

Discussion topics on euro money markets developments

Miguel Ángel Monzón Head of Short-term Rates & Govies Trading

Pablo Zaragoza Head of European Macro and Sovereign Strategy

Juan Viguera, CFA European Sovereign Strategy

Madrid, 7 December 2021 (10:00 CET)

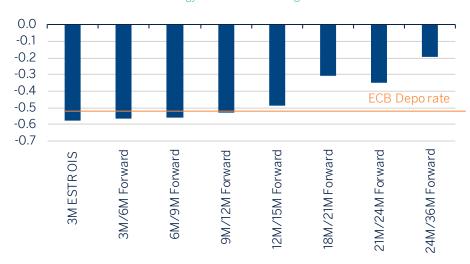
EONIA/ESTR transition: spot trends and market expectations

In the spot realm, EONIA references have been gradually moving out of the picture to the benefit of ESTR-linked contracts. The recent CCPs full migration to ESTR in mid-October should lead to their final disappearance. The transition from the former to the latter doesn't seem to have prompted any distortion either in spot or forward pricing.

As of now ESTR forwards remain fairly anchored up to 12M. Thereafter the curve is discounting some uptick.

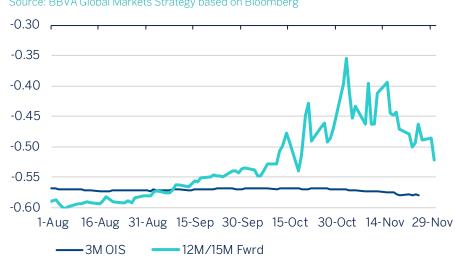
ESTR OIS spot & forwards as of 31 November (%)

Source: BBVA Global Markets Strategy based on Bloomberg



ESTR OIS spot vs. 12/15M forward (bp)

Source: BBVA Global Markets Strategy based on Bloomberg



2 Oct 20- €STR kicks off

First operations related to €STR

EONIA calculation methodology changes to €STR+8.5bp

2H20

CCPs start using €STR as the discount and remuneration curves

15-16 Oct 21

LCH, EUREX, CME transition to €STR goes-live

Significant increase in €STR values as EONIA, in practical terms, is discontinued

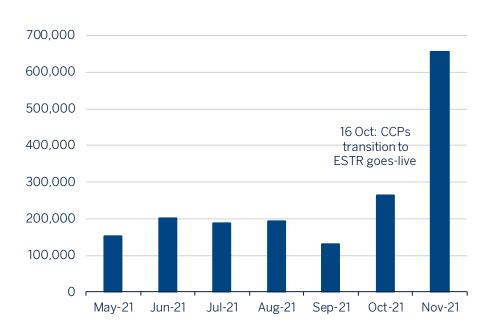
January 2022

EONIA/ESTR transition: rising volumes but concentrated in the short area

ESTR activity in swap markets has risen significantly since the migration of CCPs from EONIA to ESTR on 16 October. However, most of the activity remains concentrated in 1Y and 2Y with little flows in longer tenors.

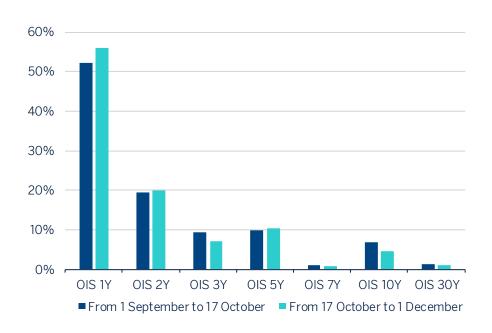
ESTR OIS swap volume (EUR bn)

Source: BBVA Global Markets Strategy based on Bloomberg swap data repository trade activity



ESTR OIS swap distribution by tenor (%)

Source: BBVA Global Markets Strategy based on Bloomberg swap data repository trade activity



volumes

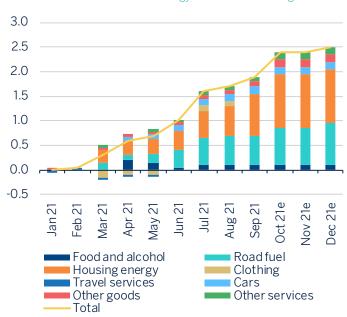
Market expectations: inflation, how much of a concern is it for the money markets?

