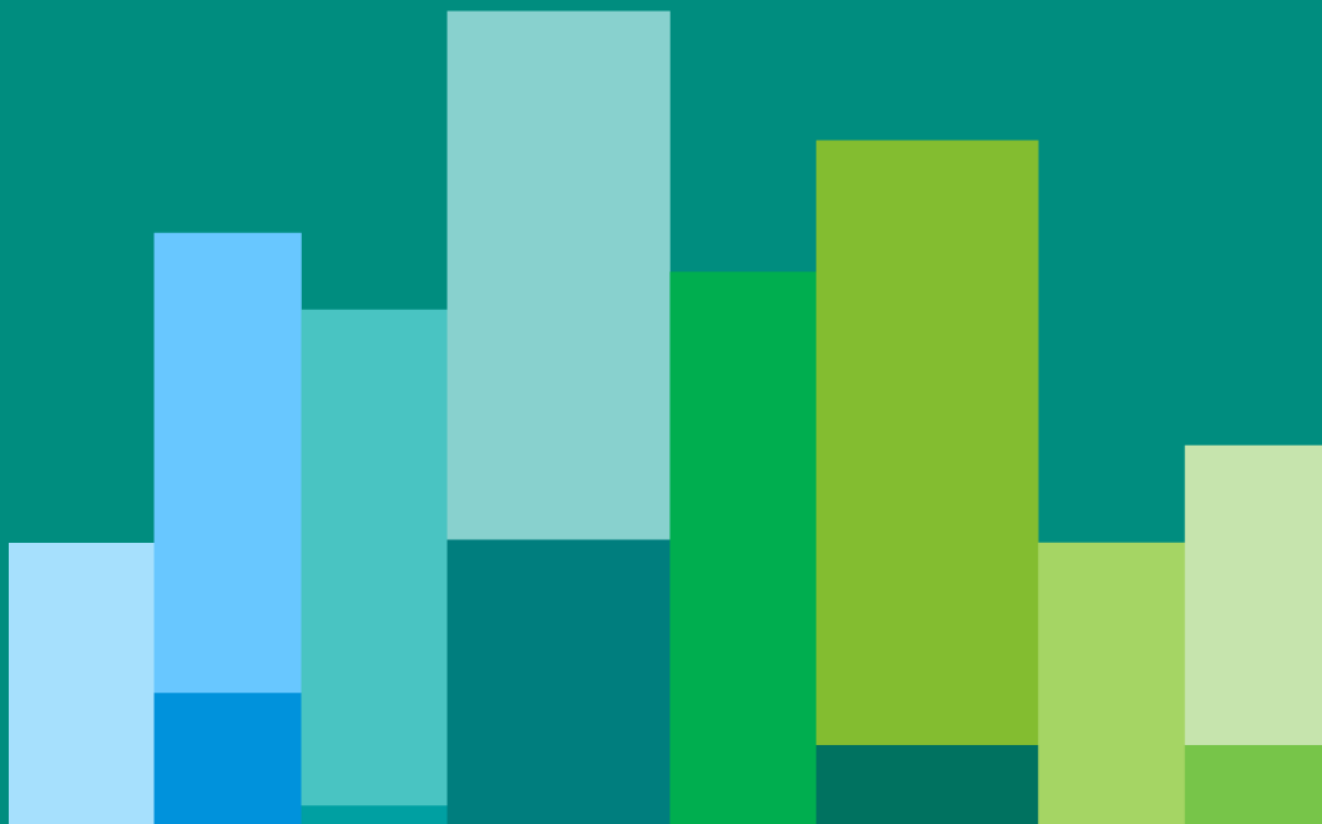


# CLEARED BORROWING & LENDING MARKET

*New trading methodology*

October 2015



# CLEARED BORROWING & LENDING MARKET

Central Order Book			
DANONE			
ISIN Code: FR0000120644			
Ticker: BN			
Bid		Ask	
qty	price	price	qty
3 506	€ 51.84	€ 51.85	750
992	€ 51.83	€ 51.86	3 109
1 435	€ 51.82	€ 51.87	641
148	€ 51.81	€ 51.88	1 378



- Buy and Sell shares & ETFs
- Trading in euros
- Continuous trading
- Clearing and Settlement in **T+2**

Trades on the L&B Market are **fungible** with transactions on the cash market.

