



clearstream

DEUTSCHE BÖRSE
GROUP

The background of the slide is a photograph of a large concrete dam situated in a mountainous region. The dam is a curved, grey structure that spans a valley. Behind the dam, a large body of water (a reservoir) is visible. The surrounding mountains are rugged, with patches of snow and green vegetation. The sky is overcast. Overlaid on the image are several vibrant, glowing light streaks in shades of purple, blue, and pink, which curve across the lower half of the slide, passing behind the text.

CIMPA

Settlement Considerations for Optimal Collateral Management

Canadian Cash Settlement Issues

What is the cause?

A fragmented and predominately manual operating Cash Settlement process in the Market.

Post the inaugural trades of CCMS, it was discovered that closing repos automatically in the overnight window was problematic.

1. The Canadian market has a number of constraints for the use of cash throughout the day (**structural challenges**)
2. There is a concern with the **cash that would be required for the Sell Side to make available early in the morning** (*before traders come into the office*)
3. The need to avoid a **credit crunch due to the PITSO obligation** to be met at 10:30AM
4. There are **some obligations** that need to be settled as soon as transactions are posted in CDS before 10h30:
 - a. CDCC - SGC: Requires settlement from 7am
 - b. Bank of Canada Auction processes
5. Furthermore, **a future solution needs** to have access (substitutions) to securities being used as collateral:
 - a. To deliver to ICSD's (11:00AM Euroclear and 12:00PM Clearstream)
 - b. Used as collateral if looking to use the STRIPS and RECONS process as CDS deadline of 10:00AM

International Comparisons

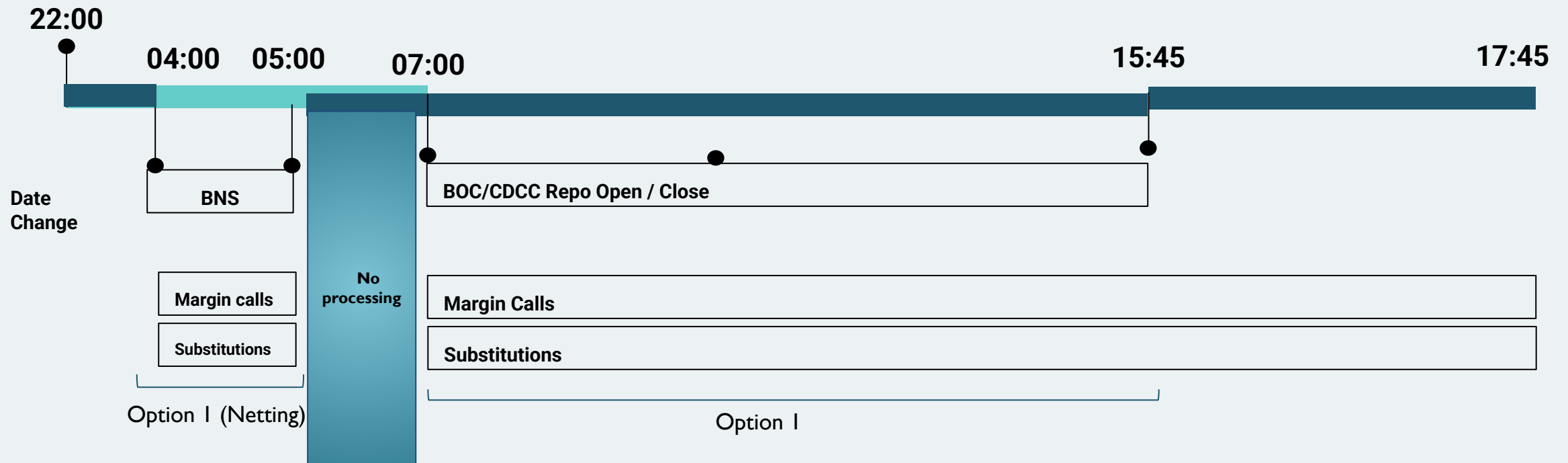
1. **ACV:** Canada is unique in relying on ACV (Aggregate Collateral Value) to settle trades
2. **One-Sided Matching:** Peer Markets largely don't have this option and is used extensively in Canada with some instructions being AUTO-matched
3. **Real Time Gross Settlement (RTGS) :** Peer Markets are integrated to RTGS systems that settle throughout the day and in real-time (combination)

