

# Safeguards of the clearing house



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# Eurex Clearing: dedicated to safer markets

This brochure provides an overview into Eurex Clearing's safeguards and the clearing house's contribution to the safety of the global financial marketplace.

In these pages, you will find information pertaining to Eurex Clearing membership, details on margining and default processes, our operational strengths and our market-leading risk management services.

Recent events have shown that safer markets are needed if financial products are to deliver their full economic benefits.

What is a "safer market"?

In our view, it is a transparent market, to inspire trust. It is efficient, so processes are simple and capital costs are lower. It ensures that investors' positions are protected. And above all it is neutral, so that counterparty risk is mitigated.

As Europe's leading central counterparty clearing house and a world leader in risk management and post-trade services, ensuring safer markets is what Eurex Clearing is all about.

We do it through fully-automated, straight-through post-trade services for derivatives, equities, energy and fixed income transactions.

We do it by being the world's only major clearing provider to control risk continuously by recalculating position risk in real time.

And we work with customers and regulators around the world to ensure maximum benefits for all market participants with safety and integrity.

Because the more people have faith in the markets, the more they'll feel clear to trade.

## About Eurex Clearing

Eurex Clearing serves more than 110 clearing members in 10 countries, managing a collateral pool of around 45 billion euros and processing gross risks valued at almost 9 trillion euros every month.

We are part of Eurex Group – a global leader in the financial marketplace, organized to deliver innovation and excellence across the entire value spectrum: trading and clearing, technology, risk management, and product distribution.

Together with Eurex Exchange, the International Securities Exchange (ISE), European Energy Exchange (EEX), Eurex Bonds and Eurex Repo, Eurex Clearing forms Eurex Group.

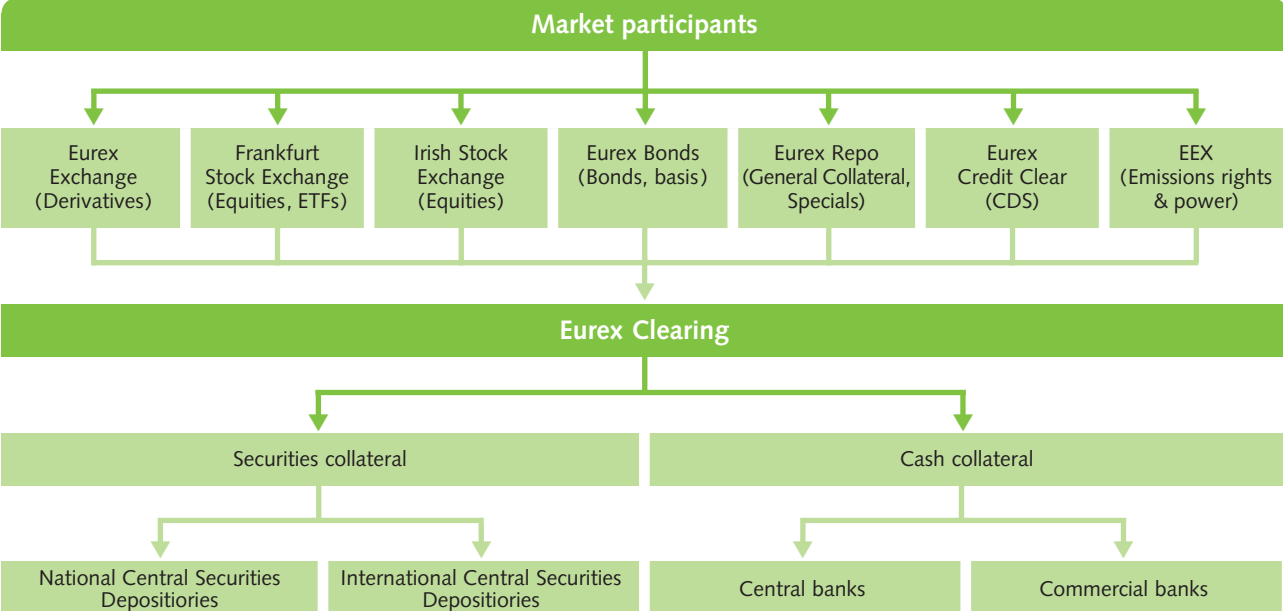
[www.eurexclearing.com](http://www.eurexclearing.com)

# Delivering safer markets

Eurex Clearing ranks as Europe's leading central counterparty and among the world's top clearing houses. Standing between buyers and sellers, we enable involved parties to make decisions fully independently of each other and mitigate counterparty risk to a single contractual partner. Neutrality, operational efficiency and reduced cost of capital are just some of the advantages of central counterparty clearing from which our customers benefit.

Eurex Clearing provides fully automated, electronic and straight-through post-trade services for a wide range of exchanges and trading venues, namely for Eurex Exchange (including transactions entered via EurexOTC trade entry services), Eurex Bonds and Eurex Repo, the Frankfurt Stock Exchange, the Irish Stock Exchange, as well as the European Energy Exchange (EEX).

### Overview of cleared markets



With Eurex Credit Clear, our services are also available for over-the-counter transactions in credit default swaps (CDS). Relationships with four national Central Securities Depositories and international Central Securities Depositories round out the picture.

