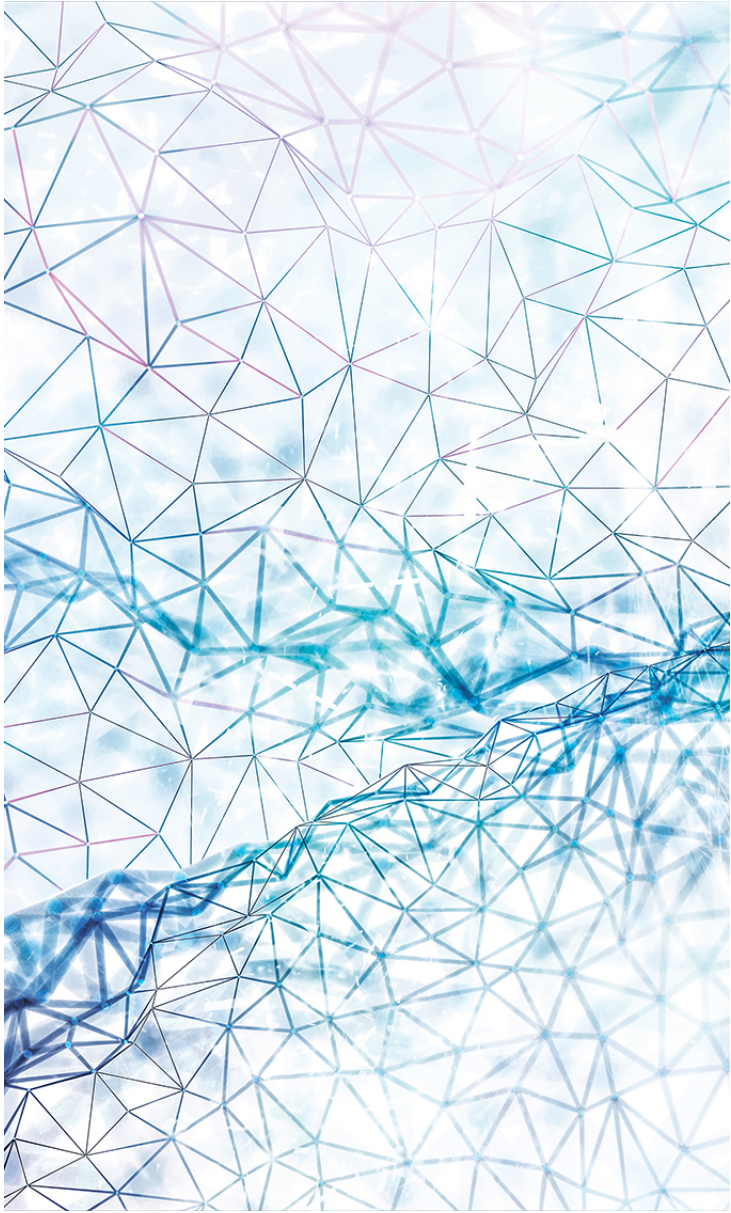


Clearstream Banking S.A.: ACSDA Webinar

Securities Lending Services & SDR

June 20, 2023

clearstream | DEUTSCHE BÖRSE
GROUP

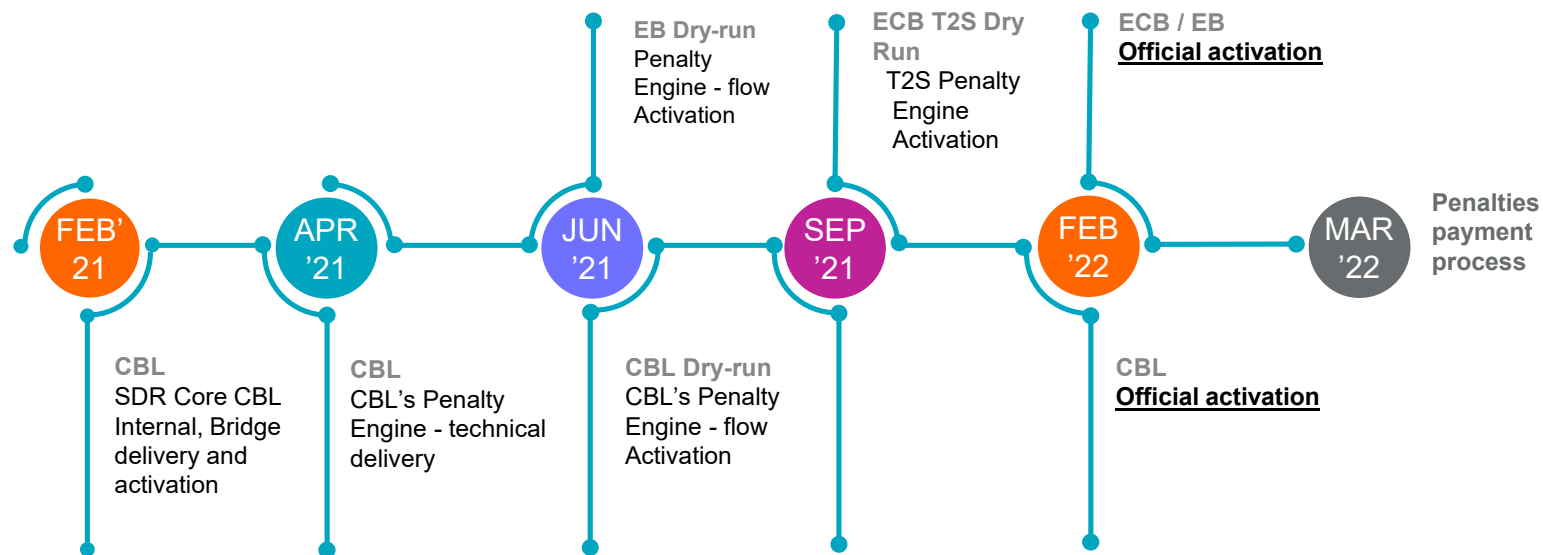


1 SDR Penalty Summary

CSDR Settlement Discipline Regime (SDR)

