

# Cognizant Technology Solutions

# 4Q results likely in-line as focus turns to 2024

Reiterate Rating: UNDERPERFORM | PO: 66.00 USD | Price: 76.88 USD

#### Risk/reward on print skews modestly to downside

CTSH will report 4Q results after-hours on 2/6. While we view 4Q revs/adj. EPS ests as safe given management's ongoing conservatism, investor focus will largely be on initial '24 revs guidance and demand commentary. Given the recent move in shares (no longer cheap at 16.5x C24 P/E), more crowded positioning, potential risk to 1Q revs guide, and likely deceleration in bookings growth, we think risk/reward is skewed modestly to the downside on the print. In our view, broader questions remain surrounding post-'23 top-line growth, and this plus valuation leads us to maintain our Underperform rating.

#### '24 consensus appears reasonable; 1Q may have some risk

Given visibility on the pace of discretionary spending improvement remains limited, we anticipate CTSH will likely guide '24 revs in-line with BofAe/Street at 1.9% y/y growth, skewed towards 2H. Given typical seasonality and ongoing end market choppiness, we believe consensus  $1Q \, q/q \, revs \, growth \, of \, +0.4\% \, could \, be \, a \, little \, high \, (BofAe = -0.1\%).$  We expect CTSH to reiterate '24 adj. EBIT margin expansion guidance of 20-40bps.

#### CTSH likely faces bookings headwinds in '24

Following solid LTM bookings growth of 16% in 3Q, we anticipate more moderate trends in 4Q, as CTSH laps the \$1B 4Q22 bookings contribution from CoreLogic. In '24 CTSH is also expected to lap the TCV growth benefit from longer duration deals signed in 2023, posing a headwind to reported bookings growth. Expect relative strength in cost-related outsourcing initiatives vs. shorter-cycle consulting to persist.

# Spotlight on '24 client budgeting plans

Commentary from comps suggest visibility into '24 budgeting plans remains limited, particularly for more discretionary initiatives. That said, in our view, signs of improvement may begin to emerge in the Spring, as enterprise decision makers address the pent-up demand within their organizations after a 12-18 month slowdown in spend.

### Expect in-line 4Q print; tweak PO to \$66

We anticipate 4Q revs growth of (1.5)% y/y, in-line with Street/guide of (1.8)%/(3.1)%-(0.3)%. On a cc basis, we model revs growth of (2.1)% vs. guide of (4.0)%-(1.2)%. BofAe adj. op. margins of 14.3% is in-line with Street, with BofAe/Street adj. EPS of \$1.04, in-line with implied guide of \$1.02-\$1.05. We also tweak PO from \$64 to \$66, see inside for details.

| Estimates (Dec) (US\$)   | 2021A | 2022A | 2023E | 2024E | 2025E |
|--|-------|-------|-------|-------|-------|
| EPS  | 4.12  | 4.39  | 4.41  | 4.66  | 5.09  |
| GAAP EPS   | 4.04  | 4.41  | 4.12  | 4.51  | 5.08  |
| EPS Change (YoY)   | 20.5% | 6.6%  | 0.5%  | 5.7%  | 9.2%  |
| Consensus EPS (Bloomberg)  |       |       | 4.41  | 4.59  | 5.00  |
| DPS  | 0.96  | 1.08  | 1.16  | 1.25  | 1.35  |
| Valuation (Dec)  |       |       |       |       |       |
| P/E  | 18.6x | 17.5x | 17.4x | 16.4x | 15.1x |
| GAAP P/E   | 19.0x | 17.4x | 18.6x | 17.0x | 15.1x |
| Dividend Yield   | 1.3%  | 1.4%  | 1.5%  | 1.6%  | 1.8%  |
| EV / EBITDA*   | 11.4x | 11.0x | 12.3x | 11.4x | 5.6x  |
| Free Cash Flow Yield*  | 5.6%  | 5.6%  | 5.0%  | 5.2%  | 6.0%  |
| * For full definitions of <i>iQ</i> method <sup>sm</sup> measures, see page 8. |       |       |       |       |       |

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 9 to 11. Analyst Certification on page 7. Price
Objective Basis/Risk on page 7.

Timestamp: 22 January 2024 12:00AM EST

#### 22 January 2024

#### Equity

| Key Changes |          |         |
|-------------|----------|---------|
| (US\$)      | Previous | Current |
| Price Obj.  | 64.00    | 66.00   |
| Price Obj.  | 64.00    | 66.00   |

