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Citi Research Fixed Income Ratings Distribution

Data current as of 30 Sep 2020	Rating		
	Buy	Hold	Sell
Citi Research US High Yield Issuer Coverage	0%	0%	0%
<i>% of companies in each rating category that are investment banking clients</i>	0%	0%	0%

Citi Research Equity Ratings Distribution

Data current as of 30 Sep 2020	12 Month Rating			Catalyst Watch		
	Buy	Hold	Sell	Buy	Hold	Sell
Citi Research Global Fundamental Coverage	55%	34%	11%	22%	68%	9%
<i>% of companies in each rating category that are investment banking clients</i>	65%	62%	59%	68%	62%	68%
Citi Research Global Closed End Fund Coverage	0%	0%	0%			
<i>% of companies in each rating category that are investment banking clients</i>	0%	0%	0%			
Citi Research Quantitative World Radar Screen Model Coverage	30%	40%	30%			
<i>% of companies in each rating category that are investment banking clients</i>	38%	36%	37%			
Citi Research Quantitative Latam Radar Screen Model Coverage	20%	59%	21%			
<i>% of companies in each rating category that are investment banking clients</i>	66%	66%	73%			
Citi Research Quantitative Asia Radar Screen Model Coverage	20%	60%	20%			
<i>% of companies in each rating category that are investment banking clients</i>	37%	32%	25%			
Citi Research Quantitative Australia Radar Screen Model Coverage	48%	0%	52%			
<i>% of companies in each rating category that are investment banking clients</i>	53%	0%	40%			

Exchange Traded Fund specific disclosures:

Investors should always consider the investment objectives, risks, and charges and expenses of an ETF carefully before investing and may obtain the prospectus and other information about an ETF from the ETF's website or from its distributor, authorized participant or listing exchange. An ETF directly invests in or aims to track the performance of an underlying index or assets and the ETF's performance will be affected by the performance of and risks associated with the underlying index or assets. If the ETF aims to track the performance of an index or assets rather than investing in them directly, the ETF will have "tracking risk" to the extent the ETF's performance doesn't exactly match that of the underlying index or assets.

ETFs are created and redeemable only through an Authorized Participant, and Citi may be an Authorized Participant for certain ETFs mentioned in this Product. Citi may also have trading and other business relationships with or provide administrative, custodian, transfer agent or other services to the ETF or its sponsors or affiliates.

Leveraged and Inverse ETFs: Leveraged ETFs seek to provide a multiple of the returns of a given index or benchmark and will generally produce a different return than the cumulative returns of the index or benchmark. Inverse ETFs (which may also be leveraged) seek to provide the opposite of the returns of a given index or benchmark. Due to the effects of compounding and possible correlation errors, leveraged and inverse ETFs may experience greater losses than one would ordinarily expect and may experience losses even in situations where the underlying index or benchmark has performed as hoped. Aggressive investment techniques such as futures, forward contracts, swap agreements, derivatives and options can increase ETF volatility and decrease performance. Investors holding these ETFs should therefore monitor their holdings consistent with their strategies, as frequently as daily.

International investing and Sector Specific ETFs: International investing involves special risks such as currency fluctuation and political instability. Investing in emerging markets may accentuate these risks. Since sector- and commodity-specific ETFs are not diversified and focus their investments entirely in a single sector, commodity, or basket of commodities, these ETFs may involve a greater degree of risk than an investment in other diversified fund types.

Exchange Traded Fund specific disclosures:

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ETFs are redeemable only in Creation Unit size through an Authorized Participant. Citigroup may be an authorized participant for certain ETFs mentioned in this report. As an authorized participant or otherwise, Citigroup acquires securities from the issuers for the purposes of resale.

An investment in an ETF is not a deposit of a bank and is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. An ETF directly invests in or aims to track the performance of an underlying asset therefore the performance of an ETF will be affected by the performance of the underlying asset and the risks associated with investing in that asset. If the ETF aims to track the performance of an asset rather than investing in it directly then there is a "tracking risk" whereby the performance of the ETF doesn't exactly match that of the asset it is aiming to track. An investment in an ETF could lose money over short or even long periods and any investor should expect the Fund's share price and total return to fluctuate within a wide range, like the fluctuations of the overall stock market. ETF shares are traded on an exchange and thus liquidity is dependent on there being sufficient buyers and sellers of the security in the market thus there is a possibility that an active trading market may not be maintained. A lack of liquidity could affect the price of the security.

