DAILY CASH SETTLEMENT OF FIXED INCOME DERIVATIVES

NASDAQ FIXED INCOME FUTURES





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1. SCOPE & BACKGROUND

NASDAQ is introducing daily cash settlement on all standardized fixed income derivatives that are currently offered as forwards with monthly cash settlement. The daily settled fixed income derivatives (hereafter "Futures") will replace the fixed income Forwards (hereafter "Forwards") after a transition period during which both the Forward and the Futures contracts are available for clearing.

Together with the introduction of daily cash settlement, discounting of settlement amounts will become inapplicable on all contracts. There will also be changes specifically to the Nordea Hypotek and Swedbank Hypotek contracts where a synthetic underlying bond instead of physical underlying will be introduced.

The daily settled products will be completely off-settable, traded at yield, and profit/loss will be settled on a daily basis. The introduction of daily cash settled derivatives is driven by members demand for capital efficient products.

NASDAQ will launch the full technical solution for the new Futures contracts on June 15th 2015 with the technical release of Genium INET 4.0.0250. In order to allow sufficient time for market participants to prepare for the new contract types, **the first trade day for Futures contracts will be on November 2nd 2015.**

2. PRODUCTS & CONTRACT DETAILS

All currently offered standardized fixed income Forwards will be replaced by standardized fixed income Futures after a transition period during which both contracts are listed.

The replacement will be applicable to Forwards on Swedish Government bonds (R-Contracts), Forwards on Swedish Mortgage Bonds (SCBC-, Swedbank Hypotek, Nordea Hypotek and Stadshypotek Contracts), Forwards on 3-Months STIBOR (FRA-Contracts) and Forwards on 3- and 6- Months NIBOR (NFRA-Contracts).

In order to enable dual listing, to differentiate Futures from Forward contracts and to harmonize with other Nordic Futures, the new contracts will have a different series contract base and name standard as listed in Table 1 and 2 below.

Table 1 –Series contract base													
Current													
Forward	NBHYP2	NBHYP5	R10	R2	R5	SB5	SPA2	SPA5	ST2	ST5	FRA	3NFRA	6NFRA
New													
Future	NDH2Y	NDH5Y	SGB10Y	SGB2Y	SGB5Y	SCBC5Y	SWH2Y	SWH5Y	STH2Y	STH5Y	3STI BFRA	3NI BFRA	6NIBFRA

The full name standard for Futures contracts will be:

- Contract Base
- Expiration Month

• Expiration Year

Table 2 - Expiration Month codes and examples of series names for NIBOR and Government bond Futures

Expiration month codes		Expiration Month	3-Month NIBOR Future	2YR Gov. Bond Future
March	н	December 2015	3NIBFRAZ5	SGB2YZ5
June	м	March 2016	3NIBFRAH6	SGB2YH6
September	U	June 2016	3NIBFRAM6	SGB2YM6
December	Z	September 2016	3NIBFRAU6	SGB2YU6
December	-	December 2016	3NIBFRAZ6	SGB2YZ6
		March 2017	3NIBFRAH7	SGB2YH7



3. DIFFERENCES BETWEEN FUTURES AND FORWARD CONTRACTS

Government Bonds

Table 3 - A summary of the differences between the Future and the Forward contract

Contract		Cash	Disc. on	Disc. in	Disc. on			Quotation
Туре	Series	Settlement	Trade Fee	Valuation	Settlement	Underlying	Deliverable Bond	instument
Forward	R10	Monthly	Yes	No	Yes	Synthetic 10 YR 6% bond	Swedish 10 YR gov.	10RGKBF
Future	SGB10Y	Daily	No	No	No	Synthetic 10 YR 6% bond	Swedish 10 YR gov.	SGB_10Y
Forward	R2	Monthly	Yes	No	Yes	Synthetic 2 YR 6% bond	Swedish 2YR gov.	2RGKBF
Future	SGB2Y	Daily	No	No	No	Synthetic 2 YR 6% bond	Swedish 2YR gov.	SGB_2Y
Forward	R5	Monthly	Yes	No	Yes	Synthetic 5 YR 6% bond	Swedish 5YR gov.	5RGKBF
Future	SGB5Y	Daily	No	No	No	Synthetic 5 YR 6% bond	Swedish 5YR gov.	SGB_5Y

Mortgage Bonds

Table 4 - A summary of the differences between the Future and the Forward contract

Contract Type	Series	Cash Settlement	Disc. on Trade Fee	Disc. in Valuation	Disc. on Settlement	Underlying	Deliverable Bond	Quotation instument
Forward	NBHYP2	Monthly	Yes	No	Yes	Deliverable Bond	Nordea Hypotek 2YR Mortg.	2NBHBF
Future	NDH2Y	Daily	No	No	No	Synthetic 2YR 6% bond	Nordea Hypotek 2YR Mortg.	NDH_2Y
Forward	NBHYP5	Monthly	Yes	No	Yes	Deliverable Bond	Nordea Hypotek 5YR Mortg.	5NBHBF
Future	NDH5Y	Daily	No	No	No	Synthetic 5YR 6% bond	Nordea Hypotek 5YR Mortg.	NDH_5Y
Forward	SB5	Monthly	Yes	No	Yes	Synthetic 5YR 6% bond	SCBC 5YR Mortg.	5SBABF
Future	SCBC5Y	Daily	No	No	No	Synthetic 5YR 6% bond	SCBC 5YR Mortg.	SCBC_5Y
Forward	ST2	Monthly	Yes	No	Yes	Synthetic 2YR 6% bond	Stadshypotek 2YR Mortg.	2SHYBF
Future	STH2Y	Daily	No	No	No	Synthetic 2YR 6% bond	Stadshypotek 2YR Mortg.	STH_2Y
Forward	ST5	Monthly	Yes	No	Yes	Synthetic 5YR 6% bond	Stadshypotek 5YR Mortg.	5SHYBF
Future	STH5Y	Daily	No	No	No	Synthetic 5YR 6% bond	Stadshypotek 5YR Mortg.	STH_5Y
Forward	SPA2	Monthly	Yes	No	Yes	Deliverable Bond	Swedbank Hypotek 2YR Mortg.	2SWHBF
Future	SWH2Y	Daily	No	No	No	Synthetic 2YR 6% bond	Swedbank Hypotek 2YR Mortg.	SWH_2Y
Forward	SPA5	Monthly	Yes	No	Yes	Deliverable Bond	Swedbank Hypotek 5YR Mortg.	5SWHBF
Future	SWH5Y	Daily	No	No	No	Synthetic 5YR 6% bond	Swedbank Hypotek 5YR Mortg.	SWH_5Y

Important note: The Nordea Hypotek and Swedbank Hypotek contracts will be valuated with a synthetic underlying instead of physical underlying. This is in line with current setup of SCBC- and Stadshypotek contracts. Consequently, all underlying bonds will have the same, synthetic structure.

Rates agreements

Contract		Cash	Disc. on	Disc. in	Disc. on			Quotation
Туре	Series	Settlement	Trade Fee	Valuation	Settlement	Underlying	Deliverable Bond	instument
Forward	FRA	Monthly	Yes	Yes	Yes	3-Month STIBOR	None	IMM_FRA
Future	3STIBFRA	Daily	No	No	No	3-Month STIBOR	None	3STIB_FRA
Forward	3NFRA	Monthly	Yes	Yes	Yes	3-Month NIBOR	None	Reuters_RIC
Future	3NIBFRA	Daily	No	No	No	3-Month NIBOR	None	Reuters_RIC
Forward	6NFRA	Monthly	Yes	Yes	Yes	6-Month NIBOR	None	Reuters_RIC
Future	6NIBFRA	Daily	No	No	No	6-Month NIBOR	None	Reuters_RIC

Table 5 - A summary of the differences between the Future and the Forward contract

Nasdaq

4. TRANSITION PERIOD AND DUAL LISTING

To facilitate the transition process from Forward to Futures NASDAQ will, for a limited time period, dual list both Forward and Futures contracts.

Listing of series in all of the new Futures contracts will be performed on November 2nd 2015, after that continuous listing will be performed, first expiration of futures contracts will be on December 2015 IMM. Please refer to attached Excel "Instrument Listing" for further information.

Listing of new instrument series in the <u>old Forward Rates</u> contracts (NIBOR- and STIBOR-FRA) will continue as normal until November 2015 when a final listing will be done.

In November 2015, the following Forward Rates contracts will be listed:

- 3-Months STIBOR Forwards with expiration on IMM December 2018
- 3-Months NIBOR Forwards with expiration on IMM December 2017
- 6-Months NIBOR Forwards with expiration on IMM December 2016

Listing of new instrument series in <u>old Forward Bond</u> contracts will continue as normal until February 2016 when a final listing will be done.

In February 2016, the following Forward Bond contracts will be listed:

- Government bond Forwards (R-Contracts) with expiration on IMM September 2016.
- Mortgage bond Forwards (Nordea Hypotek, Swedbank Hypotek, Stadshypotek, and SCBC Contracts) with expiration on IMM June 2016.

After the final listing of the Forward contract has been performed, no new listing will be done. The Forward series that have been listed on and previous to final listing day will be fully clearable until expiration day for respective contract. **There will be no changes to the attributes on any of the Forward contracts**.

The transition period starts on November 2nd 2015 for all contracts, but since the final listing of Forward contracts includes contracts with different expiry month/year, it means that the transition period will be of different length depending on contract group. The transition period for each contract group can be seen in table 6 and 7 below.