Our customers can rest assured that they receive clearing services and protection under both German and foreign law. Eurex Clearing is licensed as a credit institution under the supervision of the German Federal Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin). At the same time, regulators in the United Kingdom and the United States recognize the high standards to which Eurex Clearing holds itself. The UK's Financial Services Authority (FSA) has conferred the status of Recognised Overseas Clearinghouse (ROCH) to Eurex Clearing. In addition, Eurex Clearing is fully compliant with CPSS and IOSCO Recommendations for CCPs<sup>1</sup>.

In light of ongoing regulatory initiatives, Eurex Clearing is actively participating in multilateral discussions on potential upcoming changes with regulators in Germany, Europe and the U.S. We are striving to obtain the necessary new clearing house registrations as soon as legislation is finalized.

In times of market turmoil as well as tranquility, central counterparty clearing has proven itself essential in maintaining market confidence and liquidity. Today, we clear a gross volume of almost 100 trillion euros per year and participants deposit on average 45 billion euros to collateralize their open

positions.<sup>2</sup> Despite our strong track record at Eurex Clearing, we never rest on our laurels. Just as international markets continue to evolve, we increase our capacity and work with customers to develop tailored solutions that drive innovation in risk management.

However, every well-built house starts with a strong foundation. In the case of Eurex Clearing, we have built a clearing house on a sound framework of safeguards to protect our customers, the clearing house and the overall marketplace.

The lines of defense are:

- position close-out
- margin collaterals of the clearing member in default
- clearing fund contribution of the clearing member in default
- Eurex Clearing reserves
- remaining clearing fund
- Eurex Clearing equity capital

With these lines of defense, as a part of our safeguards, Eurex Clearing covers the whole life cycle of the clearing process, consisting of our admission requirements, margining procedures, risk management, operational robustness and default management.

<sup>1</sup> The industry working groups Committee on Payment and Settlement Systems (CPSS) and the Technical Committee of the International Organization of Securities Commissions (IOSCO) develop and publish standards for financial market infrastructures such as payment systems, securities settlement systems and central counterparties.

<sup>2</sup> Figures as of 2010

# Admission

Our clearing members hail from across continental Europe and the UK and serve both local and international customers. In addition to their proprietary and agency business, our clearing members serve several hundred trading participants located in Europe, the U.S., Asia-Pacific and the Middle East.

To maintain our high standards, only companies that meet certain stringent criteria are eligible for clearing membership. Our admission standards are the first step in a comprehensive system of safeguards that we designed to maximize the safety and integrity of the markets we provide central counterparty services for.

By stipulating that our clearing members have adequate equity capital on hand and comply with rigorous legal requirements, we help provide a solid foundation. In addition, every clearing member is required to contribute to a clearing

fund, from which the clearing house may draw in the event of a default.

In order to settle deliveries resulting from security transactions, our clearing members are required to have settlement accounts at the Central Securities Depositories at which the respective securities settle. Eurex Clearing offers settlement not only at Clearstream Banking and at SIX SIS AG, but depending upon trading location and instrument, also home market settlement in selected countries. To process cash payments related to securities delivery our clearing members must also have cash accounts in the respective trading currency. Wherever available, these cash accounts are held with central banks in order to reduce settlement bank risk further promoting safety.

While all our clearing members must fulfill rigorous membership requirements, non-listed credit derivatives like

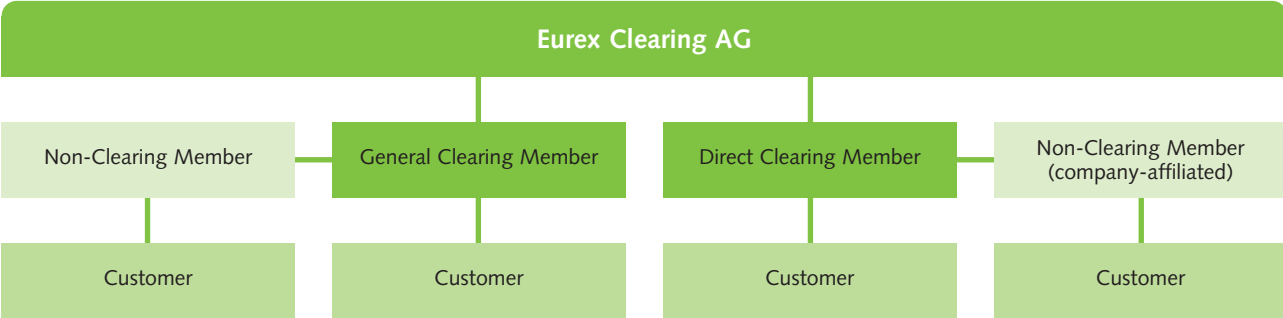
CDS require special precautionary measures. We are aware of the need for additional safeguarding and therefore have a separate, dedicated credit clearing fund for our Eurex Credit Clear solution in place, taking into account the risks that this business carries.

### Membership structure

At Eurex Clearing, membership comes in two categories, General Clearing Membership and Direct Clearing Membership, each of which confers different privileges.

- A General Clearing Member (GCM) may clear its own transactions, those of its customers, as well as those of trading participants that do not hold a clearing license (so-called Non-Clearing Member – NCM).
- A Direct Clearing Member (DCM) is entitled to clear only its own transactions, those of its customers, and those of its company-affiliated NCMs.

### Contractual relationships at Eurex Clearing



Only a clearing member – GCM or DCM – may be a counterparty of Eurex Clearing in a transaction.

As a result, legal relationships are concluded between Eurex Clearing and a given clearing member, and in turn between that clearing member and the respective NCM. Margin deposits or fee payments, for example, are always made to the clearing house via the contractually stipulated clearing member. However, NCMs may enter, exercise and close their own orders as well as those of their clients.