Lending & Borrowing Book			
DANONE DEC-15			
ISIN Code: FR0000882722			
Ticker: BNZ5			
BUY (Borrow)		SELL (Lend)	
qty	price	price	qty
1 000	100.15%	100.15%	5 000
2 000	100.10%		
2 000	99.75%		



- Lending & Borrowing shares & ETFs
- Trading in %
- Trading with 5 daily auctions
- Clearing and Settlement in **T+1**
- Securities are returned at the **end of the month** to the lender.

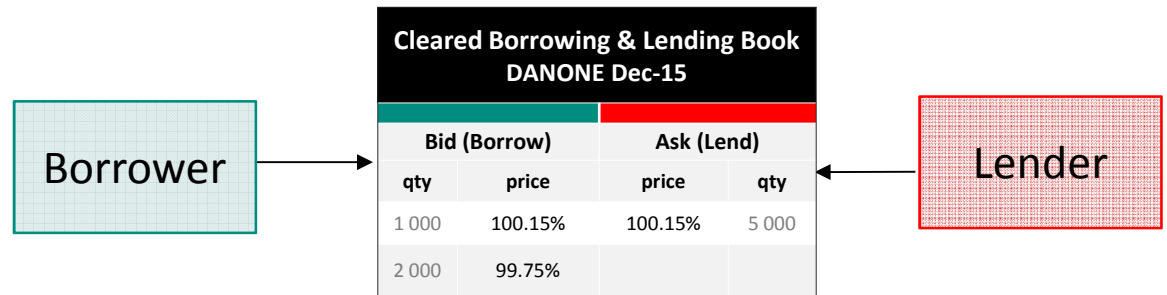


T

## In T on the CBLM

The equilibrium in the market generates one transaction:

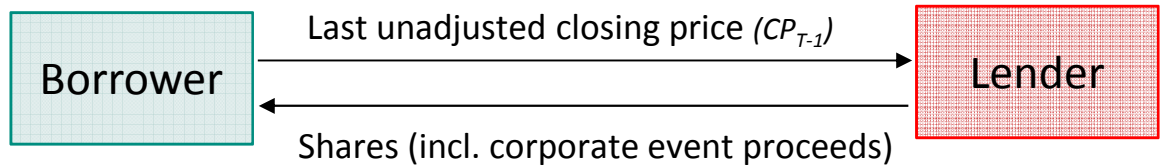
1000 shares at a rate ' $P_{L\&B}$ ' of 100.15%



T+1

## In T+1: Instruction n°1

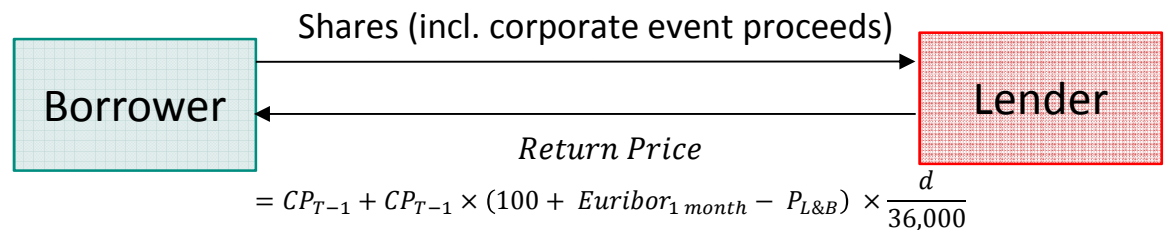
One day following the trade, shares are delivered in exchange for the last unadjusted closing price recorded in T-1 ( $CP_{T-1}$ ).



Month end

## At the end of the month (last business day): Instruction n°2

The shares are returned to the lender in exchange for the Return Price.



$CP_{T-1}$ : Closing price at T-1 used for the set-up instruction

$P_{L\&B}$ : Traded rate on the Borrowing & Lending market

$\text{Euribor}_{1m}$ : one-month-Euribor in T-1

$d$ : Number of days (not only working days) between T+1 and the settlement date of the return instruction

# NEW TRADING PRICE PRACTICE SINCE NOV 13

Before November 2013, it was not possible to borrow at negative loan rates.