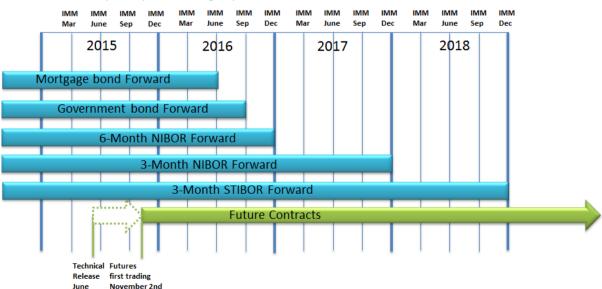


Table 6 – Transition period per contract group



Table 7 – Transition period per contract group

	Transition Period		
Government Bond Contracts	November 2nd 2015	to	September 15th 2016
Mortgage Bond Contracts	November 2nd 2015	to	June 9th 2016
3-Month STIBOR contracts	November 2nd 2015	to	December 17th 2018
3-Month NIBOR contracts	November 2nd 2015	to	December 18th 2017
6-Month NIBOR contracts	November 2nd 2015	to	December 19th 2016

5. TRANSITION PROCESS AND CONTRACT SUBSTITUTION

When the Futures contracts have been listed on the 2nd of November 2015, members are allowed to commence clearing of the new contracts in parallel to the old contracts.

NASDAQ recommends that Forwards expiring on December 2015 IMM are rolled into the new Future contract, for positions held beyond December 2015 IMM, market participants have the choice to either:

- I. Keep Forward positions until expiration and roll-over risk in corresponding Future prior to each final expiration IMM month for each applicable Forward contract.
- II. Replace a position in old Forward with new Future by entering into an offsetting Forward position which closes down the market risk and then opening up same position in new Future contract. Please note that the Forward contracts are not off-settable, which means that both the Forward and the Futures positions will be active until expiration.

6. MARKET & PRICE QUOTATION

Market-Makers are currently quoting the underlying instruments for Swedish Forward contracts in market STO Fixed Income Derivatives. The introduction of Futures will mean that NASDAQ introduces a new set of underlying quotation instruments (new indicative order books) for the daily settled Futures contracts which will be populated in the same market as the indicative order books for the existing Forward instruments. The introduction of new indicative order books is necessary in order to reflect potential differences in pricing between the Forwards and Futures contracts, this approach will also assure a smooth transition once the Forward contracts expires.

All Market-Makers that are currently providing indicative quotes on the Forward underlying quotation instruments are expected to start quoting the Future underlying quotation instruments on November 2nd 2015. During the transition period for each product, i.e. as long as there are dual listed contracts, members are expected to quote indicative prices on both Forward and Futures underlying quotation instruments. When the transition period for respective contract has ended, the Forward underlying quotation instruments will be deactivated and members will be quoting only in the Futures underlying quotation instruments. Please refer to table 7 for information regarding the transition period for each contract group. The current and the new quotation instruments names can be seen in table 8 below.



	, , , ,	STO Fixed Incom	e Derivative	25		
	Forward Order Book		Futures Order Book			
Forward Contract	Quotation instrument name	Quotation instrument Series	Futures Contract	Quotation instrument name	Quotation instrument Series	
R10	10RGKBF YYMM	10RGKBF_YYMM	SGB10Y	Swe Gov. Bond Future 10Y YYMM	SGB_10Y_YYMM	
R10	10RGKBF YYMM	10RGKBF_YYMM	SGB10Y	Swe Gov. Bond Future 10Y YYMM	SGB_10Y_YYMM	
R10	10RGKBF YYMM	10RGKBF_YYMM	SGB10Y	Swe Gov. Bond Future 10Y YYMM	SGB_10Y_YYMM	
R2	2RGKBF YYMM	2RGKBF_YYMM	SGB2Y	Swe Gov. Bond Future 2Y YYMM	SGB_2Y_YYMM	
R2	2RGKBF YYMM	2RGKBF_YYMM	SGB2Y	Swe Gov. Bond Future 2Y YYMM	SGB_2Y_YYMM	
R2	2RGKBF YYMM	2RGKBF_YYMM	SGB2Y	Swe Gov. Bond Future 2Y YYMM	SGB_2Y_YYMM	
R5	5RGKBF YYMM	5RGKBF_YYMM	SGB5Y	Swe Gov. Bond Future 5Y YYMM	SGB_5Y_YYMM	
R5	5RGKBF YYMM	5RGKBF_YYMM	SGB5Y	Swe Gov. Bond Future 5Y YYMM	SGB_5Y_YYMM	
R5	5RGKBF YYMM	5RGKBF_YYMM	SGB5Y	Swe Gov. Bond Future 5Y YYMM	SGB_5Y_YYMM	
NBHYP2	NB Hypotek Mortg. Forward 2Y 15	2NBHBF_YYMM	NDH2Y	Nordea Hyp. Future 2Y YYMM	NDH_2Y_YYMM	
NBHYP2	NB Hypotek Mortg. Forward 2Y 15	2NBHBF_YYMM	NDH2Y	Nordea Hyp. Future 2Y YYMM	NDH_2Y_YYMM	
ST2	Stadshypotek Mortg. Forward 2Y 5	2SHYBF_YYMM	STH2Y	Stadshyp. Future 2Y YYMM	STH_2Y_YYMM	
ST2	Stadshypotek Mortg. Forward 2Y 5	2SHYBF_YYMM	STH2Y	Stadshyp. Future 2Y YYMM	STH_2Y_YYMM	
SPA2	Swedbank Hypotek Mortg. Forward	2SWHBF_YYMM	SWH2Y	Swedbank Hyp. Future 2Y YYMM	SWH_2Y_YYMM	
SPA2	Swedbank Hypotek Mortg. Forward	2SWHBF_YYMM	SWH2Y	Swedbank Hyp. Future 2Y YYMM	SWH_2Y_YYMM	
NBHYP5	NB Hypotek Mortg. Forward 5Y 15	5NBHBF_YYMM	NDH5Y	Nordea Hyp. Future 5Y YYMM	NDH_5Y_YYMM	
NBHYP5	NB Hypotek Mortg. Forward 5Y 15	5NBHBF_YYMM	NDH5Y	Nordea Hyp. Future 5Y YYMM	NDH_5Y_YYMM	
SB5	SBAB Mortg. Forward 5Y 1503	5SBABF_YYMM	SCBC5Y	SCBC Mortg. Future 5Y YYMM	SCBC_5Y_YYMM	
SB5	SBAB Mortg. Forward 5Y 1506	5SBABF_YYMM	SCBC5Y	SCBC Mortg. Future 5Y YYMM	SCBC_5Y_YYMM	
ST5	Stadshypotek Mortg. Forward 5Y 5	5SHYBF_YYMM	STH5Y	Stadshyp. Future 5Y YYMM	STH_5Y_YYMM	
ST5	Stadshypotek Mortg. Forward 5Y 5	5SHYBF_YYMM	STH5Y	Stadshyp. Future 5Y YYMM	STH_5Y_YYMM	
SPA5	Swedbank Hypotek Mortg. Forward	5SWHBF_YYMM	SWH5Y	Swedbank Hyp. Future 5Y YYMM	SWH_5Y_YYMM	
SPA5	Swedbank Hypotek Mortg. Forward	5SWHBF_YYMM	SWH5Y	Swedbank Hyp. Future 5Y YYMM	SWH_5Y_YYMM	
FRA	IMM FRA YYMM	IMM_FRA_YYMM	3STIBFRA	3STIB FRA Future YYMM	3STIB_FRA_YYMM	

Table 8 - Name standard of underlying quotation instrument for Swedish Forward and Future contracts

7. CASH SETTLEMENT

The contracts will be marked-to-market and settled by a cash transaction that is either debited or credited to members on every open bank day from trade day until expiration day.

The settlement amount for a new position will be calculated as the difference between fix for the Mark-to-Market Day and the price of the Transaction.

The settlement amount for all other days will be calculated as the difference between fix for the Mark-to-Market Day and Fix for the previous trading day.

General information regarding settlement of cash and collateral can be found on <u>the cash optimization webpage</u>. Detailed information regarding Mark-to-Market calculations can be found in Appendix 1 in respective contract guide.

8. VARIATION MARGIN

From a margin standpoint, the risk calculations are similar to the corresponding Forward contracts. The difference is that the Future contracts will not generate any variation margin end of day i.e. the margin requirement will be equal to the initial margin.

9. DELIVERY OF UNDERLYING AT EXPIRATION

All Futures contracts on government and mortgage bonds will have a delivery of underlying bond at expiration. NASDAQ will determine which the deliverable instruments in respective series are and publish it on <u>this webpage</u>.

10. REPORTS



There will be no new reports created to support the Futures contracts; they will rather be integrated into the reports that are currently used.

The Futures contracts will be visible in the N_FUTURE_MARK_TO_MARKET (NFUMTMX) report instead of in the N_FORWARD_MARK_TO_MARKET_FIXED_INCOME (NFOMTMX) which will be discarded after all Forward contracts has reached final expiration.

The Genium Inet report manual can be found by following this link.

11. TESTING

Testing of Futures contracts will be available from May 2015 when the external test systems have been upgraded to 4.0.0250. Information regarding release documentation for June can be found <u>here</u>.

12. TRADE REPORTING

New trades in Futures contracts can be reported through Clearing Workstation, FIX or OMnet API. They are reported in the same manner as the Forward contracts but with the new Futures series name instead of the Forward series name. Information about trade registration in Clearing Workstation can be found <u>here</u>.

13. FEES AND REBATE MODEL

Futures contracts will have the same fee schedule as the corresponding Forward contract. Futures will be included in the current fee rebate model.

14. OPTIONS ON FUTURES

NASDAQ will list options on the following Futures:

- 3-Months STIBOR Future (3STBFRA-Options and one year mid-curve options)
- 3- and 6- Months NIBOR Futures (3NIBFRA- and 6NIBFRA- Options)
- Government bond Future (SGB2Y-, SGB5Y- and SGB10Y- Options)

Product specifications for Options on futures can be found in appendix 2

15. EXTERNAL PROTOCOLS

There will be no changes to API transactions or broadcasts due to the introduction of Futures contracts. <u>Click here</u> to find the current API and FIX documentation.