#### Jason Kupferberg

Research Analyst BofAS +1 646 855 1961 jason.kupferberg@bofa.com

#### Tyler DuPont

Research Analyst BofAS +1 646 855 2944 tyler.dupont@bofa.com

#### Mihir Bhatia

Research Analyst BofAS +1 415 436 3553 mihir.bhatia@bofa.com

#### **Cassie Chan**

Research Analyst BofAS +1 646 855 1829 cassie.chan@bofa.com

#### **Stock Data**

Price

| Price Objective             | 66.00 USD             |
|-----------------------------|-----------------------|
| Date Established            | 19-Jan-2024           |
| Investment Opinion          | B-3-7                 |
| 52-Week Range               | 56.45 USD - 78.42 USD |
| Mrkt Val (mn) / Shares Out  | 39,747 USD / 517.0    |
| (mn)                        |                       |
| Free Float                  | 99.7%                 |
| Average Daily Value (mn)    | 280.09 USD            |
| BofA Ticker / Exchange      | CTSH / NAS            |
| Bloomberg / Reuters         | CTSH US / CTSH.OQ     |
| ROE (2023E)                 | 17.8%                 |
| Net Dbt to Eqty (Dec-2022A) | -12.6%                |
| ESGMeter™                   | High                  |

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to "BofA ESGMeter Methodology".

TCV: Total Contract Value

ACV: Annual Contract Value

CC: Constant Currency

76.88 USD

# **iQ**profile<sup>™</sup> Cognizant Technology Solutions

| <del>-1, , , , , , , , , , , , , , , , , , , </del>         |        |              |                           |                           |                           |
|---|--------|--------------|---------------------------|---------------------------|---------------------------|
| iQmethod <sup>SM</sup> − Bus Performance*                   |        |              |                           |                           |                           |
| (US\$ Millions)   | 2021A  | 2022A        | 2023E                     | 2024E                     | 2025                      |
| Return on Capital Employed                                  | 15.5%  | 15.9%        | 14.3%                     | 14.7%                     | 14.8%                     |
| Return on Equity  | 19.1%  | 18.8%        | 17.8%                     | 17.3%                     | 16.7%                     |
| Operating Margin  | 15.3%  | 15.3%        | 13.6%                     | 14.5%                     | 15.3%                     |
| Free Cash Flow  | 2,216  | 2,236        | 1,963                     | 2,061                     | 2,363                     |
| <i>iQ</i> method <sup>™</sup> – <b>Quality of Earnings*</b> |        |              |                           |                           |                           |
| (US\$ Millions)   | 2021A  | 2022A        | 2023E                     | 2024E                     | 20251                     |
| Cash Realization Ratio                                      | 1.1x   | 1.1x         | 1.0x                      | 1.1x                      | 1.1>                      |
| Asset Replacement Ratio                                     | 0.5x   | 0.6x         | 0.6x                      | 0.8x                      | 0.8                       |
| Tax Rate  | 24.5%  | 24.2%        | 23.8%                     | 24.5%                     | 24.5%                     |
| Net Debt-to-Equity Ratio                                    | -9.4%  | -12.6%       | -15.1%                    | -20.1%                    | -27.1%                    |
| Interest Cover  | NM     | NM           | NM                        | NM                        | NM                        |
| Income Statement Data (Dec)                                 |        |              |                           |                           |                           |
| (US\$ Millions)   | 2021A  | 2022A        | 2023E                     | 2024E                     | 2025                      |
| Sales   | 18.507 | 19,428       | 19,361                    | 19,722                    | 21,002                    |
| % Change  | 11.1%  | 5.0%         | -0.3%                     | 1.9%                      | 6.5%                      |
| Gross Profit  | 6,903  | 6,980        | 6,675                     | NA                        | NA<br>NA                  |
| % Change  | 15.4%  | 1.1%         | -4.4%                     | NA                        | N.A                       |
| EBITDA  | 3,400  | 3,537        | 3,163                     | 3,408                     | 6,995                     |
| % Change  | 27.5%  | 4.0%         | -10.6%                    | 7.8%                      | 105.3%                    |
| Net Interest & Other Income                                 | 1      | 52           | 97                        | 108                       | 108                       |
| Net Income (Adjusted)                                       | 2,174  | 2,278        | 2,231                     | 2,321                     | 2,507                     |
| % Change  | 17.5%  | 4.8%         | -2.1%                     | 4.0%                      | 8.0%                      |
| (US\$ Millions)   | 2021A  | 2022A        | 2023E                     | 2024E                     | 2025                      |
| Net Income from Cont Operations (GAAP)                      | 2,134  | 2,290        | 2,082                     | 2,245                     | 2,504                     |
| Depreciation & Amortization                                 | 574    | 569          | 545                       | 512                       | 536                       |
| Change in Working Capital                                   | (489)  | (279)        | (252)                     | (518)                     | (489)                     |
| Deferred Taxation Charge                                    | 27     | (273)        | (287)                     | 0                         | (                         |
| Other Adjustments, Net                                      | 249    | 261          | 185                       | 217                       | 231                       |
| Capital Expenditure   | (279)  | (332)        | (310)                     | (394)                     | (420)                     |
| Free Cash Flow  | 2,216  | 2,236        | 1,963                     | 2,061                     | 2,363                     |
| % Change  | -23.6% | 0.9%         | -12.2%                    | 5.0%                      | 14.6%                     |
| Share / Issue Repurchase                                    | (641)  | (1,336)      | (788)                     | (532)                     | (204)                     |
| Cost of Dividends Paid                                      | (509)  | (564)        | (591)                     | (624)                     | (666                      |
| Change in Debt  | (53)   | (39)         | (19)                      | (16)                      | (16)                      |
| Balance Sheet Data (Dec)                                    |        |              |                           |                           |                           |
| (US\$ Millions)   | 2021A  | 2022A        | 2023E                     | 2024E                     | 2025                      |
| Cash & Equivalents  | 1,792  | 2,191        | 2,569                     | 3,459                     | 4,935                     |
| Trade Receivables   | 3,557  | 3,796        | 3,774                     | 3,984                     | 4,243                     |
| Other Current Assets  | 1,993  | 1,279        | 1,422                     | 1,572                     | 1,655                     |
| Property, Plant & Equipment                                 | 1,171  | 1,101        | 1,047                     | 1,016                     | 985                       |
| Other Non-Current Assets                                    | 9,339  | 9,485        | 9,175                     | 9,419                     | 9,670                     |
| Total Assets  | 17,852 | 17,852       | 17,989                    | 19,451                    | 21,489                    |
| Short-Term Debt   | 38     | 8            | 33                        | 33                        | 33                        |
| Other Current Liabilities                                   | 3,491  | 3,339        | 3,177                     | 3,348                     | 3,538                     |
| Long-Term Debt  | 626    | 638<br>1,558 | 610                       | 594                       | 578                       |
| -   |        | 1 558        | 1,392                     | 1,392                     | 1,392                     |
| Other Non-Current Liabilities                               | 1,706  |              | F 044                     | F                         |                           |
| Other Non-Current Liabilities  Total Liabilities            | 5,861  | 5,543        | 5,212                     | 5,367                     |                           |
| Other Non-Current Liabilities                               |        |              | 5,212<br>12,777<br>17,989 | 5,367<br>14,084<br>19,451 | 5,541<br>15,948<br>21,489 |