The Fund's distributions may be taxable as ordinary income or capital gains. A sale of ETF Shares is a taxable event, which means that you may have a capital gain to report as income, or a capital loss to report as a deduction, to the tax authorities. Dividend and capital gains distributions that you receive, as well as your gains or losses from any sale of ETF Shares, may also be subject to income taxes.

The performance data quoted represents past performance. Past performance is no guarantee of future results. The investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. Current performance may be higher or lower than the performance data quoted.

Inverse and Leveraged ETFs: Most leveraged ETFs seek to provide a multiple of the investment returns of a given index or benchmark on a daily basis. Inverse ETFs seek to provide the opposite of the investment returns, also daily, of a given index or benchmark, either in whole or by multiples. Due to the effects of compounding and possible correlation errors, leveraged and inverse ETFs may experience greater losses than one would ordinarily expect. Compounding can also cause a widening differential between the performances of an ETF and its underlying index or benchmark, so that returns over periods longer than one day can differ in amount and direction from the target return of the same period. Consequently, these ETFs may experience losses even in situations where the underlying index or benchmark has performed as hoped. Aggressive investment techniques such as futures, forward contracts, swap agreements, derivatives and options can increase ETF volatility and decrease performance. Investors holding these ETFs should therefore monitor their holdings consistent with their strategies, as frequently as daily.

International investing and Sector Specific ETFs: International investing involves special risks such as currency fluctuation and political instability. Investing in emerging markets may accentuate these risks. Since sector- and commodity-specific funds are not diversified and focus their investments entirely in a single sector, commodity, or basket of commodities, the funds will involve a greater degree of risk than an investment in other diversified fund types.

Exchange Traded Notes (ETNs): ETNs are not funds and are not registered under the Investment Company Act of 1940. ETNs are not secured debt and do not provide principal protection unless stated specifically in the prospectus. The repayment of the principal, interest (if any), and the payment of any returns at maturity or upon redemption are dependent on that issuer's ability to pay. Risks of investing in ETNs include limited portfolio diversification, trade price fluctuations, uncertain principal repayment, and illiquidity. ETNs may have call features that allow the issuer to call the ETN at the issuer's discretion due to the occurrence of certain market events. A call right by an issuer may adversely affect the value of the notes.

Investing in ETNs is not equivalent to investing directly in an index or in any particular index components. The investor fee will reduce the amount of your return at maturity or on redemption, and as a result you may receive less than the principal amount of your investment at maturity or upon redemption of your ETN even if the level of the relevant index has increased or decreased (as may be applicable to the particular series of ETNs). An investment in ETNs may not be suitable for all investors. Commissions may apply and there are tax consequences in the event of sale, redemption or maturity of Securities. Investors should refer to the ETN's prospectus to obtain a complete discussion of the risks involved when investing.

Guide to Citi Research Fundamental Research Investment Ratings:

Citi Research stock recommendations include an investment rating and an optional risk rating to highlight high risk stocks.

Risk rating takes into account both price volatility and fundamental criteria. Stocks will either have no risk rating or a High risk rating assigned.

Investment Ratings: Citi Research investment ratings are Buy, Neutral and Sell. Our ratings are a function of analyst expectations of expected total return ("ETR") and risk. ETR is the sum of the forecast price appreciation (or depreciation) plus the dividend yield for a stock within the next 12 months. The target price is based on a 12 month time horizon. The Investment rating definitions are: Buy (1) ETR of 15% or more or 25% or more for High risk stocks; and Sell (3) for negative ETR. Any covered stock not assigned a Buy or a Sell is a Neutral (2). For stocks rated Neutral (2), if an analyst believes that there are insufficient valuation drivers and/or investment catalysts to derive a positive or negative investment view, they may elect with the approval of Citi Research management not to assign a target price and, thus, not derive an ETR. Analysts may place covered stocks "Under Review" in response to exceptional circumstances (e.g. lack of information critical to the analyst's thesis) affecting the company and / or trading in the company's securities (e.g. trading suspension). As soon as practically possible, the analyst will publish a note re-establishing a rating and investment thesis. To satisfy regulatory requirements, we correspond Under Review and Neutral to Hold in our ratings distribution table for our 12-month fundamental rating system. However, we reiterate that we do not consider Under Review to be a recommendation. Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

