In any instance where distribution of this communication is subject to the rules of the US Commodity Futures Trading Commission (“CFTC”), this communication constitutes an invitation to consider entering into a derivatives transaction under U.S. CFTC Regulations §§ 1.71 and 23.605, where applicable, but is not a binding offer to buy/sell any financial instrument.

This communication and/or presentation (“communication”) is directed at the person or persons who have been or can be classified by Citi as institutional or professional clients. No other person should access this communication or the financial instruments or products discussed in this communication. In particular, this communication is not intended for any person that may be classified as a retail client.

This communication has been prepared by individual employees of Citigroup Global Markets Inc., Citigroup Global Markets Limited or their subsidiaries or affiliates (collectively “Citi”). Such employees are not research analysts and are not subject to FINRA (U.S.), MSRB (U.S.), SEC (U.S.), BaFin (Germany), Central Bank of Ireland (Ireland) or FCA (U.K.) rules designed to promote the independence of research and research analysts and accordingly may receive compensation related to securities or products to which these materials relate. These materials may contain general market commentary and are not intended to constitute investment research, a research recommendation, research analysis or a research report for purposes of such rules. Any view expressed in this communication may represent the current view and interpretations of the markets, products or events of such individual employees and may be different from other sales and/or trading personnel and may also differ from Citi’s published research. The views in this communication may be more short term in nature and liable to change more quickly than the views of the Citi research department which are generally more long term. On the occasions when information provided includes extracts or summary material derived from research reports published by Citi’s research department, you are advised to obtain and review the original piece of research to see the research analyst’s full analysis. Unless otherwise indicated, any reference to a research report or research recommendation is not intended to represent the whole report and is not in itself considered a recommendation or research report.

Citi is not acting as your advisor, fiduciary or agent. Unless otherwise expressly indicated, this communication does not take into account the investment objectives, financial situation or individual circumstances of any particular person, and the information provided in this communication should not be relied upon as an assessment of suitability for you of a particular product or transaction. Even if we possess information as to your objectives in relation to any transaction, series of transactions or trading strategy, this will not be deemed sufficient for any assessment of suitability for you of any transaction, series of transactions or trading strategy. Recipients of this communication should obtain advice based on their own individual circumstances from their own tax, financial, legal and other advisors about the risks and merits of any transaction before making an investment decision, and only make such decisions on the basis of the investor's own objectives, experience and resources. The information set forth in this communication is not intended to be used for the purposes of (i) determining the price or amounts due in respect of one or more financial instruments, and/or (ii) measuring or comparing the performance of a financial instrument or a portfolio of financial instruments, and any such use is strictly prohibited without the prior written consent of Citi. Any trading or investment decisions you take are in reliance on your own analysis and judgment and/or that of your advisors and not in reliance on Citi.

This communication is provided for information and discussion purposes only. Unless otherwise indicated, (i) it does not constitute an offer or recommendation to purchase or sell any financial instruments or other products, (ii) it does not constitute a solicitation if it is not subject to the rules of the CFTC (but see discussion above regarding communications subject to CFTC rules), and (iii) it is not intended as an official confirmation of any transaction.

Certain transactions, including, but not limited to, those involving swaps and options, give rise to substantial risk and are not suitable for all investors. Citi does not provide investment, accounting, tax, financial or legal advice; however, you should be aware that any proposed indicative transaction could have accounting, tax, legal or other implications that should be discussed with your independent advisors. Therefore, prior to entering into any transaction, you should determine, without reliance on Citi, the economic risks or merits, as well as the legal, tax and accounting characteristics and consequences of the transaction and that you are able to assume these risks.
This communication is not intended to forecast or predict future events. Past performance is not a guarantee or indication of future results. Commissions and other costs relating to any dealing in any products or entering into any transactions referred to in this communication may not have been taken into consideration. The information contained in this communication is based on generally available information and, although all information has been obtained from, and is based upon sources believed to be reliable, it may be incomplete or condensed and its accuracy cannot be guaranteed. Citi makes no representation or warranty, expressed or implied, as to the accuracy of the information, the reasonableness of any assumptions used in calculating any illustrative performance information or the accuracy (mathematical or otherwise) or validity of such information. Any opinions, assumptions or information contained in this communication constitute a judgment only as of the date of this document or on any specified dates and is subject to change without notice.

