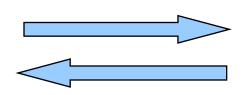
What is Netting? How Does Netting Work?

Presented by:

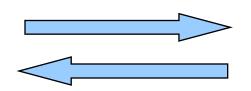
Gabriella Rosenberg, Central Bank of Argentina
Maria Carmen del Urquiza, Argentine Securities and
Exchange Commission

David Miller, Bank of America, N.A.



Definition of Netting

A method of reducing credit, settlement and other risks of financial contracts by aggregating (combining) two or more obligations to achieve a reduced net obligation.



Benefits of Netting

- Reduction of credit risk
- Reduction of settlement risk
- Reduction of liquidity risk
- Reduction of systemic risk

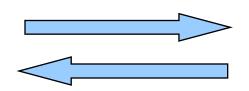
Types of Netting

- Payment Netting
- Novation Netting
- Close-Out Netting
- Multilateral Netting

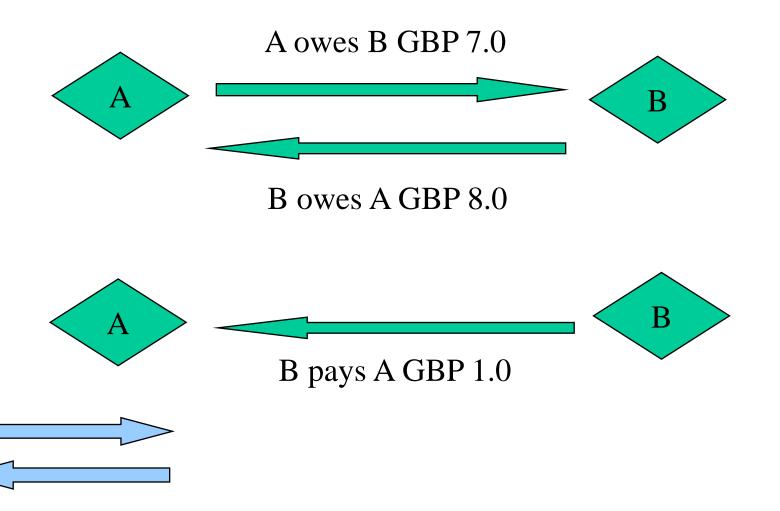
Payment Netting

Also called "Settlement Netting".

On a payment date, each party will aggregate the amounts of a currency to be delivered by it, and only the <u>difference</u> in the aggregate amounts will be delivered by the party with the larger aggregate obligation.

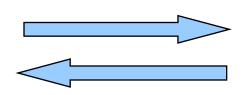


Example: Payment Netting



Types of Payment Netting Agreements

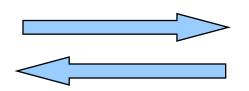
- Master Agreement with a Payment Netting Clause
- Stand-Alone Payment Netting Agreement
- Informal, "ad hoc" agreement



Payment Netting

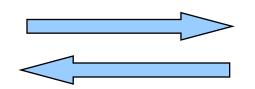
Payment Netting reduces settlement risk, but does achieve netting for balance sheet or regulatory capital purposes because the transactions remain in gross.

Contrast with Novation Netting, which achieves true netting through the cancellation of offsetting transactions and their replacement with a new, net transaction.



Novation Netting

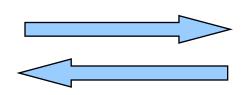
If the parties enter into a transaction which gives rise to an obligation for the same value date and in the same currency as an existing obligation, then the two obligations are <u>cancelled</u> and <u>simultaneously replaced</u> with a <u>new obligation</u> for the <u>net amount</u>.



Novation Netting

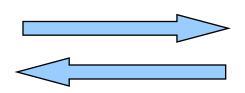
Two Types of Novation Netting:

- Matched Pair Novation Netting
- "Comprehensive" Novation Netting



Matched Pair Novation Netting

Netting only occurs if the two transactions involve the <u>same pair of currencies</u>.



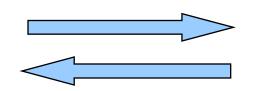
Example: Matched Pair Novation Netting

Deal 1: Buy JPY / Sell USD

Deal 2: Buy USD / Sell EUR

Deal 3: Buy EUR / Sell JPY

No two deals involve the same currency pair, and therefore no netting under matched pair novation netting.