Catalyst Watch Upside/Downside calls:

Citi Research may also include a Catalyst Watch Upside or Downside call to highlight specific near-term catalysts or events impacting the company or the market that are expected to influence the share price over a specified period of 30 or 90 days. A Catalyst Watch Upside (Downside) call indicates that the analyst expects the share price to rise (fall) in absolute terms over the specified period. A Catalyst Watch Upside/Downside call will automatically expire at the end of the specified 30/90 day period; the analyst may also close a Catalyst Watch call prior to the end of the specified period in a published research note. A Catalyst Watch Upside or Downside call may be different from and does not affect a stock's fundamental equity rating, which reflects a longer-term total absolute return expectation. For purposes of FINRA ratings-distribution-disclosure rules, a Catalyst Watch Upside call corresponds to a buy recommendation and a Catalyst Watch Downside call corresponds to a sell recommendation. Any stock not assigned to a Catalyst Watch Upside or Catalyst Watch Downside call is considered Catalyst Watch Non-Rated (CWNRR). For purposes of FINRA ratings-distribution-disclosure rules, we correspond CWNRR to Hold in our ratings distribution table for our Catalyst Watch Upside/Downside rating system. However, we reiterate that we do not consider CWNRR to be a recommendation. For all Catalyst Watch Upside/Downside calls, risk exists that the catalyst(s) and associated share-price movement will not materialize as expected.

Guide to Citi Research High Yield Ratings: Coverage in the Citi Research High Yield universe is assigned a relative return based rating. Depending on the issuer under analysis ratings may be applied to either some or all of the issuer's debt securities, CDS or leveraged loans. These ratings and their definitions are:

Guide to Citi Research High Yield Issue and Leveraged Loan Ratings:

Buy (1): The analyst expects the six-month total return of the rated instrument to exceed the market value weighted average six-month total return for the analyst's sector or comparable sub-index of the Citi High Yield Market Index (for debt securities and CDS) or Citi Leveraged Loan Tracker (for leveraged loans).

Neutral (2): The analyst expects the six-month total return of the rated instrument to be in line with the market value weighted average six-month total return for the analyst's sector or comparable sub-index of the Citi High Yield Market Index (for debt securities and CDS) or Citi Leveraged Loan Tracker (for leveraged loans).

Sell (3): The analyst expects the six-month total return of the rated instrument to be below the market value weighted average six-month total return for the analyst's sector or comparable sub-index of the Citi High Yield Market Index (for debt securities and CDS) or Citi Leveraged Loan Tracker (for leveraged loans).

The Citi High Yield Market Index and Citi Leveraged Loan Tracker are both available at

<https://www.citivelocity.com/marketbuzz/public/research/MarketSnapshot.action>

Guide to Citi Research High Yield Credit Default Swap (CDS) Ratings:

Long Risk: The analyst expects the next three months' total return from selling CDS on the issuer to exceed that of selling CDS on the on-the-run CDX.HY index and/or sector comparables.

Neutral: The analyst expects the next three months' total return for buying or selling CDS on the issuer will be in line with the returns from on-the-run CDX.HY index and/or sector comparables.

Short Risk: The analyst expects the next three months' total return from buying CDS on the issuer to exceed that of buying CDS on the on-the-run CDX.HY index and/or sector comparables.

The on-the-run CDX.HY index is available at <https://www.citivelocity.com/marketbuzz/public/research/MarketSnapshot.action>

Guide to Citi Research High Yield Sector/Issuer Portfolio Weightings:

Overweight (OW): Over the next six months, the recommended sector or issuer is expected to outperform the returns on the relevant index or benchmark based on valuation and methodology provided below;

Marketweight (MW): Over the next six months, the recommended sector or issuer is expected to perform in line with the returns on the relevant index or benchmark based on valuation and methodology provided below;

Underweight (UW): Over the next six months, the recommended sector or issuer is expected to underperform the returns on the relevant index or benchmark based on valuation and methodology provided below;

Under Review: Citi Research has suspended the investment rating for this issuer because there is not a sufficient fundamental basis for determining an investment rating. The previous investment rating is no longer in effect for this issuer and should not be relied upon. To satisfy regulatory requirements, we correspond 'under review' to Hold in our ratings distribution table. However, we reiterate that we do not consider 'under review' to be a recommendation.

