



ธนาคารแห่งประเทศไทย
BANK OF THAILAND

อัตราดอกเบี้ยทดแทน THBFIX (Fallback Rate (THBFIX))

20 สิงหาคม 2563



1. อัตราดอกเบี้ย SOFR
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 - Fallback Rate (SOFR)
 - Fallback Rate (THBFIX)

$$\text{THBFIX} = f(\text{FX spot, forward point, } \cancel{\text{USD-LIBOR}})$$



Fallback Rate (SOFR)



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1. อัตราดอกเบี้ย SOFR



In 2017, the UK Financial Conduct Authority announced that they will no longer compel or persuade panel banks to submit quotes for LIBOR post 2021. The **Secured Overnight Financing Rate (SOFR)** was introduced as an new Alternative Reference Rate (ARR).

SOFR

- Underlying: overnight repo data collected from the Bank of New York Mellon, general collateral financing repo, bilateral treasury repo
- Calculation: volume-weighted median

SOFR Average

- Calculation: SOFR compounded daily
- Tenor: 30, 90, and 180 calendar days.

Publication: New York Fed website at approximately 8:00 a.m. (New York time)

SECURED OVERNIGHT FINANCING RATE DATA

Statistics on the Secured Overnight Financing Rates
[See Secured Overnight Financing Rates Chart](#)

Export to:
[Excel](#) | [XML](#) | [Volume](#) | [Rates](#)

DATE	RATE (PERCENT)	PERCENTILES				VOLUME (US\$ BILLIONS)
		1ST (PERCENT)	25TH (PERCENT)	75TH (PERCENT)	99TH (PERCENT)	
07/30	0.10	0.06	0.07	0.12	0.18	928
07/29	0.09	0.06	0.07	0.12	0.19	948
07/28	0.10	0.07	0.08	0.13	0.19	955
07/27	0.10	0.07	0.08	0.14	0.19	973
07/24	0.10	0.07	0.08	0.13	0.19	950
07/23	0.10	0.07	0.08	0.13	0.20	942
07/22	0.10	0.06	0.08	0.13	0.20	1,031
07/21	0.11	0.07	0.08	0.14	0.20	963
07/20	0.12	0.07	0.09	0.14	0.20	975

SOFR AVERAGES AND INDEX DATA

Statistics on the SOFR Averages and Index
[See SOFR Averages and Index Chart](#)

Export to:
[Excel](#) | [XML](#)

DATE	30-DAY AVERAGE SOFR	90-DAY AVERAGE SOFR	180-DAY AVERAGE SOFR	SOFR INDEX
07/30	0.10634	0.07667	0.40584	1.04158459
07/29	0.10600	0.07612	0.41425	1.04158199
07/28	0.10534	0.07512	0.42249	1.04157910
07/27	0.10467	0.07412	0.43045	1.04157620
07/24	0.10300	0.07178	0.45433	1.04156752
07/23	0.10200	0.07101	0.46229	1.04156463
07/22	0.10134	0.07001	0.47026	1.04156174
07/21	0.10067	0.06889	0.47822	1.04155855
07/20	0.09967	0.06767	0.48613	1.04155508



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2. อัตราดอกเบี้ย Fallback Rate (SOFR)



- ISDA has appointed Bloomberg to be a vendor for Fallback of LIBOR and IBORs calculation and publication.
- Fallback rate provided by Bloomberg is used for derivative contracts under ISDA agreement.

$$\text{Fallback Rate (SOFR)} = \text{Adjusted SOFR} + \text{Spread Adjustment}$$

Fallback Rate (SOFR) is an all-in fallback rate of USD LIBOR

Compounding the daily value of SOFR to provide a term rate (according to ISDA's methodology)

Median of historical differences between USD LIBOR and Adjusted SOFR for each tenor over the 5-year period prior to an announcement constituting a Trigger Event

Publication

- Fallback Rate (SOFR) will be labelled by an 'Original IBOR Rate Record Day' which is the date that USD LIBOR would have appeared on the screen.
- Tenor: O/N, 1W, 1M, 2M, 3M, 6M, and 12M
- Data will be published on Bloomberg Terminal, whereas delayed data will be published on [Bloomberg LIBOR transition website](#)



ความแตกต่างของอัตราดอกเบี้ย SOFR Average ที่เผยแพร่โดย FED จาก Fallback Rate (SOFR) เผยแพร่โดย Bloomberg

	SOFR Average	Fallback Rate (SOFR) (Used in Fallback Rate (THBFIX))
Publisher	Federal Reserve Bank of New York	Bloomberg
Day count	Fixed: 30, 90, and 180 days	Date-to-Date from Accrual Start Date (Modified Following)
Calculation	Compound average	Compound average + Spread Adjustment

- For more details, please consult the following websites:
 - <https://www.isda.org/2019/07/31/bloomberg-selected-as-fallback-adjustment-vendor/>
 - <https://www.newyorkfed.org/markets/treasury-repo-reference-rates-information>
 - <https://www.bloomberg.com/professional/solution/libor-transition/>



FBAK<GO> displays all-in-Fallback Rate (SOFR) of the most recent Original IBOR Rate Record Day for all tenor.

Data retrieved on 17 Aug 20 (8 p.m. BKK time)

<Back> to Return

97) Settings ▾ 98) Output ▾ 200) Show in Launchpad Page 1/1 ISDA Fallback Rates				
◀ EUR EURIBOR EUR LIBOR GBP LIBOR HKD HIBOR JPY Euroyen TIBOR JPY LIBOR JPY TIBOR USD LIBOR ▶				
ISDA Safe, Efficient Markets		USD LIBOR		
ISDA Fallback Rates -> Official ISDA Fallback Rates -> USD LIBOR		60 MSG Contributor 16:29:33		
		Zoom - + 100%		
Tenor	Original IBOR Rate	Record Day	Fallback Rate	Calculation Date - see Excel Workbook
1) O/N		08/17/20	0.09750	
2) 1W		08/10/20	0.13399	
3) 1M		07/17/20	0.21319	
4) 2M		06/17/20	0.27412	
5) 3M		05/15/20	0.33627	
6) 6M		02/17/20	0.63063	
7) 12M		08/16/19	1.54033	

Tickers on Bloomberg Terminal

- Fallback Rate (SOFR)
e.g. **FUS0006M** displays Fallback Rate (SOFR) tenor 6M
- Adjusted SOFR
e.g. **SOFR6M** displays Adjusted SOFR tenor 6M
- Spread Adjustment
e.g. **SUS0006M** displays Spread Adjustment for SOFR tenor 6M



HP<GO> (Historical Fallback Screen) displays historical data of Fallback Rate (SOFR)

Data retrieved on 17 Aug 20 (8 p.m. BKK time)

FUS0001M .21319 +.00219 Ret MTD -3.50 Ret 3M +51.10
🕒 As of 07/18/20 YTW N.A. OAS N.A.

