BofA SECURITIES

Business and Information Services

# 2024 year ahead: looks like another year playing armchair economist

**Estimate Change**

**08 January 2024**

Equity
United States
Business & Information Services

**Heather Balsky**
Research Analyst
BofAS
+1 646 855 1497
heather.balsky@bofa.com

**Wahid Amin**
Research Analyst
BofAS
+1 646 855 4724
wahid.amin@bofa.com

**Emily Marzo**
Research Analyst
BofAS
+1 646 855 4057
emily.marzo@bofa.com

ALIT: Alight
ARMK: Aramark
CLVT: Clarivate
DNB: Dun & Bradstreet
EFX: Equifax
FA: First Advantage
IT: Gartner
MCO: Moody's
SPGI: S&P Global
TRU: TransUnion

## The three themes we're focused on for 2024

We challenge investors to find a more idiosyncratic sector than Information & Business Services. Despite that, we think there are three important overarching topics for 2024: 1) the impact of likely lower US interest rates, 2) price increases normalizing as inflation eases, and 3) companies (hopefully) refining their Generative AI (GenAI) strategies. In addition, there are two key micro themes we are focused on: 1) likely rising debt issuance as refinancing needs mount (benefitting Moody's and S&P ratings revenues), and the still sluggish US and European labor markets (pressuring ASGN, Robert Half, and Manpower staffing revenues). We discuss each in more detail in this report.

## The gravitational pull of lower rates

BofA's Econ team is projecting Fed rate cuts starting in March 2024, including four 25bp cuts in 2024 (and another four 25bp cuts in 2025). We see five key benefits from likely lower rates: 1) potential valuation expansion (as discount rates fall), 2) a better investor appetite for levered companies (our most levered names include ALIT, ARMK, CLVT, DNB & TRU), 3) easing variable interest costs (most exposed include ARMK, FA, CLVT, & TRU), 4) a likely mortgage market rebound (EFX & TRU exposed), and 5) a greater willingness by corporates to issue debt (SPGI & MCO exposed).

## Pricing power to modestly ease in 2024

Many stocks we cover benefitted from outsized price increases in 2022/23 to offset inflationary headwinds, especially higher labor costs. However, in 2024, we expect price increases to largely moderate from 2022/23 highs as cost inflation lessens. This means that companies will likely need to make up the delta with higher volumes via new customer growth or upselling.

## Looking for clearer GenAI plans across our coverage

We don't expect Generative AI to fuel 2024 sales growth. Instead, we're looking for more refined plans/strategies as the year progresses, which should lead to 2025/26 sales benefits. Some companies are already experimenting with commercialization (eg. Moody's recently launched its Research Assistant), but most are in early innings. The one standout is Thomson Reuters, which is already monetizing GenAI in its Legal segment. Because of GenAI enhancements, it's already garnering higher pricing for its latest Westlaw launch (Precision). Thomson's ability to get higher pricing bodes positively for the Information Services sector over the mid-term.

## Top picks: EFX, MCO, IT, SPGI

Heading into 2024, we highlight Buy-rated S&P, Moody's and Gartner's upside potential. For S&P and Moody's, we think the mounting debt refinancing wall is a material tailwind (see our June 2023 launch note and charts below). For Gartner, we're bullish on its improving sales productivity as newer salespeople hit their stride and Tech vendor demand stabilizes/improves (see our 11/5/2023 and 11/15/23 notes). We also like Equifax into 2024 assuming the mortgage market rebounds. (see today's upgrade). We also adjust our estimates for companies under coverage in this note (see Exhibit 33).



Timestamp: 08 January 2024 06:00AM EST

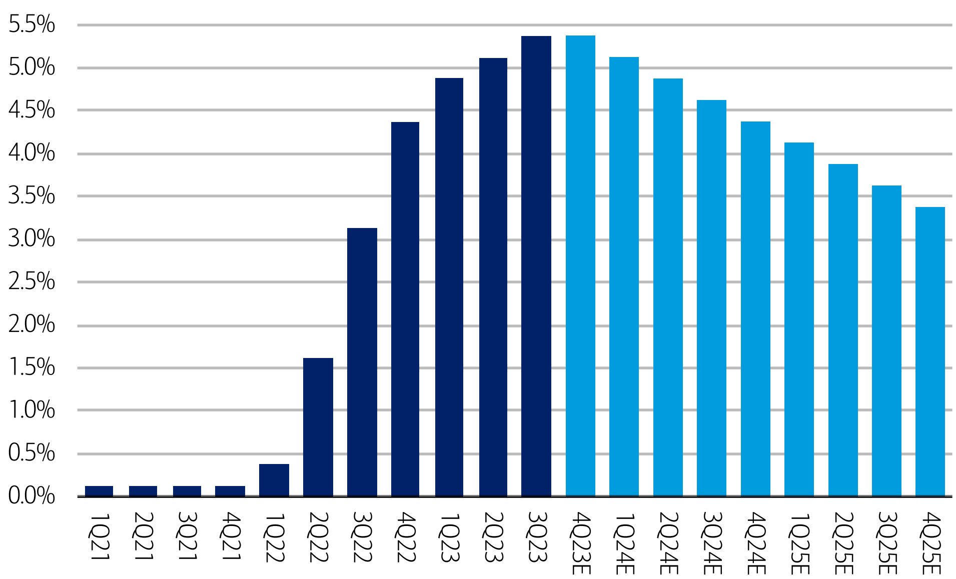
# No sleep until Brooklyn (or the Fed cuts)

Over the last two years, rates have been a material market driver and influence on investment decisions. We think higher rates have impacted our Information and Business services coverage in five material ways. This included 1) catalyzing multiple contraction, 2) fueling investor preference for less levered companies, 3) increasing interest expense for companies with high variable rate debt exposure, 4) severely pressuring credit bureaus' mortgage revenues, and 5) constraining rating agencies' ratings revenues (tied to debt issuance).

Entering 2024, with the Fed signaling three cuts next year, the conversation has already begun to shift from the negative impact of higher rates to the positive impact of rate cuts. Our US Macroeconomic team expects four 25bp rate cuts in 2024 (starting in March).

Consequently, we see five key benefits from lower rates (a reversion towards the mean): 1) potential valuation expansion (as discount rates fall), 2) a better investor appetite for levered companies, 3) easing variable interest costs, 4) likely mortgage market stabilization and rebound, and 5) a greater willingness by corporates to issue and refinance debt. We discuss each in more details below.

**Exhibit 1: BofA's US Macro team expects the Fed Funds rate to fall 200bp to 3.375% by 4Q25**
Through 3Q23, rates were up 525bp since 4Q21




**Source:** BofA Global Research estimates, Bloomberg

BofA GLOBAL RESEARCH

## 1) Lower rates could support valuation expansion

**Key equity exposures: our full Info & Business service coverage (20 stocks)**

The anticipation and implementation of higher rates led to sector multiple contraction in the early part 1H22. Investors were worried that rates would lead to a slower macroeconomic environment and recession, but also were factoring in a higher valuation discount rate. When looking at average monthly two-year forward EV/EBITDA, Information and Business service valuation multiples contracted 16% and 5% (9% ex Strategic Education) between November 2021 and June 2022.

Since the summer of 2022, valuation multiples have been choppy, but rangebound, despite rising rates. This is because higher rates were priced into the market prior to Fed actions.

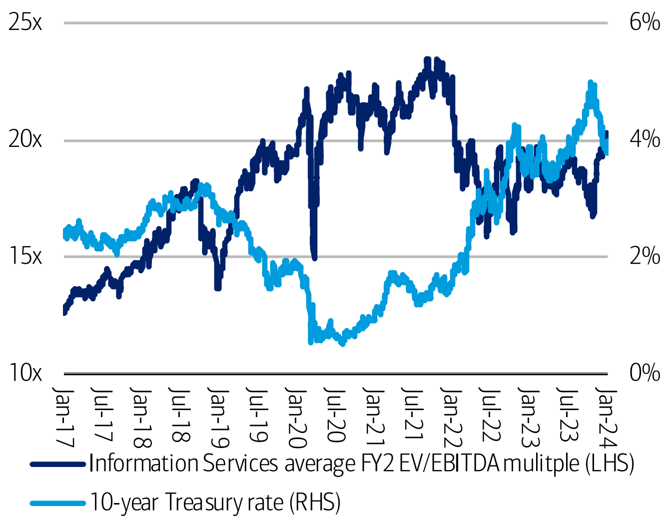
Just as higher rates pressured multiples, we expect lower rates to support higher multiples. The rebound in multiples seems to have already started in anticipation of cuts. Since the November 1st Fed meeting, 10-year treasury rates are down ~70bp, while our Information and Business Services coverage FY2 EV/EBITDA multiples have expanded by 15% and 8% on average.

In our view, the degree to which lower rates boost 2024 multiples will depend on the pace and extent of rate declines, and even more so: how much investors think rates will fall. Between January 2022 and August 2023, the Fed Funds rate climbed from nearly 0% to 5.3%.

Now, BofA's economics team is guiding to a 200bp cumulative cut to 3.375% between now and year-end 2025. Consequently, we do not expect group valuations to recover to prior peaks levels from rate cuts (although individual stocks could have idiosyncratic drivers that get them to or above peak levels).

**Exhibit 2: Information Services' multiples contracted in 1H22 amid the anticipating of rate increases and actual rate increases**

On average, Information Services EV/EBITDA multiples(1) fell 16% between November 2021 and June 2022



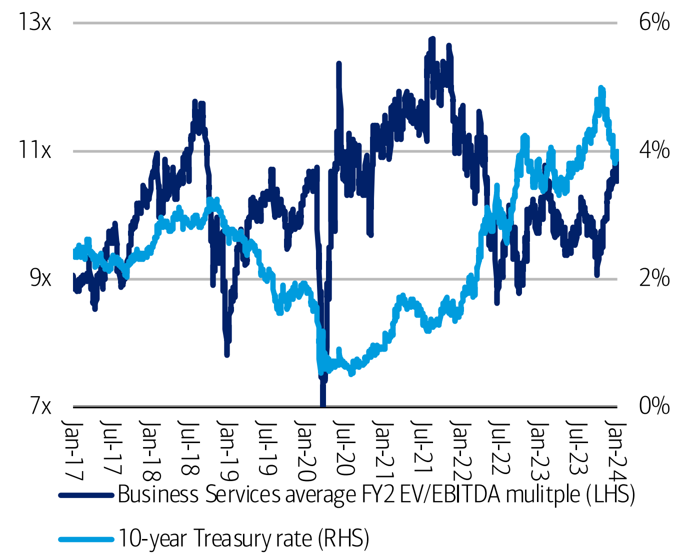

**Source:** Bloomberg

(1) Reflects average multiples for the month

BofA GLOBAL RESEARCH

**Exhibit 3: Business Services' multiples also fell in 1H22**

On average, Business Services EV/EBITDA multiples(1) fell 5% between November 2021 and June 2022 (or (9)% excluding Strategic Education)

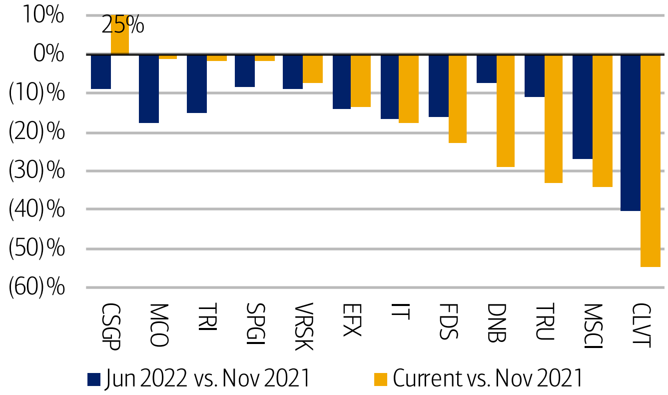



**Source:** Bloomberg

(1) Reflects average multiples for the month

BofA GLOBAL RESEARCH

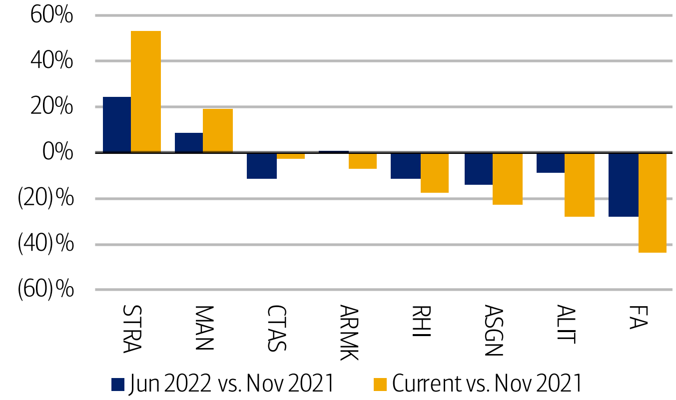
**Exhibit 4: Information Services companies FY2 EV/EBITDA percent multiple contraction (vs. November 2021)**
Clarivate, MSCI, TransUnion, and Dun & Bradstreet have seen the most multiple contraction since November 2021