For purposes of complying with ratings-distribution-disclosure rules, a Citi Research High Yield rating of Overweight is considered to correspond to a Buy recommendation; Marketweight and Neutral to a Hold recommendation; and Underweight to a Sell recommendation.

HY Catalyst Watch calls: Citi HY Research may also include a HY Catalyst Watch call to highlight specific near-term catalysts or events impacting a high yield credit issuer or the market that are expected to influence the price or spread of an instrument over the next 30 days. A HY Catalyst Watch call will automatically expire at the end of the 30 day period; the analyst may also close a HY Catalyst Watch call prior to the end of the 30 day period in a published research note. A HY

Catalyst Watch call may be different from and does not affect a fundamental issuer weighting or issue rating, which reflects a longer-term relative total return expectation. For all HY Catalyst Watch calls, risk exists that the catalyst(s) and associated price or spread movement will not materialize as expected. HY Catalyst Watch ratings are as follows:

Price Upside: The analyst expects the bond or loan price to rise in absolute terms over the next 30 days

Price Downside: The analyst expects the bond or loan price to fall in absolute terms over the next 30 days

Spread Tightening: The analyst expects the bond or loan yield spread (yield differential over benchmark US Treasury yield) or CDS spread (insurance premium as a percentage of notional) to tighten in absolute terms over the next 30 days

Spread Widening: The analyst expects the bond or loan yield spread (yield differential over benchmark US Treasury yield) or CDS spread (insurance premium as a percentage of notional) to widen in absolute terms over the next 30 days

Issuer, Sector, Bond and Loan Valuation and Methodology: In Citi's High Yield Credit Research we assign a rating (Buy, Neutral or Sell) that, depending on the company under analysis, may be assigned to some or all of the company's debt instruments. The rating is based on our credit view of the issuer and the relative value of its debt instruments, taking into account the ratings assigned to the issuer by credit rating agencies and the market prices for the issuer's debt instruments. Issuers with a non-investment grade or speculative rating by credit rating agencies will generally have a greater credit/default risk. Our credit view of an issuer is based upon our opinion as to whether the issuer will be able to service its debt obligations when they become due and payable. We may assess this by analyzing, among other things, the issuer's credit position using standard credit ratios such as cash flow to debt and fixed charge coverage (including and excluding capital investment). We also analyze the issuer's ability to generate cash flow by reviewing standard operational measures for comparable companies in the sector, such as revenue and earnings growth rates, margins, and the composition of the issuer's balance sheet relative to the operational leverage in its business. Sector weightings are based on general global macro factors, industry fundamentals, and broader high yield market and sector specific technicals.

CDS Valuation and Methodology: In Citi's High Yield Credit Research we assign a rating Long Risk (meaning Sell Protection), Neutral or Short Risk (meaning Buy Protection) that, depending on the issuer under analysis, may be assigned to some or all of the CDS on that issuer. Long Risk refers to selling the CDS, thereby assuming the risk of a credit event. Short Risk refers to buying the CDS, thereby transferring the risk of a credit event. The rating is based on our credit view of the issuer and the relative value versus the relevant index or benchmark, and or sector comparables. Our issuer view considers the fundamental and technical backdrop for the issuer and the market price of the issuer's CDS contracts. For purposes of complying with ratings-distribution-disclosure rules, a rating of Long Risk is considered to correspond to a Sell recommendation; Neutral to a Hold recommendation; and Short Risk to a Buy recommendation.

Guide To Investment Ratings - Closed-End Funds:

Citi Research closed-end fund recommendations include a risk rating and an investment rating.

Risk ratings, which take into account the quality and liquidity of the underlying securities, financial leverage, and foreign currency exposure, are: Low [L] (fund invests in high quality, liquid securities with little to no financial leverage or foreign currency exposure); Medium [M] (overall, fund invests in moderate- to high-quality, liquid securities with reasonable financial leverage, and provides primarily United States dollar currency exposure); High [H] (fund may invest in low-quality, less-liquid securities, have exposure to foreign currencies, and use above-average degrees of financial leverage); and Speculative [S] (fund invests in low-grade, illiquid and/or highly volatile securities, have exposure to foreign currency, and may also use high degrees of financial leverage).