Although the acceleration process in inflation may not be close to exhaustion, two elements continue to support the "mainly transitory" feature of this phenomenon:

- 1. most of the upward surprise in actual inflation data reflects a very specific (exogenous) set of factors;
- 2. second round effects have so far proved rather limited in both absolute and comparative terms.

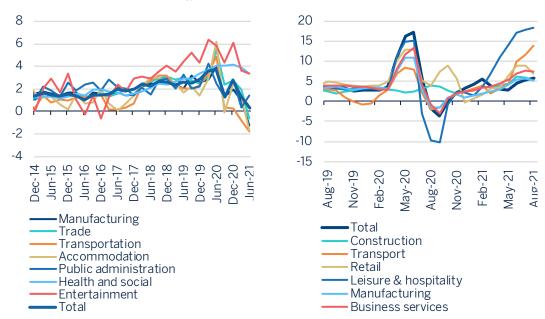
EMU inflation: deviation from Jan 2021 consensus forecasts and contribution by components (pp of YoY change)

Source: BBVA Global Markets Strategy based on Bloomberg



EMU and US labour costs* (% YoY)

* EMU: Labour cost index. US Average hourly earnings Source: BBVA Global Markets Strategy based on Eurostat and Bureau of Labour Statistics

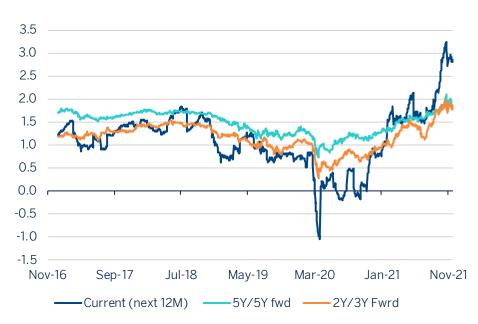


Market expectations: Inflation, how much of a concern is it for the money markets?

Despite reflecting the short-term risk of inflation spikes, both market-based and expert-view inflation gauge indicators reflect a medium-term perspective that inflation will reverse to a range below the target. Recent inflation figures do not appear to have overwhelmed the ECB and should not trigger any bold change to its monetary policy approach

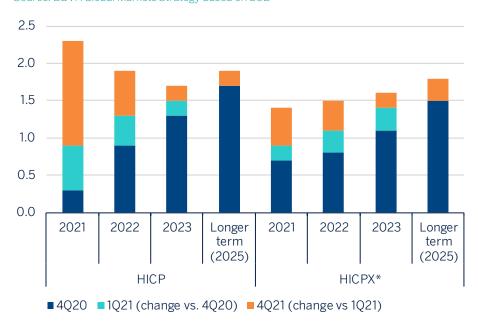
Euro implicit annual inflation expectations (% YoY)

Source: BBVA Global Markets Strategy based on Bloomberg



EMU annual inflation expectations by professional forecasters (% YoY)

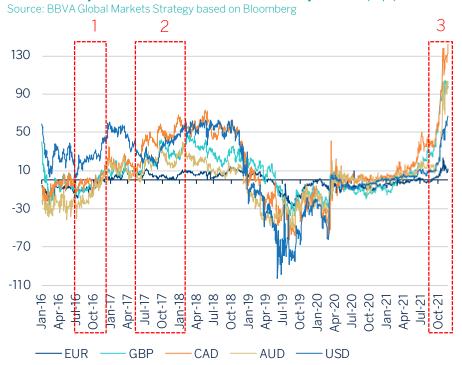
*HICP inflation ex energy, fresh food and tobacco Source: BBVA Global Markets Strategy based on ECB



Spikes in ESTR forwards: 1.- how much is due to domestic factors vs. a contagion effect from other CBs?