By modifying the price traded and re-centering it around 100% instead of 0%, negative rates have become tradable.

Cleared Borrowing & Lending Book			
Share AB – July 2015			
Auction Time: 10:30:00 CET			
Bid (Borrow)		Ask (Lend)	
Size	Price	Price	Size
10 000	0,15%	0,15%	7 500
12 500	0,10%	0,18%	2 500
7 500	<del>- 0,25%</del>		

## Before

✗ Loan fee cannot be negative

Cleared Borrowing & Lending Book			
Share AB – July 2015			
Auction Time: 10:30:00 CET			
Bid (Borrow)		Ask (Lend)	
Size	Price	Price	Size
10 000	100,15%	100,15%	7 500
12 500	100,10%	100,18%	2 500
7 500	99,75%		

## Since November 2013

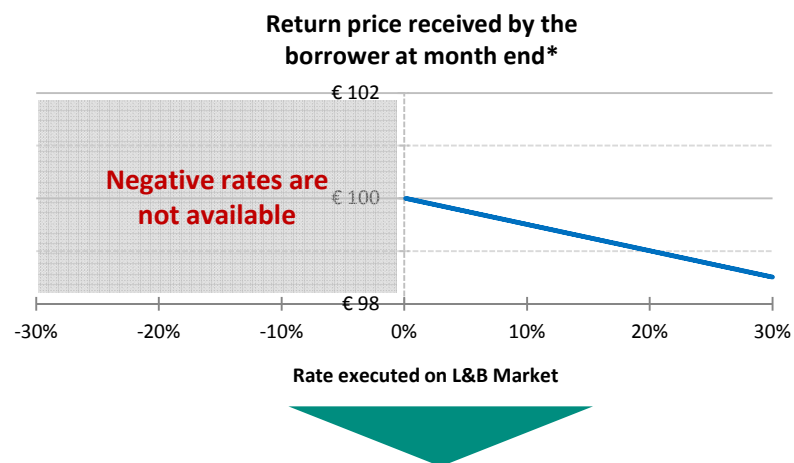
✓ Trading negative loan fees is possible



# THE NEW RETURN PRICE FORMULA...

... allows to trade a negative loan fee:

## ■ Former Return Price formula:



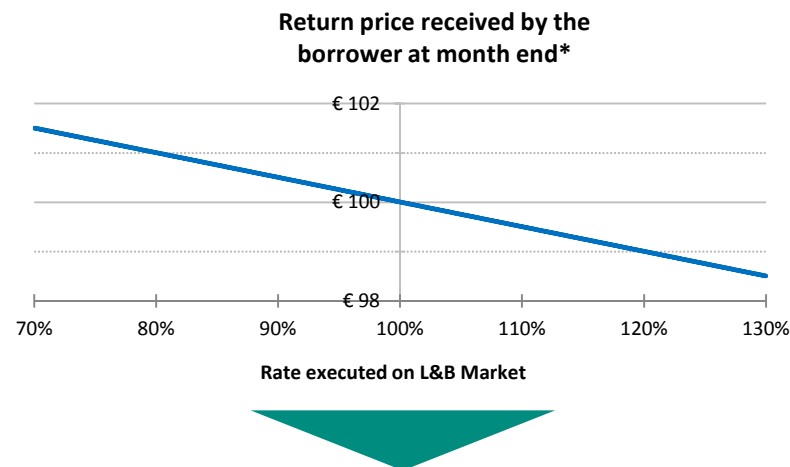
With the former formula, members can trade at loan fees between 0,001% and 30%.

The maximum Return Price was 100,006 € per share.