**Source:** Bloomberg

BofA GLOBAL RESEARCH

**Exhibit 5: Business Services companies FY2 EV/EBITDA percent multiple contraction (vs. November 2021)**
First Advantage, Alight, ASGN, and Robert Half have seen the most multiple contraction since November 2021




**Source:** Bloomberg

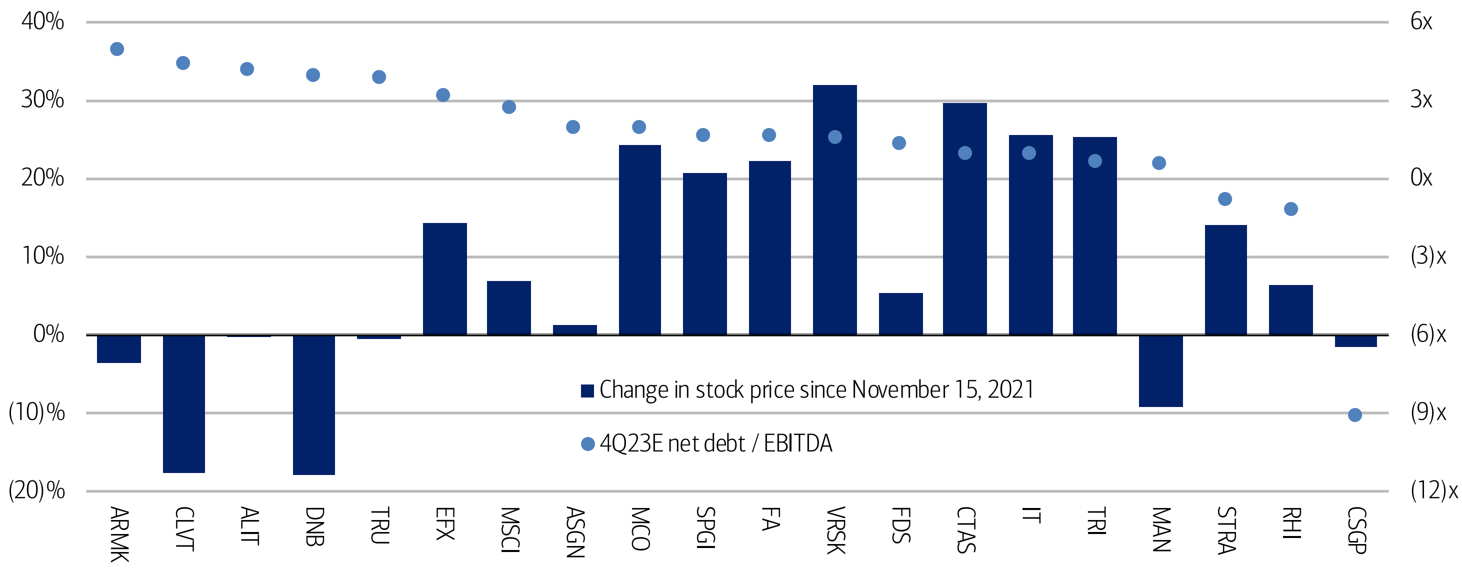
BofA GLOBAL RESEARCH

## 2) Investors get more comfortable with levered stocks

### Key equity exposures: ALIT, ARMK, CLVT, DNB, TRU

Amid higher rates, we saw investors get incrementally more negative towards stocks with higher leverage. Since the near-term valuation peak (mid-November 2021), our Information Services and Business Services coverage stocks are up 10% and 8%, respectively. However, our five most levered stocks (Alight, Aramark, Clarivate, Dun & Bradstreet, and TransUnion) are down 8% on average. We acknowledge that leverage was not the only catalyst for these stocks' underperformance, but it was a likely contributor, in our view.

**Exhibit 6: Our Information and Business Services coverage ordered by most to least levered**
The five most levered stocks in our coverage universe have underperformed the sector




**Source:** BofA Global Research estimates, company reports, Bloomberg

BofA GLOBAL RESEARCH

**As rates fall, stocks with good fundamentals but high leverage should screen better**

We still expect investors to broadly favor less levered stocks even as rates rise. However, investor appetite for more levered stocks may improve incrementally as rates fall. This should hopefully attract investors to undervalued and solid-but-levered-growth-stories, such as Buy-rated Alight and Dun & Bradstreet.

## 3) Lower rates good for variable interest costs

### Key equity exposures: ARMK, FA, CLVT, TRU

In addition, stocks with exposure to variable rate debt should get an earnings boost from lower rates. Looking across our coverage, companies most likely to benefit from a cut to rates from an earnings perspective include Aramark, First Advantage, Clarivate, and TransUnion.

**Exhibit 7: Sensitivity analysis: impact from a 1% reduction in interest rates to EPS**

Based on our analysis, a 1% move in rates has the greatest impact to Aramark, First Advantage, Clarivate, and TransUnion

| Company | 4Q23E gross debt | 4Q23E net debt | 4Q23E net debt/EV | 4Q23E gross debt / EBITDA | 4Q23E net debt / LTM EBITDA | % floating debt including swaps | CY24E adjusted EPS | Per share impact from 1% decrease in interest rates on variable debt | % of CY24E EPS |
|---|---|---|---|---|---|---|---|---|---|
| **Business Services** | | | | | | | | | |
| Aramark | $5,821 | $5,605 | 43% | 5.2x | 5.0x | 28% | $1.65 | $0.04 | 2.7% |
| First Advantage | $565 | $379 | 14% | 2.5x | 1.7x | 73% | $1.06 | $0.02 | 2.0% |
| ASGN | $1,050 | $961 | 18% | 2.2x | 2.0x | 48% | $6.25 | $0.08 | 1.2% |
| Alight | $2,794 | $2,487 | 36% | 4.7x | 4.2x | 10% | $0.70 | $0.00 | 0.5% |
| Strategic Education | $61 | ($139) | (7%) | 0.3x | (0.7x) | 100% | $4.48 | $0.02 | 0.4% |
| Manpower | $991 | $332 | 8% | 1.9x | 0.6x | 2% | $5.98 | $0.00 | 0.0% |
| Cintas | $2,490 | $2,395 | 4% | 1.1x | 1.0x | 0% | $15.68 | $0.00 | 0.0% |
| Robert Half | $0 | ($704) | (9%) | 0.0x | (1.2x) | NA | $4.07 | NA | NA |
| **Average** | | | **14%** | **2.2x** | **1.6x** | **37%** | | | **1.0%** |
| **Information Services** | | | | | | | | | |
| Clarivate | $4,771 | $4,424 | 43% | 4.8x | 4.5x | 29% | $0.88 | $0.02 | 1.9% |
| TransUnion | $5,224 | $4,813 | 28% | 4.2x | 3.9x | 24% | $3.63 | $0.05 | 1.4% |
| Moody's | $7,223 | $5,321 | 7% | 2.7x | 2.0x | 35% | $12.47 | $0.11 | 0.9% |
| FactSet | $1,563 | $1,133 | 6% | 1.9x | 1.4x | 34% | $16.89 | $0.11 | 0.7% |
| Dun & Bradstreet | $3,504 | $3,279 | 41% | 4.3x | 4.0x | 8% | $0.98 | $0.00 | 0.5% |
| Equifax | $5,784 | $5,428 | 16% | 3.4x | 3.2x | 12% | $8.22 | $0.04 | 0.5% |
| MSCI | $4,559 | $4,114 | 9% | 3.1x | 2.8x | 9% | $14.76 | $0.04 | 0.3% |
| Gartner | $2,482 | $1,341 | 4% | 1.9x | 1.0x | 11% | $12.16 | $0.03 | 0.2% |
| CoStar Group | $1,000 | ($4,422) | (15%) | 2.0x | (9.0x) | 0% | $1.34 | $0.00 | 0.0% |
| S&P Global | $11,462 | $9,879 | 7% | 2.0x | 1.7x | 0% | $14.48 | $0.00 | 0.0% |
| Thomson Reuters | $3,120 | $1,969 | 3% | 1.2x | 0.7x | 0% | $3.70 | $0.00 | 0.0% |
| Verisk Analytics | $2,885 | $2,388 | 7% | 2.0x | 1.7x | 0% | $6.62 | $0.00 | 0.0% |
| **Average** | | | **13%** | **2.8x** | **1.5x** | **14%** | | | **0.5%** |

**Source:** BofA Global Research estimates, company reports

(1) Calculated based on average notional amount outstanding during 2024

BofA GLOBAL RESEARCH

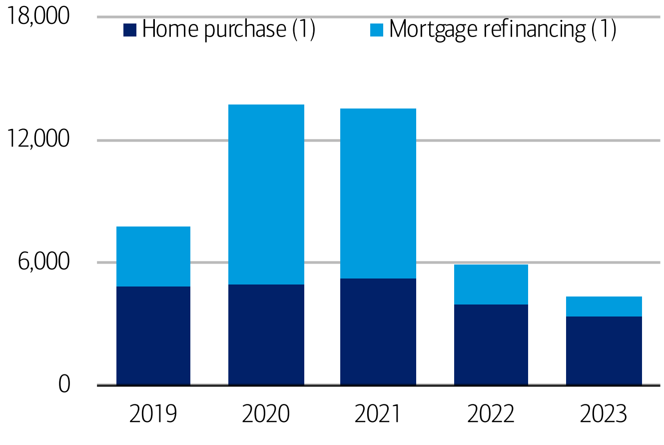
## 4) Mortgage market likely poised for a rebound off lows

### Key equity exposures: EFX, TRU

Our credit bureau coverage's (Equifax and TransUnion) earnings per share were impacted as higher rates led to significant deterioration in the mortgage market. With only one quarter remaining for the year, we model 2023E revenues tied to mortgages accounting for approximately 19% and 7% of Equifax and TransUnion's sales. Both bureaus have exposure to mortgages because they provide credit checks for mortgage underwriters, while Equifax's Workforce Solutions business also provides income and employment verifications when mortgages are originated (this accounts for ~60% of its mortgage revenues). Between 2021-23E, Equifax and Transunion's mortgage revenues fell 36%E and 22%E, respectively (including our estimate for 4Q23).

The key debate is how quickly will the mortgage market will improve. In 2022-23, the housing market deteriorated, not only because homes are less affordable at higher rates, but because many owners aren't selling because they have very low mortgage rates.

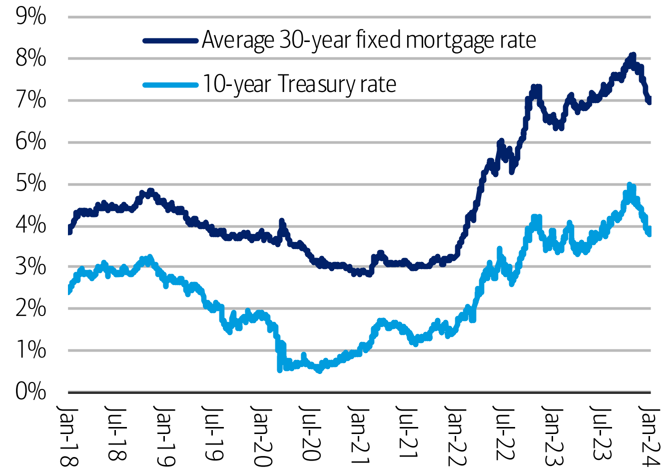
**Exhibit 8: 2023E mortgage volumes are projected ~44% below 2019 levels based on Mortgage Bankers Association's forecasts**
This assumes mortgages for home purchases are down 31% from 2019 levels, while refinancings are 66% below




**Source:** Mortgage Bankers Association (MBA)
(1) MBA has made modest recent revisions to its 2022+ data; revised 2019-21 data is not available

BofA GLOBAL RESEARCH

**Exhibit 9: Mortgage rates have come down from recent peak levels along with the 10-year Treasury rate**
Mortgage rates are currently 310bp above the 10-year Treasury; compared to sub-200bp in 2021




**Source:** Bloomberg, Bankrate.com

BofA GLOBAL RESEARCH

**BofA Structured Finance team sees path to ~17% 2024 mortgage growth**

Based on the current rate environment, our Structured Finance team sees a path towards 6-6.4% mortgage rates, with a downside case of 5.5% mortgage rates if there is a hard economic landing. Based on their inputs, in a 6.4% average 2024 rate environment, mortgage originations on a dollar basis could be up 16-18% y/y in 2024.