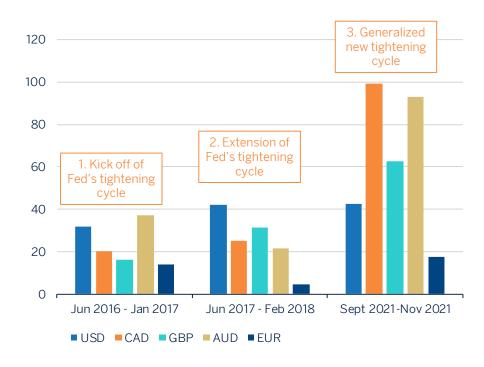
The spike in the ESTR forward rates observed in October, relevant as it is, has been more contained than in the rest of curves. In our opinion, this spike did not materialised until there was a generalised and intense repricing of hawkish expectations all across the CBs. This "contagion effect" did also take place (albeit with less intensity) in late 2H16 and 2H17 (kick off and extension of the last Fed tightening cycle).

3M OIS spot vs. 12/15M forward spread (bp)



Change in the 3M OIS spot vs. 12/15M forward in selected periods (bp)

Source: BBVA Global Markets Strategy based on Bloomberg



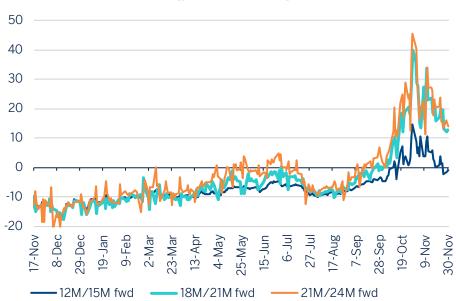
Spikes in ESTR forwards: 2.- reflecting pure ECB rate expectations or eventual changes in the liquidity realm?

ESTR forward rates may not only be reflecting expectations about the ECB's future rate policy but also eventual changes ahead in the liquidity realm. There are two elements to highlight in this context:

- 1. although short-term forward ESTR rates have reversed a great part of the pervious spikes, long forwards remain relatively high;
- 2. ESTR-Euribor spreads (which do not reflect rate expectations but rather the outlook on the abundance of liquidity and its cost) are now at significantly higher levels.

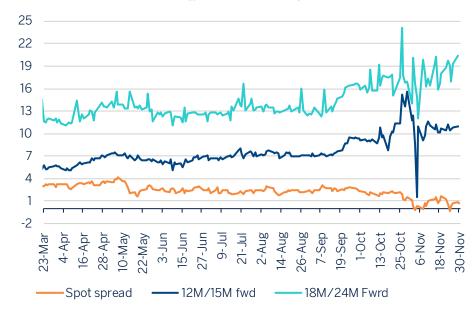
Spread between 3M ESTR OIS forwards and ECB depo rate (bp)

Source: BBVA Global Markets Strategy based on Bloomberg



3M Euribor-3M ESTR OIS spread (bp)

Source: BBVA Global Markets Strategy based on Bloomberg

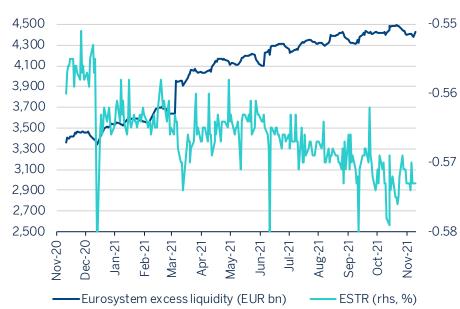


Maintaining the abundant liquidity scenario after 2022 may become somewhat more challenging

Market's expectations about the amount of excess liquidity could weigh on ESTR rates. In this regard, banks may start finding some incentives to make early repayments after 2H22 (at least those for which the NSFR assessment may represent an issue).

