API Manual
Mark-to-Market

The Thai Bond Market Association

November 11,2023

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Plain Vanilla Mark-to-Market

`POST` **/api/v1/mtm/plain-vanilla**

Description: End-of-Day Plain Vanilla Mark-to-Market price provides fair value for general securities used as reference prices by mutual funds and provident funds by calculating net asset value at the end of the day (NAV).

Frequency: Daily.

Release schedule:

1. Real time Mark-to-Market: when published Plain-Vanilla Mark-to-Market data on iBond website.

2. Mark-to-Market 2 Hours lagged published at 7.00 p.m. (BKK-GMT+07:00).

3. Mark-to-Market falls on a holiday; data will be published on the next business day.

4. Mark-to-Market End-of-Month falls on a holiday; data will be published on the previous business day.

Remark:

1. Traded yield is based on 30/360 basis (on coupon payment) which might be different from yield calculated on actual payment.

2. For Inflation-linked bonds, the coupon (%) is a real coupon (%) and all the yields (%) shown are real YTM (%). The clean price (%) and accrued interest (%) are all in unadjusted terms. The corresponding adjusted terms can be obtained by multiplying the unadjusted price or accrued interest by the index ratio shown in the last column. Modified duration and convexity are calculated based on real YTM.

3. For traded-by-price bonds shown gross price (%) only. ThaiBMA does not provide market yield (%), clean Price (%), and AI (%).

4. The cut-off time for daily quotation of all bonds is 16:00.

5. Clean price, accrued interest, modified duration, and convexity shown in Plain vanilla MTM pages (not Trade-by-price) calculated with market yield and settlement date on T+1 (Calendar day).

6. Model yield of LB23DA, LB244A, LB246A, LB24DA, LB267A, LB27DA, LB283A, LB296A, LB356A, LB383A, LB396A, LB406A, LB416A, LB446A, LB716A are synthetic yield derived from ThaiBMA pricing model. But if there are trading transactions, model yield will be traded yield.

7. BEY (%) is Bond equivalent yield (calculated with semi-annually compounded yield).

8. Since 1-Apr-2020, the market yield of Long-term corporate bonds that have one-time cash flow (zero-coupon bond and coupon at maturity) is a semi-annual compounding yield (BEY).

Request body (Method: POST)

Parameter name	Data type	Description	Format
start_period	String	Start date	"yyyy-mm-dd"
end_period	String	End date	"yyyy-mm-dd"

Example value:

```
{
  "start_period": "2023-11-30T03:02:28.658Z",
  "end_period": "2023-11-30T03:02:28.658Z"
}
```

Responses:

Code	Description
200	Success
400	Bad request
401	Unauthorized
500	Internal server error

Details:

Parameter name	Data type	Length	Description	Example
asof	datetime	19	Data as of yyyy-mm-dd	2023-11-09T00:00:00
symbol	string	15	ThaiBMA bond symbol	A241A
isin_en	string	15	ISIN code (International)	
isin_th	string	15	ISIN code (Thailand)	TH0770034104
coupon	number	(6,6)	Coupon interest (%)/Year	7
maturity_date	datetime	19	Maturity date (yyyy-mm-dd)	2024-01-08T00:00:00
ttm	number	(6,6)	Time to maturity: Settlement (T+1) time until expiration (years)	0.161643835616
type	string	50	Type of bond by characteristics	Straight
coupon_type	string	20	Type of coupon	Fixed
tris	string	20	Issue rating rated by TRIS Rating	
fitch	string	20	Issue rating rated by FITCH (Thailand)	
moody	string	20	International Issue rating by Moody	
snp	string	20	International Issue rating by S&P	
fitch_inter	string	20	International Issue rating by FITCH	
randi	string	20	International Issue rating by R&I	
last_trade_date	datetime	19	Latest trade date (yyyy-mm-dd)	
last_exec_yield	number	(6,6)	Latest execute market yield (%)	
quoted_date	datetime	19	Quoted date (yyyy-mm-dd)	
quoted_avg_yield	number	(6,6)	Quoted average yield (%)	
quoted_min	number	(6,6)	Minimum quoted yield	

