MEMORANDUM

TO: File

FROM: Kim Allen

RE: Meeting between OTC Derivatives Regulators Forum members and representatives

of certain central counterparties (CCPs)

DATE: October 21, 2011

On October 5, 2011, members of the OTC Derivatives Regulators Forum (ODRF), including Dawn Patterson and Kim Allen of the Securities and Exchange Commission, met with representatives of eight CCP service providers to discuss questions and issues related to clearing of OTC derivatives products.

The CCP representatives provided brief status updates of their respective services and discussed current market developments, including Dodd-Frank Wall Street Reform and Consumer Protection Act, and ongoing engagement with ODRF members.

Attached is a list of the ODRF members and CCP representatives attending the October 5 meeting, the agenda, and copies of the presentations given by five of the CCP representatives (Eurex Clearing, ICE Clear Credit and ICE Clear Europe, Japan Securities Clearing Corporation, and SwapClear).

OTC Derivatives Regulators' Forum - CCP Session 5 October 2011

List of Registered Attendees

Germany

Australian Securities and **Investments Commission** Australia

(Dialing in) Reserve Bank of Australia Mark Chambers

Financial Services and

Belgium Markets Authority **Didier Niclaes**

National Bank of Belgium Steven van Cauwenberge

Alberta Securities Commission Canada Debra MacIntyre

Autorité des marchés

financiers (Québec) Jean-Philip Villeneuve Derek West

Bank of Canada

Office of the Superintendent of

Financial Institutions

Ontario Securities Commission

European Authorities European Central Bank Corinna Freund

European Commission Perrine Herrenschmidt

Muriel Jakubowicz (by phone)

Carolyn Wilkins

Fabrizio Planta (by phone)

Brad Shinn

Kevin Fine

European Securities and Markets Authority

Autorité de Contrôle Prudentiel

France (ACP) Julien Mignot Autorité des Marchés

> Financiers Catherine Dias

Banque de France Philipe Mongars

Anne-Laure Roche-Rault Banque de France BaFin

Claudia Grund

Sophie Hübner Deutsche Bundesbank Anna Pliquett Hong Kong Monetary Authority Polly Lee

Hong Kong Pansy Pang Hong Kong Securities and

Futures Commission Ryan Ko Bank for International

International Organisations Settlements Can Okay

Domenico Gammaldi Bank of Italy Italy Bank of Japan Keiko Harimoto Japan Financial Services Agency Makoto Seta

Luis Manuel de los Santos

Mexico Bank of Mexico Cayetano

David Margolin Monetary Authority of

Singapore Singapore Shu Ping Chien

> Pui Hoon (by phone) Nagatsuka Ken (by phone) Tiak Peow Phua (by phone)

Spain Banco de España Montserrat Jimenez

Miguel Ángel Herrero Alvite **CNMV** Sweden

Financial Supervisory Authority Jan Axelsson

Sveriges Riksbank Johanna Stenkula von Rosen

The Netherlands **AFM** Wim Moeliker

De Nederlandsche Bank Frans Alexander Rijkschroeff

United Kingdom Bank of England Robleh Ali

Financial Services Authority Robert Barnes Benjamin Cohn-Urbach

> Sarah Harris David Lawton Ben Mitchell

United States

Commodity Futures Trading

Commission

Warren Gorlick Robert Wasserman

FDIC

Petrina Dawson John Feid Richard Heckinger

Federal Reserve Bank of

Chicago

Federal Reserve Bank of New

York

Marsha Takagi

Federal Reserve Board

Christopher Tsuboi Jennifer A. Lucier Namirembe Mukasa

New York State Department of

Financial Services

Regina Stone Paul Zhang

Office of the Comptroller of the

Currency

Michelle Taylor Kurt Wilhelm

Securities and Exchange

Commission

Kim Allen Dawn Patterson

CCP Representatives at CCP Session

Germany Hong Kong

Japan

United Kingdom

United States

Eurex Clearing Hong Kong Exchanges and

Clearing Limited
Japan Securities Clearing

Corporation

Tokyo Stock Exchange ICE Clear Europe LCH.Clearnet SwapClear

CME

ICE Clear Credit

IDCG

Patrick Deierling Kelvin Lee

Takeshi Hirano

Moriyuki Iwanaga Paul Swann Michael Davie Daniel Maguire Kim Taylor Sasha Rozenberg Chris Edmonds Peter Barsoom Garry O'Connor

Alan Sobba

OTC Derivatives Regulators' Forum Joint Session with Authorities and CCPs

Federal Reserve Bank of New York

Wednesday, 5 October 2011, 9.00 am - 11.00 am EDT

Agenda

CCPs Participating:

- CME Kim Taylor (Managing Director and President, Clearing Division)
- Eurex Patrick Deierling (Senior Vice President, Clearing Initiatives)
- ICE Clear Europe Paul Swann
- ICE Clear Credit Chris Edmonds (President) & Peter Barsoom (Chief Operating Officer)
- International Derivatives Clearing Group (IDCG) Garry O'Connor (CEO) and Alan Sobba (Chief Policy and Communications Officer)
- Japan Securities Clearing Corporation Moriyuki Iwanaga (Executive Officer, Tokyo Stock Exchange) and Takeshi Hirano (Director, OTC Derivatives Clearing Service)
- LCH.Clearnet Ltd SwapClear Michael David (CEO, SwapClear) and Daniel Maguire (Head of OTC Derivatives, Risk and Operations)
- *HKEX Kelvin Lee (VP Market Development Division)*