We take a more cautious stance given how the market has been so difficult to forecast and some uncertainty around the pace and depth of Fed rate cuts, and model more modest +9% 2024 origination growth.

**Exhibit 10: Our Structured Finance team sees a path to 6.4% average mortgage rates based on the current rate environment**
At 6.4% rates, the team thinks mortgage volumes could rise 16-18%

| 2024E 10-year US Treasury rate | 2024E 30-year fixed mortgage rate | Estimated y/y volume increase in ($tn) |
|---|---|---|
| 4.25% | 6.75% | 10-12% |
| 4.00% | 6.40% | 16%-18% |
| 3.75% | 6.00% | 23%-25% |
| 3.25% | 5.50% | 38%-40% |

**Source:** BofA Global Research estimates

BofA GLOBAL RESEARCH

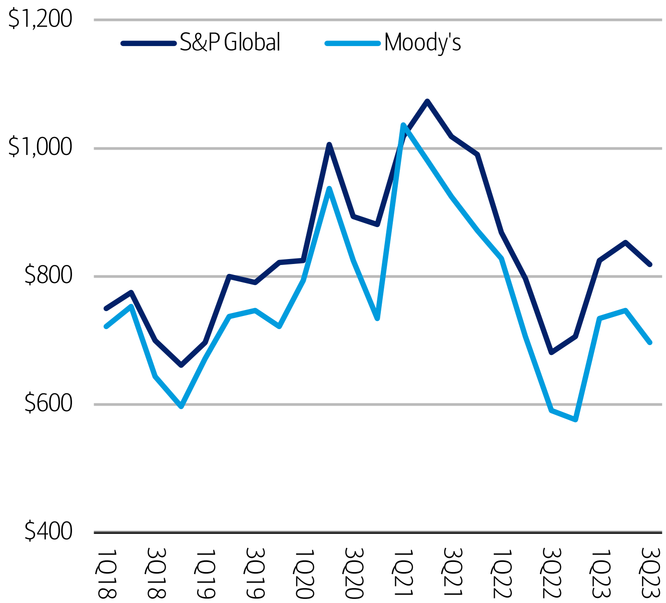
## 5) Lower rates should be a tailwind for ratings agencies

### Key equity exposures: MCO, SPGI

S&P Global and Moody's 2023 ratings revenues (26% and 48% of 2023E company total revenues) were also impacted by rate movements over the last three years. The two companies posted a spike in 2020-21 ratings revenue as very low rates led to elevated debt issuance. These revenues dropped in 2022-1H23 partly because refinancing/new issuance had been pulled forward amid lower rates. However, we also think higher rates had some direct impact on the rating agencies' sales as they led to companies delaying refinancing and M&A decisions.

Issuance trends have begun improving in 2H23, and we expect this trend to continue into 2024 as refinancing needs build. Rate declines could have a positive incremental benefit on issuance, including on the M&A market.

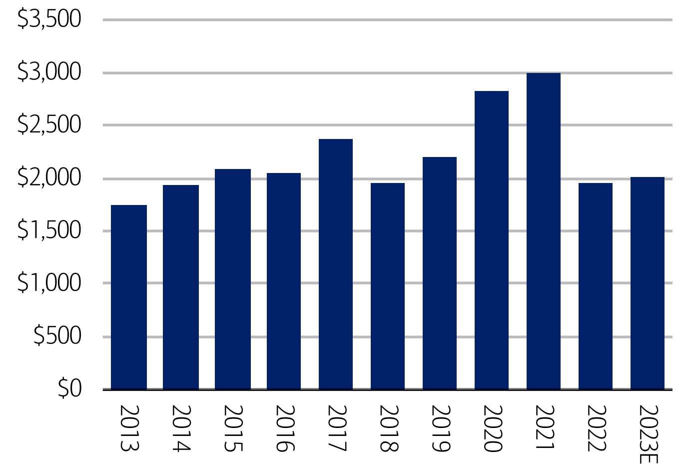
**Exhibit 11: Moody's and S&P's rating-related quarterly revenue spiked in 2020-21...**
and then dropped materially in 2022-23




**Source:** Company reports, BofA Global Research

BofA GLOBAL RESEARCH

**Exhibit 12: Rated debt issuance 2013-23E[(1)(2)]**
Rated issuance grew 29/6% in 2020/2021, and then fell 34% in 2022




**Source:** S&P Global reports, BofA Global Research
(1) Excludes municipal student loans, private placements, asset-backed commercial paper, letters of credits, asset-backed commercial paper and letters of credits, confidential and repo transactions, private placements (except Rule 144a issues), retail notes, commercial paper, and all agency issues. Includes Rule 144a (private placements), MTN takedowns, convertibles, and preferred stocks, and sovereigns
(2) S&P Global's credit analysts are forecasting ~(2)-6% 2023 rated issuance growth with 2.6% at the mid-point of the range

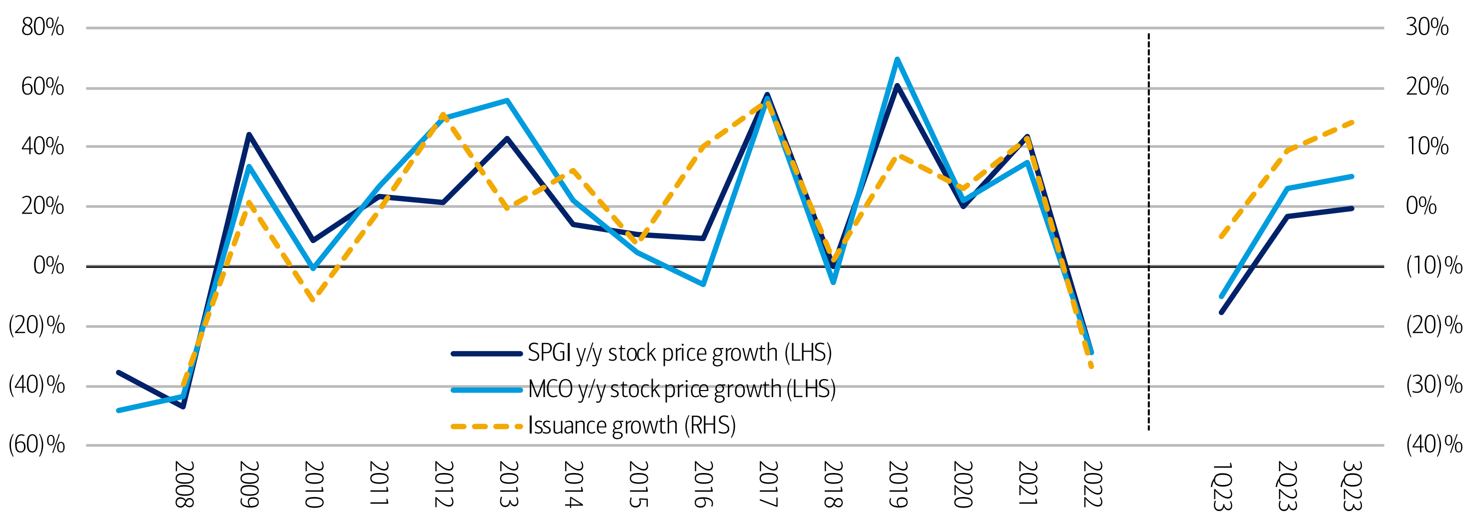
BofA GLOBAL RESEARCH

## Credit market recovery to fuel rating agency recoveries

### Key equity exposures: MCO, SPGI

We assume a gradual recovery in debt issuance (or supply) supports Moody's and S&P's sales and stock price improvement through 2024. The ratings agencies' stock price performance is highly correlated with issuance (see Exhibit 5) despite both companies' progress diversifying revenues since the Financial Crisis.

**Exhibit 13: Debt issuance growth (or declines) has a significant influence on rating agencies' stock price performance**
Since 2008, Moody's and S&P's annual stock price change has been ~80% correlated with y/y issuance growth (and ~70%+ since 2011)

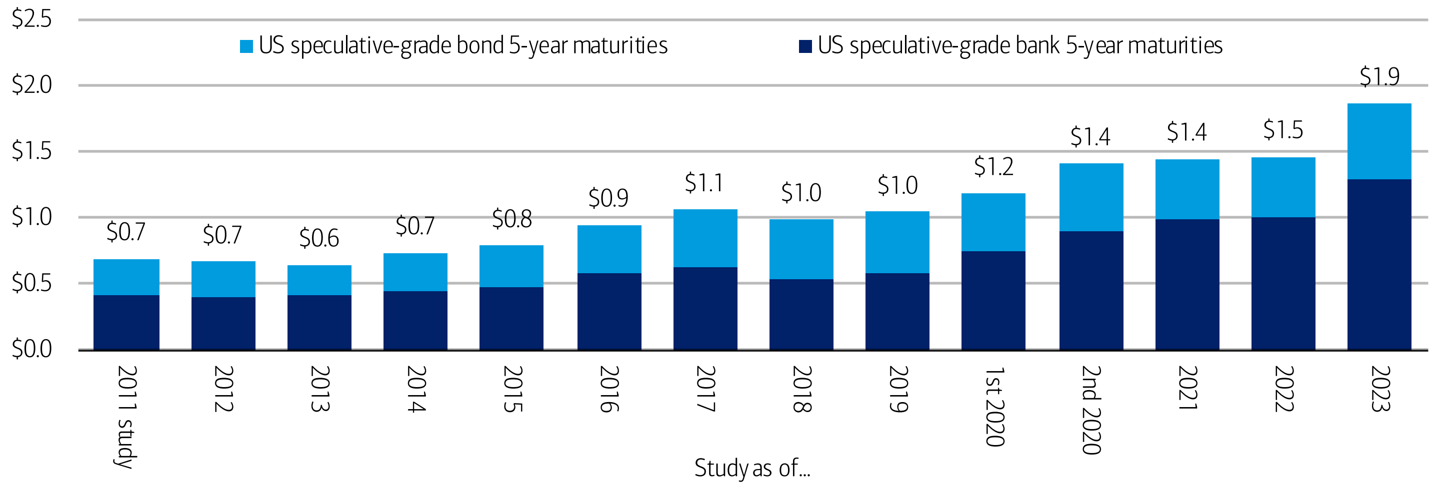



**Source:** Bloomberg, Moody's reports, BofA Global Research

BofA GLOBAL RESEARCH

Supply materially deteriorated in 2022 (Moody's-rated global issuance fell 30%) due to rising rates, frozen capital markets activity, and macroeconomic uncertainty. However, global issuance has begun to improve and we expect continued momentum as rates stabilize (potentially decline) and refunding backlogs build (especially for speculative grade debt).

**Exhibit 14: The US refinancing wall is building ($ in tn)**
According to Moody's, $1.9tn of US debt comes due over the next 5 years (2024-28), compared to $1.5tn as of 2022

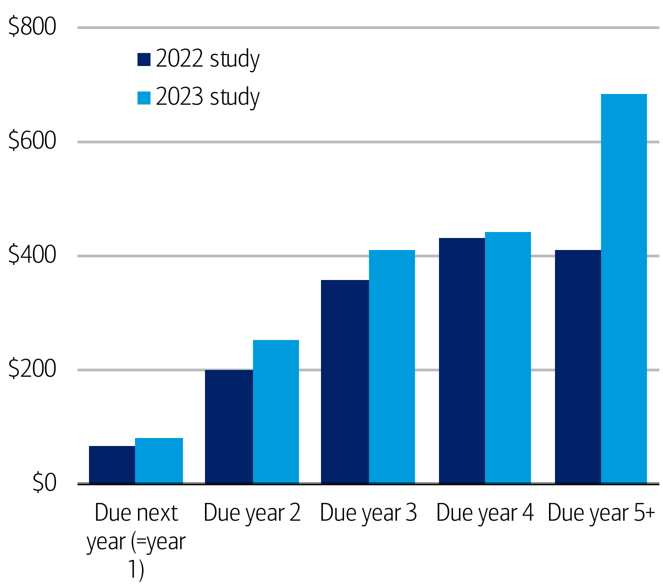



**Source:** Moody's Investor Service October 12, 2023 report
Amounts include five-year maturities of revolvers, loans and bonds rated by Moody's and issued by US-domiciled nonfinancial speculative-grade companies and their non-US subsidiaries

BofA GLOBAL RESEARCH

Since most investment grade debt is issued by frequent issuers that pay an annual fee, we focus on speculative-grade debt maturities.

