CCMS HORIZONS

CIMPA
April 2026

TMX

clearstream | DEUTSCHE BÖRSE GROUP

CCMS update for CIMPA

1. **CCMS Ecosystem update**
2. **Bank of Canada Update**
3. **Tri-Party Pricing**
4. **Enhancements**
5. **Market Decisions**

CCMS Ecosystem Update

CCMS at a Glance: **Momentum is building**

Highlights

- **CCMS Production:** 16 Clients are live on platform as of April 2026. There are 34 in the pipeline at various stages of onboarding.
- **CCMS CRC is LIVE:** Multi-lateral repo agreement is live in the Service
- **Two custodians are live:** Two more custodians are in discussion
- **Buy-side onboarding:** 1st pension fund is live and active, with more actively onboarding.
- **Banks becoming cash providers:** A consistent pattern of banks opening cash provider capabilities in addition to their capacity as collateral givers
- **SGC is ready:** First SGC trades on the CCMS are anticipated in May 2026
- **Bank of Canada's has already started testing activities & bilateral testing to start early May.**

Achievements Q1 2026

- **Trading Volume: $0.5 Trn** in turnover traded to date with daily average volumes increasing MOM
- **Bank of Canada official announcement of CCMS expansion and Repo 2.0**
- First trades processed through the **Yield Exchange between BMO & Manulife**
- **First standard basket of collateral traded in the Canadian Market (GC Standard)**

FOCUS AREAS/ CHALLENGES

- **Technical changes & enhancements** - Improvements in operational enhancements and technical nuances within the Services
- **Production support & more hires**- Improved production support, monitoring and systems in a continuous improvement process as well as increasing the size of the CCMS team by 50%

Asset Classes On the Horizon

Government Bonds	Live
Provincial Bonds	Live
Corporate Bonds	Live
Equities	Live
CMBs	Live
RRBs	Live
NHAMBS	**June 2026 (Pending Market approvals on templates)**

- Fixed Income
- Equities

Bank of Canada Updates

Bank of Canada Programme

Automatic Entitlements as it pertains to BOC
May 4tth, 2026

- CCMS users will benefit from having automatic entitlements ‘swept’ back through a re-use chain back to collateral givers
- Allowing primary dealers to keep government securities with the Bank of Canada over key coupon paying dates

Bilateral & Industry Testing
May - October 2026

- BOC is internally testing for a few months before testing with all Primary Dealers between
- August and October 2026

Go-live
Targeting first week of November 2026

- Gradual increase in volumes planned between November and end December with all Primary dealers
- Depending on readiness, adding additional Repo types (and volume) will be considered

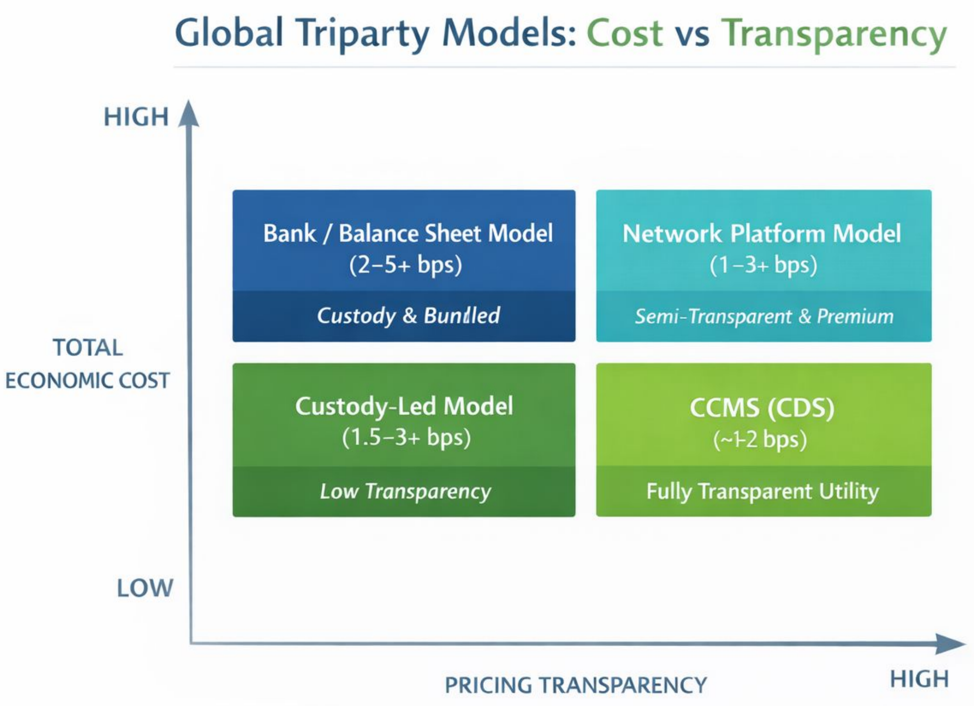
Expanding
Various 2027 + milestones

- Expanding BOC Pledge
- GC Clearing project with CDCC/BOC (leveraging foundation of CCMS/BOC)
- Pledge and Repo clearing leveraging CCMS live by end 2027

Tri-Party Pricing Comparisons and Observations

General Tri-Party Global Cost assessment

- Generally Collateral givers pay a basis point fee in all services:
    - 0.5 ~ up to 5+ bps (at the higher end includes bundled services, not a 1-1 comparison)
    - Lower end is often very high volume (daily averages of $30+bn) and is often ***negotiated***
- Collateral receivers in most models are ***free***
- Many providers have multiple layers of fees:
    - Settlement movements (~ up to $5-20 USD per line)
    - Minimum maintenance fees
    - Bundled fees (Custody, Balance sheet, Relationship based on other services)



