

Perspectives on European Repo Markets – Presentation to CIMPA Committee

Frank Gast

Managing Director, Member of the Management Board Eurex Repo GmbH &
Global Head of Repo Sales, Eurex

Member of ICMA European Repo & Collateral Council (ERCC)
Member of ICMA Regional Committee Germany

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Content

- ✓ History of repo product offerings and how these have developed – what have been the drivers for demand.
- ✓ How cleared repo fits into the European repo landscape
- ✓ What are the key determinants of success for triparty cleared products?
- ✓ The advantages that clearing brings to the various groups of market participants, including the various types of cash providers and cash borrowers.
- ✓ Eurex experience with cleared repo during periods of stress e.g. GFC and Covid-19.
- ✓ The role that official sector institutions play, including the Bundesbank and the German Finance Agency.
- ✓ How risk is managed by Eurex, including through haircuts.
- ✓ How we see cleared repo developing further in both Europe and the ROW.

Executive Summary



Importance and size of European repo markets has continuously grown over the last two decades

- New record daily outstanding volume of more than €11 trillion (about €2 trillion in 2001; about €6 trillion in 2011)
- Main execution channels:
 - 1) Direct
 - 2) Electronic trading & CCP
 - 3) Voice-broker
 - 4) Tri-party
- Share of electronic trading & CCP about 30% across all cash currencies; about 50% in EUR cash



Eurex Repo (MTF), Eurex Clearing (CCP) and Clearstream (ICSD) offer centrally cleared repo with integrated trading, clearing and settlement

- Reliable availability of repo liquidity during all major financial crises since 2005
- Large, diverse and growing participant base (160+)
- Broad collateral and currency scope (approx. 13,000 eligible securities and 4 cash currencies) with standardized baskets
- Settlement efficiency close to 100%
- Record daily outstanding volume of >EUR 900bn of which approx. 10% attributable to buy-side in 2023
- Current activity at Eurex split in three segments driven by motivation i.e. security driven (special ISIN 54%) or cash driven (GC Pooling 41% or GC repo 5%)

EUREX



Basket design typically driven by client demand taking into considerations interests of cash takers and cash providers, i.e.

- CCP eligibility
- LCR treatment
- Central Bank eligibility
- Netting



GC Pooling and GC basket repo business need to be differentiated across multiple dimensions

- Settlement
- Eligibility
- Diversification
- Auto-allocation and right to substitute
- Re-use of collateral



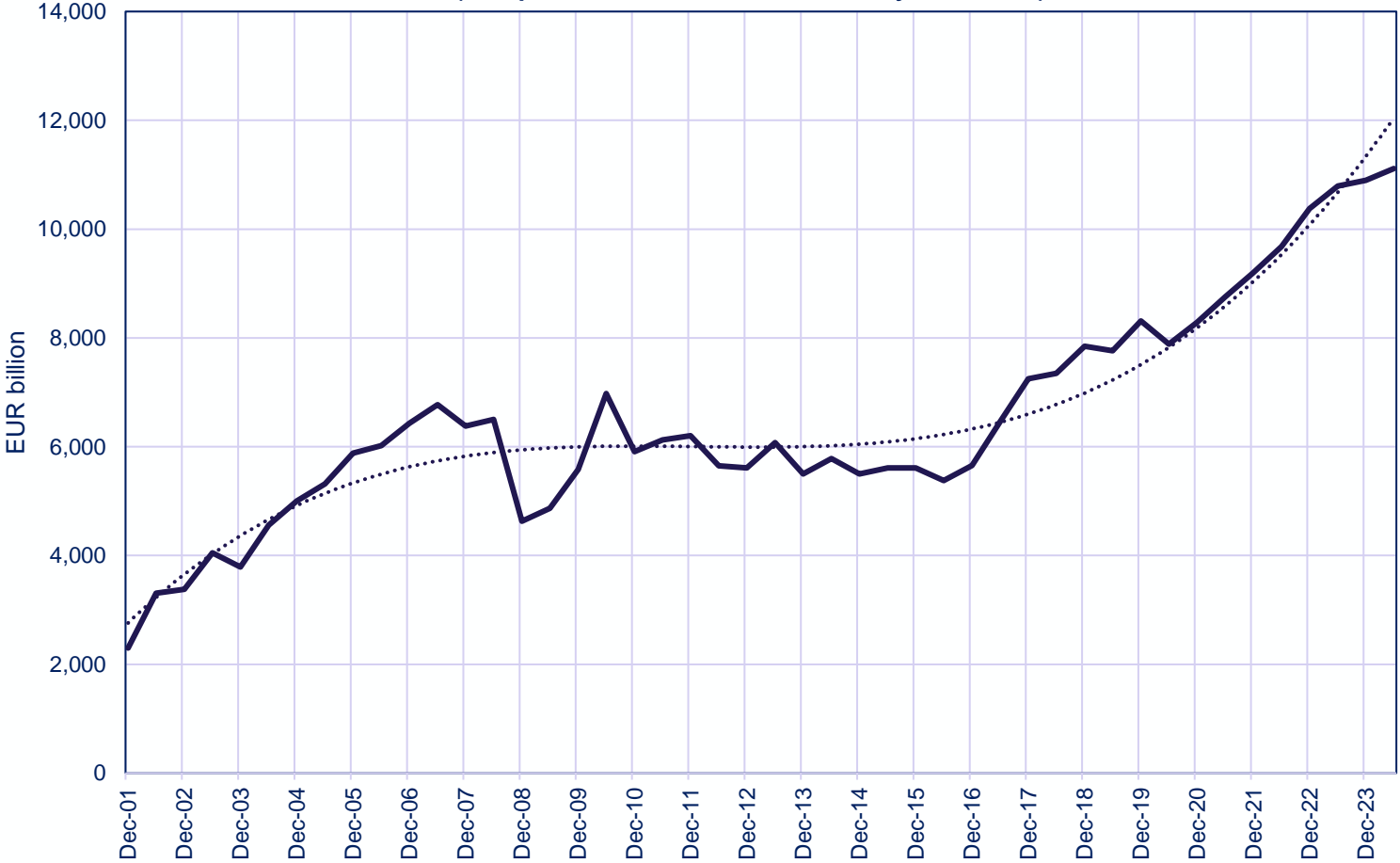
Cleared funding & financing markets will become more important and will provide opportunities for the industry as a whole

- Demand for resilient and robust infrastructure
- Regulation / Efficient balance sheet management
- Operational efficiency / New technologies, DLT...
- Crisis management
- Buyside demand

European Repo Market Development (ICMA ERCC Survey)

Total daily outstanding volume € 11,114bn

(as per June 2024, survey no. 47)



All cash currencies:

- EUR 53.9%
- USD 23.3%
- GBP 13.6%
- JPY 5.4%
- Others 3.8%

Collateral analysis:

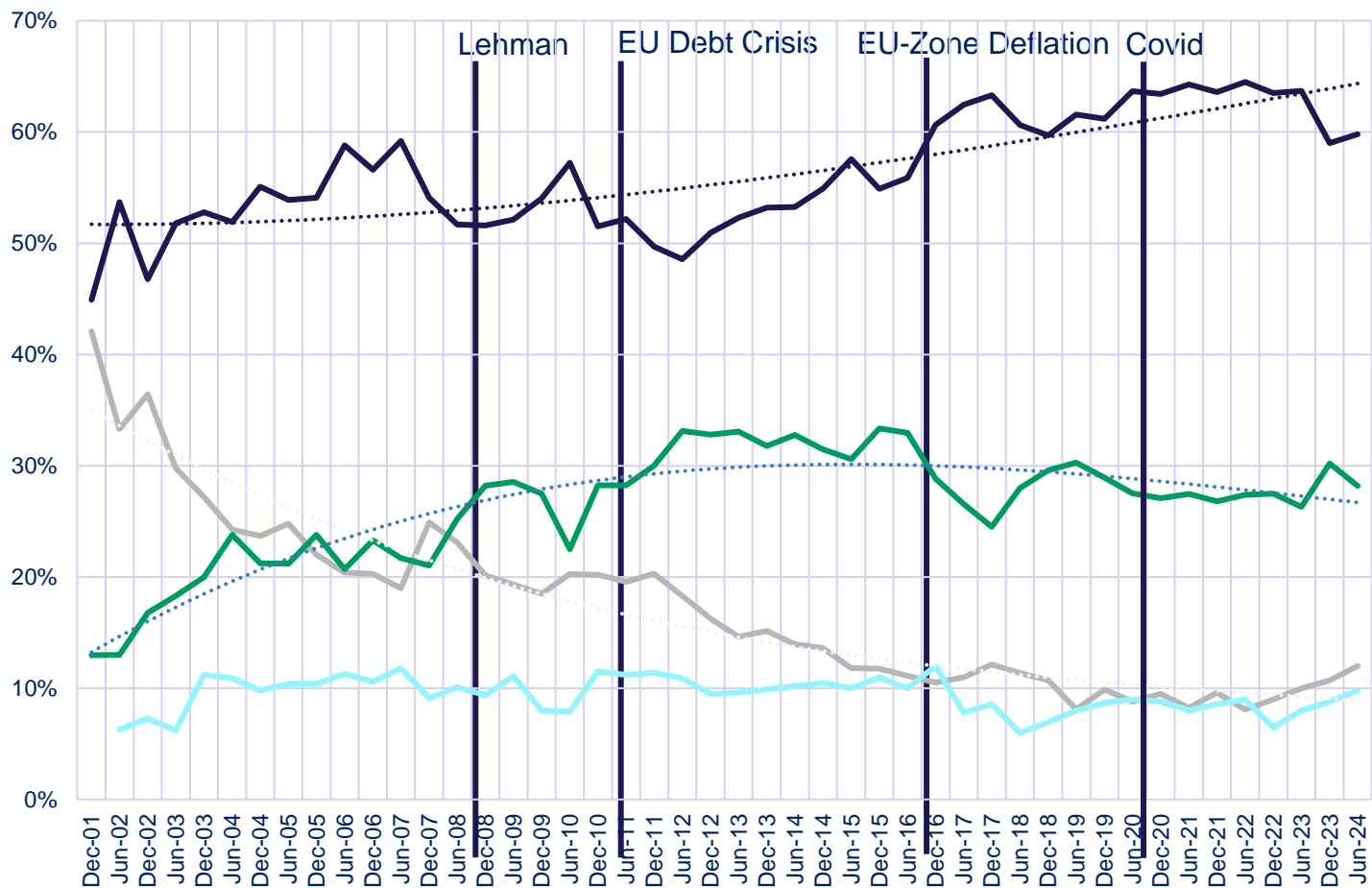
- EU gov bonds: 85.6%



European Repo Market Development (ICMA ERCC Survey)

Analysis by execution channel

all cash currencies (EUR, USD, GBP, JPY) – survey no. 47 June 2024



Direct (incl. tri-party) 59.8%

Trading Venues incl. CCP 28.2%
(note: in EUR 48.3%)

Voice Broker = 12.0% (10.7%)

Tri-party 9.8%



EUREX Architects of trusted markets



We stand for the leading European derivatives exchange and one of the leading central counterparties globally (founded 1998, formerly DTB)