### Admission requirements

Companies applying for clearing membership at Eurex Clearing must

prove appropriate regulatory oversight as determined by Eurex Clearing.

Applicants must further be authorized and entitled by their respective regulatory authorities to operate in the custody and loan business as well as to accept receipt of margins in the form of cash and/or securities. In addition, clearing members must show evidence of a certain minimum level of liable capital and must pay a contribution to Eurex Clearing's clearing fund. While in general both the level of contribution to the clearing fund and the level of liable capital depend on the status of the clearing member (GCM or DCM) as well as upon the markets that each member clears, special requirements apply for the clearing of CDS.

### Liable equity capital requirements, in EUR million

Market (1)	Product (2)	Dynamic, liable equity capital requirements		
		GCM minimum (3)	DCM minimum (4)	Maximum of (5)
Eurex Exchange	Derivatives	125	12.5	<ul style="list-style-type: none"> <li>• 10 percent of average total margin requirement (30 days)</li> <li>• 10 percent of average total margin requirement (250 days)</li> <li>• or column (3)/(4)</li> </ul> This also applies for EEX.
Frankfurt Stock Exchange	Equities, ETFs	25	2.5	
Irish Stock Exchange	Equities (Irish)	25	2.5	
Eurex Bonds	Bonds	50	5	
Eurex Repos	Repos	175	17.5	
OTC	CDS	1,000	1,000	<ul style="list-style-type: none"> <li>• 25 percent of average total margin requirement (30 days)</li> <li>• 25 percent of average total margin requirement (250 days)</li> <li>• or column (3)/(4)</li> </ul>
EEX	Emission derivatives	125	12.5	as above

### Contribution to clearing fund, in EUR million

Market (1)	Product (2)	Dynamic contribution to clearing fund		
		GCM minimum (3)	DCM minimum (4)	Maximum of (5)
All markets (as above ex OTC)	Respective products	5	1	<ul style="list-style-type: none"> <li>• 2 percent of average total margin requirement (30 days)</li> <li>• 2 percent of average total margin requirement (250 days)</li> <li>• or column (3)/(4)</li> </ul>
OTC	CDS	50	50	<ul style="list-style-type: none"> <li>• 5 percent of total margin requirement</li> <li>• or column (3)/(4)</li> </ul>

Additional admission requirements for all our clearing members include different accounts that they need to set up. Every member must hold accounts at a Central Securities Depository for the deposit of collateral and execution of settlement related payments. Further, we require evidence of cash accounts funded in central bank money for clearing related payments, for example option premiums.

With our fee model, we encourage our members to conduct business in multiple markets by taking advantage of economies of scale. For a first membership, applicants are charged a one-off admission fee as well as an annual

membership fee. However, if a company wishes to become a clearing member for additional markets that we clear, no additional admission or membership fees are levied. In line with the markets that we serve, companies may apply for one or more of the following clearing licenses:

- Eurex Exchange (including transactions entered via EurexOTC trade entry services)
- Frankfurt Stock Exchange Equity
- Frankfurt Stock Exchange Equity International (XIM)
- Irish Stock Exchange
- Eurex Bonds
- Eurex Repo
- Eurex Credit Clear
- European Energy Exchange (EEX)

#### Legal requirements

- Bank status or similar
- Domiciled in the EU, Switzerland or the U.S. and licensed by the local authority to operate and conduct safe custody business, lending operations and the receipt of collateral
- Under supervision of responsible local authority

#### Additional requirements

- Evidence of pledge account at Clearstream Banking Frankfurt or SegalInterSettle
- Cash account at TARGET2 or SECB Swiss Euro Clearing Bank (SECB account and euroSIC account)
- Technical connectivity to Eurex Clearing network
- Qualified back office staff

#### Further requirements for clearing of CDS

- CLS Bank International account
- Power of attorney for Eurex Clearing to act on behalf of the clearing member for flow provider (for example DTCC), security settlement and cash account
- Special Market licenses (RED Data, Markit Single Name and Index History, Markit-Eurex Settlement Price License)

# Margining

One of our core functions is the calculation of margin requirements that adequately protect our customers against credit risk without tying up excess capital. Margining encompasses the entire process of measuring, calculating and administering the collateral that must be put up as security for open positions. The provision of collateral is intended to ensure that all financial commitments related to the open positions of a clearing member or its clients can be offset within a very short period of time.

We calculate margin requirements in real-time to ensure that we are aware of members' current profit and loss situations and know what new future

risk is. This approach is essential in keeping a handle on open positions that change at the accelerated speeds of electronic trading.

## Tailored approaches

All open positions held by Eurex Clearing are marked-to-market on a daily basis. Changes in the daily valuation are then either charged via daily cash flows (for example Variation Margin for futures) or collateralized (for example Premium Margin for traditional-style options).

Currently Eurex Clearing has two different forward-looking margin methodologies to account for product specific risk characteristics:

## Margin calculation methods available at Eurex Clearing

### Method 1 – Risk-based Margining

The Eurex Clearing margining method for derivatives, equities, bonds and repos is called Risk-based Margining. Risk-based Margining uses scenario matrix simulations to calculate margin requirements based on underlying price and volatility combinations. In order to cover the risk of extreme price fluctuations, margin parameters are determined based on an assessment of volatility and various current market estimates.