- CCMS aligns with ***Global standards*** in terms of its structure and ***volume tiering*** on costs and has very transparent fees with ***no extra charges*** (additional settlements, custody, bundled fees)

Enhancements

Products on the Horizon -**CCMS** *Auto Entitlements*

Automated entitlements
May 4th, 2026

Distinct CCMS entitlement
process from CDS entitlements

Detailed Reporting Provided For
Entitlements and Maturities
Phase II

- **What's Coming:** Full Automation of the **CCMS** entitlement claims process for **all CCMS clients.**
- **Current Challenge:** Today, CCMS substitutes at RD-2, however residual securities are often left with the CR due to high volume of substitutions and low collateral unavailability, requiring manual reclaims, specifically surrounding Dec 1st & June 1st.
- **Enhancement**: CCMS will be automating this process including claims along complex re-use chains, while providing detailed reporting in the next phase.

Security	Substitute RD - 2 ?	Reclaim Date
GOCs	No	RD
Provincials	No	RD
NHAs	No	RD
Maturities	Yes	N/A

Decision: Remove Market substitutions of affected securities in June 2026

Products on the Horizon - *Tri-Party Pledge*

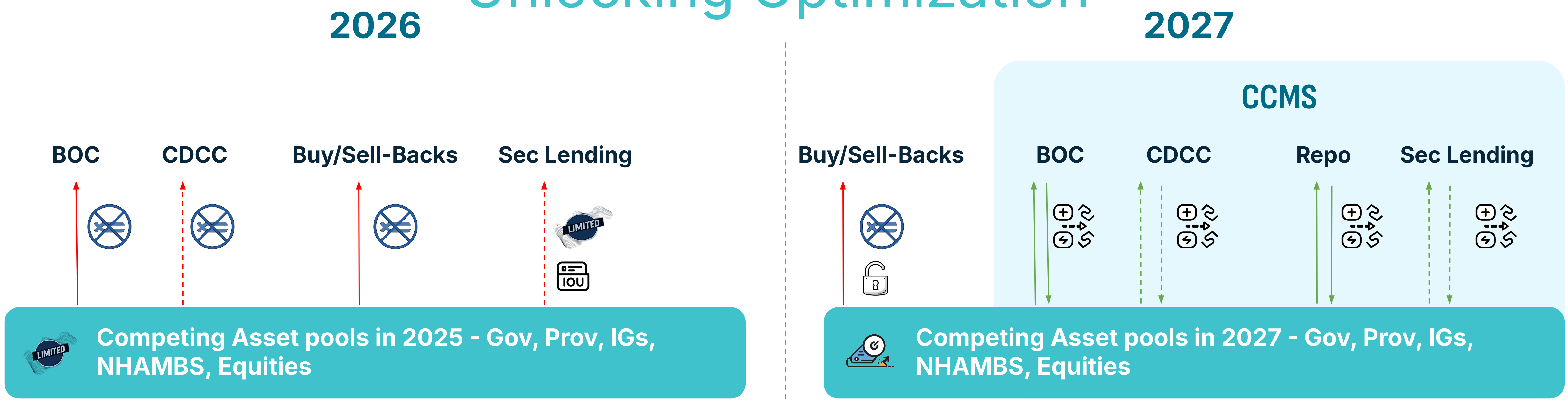
CCMS Tri-Party Pledge
Targeting Q4 2026

Auto-Settlement
Of collateral pledges

Increased
Pledge Velocity

- **Pledging, Smart and Simplified:** Enables seamless pledging of securities using the CCMS Tri-Party collateral pledge service, including features of unlimited substitutions, auto-valuations and settlements (pre-confirmed pledges).
- **Real-World Use Cases:**
  - Supports Securities Lending & Borrowing
  - **Auto-Settlement** of triparty pledges, scalable to high settlement volumes and maximum collateral velocity
  - **Sustained Peak Efficiency:** Pledge reduces settlement constraints, allowing peak transaction volumes to be maintained throughout the day.
  - **Modifications (Substitutions)**: Enable high-velocity collateral updates with minimal manual intervention.
  - **Optimized Liquidity Management:** Manage the lifecycle of pledges
  - **Coming soon:** API-enabled Initial Margin Tri - Party pledge with CDCC 2027

Why does Tri-Party pledge matter?
Unlocking Optimization



- Limited Optimization
- ‘IOU’ usage in Pledge
- Limited/No substitutions

- Balance sheet Optimized x * Counterparts
- Unlimited substitutions between exposures X* Counterparts
- Unlocking Specials via substitutions from CCMS
- Limited/No substitution nature of Buy/Sell-Backs

Market Decisions

Market-wide impacts and decisions

1

Aligning CCMS Holiday with Trading Calendar

Often CDS is open on certain holidays that trading is not.

Recommendation: *CCMS to follow Trading Calendar*

2

Enable Free of Payment cut-off at 5pm

- CCMS currently operated until 6pm
- PD and Custodian agreement to move the close of the services earlier (5pm)
- DvP Cut-offs remain at 4pm.

Recommendation: *Move close to 5pm to allow for Market conditions like payment exchange extensions and to allow for optimization (especially pledge to happen between 4-5pm)*

3

NHA MBS

- Reliant on auto-entitlements
- Requires some OSCAR updates
- Test basket to be setup and used in May 2026

Recommendation: *Targeting June/July 2026 for go-live activities*