We are the architects of market liquidity, efficiency and integrity by providing our customers with innovative solutions to seamlessly manage risk



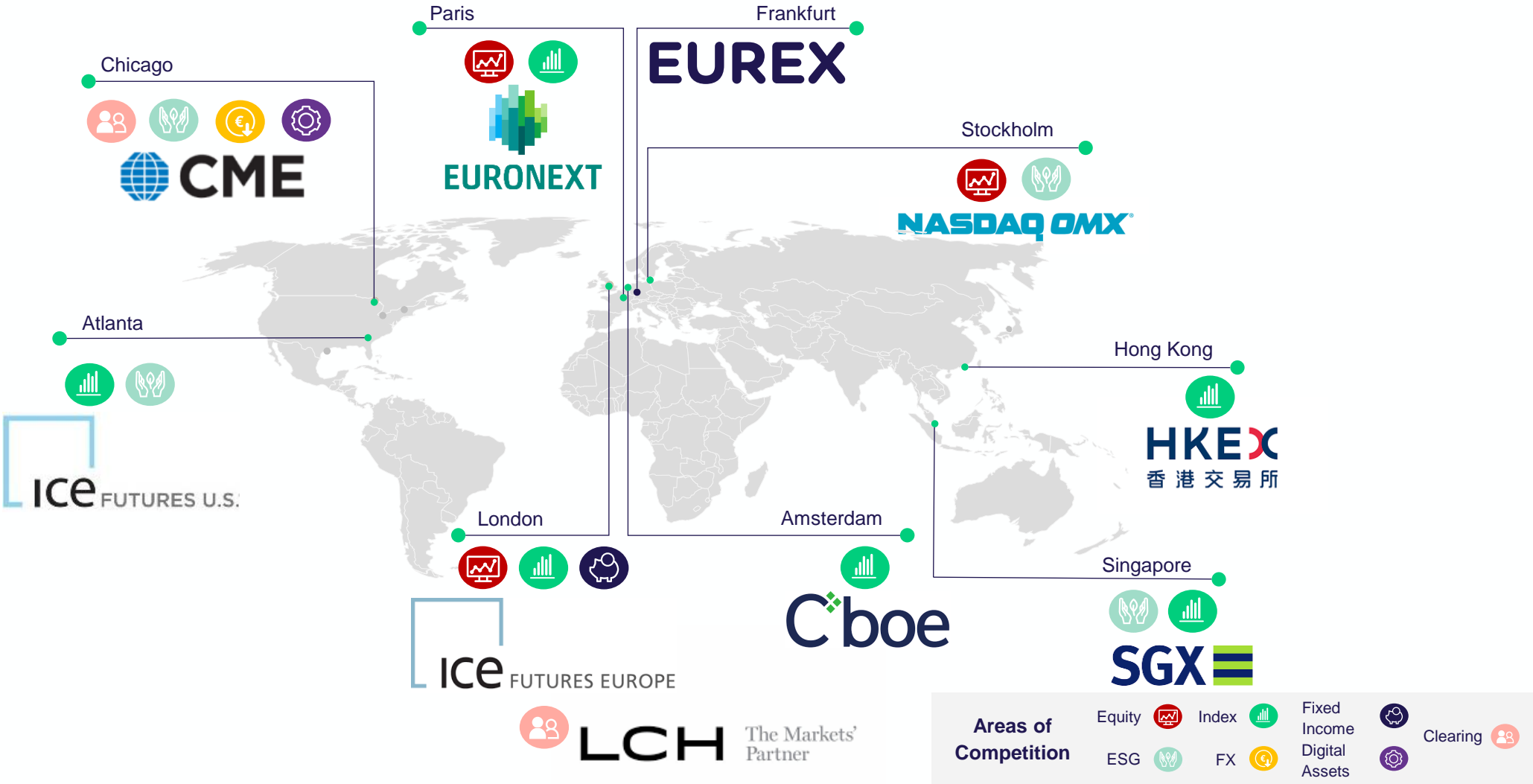
We strive to be the globally trusted home of trading, clearing and risk management, driving the industry with an extensive offer of innovative products

In trading, Eurex masterminds the most efficient derivatives landscape with open and low-cost electronic access, pioneering technology and ingenious product offering; client distribution across 4 continents covering 21 hours of access in all time-zones

In clearing, Eurex builds trusted relationships with and among market participants, enabling them to manage their risk via unique clearing models and technology

About **300 trading members** and about **80 clearing members**
from more than **30 countries**

Derivatives exchanges in a global competitive landscape



Eurex Repo GmbH – The Trading Venue



Founded in 2001 as Multilateral Trading Facility (MTF/ATS) in Germany – regulated by BaFin



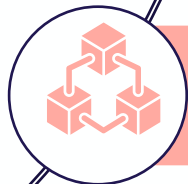
Anonymous trading via orderbook & pre-arranged



Standardized collateral baskets (GC Pooling, GC Repo) as well as single ISIN repo (special repo)

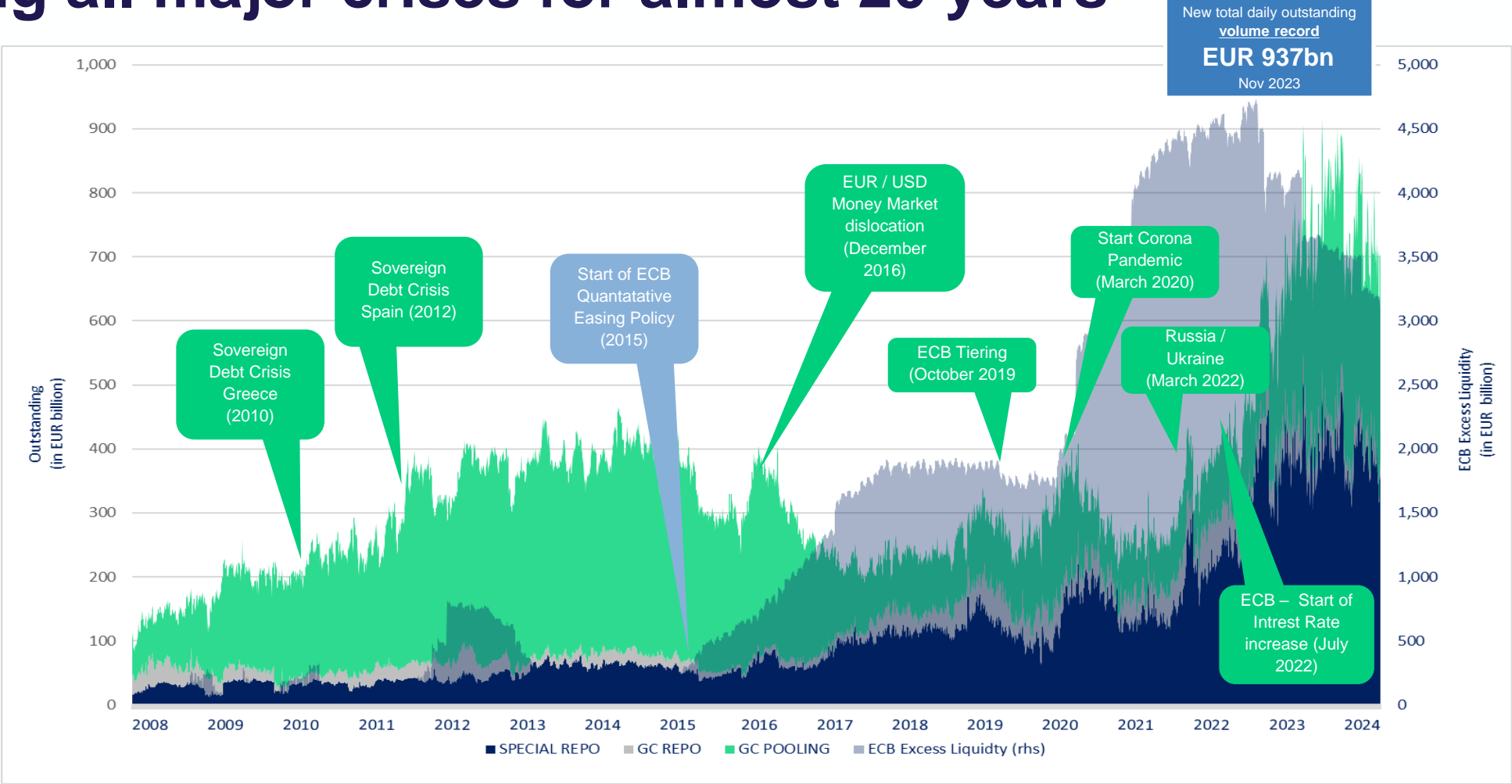


Multilateral standard legal agreement allows trading to 160+ counterparts with additional bilateral agreements



Integrated value chain of trading, CCP clearing, collateral management and settlement

Eurex cleared tri-party repo liquidity has shown resilience during all major crises for almost 20 years



Remark: Calculation of outstanding volumes according to ICMA methodology since 2016

Eurex Repo - History & milestones – Road of innovation

Foundation of
Eurex Repo MTF &

Launch of the
Euro Repo Market
(GC & special repo)

Launch of Euro GC Pooling
ECB EXTended Basket
(2nd GC Pooling Basket)

Launch of
GC Pooling
Equity Basket

2001

2005

2008

2010

2011

2012

Launch of **GC Pooling**
(cleared tri-party repo)

Launch of the **USD GC**
Pooling Segment on Eurex
Repo

Launch of New **Broker Facility**

Eurex Repo - History & milestones – Road of innovation

Launch of **STOXX GC Pooling Indices**

Launch of **first buyside access model** for corporates, insurance companies (net cash provider only)

Launch of **Select Finance (ISA Direct)** as new trading permission for **buyside clients** (cash provider and cash taker)