CCMS Standard Schedule

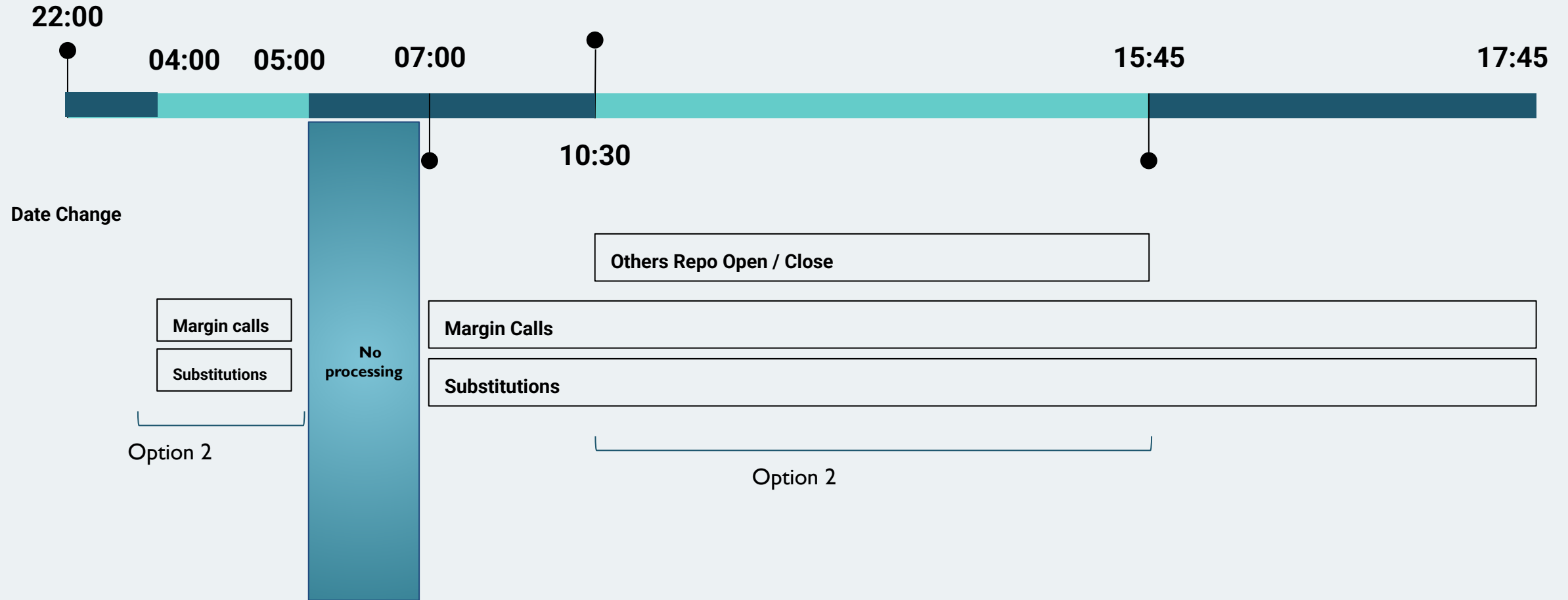
CCMS Default for opening and closings will be to send trades when the system starts and ready to start processing when the BNS cycle begins (also includes Top-up/withdrawal/substitutions)

1. CDCC - SGC: Activity can be sent during the BNS cycle, but trades not expected to occur until after 7:00 AM EST
2. BOC auction - Activity can be sent during the BNS cycle, but trades not expected to occur until after 7:00 AM EST

