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6th Meeting of the Working Subgroup on Derivative Instruments referenced to the Funding TIIE of the GTTR

October 30, 2023

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Topics

Background and objective

Recently, a minority of market participants have approached Banco de México to express their concern about the mismatch (basis) they will face once the clearinghouses of derivatives convert from 28-day TIIE IRS contracts to 28-day Funding TIIE OIS contracts.

If a participant has a bilateral 28-day TIIE IRS contract with a corporate client that does not settle through a clearinghouse, and the risk of said contract is covered with a contract that settles through a clearinghouse, a basis will effectively be generated with the conversion of contracts.

This risk was known from the beginning of the GTTR discussions. In this regard, some participants commented on the possible need to develop a basis swaps market to cover this risk.

Therefore, the objective of this session is to explore options to mitigate this risk.

The above, considering that the new methodology for the term TIIE (28, 91 and 182 days), the transition deadlines, and the conversion of legacy contracts in the clearinghouses of derivatives, are decisions agreed within the GTTR, that were subject to public consultation , and communicated to the entire market; and therefore, there is no possibility of modifying those conventions.

Topics

Account of decisions made: TIIE methodology in the term

In the fourth session of the GTTR, held in November 2021, the various methodologies proposed to replace the term TIIE were presented.[1/]

On the following session held in June 2022, after receiving comments from GTTR participants and other institutions, it was announced that a single new methodology would be established for the calculation of term TIIE.[2/]

In October 2022, at the sixth meeting of the GTTR, the new methodology to be adopted was decided, which is the one that best replicates the current term TIIE, that is, the one that considers the Funding TIIE of the day prior to the reference day, compounded to the number of days of the corresponding term, plus a fixed historical adjustment differential (24 basis points).[3/] Although, within the GTTR the volatility that could arise with this formula was noted, when asked expressly, no participant expressed an objection to adopt it.[4/] To this point:

- 68% of ABM members opted for the adopted methodology.
- 60% of AMIB members opted for the adopted methodology.
- No responses were received from any other participants.

On December 30, 2022, the new methodology was submitted to public consultation for 20 business days, and on April 13, 2023, Circular 4/2023 was published in the DOF, which modifies Circular 3/2012.[5/]

1/ For more information see: Presentación de PowerPoint (banxico.org.mx)
2/ For more information see: Presentación de PowerPoint (banxico.org.mx)
3/ When the Banco de Mexico has made a monetary policy decision on the day prior to the reference day, the TIIE for terms longer than one banking business day will be adjusted to incorporate the corresponding movement in the monetary policy rate.
4 / For more information see: Presentación de PowerPoint (banxico.org.mx)
5 / For more information see: {38CBE44D-CF95-1E3A-8750-D5C1FC3A2FB1}.pdf (banxico.org.mx)

Account of decisions made: Methodology of new OIS contracts linked to the Funding TIIE

During the fourth session of the derivatives subgroup, in April of this year, it was discussed whether OIS contracts should follow international standards or whether it was necessary to adopt a different alternative.1/ On this topic:

- 100% of ABM members chose to follow international standards. 2/
- 100% of AMIB members chose to follow international standards.2/
- No responses were received from any other participants.

Taking this into consideration, unanimously, at the eighth session of the GTTR in May 2023, **it was decided to adopt an OIS methodology consistent with international standards.**4/

The interest for the period is calculated using an in arrears methodology to capitalize business days (simple interest is applied on non-business days). Under this convention, accrued interest is paid 2 days after the coupon expiration date. Additionally, it was agreed that the coupon periods would be 28 days (see Annex 1).

On June 2, 2023, this methodology was submitted to public consultation for 20 business days, and on September 8, 2023, Circular 7/2023 was published in the DOF, which modifies Circular 4/2012.3/

1/ For more information see: Presentación de PowerPoint (banxico.org.mx)
2/ The results of the survey were presented at the eighth session of the GTTR. For more information see: Presentación de PowerPoint (banxico.org.mx)
3/ For more information see : {7D759428-892F-AD66-CF4F-B3D768ABD59A}.pdf (banxico.org.mx)
4/ See annex 1.

