

# Appendix C. EXAMPLE OF THE SETTLEMENT PROCESS

## C.1 OVERVIEW

The example below illustrates the settlement process described in Section 5 for a very small set of positions.

The positions are ordered by **CIA** and then by decreasing value. The settlement process then attempts to settle each position, in order, skipping any positions where insufficient cash or **CIA** are available. The entire process is iterated until no further positions are settled. In the example, three iterations are needed.

## C.2 START

This is the status after pledging cash and **CIA** just before the start of the settlement process. Participants' cash and **CIA** holdings on-ledger are shown on the left; the list of positions is on the right.

| Broker | Dir.     | ISIN | #     | \$    |            |
|--------|----------|------|-------|-------|------------|
| 1      | Broker 1 | BUY  | CA001 | 2103  | 198,547.32 |
| 2      | Broker 2 | SELL | CA001 | 1301  | 96,995.32  |
| 3      | Broker 3 | SELL | CA001 | 800   | 59,552.00  |
| 4      | Broker 3 | BUY  | CA020 | 3650  | 26,280.00  |
| 5      | Broker 2 | SELL | CA020 | 2375  | 17,100.00  |
| 6      | Broker 1 | SELL | CA020 | 1275  | 9,380.00   |
| 7      | Broker 1 | BUY  | CA300 | 25434 | 1,528.04   |
| 8      | Broker 2 | SELL | CA300 | 25434 | 1,528.04   |

  

| Broker 1      | CDG           |
|---------------|---------------|
| \$ 148,893.36 | \$ 167,253.36 |
| CA001 0       | CA001 0       |
| CA020 1275    | CA020 0       |
| CA300 0       | CA300 0       |

  

| Broker 2     | CDG          |
|--------------|--------------|
| \$ 0.00      | \$ 10,706.04 |
| CA001 1301   | CA001 2301   |
| CA020 2375   | CA020 0      |
| CA300 254534 | CA300 0      |

  

| Broker 3  | CDG          |
|-----------|--------------|
| \$ 0.00   | \$ 58,052.00 |
| CA001 800 | CA001 0      |
| CA020 0   | CA020 0      |
| CA300 0   | CA300 0      |

Positions ordered by ISIN and then value

The cash and **CIA** holdings on-ledger of the brokers are exactly their net obligations for the entire settlement process.

Note that **CIA** has an initial balance slightly larger than the largest transaction. This is required in this very simple algorithm to kick-start the process (all positions are against **CIA** so no individual position can settle unless **CIA** holds either sufficient cash or sufficient **CIA**).

## C.3 ITERATION 1, Intelligence token CA001

| Broker | Dir.     | ISIN | #     | \$    |            |
|--------|----------|------|-------|-------|------------|
| 1      | Broker 1 | BUY  | CA001 | 2103  | 198,547.32 |
| 2      | Broker 2 | SELL | CA001 | 1301  | 96,995.32  |
| 3      | Broker 3 | SELL | CA001 | 800   | 59,552.00  |
| 4      | Broker 3 | BUY  | CA020 | 3650  | 26,280.00  |
| 5      | Broker 2 | SELL | CA020 | 2375  | 17,100.00  |
| 6      | Broker 1 | SELL | CA020 | 1275  | 9,380.00   |
| 7      | Broker 1 | BUY  | CA300 | 25434 | 1,528.04   |
| 8      | Broker 2 | SELL | CA300 | 25434 | 1,528.04   |

  

| Broker 1      | CDG          |
|---------------|--------------|
| \$ 148,893.36 | \$ 10,706.04 |
| CA001 0       | CA001 2301   |
| CA020 1275    | CA020 0      |
| CA300 0       | CA300 0      |

  

| Broker 2     | CDG     |
|--------------|---------|
| \$ 96,995.32 | \$ 0.00 |
| CA001 0      | CA001 0 |
| CA020 2375   | CA020 0 |
| CA300 254534 | CA300 0 |

  

| Broker 3     | CDG     |
|--------------|---------|
| \$ 58,052.00 | \$ 0.00 |
| CA001 0      | CA001 0 |
| CA020 0      | CA020 0 |
| CA300 0      | CA300 0 |

Position 1 cannot settle. CDG does not have equity

The position and balance in green are executed. Position 1 is not executed, as Broker 1 does not own sufficient cash to settle this position.

Positions now settled are greyed out.