Timeline of the Settlement Discipline Regime

- The Settlement Discipline Regime requires CSDs and ICSDs to establish a penalty mechanism imposing cash penalties to the participant responsible for late matching and/or settlement fail.
- SDR is applicable to all EU (European Union) and EEA (European Economic Area) countries (Norway, Iceland, Liechtenstein and Switzerland via T2S only).



Penalty Fees Introduction:

Types of Fees

Late Matching Penalty Fees (LMFP)

A participant is subject to Late Matching Penalty Fees (LMFP) when settlement instruction is matched after the end of the relevant period of its Intended Settlement Date (ISD*) or has an acknowledgment timestamp greater than its counterpart matched instruction when both are late.

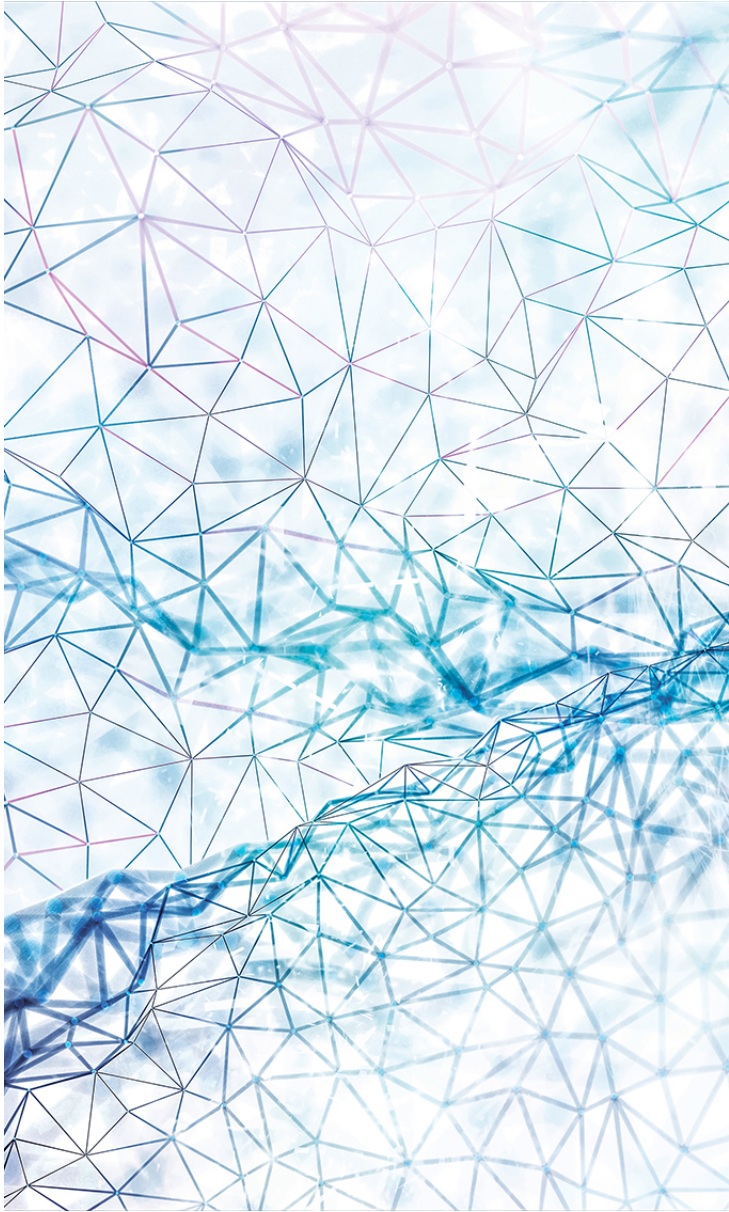
Settlement Fails Penalty (SEFP)

A participant is subject to Settlement Fails Penalty (SEFP) when settlement instruction has reached its ISD, is matched, but fails to settle on that ISD and it is not cancelled by the end of the relevant business day.

Type of fail	Type of securities	Liquidity Indicator	SME Growth Market	Penalty Rate (in bps)
Lack of securities (Applicable Penalty Rate is called "Security" Penalty Rate)	Share	Liquid	No	1.00
		Illiquid		0.50
		n/a	Yes	0.25
	Sovereign debt		n/a	0.10
	Corporate debt Money-market instruments		No	0.20
			Yes	0.15
	Other instruments (including Exchange traded funds, units in collective investment undertakings, emission allowances, etc.)		No	0.50
		Yes	0.25	
Lack of cash (Applicable Penalty rate is called "Cash Discount" Penalty Rate)	n/a	n/a	n/a	Official interest rate for overnight credit charged by the central bank issuing the settlement currency with a floor of 0

Note: Intended Settlement date = Requested Settlement Date in CBL

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2 **Penalty Impacts & CBL Data Solutions**

Managing settlement efficiency is a key cost management lever today, and even more with SDR coming into play

Settlement fails are a key cost driver today...