Topics for Discussion

- 1. Gain views from CCPs on their experiences with information sharing about their operations amongst regulators and the usefulness of the different forms of information sharing used globally, including the use of supervisory colleges, PLS, public disclosure etc.
- 2. Exchange of views between Authorities and CCPs about what information CCPs currently disclose, both about their own operations and regular data about volumes cleared, etc, and the information that should be disclosed or could usefully made public by all CCPs.
- 3. Provide the CCPs with an opportunity to discuss issues of interest to them with the ORDF (will require advanced notification of topics from CCPs).

Role of Eurex Clearing as CCP: The Future of Clearing

OTC Derivatives Regulator's Forum Federal Reserve Bank of New York

05 October 2011



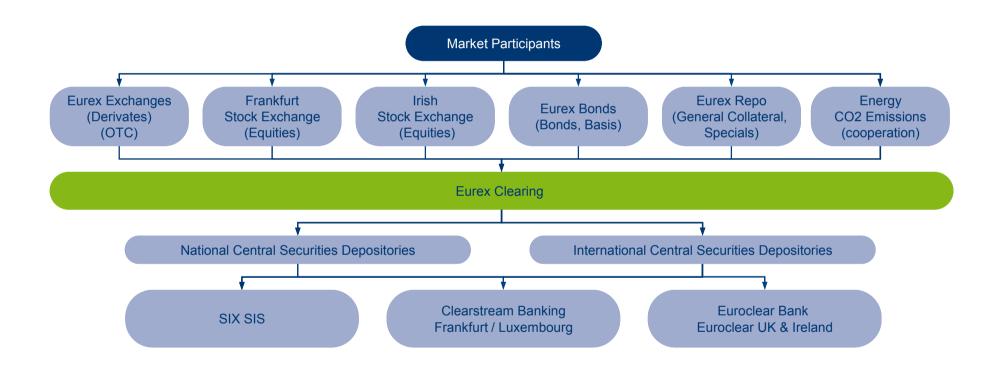
Eurex Clearing is one of largest CCPs globally

Eurex Clearing ...

- § is the clearinghouse within Deutsche Börse Group
- § offers fully automated and straight-through post trade services for derivatives, equities, repo (sale and repurchase agreement), energy and fixed income transactions
- § acts as a central counterparty for its cleared markets becomes a buyer to all sellers and a seller to all buyers thereby minimizing counterparty risk and improving operational efficiency
- § offers flexible trade management functions, advanced risk management services, efficient collateral and delivery management tools
- § is a company incorporated in Germany and licensed as a credit institution under supervision of the Bundesanstalt für Finanzdienstleistungsaufsicht (BaFin) pursuant to the Banking Act (Gesetz für das Kreditwesen).
- § the Financial Services Authority (FSA) has granted Eurex Clearing status as a Recognised Overseas Clearing House (ROCH) in the United Kingdom



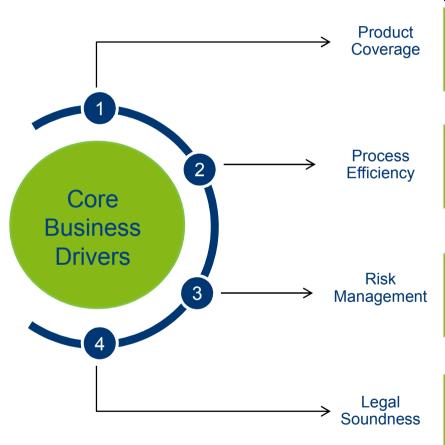
Eurex Clearing Offers Central Counterparty Services for Multiple Asset Classes Across Multiple Markets



For the Frankfurt Stock Exchange (FWB®), the Irish Stock Exchange and the European Energy Exchange Eurex Clearing is Central Counterparty only for CCP eligible trades.



Core business drivers for CCPs will be four factors



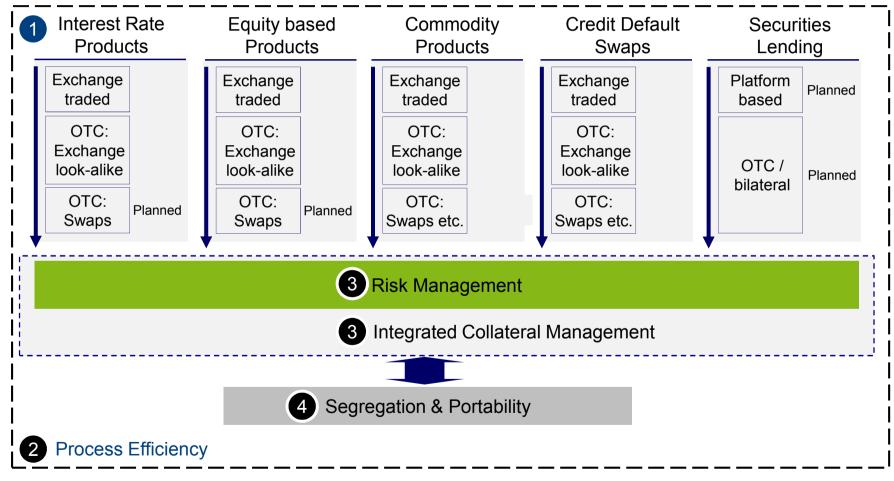
Eurex Clearing services - Examples

- Exchange traded securities and derivatives
- Exchange look alike securities and derivatives
- OTC securities and derivatives
- Straight Through Processing
- Trade management
- Integrated settlement netting
- Real time risk management / intraday margining
- Default process / lines of defence
- Capital efficiency
- Legal framework and clearinghouse rules
- Segregation & Portability (client asset protection)