Parameter name	Data type	Length	Description	Example
quoted_max	number	(6,6)	Maximum quoted yield	
model_yield	number	(6,6)	Model yield (%)	8.101725
static_spread	number	(6,6)	The difference between the yields on securities and zero coupon yield curve (basis point)	621.279052
market_yield	number	(6,6)	Market yield	8.101725
bey	number	(6,6)	Bond equivalent yield (calculated with semi-annually compounded yield)	8.183772
dm	number	(2,6)	Discount margin	
clean_price	number	(6,6)	The price of a bond without accrued interest (%)	99.806441
gross_price	number	(6,6)	The price of a bond with accrued interest (%)	100.439318
ai	number	(6,6)	Accrued interest (%)	0.632877
modified_duration	number	(6,6)	The approximate percentage change in price for a given change in yield	0.158435
convexity	number	(6,6)	A measure of the sensitivity of a bond's price to changing interest rates	0.063924
par	number	(18,6)	Current par (Baht)	835
currency	string	3	Currency (THB, CNY, USD, JPY, or EUR)	THB
registration_status	string	50	Registration status (Registered, or Mark-to-Market)	Registered
index_ratio	number	(6,6)	Index ratio	
current_outs_size	number	(18,10)	Current outstanding size (mln)	1296.588
issuer rating	string	50	Issuer rating	B
distribution_type	string	10	Distribution type (HNW, II, PG, PO, PP10, PP13, PP13e, P/P, PP17, PPEXX, PPCC or RO)	PP13e
event_sign	string	20	Event sign status (RS, DP, DNP, REH, BANKRUPT, IC, RI, FP, or FPG)	
embedded_option	string	50	Embedded Option (Call - Put, Call Option, Put Option, Conv & Call Option or Convertible Issue)	Call Option

Structured Note Mark-to-Market

`POST` **/api/v1/mtm/structured-note**

Description: Structured Note Mark-to-Market Prices are obtained from the latest trading price on that day, If no trading data, prices are calculated from the bid price from the issuer or underwriter sent to ThaiBMA every 15 days.

Frequency: Daily.

Release schedule:

1. When publishing Structured Note Mark-to-Market data on the iBond website.
2. Mark-to-Market falls on a holiday; data will be published on the next business day.
3. Mark-to-Market End-of-Month falls on a holiday; data will be published on the previous business day.

Request body (Method: POST)

Parameter name	Data type	Description	Format
start_period	String	Start date	"yyyy-mm-dd"
end_period	String	End date	"yyyy-mm-dd"

Example value

```
{
  "start_period": "2023-11-30T03:37:44.346Z",
  "end_period": "2023-11-30T03:37:44.346Z"
}
```

Responses

Code	Description
200	Success
400	Bad request
401	Unauthorized
500	Internal server error

Details:

Parameter name	Data type	Length	Description	Example
asof	datetime	19	Data as of yyyy-mm-dd	2023-11-09T00:00:00
symbol	string	15	ThaiBMA bond symbol	CIMBT249A
isin_en	string	15	ISIN code (International)	
isin_th	string	15	ISIN code (Thailand)	TH0041C34910
maturity_date	datetime	19	Maturity date (yyyy-mm-dd)	2024-09-06T00:00:00

Parameter name	Data type	Length	Description	Example
ttm	number	(6,6)	Time to maturity: Settlement (T+1) time until expiration (years)	0.824657534247
type	string	50	Type of bond by characteristics (Straight or Amortization)	Straight
tris	string	20	Issue rating rated by TRIS Rating	
fitch	string	20	Issue rating rated by FITCH (Thailand)	
moody	string	20	International Issue rating by Moody	
snp	string	20	International Issue rating by S&P	
fitch_inter	string	20	International Issue rating by FITCH	
randi	string	20	International Issue rating by R&I	
last_trade_date	datetime	19	Latest trade date (yyyy-mm-dd)	
last_exec_gross	number	(6,6)	Latest execute gross price (%)	
quoted_date	datetime	19	Quoted date (yyyy-mm-dd)	2017-12-07T00:00:00
quoted_avg_gross	number	(6,6)	Quoted gross price (%)	100
model_gross	number	(6,6)	Model gross price (%)	
mtm_gross	number	(6,6)	Market gross price (%)	100.0
par	number	(18,6)	Current par (Baht)	1000000.0
currency	string	3	Currency code (THB, CNY, USD, JPY, or EUR)	THB
current_outs_size	number	(18,10)	Current outstanding size (mln)	243
registration_status	string	50	Registration status (Registered, or Mark-to-Market)	Registered
issuer rating	string	50	Issuer rating	AA-(tha)
distribution_type	string	10	Distribution type (HNW, II, PG, PO, PP10, PP13, PP13e, P/P, PP17, PPEXX, PPCC or RO)	PP13e
embedded_option	string	50	Embedded Option (Call - Put, Call Option, Put Option, Conv & Call Option or Convertible Issue)	Call Option