1%

Average failure rate equates to about **4 million transactions failing** annually in Europe

\$3bn

Costs and losses would occur if **average fail rate** would be 2%

80%

Of operational cost in trade processing are **caused by failing trades**

...and increases in its importance as Settlement Discipline Regime (SDR) comes into play

- Settlement discipline regime (SDR) introduces punitive measures for failing to deliver securities.
- Apart from investing in regulatory technology for SDR compliance, firms are exploring opportunities to reduce costs associated with trade settlement failures, especially in the post-COVID-19 era where cost optimisation is a critical business imperative.
- Having a tool to identify and avoid potential settlement failures in advance to reduce financial impact . Predictive tools provide additional insight to settlements and gives opportunities to improve success rates with better information.

Connectivity & Data solutions

Predictive settlement data services

We are creating customer and business value by using trusted data, analytics and digitized connectivity channels.

Settlement Dashboard

- Detailed insights on settlement activity, such as efficiency and failure analysis, allowing to assess future transactions
- Optimises fails management processes by using analytics for exception
- Strategically reduce exposure to settlement fails and related cost by optimising settlement flows based on data analytics



What does it do?



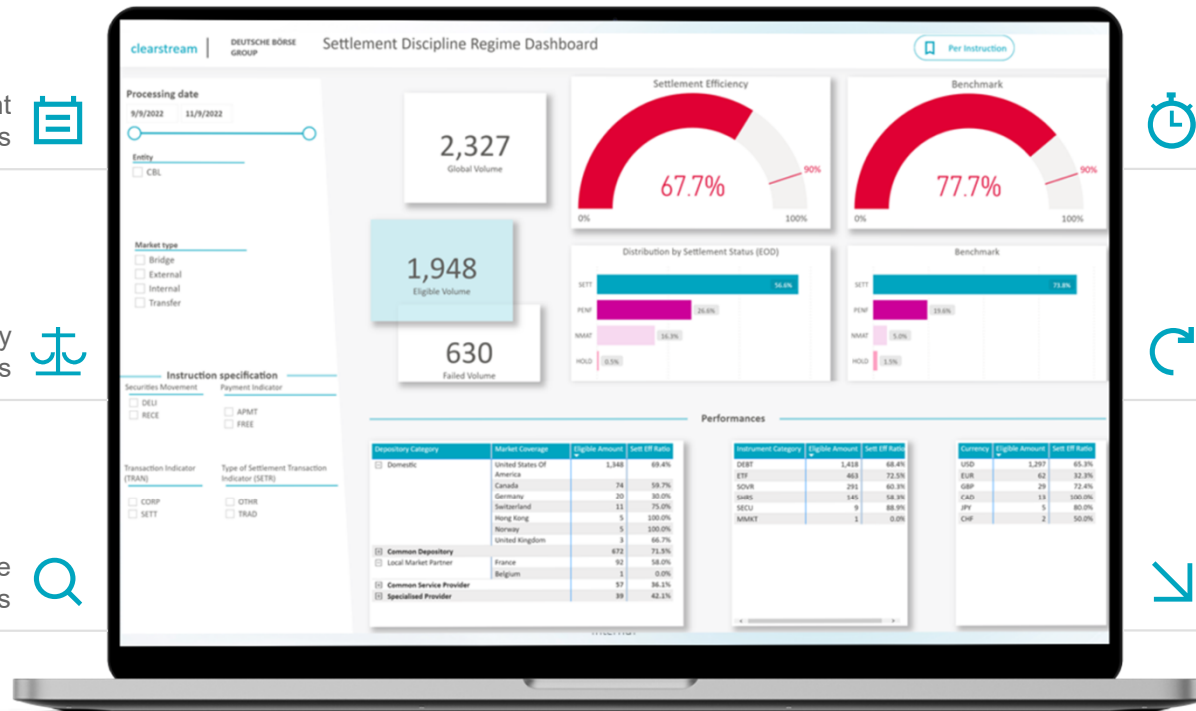
How does it support you?

Settlement Prediction Tool

- Calculates the probability that a specific settlement instruction will settle on time, based on the transaction specificities and historic data
- Anticipate potentially failing settlement transactions early and take respective action
- Optimise usage of operational resources by directing focus to critical transactions early in the process
- Maximise assets value by allocating them accordingly

Connectivity & Data solutions

Settlement Dashboard and AI-powered Settlement Prediction Tool



Insights into past, present and future settlements



Compare settlement efficiency for specific instruction types



Drill-down to the root cause of failures



Focus on settlements that are likely to fail



Redeploy resources and assets to where they can bring value



Reduce penalties, cost, risk and implications from settlement fails



Settlement Probability Tool

Our artificial intelligence tool calculates the likelihood of a specific settlement instruction settling on time of the basis of the transaction specificities and historic data.