#### **Company Sector**

Payments, Processors & IT Services

#### **Company Description**

Cognizant is a global IT services firm with CY22 revenues of \$19.4B. As of F22, the company derived 74% of its revenues from North America and 60% from the financial services and healthcare verticals. CTSH follows the offshore IT services business model, with 80%+ of its employees located in India. However, with an increasing focus on Digital, the company is currently focusing on boosting its onshore headcount. Digital now represents 50% of total revenues for the company.

#### **Investment Rationale**

While demand for cost takeout initiatives remain reasonably solid, we anticipate increased pockets of softness, which could spread in a recessionary environment. A worsening macro backdrop could exacerbate CTSH's ongoing struggle to bridge the revenue growth gap vs peers, and company-specific fulfillment/backlog conversion challenges may persist near-term.

#### Stock Data

Average Daily Volume

3,643,203

#### **Quarterly Earnings Estimates**

|    | 2022  | 2023  |
|----|-------|-------|
| Q1 | 1.08A | 1.11A |
| Q2 | 1.14A | 1.10A |
| Q3 | 1.17A | 1.16A |
| 04 | 1.01A | 1.04E |

# **4Q23 Preview**

At current valuation, we maintain our Underperform rating on CTSH, largely based on uncertainty surrounding post-'23 growth expectations. Based on typical seasonality, 1Q consensus revs could be a touch high. Below we summarize our 4Q23 preview thoughts.

#### Expect moderating bookings growth in 4Q and in 2024

In 3Q, CTSH reported LTM bookings of \$26.9B, up 16% y/y (9% y/y growth in quarterly bookings), driven by larger and longer duration deal wins, with duration up 50% over the past 12 months. This led to a healthy LTM book-to-bill of 1.4x. While these larger deals are primary focused on cost efficiency and managed services, management commentary also suggests solid momentum for transformation-led deals.

For 4Q, we believe CTSH will continue to report a solid pipeline for cost-takeout related initiatives vs. shorter-term consulting and systems integration projects. Additionally, in 4Q CTSH will be lapping the \$1B signing with CoreLogic, which will likely pose a headwind to growth.

During 2024, we also anticipate CTSH will begin lapping the benefit in 2023 of TCV growth outpacing ACV growth due to longer duration contracts, and we believe CTSH's LTM book-to-bill will ease from 3Q23 levels.

#### **BofA vs. consensus estimates**

For 4Q, we are modeling reported y/y revenue growth of (1.5)%, in-line with guidance of (3.1)%-(0.3)% and consensus of (1.8)%. On a const-curr basis, we expect growth of (2.1)% y/y compared to Street/guide of (2.5)%/(4.0)%-(1.2)%, including 100bps from M&A. We are modeling non-GAAP operating margin of 14.3%, in-line with Street.

We estimate a tax rate of 25.8%, leading to non-GAAP EPS of \$1.04, in-line with street and implied guidance of \$1.02-\$1.05. For 1Q24, we are modeling reported y/y revs growth of (1.0)% vs. Street at (0.6)%. BofAe adj. op. margin of 14.9% is in-line with Street at 14.8%, leading to BofAe/Street non-GAAP EPS estimates of \$1.11/\$1.10, respectively.