ESTR (%) vs. Eurosystem excess liquidity (EUR bn)

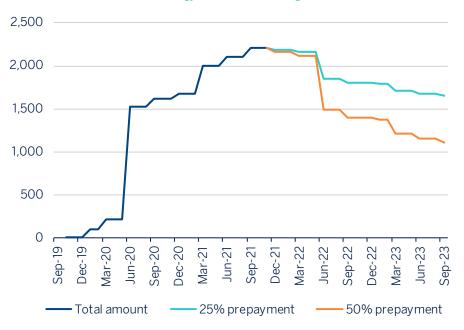
Source: BBVA Global Markets Strategy based on Bloomberg



TLTRO III potential reduction risk scenarios* (EUR bn)

* Assuming that from June 2022 onwards TLTRO operations starting to have less than one year of remaining duration are prepaid

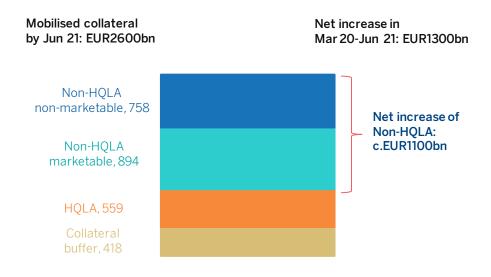
Source: BBVA Global Markets Strategy based on Bloomberg



TLTRO III + collateral easing measures: a highly effective (and still warranted) instrument

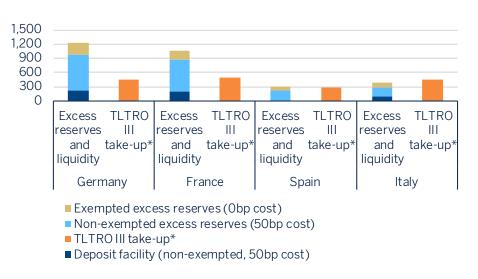
Apart from their bank-lending fostering role, the combination of TLTRO III operations + easing of collateral rules: i) has proved highly effective in "mobilising" a sizeable volume of assets; and ii) has served as a way to compensate for the ECB's "depo rate cost" to those banks with a high volume of non-exempted excess reserves (a proxy for Tiering?)

TLTRO III collateral encumbrance (total outstanding as of June 2021 and change from Mar 2020, EUR bn) Source: BBVA Global Markets Strategy based on Bloomberg and ECB



Excess reserves and TLRO III take up in selected countries (EUR bn)

*TLTRO III operations offer a net margin of +50bp if the lending target is met Source BBVA Global Markets Strategy based on Bloomberg and ECB



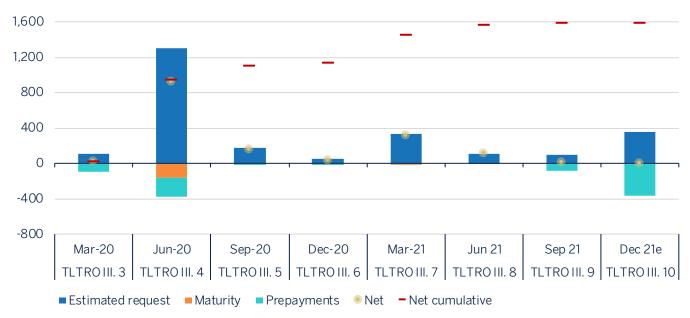
Pure price effect: collateral easing measures have increased the value of collateral by c. EUR240bn (c.EUR180bn in credit claims)

Incentivising effect: wider acceptability and lower haircuts of non-High Quality Liquid Assets (HQLA) have fostered c.EUR1.6trn of collateral mobilisation of these assets (c.EUR1.1trn increase from pre-pandemic levels)

We do not expect a large rollover of the liquidity taken up in the TLTRO III.1 to .6 into the TLTRO III.10

TLTRO III: scheduled operations and estimated take-up (EUR bn)





We believe that the "implicit cost" of the early repayments will discourage the "repay to rollover" strategies in the TLTRO III.10 (tentatively only c.20% of rollover, c.EUR350/380bn).