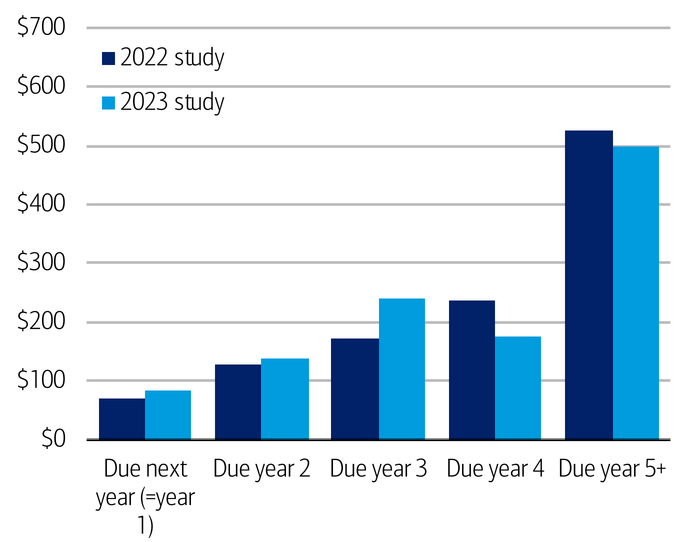
**Exhibit 15: When comparing Moody's 2023 and 2022 US speculative-grade maturity study...**
The amount due in the next 12 months is up 18% from the 2022 study, and the amount due in the following 12 months is up 28%




**Source:** Moody's Investor Service October 12, 2023 report

BofA GLOBAL RESEARCH

**Exhibit 16: When comparing Moody's 2023 and 2022 EMEA[(1)] speculative-grade maturity study...**
The amount due in the next 12 months is up 18% from the 2022 study, and the amount due in the following 12 months is up 28%




**Source:** Moody's Investor Service October 18, 2023 report
(1) EMEA = Europe, Middle East, and Asia

BofA GLOBAL RESEARCH

## GenAI to eventually be a given

Information Services companies are excited about Generative AI (Gen AI). In fact, our 12 Information Services stocks under coverage mentioned GenAI 202 times on earnings calls over the last three quarters. Information Services companies are largely technology and data companies, and it makes sense that they are rushing to invest in this technology. Over the long-term, we think GenAI will be a fundamental expectation, but it also can provide our coverage with new product opportunities and potential internal efficiencies. Over the mid-term, there is opportunity to layer in GenAI features to existing products, enabling companies to garner higher pricing.

Some investors worry that our coverage could face share losses from venture-driven upstarts. However, we think our stocks are generally well positioned to compete given their differentiated and historical data assets and capital to invest in the technology. Importantly, if a company emerges with differentiated technology, we think it is likely that one of coverage names (or a large competitor) would try to acquire it. This is what happened with Thomson Reuters and Casetext.

### GenAI's benefits are not likely a 2024 story…except for Thomson Reuters

For most of our Information Services coverage, we don't expect Generative AI (or GenAI) to provide a measurable benefit to 2024 sales or margins. This is because most of our coverage is still in the early innings of identifying ways to commercialize the technology or using it to boost productivity.

The exception is Thomson Reuters, which acquired a GenAI legal-tech company (Casetext) in mid-August 2023. Thomson is already monetizing this technology by integrating it into its cornerstone Westlaw product and realizing higher pricing. It has a detailed road plan to monetize GenAI over the next few years (see below). Moody's just launched its pilot GenAI product, but we assume it takes time to scale and have an impact on sales. S&P Global has noted plans to launch a product in early 2024, but details have been limited.

For our eight Business Services stocks, Generative AI is less relevant. During the last three quarters' earnings calls, our eight Business Services stocks mentioned GenAI only 36 times. Across our Business Services coverage, we think GenAI is most relevant to Alight, which is a benefits servicing provider and has been commercializing its vast user data.

Below we provide a summary of how our coverage names are utilizing GenAI.

**Exhibit 17: Information Services companies are especially excited about GenAI**

Below we summarize each of our 20 coverage companies' GenAI strategy

| Company | GenAI strategy |
|---|---|
| **Information Services** | |
| CLVT | ● Has centralized AI/ML team (formed five years ago) that is focused on delivering solutions across CLVT portfolio<br>● Leveraging AI for product development, and also to improve efficiency to expand margins and/or reinvest in new products<br>● Initial product innovation will include "conversational discovery", or tools that answer questions rather than just a list of source links<br>● In 3Q23, established Academia & Government Innovation Incubator, which acquired Alethea, an AI student engagement solution that helps faculty and librarians analyze student reading engagement and quickly adapt their teaching approach<br>● Partnered with natural language processing company AI21 to deliver products across Academia & Government segment<br>● Product examples: 1) introduced a AI-powered tool called Enhanced Search in August 2023 for life science and pharmaceutical companies that enable them to integrate, leverage and analyze multiple data sets; 2) AI Research Assistant tool for its Web of Science product that will be beta tested in December 2023; and 3) in September, launched AI tool called Forecast that helps Intellectual Property professionals analyze budget scenarios |
| CSGP | ● Has not discussed the use of GenAI |
| DNB | ● Collaborating with clients in its D&B.AI Labs (launched June 2023) and will be launching new products under its AiBE brand<br>● Expanded partnership with IBM to build and launch new products based on the integration of D&B data and IBM Watsonx<br>● Focused internally on ways that AI can improve operational efficiency<br>● Differentiation: validated, historical and proprietary data, which allows D&B to deliver reliable and interpretable AI created results |
| EFX | ● The company does not permit the use of ChatGPT at Equifax. Instead, the company leverages its proprietary AI/ML learning technology, called NeuroDecision (NDT) |
| FDS | ● FactSet is prioritizing GenAI investments for product development, and views AI-led internal productivity initiatives as a secondary step<br>● GenAI investments is among its top areas of focus; in F2H23, it started moving significant resources towards the area in anticipation of further investments in F2024 |

**Exhibit 17: Information Services companies are especially excited about GenAI**

Below we summarize each of our 20 coverage companies' GenAI strategy

| Company | GenAI strategy |
|---|---|
| | ● In-development product examples: 1) a GenAI-powered conversational user-interface for customer to ask questions, discover and source information, and initiate tasks; 2) using GenAI to develop code for buyside customers (reduces their need to know Python); 3) GenAI-led solutions that enable wealth managers to produce portfolio summaries; 4) producing GenAI-ready data bundles so clients can augment their own large language models with FactSet's data; and 5) recently launched FactSet Mercury, a large language model-based conversational interface for client workflows, research, and actionable insights |
| IT | ● Already using GenAI to improve operational efficiency internally (eg. a salesperson wants to get synthesized publicly available information on a client)<br>● Testing having a natural language interface for customers and see opportunities to optimize its internal cost structure (eg. automating currently outsourced work)<br>● GenAI is an important topic for its customers and corporate's focus on the topic has helped Gartner salespeople book meetings<br>● Focused on ensuring Gartner is developing insights, data, tools, and information assets that are significantly differentiated from what a client could get through a GenAI tool |
| MCO | ● Sees opportunities to leverage GenAI to help analysts perform rating assessments faster (but is not a substitute for its analysts) and develop new solutions across Moody's Analytics<br>● In early December, launched Moody's Research Assistant, an add-on to its CreditView product that helps customers quickly create credit memorandums<br>● GenAI partnerships with Microsoft (Azure) and Google<br>● Moody's has noted that its upfront AI investment costs are not too significant. It has pulled existing resources into a horizontal group called Generative Intelligence Group (GIG), which is spearheading its AI efforts and its leveraging its employees to run an internal pilot. The company is also piloting GenAI tools with its 14,000-employee base. Moody's thinks that GenAI will provide significant efficiencies, although we infer management perceives the revenue opportunity as larger. GIG has already identified and cleared GenAI 185 use cases that include a mix of cost and revenue opportunities |
| MSCI | ● Focused on improving client experience and also making entire company, including data production, more efficient<br>● Examples of use cases: deploying AI in corporate functions (eg. finance) to automate contract review, extract information, and process invoices; leveraging AI to continue improving data processing, auditing, and quality control; working to integrate AI into its MSCI ONE platform to proactively deliver actionable insights for client portfolios<br>● Partnerships with Google (expanded Google partnership in August 2023) and Microsoft<br>● Product examples: 1) a solution that helps portfolio and risk managers more easily synthesize and rapidly act on significant volumes of risk signals from their portfolios; 2) a new conversational AI solution that can enable clients to quickly answer questions and surface information about their portfolios and MSCI data, models, and solutions; 3) tools to help investors measure and manage portfolio exposure to climate risk and identify low carbon investment opportunities |
| SPGI | ● Applying GenAI across the organization, using it to both improve internal productivity and launch new products<br>● Goal to be one of the first to market with an actual production-grade level tool<br>● Thinks products that incorporate GenAI will eventually be "table stakes". As a result, management has messaged that it is unlikely to monetize its GenAI-powered products as stand-alone modules<br>● ChatIQ, a GenAI search tool developed jointly between Kensho and Market Intelligence, began beta testing internally in 3Q23, and management expects it to be shared with customers towards the beginning of 2024; also has several other GenAI-powered products that are being prepared for launch at the beginning of 2024<br>● Has not announced a GenAI partnership with an outside tech firm, but has pre-existing relationships with AWS and Microsoft and uses NVIDIA chips. It is also developing its own LLM in-house |
| TRI | ● Thomson is the first Information Services company to monetize GenAI technology and has invested both organically and through M&A<br>● The company plans to invest $100mn+ annual on GenAI initiatives and announced on its 3Q23 call that it was accelerating this investment in the short-term<br>● The company acquired GenAI legal-tech company Casetext in 3Q23. Casetext is best known for its CoCounsel product, which is an AI legal assistant, powered by ChatGPT. Thomson has integrated Casetext's technology into its Westlaw product, which has enabled it to extract an additional price increase. The company is also monetizeing a bundle of CoCounsel's GenAI legal tools and skills into a product called CoCounsel Core. The company has plans to expand GenAI throughout the research process in Westlaw and expand international (starting in 2024, target international markets include the UK, Canada, Australia, and New Zealand)<br>● Thomson plans to launch a GenAI assistant (called CoCounsel) that will interface across its legal products later in 2024; it plans to introduce GenAI within its Practical Law Dynamic Tool Set in January 2024<br>● The company's long-term GenAI road-map includes integrating GenAI tools across its portfolio, but it is currently focused on its legal segment<br>● In November, the company introduced its GenAI platform (Thomson Reuters Generative AI platform) that will enable it to readily launch new GenAI skills by leveraging reusable components as the building blocks for future products<br>● Has partnered with Microsoft 365 Copilot to develop a drafting solution for lawyers that is powered by Thomson's legal content |
| TRU | ● Sensitivity to using GenAI tool (eg. ChatGPT) given that credit bureaus operate in a highly regulated industry<br>● Has a partnership with Shift Technology, which develops AI-driven fraud prevention solutions for the global insurance industry. Shift has recently integrated GenAI functionality across its tools |
| VRSK | ● Increasing investment in GenAI and believes it can develop and invest in GenAI tools in a more efficient way than its individual insurance industry customers can do on their own<br>● The company's Discovery Navigator product already has some components that utilize GenAI |
| **Business Services** | |
| ALIT | ● Opportunity to help Alight's ability to scale, ingest, and comprehend more complex data, and use technology to drive better outcomes<br>● Focused on using GenAI to improve its customer experience via new offerings, personalization, and more efficient inquiries<br>● Internally driving higher productivity for administrators and operators (examples: streamlining processes and digitizing documents) and driving down service costs |
| ARMK | ● Has not discussed the use of GenAI |

**Exhibit 17: Information Services companies are especially excited about GenAI**
Below we summarize each of our 20 coverage companies' GenAI strategy

| Company | GenAI strategy |
|---|---|
| ASGN | ● GenAI-related projects accounting for many of the new opportunities in the company's sales pipeline, followed closely by work in machine learning. However, the vast majority of the GenAI projects for clients are exploratory (as of 3Q23)<br>● Partnered with Microsoft to pilot AI toolsets for internal team efficiencies, as well as supporting clients development of AI models and tools |
| CTAS | ● The recently expanded partnership between SAP and Google, will enable Cintas' SAP data to be connected with Google Cloud Data and analytics technology. This will give Cintas access to Google's advanced AI and machine learning capabilities |
| FA | ● Its latest redesign of its Profile Advantage platform in the US, uses GenAI to provide a personalized applicant experience tailored to the specific job screening requirements<br>● Sees opportunities to improve reduce headcount and improve margins by using GenAI to replace outsourced call centers with a GenAI-driven chat bot |
| MAN | ● Sees opportunities to deploy and adopt AI-based recruitment tools and machine learning to enhance recruiter productivity and improve its candidate matching |
| RHI | ● Using its proprietary data and algorithms to customize its latest generation large language model and incorporate it into our AI to further improve its candidate matching engine |
| STRA | ● Sees opportunities for efficiency and productivity across the organization with GenAI technology and robotic process automation, including simplifying accounting, finance, and administration work<br>● Potential to improve student learning experience with personalization, enhanced curriculum, and additional courses |