FUS0001M Index			96) Export		97) Settings		Page 1/3 Historical Price Table		
Fallback for ICE LIBOR USD 1 Month									
Range	02/28/2020	-	07/17/2020	Period	Daily	High	20,200,817 on	07/15/20	
Market	IBOR Fllbck C		IBOR Fllbck C	Currency	USD	Low	20,200,616 on	05/11/20	
View	Price Table					Average	20,200,712	.20570	
						Net Chg	201	0.00%	
Date	IBOR Fllb...	Last Price	Date	IBOR Fllb...	Last Price	Date	IBOR Fllb...	Last Price	
Fr 07/17/20	20,200,817	.21319	Fr 06/26/20	20,200,727	.21836	Fr 06/05/20	20,200,706	.19875	
Th 07/16/20	20,200,817	.21386	Th 06/25/20	20,200,727	.21792	Th 06/04/20	20,200,706	.19779	
We 07/15/20	20,200,817	.21479	We 06/24/20	20,200,724	.21748	We 06/03/20	20,200,706	.19701	
Tu 07/14/20	20,200,814	.21616	Tu 06/23/20	20,200,723	.21658	Tu 06/02/20	20,200,702	.19316	
Mo 07/13/20	20,200,813	.21652	Mo 06/22/20	20,200,722	.21592	Mo 06/01/20	20,200,701	.19104	
Fr 07/10/20	20,200,810	.21706	Fr 06/19/20	20,200,720	.21384	Fr 05/29/20	20,200,629	.18840	
Th 07/09/20	20,200,810	.21698	Th 06/18/20	20,200,720	.21340	Th 05/28/20	20,200,629	.18716	
We 07/08/20	20,200,810	.21691	We 06/17/20	20,200,717	.21100	We 05/27/20	20,200,629	.18583	
Tu 07/07/20	20,200,807	.21813	Tu 06/16/20	20,200,716	.20987	Tu 05/26/20	20,200,626	.18491	
Mo 07/06/20	20,200,806	.21850	Mo 06/15/20	20,200,715	.20845	Mo 05/25/20	20,200,622	.17975	
Fr 07/03/20	20,200,803	.22011	Fr 06/12/20	20,200,713	.20610	Fr 05/22/20	20,200,622	.17903	
Th 07/02/20	20,200,803	.22011	Th 06/11/20	20,200,713	.20571	Th 05/21/20	20,200,622	.17702	
We 07/01/20	20,200,803	.22024	We 06/10/20	20,200,710	.20417	We 05/20/20	20,200,622	.17481	
Tu 06/30/20	20,200,730	.22092	Tu 06/09/20	20,200,709	.20326	Tu 05/19/20	20,200,619	.17125	
Mo 06/29/20	20,200,729	.22058	Mo 06/08/20	20,200,708	.20203	Mo 05/18/20	20,200,618	.16954	

Original IBOR IBOR Fallback Calculation Date
Rate Record Day (i.e. Publication Date)



การใช้ Fallback Rate (SOFR) ในสัญญาอนุพันธ์

การใช้ Fallback Rate (SOFR) ในสัญญาอนุพันธ์และ แนวทางการปรับสัญญาสินเชื่อที่อ้างอิง USD LIBOR

- Fallback rate with the original IBOR Rate Record Day shall appear on the screen **at least 2 business days** prior to the relevant payment date.
- If, however, Fallback rate for the Original IBOR Rate Record Day corresponding to the Reset Date is not produced by Bloomberg 2 business days prior to the payment date, then Fallback rate that has been published for **the most recent Original IBOR Rate Record Day** should be used.

แนวทางการปรับสัญญาสินเชื่อที่อ้างอิง USD LIBOR

Selected Cash Products	Benchmark Replacement	Benchmark Replacement Adjustment (Spread Adjustment)
Bilateral business loans	<u>Hardwired approach</u> <ol style="list-style-type: none"> Term SOFR Next available Term SOFR Compounded SOFR <u>or</u> simple average SOFR Lender selected rate 	<u>Hardwired approach</u> <ol style="list-style-type: none"> ARRC selected ISDA fallback Lender selected
	<u>Amendment approach</u> : Lenders select based on recommendations by regulatory body or prevailing market convention	<u>Amendment approach</u> : Lenders select based on recommendations by regulatory body or prevailing market convention
Syndicated loans	<u>Hardwired approach</u> <ol style="list-style-type: none"> Term SOFR Daily simple SOFR <u>or</u> daily compounded SOFR <u>or</u> compounded SOFR in advance Borrower and administrative agent selected rate 	<u>Hardwired approach</u> <ol style="list-style-type: none"> ARRC selected ISDA fallback Borrower and administrative agent selected rate



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3. อัตราดอกเบี้ย Fallback Rate (THBFIX)



การคำนวณ Fallback Rate (THBFIX)

$$\text{THBFIX} = \left\{ \left[\left(\frac{\text{Spot Rate} + \text{Forward Points}}{\text{Spot Rate}} \right) \times \left(1 + \frac{\text{USD LIBOR} \times \#days}{360} \right) \right] - 1 \right\} \times \frac{365}{\#days} \times 100$$



$$\text{Fallback Rate (THBFIX)} = \left\{ \left[\left(\frac{\text{Spot Rate} + \text{Forward Points}}{\text{Spot Rate}} \right) \times \left(1 + \frac{\text{Fallback Rate (SOFR)} \times \#days}{360} \right) \right] - 1 \right\} \times \frac{365}{\#days} \times 100$$

