on March 17, 2023.

BofA Securities is currently acting as financial advisor to Energy Capital Partners Holdings LP and affiliated entities ("ECP"), minority-owned by funds managed by Blue Owl Capital Inc (formerly Dyal Capital Partners), in connection with its proposed sale of the Company which was announced on September 6, 2023. The proposed transaction is subject to approval by shareholders of Bridgepoint Group PLC. This research report is not intended to provide voting advice, serve as an endorsement of the proposed transaction, or result in the procurement, withholding or revocation of a proxy.

BofA Securities is currently acting as Financial Advisor to Blackstone Inc in connection with its proposed arrangement agreement under which Blackstone Real Estate Partners X LP together with Blackstone Real Estate Income Trust Inc will acquire Tricon Residential Inc, which was announced on Jan 19, 2024. The proposed transaction is subject to approval by shareholders of Tricon Residential Inc. This research report is not intended to provide voting advice, serve as an endorsement of the proposed transaction, or result in the procurement, withholding or revocation of a proxy.

BofA Securities is currently acting as a Financial Advisor to Canadian Solar Inc in connection with its subsidiary Recurrent Energy LLC's secured preferred equity investment commitment, convertible into common equity, for Recurrent Energy BV from BlackRock Inc through a fund managed by its Climate Infrastructure business, which was announced on January 23, 2024.

US - Brokers, Asset Managers, & Exchanges Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	AllianceBernstein	AB	AB US	Craig Siegenthaler, CFA
	Ameriprise Financial	AMP	AMP US	Craig Siegenthaler, CFA
	Ares Management Corp	ARES	ARES US	Craig Siegenthaler, CFA
	BlackRock, Inc.	BLK	BLK US	Craig Siegenthaler, CFA
	Blackstone	BX	BX US	Craig Siegenthaler, CFA
	Blue Owl Capital	OWL	OWL US	Craig Siegenthaler, CFA
	Cboe Global Markets	CBOE	CBOE US	Craig Siegenthaler, CFA
	Interactive Brokers	IBKR	IBKR US	Craig Siegenthaler, CFA
	Intercontinental Exchange	ICE	ICE US	Craig Siegenthaler, CFA
	KKR & Co. Inc.	KKR	KKR US	Craig Siegenthaler, CFA
	Raymond James Financial	RJF	RJF US	Mark McLaughlin, CFA
	TPG Inc	TPG	TPG US	Craig Siegenthaler, CFA
	Tradeweb Markets Inc.	TW	TW US	Craig Siegenthaler, CFA
	Victory Capital Holdings, Inc.	VCTR	VCTR US	Craig Siegenthaler, CFA
	Virtu Financial	VIRT	VIRT US	Craig Siegenthaler, CFA
NEUTRAL				
	Affiliated Managers Group	AMG	AMG US	Craig Siegenthaler, CFA
	Apollo Global Management	APO	APO US	Craig Siegenthaler, CFA
	Brookfield Asset Management	BAM	BAM US	Craig Siegenthaler, CFA
	CME Group Inc	CME	CME US	Craig Siegenthaler, CFA
	Invesco	IVZ	IVZ US	Craig Siegenthaler, CFA
	Janus Henderson Group	JHG	JHG US	Craig Siegenthaler, CFA
	LPL Financial Holdings	LPLA	LPLA US	Craig Siegenthaler, CFA
	Patria	PAX	PAX US	Craig Siegenthaler, CFA
UNDERPERFORM				
	Charles Schwab Corp.	SCHW	SCHW US	Craig Siegenthaler, CFA
	Franklin Resources	BEN	BEN US	Craig Siegenthaler, CFA
	Nasdaq	NDAQ	NDAQ US	Craig Siegenthaler, CFA
	Robinhood Markets	HOOD	HOOD US	Craig Siegenthaler, CFA
	T. Rowe Price	TROW	TROW US	Craig Siegenthaler, CFA
	The Carlyle Group	CG	CG US	Craig Siegenthaler, CFA

Disclosures

Important Disclosures

Equity Investment Rating Distribution: Financial Services Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	156	53.79%	Buy	94	60.26%
Hold	72	24.83%	Hold	48	66.67%
Sell	62	21.38%	Sell	35	56.45%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R2}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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