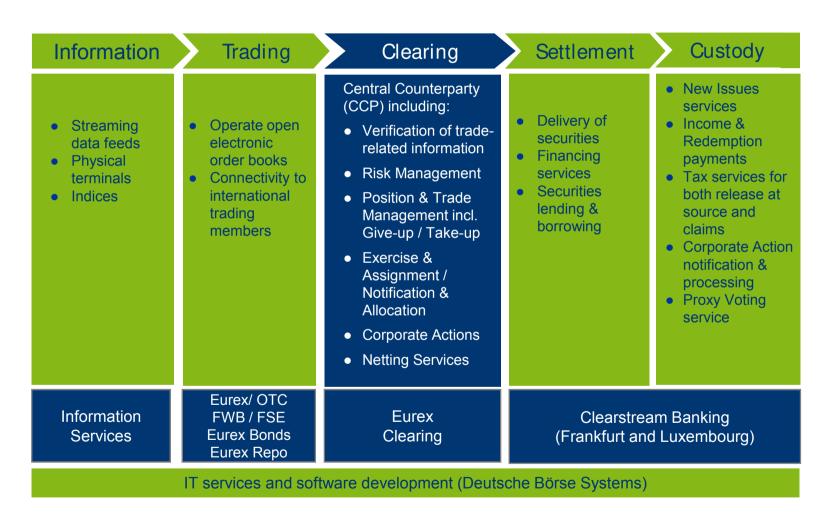


Eurex Clearing is the leading European CCP and committed to provide industry leading clearing solutions





Eurex Clearing is an Integral Part of the Deutsche Börse Value Chain

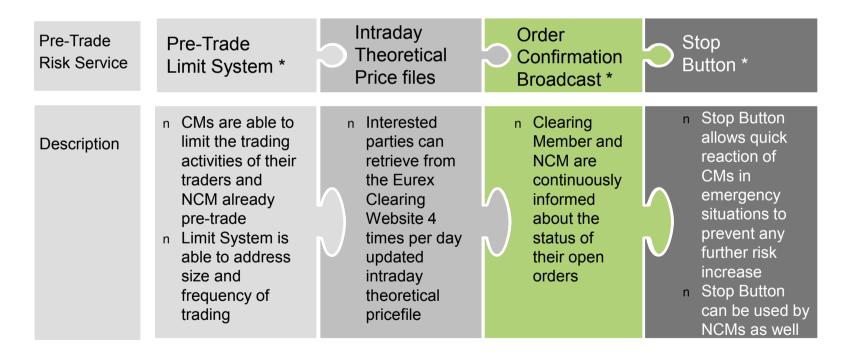






Substantial changes in trading patterns lead to the extension of the range of Pre-Trade Risk Services by Eurex Clearing

Eurex Clearing's Pre-Trade Risk Services provide efficient toolbox to address risk management requirements arising out of algorithmic trading, but applicable to several parts of the Trading & Clearing members business.





... which is already complemented by a comprehensive range of Post-Trade Risk Services

Eurex Clearing's Post-Trade Risk Services provide real-time information for optimized intraday risk management once a trade has been executed*

Post-Trade Risk Service	Trade Confirmation Broadcast	Risk Based Margining	Intraday Risk Information	Enhanced Risk Solution
Description	n View confirmed trade history in real-time	n Position netting n Risk measured on probability distribution of returns n Risk netting on margin class and margin group level	n Intraday on- screen broadcast of margin exp. in 10 minute intervals n Real-time risk calc. on deri- vative positions n Near time calc. for equities & FI	n Real-time update with FIXML-based messages via AMQP: n Positions n Margin Requirements n System Parameters

^{*} Derivatives, Equities and Fixed Income





Eurex Clearing ensures highest protection by providing segregation and timely portability

Introduction

- We have introduced a further dimension to our proven clearing service by addressing segregation and portability needs that will benefit both Clearing Members and their clients
- Since the unprecedented example from 2008, there has been a growing demand from clients for mechanisms to effectively address the requirements for Client Asset Protection
- Our solution has been designed with a view to ensure compliance with regulatory initiatives that will be implemented during 2012

Benefits

- Our Client Asset Protection service has been designed to deliver
 - Maximum protection for clients under a proven legal construct
 - Segregation of client margin collateral mitigating the impact on clients in the event of a Clearing Member's (CM's) default
 - Portability of positions enabling continued trading in the event of their CM's default
 - Portability of client margin collateral in the event of a CM's default
 - Unique client segregation offering a higher level of protection with the Individual Clearing Model
 - Further capital efficiencies with upcoming regulations