- แทนที่ USD LIBOR ด้วย Fallback SOFR ซึ่งคำนวณจาก Adjusted SOFR + Spread Adjustment ที่ Bloomberg เผยแพร่
- ระยะที่เผยแพร่จะเหลือ 1M/3M/6M
- Fallback Rate (THBFIX) จะยังคำนวณและเผยแพร่ตราบเท่าที่ตลาดยังมีความจำเป็น โดยหลัง 3 ปี ธปท. จะประเมินความจำเป็นเป็นระยะจาก
 1. ยอดคงค้างธุรกรรมที่ยังคงอ้างอิงอัตราดอกเบี้ย Fallback Rate (THBFIX)
 2. พัฒนาการของตลาด OIS อ้างอิงอัตราดอกเบี้ยใหม่
- จำกัดการใช้งานเฉพาะกับสัญญาเก่าที่อ้างอิง THBFIX เท่านั้น



	Day-2	Day-1	Day 0	(Day + 6M)-2	(Day + 6M) -1	Day + 6M
6M IRS	Fixing Date		Start Date				Payment Date
6M THBFIX	Trade Date of spot and swap (T)	(T+1)	Value Date* of spot and swap (T+2)				Maturity Date* of swap
6M Fallback THBFIX	<u>Record Date</u>				Publication Date (P)		Payment Date of IRS

*The value date and maturity date of FX swap are not always the same date as the start date and payment date of IRS.

Fallback Rate (THBFIX) Record date

- Fallback Rate (THBFIX) will be labelled by a “record date” which refers to the trade date of FX spot and swap traded on the original fixing date of the IRS that the payment will be due on the following 2 Bangkok business days from the publication date.
- The record date should also represent the date where THBFIX would have appeared on the screen.
- Fallback Rate (THBFIX) of a certain tenor with any particular record date refers to only one single unique value and will be the same value on any publication day.



Fallback Rate (THBFIX) Publication

- Fallback Rate (THBFIX) will be published at 8 a.m. on Bangkok business day only.
- Available for 1M, 3M, and 6M tenors.
- For any publication of Fallback Rate (THBFIX) for each tenor, chances are that there will be
 1. Single record date published (1 record date)
 2. Multiple record dates published (More than 1 record date)
 3. No new record date published

Application of Fallback Rate (THBFIX)

- Fallback Rate (THBFIX) will appear on the screen at least 2 Bangkok business days prior to the IRS payment date.
- On such date, users could observe the record date which is identical to the original fixing date of IRS.



RIC code: FBKTHBFIX=

Advanced calendar for 1M tenor

Main Fallback THBFIX page

FBKTHBFIX

Bank of Thailand Transaction-based Thai Baht Interest Rate Fixing

Fallback THBFIX as of 08:00 hrs Bangkok Time. 14-Aug-20

=====TEST DATA=====

	FALLBACK	THBFIX RATE	USD/THB	USD/THB	DAY	FALLBACK
TENOR	THBFIX	RECORD DATE	FWD PTS	SPOT	COUNT	SOFR RATE
1M	0.28196	16-Jul-20	0.1679	31.6705	31	13-Jul-20
3M	0.45037	14-May-20	0.9000	32.0864	92	12-May-20
6M	-0.22685	14-Feb-20	-13.5426	31.1733	182	13-Feb-20

Announcement:

The fallback THBFIX is calculated based on the latest fallback SOFR rates.
In the event that current day is a US holiday, the published fallback SOFR rates
published on the previous day are used for the fallback THBFIX calculation.

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INDEX PAGE <THBFXFIX> RIC CODES <FBKTHBFIX=> DISCLAIMER <THBFXDISC>

FALLBACK THBFIX METHODOLOGY:<----->

FBKTHBFX1M							
Fallback 1M THBFX Publication Calendar							
=====TEST DATA=====							
1M IRS	Fallback	Fallback	USDTHB	USDTHB	Days	Fallback	Fallback
Payment	THBFX	THBFX	SPOT	FORWARD		SOFR	THBFX
Date	Pub	R.R.Date				R.R.Date	
05Aug20	03Aug20	02Jul20	31.1217	0.1000	31	30Jun20	0.26183
06Aug20	04Aug20	02Jul20	31.1217	0.1000	31	30Jun20	0.26183
07Aug20	05Aug20	02Jul20	31.1217	0.1000	31	30Jun20	0.26183
10Aug20	06Aug20	03Jul20	31.1006	0.0542	33	03Jul20	0.24245
		07Jul20	31.1434	0.0000	32	03Jul20	0.22317
		08Jul20	31.2472	-0.1000	31	03Jul20	0.18548
11Aug20	07Aug20	09Jul20	31.1929	-0.0912	31	06Jul20	0.18710
13Aug20	10Aug20	09Jul20	31.1929	-0.0912	31	06Jul20	0.18710
14Aug20	11Aug20	10Jul20	31.3093	-0.0438	31	10Jul20	0.20360
17Aug20	13Aug20	13Jul20	31.3294	0.0000	33	10Jul20	0.22007
		14Jul20	31.5590	-0.1500	32	10Jul20	0.16585
		15Jul20	31.5349	0.0000	31	10Jul20	0.22007
18Aug20	14Aug20	16Jul20	31.6705	0.1679	31	13Jul20	0.28196
19Aug20	17Aug20	16Jul20	31.6705	0.1679	31		
20Aug20	18Aug20	16Jul20	31.6705	0.1679	31		
21Aug20	19Aug20	17Jul20	31.7040	0.2114	31		
24Aug20	20Aug20	20Jul20	31.8181	0.2250	33		
		21Jul20	31.7169	0.3000	32		
		22Jul20	31.6757	0.2083	31		
25Aug20	21Aug20	23Jul20	31.6677	0.2217	33		
26Aug20	24Aug20	23Jul20	31.6677	0.2217	33		
27Aug20	25Aug20	23Jul20	31.6677	0.2217	33		
28Aug20	26Aug20	23Jul20	31.6677	0.2217	33		
31Aug20	27Aug20	23Jul20	31.6677	0.2217	33		
		24Jul20	31.7469	0.3201	32		
		29Jul20	31.4493	0.4029	31		
01Sep20	28Aug20	30Jul20	31.4104	0.4629	31		
02Sep20	31Aug20	30Jul20	31.4104	0.4629	31		
=====							
MAIN PAGE <FBKTHBFX>		RIC CODES <FBKTHBFX=>			DISCLAIMER <THBFXDISC>		
FALLBACK THBFX METHODOLOGY:<----->							