Account of decisions made: Conversion of OIS contracts

Derived from the decisions agreed in the GTTR, it is necessary to convert legacy contracts to OIS contracts based on the Funding TIIE in order to:

- Avoid market segmentation.
- Provide immediate liquidity to the new OIS contract.
- Generate incentives to begin operating new OIS contracts as soon as possible. Since, the longer the IRS contracts linked to the 28-day TIIE continue to operate, the more exposure there will be to the mismatch discussed in this session of the GTTR.

Due to the above, some clearinghouses have made public their plan to carry out the conversion of legacy contracts.

Topics

Basis that some institutions could face

The basis, described previously, that some institutions may face is not an exclusive problem of the TIIE transition. In fact, it is a global phenomenon.

One way in which these basis are produced internationally is due to the difference between the substitute rate methodologies used in legacy contracts referenced to LIBOR (e.g. derivatives use an in arrears methodology and some instruments use a substitute rate, calculated with the in advance composition methodology).

It is important to mention that the basis is not exclusive to legacy contracts, it may also arise in new contracts. For example, derivatives use close to risk-free rates (RFRs) with in-arrears composition, while the products they cover can use rates with in-advance composition (SOFR Average or TIIEs compounded in advance), or forward-looking rates (such as Term SOFR or Term SONIA), or credit sensitive rates (such as BSBY).

This is why an international basis swaps market has been created to cover the new basis that have emerged (See Annex 2).

Possible solutions to the basis that some institutions could face

Most institutions in Mexico have stated that the basis (previously explained) does not have relevant impacts on their balance sheets.

Notwithstanding the above, this impact could be greater for some external institutions. **Therefore, it is necessary to look for solutions that mitigate the impact of the basis, <u>taking into account that the decisions undertaken cannot be modified.</u>**

Some alternatives are:

- Let the market develop a basis swaps contract. A change will be made to the existing regulation to establish that forward TIIEs may be operated in contracts in which floating rate is exchanged for floating rate (basis swaps).
- That the participants most affected by the basis begin to operate OIS contracts as soon as possible (both bilateral and through clearinghouses) so that on the day of the conversion the impact is less. This also applies to Cross Currency Swaps.
- The previous point will be addressed in the next session of this GTTR working subgroup on derivatives, where a plan called “First Funding TIIE” will be proposed. In this plan, it will be recommended that they begin using the Funding TIIE in all derivative contracts as soon as possible to avoid unnecessary costs.

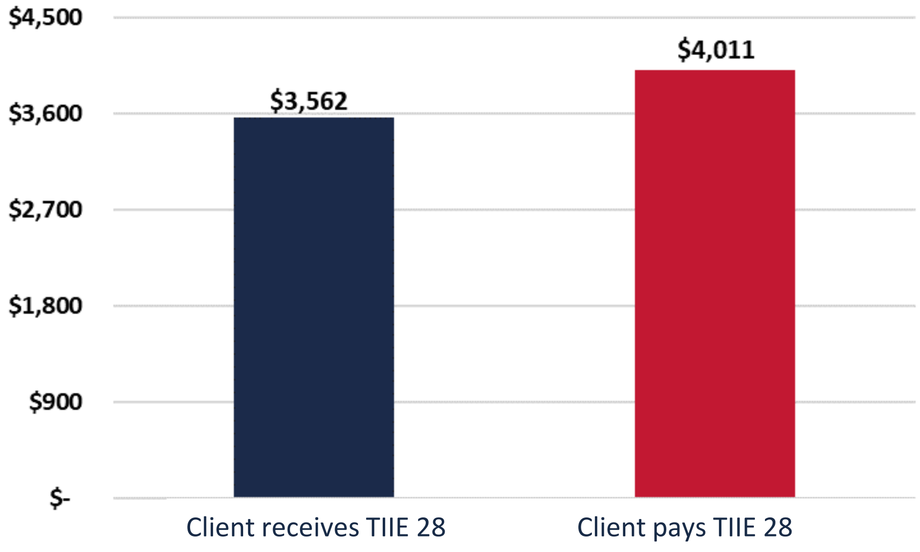
Possible solutions to the basis that some institutions could face

IRS and Cross Currency Swaps (CCS) operations linked to TIIE 28 in the Over the Counter (OTC) market that settle outside the clearinghouses, belong to a market with good liquidity and with participants on both sides of the operation (receiving or paying TIIE 28), which would facilitate the development of products such as basis swaps.