This communication may contain "forward-looking" information. Such information may include, but is not limited to, projections, forecasts or estimates of cash flows, yields or return, scenario analyses and proposed or expected portfolio composition. Any forward-looking information is based upon certain assumptions about future events or conditions and is intended only to illustrate hypothetical results under those assumptions (not all of which are specified herein or can be ascertained at this time). Actual events or conditions are unlikely to be consistent with, and may differ significantly from, those assumed. Illustrative performance results may be based on mathematical models that calculate those results by using inputs that are based on assumptions about a variety of future conditions and events and not all relevant events or conditions may have been considered in developing such assumptions. Accordingly, actual results may vary and the variations may be substantial. The products or securities identified in any of the illustrative calculations presented herein may therefore not perform as described and actual performance may differ, and may differ substantially, from those illustrated in this material. When evaluating any forward looking information you should understand the assumptions used and, together with your independent advisors, consider whether they are appropriate for your purposes. You should note that the models used in any analysis may be proprietary, making the results difficult or impossible for any third party to reproduce. Citi makes no representation or warranty, whether express or implied, as to the accuracy, completeness, validity or reasonableness of any assumptions or inputs or model (mathematical or otherwise) used in calculating any illustrative performance information. Any prices, values or estimates provided in this communication (other than those that are identified as being historical) are indicative only, may change without notice, do not represent firm quotes as to either price or size, nor reflect the value Citi may assign a security in its inventory, and do not represent actual termination or unwind prices that may be available to you. Forward looking information does not indicate a level at which Citi is prepared to do a trade and may not account for all relevant assumptions and future conditions.

Any securities or other financial products described herein may be subject to fluctuations of their mark-to-market price or value. Such fluctuations may, depending on the type of security or other financial products and the financial environment, be substantial and may result in a loss of some or all of your investment. In addition, certain securities described in this communication may provide for payments linked to or derived from prices or yields of one or more securities or other instruments or foreign currencies, and such provisions may result in negative fluctuations in the value of and the amounts payable with respect to such securities prior to or at redemption. You should consider the implication of such fluctuation with your independent accounting, tax and risk advisors.

Citi shall have no liability to the user or to third parties, for the quality, accuracy, timeliness, continued availability or completeness of the data nor for any special, direct, indirect, incidental or consequential loss or damage which may be experienced because of the use of the information in this communication or otherwise arising in connection with this communication, provided that this exclusion of liability shall not exclude or limit any liability under any law or regulation applicable to Citi that may not be excluded or restricted.

These materials are intended for distribution solely to customers of Citi in jurisdictions where such distribution is permitted. The information contained herein is proprietary information of Citi and may not be reproduced or otherwise disseminated in whole or in part without Citi’s prior written consent. The information is being provided to you solely for your use and the internal use of your firm in assessing the entry into derivative, securities, loan or other transactions as a direct counterparty to Citi. The information is not to be used for any other purpose or distributed or disclosed to any other person outside your firm in any direct, individual, aggregated or derived form,
whether or not attributed to Citi. You or your firm may, however, disclose such information to a service provider to assist in the analysis of such information, provided that the service provider agrees not to disclose such information in any direct, individual, aggregated or derived form to any party other than you or your firm or to use such information in any other manner, and you, your firm, or your service provider may disclose such information in response to a regulatory inquiry or requirement (with notice to Citi following such disclosure to the extent practical) or in accordance with the express written consent of Citi.

