

# alternative repo structures: repurchase agreement v sell/buy-back

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THE BUSINESS SCHOOL  
FOR FINANCIAL MARKETS

# alternative repo structures

- repurchase agreement
- sell/buy-back

# alternative repo structures

- **repurchase agreement**  
also known as classic repo, US-style or all-in repo  
pension livrée in France

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- **repurchase agreement**  
also known as classic repo, US-style or all-in repo  
pension livrée in France
- **sell/buy-back**  
also known as buy/sell-back or just sell/buys  
gensaki in Japan  
simultaneas in Spain

# alternative repo structures

- repurchase agreements
- undocumented buy/sell-backs
- documented buy/sell-backs

# repurchase agreement

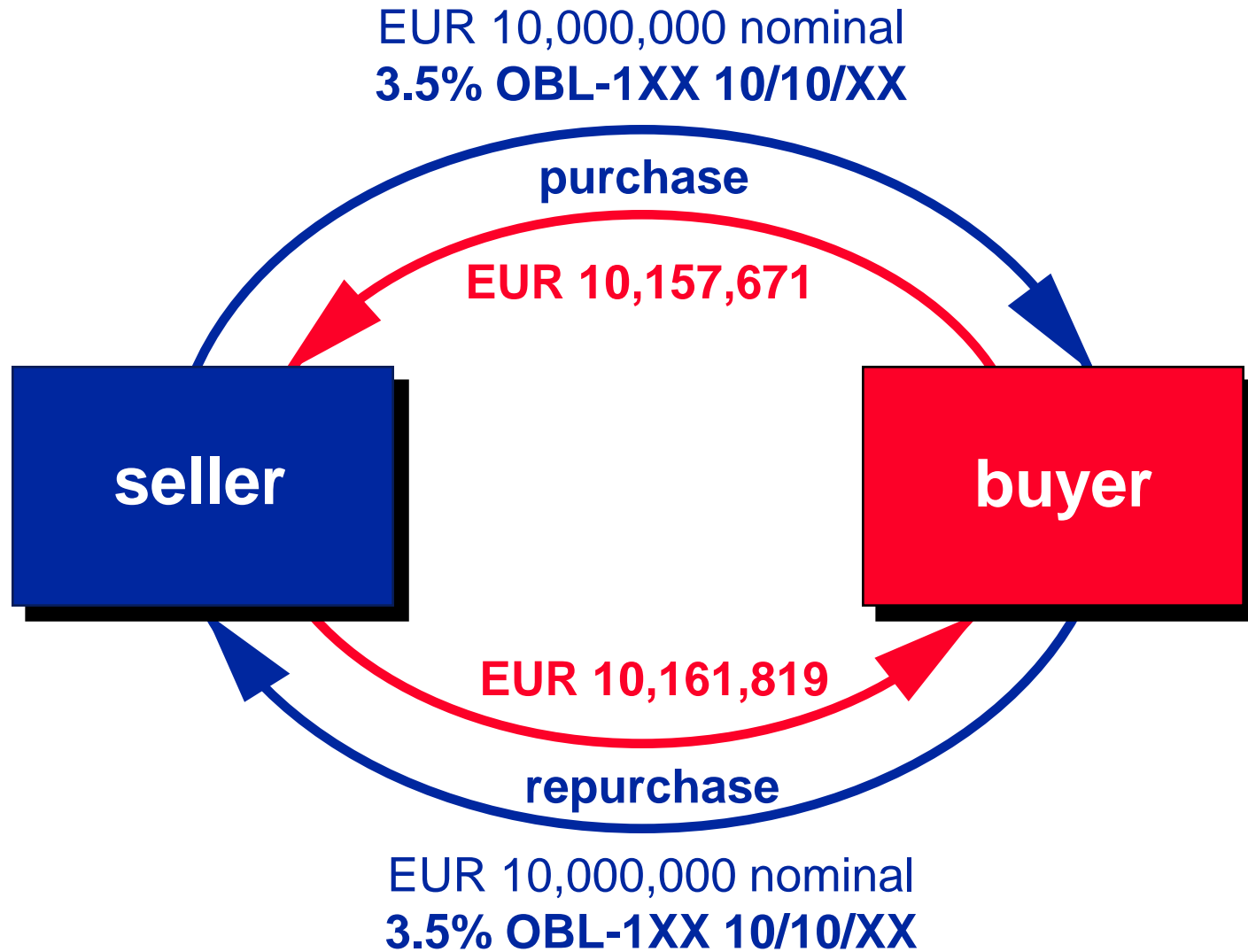
term	1 week
repo rate	2.10%
collateral	3.5% OBL-1XX 10/10/XX
nominal value	EUR 10 million
clean price	101.50
accrued interest	8 days
dirty price	101.5767123
haircut	0%
market value	EUR 10,157,671.23
purchase price	EUR 10,157,671.23
repurchase price	EUR 10,161,818.95
(repo return	EUR 4,147.72)