### Method 2 – Portfolio Margining for CDS

For CDS products Eurex Clearing has implemented a portfolio-based conditional Value at Risk (cVaR) methodology to account for their event-driven binary nature, asymmetric risk position and discontinuous pay-off structure.

Margin requirements are calibrated to cover risk factor moves with a 99 percent confidence level. The determined margin requirements have to be supplied by the clearing member, and we apply minimum parameters for all products irrespective of actual margin requirements. We routinely adjust these parameters to reflect current market conditions and validate all models and the used parameters via an ongoing back-testing and validation procedure.

### Intraday margining

In today's electronic markets, price moves happen in milliseconds. It is essential for the clearing house and its clearing members to monitor on resulting changes in positions closely. Thus, intraday margining is an important feature of our risk management framework as it directly reduces the counterparty credit risk of the clearing house and helps mitigating systemic risk. Intraday margin calls allow us to quickly respond to increased price volatility or the growing positions of members and to take appropriate action to lower the exposure to the central counterparty.

Our industry-leading intraday margining process monitors whether additional collateral must be transferred within a given trading day, should excessive market movement occur and member positions need additional good faith deposits. For this reason, the clearing house reserves the right to debit clearing members directly.

We calculate margin requirements for all products every time any position or price changes, but at least every ten minutes, for example in the case of

less liquid products or option series that may not be traded frequently. This approach of calculating margin requirements allows us to keep pace with algorithmic trading. And in order to enable our members to react quickly to sudden changes in positions we deliver comprehensive risk and position information to them both frequently and rapidly throughout the trading day.

### Cross margining across asset classes

Cross margining<sup>3</sup> is another feature of our margining methodology that directly benefits our customers. Risks arising from cleared products that are based on the same underlying instrument may offset or partially offset each other. Products that show identical risk characteristics are evaluated together in margin classes. With cross margining we take offsetting risks within a margin class into consideration when calculating margin requirements and charge reduced margins from our customers. This allows them to optimize margin deposits and frees up excess capital for investment purposes.

On the next level, in the case in which underlying securities of two or more margin classes have both economic rationale and high-short and long-term correlations, the margin classes can be assembled into a margin group. With cross margining, we account for the price correlation within a margin group when calculating the necessary margin requirements. In comparison to collateralizing each margin class separately, this results in considerably lower capital being tied up. Through cross margining, less risky portfolios are charged lower margin.

<sup>3</sup> Applicable to method 1 per previous page

# Risk management services

Developments in technology have accelerated the speed and complexity of trading and clearing houses have had to adopt those same advancements to ensure that their risk management keeps pace for the benefit of a safe market. We at Eurex Clearing were early proponents of system-based risk controls that offer both the clearing house and its members powerful, user-friendly tools to help them proactively control risk. In fact, we were the first to implement integrated risk controls and continue to lead the global industry in developing cutting edge risk tools meeting the needs of the market.

We offer a wide range of pre-trade and post-trade risk controls. All members have access to our data and tools, which enable them to set limits to prevent excessive exposure as well as to respond quickly if an incident occurs. Our post-trade controls ensure that

members have a clear picture of their overall risk profiles throughout the trading day.

## Pre-trade risk controls

Our pre-trade risk controls are the first step in helping members to manage their risk. These tools offer members flexibility in setting intelligent limits that reflect their risk profiles.

## Advanced Risk Protection

We offer a pre-trade risk management service that enables clearing members to define individual risk limits for themselves or their associated NCMs. In addition, any exchange member can define its own risk limits, down to the trader subgroup level, for added control. However, when both a GCM and an NCM set limits, the more restrictive limits will hold. From Eurex Release 14.0 onwards, the Advanced

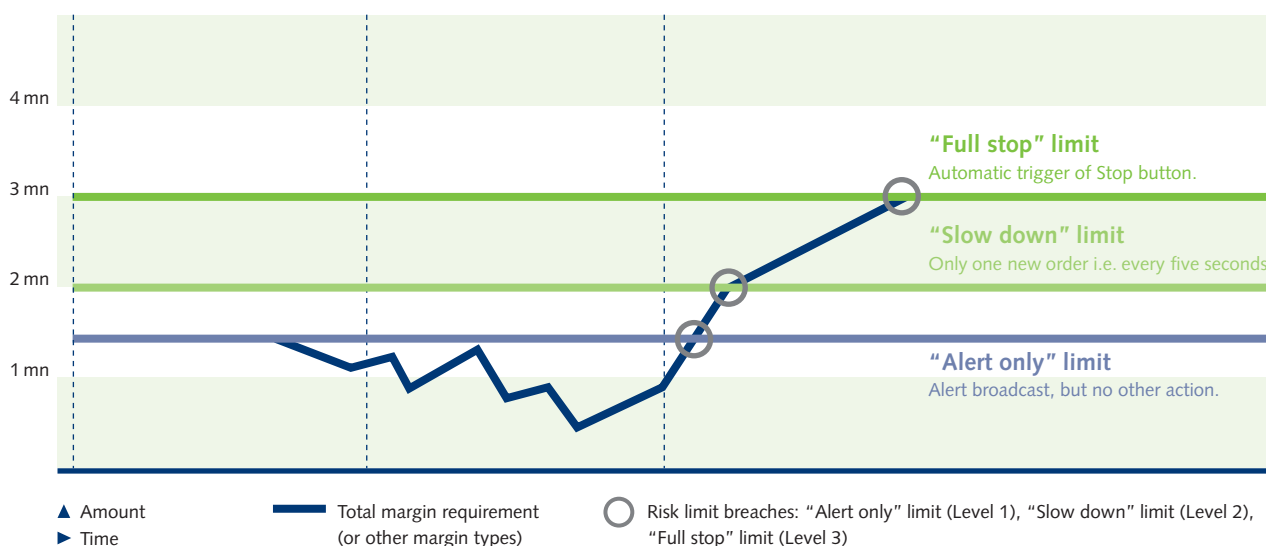
Risk Protection service also accommodates transactions entered via EurexOTC trade entry services.