Investment ratings are based upon the Citi Research expectation of the funds total return relative to its peer group of closed-end-funds, and the ability to provide stable to rising dividends, where applicable. Investment ratings are: Outperform [1] (fund is expected to outperform its peer group, and/or the fund is expected to provide stable to rising dividends, where applicable); In-Line [2] (fund is expected to perform in line with its peer group, and/or the fund is expected to provide stable dividends, where applicable); and Underperform [3] (fund is expected to underperform its peer group, and/or the fund is expected to provide a declining dividend, where applicable).

Guide to Citi Research Quantitative Research Investment Ratings:

Citi Research Quantitative Research World Radar Screen recommendations are based on a globally consistent framework to measure relative value and momentum for a large number of stocks across global developed and emerging markets. Relative value and momentum rankings are equally weighted to produce a global attractiveness score for each stock. The scores are then ranked and put into deciles. A stock with a decile rating of 1 denotes an attractiveness score in the top 10% of the universe (most attractive). A stock with a decile rating of 10 denotes an attractiveness score in the bottom 10% of the universe (least attractive).

Citi Research Asia Quantitative Radar Screen model recommendations are based on a regionally consistent framework to measure relative value and momentum for a large number of stocks across regional developed and emerging markets. Relative value and momentum rankings are equally weighted to produce a global attractiveness score for each stock. The scores are then ranked and put into quintiles. A stock with a quintile rating of 1 denotes an attractiveness score in the top 20% of the universe (most attractive). A stock with a quintile rating of 5 denotes an attractiveness score in the bottom 20% of the universe (least attractive).

Citi Research Quantitative Research Latam Radar Screen recommendations are based on a globally consistent framework to measure relative value and momentum for a large number of stocks across markets in Latin America. Relative value and momentum rankings are equally weighted to produce a global attractiveness score for each stock. The scores are then ranked and put into quintiles. A stock with a quintile rating of 1 denotes an attractiveness score in the top 20% of the universe (most attractive). A stock with a quintile rating of 5 denotes an attractiveness score in the bottom 20% of the universe (least attractive).

Citi Research Australia Quantitative Radar Screen model recommendations are based on a robust framework to measure relative value and momentum for a large number of stocks across the Australian market. Stocks with a ranking of 1 denotes a stock that is above average in terms of both value and momentum relative to the stocks in the Australian market. A ranking of 10 denotes a stock that is below average in terms of both value and momentum relative to the stocks in the Australian market.

For purposes of FINRA ratings-distribution-disclosure rules, a Citi Research Quantitative World Radar Screen recommendation of (1), (2) or (3) most closely corresponds to a buy recommendation; a recommendation from this product group of (4), (5), (6) or (7) most closely corresponds to a hold recommendation; and a recommendation of (8), (9) or (10) most closely corresponds to a sell recommendation. An (NR) recommendation indicates that the stock is no longer in the screen. For purposes of FINRA ratings-distribution-disclosure rules, a Citi Research Latam Radar Screen recommendation of (1) most closely corresponds to a buy recommendation; a recommendation of (2),(3) or (4) most closely corresponds to a hold recommendation; and a recommendation of (5) most closely corresponds to a sell recommendation. An (NR) recommendation indicates that the stock is no longer in the screen.

For purposes of FINRA ratings distribution disclosure rules, a Citi Research Asia Quantitative Radar Screen recommendation of (1) most closely corresponds to a buy recommendation; a Citi Research Asia Quantitative Radar Screen recommendation of (2), (3), (4) most closely corresponds to a hold recommendation; and a recommendation of (5) most closely corresponds to a sell recommendation. An (NR) recommendation indicates that the stock is no longer in the screen.

For purposes of FINRA ratings-distribution-disclosure rules, a Citi Research Quantitative Research Australia Radar Screen recommendation of "attractive" (1) most closely corresponds to a buy recommendation. All other stocks in the sector are considered to be "unattractive" (10) which most closely corresponds to a sell recommendation. An (NR)/(0) recommendation indicates that the stock is no longer in the screen.

Recommendations are based on the relative attractiveness of a stock, thus can not be directly equated to buy, hold and sell categories. Accordingly, your decision to buy or sell a security should be based on your personal investment objectives and only after evaluating the stock's expected relative performance.