See Exhibit 1 for analysis of BofAe vs. consensus and guidance.

#### Exhibit 1: Analysis of BofAe vs. consensus and company guidance

Our 4Q23/F24 estimates are relatively in-line with Street, 1Q24 revs modestly below

|        | 4Q23  |   | 10  | 24  | F.   | 24   |
|--------|---|---|---|---|--|--|
| BofAe  | Street  | Guidance  | BofAe   | Street  | BofAe  | Street   |
| -3.1%  |   | (5.0%)-(2.2)%   |   |   |  |  |
| 1.0%   |   | 1.0%  |   |   |  |  |
| -2.1%  | -2.50%  | (4.0)%-(1.2)%   |   |   |  |  |
| 0.6%   |   | 0.9%  |   |   |  |  |
| -1.5%  | -1.8%   | (3.1)%-(0.3)%   | -1.0%   | -0.6%   | 1.9%   | 1.9%   |
|        |   |   |   |   |  |  |
| 14.3%  | 14.3%   |   | 14.9%   | 14.8%   | 15.0%  | 15.0%  |
| 25.8%  | 28.5%   |   | 24.5%   | 25.5%   | 24.5%  | 24.1%  |
| \$1.04 | \$1.04  | \$1.02 - \$1.05   | \$1.11  | \$1.10  | \$4.66   | \$4.62   |
|        | -3.1%<br>1.0%<br>-2.1%<br>0.6%<br>-1.5%<br>14.3%<br>25.8% | BofAe Street  -3.1% 1.0% -2.1% -2.50% 0.6% -1.5% -1.8%  14.3% 14.3% 25.8% 28.5% | -3.1% (5.0%)-(2.2)% 1.0% 1.0% -2.1% -2.50% (4.0)%-(1.2)% 0.6% 0.9% -1.5% -1.8% (3.1)%-(0.3)%  14.3% 14.3% 25.8% 28.5% | BofAe         Street         Guidance         BofAe           -3.1%         (5.0%)-(2.2)%         1.0%           1.0%         1.0%         0.0%           -2.1%         -2.50%         (4.0)%-(1.2)%           0.6%         0.9%         0.9%           -1.5%         -1.8%         (3.1)%-(0.3)%         -1.0%           14.3%         14.3%         14.9%           25.8%         28.5%         24.5% | BofAe         Street         Guidance         BofAe         Street           -3.1%         (5.0%)-(2.2)%         1.0%           1.0%         1.0%         -2.1%           -2.1%         -2.50%         (4.0)%-(1.2)%           0.6%         0.9%         -1.5%           -1.5%         -1.8%         (3.1)%-(0.3)%         -1.0%         -0.6%           14.3%         14.3%         14.9%         14.8%           25.8%         28.5%         24.5%         25.5% | BofAe         Street         Guidance         BofAe         Street         BofAe           -3.1%         (5.0%)-(2.2)%         1.0 |

**Source:** BofA Global Research estimates, Visible Alpha, Bloomberg, Company Materials

BofA GLOBAL RESEARCH

# Update PO to \$66 from \$64

We also tweak our PO to \$66 from \$64 prior, based on 15x (vs. 14x prior) our C24e non-GAAP EPS and our DCF model to reflect an increase in market multiples. Our multiple represents a 25% discount to the S&P500 (no change), based on CTSH's revenue and EPS growth profile.

# Read-thrus from recent comps' results

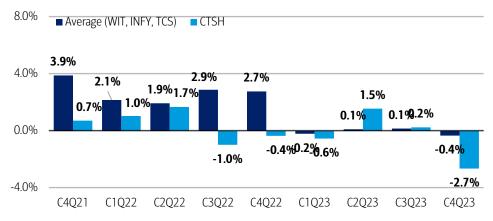
Exhibits 2-3 show the average q/q reported and y/y const-curr revenue growth rates for Indian IT Services comps (Wipro, Infosys, and TCS) compared to Cognizant's results since C4Q21, with C4Q23 reflecting BofA revenue estimates.



Comps' q/q reported revs growth declined modestly in C4Q at (0.4)%, driven largely by positive growth in TCS offset by declines in Wipro revs (Exhibit 2). Between C4Q21 and C3Q23, Cognizant has averaged q/q growth 130bps below the Indian IT Services peer group.