Launch of first **CTD Basket**

Launch of first **Green Bond GC Basket**

Introduction of new **GC Pooling Green Bond Basket**



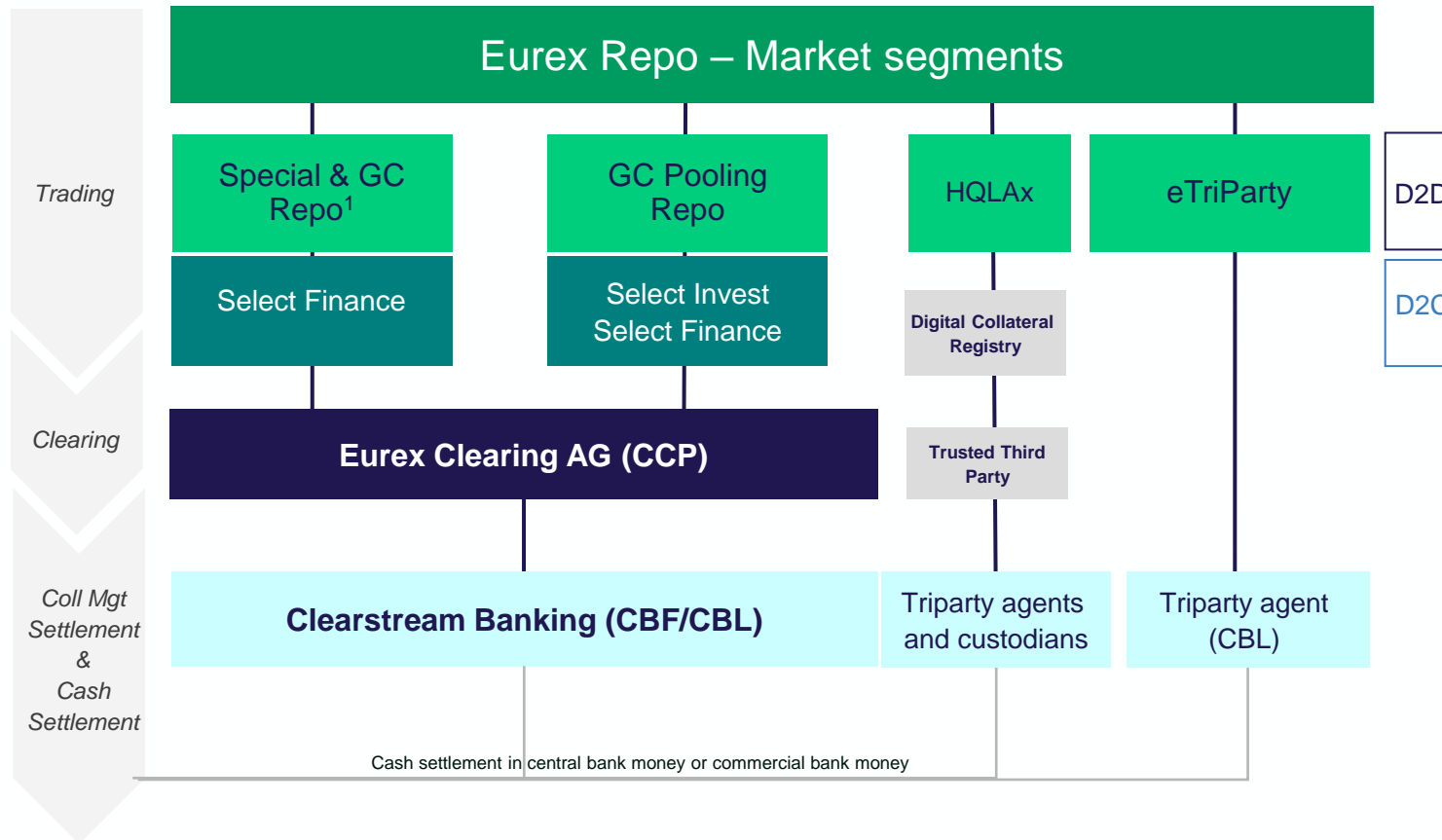
Introduction of the new **GC Pooling INT MXQ Basket**

Introduction of the new **Repo Partnership Program**

Extension to **ISA Direct Indemnified** buyside model for Hedge Funds

Eurex Repo – High level overview of segments

Eurex Repo operates the following segments for secured funding and financing:



Eurex Repo is the **leading European marketplace** for international secured funding and financing with more than **160 participants** from buy and sell side since 2001.

It offers integrated markets for electronic **trading, clearing, collateral management and settlement** of repo transactions.

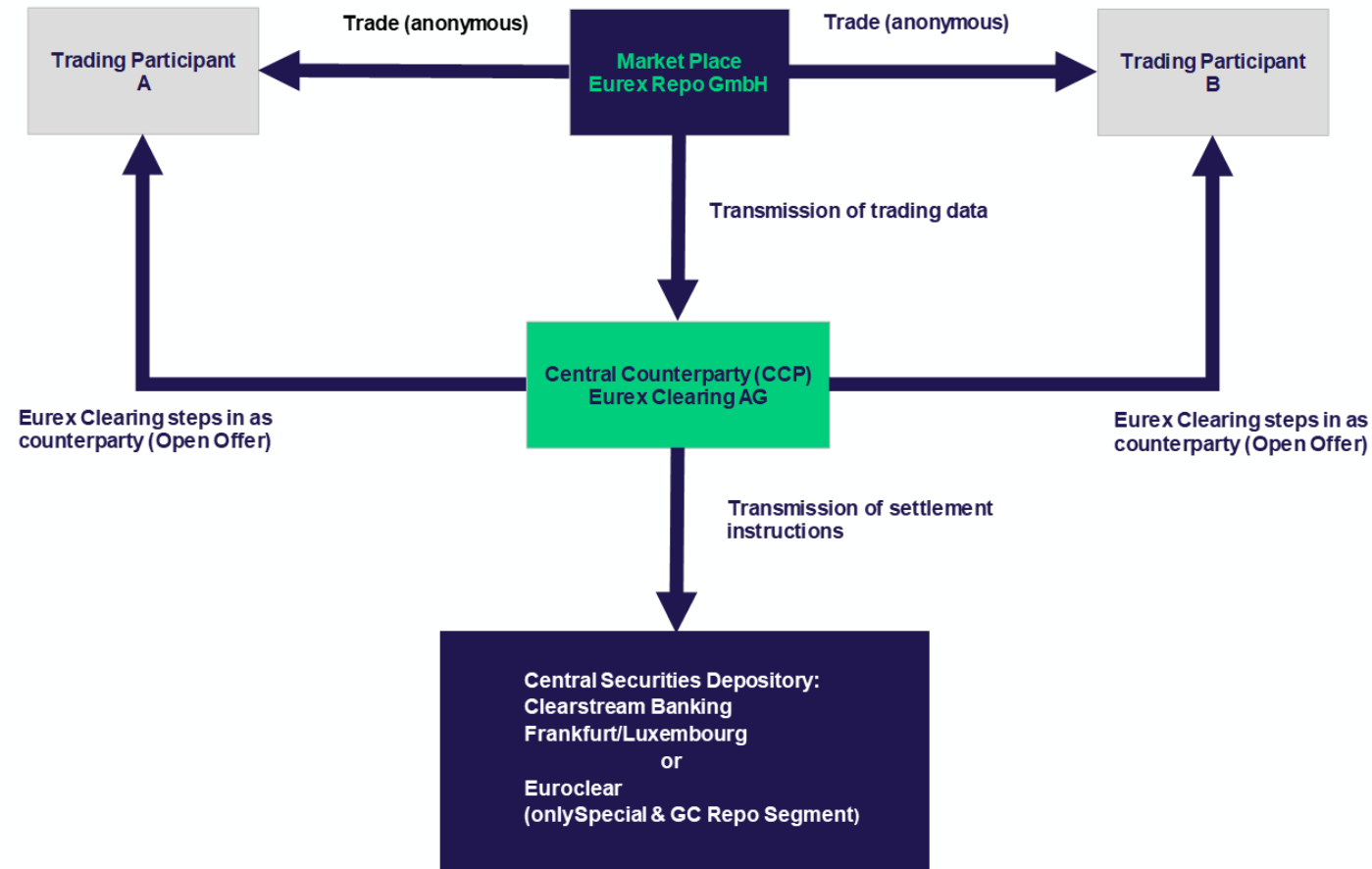
Its **GC Pooling Repo Segment** is the European **benchmark** for standardized secured funding with central clearing and integrated tri-party collateral management.

¹ In addition to Clearstream Banking, settlement also via Euroclear Banking possible

Eurex operates integrated cash and securities driven repo

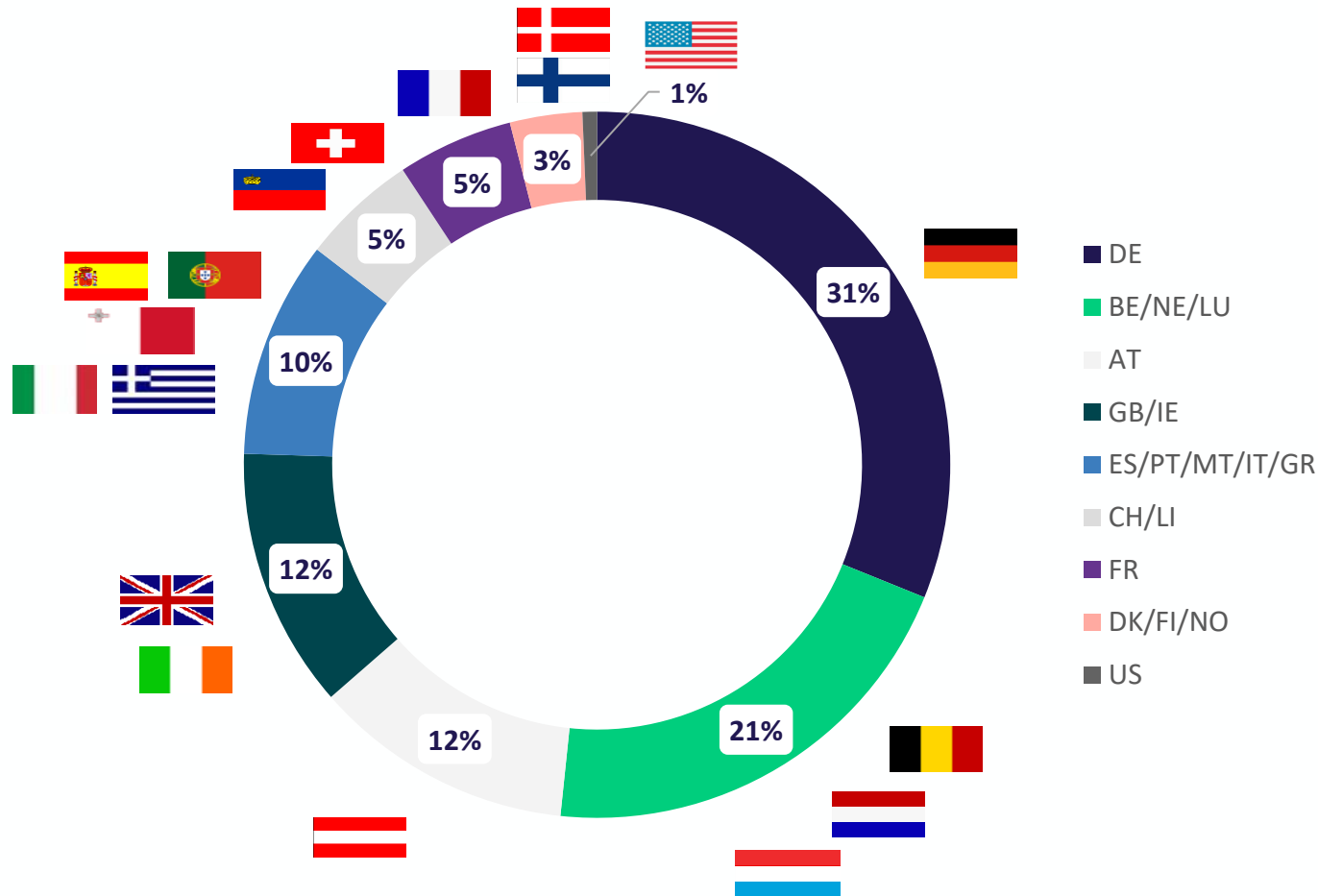
	GC Pooling Segment (cleared tri-party repo)	Special & GC Segment
Market Driver	Cash	Securities
Collateral	Pre-defined baskets with total of ~13,000 ISINs	Specific Securities & 41 GC Baskets with total of approx. 8,000 ISINs
Collateral Issuer Types	Central Governments, Local Governments, Credit Institutions, Supranationals, Corporates, Agencies	Central Governments, Local Governments, Credit Institutions, Supranationals, Corporates, Agencies
Currencies	EUR, USD, CHF, GBP	EUR and GBP
Duration	O/N to 3 years	O/N to 3 years
Allocation	Automated & optimized	Manual allocation by traders (only GC trades)
Substitution	Real-time substitution	No substitutions
Settlement	Triparty DvP, Netting on basket / currency	DVP, Netting on single ISIN
CSD/ICSD	Clearstream (FFT or LUX)	Clearstream (FFT/LUX) or Euroclear