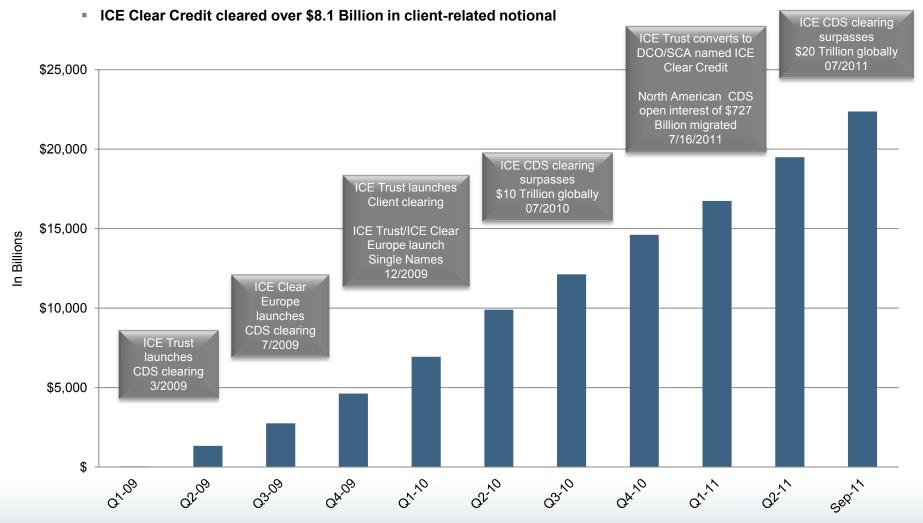
OTC Derivatives Regulators Forum ICE Clear Credit & ICE Clear Europe Overview Christopher S. Edmonds, Paul Swann

October 5, 2011

ICE CDS Milestones and Volume Cleared

Global Cumulative Volume

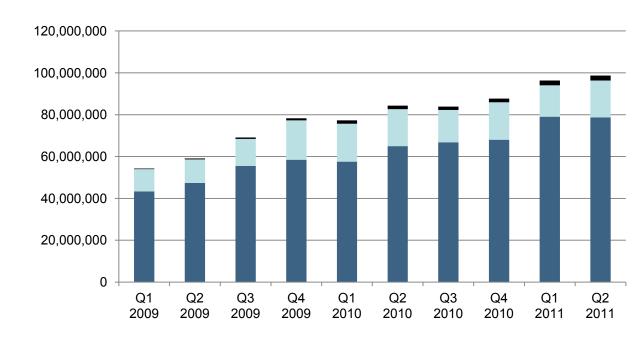
Over \$22.6 Trillion notional cleared globally



ICE OTC Energy Volume Cleared

ICE operates the leading global OTC marketplace for natural gas, power, refined oil products and natural gas liquids





■ Global Oil and Other ■ North American Power ■ North American Natural Gas

Energy Products

- Over 500 cleared energy products
- · Brokered and electronic markets

Energy Customers

- Commercial energy companies
- Banks/Financial institution
- Liquidity providers

~51%

~24%

~25%

ICE Overview

ICE Regulated Futures Exchanges

ICE OTC

ICE Data & Services

U.S. & CANADA	
AGRICULTURAL	FINANCIAL
Cocoa Coffee Cotton Sugar Orange Juice Barley Canola Oil	FX US Dollar Index Russell Equity Indexes

EUROPE ENERGY Brent Crude WTI Crude Sour Crude Gasoil/Heating oil Natural gas Electricity Coal Emissions

OTC CONTRACTS

OTC Energy

Oil and refined products Physical/Financial gas Physical/Financial power Natural gas liquids

OTC Credit
OTC Wet and Dry Freight
OTC Iron Ore

MARKET DATA

Real-time prices/screens
Indices and end of day reports
Tick-data, time and sales
Market price validations

SERVICES

ICE eConfirm
Coffee & cocoa grading facilities

ICE Clear U.S. and ICE Clear Canada –
OTC and Exchange-traded
Agricultural and Financials

ICE Clear Europe – OTC CDS and Energy Clearing

ICE Clear Credit – OTC CDS Clearing

Integrated Markets, Clearing and Technology

ICE Global CDS Products and Clearing Participants

80 Indices

North America (CDX)		Europe (iTraxx)	
IG	S8 – S17	Main	S7 – S16
HY	S8 – S16	хо	S9 – S16
HVOL	S8 – S16	HVOL	S7 – S16

249 Single Names

Sector	North America	Europe
Consumer Services	30	22
Industrials	18	15
Consumer Goods	15	19
Utilities	6	16
Financials	22	15
Basic Materials	7	14
Telecommunications	3	13
Healthcare	9	2
Oil & Gas	9	4
Technology	9	1

Listing of clearing eligible instruments can be found at:

ICE Clear Credit

ICE Clear Europe

Clearing Participant (CP)	ICE Clear Credit	ICE Clear Europe
Bank of America	✓	✓
Barclays	✓	✓
BNP Paribas	✓	√
Citibank	✓	✓
Credit Suisse	✓	√
Deutsche Bank	✓	✓
Goldman Sachs	✓	✓
HSBC *	✓	✓
JPMorgan	✓	✓
Merrill Lynch	✓	✓
Morgan Stanley	✓	✓
Nomura	✓	✓
RBS *	✓	✓
Société Générale *	✓	✓
UBS	✓	✓
Unicredit AG	-	√