#### Exhibit 2: Q/Q reported growth for CTSH vs. comps (WIT, INFY, TCS)

Comps' q/q average reported revenue declined 0.4% in C4Q



Source: BofA Global Research estimates, Company Materials

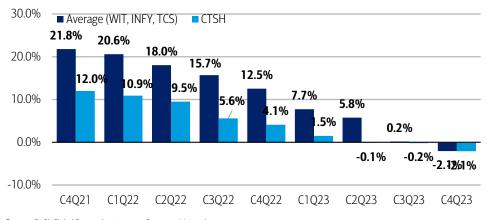
\*\* CTSH C4Q23 reflects BofAe growth; guidance implies (4.2)%-(1.6)% q/q growth

BofA GLOBAL RESEARCH

In C4Q, the peer set's const-curr y/y growth decelerated 190bps sequentially to (2.1)%, attributable to a 350bps deceleration in Infosys const-curr growth to (1.0)% y/y and 210bps deceleration in Wipro const-curr growth to (6.9)%, as shown in Exhibit 3. On average between C4Q21 and C3Q23, Cognizant has reported a const-curr revenue growth rate 740bps below the Indian IT Services comp group (Exhibit 4).

#### Exhibit 3: Y/Y const-currency growth for CTSH vs. comps (WIT, INFY, TCS)

Comps' average growth rate has been decelerating since C4Q21



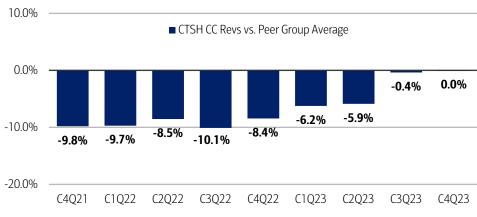
**Source:** BofA Global Research estimates, Company Materials

\*\* CTSH C4Q23 reflects BofAe growth

BofA GLOBAL RESEARCH

#### Exhibit 4: Y/Y const-currency growth for CTSH vs. comps (WIT, INFY, TCS)

CTSH has grown 740bps slower than the peer group on average since C4Q21, but the gap has narrowed



Source: BofA Global Research estimates, Company Materials

\*\* CTSH C4Q23 reflects BofAe growth

BofA GLOBAL RESEARCH

Similar to last quarter, commentary from peers (Exhibit 5) suggests that the demand environment for IT Services and visibility into future spending remains cloudy, as vendors see clients focus on cost-takeout initiatives and shorter duration ROI initiatives, while remaining cautious towards more discretionary-oriented projects.

While AI is also becoming an increasingly frequent talking point among peers, commentary suggests generative AI is not expected to be a significant contributor to revenue in the near term.

#### Exhibit 5: Management demand commentary from comps' recent earnings (ACN, INFY, TCS, WIT)

Demand remains muted across verticals and geographies, as clients remain focused on shorter-duration cost takeout initiatives

#### **Demand Commentary**

Accenture

I'd kind of anchor to, first of all, we're seeing demand for transformational deals. So, in an environment like this, the thing that I look at most is are we continuing to have our clients do more than \$100 million of bookings, right, which is in our industry, we are a real standout here...We are continuing to see significant demand in areas like cloud migration and modernization, modern ERP, and data and Al, including GenAl, platforms and security, all of which represent areas of great opportunity... Clients are continuing to prioritize the digital core as evidenced by strong demand for cloud migration...

Infosys

Our resilient performance in a seasonally weak quarter and the continued momentum in deal wins, coupled with a very large, efficient execution engine, gives us confidence for growth in the medium-term... In terms of the client discussions, we've not seen some sort of significant change in one or the other direction from what we were seeing in last quarter. So some of the digital transformation work or some of that type of programs are where clients are not putting focus or attention, whereas the cost and the efficiency and now even consolidation we are seeing more and more of that, which is what we were seeing last quarter as well. So in that sense, we don't have any change that we have sensed at this stage... The budget decisions are ongoing and as you know well, these will go through the early part of this month. So nothing firmed up, but we don't see any change and in what we were seeing in terms of behavior from the last quarter where budgets would suddenly have a different direction.

Tata Consultancy pent-up demand. This pent-up demand is important for long-term strategic growth for our customers, and we are optimistic that our customers will scale up these initiatives once they gain the comfort that the macro risks are receding... Operating model transformation focused on improving efficiencies, digitalization, customer and employee experience transformation, sustainability, cloud, cyber resilience, and Gen Al continue to be key themes driving demand for our services. We signed several large deals in the quarter led by vendor consolidation, and operating model transformation... the proportion between discretionary and non-discretionary that existed in last quarter or last couple of quarters has not tilted or changed significantly, it's continuing to be the same.

n the face of macro-economic uncertainties around fear of recession and continued high inflation, many businesses are being cautious about further investments creating a

Wipro

The demand environment overall remains cautious. Clients are still making conservative investments. They are looking for efficiency. They are more focusing on returns on investment and looking for better optimization, I would say, of existing investments. But we are seeing some indicators for growth.

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

BofA GLOBAL RESEARCH

Exhibit 6 summarizes C4Q earnings commentary from Indian IT Services comps, and suggests, similar to previous quarters, demand softness persists across a variety of industry verticals and geographies.

By industry vertical, Technology and Financial Services remain the most impacted by softer spending trends. The Financial Services and Technology verticals represented ~47.5% of Cognizant's total revenue in C3Q (same total in F22). In C3Q, Financial



Accenture

Infosys

Tata

Consultancy

Wipro

Services const-curr revs declined (4.0)%, while Communications, Media, & Technology increased 7.3% y/y due to recent M&A and ramp-ups among top clients.