Citi often acts as (i) a market maker; (ii) an issuer of financial instruments and other products; and (iii) trades as principal in many different financial instruments and other products, and can be expected to perform or seek to perform investment banking and other services for the issuer of such financial instruments or other products. Such financial instruments or products may be identical to or economically related to the products or financial instruments referred to in this communication. The author of this communication may have discussed the information contained herein with others within or outside Citi and the author and/or such other Citi personnel may have already acted on the basis of this information (including by trading for Citi's proprietary accounts or communicating the information contained herein to other customers of Citi). Citi, Citi's personnel (including those with whom the author may have consulted in the preparation of this communication), and other customers of Citi may be long or short the financial instruments or other products referred to in this communication, may have acquired such positions at prices and market conditions that are no longer available, and may have interests different from or adverse to your interests.

Certain personnel or business areas of Citi may have access to or have acquired material non-public information that may have an impact (positive or negative) on the information contained herein, but that is not available to or known by the author of this communication. Citi may have an investment banking or other commercial relationship with and access to information from the issuer(s) of securities, products, or other interests underlying a product or transaction. Citi may also have potential conflicts of interest due to the present or future relationships between Citi and any asset underlying the product or transaction, any collateral manager, any reference obligations or any reference entity. Citi may submit prices, rates, estimates or values to data sources that publish indices or benchmarks which may be referenced in products or transactions discussed in this communication. Such submissions may have an impact on the level of the relevant index or benchmark and consequently on the value of the products or transactions. Citi will make such submissions without regard to your interests under a particular product or transaction, although Citi has adopted policies and procedures designed to mitigate potential conflicts of interest arising from such submissions and our other business activities. In light of the different roles performed by Citi you should be aware of the potential that Citi’s interests may conflict with or adversely impact your interests.

Investments in financial instruments or other products carry significant risk, including the possible loss of the principal amount invested. This document does not purport to identify all the risks or material considerations which may be associated with entering into any transaction. Citi accepts no liability for any loss (whether direct, indirect or consequential) that may arise from any use of the information contained in or derived from this communication. You should contact your local representative directly if you are interested in buying or selling any financial instrument or other product or pursuing any trading strategy that may be mentioned in this communication.

Any decision to purchase any product or enter into any transaction referred to in this communication should be based upon the information contained in any associated offering document if one is available (including any risk factors or investment considerations mentioned therein) and/or the terms of any agreement. Any securities which are the subject of this communication have not been and will not be registered under the United States Securities Act of 1933 as amended (the Securities Act) or any United States securities law, and may not be offered or sold other than pursuant to an exemption from registration under the Securities Act. This communication is not intended for distribution to, or to be used by, any person or entity in any jurisdiction or country which distribution or use would be contrary to law or regulation.

Unless a key information document (KID) has been prepared pursuant to the PRIIPs Regulation (Regulation (EU) 1286/2014) and published on our designated website, no transaction or product manufactured by Citi for which such a KID is required, is to be offered, sold or otherwise made available to a retail investor in the EEA. Unless you notify us otherwise in writing, you will not, and do not intend to, “distribute” any of the transactions, products or investments that we “manufacture” or transactions, products, investments or services that we “distribute” (as such terms are defined pursuant to Markets in Financial Instruments Directive (recast) (Directive 2014/65/EU)).
Citi may offer, issue, distribute or provide other services (including, without limitation, custodial and other post-trade services) in relation to certain financial instruments. Some of these financial instruments may be unsecured financial instruments issued or entered into by BRRD Entities (i.e. EEA entities within the scope of Directive 2014/59/EU (the BRRD), including EEA credit institutions, certain EEA investment firms and / or their EEA subsidiaries or parents) (BRRD Financial Instruments).

In various jurisdictions (including, without limitation, the European Union and the United States) national authorities have certain powers to manage and resolve banks, broker dealers and other financial institutions (including, but not limited to, Citi) when they are failing or likely to fail. There is a risk that the use, or anticipated use, of such powers, or the manner in which they are exercised, may materially adversely affect (i) your rights under certain types of financial instruments (including, without limitation, BRRD Financial Instruments), (ii) the value, volatility or liquidity of certain financial instruments (including, without limitation, BRRD Financial Instruments) that you hold and / or (iii) the ability of an institution (including, without limitation, a BRRD Entity) to satisfy any liabilities or obligations it has to you, among other risks. By accepting any services from Citi, you confirm that you have consulted your advisors, are aware of any risks and shall be deemed to have considered such risks prior to any decision to purchase any product or enter into any transaction referred to in this communication.