16. VALUATION METHOD FOR STIBOR AND NIBOR FUTURES

$$B = N x \frac{(s-r)}{100} x \frac{d}{360}$$

- B Settlement Amount
- N Nominal Amount
- *s* Current fix / Expiration fix
- *r* Trade Price / Previous fix
- *d* Number of days from expiration settlement day to next IMM day

17. VALUATION METHOD FOR BOND FUTURES

$$B = \left(\left(\frac{\frac{K}{R/100} * \left[\left(1 + \frac{R}{100} \right)^n - 1 \right] + IK}{\left(1 + \frac{R}{100} \right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right) - \left(\left(\frac{\frac{K}{R2/100} * \left[\left(1 + \frac{R2}{100} \right)^n - 1 \right] + IK}{\left(1 + \frac{R2}{100} \right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right)$$

- K Coupon
- *R* Trade price / previous fix
- *R2* Current fix / final fix
- *n* Number of remaining Coupons
- d Number of days until next coupon
- *IK* Redemption price
- Nam Nominal Amount Single trade / aggregated position

Since all bond Futures have a synthetic underlying for valuation purposes, (K), (n) and (d) are referring to the synthetic underlying with the following attributes:

- Coupon: 6 %
- Number of outstanding coupons: same as the contract length (i.e. always 2, 5 or 10)
- Days until next coupon: 360 days

18. CONTACT DETAILS

Questions regarding the introduction of Futures contracts should be directed to NASDAQ Fixed Income team at <u>Fixedincomesweden@nasdaq.com</u>

19. APPENDIX 1 – FUTURES PRODUCT GUIDES



I. STIBOR FUTURES

The STIBOR- Future contract constitutes a valuable tool in management of Swedish short-term interest rate risk. Contract base is 3-month STIBOR. The contract has standardized expiration days, i.e. IMM days. This means that liquidity is concentrated to a limited number of contracts, which benefits trading. Committed market makers quote indicative prices for all outstanding contracts.

Facts about 3-month STIBOR-Future

Contract type	Futures contract with daily cash settlement
Contract base	3-month Stockholm Inter Bank Offered Rate, STIBOR
Contract base size	Nominal value of SEK 1,000,000
Trading	Trades in STIBOR-Future contracts will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
Tick size	0.0001
Price	Price expressed as simple interest rate with an act/360 day calculation convention
Expiration months	March, June, September and December
Expiration settlement day	First bank day following expiration day
Expiration day	Two bank days prior to the third Wednesday of the end month
Expiration fix	Fix of 3 month STIBOR is established at expiration day at 11.05 CET
Daily settlement	Cash settlement of the difference between the trade price and the daily fix takes place on the registration day. All following settlement amounts will be the difference between current fix and previous fix
Offsetting	Set-Off of Contracts may occur every Bank Day during the entire Term
Series term	Thirty-six months

Market model



STIBOR-Future contracts are traded in the current market structure for Swedish interest rate derivatives. Trades in STIBOR-Futures are reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing. The exchange has agreements with a number of market committed banks, according to which two-way indicative prices are quoted within the exchange's trading system in accordance with standard market practices in the Swedish interest-rate market. The market committed banks also support trading in the contracts, which occur outside the exchange system.

Trade Registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is a fictitious three month loan of SEK 1,000,000, which extends between two consecutive IMM dates, meaning between the third Wednesday in the months of March, June, September or December. Accordingly, the underlying duration can vary between series with different expiration months. Normally the period is 91 days, but may be longer or shorter.

There is no delivery of the underlying loan amount. Only a cash amount corresponding to the interest rate difference between agreed interest rate and the fix rate will be paid. The buyer of the contract is a fictitious borrower who assumes the obligation to pay the difference between the agreed interest rate and the fix rate to the seller on condition that the agreed interest rate is higher. If the agreed interest rate is lower than the fix rate, the buyer is paid the interest rate amount by the seller.

In practice, no payment takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to the exchange (the clearing house).

Settlement and offsetting

All purchased and sold contracts in same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Daily cash settlement of the profit/loss takes place on bank days and is based on the profit/loss of the net position at the end of the trading day on the bank day before settlement day.

Name standard

Contracts are listed by the contract base short name 3STIBFRA followed by a letter designation for the delivery month and the number of the year in which the expiration month falls.

Expiration month codes		Expiration Month	Series Name
March	н	September 2015	3STIBFRAU5
June	М	December 2015	3STIBFRAZ5
September	U	March 2016	3STIBFRAH6
December	Z	June 2016	3STIBFRAM6
		September 2016	3STIBFRAU6
		December 2016	3STIBFRAZ6
		March 2017	3STIBFRAH7



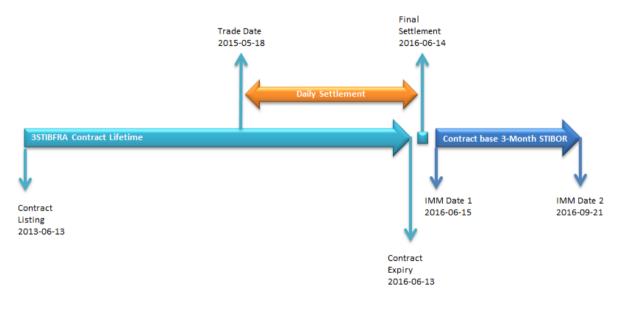
STIBOR fix

Stockholm Interbank Offered Rate, STIBOR is a reference rate that shows the average interest rate at which a number of active banks on the Swedish money market ("the STIBOR banks") are willing to lend to one another, without collateral, at different maturities. The official 3-month STIBOR interest rate is published at <u>NASDAQ's website</u> at 11:00 a.m. on a daily basis. For further information about the STIBOR framework, go to the <u>Swedish Bankers' Association website</u>.

Example of 3-Month STIBOR-Future with end month in June 2016, 3STIBFRAM6

Contract name	3STIBFRAM6
Contract listed	June 13, 2013
Trade date	May 18, 2015
Expiration day	June 13, 2016
Expiration fix	June 13, 2016
Final settlement day	June 14, 2016
Term of contract Base	98 calendar days
Daily Cash settlement	Every bank day from trading day until final settlement day

The following is assumed: On May 18 2015, 1,500 STIBOR-Future contracts representing a nominal amount of SEK 1,500 million at a trade price of 1.860 percent are bought. The contracts mature on the expiration day on June 13 2016, and are based on a fictitious loan of three months, in this case 98 days for the period June 15 until September 21. Due to the fact that NASDAQ employs daily cash settlement for STIBOR-Futures, the position is marked to market on every bank day from trade day until expiration day.



Example of cash settlement on Trade Date

In connection with trade date May 18, 2015 the 3M STIBOR fix is determined to be 1.885 percent. The future position is marked-to-market based on the difference between the trade price and the daily fix.

 $1500\ 000\ 000\ *\frac{(1.885-1.86)}{100}\ *\frac{98}{360} = 102,083.33$

The difference of SEK 102.083.33 represents the accumulated profit for the position from trade day until the day after. The buyer of the contracts makes a profit since the fixing is higher than the agreed rate.



Daily Cash Settlement

Every new trade that is registered for clearing will be valuated independently of each other on trade date according to above example. When the new trades have been marked-to-market on trade date, they will be aggregated into a net position together with other trades in same series.

The total net position will on the following day be marked-to-market based on the current fix and previous fix.

Example of Cash settlement on Expiration Date

At 11:05 a.m. on the expiration day for the June STIBOR-Forward contract, the fix is determined to be 1.800 percent. The fix is equal to 3 months STIBOR. On the final settlement day, June 14, the settlement amount is calculated by taking the difference between the fix from the day before expiration, 1.810 percent, and the fix for expiration, 1.800 percent.

 $1500\ 000\ 000\ *\frac{(1.8-1.81)}{100}\ *\frac{98}{360} = -40,833.33$

The difference of SEK -40.833 represents the accumulated loss for the position from day before expiration day. The buyer of the contracts makes a loss since the current fixing is lower than the previous fixing.

Valuation formula for STIBOR- Future

$$B = N x \frac{(s-r)}{100} x \frac{d}{360}$$

- **B** Settlement Amount
- N Nominal Amount
- *s* Current fix / Expiration fix
- r Trade Price / Previous fix
- *d* Number of days from expiration settlement day to next IMM day

A trade valuation will differ from a position valuation with respect to the following:

	Trade Valuation	Position Valuation	
r	Trade price	Previous fix	
s	Current fix	Current fix	
N	Single Trade	Aggregated position	



II. NIBOR FUTURES

The NIBOR-Future contract constitutes a valuable tool in management of Norwegian short-term interest rate risk. Contract base is 3- and 6- month NIBOR. The contract has standardized expiration days, i.e. IMM days. This means that liquidity is concentrated to a limited number of contracts, which benefits trading. Committed market makers quote indicative prices in Thomson Reuters for outstanding contracts.

Facts about 3- and 6- month NIBOR-future

Contract type	Futures contract with daily cash settlement
Contract base	3- or 6- month Norway Inter Bank Offered Rate, NIBOR
Contract base size	Nominal value of NOK 1,000,000
Trading	Trades in NIBOR-Future contracts will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
Tick size	0.0001
Price	Price expressed as simple interest rate with an act/360 day calculation convention
Expiration months	March, June, September and December
Expiration settlement day	First bank day following expiration day
Expiration day	Two bank days prior to the third Wednesday of the end month
Expiration fix	Fix of 3- and 6- month NIBOR is established at expiration day at 12.00 CET
Daily settlement	Cash settlement of the difference between the trade price and the daily fix takes place on the registration day. All following settlement amounts will be the difference between current fix and previous fix
Offsetting	Set-Off of Contracts may occur every Bank Day during the entire Term
Series term	3-month NIBOR-Future: Twenty-Four months 6-month NIBOR future: Twelve months

Market model

Trades in NIBOR-Futures are reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing. Committed market makers quote indicative prices in Thomson Reuters for outstanding contracts. The banks also support trading in these contracts, which occurs outside the exchange system.

Nasdag

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is a fictitious three month loan of NOK 1,000,000, which extends between two consecutive IMM dates, meaning between the third Wednesday in the months of March, June, September or December. The underlying duration can vary between series with different expiration months. Normally the period is 91 days, but may be longer or shorter. There is no delivery of the underlying loan amount. Only a cash amount corresponding to the difference between agreed interest rate and the fix rate will be paid. The buyer of the contract is a fictitious borrower who assumes the obligation to pay the difference between the agreed interest rate and the fix rate to the seller on condition that the agreed interest rate is higher. If the agreed interest rate is lower than the fix rate, the buyer is paid the interest rate amount by the seller. In practice, no payment takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to the exchange (the clearing house).