สัญญาอนุพันธ์

1. ก่อนถึงวันจ่ายเงินเป็นเวลา 2 วันทำการ ให้คู่สัญญา observe Fallback Rate (THBFIX) ที่มี record date ตรงกับวัน Original Fixing Date ของ IRS
2. หาก ณ วันดังกล่าว ไม่มี record date ที่ตรงกับ Original Fixing Date ของ IRS ให้ใช้ Most recent record date แทน

ข้อสังเกต:

- หากคู่สัญญาเลือก observe Fallback Rate (THBFIX) ณ 2 วันทำการ ก่อนวันจ่ายเงิน จะได้อัตราดอกเบี้ยที่ใกล้เคียงกับวิธีคำนวณในปัจจุบันมากที่สุด (แนวทางตาม ISDA Protocol)
- หากคู่สัญญาต้องการระยะเวลาเตรียมเงินมากขึ้น อาจตกลงการ observe Fallback Rate (THBFIX) เป็นวันอื่น เช่น 3, 4, 5 วันทำการ ก่อนวันจ่ายเงิน แต่อัตราดอกเบี้ยที่นำไปใช้จ่ายเงินจะยังไม่ตรงกับวิธีคำนวณในปัจจุบัน

สัญญาสินเชื่อ

1. คู่สัญญาสามารถตกลงกันเองได้ว่าจะ observe Fallback Rate (THBFIX) ณ วันใด
2. กรณีลูกค้า hedge loan ไว้ด้วย IRS อาจเป็นไปได้ที่จะกำหนดการ observe Fallback Rate (THBFIX) 2 วันทำการก่อนวันจ่ายเงิน เพื่อหลีกเลี่ยง basis ที่อาจเกิดขึ้นได้
3. กรณีลูกค้าไม่ได้ hedge loan ไว้ และต้องการระยะเวลาในการเตรียมเงินเพิ่มขึ้น อาจตกลงกันเป็นวันอื่น เช่น 3, 4, 5 วันทำการก่อนจ่ายเงิน

ข้อสังเกต:

Original THBFIX Rate Record Date ที่เผยแพร่คู่กับ Fallback Rate (THBFIX) เป็น record date สำหรับธุรกรรมที่ observe rate 2 วันทำการ ก่อนวันจ่ายเงิน ดังนั้น หากสินเชื่อจะใช้ rate ที่เผยแพร่ก่อนวันจ่ายเงิน มากกว่า 2 วันทำการ จะไม่มี record date ที่ตรงกับสินเชื่อนั้น และให้อ้างอิงกับ Most recent record date แทน



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4. Calculation Methodology



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Calculation Methodology

Fallback Rate (SOFR)



$$\text{Fallback Rate (SOFR)} = \text{Adjusted SOFR} + \text{Spread Adjustment}$$

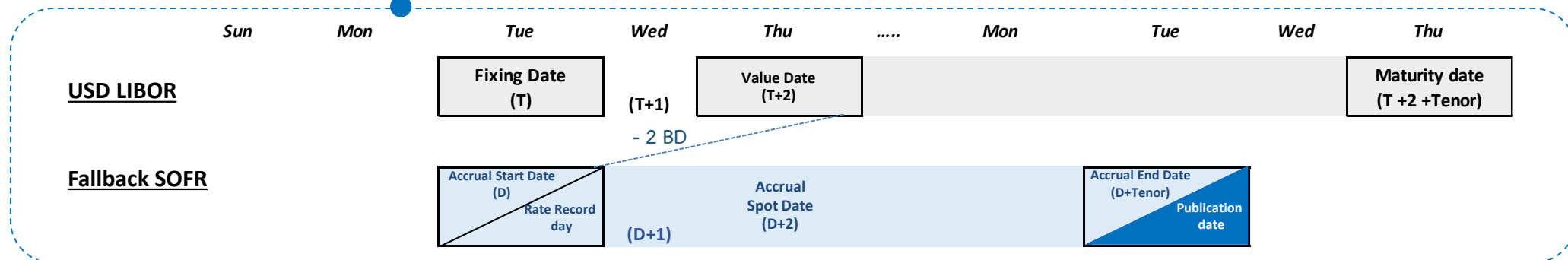
Adjusted SOFR is derived from compounding in arrears daily value of SOFR over an accrual period to provide a term rate, then annualize the compounded SOFR to get Adjusted SOFR per annum.

Spread Adjustment is the 5-year historical median of the differences between USD LIBOR and Adjusted SOFR which will become a fixed value on the Spread Adjustment Fixing Date.

The Spread Adjustment Fixing Date is the earlier of:

- 1) Index Cessation Event under the updated 2006 ISDA Definitions for all tenor of the relevant IBOR; and
- 2) Cessation of a certain tenor which cannot be interpolated

For more information: <https://data.bloomberglp.com/professional/sites/10/IBOR-Fallbacks-Fact-Sheet.pdf>



Disclaimer: Accrual Start Date can be on the same or different from Original IBOR Rate Record Day due to different convention. Rate Record Day can be any day that is not weekends.