**Source:** Company reports

BofA GLOBAL RESEARCH

## Price increases moderating this year

Our coverage was able to pass through higher-than-normal price increases in 2023 to offset strong inflationary pressures, especially labor costs. For 2024, we expect price increases to moderate as inflation eases. There are a few exceptions. For instance, Thomson Reuters' Westlaw business is benefitting from new GenAI tools, and Dun & Bradstreet should see a lift from multi-year contracts put in place in recent years. We summarize company specific details below:

**Exhibit 18: Pricing across our coverage universe largely seeing a slowdown from last year**
Below we touch on pricing commentary from our 20 coverage companies

| Company | Current/2024 Pricing Commentary |
|---|---|
| **Information Services** | |
| Clarivate | ● Management targeting ~4% 2024 price increase, similar to 2023 levels |
| CoStar | ● The company prices with inflation<br>● Management has not commented specifically on 2024 pricing plans |
| Dun & Bradstreet | ● Management has increased the mix of revenues on multi-year contracts, which have built in price escalators. This is resulting in a rising benefit from price increases y/y<br>● 2023 price increase was ~2% and 2023 will be north of that (we estimate around ~3%) |
| Equifax | ● Management has not quantified 2024 pricing plans<br>● USIS mortgage business will benefit from FICO price increases (USIS mortgages revenues are ~7% of EFX's 2023 revenues) |
| FactSet | ● Management expects pricing to contribute 1/4-1/3 of sales growth (~200bpE), compared to >1/3 in FY23 (>300bpE) |
| Gartner | ● 2024 pricing expected in the 4-4.5% range, compared to ~5% in 2023 |
| Moody's | ● Average pricing is 3-4% annually across the firm and management expects it to be the same in 2024 |
| MSCI Inc. | ● In 2023, management rolled out higher price increases compared to 2022<br>● MSCI has not commented on 2023's pricing plans |
| S&P Global | ● Has not disclosed 2024 pricing plans |
| Thomson Reuters | ● Total pricing was up 3-3.5% in 2023 (30-40bp benefit to sales growth), contribution from pricing will likely be lower in 2024<br>● Garnering a strong pricing benefit in its Legal Segment from the roll-out of Westlaw Precision, which includes a step-up in pricing from GenAI enhancements |
| TransUnion | ● Has not discussed 2024 pricing plans in detail<br>● Should benefit from FICO price increases in mortgages (~7% of TRU's 2023E revenues are from mortgages) |
| Verisk Analytics | ● When thinking about 2024 price increases looking to balance pricing for value created and customers' recent profitability headwinds<br>● 15-20% of its Core Lines contracts (or 9-12% of total revenues) are tied to net written premium (NWP) growth on two-year lag. NWP were up ~8% in 2022 (vs. 9-10% in 2021), which should provide a benefit to 2024 sales |
| **Business Services** | |
| Alight | ● The company's contracts allow it to take price for CPI inflation above 3%; disinflation means less pricing |
| Aramark | ● Aramark prices against inflation<br>● FY24 pricing was guided to + 3-4% y/y, compared to +mid-single-digits% in FY23; guidance assume inflation remains unchanged, a lower rate of inflation would mean less of a price increase |
| ASGN | ● As of 3Q23, bill rates are still up |
| Cintas | ● FY24 pricing guided to below 2023 levels, but above historical ~2% levels |
| First Advantage | ● No commentary on pricing |
| Manpower Group | ● MAN has stated that the pricing environment remains competitive, but rationale<br>● The company has not commented on 2024 pricing compared to 2023 levels |

**Exhibit 18: Pricing across our coverage universe largely seeing a slowdown from last year**
Below we touch on pricing commentary from our 20 coverage companies

| Company | Current/2024 Pricing Commentary |
|---|---|
| Robert Half | ● Bill rates have waned from 8.5% (average quarterly) in 2022 to 5.8% in 1Q23-3Q23 |
| Strategic Education | ● The company has not commented on 2024 pricing plans |

**Source:** Company reports, BofA Global Research estimates

BofA GLOBAL RESEARCH

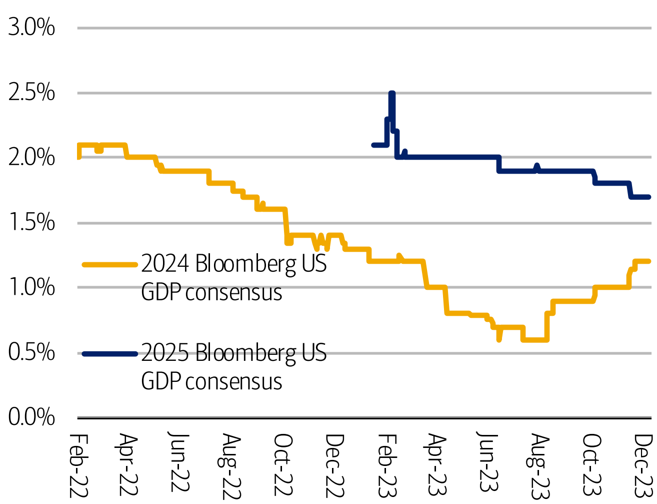
# Labor market likely to remain weak in 2024

For our staffing coverage, including ASGN, Manpower, and Robert Half, we assume the labor market remains sluggish and demand for staffing continues to decline. BofA's US Economics team expects soft economic growth to moderate labor demand, raising the unemployment rate to a peak of 4.2% by 4Q24. Recent job growth has been driven by a handful of laggard sectors (education, leisure & hospitality, and the public sector). As job gains in these sectors slow next year, they anticipate that nonfarm payroll growth should fall below the breakeven rate required to keep up with labor force growth. In terms of labor supply, they think upside surprises have run their course. Over time, they anticipate that the drag from demographics will offset any further cyclical gains in participation. We think a weak labor market bodes negatively for staffing company sentiment.

Meanwhile, BofA's European Economics team expects economic stagnation near-term and notes that the labor market isn't as tight as it looks. This bodes poorly for the European staffing market. About 65% and 14% of Manpower and Robert Half's revenues are in Europe.

## US GDP outlooks point to a sluggish landing in 2024

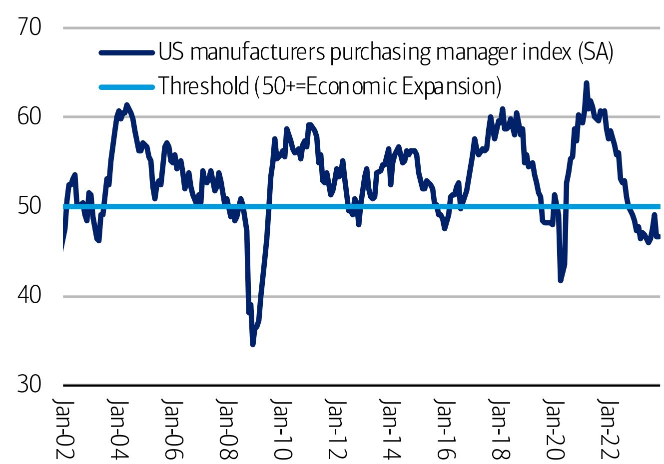
**Exhibit 19: 2024 US GDP forecast has recovered from lows, but points to ongoing sluggish growth**
The sellside is currently forecasting 1.2% 2024 GDP growth




**Source:** Bloomberg Finance L.P., BofA Global Research

BofA GLOBAL RESEARCH

**Exhibit 20: US purchasing manager's index has been below 50 for 13 consecutive months**
This implies a lack of growth

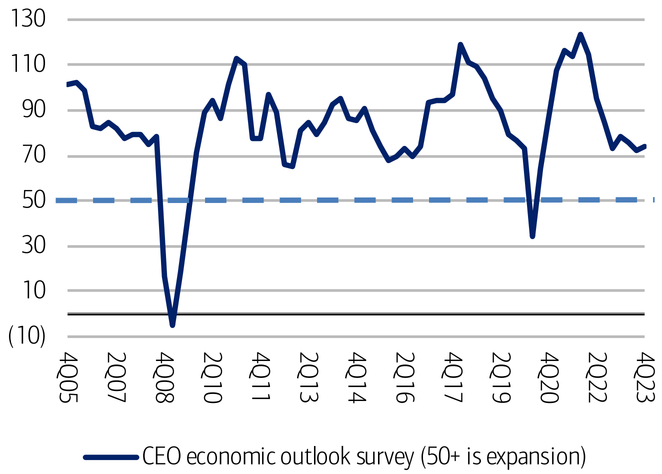



**Source:** Institute for Supply Management, IHS Markit, Bloomberg Finance L.P., BofA Global Research

BofA GLOBAL RESEARCH

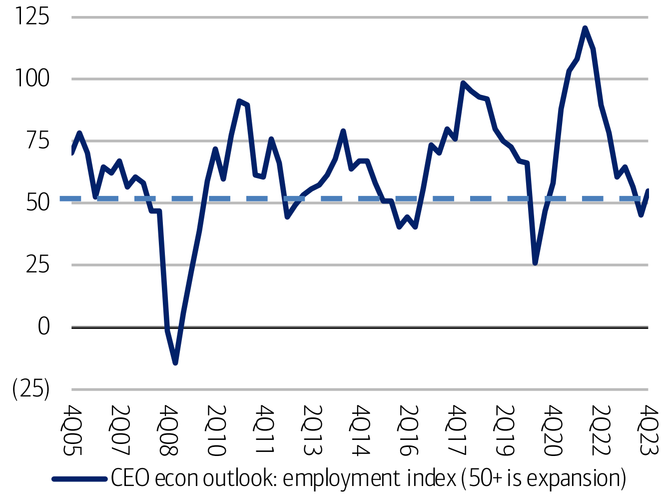
## US business confidence is quite weak

**Exhibit 21: Business roundtable's survey: CEO economic outlook**
CEO's economic outlooks have moderated materially from post-COVID highs



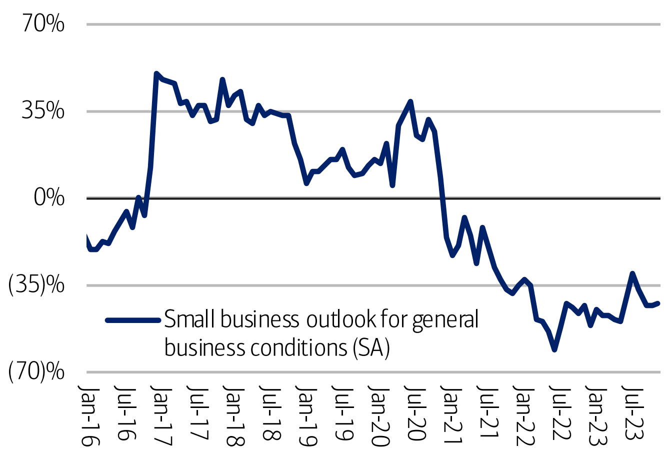

**Source:** Bloomberg Finance L.P., Business Roundtable, BofA Global Research
BofA GLOBAL RESEARCH

**Exhibit 22: Business roundtable's survey: employment sub-index lukewarm**
The CEO outlook on employment bottomed in 3Q23 at 45.1, averaging a moderate 55 in 2023




**Source:** Bloomberg Finance L.P., Business Roundtable, BofA Global Research
BofA GLOBAL RESEARCH

**Exhibit 23: Small business outlook has improved since 2022 but is still very depressed**
Sentiment around business conditions was (42)% in November 2023, vs. (46)% in 1H23 and (37)% in 3Q