Some proposals on discussion topics about where the liquidity policy should focus

What is now in force?

Collateral easing measures implemented since March 2020

..on credit claims collateral

- Less stringent reporting requirements
 Removal of minimum eligible size
- Eligibility expansion of additional credit claims

...on Eurosystem risk tolerance

Lower haircuts

Waiver on Greek sovereign bonds Increase in concentration limit for unsecured bank bonds

Extraordinary features in the TLTRO III

Cost: up to June 2022, a 50bp positive margin is applied to the gross liquidity take up if lending targets are met and 0% thereafter.

Volume: maximum borrowing capacity raised from 30% to 55% of eligible loans

Standard rates policy

Refi rate at 0%, Deposit facility rate at -0.50% Tiering (6x minimum reserve requirement) A tentative approach to what can and cannot be fine tuned in the current or potentially new TLTRO programmes from our point of view

Not a major game changer in the event it is wound down

Still a key (highly warranted) element to foster collateral mobilisation

Not a major game changer in the event it is wound down

Discouraging early repayments after June 2022 and/or incentivise fresh take in eventual new instruments in 2022

The early repayment of the TLTRO III.1 to .6 before June 2022 has an embedded "cost". This may disincentivise "repay to rollover" strategies.

The period when the 50bp margin is applied can be extended beyond June 2022 (this could include new lending targets).

No need to widen the net margin of 50bp

A new funding for lending programme might be convenient in 2022

No need to intervene on the standard rates. The dual rate policy can be fine-tuned through the TLTRO effective cost

No need to tweak the tiering unless the deposit rate is altered

Contacts European Fixed Income

Director of Global Markets Strategy

Ana Munera ana.munera@bbva.com +34 91 374 36 72

BBVA Macro and Fixed Income Strategy

Head of European Macro and Sovereign Strategy

Pablo Zaragoza pzaragoza@bbva.com +34 91 374 38 64

European Sovereign Strategy

Juan Viguera, CFA juan.viguera@bbva.com +34 91 374 61 74 Head of Credit Strategy, Public Sector and Covered Bonds

Agustín Martín agustin.martin@bbva.com +44 207 397 6087

Utilities and ESG Corporates

Álvaro Sánchez alvaro.sanchez.lopez@bbva.com +44 207 397 6082 Financials and ESG FIG

Michael Gaynor michael.gaynor@bbva.com +44 207 648 7555

Insurance

Rubén Benavides rubenlucas.benavides@bbva.com +44 207 397 6091

Disclaimer

Important information

This present document should be considered Marketing Material for the purposes of Directive 2014/65 / EU and its implementing measures.

This document contains an investment recommendation by "strategy analysts" as defined in European Regulation 596/2014 from the European Parliament and the Council on Market Abuse ("MAR") as well as the in Delegated Regulation 958/2016 regarding technical regulatory standards relating to the technical measures applicable to the aim of the investment recommendations or other information in which an investment strategy is recommended or suggested and the communication of particular interests or indications of conflicts of interest.

This document contains information recommending or suggesting an investment strategy and has not been prepared by an independent analyst; instead, it was prepared by "strategy analysts", who suggest investment decisions in financial instruments based on their experience or knowledge in the financial field. It has not been prepared in accordance with the legal provisions aimed at promoting the independence of Investment Reports.

The BBVA Group companies that have participated in the preparation of this investment recommendation (hereinafter called Marketing Material) are identified by the location(s) of the author(s), as indicated in the present document (Strategy analysts) or via chat/email or other medium, in the following manner: 1) Madrid, London or Europe = Banco Bilbao Vizcaya Argentaria, S.A., including its E.U. branches (hereinafter called 'BBVA'); 2) Mexico City = BBVA Mexico; 3) New York = BBVA Securities, Inc. (hereinafter called "BBVA Securities"); 4.) New York Branch = BBVA, New York branch; 5.) Lima = BBVA Continental; 6.) Bogota = BBVA Colombia S.A.; 7.) Hong Kong = BBVA, Hong Kong branch.