NON-US RESEARCH ANALYST DISCLOSURES

Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the FINRA Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below (and their regulators are listed further herein):

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OTHER DISCLOSURES

Statements to be presented in relation to the Article 37 of the Financial Instruments and Exchange Laws (the "FIEL")

With respect to the purchase or sale of financial instruments, we may charge you a commission (in case of stock, a commission equal to the transaction price multiplied by a commission rate agreed between you and us in advance and consumption tax, and in case of investment trust, sales commission, trust fees and other fees prescribed for each fund). Each financial instrument is subject to relevant inherent risk and a substantial amount of loss or liability may occur due to a change in domestic/overseas political, economic or financial environment, market environment such as exchange rates, stock market, commodity market and interest rates, credibility of issuers, and change in underlying assets. For trading in derivatives, you may be required to pay margin, deposit or collateral ("collateral amount") based on agreement of each transaction. In addition, you may be required to pay additional collateral amount. For such transaction, nominal amount of transaction may exceed collateral amount, etc. Collateral amount to be paid by you will vary with the contents of collateral agreement. Therefore, we cannot calculate the maximum ratio of nominal amount against the collateral amount at this moment. There is a risk that a loss or liability exceeding the collateral amount may occur due to change in underlying asset. In addition, depending on the type of transaction, the rate we show you for sell and purchase as set out in Article 16.1.6 of the Enforcement Order of the FIEL may differ. In the case that there is an exercise period, please note that there is a limit in period when you can exercise relevant right. If there is early termination clause such as early cancellation clause or automatic lapse clause, the transaction may be completed prior to the expected completion date. Before executing any transaction, please carefully read the documents provided prior to the execution of the contracts, prospectus and other materials for customers, etc. Trade Name, Etc.: Citigroup Global Markets Japan Inc. (Financial Instruments Firm, Director-General of Kanto Local Finance Bureau (Kin-Sho) No. 130). Association Membership: Japan Securities Dealers Association, The Financial Futures Association of Japan, Type II Financial Instruments Firms Association.

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5.1. Compensation of Citi Research analysts is structured to align the interests of research analysts with Citi Research's investing clients and to avoid any incentive inconsistent with the provision of impartial research. As such, compensation of research analysts is determined exclusively by Citi Research management and Citi's senior management (excluding anyone from Banking or anyone who performs sales, trading or clearing activities or their direct supervisors) and is not linked to specific transactions or recommendations.

5.2. Citi Research analyst compensation is based on established criteria that include the quality and accuracy of the analyst's research and analysis. No Research analyst compensation may be based upon specific investment banking transactions or contributions to the Banking business or upon specific trading transactions or contributions to Markets' trading or clearing business. However, compensation may relate to the revenues or results of Citi as a whole (including Banking and Markets).

5.3. The Research budget and allocation of expenses is determined by Research Management and Citi's senior management (with no involvement or input from Banking or, for certain elements, from senior management engaged in trading activities). Citi Research budgets shall be determined without regards to specific revenues or results derived from Banking, though revenues and results of the firm as a whole may be considered in determining Citi Research budget and the allocation of Citi Research expenses.

5.4. Citi Research analyst feedback is controlled in order to prevent improper influence from areas of the firm where a conflict may exist. For example, research analysts classified as "CFTC Derivatives Research Analysts" must not receive feedback from Citi's business trading unit, and Banking is not permitted to provide analyst feedback.

5.5. All Citi Research reports must carry a certification from the research analyst that the views expressed accurately reflect the analyst's personal views about any and all of the subject issuer(s) or securities and that no part of their compensation was, is or will be directly or indirectly related to the specific recommendation(s) or view(s) in that report.

6. Involvement of analysts in other activities

6.1. Citi Research analysts are not permitted to participate in efforts to solicit investment banking business or to participate in any pitches to prospective investment banking clients.

6.2. Citi Research analysts are not permitted to participate in or attend any company or investment banking sponsored road shows related to a public offering or other investment banking transaction.

6.3. Interactions between Citi Research and Banking are permitted only if they do not compromise Citi's commitment to research independence. Email and certain other electronic communications between Banking and Equity Research are blocked, subject to limited exceptions.