By geography, commentary from comps suggest a more resilient spending environment in Europe vs. N. America, though respective geographic growth rates varied by vendor. CTSH generated 73.5% of C3Q revs from N. America (predominately US), followed by Europe and the UK both at 9.9% of total. The rest of world generated ~6.7% of total reported revs.

#### Exhibit 6: Management vertical and geography commentary from comps' recent earnings (ACN, INFY, TCS, WIT)

Comps experienced continued softness in financial services and high-tech verticals

#### Industry Verticals and Geographic Commentary

Consulting revenues for the quarter were \$8.5 billion, flat in US dollars and a decline to 2% in local currency. Managed services revenues were \$7.8 billion, up 6% in US dollars and 5% in local currency. Technology services grew mid-single digits, Operations was flat, and Strategy & Consulting declined mid-single digits.... In North America, revenue declined 1% local currency. Growth was led by public service, offset by declines in communications & media, software & platforms, and banking & capital markets... In EMEA, revenues grew 2% in local currency, led by growth in public service and banking & capital markets, partially offset by a decline in communications & media. Revenue growth was driven by Italy, Austria, and France, partially offset by a decline in the United Kingdom... In growth markets, we delivered 5% revenue growth in local currency, driven by growth in chemicals and natural resources, public service, and banking & capital markets. Revenue growth was led by Japan.

Inflation, uncertain macro, and delays in decision-making continue to impact the financial services sector with increasing cost pressures, client remain cautious on spending and are re-prioritizing their programs to deliver maximum business value. Overall, while the near-term outlook remains volatile, we will benefit from the recent deal wins and the new account openings. Communications sector continues to face growth challenges, which is putting pressure on OpEx spend. Uncertainty about medium-term spends remains with clients prioritizing cost optimization and vendor consolidation. Clients are looking at conserving cash, which is visible in delayed decision-making and project deferrals... Energy, utilities, resources and services clients remain cautiously optimistic about the demand environment with cap on short-term spend. In energy segment, we are seeing market share gains due to consolidation... Manufacturing segment continues to deliver strong performance on the back of new deal wins and ramp-up of earlier large deal signed. Growth was broad-based across Europe and the US, as well as across the industrial, automotive and aerospace industries. While the budget remains largely stable, clients continued to find ways to channel run savings into newer areas like digital cloud data and IoT. Pipeline remains healthy with emerging opportunities on various fronts in the ER&D space resulting from increased spending. In the retail segment, cost takeout and consolidation remain the primary focus for the clients. While discretionary spends remain under pressure, there are pockets of the opportunities, leveraging generative AI in predictive analysis, real-term insights and decision support areas.

Growth was led by energy resources and utilities vertical which grew 11.8%, manufacturing which grew 7%, Life sciences & Healthcare grew 3.1%. Our consumer business group grew by minus 0.3%. Banking, financial services, insurance by minus 3.0%. Communications & Media by minus 4.9%, and Technology & Services by minus 5.0%. Among major markets, the United Kingdom led with 8.1% growth. Continental Europe grew by 0.5%, North America by minus 3.0%. In emerging markets, India led the growth with 23.4%. Middle-East and Africa grew by 16%, Latin America grew by 13.2% and Asia Pacific by 3.9%.

Looking at Americas 1 first, we recorded a strong quarter for this unit, where we booked half of our 14 large deals this quarter. Revenue in this market grew 2% sequentially, ed by healthcare, which grew actually 9% sequentially. In our Americas 2 market unit, we continue to see some softness. This is -- let's keep in mind, this unit is primarily a BFSI or BFSI and energy and utilities being the large part of these units. They are seeing still some softness and resulting in a 1.3% drop in revenue Q-on-Q. That said, there's strong momentum in order bookings, which in total contract value terms increased 46% sequentially. In Europe, we won four large deals in the third quarter despite the continuing economic weakness. These four new transformative deals add up to nearly \$300 million in booking. These deals underscore the success of our strategy in this market. Having said that, revenue from Europe decreased 4.3% sequentially in Q3. Across the board, but more specifically in our APMEA strategic market unit, we have worked on -- and we've reported on that regularly, we have worked on reducing low-margin accounts, while slowly moving towards higher-value transformation projects. So in APMEA, evenues declined 5.4% quarter-on-quarter. However, the strategy of pivoting towards higher-value business reflects in the margins we delivered in the region.

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

BofA GLOBAL RESEARCH

# Price objective basis & risk

#### **Cognizant Technology Solutions (CTSH)**

We use a blend of 15x our 2024E non-GAAP EPS estimates and our DCF model to calculate our 12-month price objective of \$66. Our multiple represents a 25% discount to the S&P500, which we believe is appropriate based on CTSH's revenue and EPS growth profile, along with the risk/reward. Our DCF model assumes a weighted average cost of capital (WACC) of 10.9% and terminal growth rate of 2.2%.