[•]HSBC, RBS and Société Générale are self-clearing participants only for ICE Credit

Listing of Clearing Participants can be found at:

ICE Clear Credit

ICE Clear Europe

Features of ICE CDS Clearing

Expertise & Depth

- Over 320 cleared CDS products globally
- 41 Clearing Participants globally
- Managed numerous Credit Events, Succession Events and Matured Contracts
- Leading market connectivity processing thousands of trades daily

Customer Protection

- Segregation of gross margin at the clearing house
- Robust default protection and legal framework
- Pre and post default portability of positions and collateral supported

Risk Management

- World class risk management designed specifically for CDS
- Guaranty fund covers simultaneous default of 2 largest Clearing Participants
- Transparent and replicable margin requirements
- EOD settlement process based on prices subject to execution

Ease of Doing Business

- Open access: supporting multiple platforms
- Trades cleared intra-day, on a near real-time basis
- Support for all trade life cycle events: backloading, netting, credit events
- Allows users to leverage existing infrastructure no costly technology build

2011 Global Accomplishments

Dodd-Frank Compliance

- Successfully converted ICE Trust to DCO/SCA and renamed ICE Clear Credit
- Migrated \$727 Billion in open interest
- ICE Clear Europe deemed SCA

Expanded Product / Members

- Cleared global volume of \$23 trillion
- Launched 47 single names globally
- Added 12 additional Clearing Participants
- Operationally ready to clear Latin American sovereigns in ICE Clear Credit
- Operationally ready to clear Western European sovereigns in ICE Clear Europe

Pricing & Risk Management

- Successfully conducted two default management exercises
- Developed capabilities to support strategic restructuring process and successfully participated in industry-wide test in Europe

Process Improvements

- Adapted operations and technology in ICE Clear Credit to accommodate both FCM/BD and self-clearing workflows
- Launched CP-CP trade date clearing



Cleared for Public Release

Japan Securities Clearing Corporation Outline of service and future plans

October 5, 2011

Japan Securities Clearing Corporation
Prepared for OTC Derivatives Regulators Forum