Transaction ID	Mov	Quantity	+/-	Amount	Ccy	Processing	Matching	Settlement	Trade date	Req. sett. date	Exp./Eff. sett. date
X00BOIC64074001	DELI	300,000.00	+	295,800.00	EUR	Accepted Acknowledged	Matched	Pending	07/03/2022	21/04/2022	21/04/2022
X00BOIX07833001	DELI	735.00	+	1,810,474.00	JPY	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIV74330001	RECE	455.00	-	62,601.95	EUR	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIW26560001	DELI	22,071.352	+	253,103.23	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIW26550001	DELI	47,900.00	+	547,516.16	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIW26578001	DELI	319,681.443	+	3,217,593.72	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIW26567001	DELI	143,603.123	+	1,433,719.22	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIW26560001	DELI	14,376.402	+	153,459.47	EUR	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIX07833001	APMT	1,780.00	+	61,588.00	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	22/03/2022	22/03/2022
X00BOIX07833001	APMT	735.00	+	1,810,474.00	JPY	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIX89331001	DELI	1,780.00	+	61,588.00	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	22/03/2022	22/03/2022
X00BOIX95925001	DELI	177,917.784	+	2,048,420.82	USD	Accepted Acknowledged	Matched	Pending	11/03/2022	22/03/2022	22/03/2022
X00OIP8543908001	RECE	2,000,000.00	-	2,000,000.00	USD	Accepted Acknowledged	Matched	Pending	08/03/2022	22/03/2022	22/03/2022

Transaction ID	Probability	Movement	Payment	Quantity	+/-	Amount	Ccy	Processing	Matching	Settlement	Trade date	Req. sett. date	Exp./Eff. sett. date
X00BOIV74330001	9.5%	RECE	APMT	455.00	-	62,601.95	EUR	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIC64074001	17.1%	DELI	APMT	300,000.00	+	295,800.00	EUR	Accepted Acknowledged	Matched	Pending	07/03/2022	21/04/2022	21/04/2022
X00BOIW26550001	15.5%	DELI	APMT	47,900.00	+	547,516.16	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIW26578001	13.6%	DELI	APMT	319,681.443	+	3,217,593.72	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIW26567001	13.6%	DELI	APMT	143,603.123	+	1,433,719.22	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIW26560001	13.2%	DELI	APMT	14,376.402	+	153,459.47	EUR	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIW26550001	13.2%	DELI	APMT	47,900.00	+	547,516.16	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIT95847001	13.2%	DELI	APMT	40,444.893	+	467,183.00	USD	Accepted Acknowledged	Matched	Pending	11/03/2022	22/03/2022	22/03/2022
X00BOIX07833001	11.5%	DELI	APMT	735.00	+	1,810,474.00	JPY	Accepted Acknowledged	Matched	Pending	14/03/2022	23/03/2022	23/03/2022
X00BOIX89331001	11.5%	DELI	APMT	1,780.00	+	61,588.00	USD	Accepted Acknowledged	Matched	Pending	14/03/2022	22/03/2022	22/03/2022
X00BOIX95925001	11.5%	DELI	APMT	177,917.784	+	2,048,420.82	USD	Accepted Acknowledged	Matched	Pending	11/03/2022	22/03/2022	22/03/2022
X00OIP8543908001	11.5%	RECE	APMT	2,000,000.00	-	2,000,000.00	USD	Accepted Acknowledged	Matched	Pending	08/03/2022	22/03/2022	22/03/2022