Upside risks to our price objective are: 1) better than expected hiring and revenue growth trends, 2) significant improvement in employee attrition, 3) extended period of material margin expansion. Downside risks to our price objective are 1) potential work visa reform, 2) cyclical nature of CTSH's discretionary IT services businesses, 3) competition for talent, 4) wage inflation.

#### **Analyst Certification**

I, Jason Kupferberg, 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 - Payments, Processors, Specialty Finance and IT services Coverage Cluster** 

| Investment rating | Company                                | BofA Ticker | Bloomberg symbol | Analyst          |
|-------------------|--|-------------|------------------|------------------|
| BUY               |  |             |                  |                  |
|                   | Accenture Plc                          | ACN         | ACN US           | Jason Kupferberg |
|                   | American Express Company               | AXP         | AXP US           | Mihir Bhatia     |
|                   | Block Inc                              | SQ          | SQ US            | Jason Kupferberg |
|                   | Capital One Financial                  | COF         | COF US           | Mihir Bhatia     |
|                   | Discover Financial                     | DFS         | DFS US           | Mihir Bhatia     |
|                   | Enact Holdings                         | ACT         | ACT US           | Mihir Bhatia     |
|                   | Essent Group                           | ESNT        | ESNT US          | Mihir Bhatia     |
|                   | Fidelity National Information Services | FIS         | FIS US           | Jason Kupferberg |
|                   | Fiserv Inc                             | FI          | FIUS             | Jason Kupferberg |
|                   | FleetCor Technologies Inc.             | FLT         | FLT US           | Mihir Bhatia     |
|                   | Flywire                                | FLYW        | FLYW US          | Jason Kupferberg |
|                   | Global Payments Inc                    | GPN         | GPN US           | Jason Kupferberg |
|                   | Jack Henry & Associates                | JKHY        | JKHY US          | Jason Kupferberg |
|                   | Mastercard Inc                         | MA          | MA US            | Jason Kupferberg |
|                   | MGIC Investment Corp.                  | MTG         | MTG US           | Mihir Bhatia     |
|                   | NMI Holdings                           | NMIH        | NMIH US          | Mihir Bhatia     |
|                   | Nuvei                                  | NVEI        | NVEI US          | Jason Kupferberg |
|                   | Nuvei                                  | YNVEI       | NVEI CN          | Jason Kupferberg |
|                   | OneMain Holdings, Inc.                 | OMF         | OMF US           | Mihir Bhatia     |
|                   | Shift4 Payments, Inc                   | FOUR        | FOUR US          | Jason Kupferberg |
|                   | Telus International                    | TIXT        | TIXT US          | Cassie Chan      |
|                   | Telus International                    | YTIXT       | TIXT CN          | Cassie Chan      |
|                   | Visa Inc.                              | V           | V US             | Jason Kupferberg |
|                   | WEX Inc.                               | WEX         | WEX US           | Mihir Bhatia     |
| NEUTRAL           |  |             |                  |                  |
|                   | ADP                                    | ADP         | ADP US           | Jason Kupferberg |
|                   | Affirm Holdings                        | AFRM        | AFRM US          | Jason Kupferberg |
|                   | Bread Financial Holdings Inc           | BFH         | BFH US           | Mihir Bhatia     |
|                   | DLocal                                 | DLO         | DLO US           | Jason Kupferberg |
|                   | Globant SA                             | GLOB        | GLOB US          | Jason Kupferberg |
|                   | Marqeta                                | MQ          | MQ US            | Jason Kupferberg |
|                   | PayPal Holdings Inc                    | PYPL        | PYPL US          | Jason Kupferberg |
|                   | SoFi Technologies Inc                  | SOFI        | SOFI US          | Mihir Bhatia     |
|                   | Synchrony Financial                    | SYF         | SYF US           | Mihir Bhatia     |
|                   | Thoughtworks                           | TWKS        | TWKS US          | Jason Kupferberg |
|                   | Toast                                  | TOST        | TOST US          | Jason Kupferberg |
|                   | TTEC Holdings                          | TTEC        | TTEC US          | Cassie Chan      |



#### **US - Payments, Processors, Specialty Finance and IT services Coverage Cluster**

| Investment rating | Company                        | BofA Ticker | Bloomberg symbol | Analyst          |
|-------------------|--------------------------------|-------------|------------------|------------------|
| UNDERPERFORM      |                                |             |                  |                  |
|                   | CGI Inc.                       | GIB         | GIB US           | Jason Kupferberg |
|                   | CGI Inc.                       | YGIBA       | GIB/A CN         | Jason Kupferberg |
|                   | Cognizant Technology Solutions | CTSH        | CTSH US          | Jason Kupferberg |
|                   | Coinbase                       | COIN        | COIN US          | Jason Kupferberg |
|                   | DXC Technology                 | DXC         | DXC US           | Jason Kupferberg |
|                   | EPAM Systems                   | EPAM        | EPAM US          | Jason Kupferberg |
|                   | Paychex                        | PAYX        | PAYX US          | Jason Kupferberg |
|                   | Radian Group Inc               | RDN         | RDN US           | Mihir Bhatia     |
|                   | Rocket Companies, Inc.         | RKT         | RKT US           | Mihir Bhatia     |
|                   | TaskUs                         | TASK        | TASK US          | Cassie Chan      |
|                   | Western Union                  | WU          | WU US            | Jason Kupferberg |
| RSTR              |                                |             |                  |                  |
|                   | EngageSmart                    | ESMT        | ESMT US          | Jason Kupferberg |
|                   |                                |             |                  |                  |