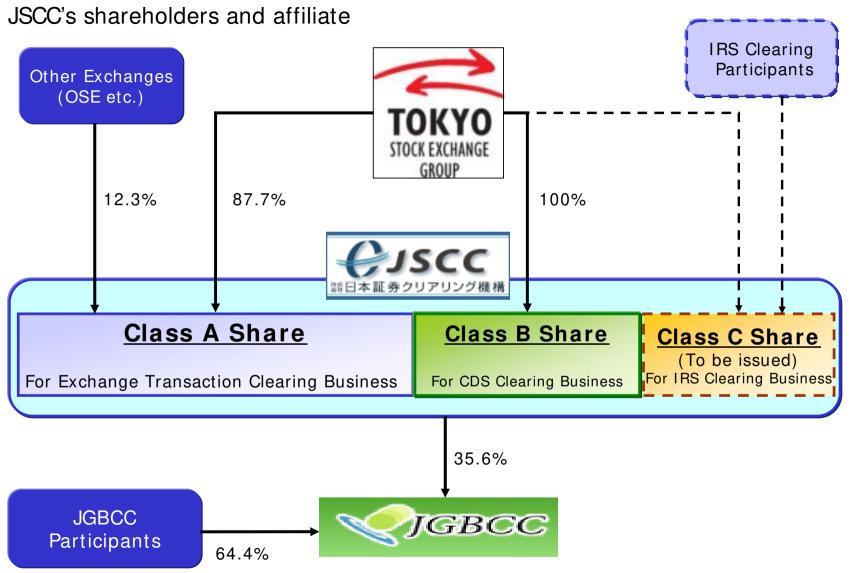


1. Overview of Japan Securities Clearing Corporation (JSCC)

Corporate history and its structure

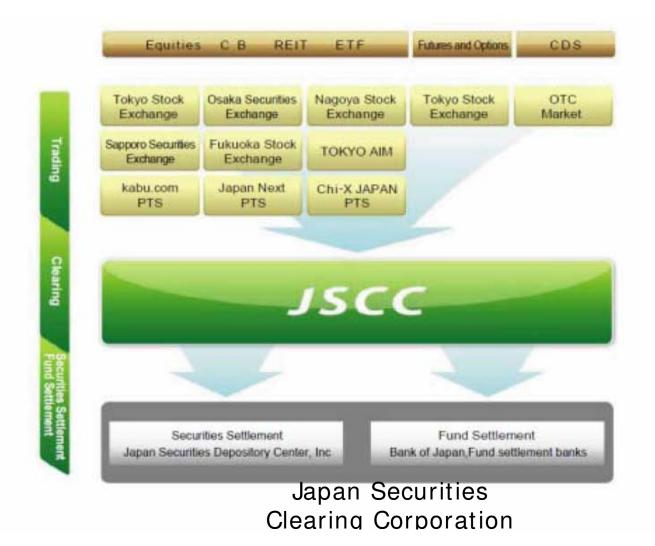
- Established by 5 Japanese Stock Exchanges and Japan Securities Dealers Associations (Jul. 2002)
- > Implemented clearing of exchange listed cash transactions in Jan. 2003 and exchange derivative transactions listed on Tokyo Stock Exchange ("TSE") in Feb. 2004
- Clearing volume (in USD value on average per day for FY2010)
 - · Cash products: USD25bil.
 - Exchange listed derivative products: USD 45bil.
- Clearing Participants
 - 152 participants for listed transaction (As of Mar. 2011)
- Capital amount and shareholders
 - Capital amount: JPY 9.25 billion (Capital: JPY 4.85 billion, Capital Reserve: JPY 4.4 billion)
 - Class A share (for listed trade clearing service); TSE (87.7%), OSE (11.5%), other exchanges (0.7%)
 - Class B share (for CDS clearing service); TSE (100%)
- Affiliate CCP; Japan Government Bond Clearing Corporation ("JGBCC") in which JSCC owns 35.6% of JGBCC's stake. JGBCC clears OTC trades of JGB and its daily average clearing volume in FY2010 was 940 bil. in USD value.





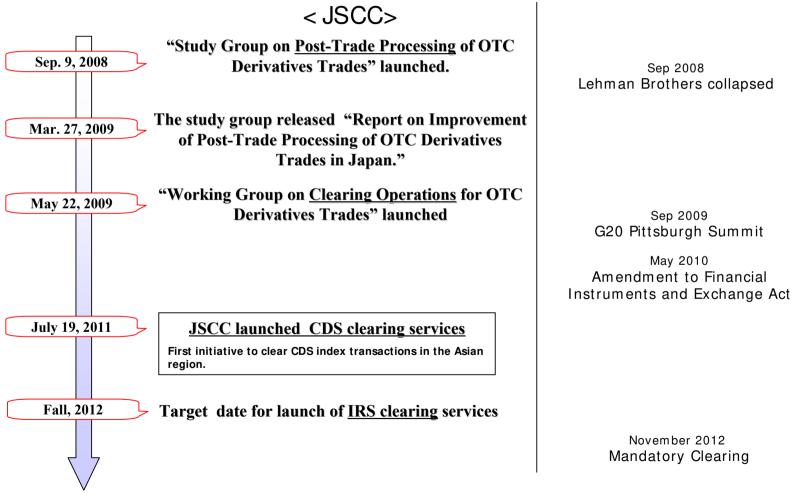


- 1. Overview of Japan Securities Clearing Corporation (JSCC)
 - Service coverage by JSCC





2. Milestones, Initiatives for OTC Derivatives Clearing





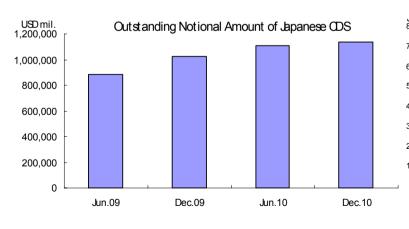
3. Overview of CDS Clearing Service

CDS index clearing in Japan

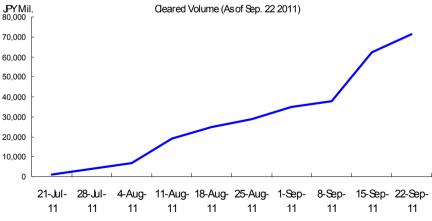
Scope of Clearing	iTraxx Japan Series
Clearing Cycle	Weekly
Participants	5 participants (As of Jul.2011)
Margin	99% ETL

- The scope will expand to include single name CDS as early as by fall 2012
- Risk Monitoring is conducted on a daily basis.
- More dealers are expected to participate in a timely manner.
- Also include short charge and bid-offer spread charge, etc.

Track record of CDS clearing at JSCC



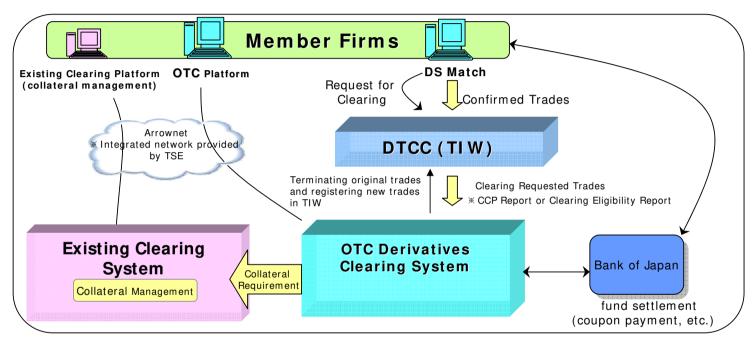
Source: Bank of Japan



- Total Obligation Assumption Values: JPY 71,284 mil. (As of Sep.22 2011)
- Total Number of cleared Trades: 51