For more information: <https://data.bloomberglp.com/professional/sites/10/IBOR-Fallback-Rate-Adjustments-Rule-Book.pdf>



Single Rate Record Day of Fallback SOFR

26 Dec 27 Dec 27 Jun 28 Jun

6M FB SOFR Record date 27 Dec

Publication
of FB SOFR

No Rate Record Day of Fallback SOFR

23 Aug Sat Sun Sun 24 Feb 25 Feb 26 Feb
24 Aug 25 Aug 23 Feb



Multiple Rate Record Day of Fallback SOFR

28 Aug 29 Aug 30 Aug Sat 28 Feb Sat Sun
31 Aug 29 Feb 1 Mar

6M FB SOFR Record date 28 Aug

Publication
of FB SOFR

6M FB SOFR Record date 29 Aug

Publication
of FB SOFR

6M FB SOFR Record date 30 Aug

Publication
of FB SOFR



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Calculation Methodology

Fallback Rate (THBFIX)



$$\text{Fallback Rate (THBFIX)} = \left\{ \left[\left(\frac{\text{Spot Rate} + \text{Forward Points}}{\text{Spot Rate}} \right) \times \left(1 + \frac{\text{Fallback Rate (SOFR)} \times \# \text{days}}{360} \right) \right] - 1 \right\} \times \frac{365}{\# \text{days}} \times 100$$

1. USDTHB Spot/Swap:

- On any day of publication, calculation of Fallback Rate (THBFIX) will utilize the Spot rate and Forward Points traded on the original fixing date of respective IRS that will mature in 2 Bangkok business days following the publication date.

Day count:

- Use the number of days calculated from the start date to the maturity date of corresponding FX swap.

2. USD Interest Rate:

- Utilizing the latest available Fallback Rate (SOFR) record date from Bloomberg's publication for each tenor (Fallback Rate (SOFR) is an all-in rate which includes fixed spread adjustment).
- For any publication date where Bloomberg publishes fallback rates for several rate record dates, the most recent record date will be used.
- In case of a non-business day in the US or no publication of Fallback Rate (SOFR), the most recent Fallback Rate (SOFR) rate record date from the previous business day will be used.

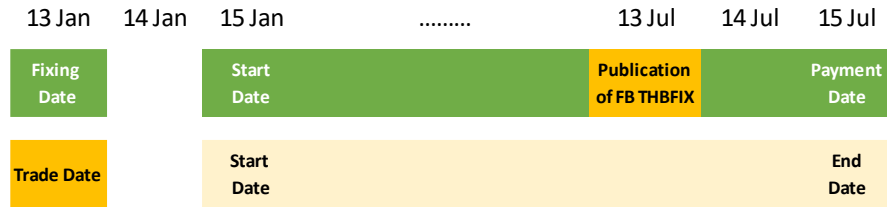


1. USDTHB Spot/Swap

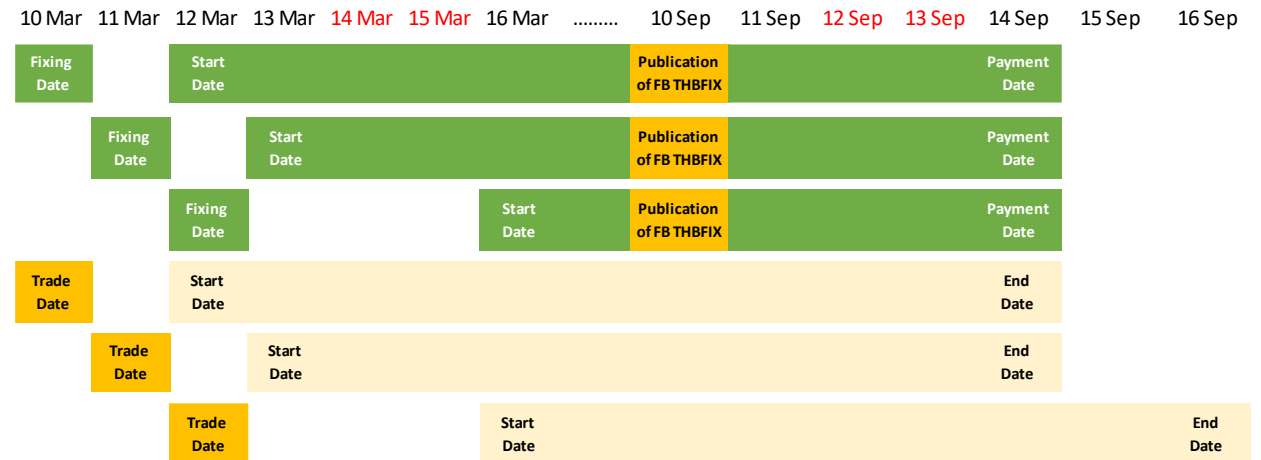
1. Identify all original fixing dates of IRS that will mature in the next 2 Bangkok business days following the publication date
2. Utilize Spot rate and Forward Points traded on that original fixing date.

Note: Day count of Fx swap will be used in the calculation and may not equivalent to that of IRS due to different business day convention

Single record date published (1 record date)

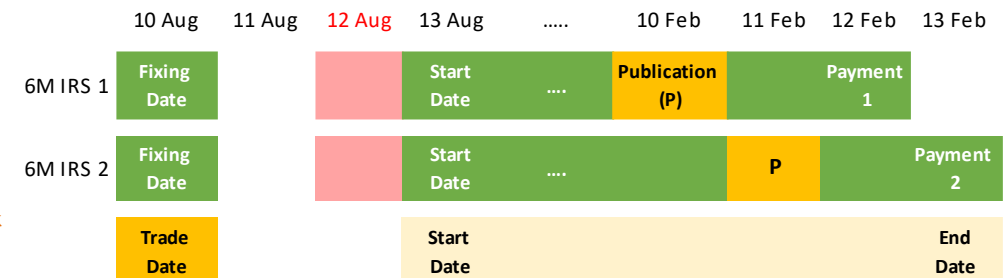


Multiple record dates published (More than 1 record date)



No new record date published

- There could be a case where IRS1 and IRS2 have the same fixing date with different payment dates. These 2 IRS will utilize the same Fallback Rate (THBFIX) record date (which refers to the same fixing date) for the settlement.
- IRS1 could observe Fallback Rate (THBFIX) on 2 Bangkok business days prior to its payment date. Such Fallback Rate (THBFIX) record date with the unchanged value will still appear on the screen on the next Bangkok business day, then IRS2 could also observe the same Fallback Rate (THBFIX) record date on 2 Bangkok business days prior to its payment date as well.