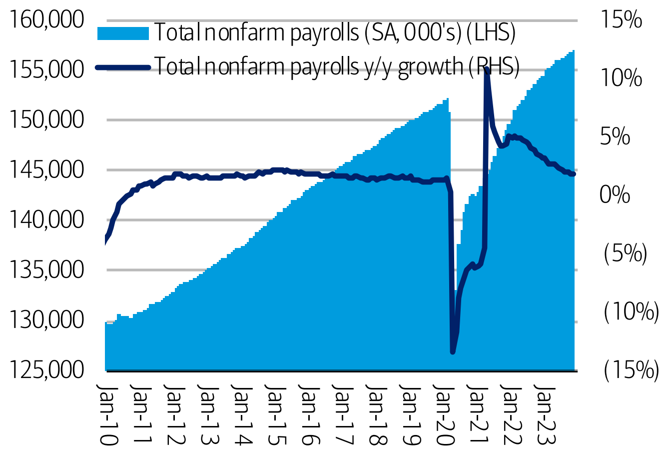



**Source:** Bloomberg Finance L.P., NFIB, BofA Global Research
BofA GLOBAL RESEARCH

# US labor market tight, but easing

**Exhibit 24: Nonfarm payroll still rising, although at a slowing pace**

Hiring still healthy, but y/y growth is normalizing from peak levels

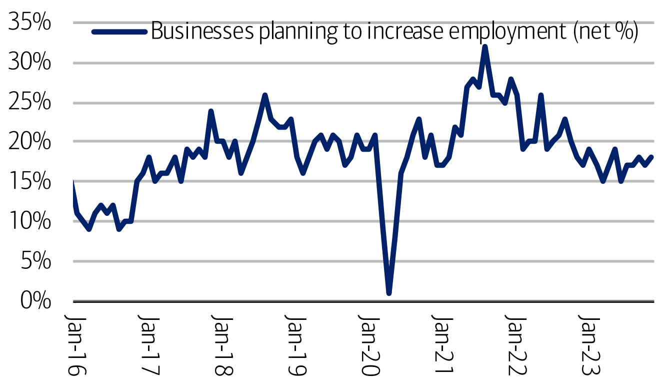



**Source:** Bureau of Labor Statistics, BofA Global Research

BofA GLOBAL RESEARCH

**Exhibit 25: National Federation of Independent Business' survey hiring index remains sluggish**

Since December 2022, the percentage of small business planning to increase employment has hung around the mid-teens

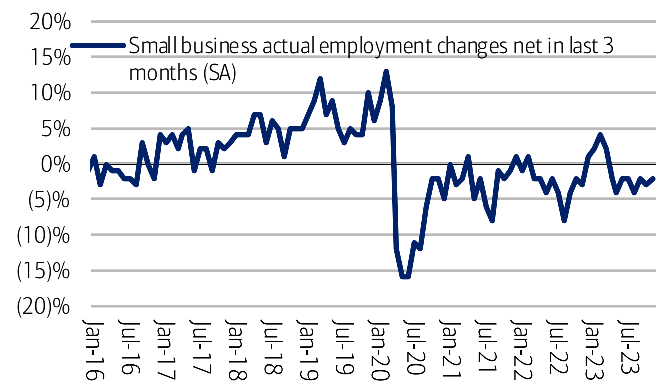



**Source:** Bloomberg Finance L.P., NFIB, BofA Global Research

BofA GLOBAL RESEARCH

**Exhibit 26: Actual hiring by small businesses remains in negative territory**

Small business net hiring for the prior three months has been in the negative low-single-digits for several months

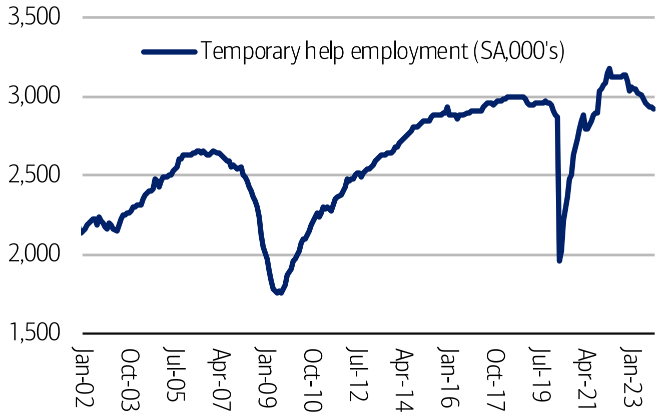



**Source:** Bloomberg Finance L.P., NFIB, BofA Global Research

BofA GLOBAL RESEARCH

# US temporary payrolls remain challenged

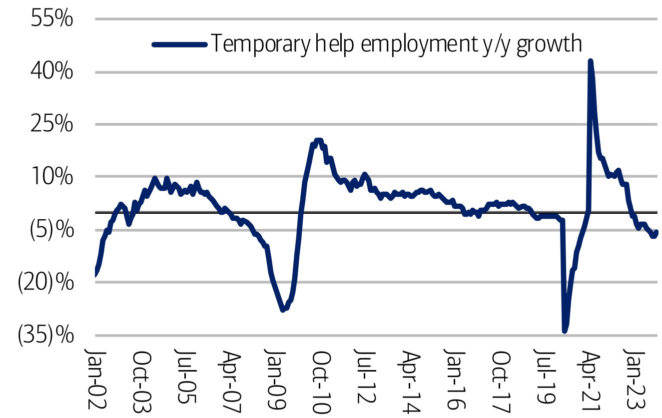
**Exhibit 27: Temporary payrolls have been deteriorating**
Temporary payrolls fell m/m by 13.6k jobs in November 2023, worse than October's and the +16.5k average decline over the last 6 months




**Source:** Bureau of Labor Statistics, BofA Global Research

BofA GLOBAL RESEARCH

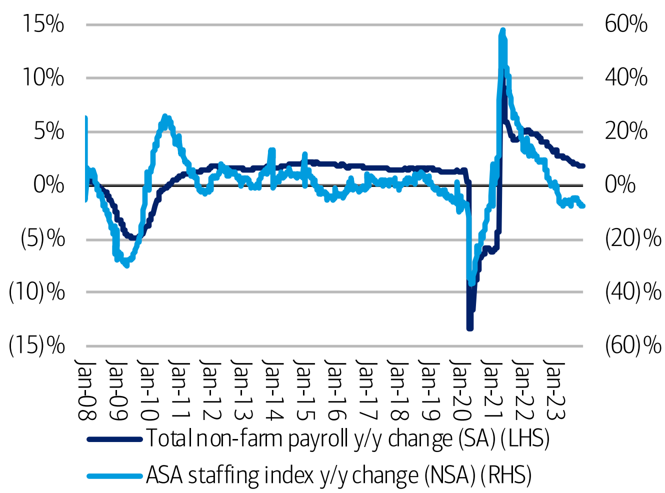
**Exhibit 28: Temporary payrolls y/y growth has been negative since December 2022**
Temporary payrolls were down ~6% in November, compared to ~(7)% in October and ~(6)% on average in 3Q




**Source:** Bureau of Labor Statistics, BofA Global Research

BofA GLOBAL RESEARCH

**Exhibit 29: ASA staffing index growth vs. change in nonfarm payrolls**
The ASA staffing index has weakened faster than non-farm payrolls

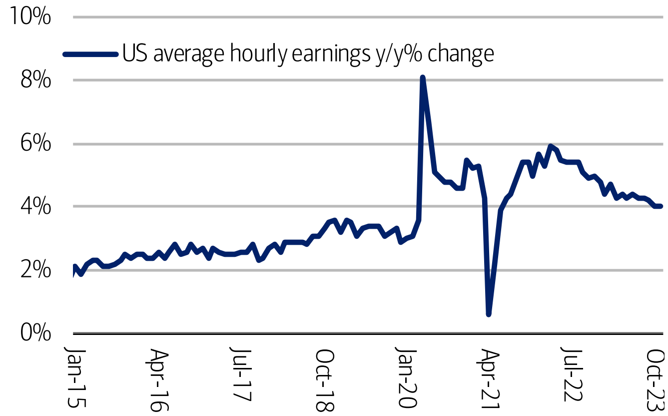



**Source:** Bloomberg Finance L.P., American Staffing Association, Bureau of Labor Statistics, BofA Global Research

BofA GLOBAL RESEARCH

## US wage inflation moderating steadily

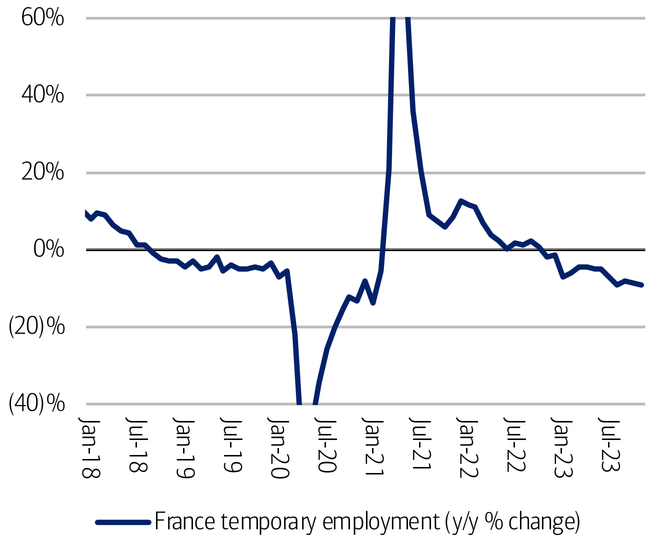
**Exhibit 30: Wage inflation is easing**
In November, US average hourly earnings were up 4% y/y, down from 6% in early 2022




**Source:** Bureau of Labor Statistics, BofA Global Research

BofA GLOBAL RESEARCH

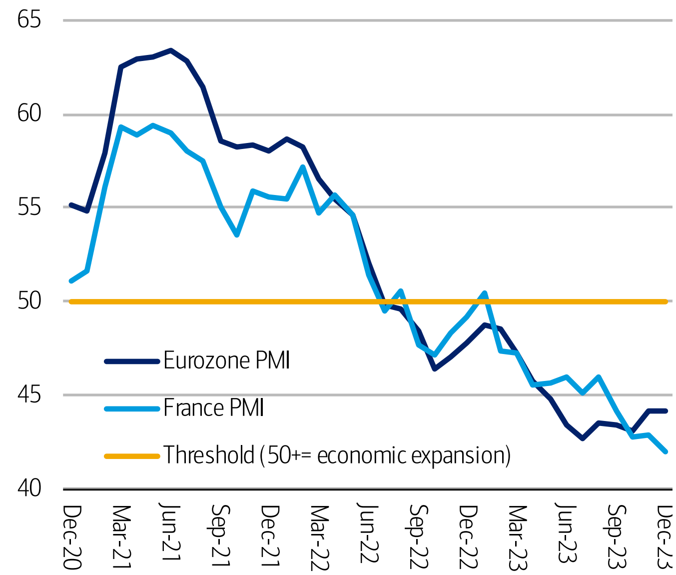
**Exhibit 31: France temporary employment declined y/y**
In France, the number of number of temps at work has been down high-single-digits since July 2023




**Source:** Prism'emploi

BofA GLOBAL RESEARCH

**Exhibit 32: PMI in Europe (and France) has largely persisted below 50 since August 2022**
In December, Europe and France's PMI were 44.2 and 42.0




**Source:** Bloomberg

BofA GLOBAL RESEARCH

**Exhibit 33: EPS estimate changes**
Model updates for 2024 and 2025

| Ticker | Old 2024E EPS | New 2024E EPS | Old 2025E EPS | New 2025E EPS |
|---|---|---|---|---|
| ALIT | $0.73 | $0.70 | $0.78 | $0.77 |
| ARMK | $1.53 | $1.55 | $2.19 | $2.09 |
| ASGN | $6.24 | $6.25 | $6.88 | $6.84 |
| CLVT | $0.84 | $0.88 | $0.93 | $0.95 |
| CSGP | $1.29 | $1.29 | $1.75 | $1.75 |
| CTAS | $14.80 | $14.80 | $16.61 | $16.61 |
| DNB | $1.01 | $0.98 | $1.12 | $1.07 |
| EFX | $8.22 | $8.22 | $11.21 | $11.21 |
| FA | $1.08 | $1.06 | $1.20 | $1.18 |

**Exhibit 33: EPS estimate changes**
Model updates for 2024 and 2025

| Ticker | Old 2024E EPS | New 2024E EPS | Old 2025E EPS | New 2025E EPS |
|---|---|---|---|---|
| FDS | $15.95 | $15.95 | $18.48 | $18.48 |
| IT | $12.16 | $12.16 | $13.93 | $13.96 |
| MAN | $5.99 | $5.98 | $7.44 | $7.50 |
| MCO | $12.47 | $12.47 | $14.09 | $14.09 |
| MSCI | $14.75 | $14.76 | $17.21 | $17.07 |
| RHI | $4.07 | $4.07 | $4.98 | $5.01 |
| SPGI | $14.47 | $14.48 | $16.47 | $16.29 |
| STRA | $4.51 | $4.48 | $5.57 | $5.58 |
| TRI | $3.78 | $3.70 | $4.21 | $4.11 |
| TRU | $3.55 | $3.55 | $4.38 | $4.26 |
| VRSK | $6.64 | $6.64 | $7.24 | $7.24 |