Simulation tool – ASL Forecast

Net late penalties Net buy-in volumes Settlement inefficiency

Consider only CSDR ISINs

Settlement inefficiency by number

Consider all ISINs

Settlement inefficiency by volume

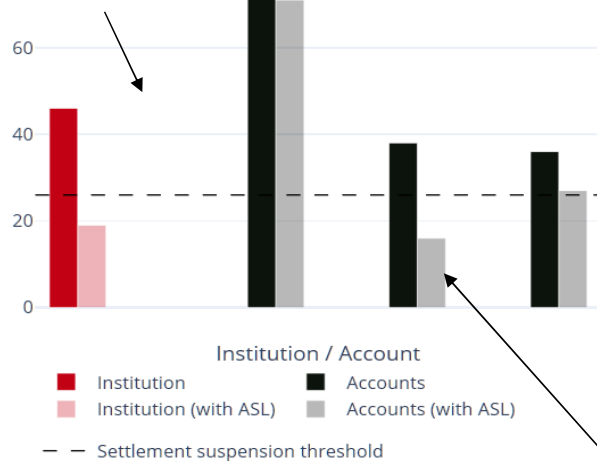
Select an account ▾

Aggregate inefficiency by day ▾

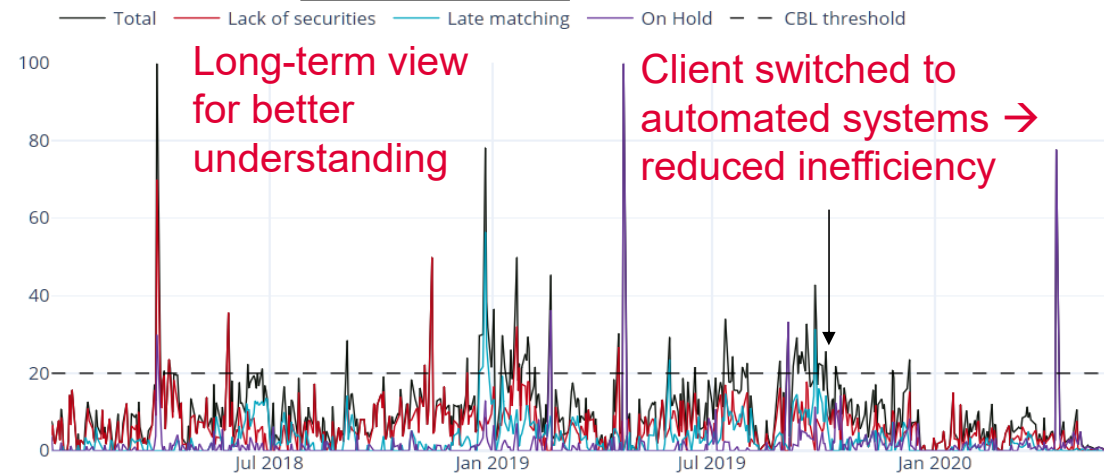
Your overall delivering inefficiency ▾

Number of inefficient days in 2019

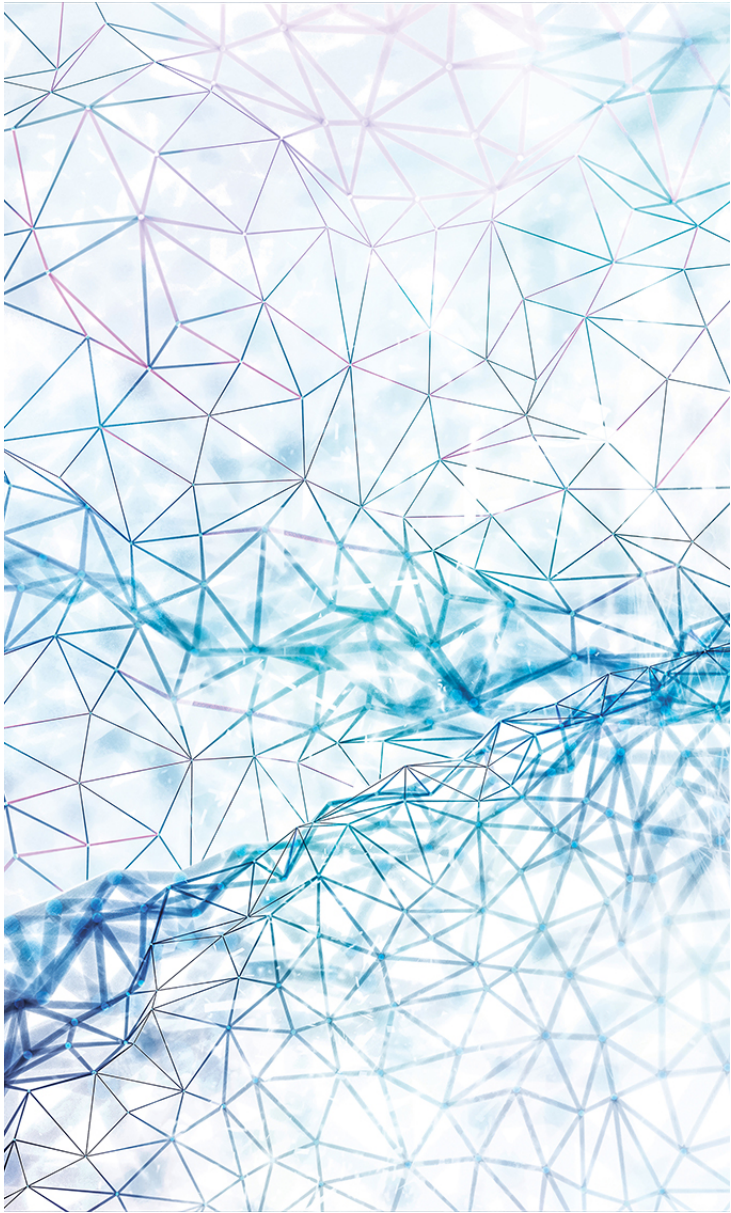
Systematically inefficient → at risk of settlement suspension



Settlement inefficiency of [redacted]



Subscribing to ASL may significantly improve efficiency → no longer systematically inefficient



3 Securities Lending as a Solution

Securities Lending as a Solution: ASLprinciple & ASLplus

ASLprinciple (Fails Lending)

Reliable provider

Fails oriented philosophy, unique to ICSDs. Fully integrated into the settlement engine of Clearstream. Undisclosed, anonymous and no direct relationship between lender and borrower.

Secure Risk Management

Collateralized borrowing issued by CBL. Securities pledged by borrower to CBL under Luxembourg Law Pledge. Collateral quality and sufficiency monitored by CBL daily. Second ranking pledge on collateral in the unlikely event of a simultaneous default by Clearstream Banking and the borrower the right to the collateral passes to the Lender. Clearstream as guarantor in case borrower defaults.

Transparent Pricing

Monthly rates set and published by CBL. Close to market cash rates less agency and guarantee costs.

Reliable (Security First)

During the operation of the program, there has not been a default situation, this reflects the stringent controls imposed by Clearstream's Credit department for accepting borrowers into its program.