To ensure greater customization, members can define configurable risk limits according to different risk metrics, including total margin requirements and cash flows. When these limits are breached, predefined safety measures are activated.

## When limits are exceeded

Our risk management service encourages members to set risk limits in advance to proactively safeguard trading activities. And when predefined limits are exceeded, our system responds automatically to protect the member or user in question and thus safeguard the marketplace. Members specify which of three actions will be implemented when a breach of each level or risk limit occurs.

Advanced Risk Protection: examples of risk limits and associated actions



## Advanced Risk Protection: available risk limits

<b>Level 1</b>	An alert message is broadcast to both the NCM and its respective clearing member.
<b>Level 2</b>	The system automatically slows down a member's order/quote entry and order/quote modification by enforcing a minimum delay of between 250 and 5,000 milliseconds (member configurable) between non-delete transactions in any single product.
<b>Level 3</b>	The member's trading state is set to "Halt" which means that all open orders and quotes are deleted and all further trading and clearing functions are prevented.

### Maximum order quantity

Having the ability to set a maximum order quantity per member and trader ID prevents erroneous order entries. Clearing members are encouraged to predefine limits on a product level per NCM. Further, NCMs can define such limits for themselves as well as trader groups and individual traders.

### Stop buttons for clearing members and trading members

Although we have robust pre-trade risk tools in place, emergency situations can occur. In this case it is important for members to be able to take immediate actions to prevent further exposures. We provide both clearing and trading members a stop button that they can use to "Halt" further trading on a member or more granular level, including specific trader IDs. Once a "Stop" is triggered, open orders and quotes are deleted and further trading and clearing activities, including the usage of EurexOTC trade entry services are prohibited until the member or trader ID in question is manually reset.

### Order confirmation broadcast

By giving clearing members a real-time order monitoring tool, we allow them to quickly spot problems before they get out of control. A clearing member can subscribe to NCM order confirmation broadcasts in order to get a complete overview of its own as well as its clients orders. With this tool, we promote enhanced vigilance throughout the trading day.

### Post-trade risk controls

Our comprehensive post-trade risk controls build on our pre-trade measures to ensure that both clearing and trading members have a complete picture of all relevant risk profiles. Our real-time post-trade risk information provides a clear picture of recent activity.

### Enhanced Risk Solution

On top of our basic risk management services, we offer members the choice to subscribe to an optional interface called the Enhanced Risk Solution. Through this award-winning<sup>4</sup> interface, Eurex Clearing distributes real-time risk and position data for all exchanges and trading venues for which the clearing house offers its clearing services.

With the introduction of our Enhanced Risk Solution, we became the first clearing house worldwide to provide members with real-time risk data.

Provision of real-time data allows members to monitor developments in risk and positions within the moment they happen, promoting more proactive risk management. It also facilitates the efficient use of collateral as the data enables risk managers to monitor margin surpluses and shortfalls as they occur, providing indications of potential intraday margin calls.

### Trade confirmation broadcast

In addition to giving clearing members the possibility to view order activity in real-time, we also permit them to view confirmed trade history in real-time. Similar to pre-trade order confirmation broadcasts, clearing members can subscribe to NCM trade confirmation broadcasts, which enable them to monitor their clients' trade activity with minimum latency.

### Report information

We help our clearing members to remain on top of their risk situations by providing intraday and end of day reports. These reports contain detailed and extensive information about risk exposure and allow clearing members to control and monitor margin and cash flow components of their clients on a near-time basis intraday and end of day.

<sup>4</sup> Eurex Clearing's Enhanced Risk Solution won the 2010 "FOW Award for Innovation" in the clearing category (for EMEA).

# Operational robustness

Eurex Clearing's foremost objective is to fulfill its obligations as a central counterparty at any time. The marketplace depends on our ability to continue to conduct business smoothly, even in the most turbulent markets. To help ensure that we live up to our own as well as external standards, we have developed and implemented a set of measures designed to test and verify our readiness. Regularly conducted stress tests help prevent a shortage of cover or liquidity under extreme market conditions, whereas contingency plans prepare us to deal with operational risks caused by accidents, natural and man-made disasters and even pandemics.

## Stress testing

Stress testing plays an important role in the Eurex Clearing risk management system because it provides critical information on risk exposure under stressed market conditions. Our testing methodology establishes a number of comprehensive scenarios that reflect extreme situations across all relevant products and risk types. It also defines scenario components such as a general scenario structure, product groups, risk factors, stress magnitudes and metrics for the quantification of the stress test outcomes. Furthermore, it institutionalizes a set of rules and processes

for ongoing validation of parameter adequacy and parameter re-calibration so that as market conditions change, we keep pace.

Stress testing aims to verify that the sum of the collateral pledged by an individual defaulting member, Eurex Clearing's reserves plus the total amount of the clearing fund is sufficient to cover the potential losses of the individual clearing member under extreme but plausible market conditions (defined as sufficient coverage in 99.9 percent of all risk factor moves). Additionally, Eurex Clearing tests the impact of the simultaneous insolvency of multiple key market participants in a contagion scenario.