**Source:** BofA Global Research estimates

BofA GLOBAL RESEARCH

**Exhibit 34: Companies mentioned**
Companies mentioned in this report

| BofA Ticker | Bloomberg ticker | Company name | Price | Rating |
|---|---|---|---|---|
| ALIT | ALIT US | Alight | US$ 8.73 | B-1-9 |
| ARMK | ARMK US | Aramark | US$ 28.22 | B-1-7 |
| ASGN | ASGN US | ASGN Inc. | US$ 90.95 | B-3-9 |
| CTAS | CTAS US | Cintas | US$ 577.26 | B-1-7 |
| CLVT | CLVT US | Clarivate PLC | US$ 8.67 | C-3-9 |
| CSGP | CSGP US | CoStar | US$ 81.34 | B-1-9 |
| DNB | DNB US | Dun & Bradstreet | US$ 11.97 | B-1-7 |
| EFX | EFX US | Equifax | US$ 237.02 | B-1-7 |
| FDS | FDS US | FactSet | US$ 456.58 | B-2-7 |
| FA | FA US | First Advantage Corp | US$ 15.66 | C-2-9 |
| IT | IT US | Gartner | US$ 425.37 | B-1-9 |
| MAN | MAN US | Manpow erGroup | US$ 76.67 | B-3-7 |
| MCO | MCO US | Moody's Corp. | US$ 371.69 | B-1-7 |
| MSCI | MSCI US | MSCI | US$ 538.05 | B-3-7 |
| RHI | RHI US | Robert Half | US$ 82.9 | B-3-7 |
| SPGI | SPGI US | SPGI | US$ 427.93 | B-1-7 |
| STRA | STRA US | Strategic Education | US$ 90.14 | B-1-7 |
| TRI | TRI US | Thomson Reuters | US$ 143.93 | A-1-7 |
| YTRI | TRI CN | Thomson Reuters | C$ 192.27 | A-1-7 |
| TRU | TRU US | TransUnion | US$ 64.99 | B-3-7 |
| VRSK | VRSK US | Verisk Analytics | US$ 233.7 | B-2-7 |

**Source:** BofA Global Research

BofA GLOBAL RESEARCH

## Price objective basis & risk

### Alight Inc (ALIT)

Our $12 price objective is based on 11.0x 2024E EV/EBITDA. We adjust out stock comp from EBITDA. It is a 12.5x multiple when adding back stock comp to EBITDA, which is how the company reports. We use a EV/EBITDA multiple given the company's leverage compared to peers. Our price objective implies a premium as the company executes on its strategy and drives double-digit earnings growth. We assume a 5% discount to peers to factor in the company's higher leverage, lower EBITDA margin (adjusting for stock comp) and sponsor overhang.

Downside risks to our price objective are: (1) larger than expected negative impact from a macro downturn, 2) execution challenges as Alight continues to implement its new strategy and transformation initiatives, and (3) the company needs to invest more than expected to drive growth.

Upside risks to our price objective are: (1) higher than expected sales growth driven by the success of BPaaS and new salesforce initiatives, (2) sales and EPS upside from M&A, and (3) better than expected margin expansion from BPaaS sales and cost productivity initiatives.

### Aramark (ARMK)

Our $31 price objective is based on a 11x EV/EBITDA multiple on our CY24 estimate reflecting our confidence in the company's turnaround momentum. This is a half-turn discount to its top peer. We think a modest discount is warranted to reflect Aramark's higher growth but lower debt.

We value on CY24 estimates because Aramark is still recovering from COVID-related disruption. We think EV/EBITDA is the best valuation methodology because of Aramark's elevated leverage post-COVID. Valuation had begun to improve in CY19 with news of activist involvement and the change in management, reaching nearly 12x EBITDA, but then COVID hit.

Downside risks to our price objective are 1) worse-than-expected or longer disruption from coronavirus, 2) inability over time to recover COVID-impacted revenue, 3) an inability to continue delivering efficiency/margin gains, 4) high financial leverage, and 5) exposure to wage and/or food inflation.

Upside risks to our PO are a move to separate the Uniforms business, valuation expansion driven by headcount expansion and technology investment, the leadership change and activist involvement, better-than-expected net new business wins and/or operating margins, or more rapid deleveraging.

**ASGN Inc. (ASGN)**
Our $70 price objective is based on 11x our 2024E EPS (14x when subtracting out amortization of intangibles from adjusted EPS). This is below the company's 12-month average reflecting decelerating growth against tougher comparisons and macro headwinds.

Downside risks to our PO are: 1) a slower US economy driven by macro headwinds, 2) risks related to the active M&A strategy, 3) a highly competitive and fragmented industry. Upside risks to our PO are: 1) potentially accretive M&A, 2) an uptick in US IT budgets, and 3) accelerated share repurchase activity.

**Cintas (CTAS)**
Our $700 price objective is based on 26.5x CY25E EV/EBITDA . This is a premium to its current multiple. We think a premium is warranted given the company's potential for earnings upside and strong capital returns.

Downside risks to our price objective are: (1) potential for more severe financial impact from coronavirus, (2) economic cyclicality, (3) risks related to the company's M&A strategy, and (4) a lack of disclosures which limits analysis.

Upside risks to our price objective are: (1) less negative coronavirus impact and/or a quick and sharp rebound, (2) cross-selling success into the G&K base, (3) better operating leverage and/or SAP efficiencies, and (4) aggressive share repurchases or bolt-on M&A.

**Clarivate PLC (CLVT)**
Our $6 price objective is based on a 9x 2024E EV/EBITDA (adjusted for stock based comp). This is a discount to information services peers at approximately 20x. We think a discount is warranted given turnaround risk, slower EBITDA growth, higher net leverage, and lower free cash flow conversion.

Downside risks are 1) slower sales growth recovery, 2) execution risk, 3) turnaround sales strategy may require additional capital investments, 4) elevated leverage during a rising rate environment provides interest rate risk, 5) weakening US or international macro environment.

Upside risks are 1) 2025 sales turnaround strategy can materialize sooner or grow faster than anticipated, 2) strong adoption of new products, 3) higher than expected free cash flow conversion being utilized to reduce debt and return capital to shareholders.

**CoStar Group (CSGP)**
We base our $97 price objective on a sum-of-the-parts methodology. We value the core commercial real estate business (ie. ex Residential) with a 26.5x 2024E EV/EBITDA multiple (vs. 23x prior). This multiple is a premium to peers to reflect CSGP's outsized mid-term sales/free cash flow CAGRs. We then value the Residential business separately using a DCF method based on 12% WACC and EBITDA multiple (2-year forward) of 23.0x

based peer average.

Downside risks to our price objective are: (1) larger than expected macro downturns pressuring clients send and CoStar's revenue, (2) declining margins due to investments and investment timing, (3) execution challenges as it rolls out LoopNet internationally and its US residential market and (4) any antitrust regulations and challenges that restrict CoStar's ability to grow through acquisitions.

Upside risks to our price objective are: (1) increased gains and adoption across CoStar's multifamily, LoopNet and Residential segments, (2) successful integration of data sets across CoStar's brands deepening its depth and breadth, (3) ability to source incremental and transformational acquisitions and (4) better then expected market conditions in the commercial real estate market increasing transaction and leasing volumes.

**Dun & Bradstreet Holdings, Inc. (DNB)**

We base our $13.50 price objective on 9.5x our CY24 EV/EBITDA estimate (vs. 10.5x prior). Our price objective assumes the company's 2023E EV/EBITDA multiple trades roughly in line with valuation over the last twelve months.

Downside risks to our PO: 1) failure to successfully execute the turnaround plans could hurt earnings and valuation, 2) leverage is above and free cash flow conversion is below peers, 3) D&B's markets are competitive and it has lost share in recent years. Further share gains could erode its market position.

Upside risks to our PO: 1) faster than expected sales, 2) margins track better than expected, and 3) spending slows in 2023E

**Equifax (EFX)**

Our $300 Price Objective is based on 27x our 2025 adjusted EPS. This is a premium to the company's 24x 5-year average, but below the 32-33x recent peak. We assume the multiple expands as EPS re-rates higher and more investors hone in on 2025's profitability potential.

Downside risks are 1) US mortgage market recovery weaker than expected amid higher for longer rates, 2) weakening US or international credit trends due to a worse than expected economic environment and tighter than expected consumer lending standards, 3) risks associated with Equifax's ongoing technology transformation (cost pressure, delayed timing of completion), and 4) market share losses at Workforce Solutions due to increased competition and reduced pricing power

Upside risks are 1) faster rate cuts leading to better mortgage performance, 2) faster than expected sakes traction from its cloud migration, 3) a better than expected labor market benefitting Workforce Solution's sales growth, and 4) better than expected international momentum.

**FactSet Research Systems Inc (FDS)**

Our $500 price objective is based on a 30.0x CY24E P/E multiple (based on 4 quarters ending in November 2024). This is a 2.5x discount to peers, in line with its historical average. We think potential upside on cost control is balanced by near-term sales headwinds in terms of risk/reward.

Downside risks to our price objective are: 1) longer than expected sales cycles and cancellations due to sellside and buyside clients tightening their budgets and investment banks slowing hiring, 2) longer than expected slowdown in capital markets activity, 3) adoption of new products slower than expected, and 4) higher than expected costs associated with investment spend that could impact margins

Upside risks to our price objectives are: 1) higher than expected sales from new logos and cross-selling opportunities, 2) greater than expected demand for deep sector, ESG, and private company raw data and content, 3) better than expected margin expansion sales and cost productivity initiatives and 4) greater than expected share buybacks.

**First Advantage Corporation (FA)**

Our $16 price objective is based on 10.0x 2024E EV/EBITDA (vs. 9.5x prior). This is a 0.5x premium to its current multiple, as well as peers. We see valuation upside on earnings beats, but we think it will be limited given sales pressures from more challenging labor market trends. We also think a premium to peers is warranted given FA's higher margins and stronger balance sheet.

Downside risks to our PO: 1) economic cyclicality, 2) risks related to the company's data (reliance on third parties, data security), 3) high sponsor ownership that limits the float, 4) limited M&A track record, 5) potential need for increased investment, 6) more stringent regulatory environment, 7) moderate customer concentration, and 8) post-employment monitoring not gaining traction.

**Gartner (IT)**

Our $500 price objective is based on 30x our 2024E P/FCF. Our multiple is 1.5x above the peer average, which we think is warranted given IT's resilient business.

Downside risks are 1) slowing demand throughout the COVID-recovery, 2) a slow rebound in conference activity due to consumers' reduced willingness to travel, and 3) inability to hire as much or as quickly as expected.

Upside risks are 1) EPS beat with Research segment sales upside, 2) better-than-expected in-person conference sales, and 3) better cost control.

**ManpowerGroup (MAN)**

We base our $55 price objective on 9x 2024E P/EPS, which is below MAN's typical mid-cycle FY2 P/E multiple range (10-15x) given recession risk.

Upside risks to our price objective are: 1) faster global and especially European economic recovery, 2) aggressive share repurchases or acquisitions, 3) further cost rationalization efforts.

Downside risks to our price objective are: 1) COVID-19 impacts on economic activity linger longer than expected, 2) the European economic recovery fails to meet expectations, 3) competitive pressures amid sluggish growth, and 4) strengthening in the US dollar.

**Moody's Corp. (MCO)**

Our $411 price objective is based on 33x 2024E P/E, a 8x premium to its current multiple. This is 8.5x above Information Services peers. We think a premium to peers is warranted given higher earnings growth.

Downside risks to our price objective are: 1) issuance recovery is weaker than expected due to higher rates, 2) an economic downturn leads to further issuance declines and reduces demand for Moody's Analytics' tools, and 3) adoption of Moody's Analytics' products is slower than expected.

Upside risks to our price objective are: 1) faster than expected credit cycle recovery, 2) larger than expected margin uplift, 3) stronger adoption of new products, 4) private credit market embraces ratings in a more material way, and 5) higher than expected buybacks

**MSCI Inc (MSCI)**
Our $460 price objective is based on 31.5x 2024E P/E (vs. 35.5x prior), which assumes a 1x discount from its current multiple, but ahead of information service peers by 7.5x. We think the premium to peers is warranted given high recurring revenues (97%), customer stickiness in its index business, and the ongoing shift from active to passive investing.

Upside risks to our price objective are: 1) ESG revenues slow faster than expected amid increased competition, growth off of a higher base, and political pressures, 2) global market weakness and/or an economic downturn, 3) slower than expected adoption of its risk-management tools

Downside risks to our price objective are: 1) accelerated shift in active to passive, 2) a re-acceleration of ESG revenues, 3) higher than expected leverage on double-digit sales growth, and 4) higher than expected share buybacks

**Robert Half (RHI)**
Our $59 price objective applies a 14.5x CY24E EPS which is below RHI's recent mid-cycle FY2 P/E multiple range (15-20x) given recession risk. We think this is warranted with the labor market peaking and GDP decelerating.