# **IQ**method<sup>SM</sup> Measures Definitions

| <b>Business Performance</b> | Numerator  | Denominator   |
|-----------------------------|--|---|
| Return On Capital Employed  | NOPAT = (EBIT + Interest Income) $\times$ (1 $-$ Tax Rate) + Goodwill Amortization | Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill<br>Amortization |
| Return On Equity            | Net Income   | Shareholders' Equity  |
| Operating Margin            | Operating Profit   | Sales   |
| Earnings Growth             | Expected 5 Year CAGR From Latest Actual  | N/A   |
| Free Cash Flow              | Cash Flow From Operations — Total Capex  | N/A   |
| Quality of Earnings         | Numerator  | Denominator   |
| Cash Realization Ratio      | Cash Flow From Operations  | Net Income  |
| Asset Replacement Ratio     | Capex  | Depreciation  |
| Tax Rate                    | Tax Charge   | Pre-Tax Income  |
| Net Debt-To-Equity Ratio    | Net Debt = Total Debt — Cash & Equivalents   | Total Equity  |
| Interest Cover              | EBIT   | Interest Expense  |
| Valuation Toolkit           | Numerator  | Denominator   |
| Price / Earnings Ratio      | Current Share Price  | Diluted Earnings Per Share (Basis As Specified)                                     |
| Price / Book Value          | Current Share Price  | Shareholders' Equity / Current Basic Shares   |
| Dividend Yield              | Annualised Declared Cash Dividend  | Current Share Price   |
| Free Cash Flow Yield        | Cash Flow From Operations — Total Capex  | Market Cap = Current Share Price × Current Basic Shares                             |
| Enterprise Value / Sales    | EV = Current Share Price × Current Shares + Minority Equity + Net Debt +           | Sales   |
|                             | Other LT Liabilities   |   |
| EV / EBITDA                 | Enterprise Value   | Basic EBIT + Depreciation + Amortization  |

Momethod Suris the set of BofA Global Research standard measures that serve to maintain global consistency under three broad headings: Business Performance, Quality of Earnings, and validations. The key features of iQmethod are: A consistently structured, detailed, and transparent methodology. Guidelines to maximize the effectiveness of the comparative valuation process, and to identify some common pitfalls.

\*\*Polarabose\*\* is our real-time global research database that is sourced directly from our equity analysts' earnings models and includes forecasted as well as historical data for income statements, balance sheets, and cash



# **Disclosures**

### **Important Disclosures**

#### **Cognizant (CTSH) Price Chart**



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

The Investment Opinion System is contained at the end of the report under the heading "Fundamental Equity Opinion Key". Dark grey shading indicates the security is restricted with the opinion suspended. Medium grey shading indicates the security is under review with the opinion withdrawn. Light grey shading indicates the security is not covered. Chart is current as of a date no more than one trading day prior to the date of the report.

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

| Coverage Universe | Count | Percent | Inv. Banking Relationships R1 | Count | Percent |
|-------------------|-------|---------|-------------------------------|-------|---------|
| Buy               | 215   | 53.09%  | Buy                           | 111   | 51.63%  |
| Hold              | 97    | 23.95%  | Hold                          | 45    | 46.39%  |
| Sell              | 93    | 22.96%  | Sell                          | 24    | 25.81%  |

#### 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<sup>R2</sup>

| Buy          | ≥ 10% | ≤ 70% |
|--------------|-------|-------|
| Neutral      | ≥ 0%  | ≤ 30% |
| Underperform | N/A   | ≥ 20% |

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: Cognizant.

The issuer is or was, within the last 12 months, an investment banking client of BofAS and/or one or more of its affiliates: Cognizant.

 $Bof AS \ or \ an \ affiliate \ has \ received \ compensation \ from \ the \ issuer \ for \ non-investment \ banking \ services \ or \ products \ within \ the \ past \ 12 \ months: \ Cognizant.$ 

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: Cognizant.

BofAS or an affiliate has received compensation for investment banking services from this issuer within the past 12 months: Cognizant.

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: Cognizant. 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: Cognizant.



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: Cognizant.

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: Cognizant.

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 (Hong Kong): Merrill (Hong Ko (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): Merrill Lynch (Canada): Merrill Lynch (Mexico): Merrill Ly 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 wi

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.

#### Copyright and General Information:

Copyright 2024 Bank of America Corporation. All rights reserved. iQdatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities. 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 inform

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.