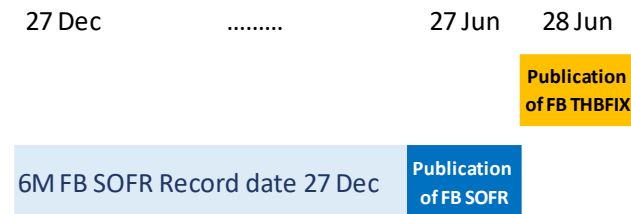
P represents publication of Fallback Rate (THBFIX) record date which is used for both IRS



2. USD Interest Rate: Utilizing the latest Fallback Rate (SOFR) record date from Bloomberg's publication

Single publication of Fallback Rate (SOFR)

A Fallback THBFIX on any given day will utilize the latest available Fallback Rate (SOFR) record date



No publication of Fallback Rate (SOFR)

Fallback Rate (SOFR) from the previous business day will be used.



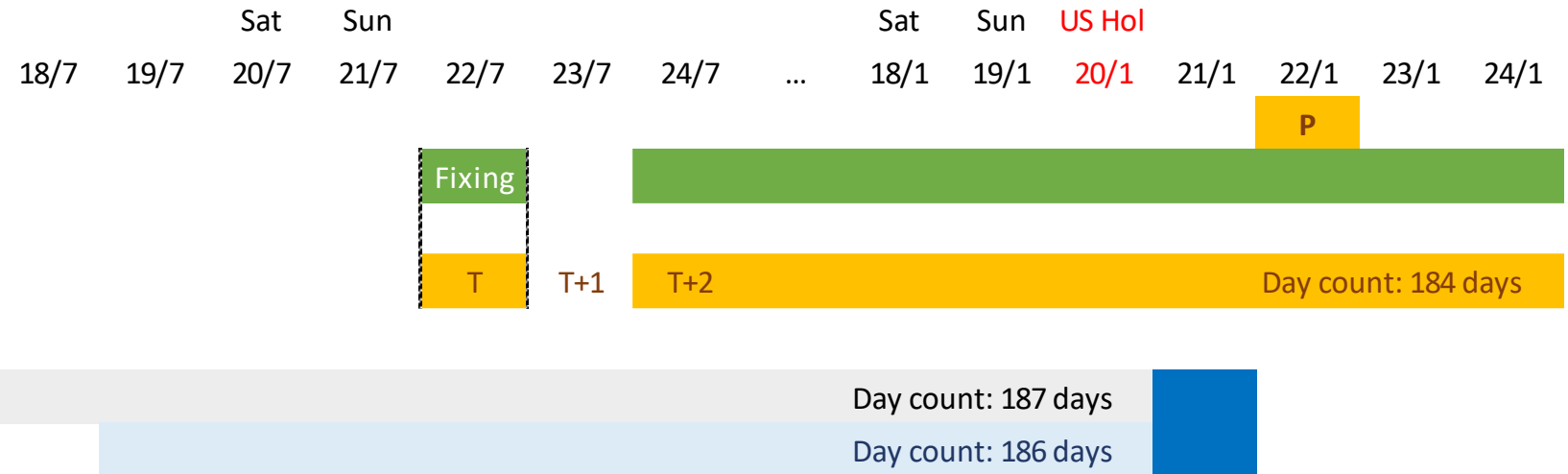
Multiple publication of Fallback Rate (SOFR)

For several record dates, the most recent record date will be used.





Illustrative Example 1: Single Rate Publication



Methodology: 6M Fallback Rate (THBFIX) rate record date of 22 Jul will be available on 22 Jan, derived from

1. USDTHB Spot rate and Forward Points traded on 22 Jul which is the original fixing date of IRS maturing on 24 Jan (2 Bangkok business days following the publication date of 22 Jan).
2. While there are several Fallback Rate (SOFR) published on 21 Jan (rate record date of 18 and 19 Jul), the most recent record date will be used (19 Jul).

Application: A 6M IRS with the payment date on 24 Jan will observe 6M Fallback Rate (THBFI)X rate record date of 22 Jul (published on 22 Jan).



Illustrative Example 2: Multiple Rate Publication with multiple Fallback Rate (SOFR)

6M Fallback THBFIX Publication on 26/2

IRS1 Payment 28/2 (Fixing 26/8, Start 28/8)

IRS2 Payment 28/2 (Fixing 27/8, Start 29/8)

IRS3 Payment 28/2 (Fixing 28/8, Start 30/8)

1. Spot/Swap for Fallback THBFIX

Record Date 26/8 (Trade 26/8, Start 28/8)

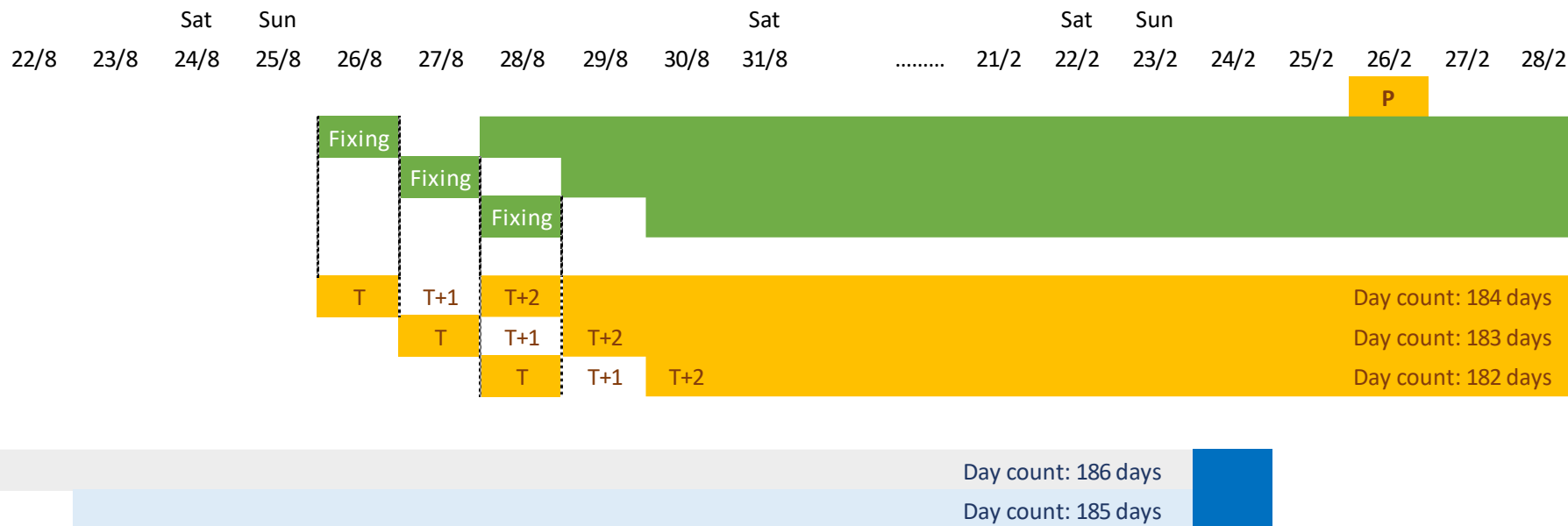
Record Date 27/8 (Trade 27/8, Start 29/8)