For recipients in the European Union, this document is distributed by BBVA, a bank supervised by the Bank of Spain and by Spain's Stock Exchange Commission (CNMV), and registered with the Bank of Spain with number 0182...

All traders and sales personnel are subject to the "CIB Investment Recommendation Procedure." The Marketing Material published are the opinions of the creator of this document regarding the prospects of evolution of one or more financial instruments mentioned, subject to market conditions, either in absolute or relative terms, depending on whether it is a directional purchase or sale recommendation or a long / short recommendation.

For recipients in Hong Kong, this document is distributed by BBVA, which Hong Kong branch is supervised by the Hong Kong Monetary Authority.

For recipients in Colombia, this document is distributed by BBVA Colombia, a bank supervised by the Superintendencia Financiera de Colombia.

For recipients in Mexico, this document is distributed by BBVA México, a bank supervised by the Comisión Nacional Bancaria y de Valores de México.

For recipients in Peru, this document is distributed by BBVA Continental, a bank supervised by the Superintendencia de Banca, Seguros y Administradoras Privadas de Fondos de Pensiones.

For recipients in Singapore, this document is distributed by BBVA, which Singapore branch is supervised by the Monetary Authority of Singapore.

For recipients in the US, analysis on products other than swaps is being distributed by BBVA Securities, a subsidiary of BBVA registered with and supervised by the US Securities and Exchange Commission and a member of the Financial Industry Regulatory Authority ("FINRA") and the Securities Investor Protection Corporation. US persons wishing to execute any transactions should do so only by contacting a representative of BBVA Securities in the US. Unless local regulations provide otherwise, non-US persons should contact and execute transactions through a BBVA branch or affiliate in their home jurisdiction.

Marketing Material on swaps is being distributed by BBVA, a swaps dealer registered with and supervised by the Commodity Futures Trading Commission ("CFTC"). US persons wishing to execute any transactions should do so only by contacting a representative of BBVA. Unless local regulations provide otherwise, non-US persons should contact and execute transactions through a BBVA branch or affiliate in their home jurisdiction.

BBVA and associated companies of the BBVA Group (Article 42 of RD of 22 August 1885, Commercial Code) have a Securities Market Conduct Policy that establishes common standards applicable to people who carry out market activity for these entities This policy is available for on the following website: www.bbva.com.

Strategy analysts who reside outside the United States and who have participated in this document may not be registered or recognised as analysts by FINRA or on the New York Stock Exchange and should not be considered "persons associated" with BBVA Securities (as defined by FINRA). As such, they may not be subject to the restrictions of FINRA rules 2242/2241 in their communication with the companies in question, public appearances and operating on their own behalf

This document and the information, opinions, estimates, forecasts and recommendations expressed herein have been prepared to provide BBVA Group's customers with general information and are current as of the date hereof and subject to changes without prior notice. Neither BBVA nor any of its affiliates is responsible for giving notice of such changes or for updating the contents hereof.

This document and its contents do not constitute an offer, invitation or solicitation to purchase or subscribe to any securities or other instruments, to undertake or divest investments, or to participate in any trading strategy. Neither shall this document nor its contents form the basis of any contract, commitment or decision of any kind.

Disclaimer

Investors who have access to this document should be aware that the securities, instruments or investments to which it refers may not be appropriate for them due to their specific investment goals, financial positions or risk profiles, as these have not been taken into account to prepare this report. Therefore, investors should make their own investment decisions considering the said circumstances and obtaining such specialized advice as may be necessary. Other than the disclosures relating to BBVA Group, the contents of this document are based upon information available to the public that has been obtained from sources considered to be reliable. However, such information has not been independently verified by BBVA or any of its affiliates and therefore no warranty, either express or implicit, is given regarding its accuracy, integrity or correctness. To the extent permitted by law, BBVA and its affiliates accept no liability of any type for any direct or indirect losses or damages arising from the use of this document or its contents. Investors should note that the past performance of securities or instruments or the historical results of investments do not guarantee future performance.