# repurchase agreement

repo return

$$\frac{10,157,671.23}{100\%} \times \frac{2.10 \times 7}{100 \times 360} = \text{EUR}4,147.72$$

# repurchase agreement





# repurchase agreement

GRAB Corp RRRA  
Enter <1><GO> to send screen via <MESSAGE> System.

## REPO/REVERSE REPO ANALYSIS

BUNDESOBL-143 OBL 3 1/2 08 #143 101.4900/101.5400 (3.10/3.09) BGN @11:50  
CUSIP: ED1687745

SETTLEMENT DATE	10/18/04	RATE (360)	2.1000%
PRICE	101.5000000	COLLATERAL:	100.0000% OF MONEY
YIELD	3.0931565	Y/N, HOLD COLLATERAL PERCENT CONSTANT?	Y
ACCRUED	0.0767123	Y/N, BUMP ALL DATES FOR WEEKENDS/HOLIDAYS?	Y
FOR 8 DAYS.		ROUNDING 1	1 = NOT ROUNDED
TOTAL	101.5767123	2	2 = ROUND TO NEAREST 1/8

FACE AMT M 10000 <OR> SETTLEMENT MONEY 10157671.23  
<OR> To solve for PRICE: Enter NUMBER of BONDS, SETTLEMENT MONEY & COLLATERAL  
TERMINATION DATE 10/25/04 <OR> TERM (IN DAYS) ?  
ACCRUED 0.143836 FOR 15 DAYS.

### MONEY AT TERMINATION

WIRED AMOUNT	10,157,671.23
REPO INTEREST	4,147.72
TERMINATION MONEY	10,161,818.95

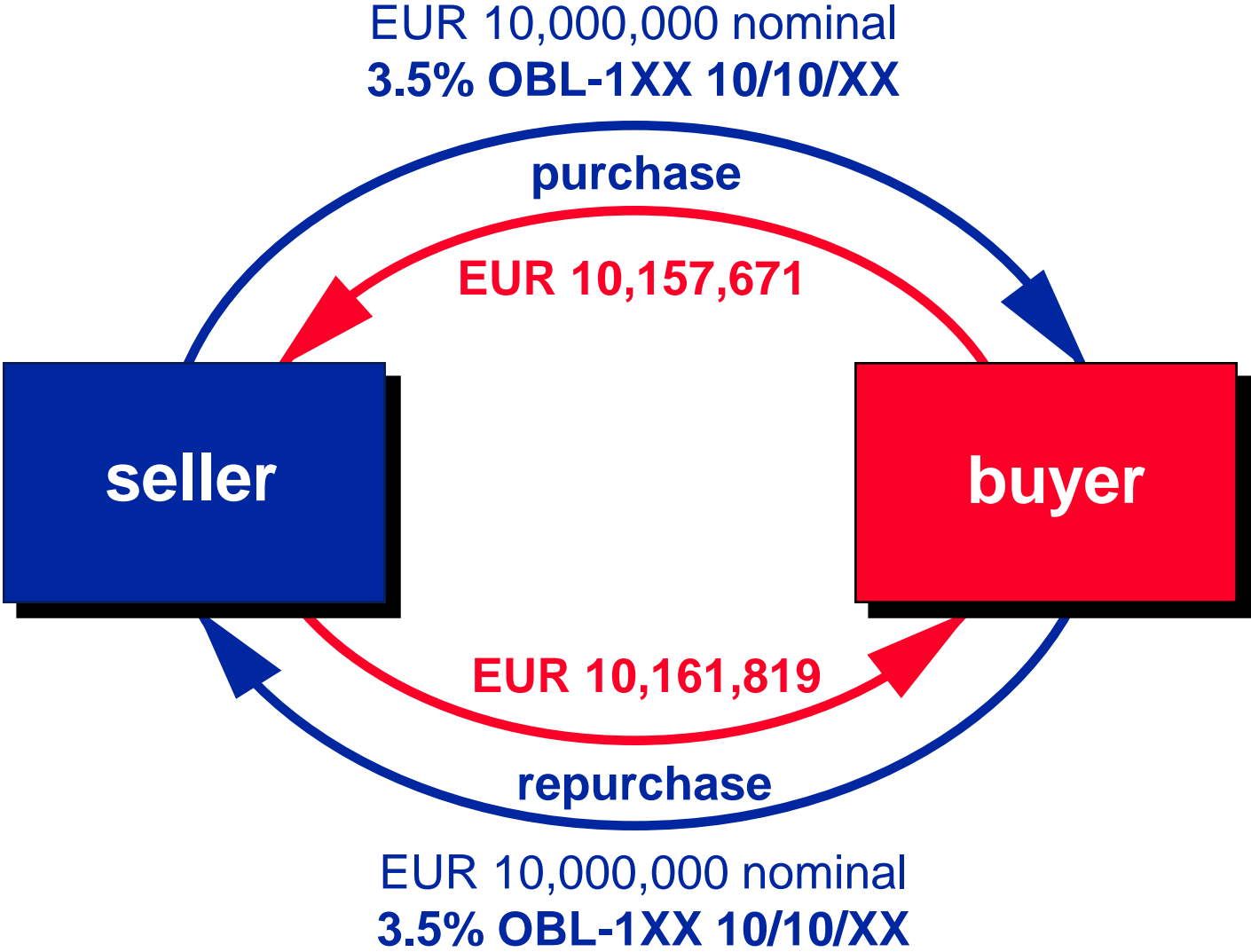
NOTES:

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 920410  
Hong Kong 852 2977 6000 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2004 Bloomberg L.P.  
6675-899-3 28-Sep-04 11:53:31

# sell/buy-back

term	1 week
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# sell/buy-back



# sell/buy-back

GRAB

Corp **BSR**

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## BUY/SELL BACK REPO ANALYSIS

BB Number: ED1687745

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BUNDESOBL-143    OBL 3 1/2 08 #143    101.4900/101.5400    (3.10/3.09) BGN    @11:50

SETTLEMENT

10/18/04

PRICE

101.50000000

<ACCRD: 0.07671233>

REPO % (ACT/360)

2.1000

<ACCRD # DAYS: 8>

FACE AMT M

10000

Minimum Piece: 100

/ Minimum Increment: 1

YIELD

3.093157%

WORKOUT

DATE / PRICE

W Worst    10/10/08    100

TERMINATION

10/25/04

FORWARD PRICE

101.47435387

<ACCRD: 0.14383562>

FORWARD POINTS

0.025646

<ACCRD # DAYS: 15>

TERM (actual # days):

7

YIELD

3.097979%

WORKOUT

DATE / PRICE

W Worst    10/10/08    100

ADD COUPONS TO FORWARD PRICE

Y-N

N

REINVESTMENT OF COUPONS

DATE	AMOUNT	RATE	%
/ /			%
/ /			%
/ /			%

COMPOUNDING METHOD: BX

P = Proceeds or B = Bullet

COLLATERAL

100.00%

OF MONEY

\* MONEY AT TERMINATION \*

SETTLEMENT AMOUNT

10,157,671.23

REPO INTEREST

4,147.72

TERMINATION MONEY

10,161,818.95

HOLD BOND PRICE/FACE AMOUNT

PX

NOTES:

Australia 61 2 9777 8600

Brazil 5511 3048 4500

Europe 44 20 7330 7500

Germany 49 69 920410

Hong Kong 852 2977 6000

Japan 81 3 3201 8900

Singapore 65 6212 1000

U.S. 1 212 318 2000

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# repurchase agreement v sell/buy-back

	<u>repurchase agreement</u>	<u>undocumented sell/buy-back</u>
<b>contract</b>	single	separate
<b>margin</b>	yes	no
<b>substitution</b>	yes	no
<b>coupon</b>	immediate	deferred
<b>written agreement</b>	yes	no
<b>variants</b>	yes	no
<b>cost</b>	operational, legal	minimal
<b>economic effect</b>	secured loan	secured loan
<b>transfer of title</b>	yes	yes

# sell/buy-back

- recognition of collateral in capital adequacy calculations requires:
  - documentation with rights of close-out & set-off
  - margin maintenance

# sell/buy-back

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  - documentation with rights of close-out & set-off
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- but some counterparties, some countries have:
  - **legal problems** with repurchase agreements
  - **operational problems** with repurchase agreement

# sell/buy-back

- recognition of collateral in capital adequacy calculations requires:
  - documentation with rights of close-out & set-off
  - margin maintenance
- but some counterparties, some countries have:
  - legal problems with repurchase agreements
  - operational problems with repurchase agreements
- incorporation of buy/sell-backs into documentation