Although Citibank, N.A. (together with its subsidiaries and branches worldwide, "Citibank") is an affiliate of Citi, you should be aware that none of the financial instruments or other products mentioned in this communication (unless expressly stated otherwise) are (i) insured by the Federal Deposit Insurance Corporation or any other governmental authority, or (ii) deposits or other obligations of, or guaranteed by, Citibank or any other insured depository institution.

**IRS Circular 230 Disclosure.** Citi and its employees are not in the business of providing, and do not provide, tax or legal advice to any taxpayer outside of Citi. Any statements in this communication relating to tax matters were not intended or written to be used, and cannot be used or relied upon, by any taxpayer for the purpose of avoiding tax penalties. Any such taxpayer should seek advice based on the taxpayer’s particular circumstances from an independent tax advisor.

**Options.** These materials may mention options regulated by the U.S. Securities and Exchange Commission. Before buying or selling options you should obtain and review the current version of the Options Clearing Corporation booklet, Characteristics and Risks of Standardized Options. A copy of the booklet can be obtained upon request from Citigroup Global Markets Inc., 390 Greenwich Street, 3rd Floor, New York, NY 10013 or by clicking the following link, [http://www.theocc.com/about/publications/character-risks.jsp](http://www.theocc.com/about/publications/character-risks.jsp).

If you buy options, the maximum loss is the premium. If you sell call options, the risk is unlimited. The actual profit or loss from any trade will depend on the price at which the trades are executed. The prices used herein are historical and may not be available when you order is entered. Commissions and other transaction costs are not considered in these examples. Option trades in general and these trades in particular may not be appropriate for every investor. Unless noted otherwise, the source of all graphs and tables in these materials is Citi. Because of the importance of tax considerations to all option transactions, the investor considering options should consult with his/her tax advisor as to how their tax situation is affected by the outcome of contemplated options transactions.

**Exchange Traded Funds.** These materials may mention Exchange Traded Funds (“ETFs”) regulated by the U.S. Securities and Exchange Commission. Investors should consider the investment objectives, risks, charges and expenses of the investment company or companies discussed in this material carefully before investing. The prospectus and, if available, the summary prospectus for each of the ETFs mentioned in this material contain this and other information about the investment company or companies and should be read carefully before investing. Clients may obtain prospectuses and, if available, summary prospectuses for the ETFs mentioned in this material by clicking on the below link or from the ETF distributors or the exchanges upon which the ETFs are listed. [https://www.citivelocity.com/equity/public/ETFDisclosure.jsp](https://www.citivelocity.com/equity/public/ETFDisclosure.jsp)
A Citi affiliate licensed the methodology to the index provider for VelocityShares Equal Risk Weighted Large Cap ETF (Ticker: ERW) and will receive a licensing fee based on Assets Under Management. [http://www.velocitysharesetfs.com/prospectus/](http://www.velocitysharesetfs.com/prospectus/)

ETFs are redeemable only in Creation Unit size through an Authorized Participant. Citi may be an authorized participant for certain ETFs mentioned in this report. As an authorized participant or otherwise, Citi 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 or asset class, therefore the performance of an ETF will be affected by the performance of the underlying asset or asset class and the risks associated with investing in that asset or asset class. If the ETF aims to track the performance of an asset or asset class 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 or asset class 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 income taxes. Past performance is no guarantee of future results. The investment return and principal value of an ETF and its underlying assets 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. Investors should review the prospectus for each ETF mentioned in the material to obtain additional performance.

**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 thereof. 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, a commodity, or a 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.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY COPYRIGHT LAW AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT CITI'S PRIOR WRITTEN CONSENT.

© 2019 Citigroup Global Markets Inc. Member SIPC. All rights reserved. Citi and Citi and Arc Design are trademarks and service marks of Citigroup Inc. or its affiliates and are used and registered throughout the world.