The market prices of securities or instruments or the results of investments could fluctuate against the interests of investors. Investors should be aware that they could even face a loss of their investment. Transactions in futures, derivatives, options on securities or high-yield securities can involve high risks and are not appropriate for every investor. Indeed, in the case of some investments, the potential losses may exceed the amount of initial investment and, in such circumstances; investors may be required to pay more money to support those losses. Thus, before undertaking any transaction with these instruments may be required to pay more money to support those losses. Thus, before undertaking any transaction with these instruments may not exist. Before entering into transactions in futures, derivatives, or options, investors should review all documents on disclosures for risks of investing in options and/or futures at the following websites:

Options - https://www.finra.org/rules-guidance/notices/13-39

Futures - https://www.finra.org/investors/learn-to-invest/types-investments/security-futures

Covered bonds, collateralized mortgage obligations, and other mortgage-related or asset backed securities are not suitable for every investor and are subject to certain risks. The value and price of these securities is sensitive to conditions affecting the assets underlying these securities. Accordingly, changes in economic conditions, the value of underlying assets, the real estate market, credit conditions, interest rates, or other factors can cause these securities to diminish in value. Such securities are also subject to risks related to prepayment and clean-up call risk. When the obligations underlying these securities are prepaid at a faster pace than expected and the securities are called, an investor may have to reinvest in securities with a lower yield and/or fail to recover additional amounts (premiums) paid for securities with higher interest rates, resulting in an unexpected capital loss. The structure of these securities are the securities are called, an investor should thoroughly review educational material that is available on the securities at http://www.investinginbonds.com/.

The following information lays out the obligations relating to the disclosure of associations or conflicts of interest for BBVA and any of its companies, as established in Regulation (EU) 596/2014 on Market Abuse and in Delegated Regulation (EU) 2016/958.

Conflicts of interest

BBVA trades, or may trade as principal in debt securities, or related derivatives that are the subject of this Marketing Material.

The following companies hold more than a 5% of the total issued share capital of BBVA: BLACKROCK INC.

In the past twelve months, BBVA or one or more of its affiliates has had, or currently has, as corporate and investment banking clients the following companies/issuers that may be covered in this report: N/A.

In the past twelve months, BBVA or one or more of its affiliates managed or co-/managed public offerings of the following companies/issuers that may be covered in this report: N/A.

In the past twelve months, BBVA or one or more of its affiliates has received compensation for investment banking services from the following companies/issuers that may be covered in this report: N/A.

In the next three months, BBVA or one or more of its affiliates expects to receive or intends to seek compensation for investment banking services from the companies covered in this report.

BBVA or any of its affiliates have liquidity commitments or is a market maker in: Segment of BME Warrants, stock futures in MEFF, stock futures in PSI20 and Portuguese shares in EURONEXT, ETFs of BBVA Asset Management, on IBEX and EUROSTOXX50, preferred issues of Eroski, Naturgy, MexDer Future Contracts (US dollar [DEUA], 28-day TIIES [TE28], TIIE Swaps, 91-day CETES [CE91]), Bonos M, Bonos M3, Bonos M10, BMV Price and Quotations Index (IPC), Options Contracts (IPC, shares in América Móvil, Cemex, CPO, Femsa UBD, Gcarso A1, Telmex L) and Udibonos, sovereign bonds issued by Kingdom of Spain, Republic of Colombia, Republic of Peru.

BBVA is the Primary dealer for sovereign bonds issued by: Kingdom of Spain, Republic of Portugal, Republic of Colombia, Republic of Peru, Republic of Uruguay.