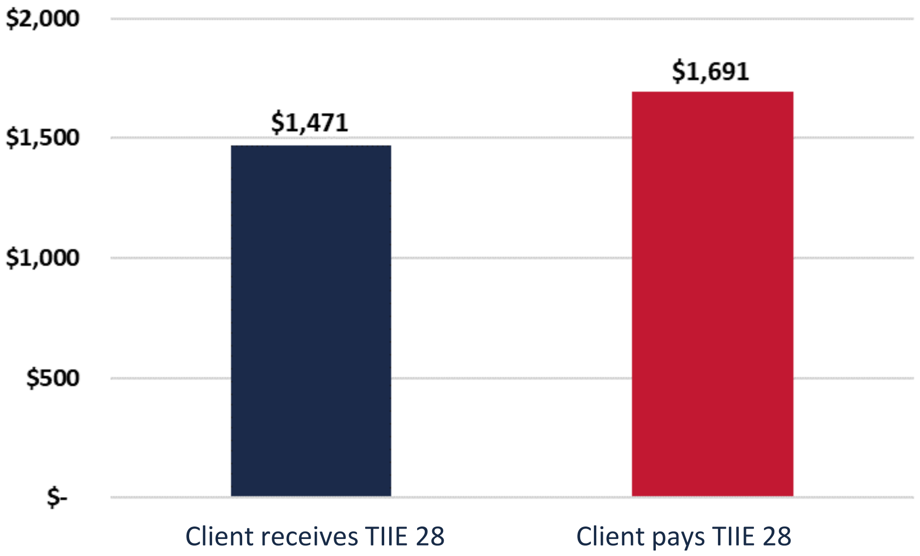
Current operations in the IRS and CCS* markets referenced to TIIE 28 and executed off-camera

Percentage and billions of pesos

Mercado IRS



CCS Market



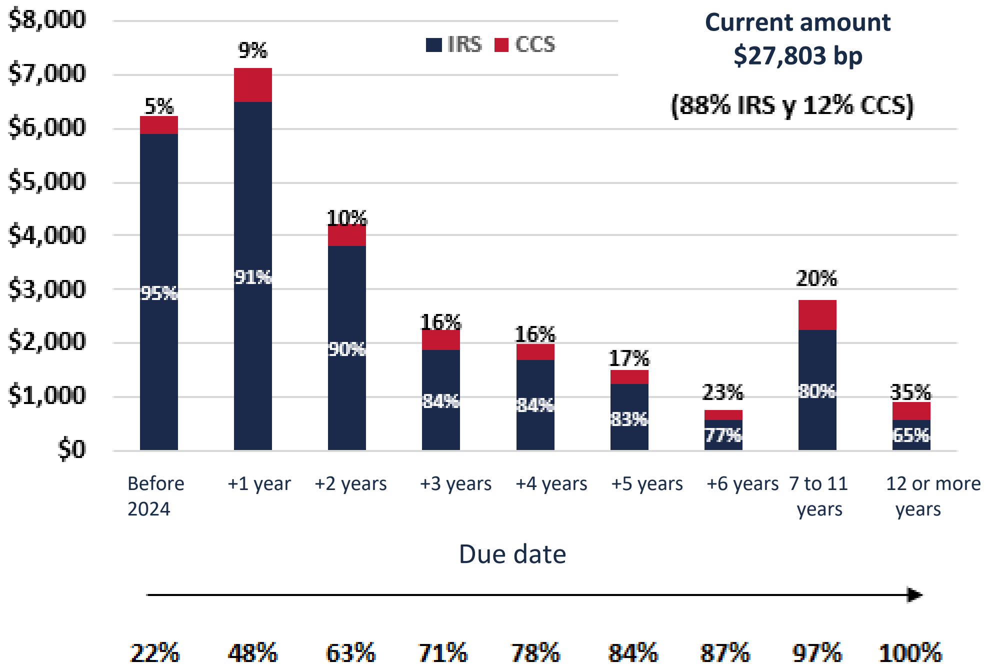
*These operations only consider those in which at least one bank operating in Mexico is involved. The percentages inside the bars indicate the proportion that each type of counterparty traded of the total amount presented per column. Source: Banco de México with data at the end of September.