How much of the clearing fund is potentially consumed by the theoretical stress test calculations is identified and analyzed on a daily basis assuming a predefined number of clearing member defaults.

As soon as the potential consumption of the clearing fund breaches a defined threshold, the Eurex Clearing management board takes risk-mitigating measures. They include member-specific actions, for example requiring extra margin or member-wide actions, for example an augmentation of the size of the clearing fund by increasing the mandatory contribution from all members.

## Liquidity management

In addition to testing coverage in a default event, we take steps to ensure the liquidity of the clearing house at all times. We regularly conduct liquidity stress tests to ensure that the restrictions in the time-to-maturity of placements (tenors) as well as the size of liquidity sources, for example credit facilities, are appropriate to cover our liquidity requirements.

When it comes to repayment of margins as required, placement tenors are restricted to ensure that Eurex Clearing can and does meet its obligations. In fact, it is stipulated that the majority of cash margin is invested with a tenor of only one business day.

In addition to cash margin, we have committed credit facilities with commercial banks in place to be able to pre-finance central counterparty transactions. Furthermore, we have access to the intraday credit facility of the Deutsche Bundesbank, which provides us with another source from which to acquire liquidity at short notice if necessary.

### European Central Bank money

For our daily business of the clearing and settlement of transactions we enjoy privileged access to the TARGET2<sup>5</sup> system operated by the European Central Bank (ECB) as well as the euroSIC system operated on behalf of the Swiss National Bank (SNB). To effect money settlements with our clearing members including the payment of cash to meet margin requirements we use the ECB as the major settlement bank for payments denominated in euro.

Compared to commercial bank money, the pivotal advantage of central bank money is the higher level of safety, since there is essentially a zero chance of central bank default. Thus, the access to central bank money gives the market added confidence and stability, especially in times of high volatility.

Just as important, the TARGET2 system of the European Central Bank is protected by the so-called Settlement Finality Directive. According to EU-law, this directive provides recognized financial benchmark systems with extra safety in the case of the insolvency of a participant in this system. Whenever a transfer order has been entered into the TARGET2 system, it is protected in the event of bankruptcy of a clearing member meaning that any transaction already conducted must be settled. In contrast, a commercial bank would stop payment instructions pertaining to an insolvent clearing member.

### Business continuity plan

Eurex Clearing has developed a solid business continuity plan, which we routinely test to ensure our readiness

to cope with extraordinary situations that can affect our business activity. The overall goal of the testing approach is to simulate situations as close as possible to real life to ensure functional effectiveness, execution ability and reasonable recovery time. Executive management is closely involved in monitoring the performance of these tests.

Our business continuity plan contains information, guidelines and procedures which are developed and maintained for use in the event of an emergency or disaster, including the loss of IT, workspace and staff in order to maintain the continuity of critical services. It comprises a crisis management process as well as business unit, IT and facilities recovery plans.

Eurex Group's data centers, including those relevant for the operation of Eurex Clearing, are remotely duplicated to form primary and secondary centers acting as backups of each other. The data centers are equipped with similar capacity data processing and communications equipment and are interconnected with high-speed optical data links that are themselves duplicated.

Communications networks are routed via separate hubs of the network provider allowing for failover in the event of failure of one exchange. Data is written to multiple disks in real-time across the two data centers. Should an event occur disabling the primary data center, the secondary data center can be brought into operation without loss of data. The data centers are equipped with environmental protection devices including intrusion, fire

and humidity detectors, fire suppression systems, uninterruptible power supply and backup generators.

Furthermore, exclusively dedicated backup facilities exist to provide backup office space for mission critical staff in the event that their normal office location becomes unavailable. The backup office facilities are fully equipped and networked to both the primary and secondary data centers and are kept operational at all times.

Business continuity measures have also been implemented to address the loss of very significant numbers of staff in order to ensure the continuity of the most critical operations also in catastrophic scenarios, including a potential pandemic.

### External standards

To help ensure that Eurex Clearing meets the best practices of the clearing industry, we regularly evaluate our compliance with accredited external standards, which are also audited by regulators. Eurex Clearing is deemed to be fully compliant with all 15 of the CPSS and IOSCO Recommendations for Central Counterparties. Auditors utilized the recommendations and the methodology developed jointly by the CPSS and IOSCO in their assessment of Eurex Clearing.

Compliance with the recommendations illustrates that Eurex Clearing meets the industry's best practices in a variety of areas including the development and maintenance of effective default procedures, that we measure and manage credit exposure, maintain effective governance and oversight and more.

<sup>5</sup> TARGET2 (Trans-European Automated Real-time Gross Settlement Express Transfer System) is an interbank payment system for the real-time processing of cross-border transfers throughout the European Union.

# Default management

As Europe's leading clearing house, we play an important role in the global effort to stabilize financial markets. We recognize our responsibility to help mitigate systemic risks should the insolvency of a clearing member occur. We managed the financial crisis effectively, not least because we had robust procedures in place to deal with a clearing member default and were prepared to act when the need arose.

## Default procedures

Aware that each default scenario is unique, we maintain flexibility in our procedures in order to accommodate the individual features of each default. Our procedures provide an adjustable framework that is applied depending on the circumstances of the scenario at hand.