Settlement and offsetting

All purchased and sold contracts are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Daily cash settlement of the profit/loss takes place on bank days and is based on the profit/loss of the net position at the end of the trading day on the bank day before settlement day.

Name standard

Contracts are listed by the contract base short name 3NIBFRA or 6NIBFRA followed by a letter designation for the delivery month and the number of the year in which the expiration month falls.

Expiration month code	es	Expiration Month	3-Month Future	6-Month Future
March	Н	September 2015	3NIBFRAU5	6NIBFRAU5
June	Μ	December 2015	3NIBFRAZ5	6NIBFRAZ5
September	U	March 2016	3NIBFRAH6	6NIBFRAH6
December	Z	June 2016	3NIBFRAM6	6NIBFRAM6
		September 2016	3NIBFRAU6	6NIBFRAU6
		December 2016	3NIBFRAZ6	6NIBFRAZ6
		March 2017	3NIBFRAH7	6NIBFRAH7

NIBOR fix



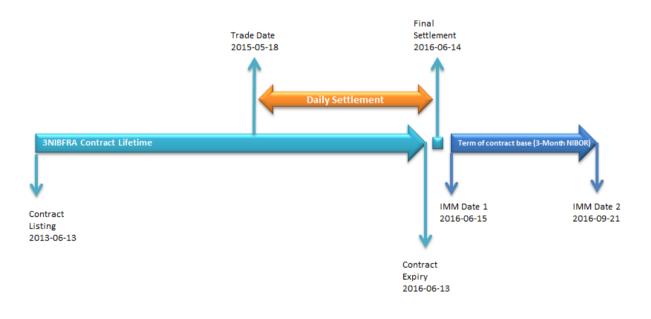
The Norwegian Interbank Offered Rate, NIBOR is determined on the basis of the interest rates at which deposits in Norwegian Kronor are offered by four leading banks on the Norwegian interbank market (Reference Banks) at approximately 12:00 a.m. on the applicable Interest rate determination day. The NIBOR fixing is published at the Thomson Reuters Screen OIBOR= at 12:00 am on a daily basis. More information about NIBOR fixing can be found on <u>Oslo Bors webpage</u>.

Final settlement of the contract is performed against the official 3- or 6- month NIBOR fix rate that is published on the expiration day.

Example of 3-month NIBOR-future with end month in June 2016, 3NIBFRAM6

Contract name	3NIBFRAM6
Contract listed	June 13, 2013
Trade date	May 18, 2015
Expiration day	June 13, 2016
Expiration fix	June 13, 2016
Final settlement day	June 14, 2016
Term of contract Base	98 calendar days
Daily Cash settlement	Every bank day from trading day until final settlement day

The following is assumed: On May 18 2015, 1,500 NIBOR-Future contracts representing a nominal amount of NOK 1,500 million at a transaction yield of 1.860 percent are bought. The contracts mature on the expiration day on June 13 2016, and are based on a fictitious loan of three months, in this case 98 days for the period June 15 until September 21. Due to the fact that NASDAQ employs daily cash settlement for NIBOR-Futures, the position is marked to market on every bank day from trade day until expiration day.



Nasdaq

Example of cash settlement calculation on trade date

In connection with trade date May 18, 2015 the 3M NIBOR fix is determined to be 1.885 percent. As the future position is marked-to-market based on the difference between the trade price and the current fix.

$$1500\ 000\ 000\ *\frac{(1.885-1.86)}{100}\ *\frac{98}{360} = 102,083.33$$

The difference of NOK 102.083.33 represents the accumulated profit for the position from trade day until the day after. The buyer of the contracts makes a profit since the fixing is higher than the agreed rate.

Daily cash settlement

Every new trade that is registered for clearing will be valuated independently of each other on trade date according to above example. When the new trades have been marked-to-market on trade date, they will be aggregated into a net position together with other trades in same series.

The total net position will on the following day be marked-to-market based on the current fix and previous fix.

Example of cash settlement on expiration date

At 12:00 a.m. on the expiration day for the June NIBOR-Forward contract, the fix is determined to be 1.800 percent. The fix is equal to 3 months NIBOR. On the final settlement day, June 14, the settlement amount is calculated by taking the difference between the fix from the day before expiration, 1.810 percent, and the expiration fix, 1.800 percent.

$$1500\ 000\ 000 * \frac{(1.8 - 1.81)}{100} * \frac{98}{360} = -40,833.33$$

The difference of NOK -40.833 represents the accumulated loss for the position from day before expiration day. The buyer of the contracts makes a loss since the current fixing is lower than the previous fixing.

Valuation formula for NIBOR-futures

$$B = N x \frac{(s-r)}{100} x \frac{d}{360}$$

- B Settlement Amount
- N Nominal Amount
- s Current fix / Expiration fix
- *r* Trade Price / Previous fix
- *d* Number of days from expiration settlement day to next IMM day

A trade valuation will differ from a position valuation with respect to the following:

Trade Valuation Position Valuation	
------------------------------------	--

r	Trade price	Previous fix	
s	Current fix	Current fix	
N	Single Trade	Aggregated position	

Nasdaq

III. NORDEA HYPOTEK FUTURES

The Nordea Hypotek bond futures offered for 2- and 5- year maturities are used as a complement to the cash bonds market offering more liquidity and trading opportunities The contract has standardized expiration days, i.e. IMM days, and liquidity is concentrated to a limited number of contracts which benefits trading.

Contract type	Futures contract with a combination of daily cash settlement and delivery of underlying cash instrument at fixing
Contract base	Synthetic bond with a maturity of two or five years at the expiration settlement day. The synthetic bond has an annual coupon of six percent
Contract base size	Nominal value of underlying is SEK 1,000,000
Trading	Trades in Nordea Hypotek bond futures contracts will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
Tick size	0.001
Price	Price expressed in accordance with the underlying cash instrument as effective interest rate with a 30E/360 day convention
Deliverable instrument	Nordea Hypotek bond with a remaining maturity of Two or five years, or as close to two or five years as possible at the expiration settlement day
Expiration months	March, June, September and December
Expiration settlement day	The third Wednesday of the expiration month
Expiration day	Four bank days prior to the expiration settlement day. Last time for registration is 12.00 CET on the expiration day
Expiration fix	Established on expiration day at 11.00 CET
Daily settlement	Cash settlement of the difference between the trade price and the daily fix takes place on the registration day. All following settlemen amounts will be the difference between current fix and previous fix
Offsetting	Set-Off of Contracts may occur every Bank Day during the entire Term
Series term	Three months

Market model

Trades in futures will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing. The market committed banks will also support trading in the contracts, which will occur outside the exchange system.

Nasdaq

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is a synthetic bond with a maturity of two or five years at expiration and an annual coupon of six percent. The future contract offers a combination of daily cash settlement and delivery of underlying instrument at expiry. The deliverable instrument is a Nordea Hypotek bond with a remaining maturity of two or five years at the expiration settlement day and will be settled with a DVP instruction in Euroclear Sweden.

In practice, no payment or delivery takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to NASDAQ.

Settlement and offsetting

All purchased and sold contracts in the same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Daily cash settlement of the profit/loss takes place on bank days and is based on the profit/loss of the net position at the end of the trading day on the bank day before settlement day.

Name standard

Contracts are listed by the contract base short name NDH2Y or NDH5Y followed by a letter designation for the delivery month and the number of the year in which the expiration month falls.

Expiration month co	des	Expiration Month	2-Year Future	5-Year Future
March	Н	September 2015	NDH2YU5	NDH5YU5
June	М	December 2015	NDH2YZ5	NDH5YZ5
September	U	March 2016	NDH2YH6	NDH5YH6
December	Z	June 2016	NDH2YM6	NDH5YM6
		September 2016	NDH2YU6	NDH5YU6
		December 2016	NDH2YZ6	NDH5YZ6
		March 2017	NDH2YH7	NDH5YH7



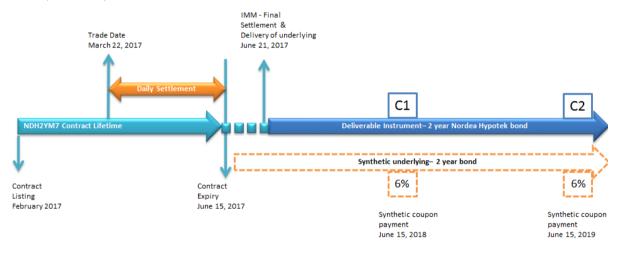
Example of 2-Year Nordea Hypotek future with expiration month in June 2017 - NDH2YM7

NDH2YM7
February 2017
March 22, 2017
1.860 percent
1 500
1 500 million SEK
June 15, 2017
June 21, 2017
2 year synthetic bond with 6% coupon
2 year Nordea Hypotek bond with 3,1% coupon
Every bank day from trading day until expiration settlement day

During the period from March 22, 2017 (trade date) until June 15, 2017 (expiration date), the holder of the contract receive a daily cash settlement of profit/loss from mark to market.

On expiration day, the final settlement is calculated and the open position of 1500 NDH2YM7 is converted into a delivery instruction in the underlying 2 year Nordea Hypotek bond with 3,1% coupon.

The final settlement and the delivery instruction settle on June 21, 2017 (final settlement date) which is four bank days after expiration day.



Example of cash settlement calculation on trade date

At the end of trade date March 22, 2017 the fix for NDH2YM7 is determined to be 1.885 percent.

Mark-to-market is performed on the future position based on the difference between the transaction price of the trade and the daily fix on trade date.