Market model enables electronic trading with integrated CCP, collateral management & settlement



Eurex Repo – Pan-European participant structure

Large, diverse and well-balanced client base – 160+ clients from 20 countries



Geographical Expansion as of October 2024

EUREX

Types of participants

- Commercial Banks / Credit Institutions
- Central banks: Deutsche Bundesbank, Banque Centrale du Luxembourg, Swiss National Bank, Danmarks National Bank, Central Bank of Malta
- Debt Management Offices: Deutsche Finanzagentur, Dutch State Treasury Agency and Austrian Finance Agency
- Supranational organizations e.g. KfW, European Investment Bank (EIB), EFSF, ESM
- German regional country (Land Rheinland-Pfalz)
- Pension Funds & Insurance Companies
- Corporates
- Brokers

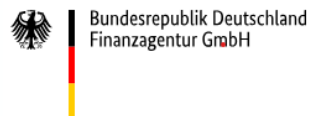
See current Eurex Repo interbank participant list on: [Eurex Repo](#)

All Select Invest participants have access to GC Pooling.

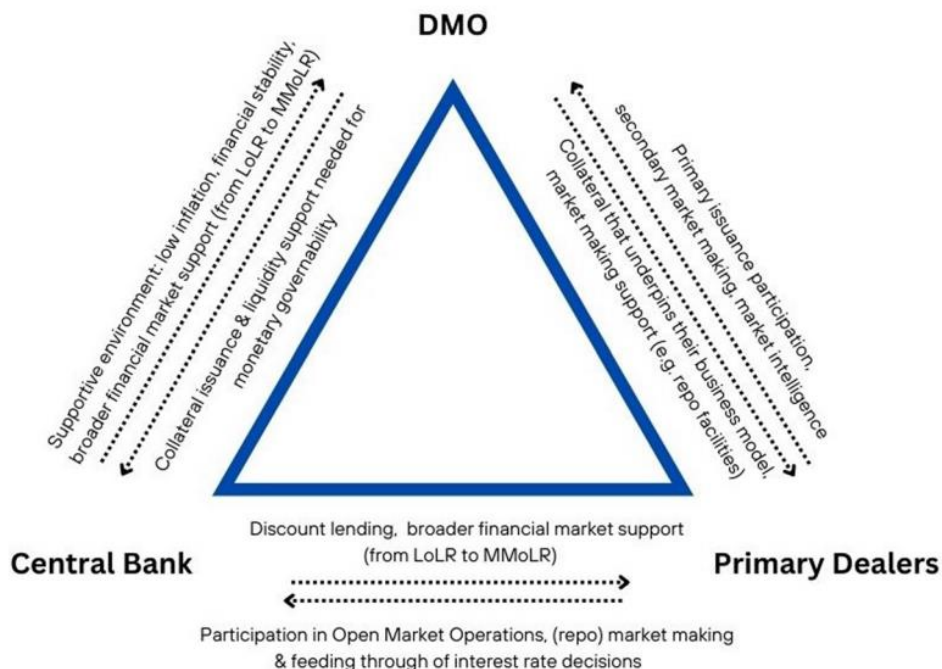
Current membership list on: [Participant_list_Repo_and_GCP_and_SecLend.pdf \(eurex.com\)](#)

Central banks and debt management offices

The activities of the European Central Bank (ECB), national central banks (NCBs) and domestic Debt Management Offices (DMOs) are integral to understanding the repo market landscape in the Eurozone



Interplay between public authorities and the market¹



- Maintains the federal government's budget and cash financing ensure an optimized cost and risk position
- Maintains the federal government's benchmark position as a sovereign bond issuer in the euro area, including targeted interventions in times of squeezes and scarcity
- Largest client of Eurex Repo with its management of cash balances and supporting liquidity in Bunds
- Longstanding and trusted relationship
- Member of the Eurex Repo Board Advisory Committee

Mandated for safeguarding price stability and the stability of the financial system:

Bundesbank (BuBa)

- Trading Member of Eurex Repo for single ISIN (special repo in BUNDs)
- Clearing member of Eurex Clearing for derivatives and repo
- Long-standing and trusted relationship, with Eurex acting as an advisor on repo market functioning
- Eurex clients can re-use GC Pooling collateral for liquidity operations with BuBa
- Member (non-voting) of the Eurex Repo Board Advisory Committee



European Central Bank (ECB)

- Relationships at senior and operational levels, including market operations and supervision directorates
- Eurex is a member of the Money Market Contact Group
- Eurex acts in an advisory capacity on a broad range of topics, including repo and broader financial market functioning, and liquidity support operations

1. Fabian Pape & Charlotte Rommerskirchen (08 Feb 2024): Co-working in the collateral factory: analyzing the infrastructural entanglements of public debt management, central banking, and primary dealer systems, Review of International Political Economy, DOI: 10.1080/09692290.2024.2313476

Introduction to GC Pooling (cleared tri-party repo)

Key characteristics of GC Pooling (cleared tri-party repo)

Liquidity	Flexibility	Efficiency
<ul style="list-style-type: none">• 160+ participants incl. banks, finance agencies, central banks, pension funds, insurances and corporates• Anonymous trading on F7 trading venue and Eurex Clearing stepping in as central counterparty• Transparent trading prices on an open order book basis• Strong volumes during all major financial crisis• 7 standardized fixed income baskets incl. pan European ECB and ECB EXTended funding benchmark baskets for HQLA	<ul style="list-style-type: none">• 13,000+ securities denominated in 10 currencies incl. government, covered, agency and corporate bonds• Collateral re-use for ECG margin requirements or in central bank liquidity operations for GC Pooling repo transactions• Additional re-use opportunities planned for UMR and additional domestic central banks with implementation of ECMS• Automated allocation of securities in CmaX replaces• Real-time substitution of securities by the cash taker	<ul style="list-style-type: none">• Use of existing and established STP-infrastructure (trading-clearing-settlement)• Settlement netting• Intraday funding with 30 minutes of trade execution• Real-time risk evaluation of all trading positions• Settlement efficiency rate close to 100%• Capital cost reduction through balance sheet-netting between single ISIN repo and GC Pooling and single counterparty (QCCP)

Major benefits of GC Pooling (cleared tri-party repo)

Take advantage of collateralized funding



Monetize diverse set of European and global HQLA

- Raise or place EUR, USD, GBP or CHF cash vs. standardized and most diverse set of securities eligible at any CCP globally for optimal liquidity.



HQLAs

- Basket design ensures preferable treatment under Liquidity Coverage Ratio (ECB Basket complies with European Level 1 HQLA standards for the European LCR. The other baskets have market-driven, non-regulatory designs).



Efficient intraday funding & straight-through-processing from execution to settlement

- Settle intraday within 30 minutes of trade conclusion from 7:30 CET until 17:30 CET.



Central bank settlement and balance sheet netting within single ISIN repo

- GC Pooling settlement in T2S – central bank money (or optionally commercial bank money) allows for optimal bank liquidity management and enables balance sheet netting of GC tri-party with special repo via single account.



Re-use of GC Pooling collateral for Eurex Clearing margin requirements and central bank liquidity operations

- Basket collateral received can be re-used for 1) other GC Pooling cash taking trades, 2) for margin at ECAG and 3) for central bank liquidity operations improving operational efficiency and collateral utilization.

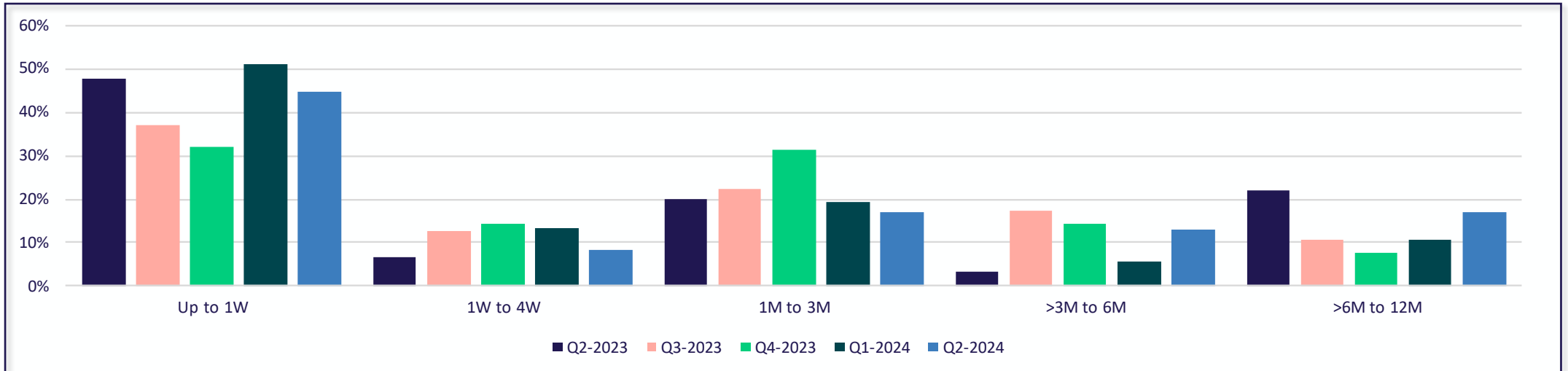


Reduced fail rates and secure Eurex FI bond futures box financing

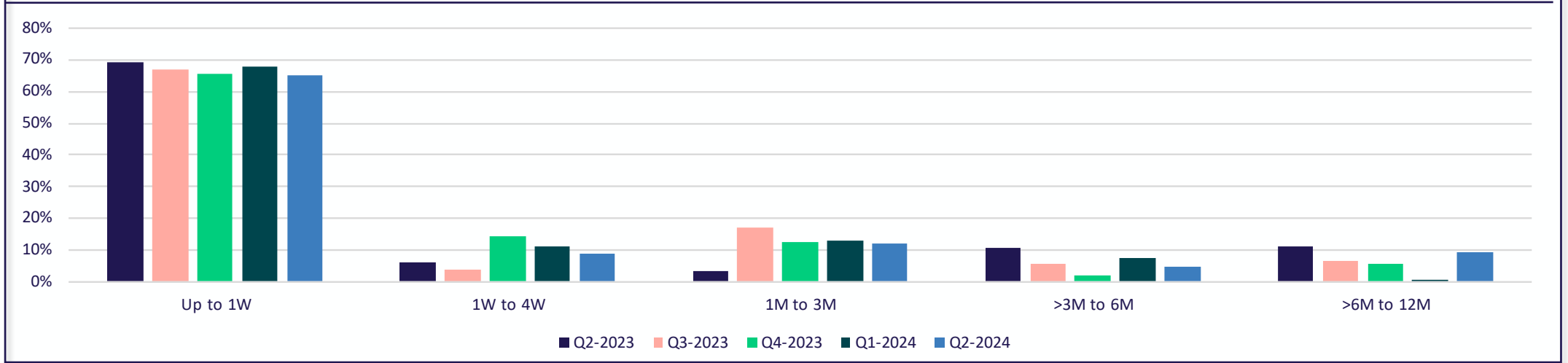
- GC Pooling fail rate is less than 0.1% due to Clearstream tri-party collateral management system and limited re-use. CTD basket financing allows for guaranteed delivery of bonds acceptable in Eurex FI futures contracts.

