Citi acting through its Markets division

Pre-trade costs and charges disclosure document

Professional clients and eligible counterparties

This costs and charges disclosure document is provided by Citigroup Global Markets Deutschland AG acting through its Markets division ("Citi").

From time to time Citi is required by article 24(4) of the Markets in Financial Instruments Directive (Directive 2014/65/EU) (MIFID II) to provide certain pre-trade information in relation to costs and charges.

When Citi provides you with a price to buy or sell a financial instrument on a commission basis, the commission that we shall charge you shall be as set out in the rate card that applies from time to time.

The information set out in this document below applies when you deal with Citi as principal on a noncommission basis.

Instances where there is no cost or charge to disclose

When Citi provides you with an "all in" price to buy or sell a financial instrument, in each case in our capacity **as principal on a non-commission basis** (in, for example, our capacity as dealer in the secondary market), it is Citi's risk price and as such we do not charge any additional cost or charge to you. Legal, tax or other costs and charges may arise in connection with any such transaction.

Instances where there are costs and/or charges to disclose

Financial instruments

Costs and charges related to financial instruments

When Citi provides you with a price to enter into a transaction which is not an "all in" price, the costs and charges associated with that transaction shall be the difference between the price paid by you and an estimated valuation of the financial instrument on the date that the disclosure is made (the "Costs and Charges"). The total amount paid by you for a financial instrument may include any of the factors set out in the Annex. The extent to which these factors are reflected in our Costs and Charges will vary depending on the nature of the financial instrument and the transaction.

Costs and charges related to investment services and/or ancillary services

Unless otherwise disclosed to you separately (for example, in a product agreement), when Citi enters into a transaction with you in our capacity as principal on a non-commission basis, we do not charge you for related investment services and/or ancillary services.

Third party payments

Unless otherwise disclosed to you separately, when Citi enters into a transaction with you in our capacity as principal on a non-commission basis we do not receive payments from third parties.

Foreign exchange - costs and charges

Where costs and charges represent an amount in a currency other than the currency for settlement that you have agreed with us, the applicable currency conversion rates and costs shall be disclosed to you separately, unless you have agreed with us that a different rate will be used (e.g. a specific benchmark).

Cumulative effect on return of investment

Where there are no ongoing costs and charges relating to the provision of investment and/or ancillary services and no ongoing costs and charges relating to the financial instrument itself and no third party payments are received on an ongoing basis, the costs and charges disclosed in this document are not expected to have a cumulative effect on return.

Where there are ongoing costs and charges relating to the provision of investment and/or ancillary services or relating to the financial instrument itself or third party payments are received on an ongoing basis, these may reduce the returns on an investment by an amount that corresponds to the total ongoing costs and charges incurred in connection with the financial instrument and related investment services and/or ancillary services.

Ongoing charges in relation to financial instruments linked to Citi proprietary indices or custom baskets

With respect to financial instruments that reference a Citi proprietary index or a custom basket, the relevant index level or basket level may include a deduction of notional fees and/or notional costs

(howsoever described) on a one-off, daily or periodic basis, as described in the relevant product documentation, including the relevant rules applicable to such index or basket.

The deduction of notional fees and/or costs acts as a drag on the performance of the index or the basket, and will result in the index or basket underperforming a similar hypothetical investment portfolio from which no such deduction is made.

Additional fees may apply in respect of the financial instrument itself.

Factors which will determine the magnitude of the drag on the index level or basket level include, but are not limited to, the following:

- whether any leverage is applied, whether within the index or basket to its notional exposure to its underlying reference constituents, and/or within the financial instrument itself;
- the frequency of the rebalancing of the index or basket, and the extent of the changes implemented by the rebalancing;
- where applicable, the number of amendments, adjustments or reallocations made by you or another person with the relevant discretion;

- licensing fees incurred with respect to the underlying reference constituents of the index or basket; and
- any other fees and/or costs deducted from the index or basket, in accordance with its rules.

You should note that additional fee and/or cost disclosure documentation may be provided to you pretrade.

Annex

Factors that we may take into account in determining the total amount paid by you for a financial instrument may include (but are not limited to):

- product type and market in which the transaction would occur, such as:
 - the trading venue;
 - the type of order;
 - the size and direction of the transaction;
 - transparency of the market, including actionable and visible liquidity, trading volume and available external venues or platforms; and
 - o the accessibility of third-party quotations and other pricing information;
- internal costs, such as hedging costs, funding costs, fees, capital costs and overhead;
- counterparty- and transaction-specific factors, such as:
 - the volume, types, size, frequency or speed of trading the counterparty executes with Citi and in the market;
 - the potential market impact of the counterparty's trading activity with Citi and in the market;
 - the counterparty's credit quality and Citi's credit exposure to the counterparty;
 - o specific terms of the transaction or governing documentation; and
 - o the extent and nature of the counterparty's business relationship(s) with Citi; and
- applicable legal or regulatory requirements.

These factors do not represent movements in the value of capital invested caused directly by movements in the value of underlying assets.