The settlement is calculated on a synthetic 2-year 6% coupon bond with 360 days until next coupon. Amount based on the trade price 1.86:

$$\left(\frac{\frac{6}{1.86/100} * \left[\left(1 + \frac{1.86}{100}\right)^2 - 1\right] + 100}{\left(1 + \frac{1.86}{100}\right)^{(2-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,620,818,850.00$$

Amount based on the current fix (end of trade date) 1.885:

$$\left(\frac{\frac{6}{1.885/100} * \left[\left(1 + \frac{1.885}{100}\right)^2 - 1\right] + 100}{\left(1 + \frac{1.885}{100}\right)^{(2-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,620,045,150.00$$

The difference between the two amounts calculated is the cash settlement for mark-to-market on trade date. 1,620,818,850.00 - 1,620,045,150.00 = **773,700.00 SEK**



The seller of the contracts makes a profit since the fixing is higher than the agreed rate.

Valuation of Nordea Hypotek bond futures

Every new trade that is registered for clearing will be valuated independently of each other on trade date according to above example. When the new trades have been marked-to-market on trade date, they will be aggregated into a net position.

The new net position will on the following day be marked-to-market based on the current fix and previous fix.

Hence, a trade valuation will differ from a position valuation with respect to the following:

	Trade Valuation	Position Valuation	
R	Trade price	Previous fix	
R2	Current fix	Current fix	
Nam	Single Trade	Aggregated position	

The following formula is used to calculate the settlement amount for mark-to-market:

$$B = \left(\left(\frac{\frac{K}{R/100} * \left[\left(1 + \frac{R}{100} \right)^n - 1 \right] + IK}{\left(1 + \frac{R}{100} \right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right) - \left(\left(\frac{\frac{K}{R2/100} * \left[\left(1 + \frac{R2}{100} \right)^n - 1 \right] + IK}{\left(1 + \frac{R2}{100} \right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right)$$

- B Settlement Amount
- K Coupon
- *R* Trade price / previous fix
- *R2* Current fix / final fix
- *n* Number of remaining Coupons
- *d* Number of days until next coupon
- *IK* Redemption price
- Nam Nominal Amount Single trade / aggregated position

IV. SCBC FUTURES



The SCBC (Swedish Covered Bond Corporation) bond futures offered for 5- year maturities are used as a complement to the cash bonds market offering more liquidity and trading opportunities The contract has standardized expiration days, i.e. IMM days, and liquidity is concentrated to a limited number of contracts which benefits trading.

Contract type	Futures contract with a combination of daily cash settlement and
	delivery of underlying cash instrument at fixing
Contract base	Synthetic bond with a maturity of five years at the expiration settlement day. The synthetic bond has an annual coupon of six percent
Contract base size	Nominal value of underlying is SEK 1,000,000
Trading	Trades in SCBC bond futures contracts will be reached through bilateral negotiations between buyers and sellers, and reported NASDAQ for central counterparty clearing
Tick size	0.001
Price	Price expressed in accordance with the underlying cash instrument as effective interest rate with a 30E/360 day convention
Deliverable instrument	SCBC bond with a remaining maturity of five years, or as close to years as possible at the expiration settlement day
Expiration months	March, June, September and December
Expiration settlement day	The third Wednesday of the expiration month
Expiration day	Four bank days prior to the expiration settlement day. Last time for registration is 12.00 CET on the expiration day
Expiration fix	Established on expiration day at 11.00 CET
Daily settlement	Cash settlement of the difference between the trade price and the daily fix takes place on the registration day. All following settlem amounts will be the difference between current fix and previous
Offsetting	Set-Off of Contracts may occur every Bank Day during the entire Term
Series term	Three months



Market model

Trades in futures will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing. The market committed banks will also support trading in the contracts, which will occur outside the exchange system.

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is a synthetic bond with a maturity of five years at expiration and an annual coupon of six percent. The future contract offers a combination of daily cash settlement and delivery of underlying instrument at expiry. The deliverable instrument is a SCBC bond with a remaining maturity of five years at the expiration settlement day and will be settled with a DVP instruction in Euroclear Sweden.

In practice, no payment or delivery takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to NASDAQ.

Settlement and offsetting

All purchased and sold contracts in the same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Daily cash settlement of the profit/loss takes place on bank days and is based on the profit/loss of the net position at the end of the trading day on the bank day before settlement day.

Name standard

Contracts are listed by the contract base short name SCBC5Y followed by a letter designation for the delivery month and the number of the year in which the expiration month falls.

Expiration month	n codes	Expiration Month	5-Year Future
March	Н	September 2015	SCBC5YU5
June	М	December 2015	SCBC5YZ5
September	U	March 2016	SCBC5YH6
December	Z	June 2016	SCBC5YM6
		September 2016	SCBC5YU6
		December 2016	SCBC5YZ6
		March 2017	SCBC5YH7



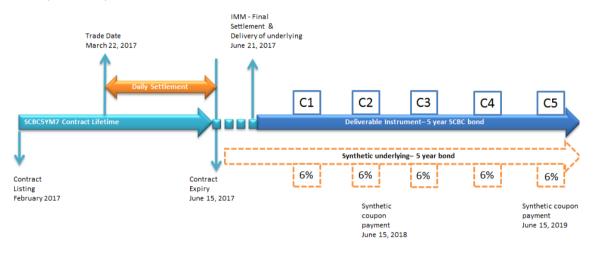
Example of 5-Year SCBC future with expiration month in June 2017 - SCBC5YM7

SCBC5YM7
February 2017
March 22, 2017
1.860 percent
1 500
1 500 million SEK
June 15, 2017
June 21, 2017
5 year synthetic bond with 6% coupon
5 year SCBC bond with 3,1% coupon
Every bank day from trading day until expiration settlement day

During the period from March 22, 2017 (trade date) until June 15, 2017 (expiration date), the holder of the contract receive a daily cash settlement of profit/loss from mark to market.

On expiration day, the final settlement is calculated and the open position of 1500 SCBC5YM7 is converted into a delivery instruction in the underlying 5 year SCBC bond with 3,1% coupon.

The final settlement and the delivery instruction settle on June 21, 2017 (final settlement date) which is four bank days after expiration day.



Example of cash settlement calculation on trade date

At the end of trade date March 22, 2017 the fix for SCBC5YM7 is determined to be 1.885 percent. Mark-to-market is performed on the future position based on the difference between the transaction price of the trade and the daily fix on trade date.

The settlement is calculated on a synthetic 5-year 6% coupon bond with 360 days until next coupon. Amount based on the trade price 1.86:

$$\left(\frac{\frac{6}{1.86/100} * \left[\left(1 + \frac{1.86}{100}\right)^5 - 1\right] + 100}{\left(1 + \frac{1.86}{100}\right)^{(5-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,793,899,050.00$$

Amount based on the current fix (end of trade date) 1.885:

$$\left(\frac{\frac{6}{1.885/100} * \left[\left(1 + \frac{1.885}{100}\right)^5 - 1\right] + 100}{\left(1 + \frac{1.885}{100}\right)^{(5-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,791,911,850.00$$

The difference between the two amounts calculated is the cash settlement for mark-to-market on trade date. 1,793,899,050.00 - 1,791,911,850.00 = **1,987,200.00 SEK.**



The seller of the contracts makes a profit since the fixing is higher than the agreed rate.

Valuation of SCBC bond futures

Every new trade that is registered for clearing will be valuated independently of each other on trade date according to above example. When the new trades have been marked-to-market on trade date, they will be aggregated into a net position.

The new net position will on the following day be marked-to-market based on the current fix and previous fix.

Hence, a trade valuation will differ from a position valuation with respect to the following:

	Trade Valuation	Position Valuation
R	Trade price	Previous fix
R2	Current fix	Current fix
Nam	Single Trade	Aggregated position

The following formula is used to calculate the settlement amount for mark-to-market:

$$B = \left(\left(\frac{\frac{K}{R/100} * \left[\left(1 + \frac{R}{100}\right)^n - 1 \right] + IK}{\left(1 + \frac{R}{100}\right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right) - \left(\left(\frac{\frac{K}{R2/100} * \left[\left(1 + \frac{R2}{100}\right)^n - 1 \right] + IK}{\left(1 + \frac{R2}{100}\right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right)$$

- *B* Settlement Amount
- K Coupon
- *R* Trade price / previous fix
- *R2* Current fix / final fix
- *n* Number of remaining Coupons
- *d* Number of days until next coupon
- *IK* Redemption price
- Nam Nominal Amount Single trade / aggregated position

Nasdaq

V. GOVERNMENT BOND FUTURES

The government bond futures offered for 2, 5 and 10-year maturities are used as a complement to the cash bonds market offering more liquidity and trading opportunities The contract has standardized expiration days, i.e. IMM days, and liquidity is concentrated to a limited number of contracts which benefits trading.

Facts about government bond futures

Contract type	Futures contract with a combination of daily cash settlement and delivery of underlying cash instrument at fixing
Contract base	Synthetic Swedish government bond with a maturity of two-, five- or ten years at the expiration settlement day. The synthetic bond has an annual coupon of six percent
Contract base size	Nominal value of underlying is SEK 1,000,000
Trading	Trades in government bond futures contracts will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
Tick size	0.001
Price	Price expressed in accordance with the underlying cash instrument as effective interest rate with a 30E/360 day convention
Deliverable instrument	Swedish government bonds with a remaining maturity of two- five- and ten years, or as close to two-, five- and ten years as possible at the expiration settlement day
Expiration months	March, June, September and December
Expiration settlement day	The third Wednesday of the expiration month
Expiration day	Four bank days prior to the expiration settlement day. Last time for registration is 12.00 CET on the expiration day
Expiration fix	Established on expiration day at 11.00 CET
Daily settlement	Cash settlement of the difference between the trade price and the daily fix takes place on the registration day. All following settlement amounts will be the difference between current fix and previous fix
Offsetting	Set-Off of Contracts may occur every Bank Day during the entire Term
Series term	Six months

Market model

Trades in futures will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing. The market committed banks will also support trading in the contracts, which will occur outside the exchange system.