GC Pooling term repo volume up to 12M traded provides important netting benefits for banks

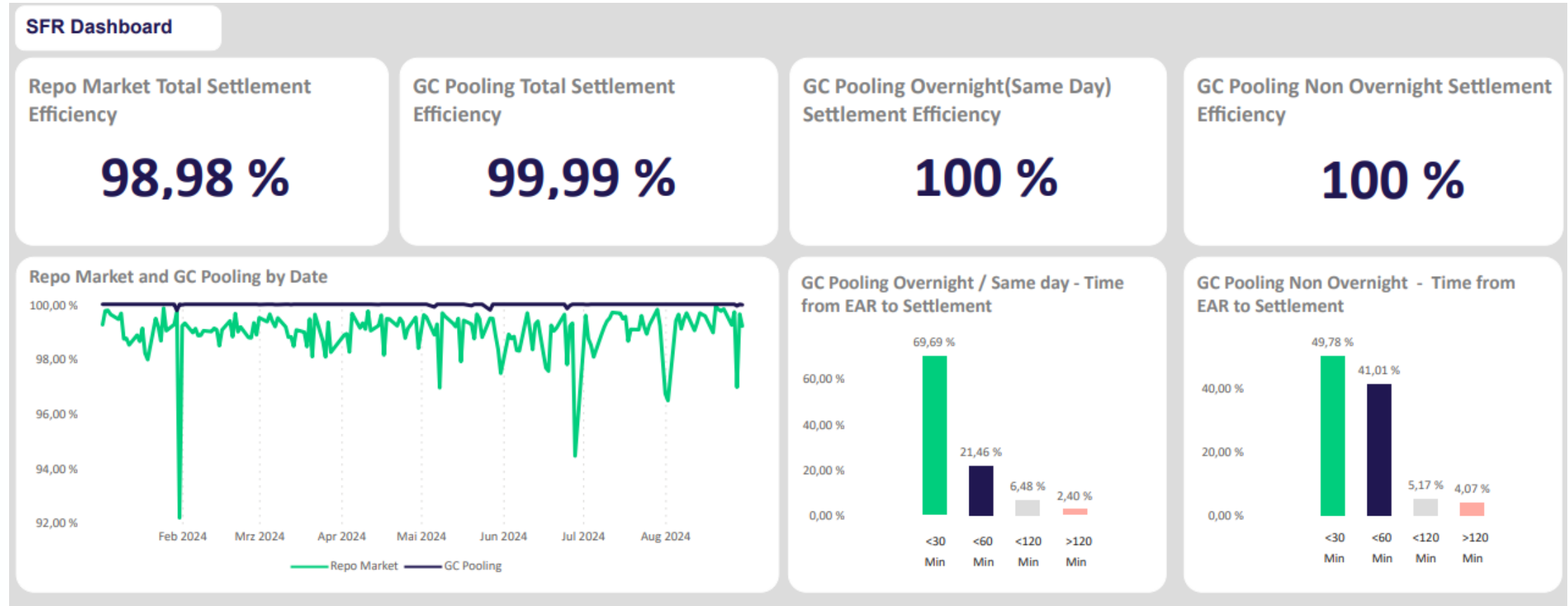
ECB Basket



EXTended Basket



Settlement Efficiency at Eurex Repo close to 100%



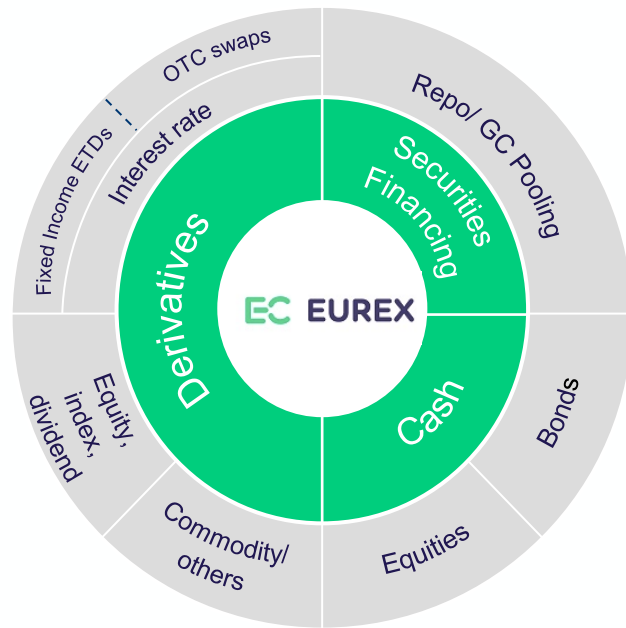
Source: Eurex Clearing

Increase in buy-side participation – Key benefits of repo clearing for the buy-side



Introduction to Eurex Clearing CCP

Eurex Clearing is a fully integrated QCCP maximising capital, margin and collateral efficiencies across instruments



Capital efficiency

- Single legal cross product netting set
- Capital efficient clearing models across securities finance and derivatives
- Advanced netting and compression reduce gross notional and balance sheet usage

Margin efficiency

- Eurex Clearing Prisma: Live cross-product margining
- Full fixed income rates curve across listed and OTC
- Most comprehensive equity/index derivatives coverage
- Product innovation continuously complementing fixed income and equity product range

Collateral efficiency

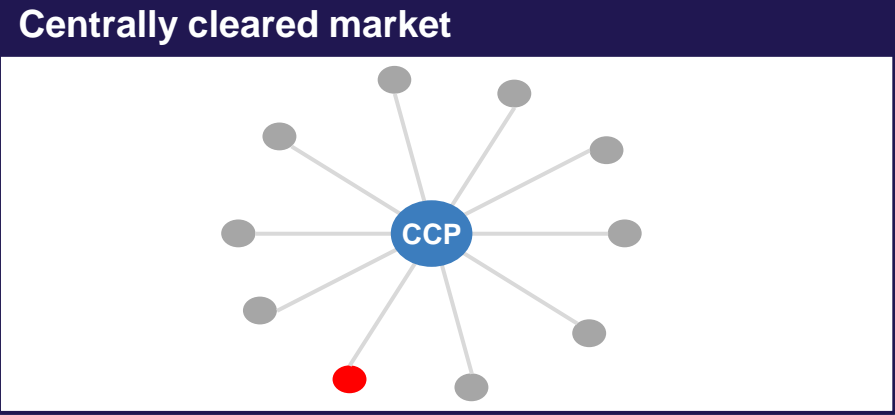
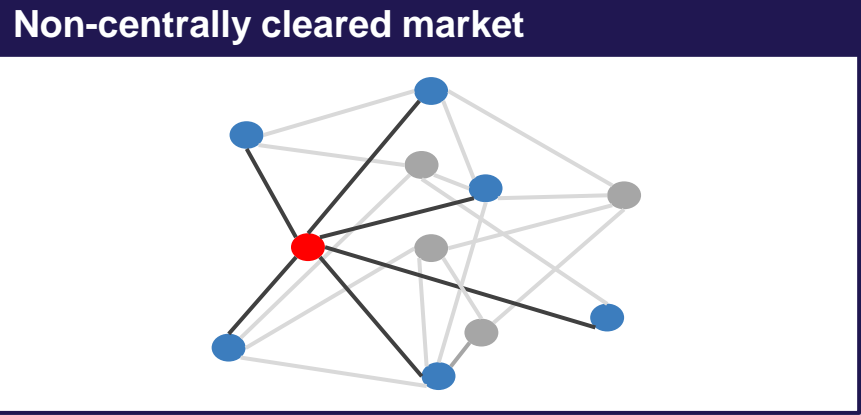
- Largest spectrum of eligible collateral
- Collateral transformation tools to increase the effective supply of collateral
- Collateral enhancement tools enable additional returns

Safety & robustness

- Superior client asset protection models
- Robust default management process with strong lines of defence, increased dedicated amount of ECAG
- Central bank access for investment and liquidity purposes to ECB & SNB

While non-centrally cleared markets remain inter-connected, CCPs offer transparency with a single point of access

- Defaulting counterparty
- Affected counterparty
- Unaffected counterparty



- Market structure**
- Liquidity provision**
- Contagion in case of counterparty default**

- **Complex** web of bilateral connections
- **High number** of connections
- **Non-transparency**

- Liquidity provision to **many market participants** to calm markets

- **Multiple** market participants are affected; hence, risk of **domino effects**
- **Uncertainty** about number and degree of affected counterparties

- **Simple**, with CCP as central intermediary
- **Novation: low number** of connections
- **Transparency** of the CCPs interdependencies

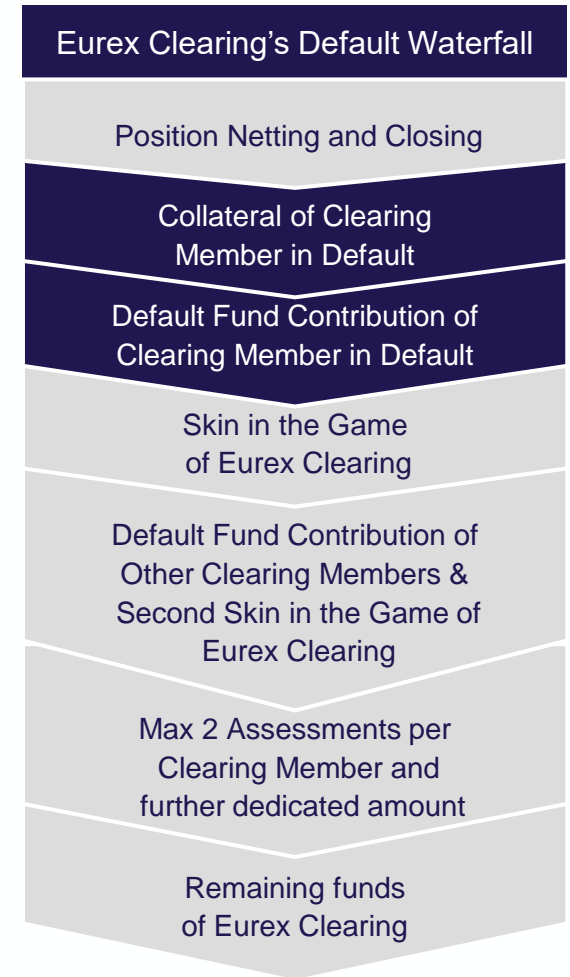
- **One access point** for **collateralized central bank liquidity** to calm markets