ASLplus (Strategic Lending)

Reliable provider

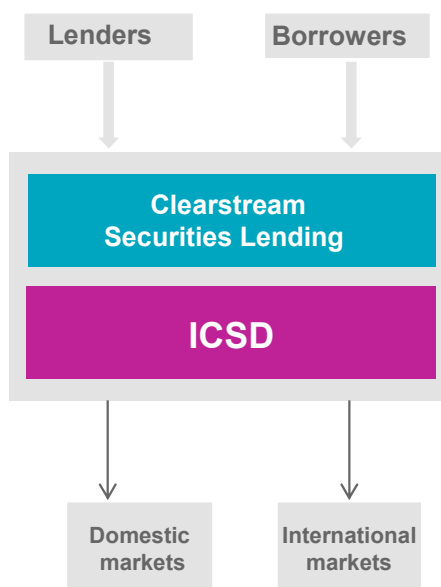
Negotiated lending rates – integrated into the settlement engine of Clearstream Banking. Direct relationship and risk to CBL as lender/borrower.

Secure Risk Management

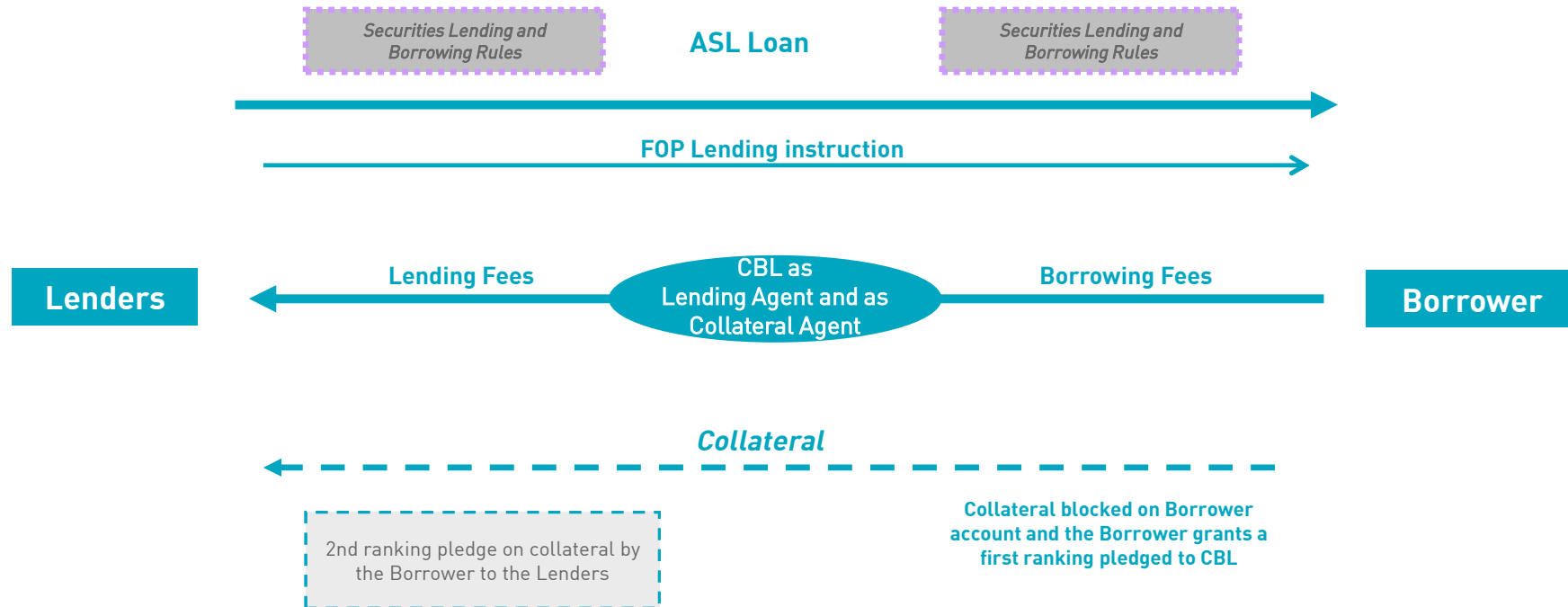
Clearstream International (CI) acts as collateral agent for the lender monitoring loans and collateral on a daily basis. CBL is sole borrower, borrowing selected securities on a discretionary basis at market rates. Full risk on CBL, loans are collateralized by CBL in favor of the lender. Minimum eligibility criteria on bonds rated A+ and above. Pledge on collateral to the lender, in unlikely event of default of CBL as borrower. Perfection of the pledge under Lux law – Collateral held by CI as "tiers detenteur".

Reliable (Security First)

During the operation of the program, there has not been a default situation, this reflects the stringent controls imposed by Clearstream's Credit department for accepting borrowers into its program