Possible solutions to the basis that some institutions could face

! Starting to operate OIS contracts as soon as possible could reduce close to 50% of the problem generated by the basis, considering the expiration pattern of the IRS and CCS contracts linked to TIIE in the term.

Distribution of the maturities of current operations referenced to the TIIE in installments in the IRS and CCS markets*

Percentage and billions of pesos



* These operations only consider those in which at least one bank operating in Mexico is involved. The percentages inside the bars mean the proportion of IRS and CCS within the total swaps. The percentages below the arrow refer to the accumulated maturities as a percentage of the total swaps, according to the remaining term. Source: Bank of Mexico.

Consultation on possible solutions

With the aim of looking for more alternatives to minimize the impacts of the mismatch, it is requested that you answer the following questions and send them to secretariado.gttr@banxico.org.mx, no later than Friday, November 10:

- Is your institution affected by the impact of the basis, explained in the sixth session of the GTTR Derivatives Subgroup? (yes or no)
- Is the impact of the basis on your institution's balance sheet manageable? (yes, no, partially, please explain)
- What actions will your institution take to reduce the impact of the basis?
- What could the authorities do to reduce the impact of the basis? (Consider that previously made decisions will not be modified)

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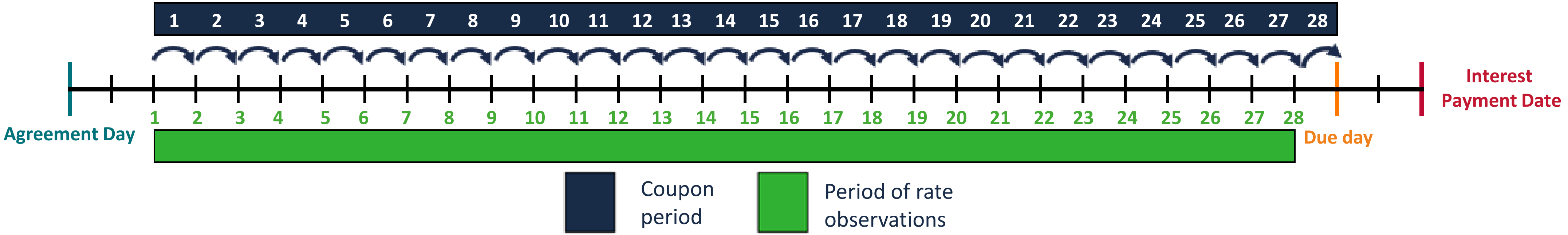
Annex 1: Convention on OIS Products linked to the Funding TIIE

- The interest for the period is calculated using an in arrears methodology without capitalizing non-business days. Under this convention, accrued interest is paid 2 days after the coupon expiration date. Additionally, it was agreed that the coupon periods would be 28 days.

Day N-2	…	Day N (first day of coupon period)	Day N+1	…	Day T-3	Day T-2	Day T-1 (last day of coupon period)	Day T due (first day of the next coupon period)	…	Day T+2	Composition of interests on non-business days
Agreement date	…	Use the TIIEF of day N	Use the TIIEF of day N+1	…	Use the TIIEF of dayT-3	Use the TIIEF of day T-2	Use theTIIEF of day T-1		…	Interest Payment Date	Does not include non-working days



Annex 2: Basis in the international context

- The ARRC in April 2023 mentioned that *"An additional, limited, recommendation regarding Term SOFR-SOFR basis swaps: the ARRC now recognizes that a dealer may enter into Term SOFR-SOFR basis swaps with any non-dealer market participant, even if the market participant is not a direct party to a Term SOFR cash exposure"*.[1/]

- For its part, in a study by the Bank for International Settlements (BIS) from December 2022, it indicated that "*New basis swaps emerged as a tool for hedging basis risks stemming from the new reference rates. Turnover of basis swaps referencing RFRs and rates other than Libor expanded significantly in 2022… basis risks can arise from the difference between Libor and RFRs when market participants have legacy Libor exposures".*[2/]

1/ Summary and Update of the ARRC's Term SOFR Scope of Use Best Practice Recommendations. Disponible en: https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2023/ARRC-Term-SOFR-Scope-of-Use-Best-Practice-Recommendations.pdf
2/ The post-Libor world: a global view from the BIS derivatives statistics. Disponible en: https://www.bis.org/publ/qtrpdf/r_qt2212e.htm