- 6.4. Citi Research analyst participation in the capital formation process may be required during several phases of the process, including assessing potential candidates for transactions; vetting of identifiable transactions; addressing Citi internal review committees; and educating investors and sales.
- 6.5. Interactions between research analysts and corporates, including private companies, are a legitimate and necessary part of an analyst's ordinary course work to understand their area of coverage (including the wider sector).
- 6.6. Nonetheless, to comply with regulatory requirements that exist in certain regions, Citi research analyst interactions with issuers, their advisers and representatives may be restricted in order to further mitigate any perceived impairment to a research analyst's independence during the capital formation process.
- 6.7. It is in the interest of Citi Research's investing clients to have independent research analysts comment on potential candidates for transactions and review identifiable transactions to assess the merits of such transactions. The purpose of research vetting is to allow equity research analysts to assess the investment merits and risks; assist Citi in determining the appropriateness of transactions for investing clients; and provide input to Citi's overall view of the proposed transaction.
- 6.8. Banking may not use research to win banking business and are only permitted to provide research to banking clients in limited circumstances, in order to maintain research independence.
- 6.9. Citi Research analysts are not permitted to collaborate with Markets on the production of research reports or market commentary.

7. Avoiding Inappropriate Influences

- 7.1. Citi Research management independently makes research coverage decisions (e.g., initiating, transferring, or terminating coverage). Banking may not provide any input on or discuss the coverage of individual companies with Research. Generally, Citi Research intends to provide coverage for all equity securities underwritten by Citi (regional nuances may exist, for example depending on the role Citi takes in the transaction). Notwithstanding the foregoing, Research Management will have final discretion and responsibility with respect to all coverage decisions including taking into account, among other things, whether sufficient capacity exists to provide coverage.
- 7.2. Non-research personnel must never attempt to influence a research analyst's rating or opinion or any other contents of a research publication.
- 7.3. Neither Citi Research nor any non-Citi Research personnel may offer or accept any inducement to produce favourable research or a specific rating or price target.
- 7.4. Citi Research analysts shall not provide draft, written research or models to any non-Citi Research personnel (including the subject company) prior to publication, except as expressly permitted by Legal/Compliance solely for the purpose for fact checking.
- 7.5. All Citi employees must adhere to policy restrictions and requirements regarding personal investment activities that have been reasonably designed to prevent conflicts of interest arising between the publication of research and personal investment activity. Such measures include (but are not limited to) the pre-disclosure of trading accounts, monitoring and surveillance on certain personal investment activity, pre-approval requirements to trade certain instruments, and disclosure of positions that may create the perception of a conflict of interest with the research analyst's investment research coverage.
- 7.6. All Citi employees must seek approval for outside directorships and business interests from business management and Compliance. Such disclosures will be reviewed for actual and perceived conflicts of interest with the research analyst's investment research coverage.

8. Means and Timing of Publication

- 8.1. Research is distributed through controlled channels. Citi considers research to be broadly disseminated when posted to or made available through its global institutional and retail proprietary electronic distribution platforms (e.g., Citi Velocity and Citi Personal Wealth Management).
- 8.2. Research may also be concurrently posted to various third-party aggregation platforms and may be distributed via email (subsequent to its posting). Content that is not regularly posted to non-proprietary platforms or distributed via email subscriptions will not contain changes to earnings forecasts, target price, investment or risk rating or investment thesis or be otherwise inconsistent with the author's previously published research.
- 8.3. Certain research is made available only to institutional investors to satisfy regulatory requirements.
- 8.4. Sales and Trading Staff are not permitted to produce "research" (broadly meaning written communications about a security, derivative or issuer including a recommendation and a substantive analysis of the risk, rewards and opportunities present in a security or detailed analysis of issuers operations or projected earnings growth) or hold themselves out as research analysts. Written materials produced or distributed by sales and trading may not therefore contain formal ratings, company or issuer specific earnings, projections or financial forecasts, and materials and formats must be clearly distinguished from Citi Research and labelled accordingly.

9. Client communications and ongoing service

- 9.1. In addition to published research, Citi Research analysts are permitted to have certain communications with clients, in line with internal policies. Such communications are generally required to be consistent with an analyst's published research. A research analyst may not communicate matters that could be perceived to be of general client interest unless they have previously published it.
- 9.2. Citi Research analysts are prohibited from disclosing the proposed timing or content of research prior to its public distribution.
- 9.3. Except as described above in the context of fact checking investor education research, Citi Research analysts or other employees may not communicate the substance of any research prior to publication either internally (other than to the necessary Citi Research personnel and Legal/Compliance) or outside Citi. Research analysts are permitted to verify factual information with the subject company only. Additional disclosures may be made accordingly.
- 9.4. Client confidential information may only be shared on a need-to-know basis and to better serve the particular client.
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10. Disclosures

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