Record Date 28/8 (Trade 28/8, Start 30/8)

2. 6M Fallback SOFR

Record date 22/8

Record date 23/8



Assuming there are 28 days in February.

Methodology: There will be 3 record dates for 6M Fallback Rate (THBFIX) available on 26 Feb, which are 26, 27, 28 Aug, derived from

- USDTHB Spot rate and Forward Points traded on 26, 27, 28 Aug which are the original fixing dates of the IRS maturing on 28 Aug (2 Bangkok business days following the publication date of 26 Feb)
- Fallback Rate (SOFR) rate record date of 23 Aug (published on 24 Feb). There is no publication of 6M Fallback Rate (SOFR) on the 25 Feb so the 6M Fallback Rate (SOFR) from the previous business day (24 Feb) will be used. While there are several Fallback Rate (SOFR) published on 24 Feb (rate record date of 22 and 23 Aug), the most recent record date will be used (23 Aug).

Application: All 6M IRS with the payment date on 28 Feb - those fixing on 26, 27, and 28 Aug, will observe Fallback Rate (THBFIX) published on 26 Feb

- IRS 1 utilizes 6M Fallback Rate (THBFIX) rate record date of 26 Aug
- IRS 2 utilizes 6M Fallback Rate (THBFIX) record date of 27 Aug
- IRS 3 utilizes 6M Fallback Rate (THBFIX) record date of 28 Aug



Illustrative Example 3(A): Multiple Rate Publication

6M Fallback THBFIX Publication on 20/2

IRS 1 Payment 24/2 (Fixing 20/8, Start 22/8)

IRS 2 Payment 24/2 (Fixing 21/8, Start 23/8)

IRS 3 Payment 24/2 (Fixing 22/8, Start 26/8)

1. Spot/Swap for Fallback THBFIX

Record Date 20/8 (Trade 20/8, Start 22/8)

Record Date 21/8 (Trade 21/8, Start 23/8)

Record Date 22/8 (Trade 22/8, Start 27/8)

2. 6M Fallback SOFR Record date 19/8

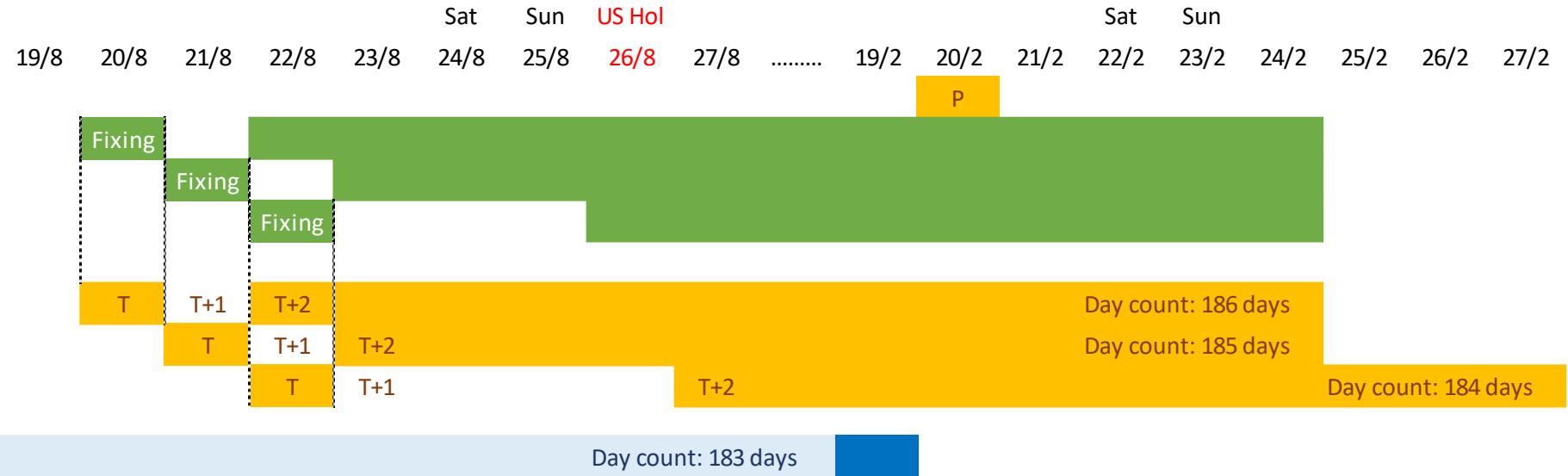
Assuming 26 Aug is a holiday in the US.

Methodology: There will be 3 record dates for 6M Fallback THBFIX available on 20 Feb, which are 20, 21, 22 Aug, derived from

1. USDTHB Spot rate and Forward Points traded on 20, 21, 22 Aug which are the original fixing dates of IRS maturing on 24 Aug (2 Bangkok business days following the publication date of 20 Feb)
2. Fallback Rate (SOFR) rate record date of 19 Aug (published on 19 Feb as latest available).