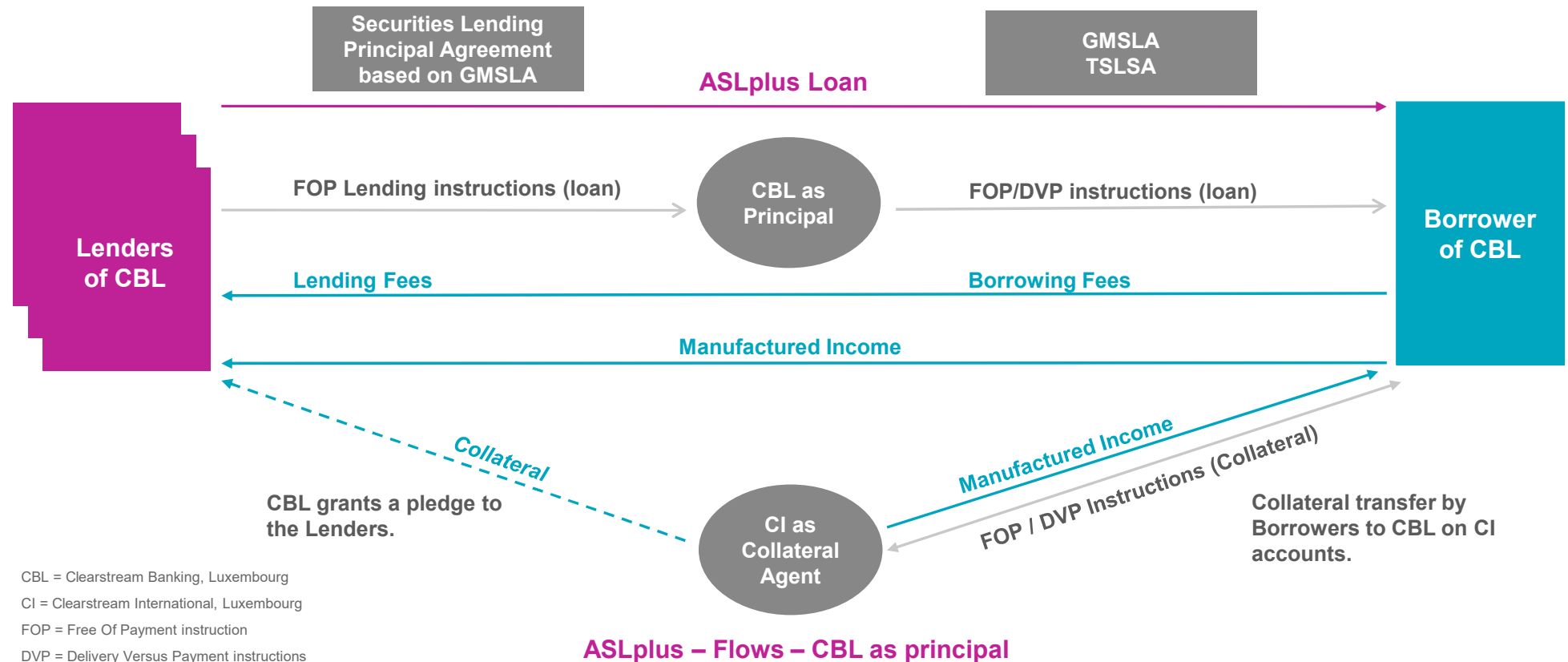
ASL principle: Flows for CBL as Agent



CBL = Clearstream Banking, Luxembourg
FOP = Free Of Payment

ASLplus: Flows for CBL as principal & CI as Agent

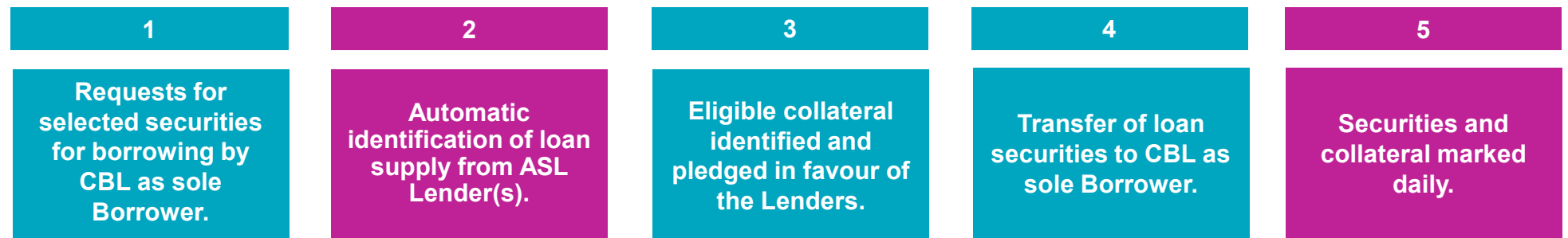
Strategic Securities Lending ASLplus



CBL = Clearstream Banking, Luxembourg
 CI = Clearstream International, Luxembourg
 FOP = Free Of Payment instruction
 DVP = Delivery Versus Payment instructions