BBVA is subject to an Internal Standards of Conduct on the Security Markets, which details the standards of the above-mentioned overall policy for the EU. Among other regulations, it includes rules to prevent and avoid conflicts of interests with the ratings given, including information barriers. This Internal Standards of Conduct on the Security Markets is available for reference in the 'Corporate Governance' section of the following web site: https://accionistaseinversores.bbva.com/gobierno-corporativo-y-politica-de-remuneraciones/ric-en-los-mercados-de-valores/

BBVA Mexico is subject to a Code of Conduct and to Internal Standards of Conduct for Security Market Operations, which details the standards of the above-mentioned overall policy for Mexico. Among other regulations, it includes rules to prevent and avoid conflicts of interests with the ratings given, including information barriers. This Code and the Internal Standards are available on the following website: https://investors.bbva.mx/es/codigomejorespracticas-es/

BBVA Peru is subject to a Code of Conduct and to a Code of Ethics for Security Market Operations, which details the standards of the above-mentioned overall policy for Peru. Among other regulations, it includes rules to prevent and avoid conflicts of interests, including information barriers. Both Codes are available for reference on the following website: https://www.bbvacontinental.pe/meta/conoce-bbva/

BBVA Securities is subject to a Capital Markets Code of Conduct, which details the standards of the above-mentioned overall policy for the US. Among other regulations, it includes rules to prevent and avoid conflicts of interests, including information barriers.

Disclaimer

Exclusively for recipients resident in Mexico

The information related to the disclosure of conflicts of interest that exclusively affect BBVA México is included in the table included in the previous section.

BBVA Mexico or any of its affiliates have liquidity commitments or is a market maker in: MexDer futures (USD (DEUA)), TIIE 28D (TE28), TIIE swaps, CETES 91D (CE91)), Bonos M, Bonos M3, Bonos M10, BMV Price and Ouotations Index (IPC), Options Contracts (IPC, shares in América Móvil, Cemex, CPO, Femsa UBD, Gcarso A1, Telmex L) and Udibonos.

BBVA Mexico, and where appropriate the companies that are part of the BBVA Mexico Financial Group, may from time to time hold investments in the securities or derivative financial instruments whose underlying are securities subject to this recommendation, representing 10% or more of their portfolio of securities or investment portfolio, or the aforementioned percentage of the issue or underlying of the securities in question.

Recommendations, distribution and history

Long/Buy/Overweight: we recommend the investor purchase the financial instrument in question, as we think its value will increase.

Hold/Neutral: we recommend the investor neither increase nor decrease his/her current holding of the financial instrument in question at current prices.

Short/Sell/Underweight: we recommend the investor sell the financial instrument in question, as we expect its value to decrease.

Long / Short: we recommend the investor buy a given financial instrument (Long) and sell another financial instrument (Short) at the same time in the same notional or equivalent risk, or in the proportion that is specified in the Marketing Material.

Relative Value: we recommend the investor combine two or more assets to benefit from the differential behaviour of one (or more instrument) over another (or group thereof).

This is Marketing Material that has been prepared as a one-off publication, and no updates are planned for it.

Unless an investment horizon is indicated in the Marketing Material, it must be understood that it contains no such investment horizon.

In the preparation of this Marketing Material, no specific valuation methodology has been used, only Expert judgment. If you require additional information, contact the Expert for further clarification.

The BBVA Group's policy does not allow draft reports or Marketing Material to be sent to issuers prior to publication or dissemination.

By virtue of Regulation (EU) 596/2014 on Market Abuse and Delegated Regulation (EU) 2016/958, the proportion of recommendations and their category/meaning as well as the averages of these recommendations are shown for the last 12 months. The average in which BBVA or any of the companies of the BBVA Group have provided investment banking services or have acted as an underwriter in public offerings of securities is also shown for each category and recommendation type.

BBVA's Marketing Materials activity in the last 12 months in terms of financial instrument/issuers and their investment recommendations are as follows:

Recommendation history

Expert certification

The strategy analysts hereby certify that (i) the views expressed in this Marketing Material accurately reflect their personal views about the subject companies and their securities and (ii) their remuneration may be linked to trading or sales in the instruments included in this document or in relation to the global sales and trading activity of the BBVA unit or group.