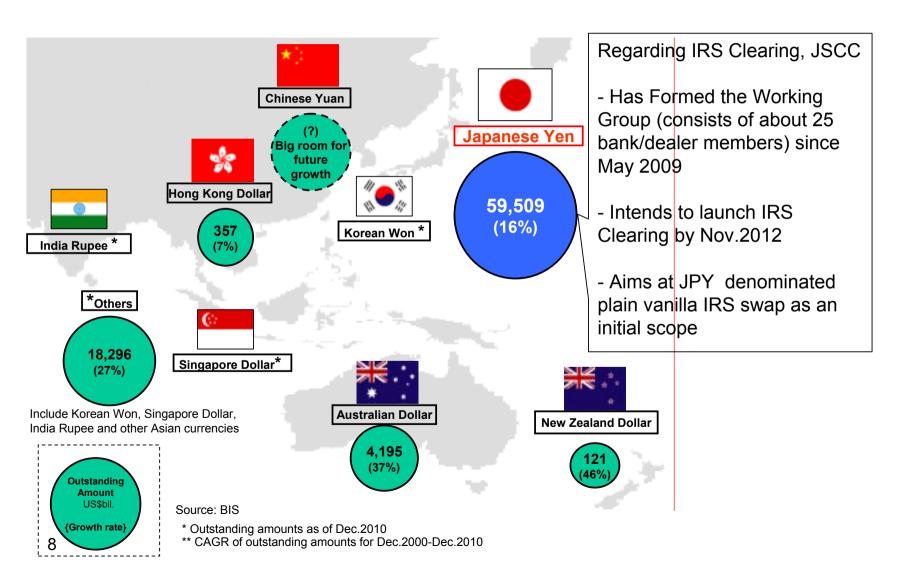
4. CDS Clearing Workflow



- Member firms request for clearing through DS Match. DTCC sends trades data to JSCC on a daily basis.
- After checking clearing conditions, JSCC will terminate original trades and register new trades (between a member firm and JSCC), without forcing member firms to operate with DTCC.
- JSCC will provide member firms with various data and info related to cleared trades, margin requirement, fund settlement, settlement price, etc. via OTC Platform (web-based).
- · Collateral management will be handled in the existing clearing system and platform.
- Fund settlement will take place in Bank of Japan, while cash as collateral in commercial banks in Japan.



5. Overview of the IRS market in the Asia-Pacific Region and JSCC's IRS Clearing Initiatives





Cleared for Public Release



SwapClear[®]

Contents

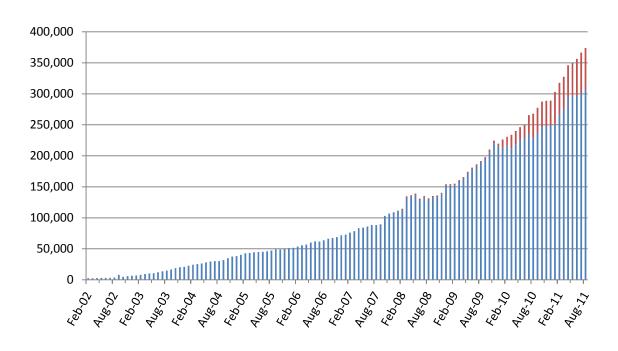
- 1. Service Statistics
- 2. Service Participation & Membership Criteria
- 3. Default Management Process & Experience
- 4. Product Eligibility
- 5. Product & Service Enhancements 2011
- 6. SwapClear Client Clearing Objectives
- 7. ForexClear

2 Private & Confidential



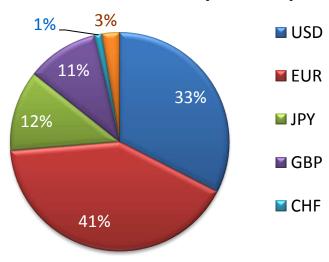


SwapClear Notional Outstanding (USD bn)



- SwapClear Notional Outstanding (USD bn sides)
- Cumulative TriReduce Notional Reduction (USD bn sides)

Notional Distribution by Currency



SwapClear Full terminations by **Currency since February 2008**

Currency	Trade Count (sides)
EUR	279,350
GBP	93,750
JPY	14,638
USD	219,216
Total Sides:	606,954



2. Service Participation & Membership



SwapClear Participation Statistics	31-Aug-11	<u>30-Jun-10</u>
 Number of clearing members 	58	28
 Number of dealers 	90	40
 Number of members offering client clearing 	36	
 Number of live client accounts 	58	

Clearing Member Eligibility

- Membership of SwapClear is based on stringent criteria designed to protect both LCH.Clearnet and other members
- Only clearing members may clear trades directly with LCH.Clearnet
- Other firms can benefit from clearing by using an LCH.Clearnet member to access the clearing service

Current Membership Criteria

All SwapClear members must meet the following minimum criteria of eligibility:



Capital - Minimum \$ 5 billion in clearing member or parent providing guarantee (FCM: \$1 billion)

Credit rating - Single A or better

Margin multipliers - Applied if an existing member is downgraded below A

Default management process - Compulsory participation

Entry "firedrill" for new members



3. Default Management Process



- SwapClear default managed Lehman's \$9 trillion book (66,390 trades in 5 currencies)
- >> Only 35% of Lehman's Initial Margin was used across all assets cleared in LCH.Clearnet

Robust default waterfall

Membership Criteria

Variation Margin

Initial Margin

Defaulter's Default Fund Contribution

LCH.Clearnet's Capital & Reserves to £20mm

Remaining Default Fund

SwapClear Undertaking (£50mm per SwapClear Member)