Despite the individual nature of every situation, the legal triggers that set a given clearing member into default are the same, regardless of product or cleared market. In the case that a member has been declared to be in default, the member's proprietary and its agency (client) positions are treated in distinct ways.

## Client positions

When a clearing member goes into default, one of our principle objectives is to protect customers and minimize harm to clients and their positions. We are committed to ensuring that clients and their positions can be transferred to a new, solvent clearing member as quickly and as smoothly as possible.

Our risk management and clearing procedures were proven to be rock solid even in times of acute distress in financial markets. However, the recent crisis also highlighted that in the event of a clearing member default greater transparency and legal certainty with respect to the treatment of client positions and assets are critical to ensure the highest degree of protection for our clearing members and their

customers. As a result of our continuous efforts to optimize our default management, we at Eurex Clearing address segregation and portability needs to help our customers to better prepare for a default event.

## Client Asset Protection

By introducing our new Client Asset Protection service we provide segregation and timely portability of client's positions and collateral (both cash and securities). The service, developed in close cooperation with leading market participants, allows clearing members and their clients to choose the level of protection they want – depending on their risk/cost profile. With the Client Asset Protection service, Eurex Clearing offers two optional protection solutions: individual segregation and omnibus segregation.

### Individual Clearing Model

Maximum protection is achieved for clients who opt for the individual segregation solution. Positions and collateral of an individually segregated client are held in dedicated, individual accounts at the clearing house level, and hence are completely ring-fenced from the clearing member's or other client's positions and collateral. Seamless and timely portability of client positions and collateral is achieved through a close-out netting mechanism in case of a clearing member default. Positions against the defaulting clearing member will be terminated and subsequently reopened at a new clearing member.

### Omnibus Segregation Model

If clients choose the omnibus segregation\* solution, they will have their positions and collateral held in a separate omnibus position and an omnibus collateral account established at the clearing house level, with all omnibus client positions margined on a net basis. If a clearing member defaults, omnibus client positions and collateral are segregated from the clearing member's proprietary or other individually segregated client accounts. Timely portability of positions will be supported but depends on a new clearing member accepting the client's positions.

\* It is planned to implement the omnibus solution in the second half of 2011.

Our models support operational efficiencies while maintaining economic attractiveness for clearing members. By offering new options for asset segregation we give members the flexibility to choose for themselves rather than mandating a “one-size-fits-all” solution.

**Proprietary positions**

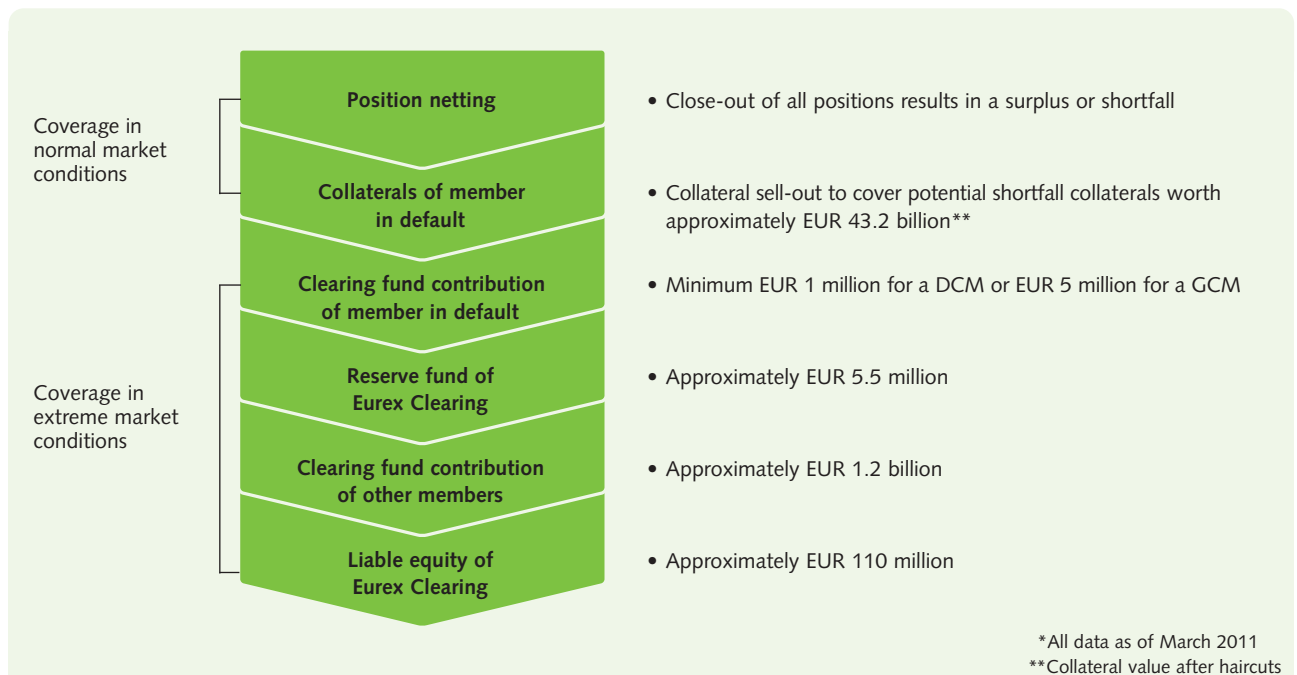
In a default scenario, we immediately take steps to reduce the risk of the given member’s portfolio. Weighing market impact and timing, we liquidate the proprietary positions as soon as is both possible and practical. Eurex Clearing is committed to managing any liquidation procedures in close cooperation with clearing members as

well as relevant regulators. In times of crisis, our strong working relationships with our members and with international regulators and long-time experience facilitate effective resolutions to default situations.