\*Graphs are based on the following parameters:

$$\begin{cases} Euribor_{1\text{ month}} = 0,121\% \\ \text{Closing Price}_{T-1} = CP_{T-1} = 100 \text{ €} \\ \text{days before settlement month end} = 18 \end{cases}$$

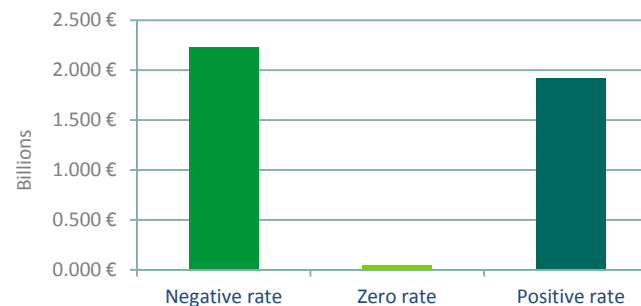
## ■ Current Return Price formula:



The loan fee is negative when the rate traded is below 100%.

The maximum Return Price can be higher than 100,006 € per share.

## Value traded and average L&B rate



Period: Monthly expiries from Jan 2014 to Sep 2015.

# EXAMPLE 1: POSITIVE LOAN FEE

$$\begin{cases} Euribor_{1\text{ month}} = 0.121\% \\ \text{Share's Closing Price}_{T-1} = CP_{T-1} = \text{€}100 \\ \text{Number of days before month end} = d = 18 \end{cases}$$

Add "100" to allow a negative loan fee

**Current** Return Price formula:

$$= CP_{T-1} + CP_{T-1} \times (Euribor_{1\text{ month}} - P_{L\&B}) \times \frac{d}{36,000}$$

**New** Return Price formula:

$$= CP_{T-1} + CP_{T-1} \times (100 + Euribor_{1\text{ month}} - P_{L\&B}) \times \frac{d}{36,000}$$

If the price traded on the CBLM ( $P_{L\&B}$ ) = **0.001%**

$$\begin{aligned} \text{Return Price} &= 100 + 100 \times (0.121 - \mathbf{0.001}) \times \frac{18}{36,000} \\ &= 100 + 0.006 = \mathbf{\text{€}100.006 \text{ per share}} \end{aligned}$$

If the price traded on the CBLM ( $P_{L\&B}$ ) = **100.001%**

$$\begin{aligned} \text{Return Price} &= 100 + 100 \times (\mathbf{100} + 0.121 - \mathbf{100.001}) \times \frac{18}{36,000} \\ &= 100 + 0.006 = \mathbf{100.006 \text{ € per share}} \end{aligned}$$

- With the existing trading methodology, the highest Return Price possible is €100.006 per share, which is achieved when the minimum rate of 0.001% is traded.
- With the new trading methodology, members will find the corresponding loan fee by simply adding 100: 100.001% instead of 0.001%.

## EXAMPLE 2: NEGATIVE LOAN FEE

$$\begin{cases} \text{Euribor}_{1\text{ month}} = 0.121\% \\ \text{Share's Closing Price}_{T-1} = CP_{T-1} = \text{€}100 \\ \text{Number of days before month end} = d = 18 \end{cases}$$

**Current** Return Price formula:

$$= CP_{T-1} + CP_{T-1} \times (\text{Euribor}_{1\text{ month}} - P_{L\&B}) \times \frac{d}{36,000}$$

If the price traded on the CBLM ( $P_{L\&B}$ ) = **0.001%**

Currently, it is **not possible** to trade below 0.001%.

$$\begin{aligned} \text{Return Price} &= 100 + 100 \times (0.121 - \mathbf{0.001}) \times \frac{18}{36,000} \\ &= 100 + 0.006 = \mathbf{\text{€}100.006 \text{ per share}} \end{aligned}$$

**New** Return Price formula:

$$= CP_{T-1} + CP_{T-1} \times (\mathbf{100} + \text{Euribor}_{1\text{ month}} - P_{L\&B}) \times \frac{d}{36,000}$$

If the price traded on the CBLM ( $P_{L\&B}$ ) = **90%**

$$\begin{aligned} \text{Return Price} &= 100 + 100 \times (\mathbf{100} + 0.121 - \mathbf{90.000}) \times \frac{18}{36,000} \\ &= 100 + 0.506 = \mathbf{\text{€}100.506 \text{ per share}} \end{aligned}$$

- With the existing trading methodology, the highest Return Price possible is €100.006 per share.
- With the new trading methodology, members will be able to trade at "**negative loan fee**".

# Thank You

**For more information, please contact your Client Coverage Centre**

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