- **Only the CCP** and no other market participants is affected
- CCP is **designed to withstand a counterparty default** – transparency about default fund exposure

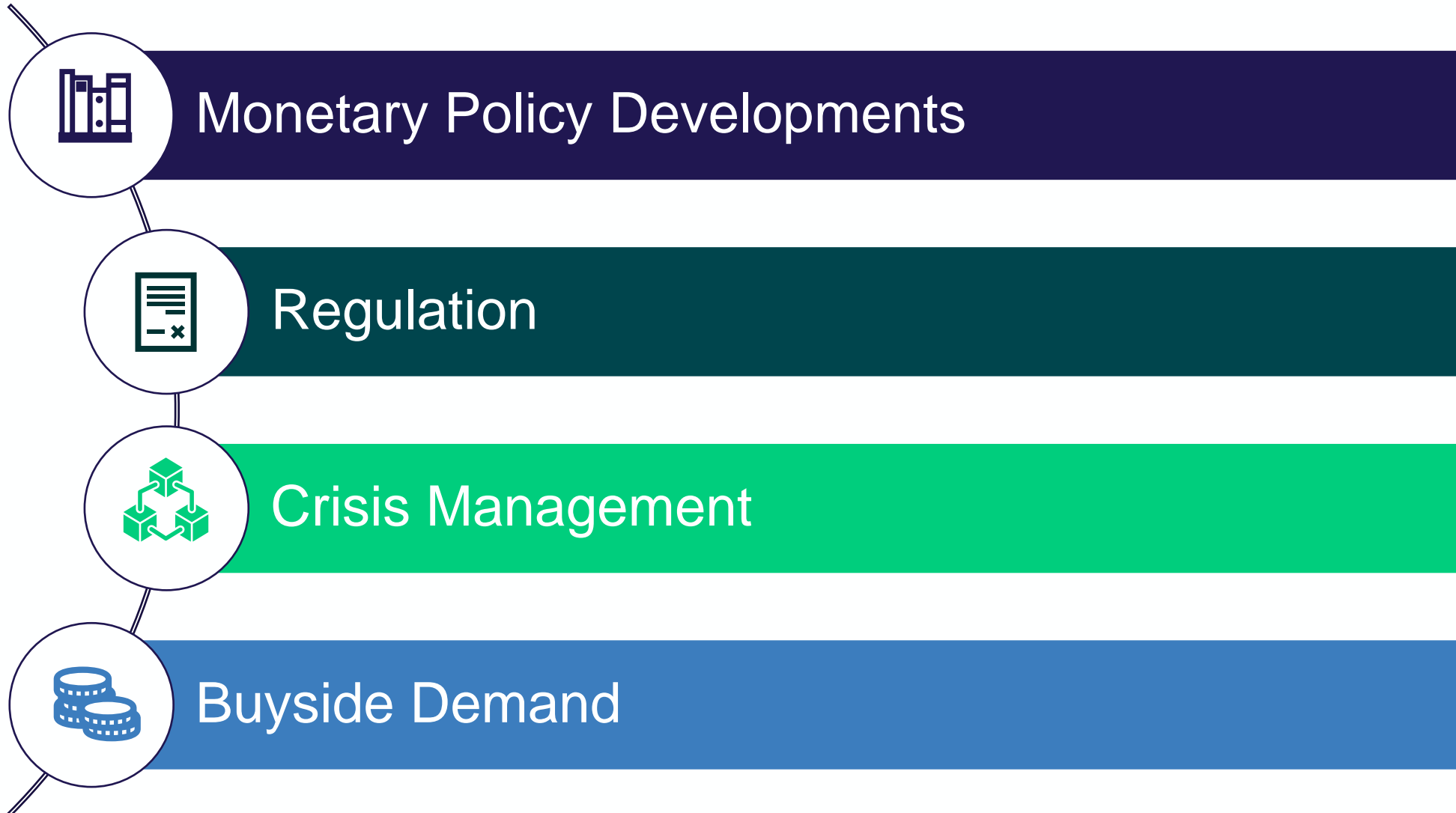
Eurex Clearing's Default Waterfall

Minimize the effect on the CCP Default Waterfall and to stabilize the markets

- Eurex Clearing provides a multi-level security system
 - First the collateral and the Default Fund contribution of the member in default are utilized.
 - After the defaulter's contributions are exhausted, an assigned dedicated amount of Eurex Clearing, a so-called "Skin in the Game", is applied, before non-defaulting clearing members' Default Fund contributions, a "Second Skin in the Game" and remaining capital of Eurex Clearing are used.
 - Each clearing member's contribution to the Default Fund is based on a minimum contribution and a dynamic component, accounting for the individual clearing member's risk situation.
- There is one segmented Default Fund for all types of products cleared by Eurex Clearing.
- Following a realization of any Default Fund contributions of non-defaulted clearing members, such clearing members are asked to provide assessments to their contributions. Eurex Clearing simultaneously provides the further dedicated amount.
- Clearing members' total liability is limited as they have to provide a maximum of two assessments per capped period.
- Buyside access models have unique waterfalls – but they do not change the risk profile of the CCP.



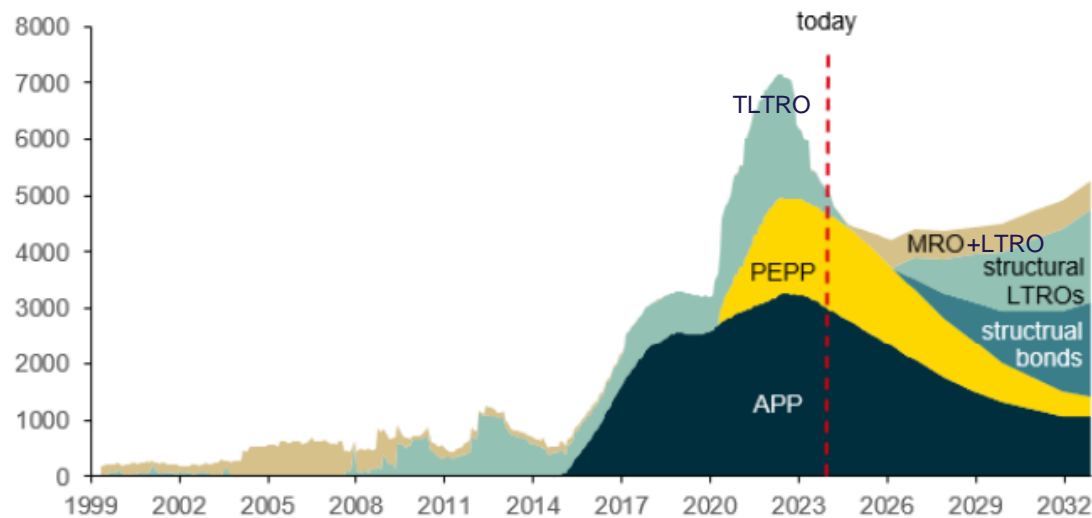
Outlook on Global Repo Markets



Monetary Policy Developments

- All major central banks are currently engaged in balance sheet normalization following record liquidity injections to mitigate the effects of the COVID-19 pandemic on developed market economies.
- The challenge for central banks in winding down balance sheets is to continue to maintain tight control over short term interest rates and monetary policy transmission.
- The ECB (and BoE) has implemented an operational framework based on a “demand-driven floor system”

When and how will the ECB balance sheet grow again?



Source: ECB, Bloomberg, Commerzbank Research

EUREX

MRO – DFR spread	<ul style="list-style-type: none"> • Main Refinancing Operation (MRO) spread above DFR changed to 15bps (from 50bps) from 18 September 2024
Liquidity operations	<ul style="list-style-type: none"> • MRO: 7d tenor at the MRO rate. • LTRO: 3M tenor at the average MRO rate. • Fixed rate, full allotment. • No change to current (broad) collateral schedule.
(Structural) Longer term liquidity operations	<ul style="list-style-type: none"> • Policy commitment announced.
Structural bond portfolio	<ul style="list-style-type: none"> • Policy commitment announced. • Will not interfere with the wind down of the APP and PEPP.

DFR: Deposit Facility Rate – the main policy rate of the ECB

MRO: Main Refinancing Operation

LTRO: Long Term Refinancing Operation

TLTRO: Targeted Long Term Refinancing Operation

APP: Asset Purchase Programme

PEPP: Pandemic Emergency Purchase Programme

Regulation

- Repo markets face the sharp-end of nearly every prudential regulatory measure being managed by large and small banks, particularly with Basel III nearing finalization.
- The costs (capital, liquidity provision) are inevitably passed-through to the buy-side / end-clients.

RWA

- Standardized floor and higher risk-weights for end-clients
- No recognition for the short-term nature of repo
- Mandatory minimum haircuts**

G-SIB, Leverage Ratio and Large Exposures

- Gross balance sheet treatment as the base case for repo (G-SIB, Leverage Ratio)
- Window dressing restricted through daily averaging requirements
- Complex substitution rules for collateralized transactions (Large Exposures, SCCL)

NSFR and LCR

- Expiry of temporary relief on required stable funding for government bond repo
- Asymmetric treatment of repo and reverse repo
- Conservative approach for open (no fixed maturity) repo transactions**

Mandatory clearing for USTs

- Benefits for financial stability come at a cost in terms of higher trading costs and curtailed liquidity
- Opening of the debate in Europe

T+1 in Europe

- Fragmentation in Europe presents intractable problems
- Repo markets will need to move to T+0

- Cleared repo presents a number of advantages in addressing regulatory constraints
- Read our whitepapers:



Crisis Management

- Enhanced oversight of NBFIs is a key priority of regulators globally. Some examples:
 - Hedge Funds' footprint in the bond-futures basis trade is highly leveraged, and a funding shock or heightened volatility in Treasury markets could force leveraged funds to abruptly unwind their positions at potentially distressed prices. The basis trade was identified as a contributor to the Sep-19 stress in US repo markets.
 - The Truss-Kwarteng mini-budget of September 2022 led to unprecedented pressure on the UK safe asset, requiring an emergency intervention by the Bank of England to buy up to £65bn of UK government bonds to halt a run on pension funds and wider financial instability.
- A central bank liquidity back-stop for a broad spectrum of NBFIs, in the event of a crisis, has been a topic of debate across jurisdictions.
- The Bank of England has been first to roll-out policy tools for NBFIs, primarily in response to the UK mini-budget crisis.
- Eurex has been actively engaged with European policymakers to explain the advantages of a liquidity back-stop for NBFIs based on centrally-cleared repo. The context has been the entry of European pension funds into scope of the clearing mandate, but the approach is relevant for other NBFIs risks.