Upside risks to our price objective are: 1) the tight labor market and wage inflation more than offsets slowing GDP, 2) GDP growth is better than expected, and 3) continued outperformance by the Protiviti segment.

Downside risks to our price objective are: 1) a lower than projected outlook, 2) weaker than anticipated demand from small business, 3) larger than expected revenue deceleration at Protiviti, 4) a decline in gross margin due to pricing pressure, and 5) increased regulation of temporary help.

**S&P Global (SPGI)**
Our $480 price objective is based on a 33x 2024E P/E (vs. 31.5x prior). This is a 2x premium to peers. We think a modest premium is warranted given its higher earnings growth potential and potential to beat and raise.

Downside risks to our price objective are: 1) credit issuance recovery is weaker than expected due to higher rates, 2) an economic downturn leads to further issuance declines and reduces demand for S&P's data and analytical tools, 3) greater than sales pressure at Market Intelligence due to financial services customers cost cutting, 4) the company is not successful in realizing IHS sales synergies, and 5) management is distracted by the IHS integration.

Upside risks to our price objective are: 1) a faster than expected credit issuance recovery, 2) higher than expected sales upside from IHS Markit synergies, 3) stronger than expected global market growth benefitting Indices, and 4) greater than expected share buybacks.

**Strategic Education (STRA)**
Our $104 price objective is based on a 23x 2024E P/E multiple, a premium to its 20x historical pre-COVID average (January 2017-July 2020). We think a premium is warranted given the company's potential for material margin expansion and as the company continues to recover post-COVID.

Downside risks are1) pressure on enrollment from negative macro headwinds, 2) continued delays in Australia's visa program, 3) increased regulatory risks and requirements, and 4) increased competition.

Upside risks are 1) stronger than expected enrollment trends especially among working adults, 2) increased corporate partnerships and enrollments, 3) tighter cost control, and 4) greater than expected capital returns.

**Thomson Reuters (TRI / YTRI)**

Our $160 price objective (C$218) is based on 37.5x CY24E P/FCF (vs. 33x CY24E P/FCF prior). This reflects greater confidence in the durability of TRI's sales growth and a premium to peers at 24x. We think a premium is warranted given our view of TRI's resilient business model and margin expansion potential from its Change Program.

Downside risks: 1) failure to deliver revenue acceleration or margin targets associated with the "Change Program" could hurt valuation, 2) drag from Global Print and Reuters News accelerates, and 3) risks associated with Woodbridge's controlling stake. Upside risks: 1) successful execution of go-to-market strategies could accelerate revenue growth, 2) tuck-in M&A and/or share buybacks could boost earnings, and 3) rising value in TRI's LSEG stake.

**TransUnion (TRU)**

Our $47 price objective is based on 13x our 2024E EPS (adjusting out stock comp, our multiple is 15x). We are assuming valuation retrenches to late 2022 levels (13x 2024 P/E) as sales and margins remain weak amid a challenging consumer lending environment.

Downside risks are 1) a worse-than-expected consumer lending environment, 2) greater-than-expected mortgage market headwinds, 3) worse than expected deleveraging on higher sales, and 4) greater regulations (and potential) fines.

Upside risks are 1) a stronger-than-expected consumer environment, 2) greater-than-expected expense cuts, and 3) faster mortgage market recovery.

**Verisk Analytics (VRSK)**

Our $260 price objective is based on a 39x and 36x our 2024E and 2025E P/E multiple. We assume modest multiple expansion from current levels on strong execution, balanced by more normalized sales growth in 2024.

Risks to the downside 1) sales decelerate more than expected due to less auto shopping and/or a tougher economic backdrop, 2) investments in GenAI and innovation are higher than expected, and 3) greater than expected industry consolidation.

Risk to the upside 1) continued momentum in auto shopping activity benefitting transactional sales growth, 2) additional margin expansion opportunities, and 3) better than expected sales performance driven by the company's growth verticals (International, marketing, life insurance).

## Analyst Certification

I, Heather Balsky, 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.

**US - Business, Education & Professional Services Coverage Cluster**

| Investment rating | Company | BofA Ticker | Bloomberg symbol | Analyst |
|---|---|---|---|---|
| **BUY** | | | | |
| | Alight Inc | ALIT | ALIT US | Heather Balsky |
| | Aramark | ARMK | ARMK US | Heather Balsky |
| | Cintas | CTAS | CTAS US | Heather Balsky |
| | CoStar Group | CSGP | CSGP US | Heather Balsky |
| | Dun & Bradstreet Holdings, Inc. | DNB | DNB US | Heather Balsky |
| | Equifax | EFX | EFX US | Heather Balsky |
| | Gartner | IT | IT US | Heather Balsky |
| | Moody's Corp. | MCO | MCO US | Heather Balsky |
| | S&P Global | SPGI | SPGI US | Heather Balsky |
| | Strategic Education | STRA | STRA US | Heather Balsky |
| | Thomson Reuters | YTRI | TRI CN | Heather Balsky |
| | Thomson Reuters | TRI | TRI US | Heather Balsky |
| **NEUTRAL** | | | | |
| | FactSet Research Systems Inc | FDS | FDS US | Heather Balsky |
| | First Advantage Corporation | FA | FA US | Heather Balsky |
| | Verisk Analytics | VRSK | VRSK US | Heather Balsky |
| **UNDERPERFORM** | | | | |
| | ASGN Inc. | ASGN | ASGN US | Heather Balsky |
| | Clarivate PLC | CLVT | CLVT US | Heather Balsky |
| | ManpowerGroup | MAN | MAN US | Heather Balsky |
| | MSCI Inc | MSCI | MSCI US | Heather Balsky |
| | Robert Half | RHI | RHI US | Heather Balsky |
| | TransUnion | TRU | TRU US | Heather Balsky |

# Disclosures

## Important Disclosures

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

| Coverage Universe | Count | Percent | Inv. Banking Relationships [R1] | Count | Percent |
|---|---|---|---|---|---|
| Buy | 26 | 55.32% | Buy | 17 | 65.38% |
| Hold | 8 | 17.02% | Hold | 3 | 37.50% |
| Sell | 13 | 27.66% | Sell | 11 | 84.62% |

**Equity Investment Rating Distribution: Education & Training Services Group (as of 31 Dec 2023)**

| Coverage Universe | Count | Percent | Inv. Banking Relationships [R1] | Count | Percent |
|---|---|---|---|---|---|
| Buy | 8 | 53.33% | Buy | 2 | 25.00% |
| Hold | 4 | 26.67% | Hold | 1 | 25.00% |
| Sell | 3 | 20.00% | Sell | 0 | 0.00% |

**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.

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. VOLATILITY RISK RATINGS, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. INVESTMENT RATINGS reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

| 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% |

[R2] Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

*INCOME RATINGS*, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. *Coverage Cluster* is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Price Charts for the securities referenced in this research report are available on the Price Charts website, or call 1-800-MERRILL to have them mailed.
BofAS or one of its affiliates acts as a market maker for the equity securities recommended in the report: Alight, Aramark, ASGN Inc., Cintas, Clarivate PLC, CoStar, Dun & Bradstreet, Equifax, FactSet, First Advantage Corp, Gartner, ManpowerGroup, Moody's Corp., MSCI, Robert Half, SPGI, Strategic Education, Thomson Reuters, TransUnion, Verisk Analytics.
BofAS or an affiliate was a manager of a public offering of securities of this issuer within the last 12 months: Alight, Equifax, S&P Global, Verisk Analytics.
The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Alight, Clarivate, CoStar Group, Dun & Bradstreet, Equifax, First Advantage Corp, Gartner, Inc, Moody's, MSCI, On Assignment, Robert Half, S&P Global, Thomson Reuters, TransUnion, Verisk Analytics.
BofAS or an affiliate has received compensation from the issuer for non-investment banking services or products within the past 12 months: Alight, Aramark, Cintas, Clarivate, CoStar Group, Dun & Bradstreet, Equifax, FactSet Research Sys, First Advantage Corp, Gartner, Inc, ManpowerGroup, Moody's, MSCI, On Assignment, Robert Half, S&P Global, Strategic Education, Thomson Reuters, TransUnion, Verisk Analytics.
The issuer is or was, within the last 12 months, a non-securities business client of BofAS and/or one or more of its affiliates: Alight, Aramark, Cintas, Clarivate, CoStar Group, Dun & Bradstreet, Equifax, FactSet Research Sys, First Advantage Corp, Gartner, Inc, ManpowerGroup, Moody's, MSCI, On Assignment, Robert Half, S&P Global, Strategic Education, Thomson Reuters, TransUnion, Verisk Analytics.
BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Alight, Clarivate, Dun & Bradstreet, Equifax, Gartner, Inc, Moody's, MSCI, On Assignment, S&P Global, TransUnion, Verisk Analytics.
BofAS or an affiliate expects to receive or intends to seek compensation for investment banking services from this issuer or an affiliate of the issuer within the next three months: Alight, Clarivate, CoStar Group, Equifax, First Advantage Corp, Moody's, MSCI, On Assignment, Robert Half, S&P Global, Thomson Reuters, TransUnion, Verisk Analytics.
BofAS together with its affiliates beneficially owns one percent or more of the common stock of this issuer. If this report was issued on or after the 9th day of the month, it reflects the ownership position on the last day of the previous month. Reports issued before the 9th day of a month reflect the ownership position at the end of the second month preceding the date of the report: CoStar Group, Dun & Bradstreet, FactSet Research Sys, Gartner, Inc, MSCI, S&P Global, Thomson Reuters.
BofAS or one of its affiliates is willing to sell to, or buy from, clients the common equity of the issuer on a principal basis: Alight, Aramark, ASGN Inc., Cintas, Clarivate PLC, CoStar, Dun & Bradstreet, Equifax, FactSet, First Advantage Corp, Gartner, ManpowerGroup, Moody's Corp., MSCI, Robert Half, SPGI, Strategic Education, Thomson Reuters, TransUnion, Verisk Analytics.
The issuer is or was, within the last 12 months, a securities business client (non-investment banking) of BofAS and/or one or more of its affiliates: Alight, Clarivate, CoStar Group, Dun & Bradstreet, Equifax, FactSet Research Sys, First Advantage Corp, Gartner, Inc, Moody's, MSCI, On Assignment, Robert Half, S&P Global, Strategic Education, Thomson Reuters, TransUnion, Verisk Analytics.
BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

## Other Important Disclosures

From time to time research analysts conduct site visits of covered issuers. BofA Global Research policies prohibit research analysts from accepting payment or reimbursement for travel expenses from the issuer for such visits.
Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.
The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.
Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.
Refer to BofA Global Research policies relating to conflicts of interest.
**"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.**
**Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:**
BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofaml.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company,

Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSFC); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSFC; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the Electronic Communications Disclaimers for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

### General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities.

This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

This report may contain a short-term trading idea or recommendation, which highlights a specific near-term catalyst or event impacting the issuer or the market that is anticipated to have a short-term price impact on the equity securities of the issuer. Short-term trading ideas and recommendations are different from and do not affect a stock's fundamental equity rating, which reflects both a longer term total return expectation and attractiveness for investment relative to other stocks within its Coverage Cluster. Short-term trading ideas and recommendations may be more or less positive than a stock's fundamental equity rating.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned herein. Investors in such securities and instruments, including ADRs, effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

### BofA ESGMeter Methodology:

ESGMeter is a proprietary metric based on quantitative analysis and fundamental analyst inputs that reflects our assessment of a company's Environmental, Social and Governance-related attributes. The ESGMeter is intended to indicate a company's likelihood of experiencing stronger financial stability (higher return on equity and lower earnings and price volatility) over the next three years relative to peer group. There are three ESGMeter levels - Low, Medium, and High - which indicate whether a company has attributes most likely to translate into superior financial stability (in the case of a High level) or weaker financial stability (in the case of a Low level) over the next three years relative to its peer group. A Medium level suggests that a company exhibits ESG characteristics that are likely associated with financial stability results in line with its peer group over the next three years. Full details of our methodology, financial stability definition and disclaimers are available at BofA ESGMeter methodology. ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating.

ESGMeter is independent of the BofA Global Research fundamental equity analyst's investment rating, volatility risk rating, income rating or price objective for that company.



Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Subject to the quiet period applicable under laws of the various jurisdictions in which we distribute research reports and other legal and BofA Securities policy-related restrictions on the publication of research reports, fundamental equity reports are produced on a regular basis as necessary to keep the investment recommendation current.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.