Application: All 6M IRS with the payment date on 24 Feb - those fixing on 20, 21, and 22 Aug, will observe Fallback Rate (THBFIX) published on 20 Feb

- IRS 1 utilizes 6M Fallback Rate (THBFIX) record date of 20 Aug
- IRS 2 utilizes 6M Fallback Rate (THBFIX) record date of 21 Aug
- IRS 3 utilizes 6M Fallback Rate (THBFIX) record date of 22 Aug





Illustrative Example 3(B): No New Record Date Calculation

19/8	20/8	21/8	22/8	23/8	Sat 24/8	Sun 25/8	US Hol 26/8	27/8	19/2	20/2	21/2	Sat 22/2	Sun 23/2	24/2	25/2	26/2	27/2
------	------	------	------	------	-------------	-------------	----------------	------	-------	------	------	------	-------------	-------------	------	------	------	------

6M Fallback THBFX Publication on 20/2

IRS 3 Payment 24/2 (Fixing 22/8, Start 26/8)

6M Fallback THBFX Publication on 21/2

IRS 4 Payment 25/2 (Fixing 22/8, Start 26/8)

6M Fallback THBFX Publication on 24/2

IRS 5 Payment 26/2 (Fixing 22/8, Start 26/8)

1. Spot/Swap for Fallback THBFX

Record Date 22/8 (Trade 22/8, Start 27/8)



T+1

T+2

Day count: 184 days

2. 6M Fallback SOFR Record date 19/8

Day count: 183 days

P represents the rate record date of Fallback THBFX that remains on the screen since the first day of publication (P)

Assuming 26 Aug is the holiday in the US.

Methodology: For publication of 6M Fallback Rate (THBFX) on 21 and 24 Feb, which will be referring to the rate record date of 22 Aug, there will be no new record date calculated as 6M Fallback Rate (THBFX) rate record date of 22 Aug has been published since 20 Feb. 6M Fallback Rate (THBFX) rate record date of 22 Aug with the unchanged value will still be available on the screen on 21 and 24 Feb for IRS with the payment date on 25 and 26 Feb respectively. Therefore, users will observe the same rate record date of 22 Aug on 21 and 24 Feb that refer to the same value as it will not be recalculated to satisfy changes of the latest available Fallback Rate (SOFR) in relation to publication day.

Application: All 6M IRS with fixing on 22 Aug but have different payment dates (24, 25, 26 Feb) will observe Fallback Rate (THBFX) with the same record date of 22 Aug.

- IRS 3 utilizes 6M Fallback Rate (THBFX) with record date 22 Aug
- IRS 4 utilizes 6M Fallback Rate (THBFX) with record date 22 Aug (same rate that has been published since 20 Feb)
- IRS 5 utilizes 6M Fallback Rate (THBFX) with record date 22 Aug (same rate that has been published since 20 Feb)



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5. รายละเอียดการจัดบรรยายและ office hours



วัน เวลา	หัวข้อ	กลุ่มเป้าหมาย
อังคาร 21 ก.ค. 10.30 น. – 12.00 น.	การปฏิรูปอัตราดอกเบี้ยอ้างอิง	ธนาคาร / สภาวิชาชีพบัญชี
อังคาร 4 ส.ค. 10.30 น. – 12.00 น.	THOR	ธนาคาร / สภาวิชาชีพบัญชี
พฤหัสบดี 20 ส.ค. 10.30 น. – 12.00 น.	THBFIX and Fallback Rate (THBFIX)	ธนาคาร / สภาวิชาชีพบัญชี
พฤหัสบดี 3 ก.ย. 9.30 น. – 12.00 น.	ISDA: IBOR Fallback Supplement and Protocol	ธนาคาร / สภาวิชาชีพบัญชี
กันยายน / ตุลาคม	การปฏิรูปอัตราดอกเบี้ยอ้างอิง	ลูกค้า หน่วยงานภาครัฐ



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Informational Sources

- BOT Office Hour: ทุกวันพุธ เวลา 10.00 น. (Microsoft Teams Meeting)

<https://www.bot.or.th/Thai/FinancialMarkets/Pages/LiborCommunication.aspx>

- Email: ReferenceRate@bot.or.th
- <https://www.bot.or.th/Thai/FinancialMarkets/Pages/ReferenceInterestAndEndOfUseLIBOR.aspx>





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Clarification on Lookback with observation shift convention

(สำหรับ THOR และ overnight rate อื่น ๆ)



ตัวอย่าง: 5-Business Day Lookback with observation shift

	ม.ค. 64												ก.ค. 64										
	8	9	10	11	12	13	14	15	16	17	5	6	7	8	9	10	11	12	13	14	15
Interest Period																							
Observation Period																							
Compounded THOR																							
THOR Index																							

interest period: เริ่มงวดดอกเบี้ยวันที่ 15 ม.ค. 64 และจ่ายดอกเบี้ยวันที่ 15 ก.ค. 64

observation period: 8 ม.ค. 64 ถึง 8 ก.ค. 64 อย่างไรก็ตาม ในการคำนวณอัตราดอกเบี้ยของงวด จะใช้อัตราดอกเบี้ยจากวันที่ 8 ม.ค. 64 ถึง 7 ก.ค. 64

- กรณีใช้ THOR ในแต่ละวันมาคำนวณเอง (Compounded THOR)

ต้นงวด: เริ่มหิบบัตรดอกเบี้ย THOR ในวันที่ 8 ม.ค.

ปลายงวด: หิบบัตรดอกเบี้ย THOR ในวันที่ 7 ก.ค. เป็นวันสุดท้าย

- กรณีใช้ THOR Index ซึ่งเผยแพร่ในเช้าวันทำการถัดไป ดังนั้น

ต้นงวด: ใช้ THOR Index ในวันที่ 8 ม.ค. (คำนวณดอกเบี้ยทบมาจนถึงแต่วันที่ 7 ม.ค.)

ปลายงวด: ใช้ THOR Index ในวันที่ 8 ก.ค. (คำนวณดอกเบี้ยทบมาจนถึงแต่วันที่ 7 ก.ค.)