**Lines of defense**

We guarantee the fulfillment of every transaction in every market for which we provide our services. To ensure that we are able to keep this promise, we set up a multi-level security system called our “lines of defense”. While the mainstay of this safety system is the margin which clearing members have deposited as collateral for open positions, our lines of defense consist of several additional layers of safety nets.

**Overview – lines of defense\*:**



In the event of a default, these layers are applied in the order that they are listed to limit the exposure to our other members and the clearing house. This way, the lines of defense help protecting the marketplace as a whole and play an important role in preventing a domino effect.

#### **Communication guideline**

When a member default occurs, we are careful to ensure that we take steps to protect confidentiality, while we simultaneously recognize our responsibility to inform our stakeholders and the general public of the incident. In the event of a member default we have developed a clear communication guideline that is strictly implemented and supervised by Eurex Clearing's management.

Our main objective in the case of a member default is, first and foremost, the safe liquidation of the defaulting member's positions while simultaneously protecting NCMs, remaining clearing members and of course the clearing house itself. On top of these responsibilities, we have designed a policy to keep stakeholders informed at all times.

Key aspects of our policy include the immediate creation of a system-accessible news board message after an official regulator announcement or a self-declaration by the defaulting

member in question, posting of information on the Eurex Clearing website, daily press statements, the distribution of member circulars and conference calls with members of our clearing and risk committees.

# Eurex Clearing in numbers

We have provided insights into Eurex Clearing's system of safeguards that are our contribution to deliver safer markets. To round out the picture we focus on some illustrative numbers. From the size and composition of our funds and collateral to the breadth of our membership, the figures below present a concise picture of our strength.

## Funds

The financial strength of Eurex Clearing is essential in our being able to conduct our daily business. The marketplace depends on the sound financial standing of both the clearing house and our membership. Eurex Clearing is well-capitalized to help ensure that the default of a single clearing member does not cause wide-spread disruption.

## Funds as of March 2011:

Total margin requirements	EUR 34.2 billion
Clearing fund	EUR 1.2 billion
Reserves and own capital	EUR 115.5 million

## Collateral management

As a leading clearing house we offer best in class, diversified collateral management services that create maximum value for our customers and simultaneously ensure the integrity of the clearing house. We view the provision of a safe environment as fundamental to our business. For this reason we accept a wide range of high-quality collateral securities, which are distributed as follows:

## Collateral composition of margin collateral and clearing fund after haircut (Average value for the period 1, October 2010–December 30, 2010):

Collateral type	Amount in EUR billion	Percent
Cash	4.83	11.10
Government bonds	11.21	25.74
Local government & state agency bonds	8.57	19.69
Corporate bonds	1.73	3.97
Bank bonds / Pfandbriefe	14.59	33.51
GC Pooling® basket*	1.28	2.94
Equities	1.21	2.78
Guarantees**	0.12	0.27
<b>Total</b>	<b>43.53</b>	<b>100</b>

\* Pledges of the GC Pooling® ECB basket under the use of a synthetic basket ISIN are accepted as collateral since November 26, 2010.

\*\* Guarantees have only been accepted for clearing fund contribution but not for margin collateral and are now also abandoned as clearing fund collateral.

## Membership

Our strength is derived not only from sound finances but also from a broad membership base. In terms of number of cleared contracts, Eurex Clearing is the largest clearing house in Europe.

### Member licenses as of March 2011:

	Eurex Exchange	Frankfurt Stock Exchange*	Eurex Bonds	Eurex Repo	Irish Stock Exchange	EEX
Number of GCMs	43	32	16	19	7	18
Number of DCMs	36	31	16	54	3	3
Number of NCMs served	342	207	3	4	20	12
Total cleared transactions 2010	1,896,916,398	96,452,070	6,415	90,939	1,199,371	-
Total cleared volume 2010 in EUR billion	98,252.9	1,346.1	114.4	101.6	23.9	-

\* Including Xetra® International Market

# Outlook

Eurex Clearing's mission is to deliver safer markets by setting benchmarks in market efficiency and integrity. And with our solid corporate setup and operating procedures, rigorous membership requirements and ample funds, we are in a position to continue to help safeguard our clearing members, their clients and the marketplace at large as successfully as we have done in the past.

But structural transformations in the market, including upcoming regulatory changes, mean that we cannot stand still. In line with the global effort to increase the safety of the financial markets to protect investors, we are actively working to further improve and expand our offering and services.

In order to keep pace with evolving markets we will extend our existing range of services, like further expanding into the OTC markets, introducing securities lending CCP services and the refinement of our margining methodology, including the adoption of portfolio margining.

We also remain at the forefront of helping the industry respond to the evolving regulatory situation. Eurex Clearing is dedicated to helping both buy and sell-side participants to position themselves for the operational challenges of the new regime – and to make the most of new business opportunities.

All of this depends on working in close partnership with our clearing members and their buy-side clients. Together, we continue to develop new and innovative ways to help proactively monitor and reduce risk and streamline operations – all while promoting greater efficiency in the use of capital.

As we fulfill our ongoing commitment of safeguarding the marketplace, we continue to play an important role in helping the financial markets deliver their full economic benefits, thereby ensuring that you are always in a position to be **clear to trade**.

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