# repurchase agreement v sell/buy-back

	<u>legal</u>	<u>operational</u>
<b>repurchase agreement</b>	1 instrument	1 instrument
<b>traditional sell/buy-back</b>	2 instruments	2 instruments
<b>documented sell/buy-back</b>	1 instrument	2 instruments

# sell/buy-back

purchase  
date

repurchase  
date



# sell/buy-back



# sell/buy-back



# sell/buy-back

buyer

seller

purchase date    +10 collateral  
                         -10 cash

-10 collateral  
+10 cash

# sell/buy-back

buyer

seller

purchase date

+10 collateral  
-10 cash

-10 collateral  
+10 cash

---

termination

-9 collateral  
+10 cash

+9 collateral  
-10 cash

new repo

+10 collateral  
-10 cash

-10 collateral  
+10 cash

# sell/buy-back

buyer

seller

purchase date

+10 collateral  
-10 cash

-10 collateral  
+10 cash

---

termination

-9 collateral  
+10 cash

+9 collateral  
-10 cash

new repo

+10 collateral  
-10 cash

-10 collateral  
+10 cash

---

net

+1 collateral

-1 collateral

# sell/buy-back

sell ticket  
purchase  
date

buy ticket  
repurchase  
date





# sell/buy-back

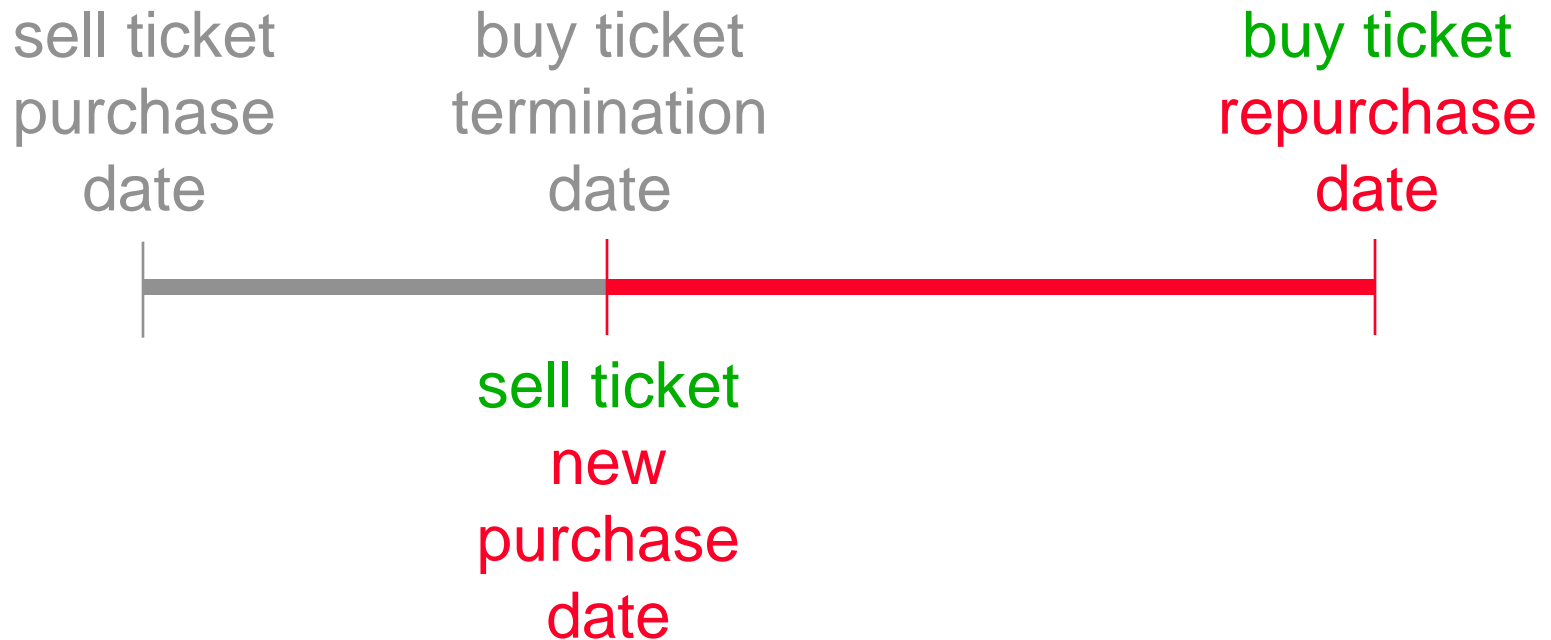
sell ticket  
purchase  
date

buy ticket  
termination  
date

buy ticket  
repurchase  
date



# sell/buy-back



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