Nasdag

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is a synthetic Swedish government bond with a maturity of two-, five - or ten years at expiration and an annual coupon of six percent. The future contract offers a combination of daily cash settlement and delivery of underlying instrument at expiry. The deliverable instrument is a Swedish government bond with a remaining maturity of two- five- or ten years at the expiration settlement day and will be settled with a DVP instruction in Euroclear Sweden.

In practice, no payment or delivery takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to NASDAQ.

Settlement and offsetting

All purchased and sold contracts in the same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Daily cash settlement of the profit/loss takes place on bank days and is based on the profit/loss of the net position at the end of the trading day on the bank day before settlement day.

Name standard

Contracts are listed by the contract base short name SGB2Y, SGB5Y or SGB10Y followed by a letter designation for the delivery month and the number of the year in which the expiration month falls.

Expiration montl	h codes	Expiration Month	2-Year Future	5-Year Future	10-Year Future
March	Н	September 2015	SGB2YU5	SGB5YU5	SGB10YU5
June	М	December 2015	SGB2YZ5	SGB5YZ5	SGB10YZ5
September	U	March 2016	SGB2YH6	SGB5YH6	SGB10YH6
December	Z	June 2016	SGB2YM6	SGB5YM6	SGB10YM6
		September 2016	SGB2YU6	SGB5YU6	SGB10YU6
		December 2016	SGB2YZ6	SGB5YZ6	SGB10YZ6
		March 2017	SGB2YH7	SGB5YH7	SGB10YH7



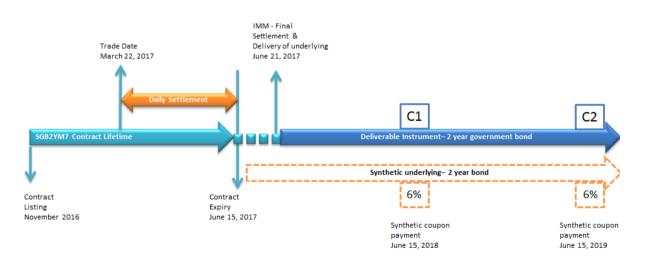
Example of 2-Year government bond future with expiration month in June 2017 - SGB2YM7

Contract name	SGB2YM7
Contract listed	November 2016
Trade date	March 22, 2017
Trade Price	1.860 percent
Quantity sold	1 500
Nominal amount	1 500 million SEK
Expiration day	June 15, 2017
Expiration settlement day	June 21, 2017
Contract Base	2 year synthetic bond with 6% coupon
Deliverable Instrument	2 year government benchmark bond with 3,1% coupon
Cash settlement	Every bank day from trading day until expiration settlement day

During the period from March 22, 2017 (trade date) until June 15, 2017 (expiration date), the holder of the contract receive a daily cash settlement of profit/loss from mark to market.

On expiration day, the final settlement is calculated and the open position of 1500 SGB2YM7 is converted into a delivery instruction in the underlying 2 year government benchmark bond with 3,1% coupon.

The final settlement and the delivery instruction settle on June 21, 2017 (final settlement date) which is four bank days after expiration day.



Example of cash settlement calculation on trade date

At the end of trade date March 22, 2017 the fix for SGB2YM7 is determined to be 1.885 percent.

Mark-to-market is performed on the future position based on the difference between the transaction price of the trade and the daily fix on trade date.

The settlement is calculated on a synthetic 2-year 6% coupon bond with 360 days until next coupon. Amount based on the trade price 1.86:

$$\left(\frac{\frac{6}{1.86/100} * \left[\left(1 + \frac{1.86}{100}\right)^2 - 1\right] + 100}{\left(1 + \frac{1.86}{100}\right)^{(2-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,620,818,850.00$$

Amount based on the current fix (end of trade date) 1.885:

$$\left(\frac{\frac{6}{1.885/100} * \left[\left(1 + \frac{1.885}{100}\right)^2 - 1\right] + 100}{\left(1 + \frac{1.885}{100}\right)^{(2-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,620,045,150.00$$



The difference between the two amounts calculated is the cash settlement for mark-to-market on trade date. 1,620,818,850.00 - 1,620,045,150.00 = **773,700.00 SEK** The seller of the contracts makes a profit since the fixing is higher than the agreed rate.

Valuation of government bond futures

Every new trade that is registered for clearing will be valuated independently of each other on trade date according to above example. When the new trades have been marked-to-market on trade date, they will be aggregated into a net position.

The new net position will on the following day be marked-to-market based on the current fix and previous fix.

Hence, a trade valuation will differ from a position valuation with respect to the following:

	Trade Valuation	Position Valuation
R	Trade price	Previous fix
R2	Current fix	Current fix
Nam	Single Trade	Aggregated position

The following formula is used to calculate the settlement amount for mark-to-market:

$$B = \left(\left(\frac{\frac{K}{R/100} * \left[\left(1 + \frac{R}{100}\right)^n - 1 \right] + IK}{\left(1 + \frac{R}{100}\right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right) - \left(\left(\frac{\frac{K}{R2/100} * \left[\left(1 + \frac{R2}{100}\right)^n - 1 \right] + IK}{\left(1 + \frac{R2}{100}\right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right)$$

- *B* Settlement Amount
- K Coupon
- *R* Trade price / previous fix
- *R2* Current fix / final fix
- *n* Number of remaining Coupons
- *d* Number of days until next coupon
- *IK* Redemption price
- Nam Nominal Amount Single trade / aggregated position



VI. STADSHYPOTEK FUTURES

The Stadshypotek bond futures offered for 2- and 5- year maturities are used as a complement to the cash bonds market offering more liquidity and trading opportunities The contract has standardized expiration days, i.e. IMM days, and liquidity is concentrated to a limited number of contracts which benefits trading.

Constant at the set	
Contract type	Futures contract with a combination of daily cash settlement and delivery of underlying cash instrument at fixing
Contract base	Synthetic bond with a maturity of two or five years at the expiratio settlement day. The synthetic bond has an annual coupon of six percent
Contract base size	Nominal value of underlying is SEK 1,000,000
Trading	Trades in Stadshypotek bond futures contracts will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
Tick size	0.001
Price	Price expressed in accordance with the underlying cash instrument as effective interest rate with a 30E/360 day convention
Deliverable instrument	Stadshypotek bond with a remaining maturity of Two or five years, or as close to two or five years as possible at the expiration settlement day
Expiration months	March, June, September and December
Expiration settlement day	The third Wednesday of the expiration month
Expiration day	Four bank days prior to the expiration settlement day. Last time for registration is 12.00 CET on the expiration day
Expiration fix	Established on expiration day at 11.00 CET
Daily settlement	Cash settlement of the difference between the trade price and the daily fix takes place on the registration day. All following settlemer amounts will be the difference between current fix and previous fi
Offsetting	Set-Off of Contracts may occur every Bank Day during the entire Term
Series term	Three months



Market model

Trades in futures will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing. The market committed banks will also support trading in the contracts, which will occur outside the exchange system.

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click here Information about trade registration in Clearing Workstation can be found here.

Contract base and settlement principles

The contract base is a synthetic bond with a maturity of two or five years at expiration and an annual coupon of six percent. The future contract offers a combination of daily cash settlement and delivery of underlying instrument at expiry. The deliverable instrument is a Stadshypotek bond with a remaining maturity of two or five years at the expiration settlement day and will be settled with a DVP instruction in Euroclear Sweden.

In practice, no payment or delivery takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to NASDAQ.

Settlement and offsetting

All purchased and sold contracts in the same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Daily cash settlement of the profit/loss takes place on bank days and is based on the profit/loss of the net position at the end of the trading day on the bank day before settlement day.

Name standard

Contracts are listed by the contract base short name STH2Y or STH5Y followed by a letter designation for the delivery month and the number of the year in which the expiration month falls.

Expiration Month	2-Year Future	5-Year Future
September 2015	STH2YU5	STH5YU5
December 2015	STH2YZ5	STH5YZ5
March 2016	STH2YH6	STH5YH6
June 2016	STH2YM6	STH5YM6
September 2016	STH2YU6	STH5YU6
December 2016	STH2YZ6	STH5YZ6
March 2017	STH2YH7	STH5YH7
	September 2015 December 2015 March 2016 June 2016 September 2016 December 2016	YearSeptember 2015STH2YU5December 2015STH2YZ5March 2016STH2YH6June 2016STH2YM6September 2016STH2YU6December 2016STH2YZ6



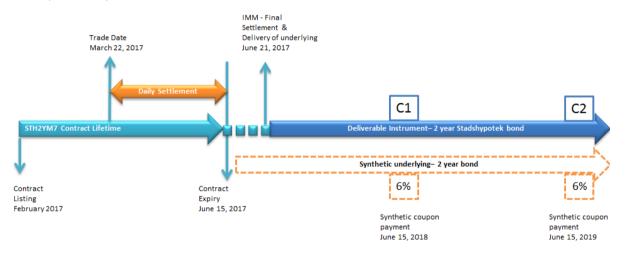
Example of 2-Year Stadshypotek future with expiration month in June 2017 - STH2YM7

STH2YM7
February 2017
March 22, 2017
1.860 percent
1 500
1 500 million SEK
June 15, 2017
June 21, 2017
2 year synthetic bond with 6% coupon
2 year Stadshypotek bond with 3,1% coupon
Every bank day from trading day until expiration settlement day

During the period from March 22, 2017 (trade date) until June 15, 2017 (expiration date), the holder of the contract receive a daily cash settlement of profit/loss from mark to market.

On expiration day, the final settlement is calculated and the open position of 1500 STH2YM7 is converted into a delivery instruction in the underlying 2 year Stadshypotek bond with 3,1% coupon.

The final settlement and the delivery instruction settle on June 21, 2017 (final settlement date) which is four bank days after expiration day.



Example of cash settlement calculation on trade date

At the end of trade date March 22, 2017 the fix for STH2YM7 is determined to be 1.885 percent.

Mark-to-market is performed on the future position based on the difference between the transaction price of the trade and the daily fix on trade date.