ASLplus: Flows for Collateral

Strategic Securities Lending ASLplus

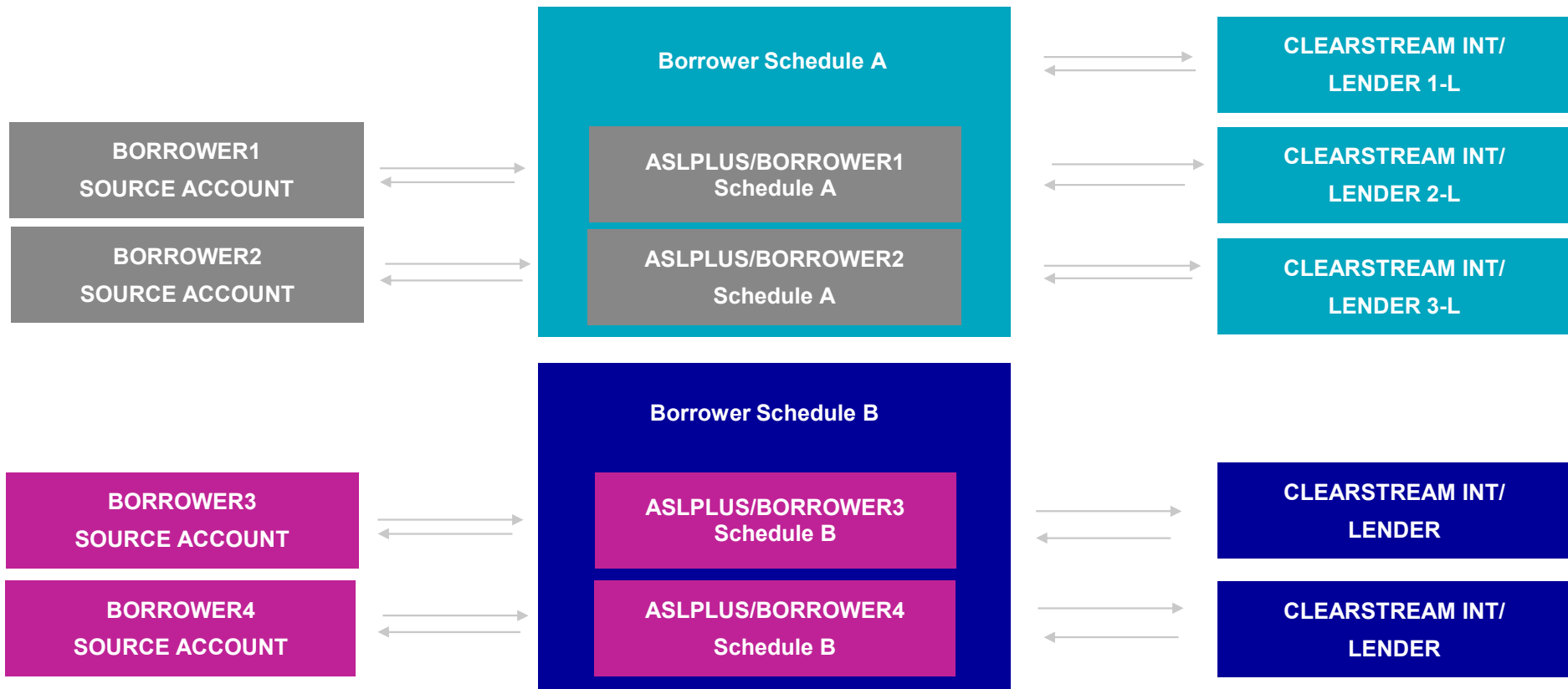


ASLplus: Collateral Details

- All collateral received from ASL+ Borrowers will be segregated in favour of the Lenders. Allocation of the collateral via the Clearstream collateral management system (CmaX).
- Collateral securities are transferred from the omnibus CBL collateral pool to a dedicated collateral account in the name of Clearstream International acting as collateral agent (and pledgor) on behalf of each Lender (and pledgee).
- Segregation of the collateral pledged in favour of the Lenders (and collateral pledgees).
- Collateral securities reported in the Securities Financing Collateral Report (SFCR) as per the transfer onto the new dedicated and segregated collateral account.

Perfection of the pledge
under the Luxembourg
law on financial
collateral
arrangements.

ASLplus: Collateral Breakdown



ASLplus: Collateral Eligibility

Collateral eligibility criteria

Long-term and short-term fixed income Securities

- Government and Sovereign: 1.5% to 13.5%
- Supranational & Agency: 1.5% to 11.5%
- Corporate and Others: 5.5% to 11.0%

All Equities: 12%

Price age additional haircut

- Over 2 days: 100%

Lenders receive a first-ranking pledge on the Securities used as Collateral.

The Collateral received by Clearstream Banking is pledged in favour of the Lenders and registered in a specific Collateral Account opened in the name of Clearstream International as collateral agent.

Lending Recall Process

Recall time lines

Lender instructions input on T before 10:45 ¹² after 10:45 ¹²	T	T+1	T+2	T+3	After end of Recall Period
	Start Date		End Date ³		
		Start Date		End Date ³	

 Lender's Substitution Period

 Recall Period

1. For U.S. Securities not including U.S. Treasuries , this deadline is 15:00 CET.
2. For U.S. Treasuries , this deadline is 16:30 CET.
3. For U.S. Treasuries, European Economic Area and Swiss denominated Securities, the Recall Period End Date is one Business Day after Start Date; for equities, it will be in accordance with the standard settlement time for such equities on the exchange.

Benefits to Securities Lending: Lenders & Borrowers

Fails Securities Lending ASL principal

1

- Enhance settlement efficiency, cash management and mitigate reputational risk
- Reduce the risk of cash penalties and mandatory buy-ins due to CSDR SDR (Settlement Discipline Regime)
- Mitigate settlement fails

2

- Reduce overhead costs for operational and administrative process, including the management of collateral
- Daily, weekly and monthly reports via flexible communication options

3

- Maintain anonymity: Clearstream is acting as a guarantor and all borrowers are undisclosed
- Single counterparty with AA rating

4

- Increase portfolio yield
- Guarantee against borrower's default
- Flexibility and freedom to further restrict their automatic lending activity
- Automatic lender substitutions and recall procedure
- Retain rights to income proceeds

#ConnectingMarkets

Clearstream's
global market
network



Contacts

Nathalia Teofilo

Vice President | Sales & Relationship Management LATAM

Clearstream Banking S.A.
1155 Avenue of the Americas, 19th Floor
New York, NY 11362
Phone +1.347.952.6488
nathalia.teofilo@clearstream.com