- Landmark speeches by the Bank of England, which have shaped the UK's policy tools for banks and NBFIs:

Thirteen days in October: how central bank balance sheets can support monetary and financial stability – speech by Andrew Hauser

Given at the ECB's 2022 Conference on Money Markets

A journey of 1000 miles begins with a single step: filling gaps in the central bank liquidity toolkit – speech by Andrew Hauser

Given at a Market News International Connect Event, Chartered Accountants' Hall, London

Let's get ready to repo! – speech by Victoria Saporta

Given at Association for Financial Markets in Europe (AFME), London

Buy-side Demand

- European pension funds and insurance companies have large liquidity buffers and face constraints in deploying those assets into the bilateral repo markets.
- European pension funds recently became subject to mandatory clearing and UMR Phases V and VI, making derivative and repo markets inextricably linked.
- Buy-side face challenges in securing bank balance sheet capacity at month-ends (i.e. minimum reserve requirements are calculated at month-end); quarter-ends / year-ends (i.e. regulatory and financial reporting dates); and in times of stress.
- Since the repo market turmoil in Europe at year-end 2016, European buy-side planning for year-end begins early (even as early as August).
- Cleared repo offer deep and liquid markets for buy-side funding and financing requirements, which are robust in times of stress.
- Prudential regulation for banks will drive the buy-side to play a greater role in intermediation, liquidity provision and market making in financial markets. The global repo market must adapt to this dynamic.
- Cleared repo can be mutually beneficial for the buy-side and sell-side, where there is direct participation of the buy-side in the clearing ecosystem.
- Eurex offers direct access to clearing for repo through a number of innovative models covering:
 - Corporates, Money Market Funds – cash providers only
 - Pension Funds, Insurance Companies and other Asset Management – cash and collateral-driven markets
 - Hedge Funds – cash and collateral-driven markets
- Read our whitepaper:



Thank you!

Frank Gast

Managing Director, Member of the Management Board Eurex Repo GmbH &
Global Head of Repo Sales, Eurex

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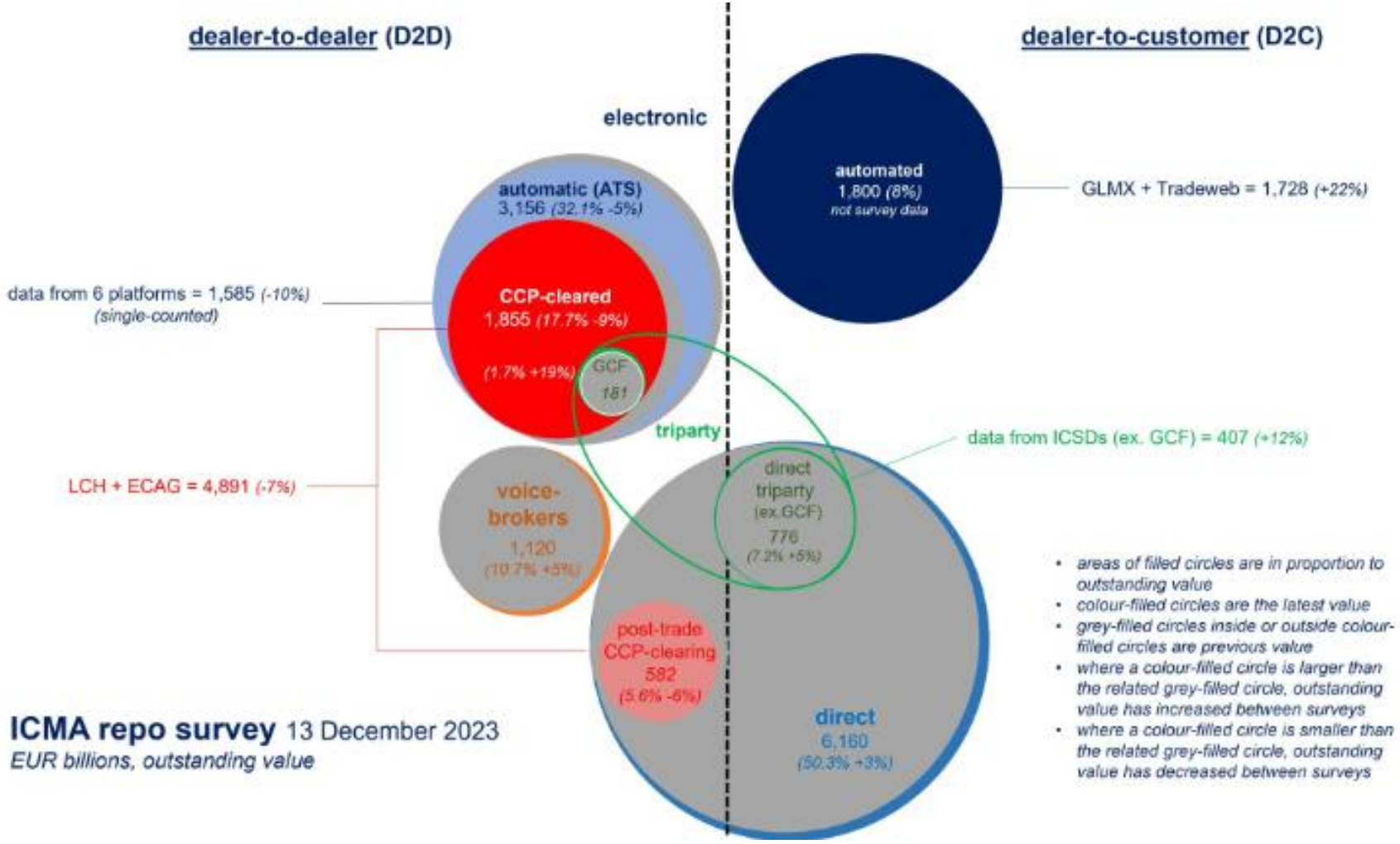
Mail: frank.gast@eurex.com
Phone: +49 173 684 0381



Appendix

Schematic map of the European repo market landscape

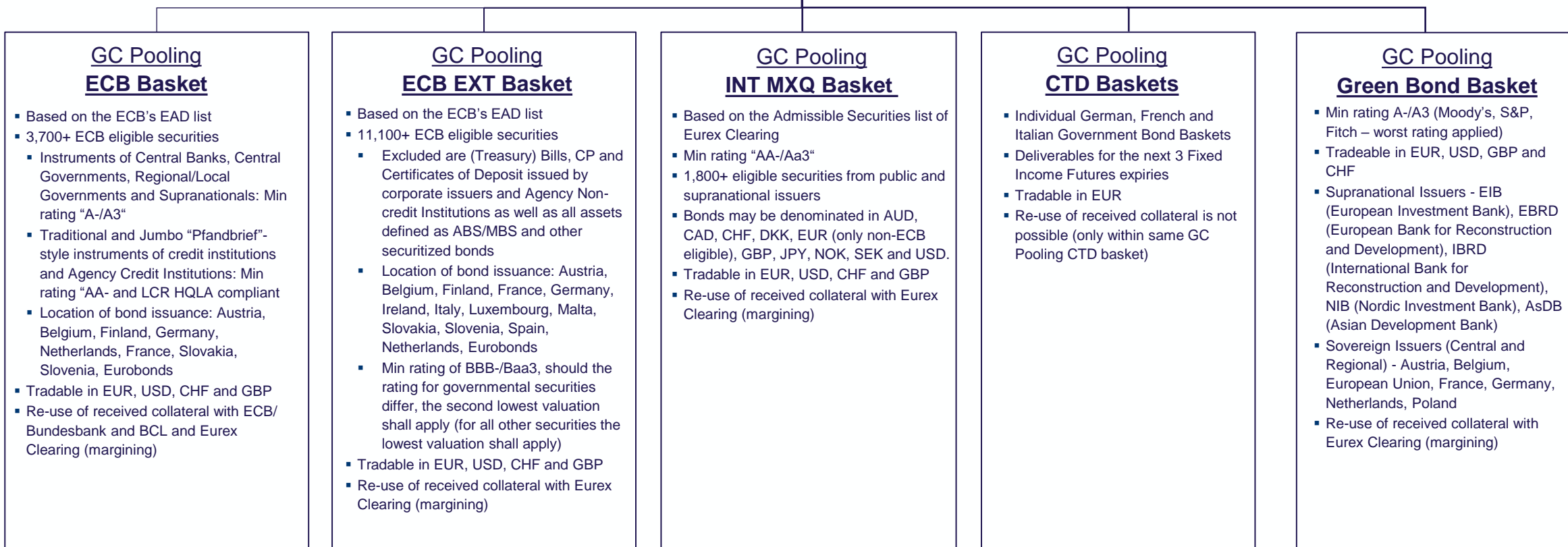
ICMA ERCC European Repo Market Survey 2023



Baskets of the GC Pooling Segment

GC Pooling Basket Overview¹

Fixed Income



¹ Up-to-date information on the eligible bonds for the Eurex GC Pooling Market can be found at: <https://www.eurex.com/ex-en/markets/eurex-repo/gcpooling>

The Special & GC Repo segment allows trading of approximately 9,000 Single ISINs¹ and 41 GC Baskets²

Basket Overview

German Baskets

German GC
German 10 Year Bond GC
German Corporate Bond GC
German Government Guaranteed GC
German Jumbo Pfandbrief GC
German Laender 10 Years Bond GC
German Laender GC
German Pfandbrief GC
KfW 10 Years Bond GC
KfW GC

European Baskets

Agency GC	European Government Guaranteed GC
Agency Ex EIB Bond GC	Finnish Government GC
Austrian Government GC	French 10 Years Bond GC
Belgian Government GC	French Covered Bond GC
Belgian 10 Years Bond GC	French Government GC
Dutch Government GC	Green Bond GC
Dutch 10 Years Bond GC	Green Bond HQ 10 Years GC
EFSF and ESM 10 Years Bond GC	Green Bond HQ GC
EFSF + ESM + EU Bond GC Basket	Italian Government 10 Years Bond GC
EIB 10 Years Bond GC	Italian Government Bond GC
EIB GC	Portuguese Government Bond GC
EU 10 Years GC	Spanish 10 Years Bond GC
EU GC	Spanish 5 Years Bond GC
European Corporate Bond GC	Spanish Government GC
European Covered Bond GC	UK Gilt GC
European Government GC	

Special Repo

All bonds belonging to the mentioned baskets can be traded special

1. Up-to-date information on the eligible Special Repo bonds for the Eurex Repo Market can be found at: <https://www.eurex.com/ex-en/markets/eurex-repo/special-repo>
2. Up-to-date information on the GC baskets for the Eurex Repo Market can be found at: <https://www.eurex.com/ex-en/markets/eurex-repo/gc-repo>

Eurex Repo – F7 Trading Venue

EUREX Eurex Repo Production

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Local Time: 15:54 CEST Last Login Time: 29.09.2022 16:04:27 CEST Ingo Deisenroth [GDBXX_DEINH]

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Trading Post Trade History Master Data