The settlement is calculated on a synthetic 2-year 6% coupon bond with 360 days until next coupon. Amount based on the trade price 1.86:

$$\left(\frac{\frac{6}{1.86/100} * \left[\left(1 + \frac{1.86}{100}\right)^2 - 1\right] + 100}{\left(1 + \frac{1.86}{100}\right)^{(2-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,620,818,850.00$$

Amount based on the current fix (end of trade date) 1.885:

$$\left(\frac{\frac{6}{1.885/100} * \left[\left(1 + \frac{1.885}{100}\right)^2 - 1\right] + 100}{\left(1 + \frac{1.885}{100}\right)^{(2-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,620,045,150.00$$



The difference between the two amounts calculated is the cash settlement for mark-to-market on trade date. 1,620,818,850.00 - 1,620,045,150.00 = **773,700.00 SEK.** The seller of the contracts makes a profit since the fixing is higher than the agreed rate.

Valuation of Stadshypotek bond futures

Every new trade that is registered for clearing will be valuated independently of each other on trade date according to above example. When the new trades have been marked-to-market on trade date, they will be aggregated into a net position.

The new net position will on the following day be marked-to-market based on the current fix and previous fix.

Hence, a trade valuation will differ from a position valuation with respect to the following:

	Trade Valuation	Position Valuation
R	Trade price	Previous fix
R2	Current fix	Current fix
Nam	Single Trade	Aggregated position

The following formula is used to calculate the settlement amount for mark-to-market:

$$B = \left(\left(\frac{\frac{K}{R/100} * \left[\left(1 + \frac{R}{100} \right)^n - 1 \right] + IK}{\left(1 + \frac{R}{100} \right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right) - \left(\left(\frac{\frac{K}{R2/100} * \left[\left(1 + \frac{R2}{100} \right)^n - 1 \right] + IK}{\left(1 + \frac{R2}{100} \right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right)$$

- B Settlement Amount
- K Coupon
- *R* Trade price / previous fix
- *R2* Current fix / final fix
- *n* Number of remaining Coupons
- d Number of days until next coupon
- *IK* Redemption price
- Nam Nominal Amount Single trade / aggregated position

Nasdaq

VII. SWEDBANK HYPOTEK FUTURES

The Swedbank Hypotek bond futures offered for 2- and 5- year maturities are used as a complement to the cash bonds market offering more liquidity and trading opportunities The contract has standardized expiration days, i.e. IMM days, and liquidity is concentrated to a limited number of contracts which benefits trading.

Facts about Swedbank Hypotek bond futures

Contract type	Futures contract with a combination of daily cash settlement and delivery of underlying cash instrument at fixing
Contract base	Synthetic bond with a maturity of two or five years at the expiration settlement day. The synthetic bond has an annual coupon of six percent
Contract base size	Nominal value of underlying is SEK 1,000,000
Trading	Trades in Swedbank Hypotek bond futures contracts will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
Tick size	0.001
Price	Price expressed in accordance with the underlying cash instrument as effective interest rate with a 30E/360 day convention
Deliverable instrument	Swedbank Hypotek bond with a remaining maturity of Two or five years, or as close to two or five years as possible at the expiration settlement day
Expiration months	March, June, September and December
Expiration settlement day	The third Wednesday of the expiration month
Expiration day	Four bank days prior to the expiration settlement day. Last time for registration is 12.00 CET on the expiration day
Expiration fix	Established on expiration day at 11.00 CET
Daily settlement	Cash settlement of the difference between the trade price and the daily fix takes place on the registration day. All following settlement amounts will be the difference between current fix and previous fix
Offsetting	Set-Off of Contracts may occur every Bank Day during the entire Term
Series term	Three months

Market model

Trades in futures will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing. The market committed banks will also support trading in the contracts, which will occur outside the exchange system.

Nasdaq

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is a synthetic bond with a maturity of two or five years at expiration and an annual coupon of six percent. The future contract offers a combination of daily cash settlement and delivery of underlying instrument at expiry. The deliverable instrument is a Swedbank Hypotek bond with a remaining maturity of two or five years at the expiration settlement day and will be settled with a DVP instruction in Euroclear Sweden.

In practice, no payment or delivery takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to NASDAQ.

Settlement and offsetting

All purchased and sold contracts in the same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Daily cash settlement of the profit/loss takes place on bank days and is based on the profit/loss of the net position at the end of the trading day on the bank day before settlement day.

Name standard

Contracts are listed by the contract base short name SWH2Y or SWH5Y followed by a letter designation for the delivery month and the number of the year in which the expiration month falls.

Expiration mont	h codes	Expiration Month	2-Year Future	5-Year Future
March	Н	September 2015	SWH2YU5	SWH5YU5
June	М	December 2015	SWH2YZ5	SWH5YZ5
September	U	March 2016	SWH2YH6	SWH5YH6
December	Z	June 2016	SWH2YM6	SWH5YM6
		September 2016	SWH2YU6	SWH5YU6
		December 2016	SWH2YZ6	SWH5YZ6
		March 2017	SWH2YH7	SWH5YH7



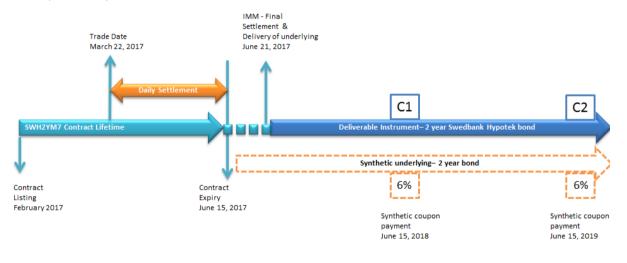
Example of 2-Year Swedbank Hypotek future with expiration month in June 2017 - SWH2YM7

Contract name	SWH2YM7
Contract listed	February 2017
Trade date	March 22, 2017
Trade Price	1.860 percent
Quantity sold	1 500
Nominal amount	1 500 million SEK
Expiration day	June 15, 2017
Expiration settlement day	June 21, 2017
Contract Base	2 year synthetic bond with 6% coupon
Deliverable Instrument	2 year Swedbank Hypotek bond with 3,1% coupon
Cash settlement	Every bank day from trading day until expiration settlement day

During the period from March 22, 2017 (trade date) until June 15, 2017 (expiration date), the holder of the contract receive a daily cash settlement of profit/loss from mark to market.

On expiration day, the final settlement is calculated and the open position of 1500 SWH2YM7 is converted into a delivery instruction in the underlying 2 year Swedbank Hypotek bond with 3,1% coupon.

The final settlement and the delivery instruction settle on June 21, 2017 (final settlement date) which is four bank days after expiration day.



Example of cash settlement calculation on trade date

At the end of trade date March 22, 2017 the fix for SWH2YM7 is determined to be 1.885 percent. Mark-to-market is performed on the future position based on the difference between the transaction price of the trade and the daily fix on trade date.

The settlement is calculated on a synthetic 2-year 6% coupon bond with 360 days until next coupon. Amount based on the trade price 1.86:

$$\left(\frac{\frac{6}{1.86/100} * \left[\left(1 + \frac{1.86}{100}\right)^2 - 1\right] + 100}{\left(1 + \frac{1.86}{100}\right)^{(2-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,620,818,850.00$$

\

Amount based on the current fix (end of trade date) 1.885:

$$\left(\frac{\frac{6}{1.885/100} * \left[\left(1 + \frac{1.885}{100}\right)^2 - 1\right] + 100}{\left(1 + \frac{1.885}{100}\right)^{(2-1) + \frac{360}{360}}}\right) * \frac{1500\ 000\ 000}{100} = 1,620,045,150.00$$

The difference between the two amounts calculated is the cash settlement for mark-to-market on trade date.



1,620,818,850.00 - 1,620,045,150.00 = **773,700.00 SEK.** The seller of the contracts makes a profit since the fixing is higher than the agreed rate.

Valuation of Swedbank Hypotek bond futures

Every new trade that is registered for clearing will be valuated independently of each other on trade date according to above example. When the new trades have been marked-to-market on trade date, they will be aggregated into a net position.

The new net position will on the following day be marked-to-market based on the current fix and previous fix.

Hence, a trade valuation will differ from a position valuation with respect to the following:

	Trade Valuation	Position Valuation
R	Trade price	Previous fix
R2	Current fix	Current fix
Nam	Single Trade	Aggregated position

The following formula is used to calculate the settlement amount for mark-to-market:

$$B = \left(\left(\frac{\frac{K}{R/100} * \left[\left(1 + \frac{R}{100} \right)^n - 1 \right] + IK}{\left(1 + \frac{R}{100} \right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right) - \left(\left(\frac{\frac{K}{R2/100} * \left[\left(1 + \frac{R2}{100} \right)^n - 1 \right] + IK}{\left(1 + \frac{R2}{100} \right)^{(n-1) + \frac{d}{360}}} \right) * \frac{Nam}{100} \right)$$

B Settlement Amount

K Coupon

R Trade price / previous fix

R2 Current fix / final fix

- *n* Number of remaining Coupons
- d Number of days until next coupon
- *IK* Redemption price
- Nam Nominal Amount Single trade / aggregated position



20. APPENDIX 2 – OPTIONS PRODUCT GUIDES

I. STIBOR OPTIONS

Fact	ts about 3-Month STIBOR Options	
	Contract type	Option on future
	Style of option	European
	Contract base	One 3-Months STIBOR future contract
	Contract base size	One future contract (Underlying value nominal SEK 1,000,000)
	Trading	Trades are reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
	Price/premium	Expressed in basis points. The premium is multiplied with the options Basis Point Value
	Tick size	0,01
	Premium settlement day	The first bank day after registration
	Exercise price	Expressed as effective interest rate
	Exercise	Automatic exercise
	Expiration months	March, June, September and December
	Expiration settlement day	According to underlying future
	Expiration day/final day of trading	Two bank days prior to the third Wednesday of the expiration month. Last time for registration is 11.00 CET on the expiration day
	Expiration fix	Fixing of 3-month STIBOR is established on expiration day at 11.05 CET
	Periodic settlement	No periodic settlement
	Offsetting	Offsetting can take place during the entire term
	Series term	Twelve months

Nasdaq

Market model

Trades in 3-Months STIBOR-options will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing. In practice, no payment or delivery takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to the exchange (the clearing house).