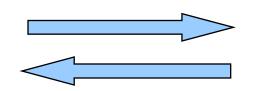
Example: Matched Pair Novation Netting

Deal 1: Sell 145 USD / Buy 100 GBP

Deal 2: Buy 147 USD / Sell 100 GBP

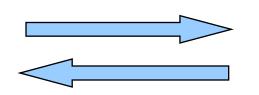
Here there is a matched pair: USD/GBP

After Netting: 2 USD



Example: Comprehensive Novation Netting

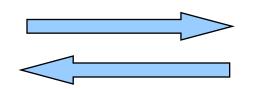
| Deal | USD | EUR | JPY | GBP |
|------|------------|-----|--------|-----|
| 1 | 10 | | -1,050 | |
| 2 | -10 | | | 7 |
| 3 | | 8 | | - 5 |
| 4 | <u>-11</u> | _ | 1,050 | |
| Net | -11 | 8 | 0 | 2 |



Close-Out Netting

Effective upon a default:

- Existing transactions are terminated
- Termination values are calculated
- Termination values are netted to arrive at a single net amount
- Recourse to credit support, if any



Example: Close-Out Netting

Overdue Payment Owed: 50

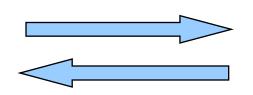
Spot Contract: 2

Forward Contract 1: 10

Forward Contract 2: -15

Option: <u>-20</u>

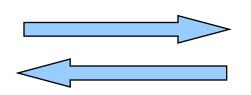
Net Amount Owed 27



Extent of Close-Out Netting

Beyond the Basics:

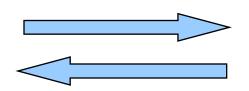
- Cross-Product Netting
- "Master Master" Netting Agreement
- Cross-Affiliate Netting



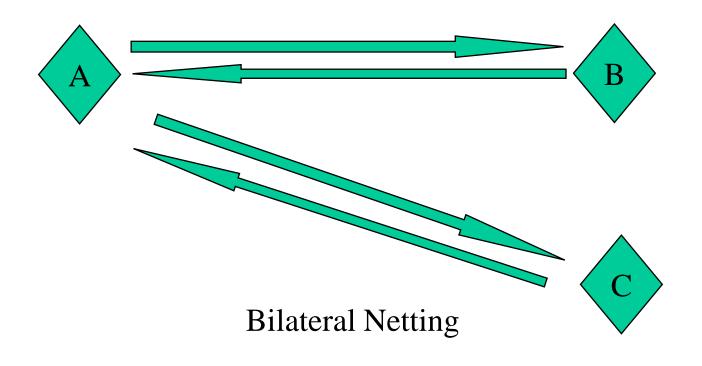
Multilateral Netting

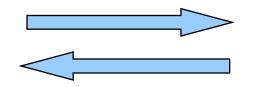
Bilateral Netting is between two parties.

Multilateral Netting involves netting among more than two parties, using a clearing-house or central exchange.

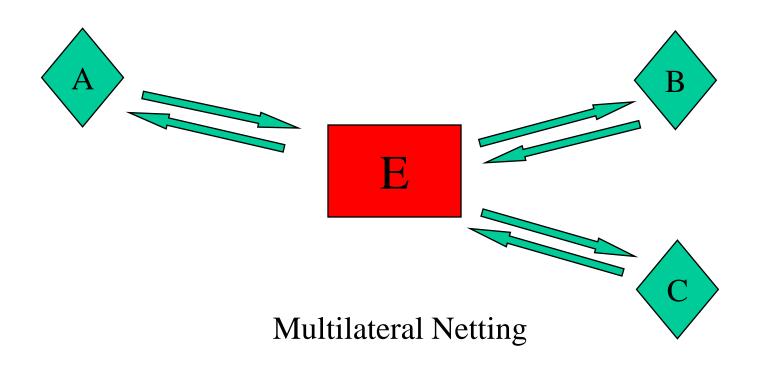


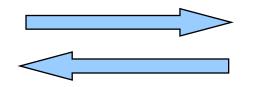
Example: Bilateral vs. Multilateral Netting





Example: Bilateral vs. Multilateral Netting

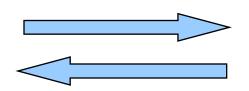




Requirements for Multilateral Netting Systems

Six Standards of Lamfalussy Report:

- Well founded legal basis under all relevant jurisdictions
- Participants have clear understand of system on each of the risks affected by the netting process
- System should have clearly defined procedures of management of credit and liquidity risks that specify the responsibilities of the system and the participants



Requirements for Multilateral Netting Systems

Six Standards of Lamfalussy Report:

- System capable of timely completing of daily settlements even if the participant with the largest position fails
- System should have objective and disclosed criteria for admission that permit fair and open access
- System must ensure operational reliability of systems and availability of back-up facilities