Market Watch Showing 1 to 28 of 33 records

Segment	CCY/Colla...	Collateral...	Product Term Combinati...	Best Buy	Best Sell	Σ ...	Σ S...	Av...	Last	High	Low	
GC POOLING	EUR	DE000A0AE077	Overnight (13.07.2023 - 14.07.2023)	250m	3.530 3.420	250m	2.82b	2.82b	3.432	3.420	3.440	3.420
			Tom Next (14.07.2023 - 17.07.2023)	250m	3.530 3.420	200m	1.82b	1.82b	3.429	3.430	3.430	3.420
			Spot Next (17.07.2023 - 18.07.2023)	250m	3.550 3.425	150m	1b	1b	3.430	3.430	3.430	3.430
			Corp Next (18.07.2023 - 19.07.2023)	250m	3.550	850m	850m	3.428	3.425	3.430	3.425	
			Tom 1W (14.07.2023 - 21.07.2023)	250m	3.530 3.420	200m	1b	1b	3.430	3.430	3.430	3.430
			Spot 1W (17.07.2023 - 24.07.2023)	250m	3.550 3.420	150m	795m	795m	3.431	3.430	3.435	3.430
			Corp 1W (18.07.2023 - 25.07.2023)	250m	3.550 3.430	300m	500m	500m	3.430	3.430	3.430	3.430
			Tom 2W (14.07.2023 - 28.07.2023)	250m	3.530 3.420	250m	250m	250m	3.430	3.430	3.430	3.430
			Spot 2W (17.07.2023 - 31.07.2023)	250m	3.550	200m	200m	200m	3.420	3.420	3.420	3.420
			Corp 2W (18.07.2023 - 01.08.2023)	50m	3.430 3.425	250m	200m	200m	3.430	3.430	3.430	3.430
			Spot 1M (17.07.2023 - 17.08.2023)	150m	3.550 3.510	150m						
			Spot 6M (17.07.2023 - 17.01.2024)	100m	3.980							
			Spot 9M (17.07.2023 - 17.04.2024)	100m	4.070							
			Spot 12M (17.07.2023 - 17.07.2024)	100m	4.110							
		Flex Term (17.07.2023 - 03.08.2023)	100m	3.510								
		Flex Term (17.07.2023 - 08.08.2023)	100m	3.570								
		Flex Term (17.07.2023 - 09.08.2023)	100m	3.580								
		Flex Term (17.07.2023 - 10.08.2023)	100m	3.585								
		Flex Term (17.07.2023 - 15.08.2023)	100m	3.620								
		Flex Term (17.07.2023 - 17.05.2024)			3.870	200m						
		DE000A0VKKX2	Overnight (13.07.2023 - 14.07.2023)	400m	3.525 3.430	200m	5.21b	5.21b	3.458	3.525	3.530	3.435
			Tom Next (14.07.2023 - 17.07.2023)	200m	3.460 3.445	150m	2.4b	2.4b	3.457	3.460	3.475	3.440
			Spot Next (17.07.2023 - 18.07.2023)	100m	3.480 3.450	100m	160m	160m	3.478	3.480	3.480	3.475
			Corp Next (18.07.2023 - 19.07.2023)	250m	3.550 3.440	200m						
			Tom 1W (14.07.2023 - 21.07.2023)	250m	3.530 3.450	200m						
			Spot 1W (17.07.2023 - 24.07.2023)	200m	3.480 3.455	100m						
			Corp 1W (18.07.2023 - 25.07.2023)	250m	3.550 3.450	200m						
			Tom 2W (14.07.2023 - 28.07.2023)	250m	3.530 3.450	200m						

Own Trades 0 Own Loans 0 Public Trades 572

Quote Book - REPO

SNO	Securit...	CCY/Co...	Product...	Amount	Rate	Buy/Sell	Purcha...	Repurc...	FO
1	DE000A31RJS7	PBBGR 3 5/8 10/13/2	Spot 1W	18'000'000	2.6	SELL	17.07.2023	24.07.2023	
2	DE000A31RJS7	PBBGR 3 5/8 10/13/2	Corp 1W	18'000'000	2.6	SELL	18.07.2023	25.07.2023	
3	IT0005534141	BTPS 4 1/2 10/01/53	Spot Next	15'000'000	3.49	SELL	17.07.2023	18.07.2023	
4	DE000A31RJS7	PBBGR 3 5/8 10/13/2	Tom 1W	17'500'000	2.6	SELL	14.07.2023	21.07.2023	
5	EUR	EUR	Tom Next	200'000'000	3.46	BUY	14.07.2023	17.07.2023	
6	EUR	EUR	Overnight	400'000'000	3.525	BUY	13.07.2023	14.07.2023	
7	DE000BU0E048	BUBILL 0 04/17/24	Spot Next	15'000'000	3.41	SELL	17.07.2023	18.07.2023	
8	DE0001102424	DBR 0 1/2 08/15/27	Spot Next	50'000'000	3.24	SELL	17.07.2023	18.07.2023	
9	DE0001102374	DBR 0 1/2 02/15/25	Spot Next	50'000'000	3.24	SELL	17.07.2023	18.07.2023	
10	DE0001141828	OBL 0 10/10/25	Spot Next	50'000'000	3.23	SELL	17.07.2023	18.07.2023	
11	EU000A1G00H5	EFFSF 0 05/31/26	Spot 1W	10'000'000	-1.995	SELL	17.07.2023	24.07.2023	
12	EUR	EUR	Spot 12M	100'000'000	4.1	BUY	17.07.2023	17.07.2024	
13	DE0001102390	DBR 0 1/2 02/15/26	Spot Next	20'000'000	3.25	SELL	17.07.2023	18.07.2023	
14	EUR	EUR	Tom Next	250'000'000	3.465	BUY	14.07.2023	17.07.2023	
15	DE000BU0E030	BUBILL 0 03/20/24	Spot Next	25'000'000	3.4	SELL	17.07.2023	18.07.2023	
16	DE0001102572	DBR 0 08/15/27	Spot Next	1'000'000	3.39	SELL	17.07.2023	18.07.2023	
17	FR0127613489	BTF 0 08/23/23	Spot Next	15'000'000	3.39	SELL	17.07.2023	18.07.2023	

Trading Book

Trading Act...	Buy	Sell
QUOTE	100m 3.560	
QUOTE	250m 3.530	
QUOTE		3.450 200m
QUOTE		3.440 200m

Notifications

Received Sent

Offer 0 Pre-Arranged 0 RFQ 0 IOI 0 TRD Mod/Cancel 0 Broker Offer 0 Auction 0

Own Trades 0 Own Loans 0 Public Trades 572

SNO Trade S... Segment Collater... Buy/Sell Product... Trade T... Rate Securit... Cash A... Purcha... Repurc... CCY/Co... Settlm... Auto Co... Buy Tra... Sell Tra... Securit... Dirty Pri... End Ca... Interest... Settlm... Offset Re

STOXX® GC Pooling Index Family

- STOXX calculates indices for each available fixed income basket (ECB and ECB EXT basket) in standard term: Overnight (ON), TomNext (TN), SpotNext (SN).
- The added indices are based on the GC Pooling ECB basket and will be calculated on the following standard terms: Spot - one week, - two weeks, - one month, - three months, - six months, - nine months and - twelve months.
- All indices have two versions:
 - volume-weighted average rate
 - total volume
- STOXX also offers a volume-weighted average rate and a total volume from EUR ON, TN and SN transactions in both baskets concluded on the effective day
 - STOXX GC Pooling EUR Funding Rate
 - STOXX GC Pooling EUR Funding Rate Volume
 - STOXX GC Pooling Deferred Funding Rate
 - STOXX GC Pooling Deferred Funding Rate Volume
- Daily distribution of the indices at 01:00 p.m. and 06:00 p.m. via STOXX website, Bloomberg and Reuters, a “current” version is available as well
- STOXX indices are rule-based and reflect real trades, no panels or committees involved

Repo margining at Eurex Clearing

Eurex applies risk-based margining (RBM) for Single ISIN, GC and GC Pooling markets.**

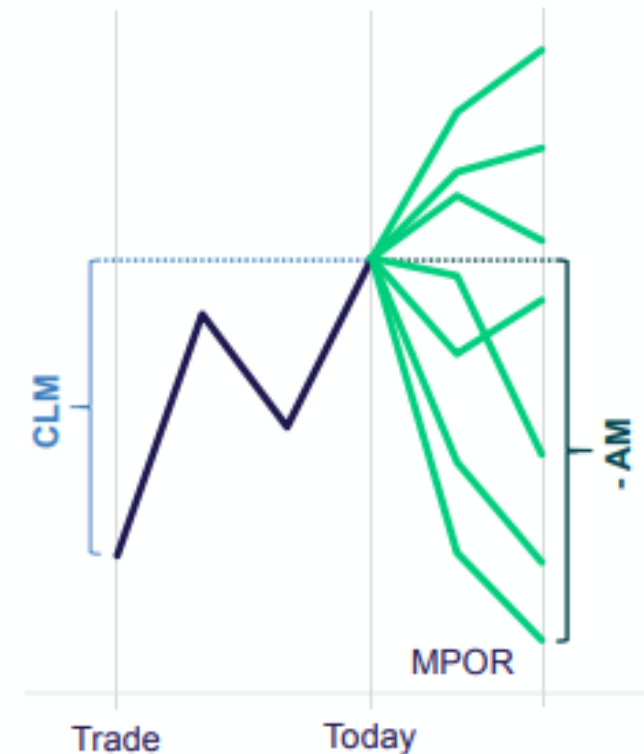
$$\text{Margin requirement} = \text{Current Liquidating Margin} + \text{Additional Margin}$$

Current Liquidating Margin

- Applies from trade execution until maturity
- Captures replacement cost of cash leg and securities leg
- Incorporates additional conservatism for interest rate shocks

Additional Margin

- Applies from front leg settlement until maturity
- Forward-looking margin covering losses on bonds to a predefined confidence level over the margin period of risk (MPOR)
- Yield shifts incorporate interest rate and credit spread components and an additional adjustment for liquidity



GFF Summit (Eurex & Clearstream) – Setting benchmarks



Coming up
“GFF Summit 2025”
28-30 January Luxembourg



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Reports, Articles, Podcasts, Webcasts & Whitepapers

- **Repo "Trading & Clearing 2023/2024"**

2023 brought substantial growth for Eurex Repo. Total average volume across all repo markets increased by approx. 70 percent with several new daily records. What were the key drivers behind these figures? What events impacted the repo business in 2023? And what will 2024 have in store for us? Find all of this and more in our latest report written by Frank Gast and Matthias Graulich.



- **Securities finance in times of monetary transition**

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- **Eurex Repo: "Paving the way for new paradigms"**

The Finadium article sheds light on a market dynamic that's in stark contrast to last year. Eurex Repo's Frank Gast and Carsten Hiller explain how we got there and what the road ahead looks like.



- **Podcast: Projecting European repo levels and volumes for 2024**

Eurex's Carsten Hiller, and Christoph Rieger from Commerzbank join the Financial Bite to discuss the latest developments in the Repo Market and what to expect in 2024.



- **GC Pooling Whitepaper: Taking repo funding management efficiencies to a new level: The Eurex GC Pooling® repo service.**

Learn more about how the visionary GC Pooling® cash-driven funding tool is a reliable refuge for market participants in periods of extreme market instability.



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