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is one 3-Months STIBOR future contract with the same expiration settlement day as the relevant option contract. When an option contract is held until expiry, it will be automatically exercised if it is in the money. The option contract will fall into a 3-Month STIBOR future contract with a trade price that is corresponding to the strike price on the option. There is no delivery of the underlying loan amount. Only a cash amount corresponding to the interest rate difference between agreed interest rate (option strike price) and the fix rate will be paid. Please refer to product guide for STIBOR Futures for more details regarding cash settlement.

Settlement and offsetting

All purchased and sold contracts in the same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Name standard

Contracts are listed by the contract base short name 3STIBFRA followed by a letter designation for the delivery month, the number of the year in which the expiration month falls, underscore, the strike price and the type of option (call or put).

Expiration Month	Strike Price	Call/Put	Contract Base	Option Name
September 2015	0.100	Call	3STIBFRAU5	3STIBFRAU5_0.100C
December 2015	0.200	Call	3STIBFRAZ5	3STIBFRAZ5_0.200C
March 2016	0.300	Call	3STIBFRAH6	3STIBFRAH6_0.300C
June 2016	0.400	Put	3STIBFRAM6	3STIBFRAM6_0.400P
September 2016	0.500	Put	3STIBFRAU6	3STIBFRAU6_0.500P
December 2016	0.600	Put	3STIBFRAZ6	3STIBFRAZ6_0.600P



II. NIBOR OPTIONS

Facts about 3- and 6- Months NIBOR Options	
Contract type	Option on future
Style of option	European
Contract base	One 3- or 6- Months NIBOR future contract
Contract base size	One future contract (Underlying value nominal NOK 1,000,000)
Trading	Trades are reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
Price/premium	Expressed in basis points. The premium is multiplied with the options Basis Point Value
Tick size	0,01
Premium settlement day	The first bank day after registration
Exercise price	Expressed as effective interest rate
Exercise	Automatic exercise
Expiration months	March, June, September and December
Expiration settlement day	According to underlying future
Expiration day/final day of trading	Two bank days prior to the third Wednesday of the expiration month. Last time for registration is 12.00 CET on the expiration day
Expiration fix	Fixing of 3- and 6- Month NIBOR is established on expiration day at 12.00 CET
Periodic settlement	No periodic settlement
Offsetting	Offsetting can take place during the entire term
Series term	On request – Maximum twelve months for 6-Month NIBOR and Maximum twenty-four months for 3- Month NIBOR
Series Listing	Upon Request

Nasdaq

Market model

Trades in 3- or 6- Months NIBOR-options will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ OMX for central counterparty clearing. In practice, no payment or delivery takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to the exchange (the clearing house).

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is one 3- or 6- Months NIBOR future contract with the same expiration settlement day as the relevant option contract. When an option contract is held until expiry, it will be automatically exercised if it is in the money. The option contract will fall into a 3- or 6- Months NIBOR future contract with a trade price that is corresponding to the strike price on the option. There is no delivery of the underlying loan amount. Only a cash amount corresponding to the interest rate difference between agreed interest rate (option strike price) and the fix rate will be paid. Please refer to product guide for NIBOR Futures for more details regarding cash settlement.

Settlement and offsetting

All purchased and sold contracts in the same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Name standard

Contracts are listed by the contract base short name 3NIBFRA or 6NIBFRA followed by a letter designation for the delivery month, the number of the year in which the expiration month falls, underscore, the strike price and the type of option (call or put).

Example of option names on 3-Month NIBOR future:

Expiration Month	Strike Price	Call/Put	Contract Base	Option Name
September 2015	0.100	Call	3NIBFRAU5	3NIBFRAU5_0.100C
December 2015	0.200	Call	3NIBFRAZ5	3NIBFRAZ5_0.200C
March 2016	0.300	Call	3NIBFRAH6	3NIBFRAH6_0.300C
June 2016	0.400	Put	3NIBFRAM6	3NIBFRAM6_0.400P
September 2016	0.500	Put	3NIBFRAU6	3NIBFRAU6_0.500P
December 2016	0.600	Put	3NIBFRAZ6	3NIBFRAZ6_0.600P



III. GOVERNMENT BOND OPTIONS

Facts about government bond Options

Contract type	Option on future
Style of option	European
Contract base	One SGB2Y, SGB5Y or SGB10Y future contract
Contract base size	One future contract (Underlying value nominal SEK 1,000,000)
Trading	Trades are reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
Price/premium	Shall be expressed in SEK and cover the price for one one-hundredth of a Contract .
Tick size	0,01
Premium settlement day	The first bank day after registration
Exercise price	Expressed as effective interest rate
Exercise	Automatic exercise
Expiration months	March, June, September and December
Expiration settlement day	According to underlying future
Expiration day/final day of trading	Four bank days prior to the third Wednesday of the expiration month. Last time for registration is 11.00 CET on the expiration day
Expiration fix	Fix shall be determined on the Expiration Day for the relevant Contract and equal to the fix for the corresponding SGB2Y, SGB5Y, or SGB10Y future contract
Periodic settlement	No periodic settlement
Offsetting	Offsetting can take place during the entire term
Series term	Six months



Market model

Trades in government bond options will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ OMX for central counterparty clearing. In practice, no payment or delivery takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to the exchange (the clearing house).

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is one SGB2Y-, SGB5Y-, or SGB10Y future contract with the same expiration settlement day as the relevant option contract. Only the contract base is deliverable. The deliverable instrument is a Swedish government bond with a remaining maturity of two- five- or ten years at the expiration settlement day and will be settled with a DVP instruction in Euroclear Sweden. Please refer to product guide for Government Bond Futures for more details regarding settlement.

Settlement and offsetting

All purchased and sold contracts in the same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Name standard

Contracts are listed by the contract base short name SGB2Y, SGB5Y or SGB10Y followed by a letter designation for the delivery month, the number of the year in which the expiration month falls, underscore, the strike price and the type of option (call or put).

Expiration Month	Strike Price	Call/Put	Contract Base	Option Name
September 2015.	0.100	Call	SGB2YU5	SGB2YU5_0.100C
December 2015.	0.200	Call	SGB2YZ5	SGB2YZ5_0.200C
March 2016.	0.300	Call	SGB2YH6	SGB2YH6_0.300C
June 2016.	0.400	Put	SGB2YM6	SGB2YM6_0.400P
September 2016.	0.500	Put	SGB2YU6	SGB2YU6_0.500P
December 2016.	0.600	Put	SGB2YZ6	SGB2YZ6_0.600P



IV. ONE YEAR MID-CURVE STIBOR OPTIONS

Facts about one year mid-curve STIBOR Options

Contract type	Option on future
Style of option	European
Contract base	One 3-Months STIBOR future contract
Contract base size	One future contract (Underlying value nominal SEK 1,000,000)
Trading	Trades are reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ for central counterparty clearing
Price/premium	Expressed in basis points. The premium is multiplied with the options Basis Point Value
Tick size	0,01
Premium settlement day	The first bank day after registration
Exercise price	Expressed as effective interest rate
Exercise	Automatic exercise
Expiration months	March, June, September and December
Expiration settlement day	According to underlying future
Expiration day/final day of trading	Two bank days prior to the third Wednesday of the expiration month. Last time for registration is 11.00 CET on the expiration day
Expiration fix	Fixing of 3-month STIBOR is established on expiration day at 11.05 CET
Periodic settlement	No periodic settlement
Offsetting	Offsetting can take place during the entire term
Series term	Twelve months
Series Listing	Upon Request

Nasdaq

Market model

Trades in one year mid-curve STIBOR Options will be reached through bilateral negotiations between buyers and sellers, and reported to NASDAQ OMX for central counterparty clearing. In practice, no payment or delivery takes place between the buyer and seller when the contract is cleared; instead, each party receives/pays from/to the exchange (the clearing house).

Trade registration

Trades can be registered via Clearing Workstation, FIX or OMnet API. For more information about FIX and OMnet API, click <u>here</u> Information about trade registration in Clearing Workstation can be found <u>here</u>.

Contract base and settlement principles

The contract base is one 3-Months STIBOR future contract with expiration day one year ahead of the relevant option contract expiration day. When an option contract is held until expiry, it will be exercised only upon request and against the 3-Month STIBOR fix. The option contract will, when exercised, fall into a 3-Month STIBOR future contract with expiration date one year ahead and with a trade price that is corresponding to the strike price of the option. There is no delivery of the underlying loan amount. Only a cash amount will be settled on a daily basis until expiration day of the underlying 3-Month STIBOR future. Please refer to product guide for STIBOR Futures for more details regarding cash settlement.

Settlement and offsetting

All purchased and sold contracts in the same series are entirely off settable against each other. This means that only one net position is held against the clearing house and, if the contracts sold equal those purchased, the portfolio may be said to be closed in practice.

Name standard

Contracts are listed by the contract base short name 3STIBFRA followed by the following:

- A letter designation for the option expiration month
- The number of the year for the option expiration year
- Underscore
- The strike price
- The type of option (call or put)
- The letters "DEL" and
- A letter designation for the underlying future expiration month
- The number of the year for the underlying future expiration year

Option Expiration	Contract Base Expiration	Contract Base	Strike Price	Call/Put	Option Name
September 2015.	September 2016.	3STIBFRAU5	0.100	Call	3STIBFRAU5_0.100CDELU6
December 2015.	December 2016.	3STIBFRAZ5	0.200	Call	3STIBFRAZ5_0.200CDELZ6
March 2016	March 2017	3STIBFRAH6	0.300	Call	3STIBFRAH6_0.300CDELH7
June 2016	June 2017	3STIBFRAM6	0.400	Put	3STIBFRAM6_0.400PDELM7
September 2016.	September 2017.	3STIBFRAU6	0.500	Put	3STIBFRAU6_0.500PDELU7
December 2016.	December 2017.	3STIBFRAZ6	0.600	Put	3STIBFRAZ6_0.600PDELZ7