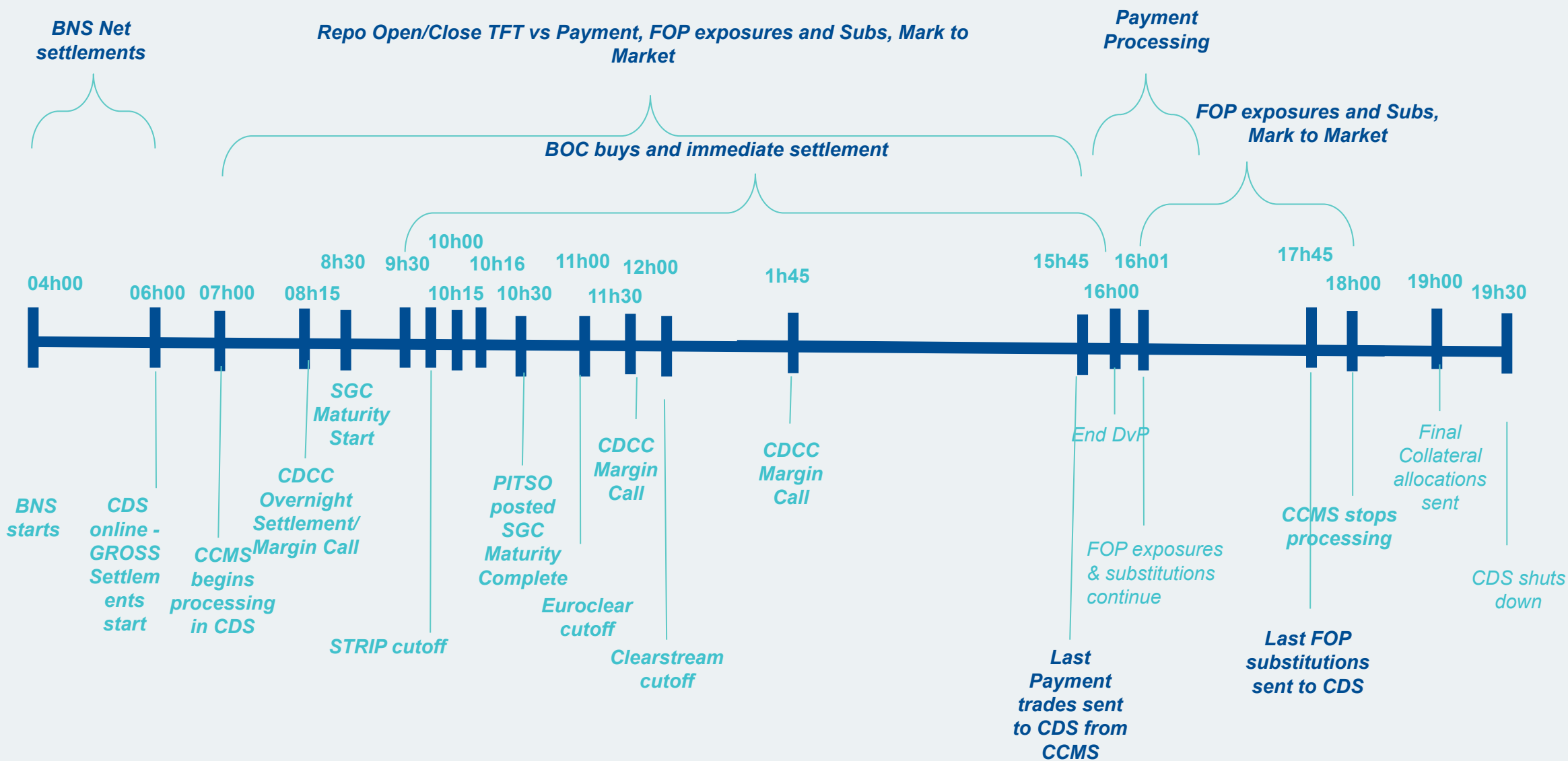
CCMS Timeline Standard - without LATE flagged



CCMS LATE Processing



Settlement Timeline complexity



Points of Interest for Future sub-streams

1. How to reduce “Gamification” of settlement in the Market
2. Opportunities for Harmonization and Optimization of settlement activities/windows in future
3. Investigation of multiple payment windows on an intra-day basis and its effect on ACV/Collateral used for settlement
4. Pragmatic approach to international models

APPENDIX

Cash Timeline for CDS targets

Time Event

3:59 AM	Bulk Net Settlement Cutoff - All TFT activity sent to CDS will process on a net basis
4:00 AM	CDS starts processing TFT activity on a Gross basis with no Net Settlement
6:00 AM	CDS Online Access commences
7:00 AM	CCMS Activity begins to be processed in CDS (flexibility to change timing)
8:15 AM	CDCC Overnight Settlement Deadline
8:30 AM	SGC Maturity activity begins
9:30 AM	BOC activity begins to settle as the trades are posted to CDS
10:00 AM	STRIP / Coupon activity cutoff, need to have positions in CDS to split or reverse segregation
10:15 AM	PITSO call notice(600mm per CUID)
10:30 AM	PITSO completed, SGC Maturity completed
11:00 AM	Euroclear Cutoff
11:30 AM	CDCC Interim Margin Call
12:00 PM	Clearstream Cutoff
1:45 PM	CDCC Cutoff
4:00 PM	Cash Cutoff at CDS

Cash Timeline for CDS targets

Time Event

4:01 PM	CCMS FOP substitutions and exposures continue
5:45 PM	CCMS End FOP activity being sent to CDS
6:00 PM	CCMS Closes all processing
7:00 PM	CCMS EOD Collateral Allocations completed and sent
7:30 PM	CDS shuts down and EOD processing starts