Replenishment of LCH.Clearnet's Capital

Unique Default Management Process: analyse, neutralize, auction



Morning Day 1 - Risk Analysis - Monday Sept. 15 2008

9.15am Lehman's declared in default

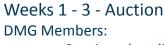
9.30am Default management group (DMG) members meet



Days 1 - 3 - Risk Neutralization

DMG Members:

Acted on behalf of LCH.Clearnet Executed approximately 60 trades Faced SCMs as trade counterparts Neutralized the risk within three days



Continued trading to further neutralise risk
Auctioned 5 currency portfolios (EUR, USD, GBP, JPY, CHF)
Received aggressive prices
Confirmed trades on a T+1 basis







SwapClear-eligible OTC Interest Rate Derivatives Product Characteristics				
Currency	IRS	Up to 50 years	USD, EUR, GBP	
		Up to 30 years	JPY, CHF, AUD, CAD, SEK	
		Up to 10 years	CZK, DKK, HKD, HUF, NOK, NZD, PLN, SGD, ZAR	
	OIS	Up to 2 years	USD, EUR, GBP, CHF	
Leg type	IRS	FXD vs FLT, FLT vs F	LT, Zero Coupon (FXD and/or FLT), Compounding	
OIS FXD vs FLT				
Notional Amount	Denomination	No denominations: users are free to customise contract size		
	Schedule	Constant notional amount		
Fixed Leg	Daycount	30/360, 30E/360, ACT/360, ACT/365.FIXED, ACT/ACT.ISDA, 30E/360.ISDA		
Floating Leg	Index	Market benchmarks: LIBOR (USD, GBP, CHF, JPY), EURIBOR, BAs, Bills		
	Daycount	As per section 6.2.(f) & (g) of ISDA 2006 Definitions		
Date Structures	Effective Date	Effective Date Spot start, forward start, broken dated (front or back stub), mismatched		
	Roll Date	Monthly, quarterly, semi-annually, annually, IMM, EOM		
	Adjustments	Modified Following, Following, Preceding business day conventions		
	Centres	All major Financial Centre business day calendars		
Additional Payments		Termination fees and Novation fees		



SwapClear 5. Product & Service Enhancements



2011 Deliveries to date

System Enhancements

- Full platform migration (risk management)
 - » Customised extension of 3rd party risk management system
 - » Increased capacity and performance
 - » Enables quicker future product roll out
 - » Enhanced Ops, Risk and Default Management tools
 - » Full end-to-end firedrill (default simulation) completed Jun11

Product Extensions

- New currencies: HUF, CZK and SGD IRS out to 10yrs
- Unadjusted fixed and final period end dates
- Multiple financial calendars for fixings

Service Enhancements

- US FCM Client clearing model
- Extension to include US agency debt & CAD cash as margin collateral
- SMART SwapClear margin simulator

Tri-Optima Trade Compression

- 2011 YTD TriReduce Notional Reduction (USD sides) US\$26,530 billion
 - » **EUR** 86,262 sides → US\$11,598 billion notional
 - » USD 114,974 sides → US\$ 12,310 billion notional
 - » GBP 22,658 side s→ US\$1,535 billion notional
 - » JPY 14,638 sides → US\$1,087 billion notional

Scheduled 2011

Strategic Initiatives

Membership Criteria and DMPA re-strike (target delivery early 2012)

Product Extensions

- FRAs in 10currencies (excluding FCM client activity)
- Variable Notional Swaps in USD, EUR, GBP

Risk Management Enhancements

- Further NPV refinements
 - » OIS discounting extended to JPY
 - Short end curve fitting
 - OIS discounting methodology

Service Enhancements

- Development of new 'ClearLink' API to enable:
 - » Direct connectivity to multiple SEF and affirmation platforms (initially Bloomberg and Tradeweb) for the purpose of receiving matched dealer-to-client trades
 - » Direct connectivity to FCMs to facilitate the 'Give up' process
- Risk Free Netting for clients clearing via FCMs
- Opening hours extended to 19:00 EST (midnight London)
- Client to Client and Affiliate activity enabled for FCM model

Tri-Optima Trade Compression

Further 5 runs planned: EUR, USD, GBP, CHF and JPY



SwapClear 6. Client Clearing Service Objectives



International model

Segregation

Client positions and margin must be segregated from House positions and margin. In addition, individual clients must be able to choose to be legally segregated from all other clients of their clearing member (individual segregated account / omnibus net segregated account).

Portability

Client positions and margin must be portable to its choice of SCM to maintain economic performance

Return of Surplus Collateral

Return of surplus collateral to the underlying client and not to the Insolvency Practitioner/Estate of Defaulted SwapClear Clearing Member.

The legal model must be enforceable along every step of the chain and on a cross border basis. LCH currently have approval in relation to UK, Dutch, French, German, Italian, Irish and Swiss SCMs.

US (FCM) model

Segregation & Portability

Customer positions and margin must be segregated from House positions and margin, and be portable en masse to a receiving FCM, selected by the CFTC / Bankruptcy judge / Bankruptcy Trustee, in compliance with the requirements of the Commodity Exchange Act and applicable CFTC Rules

SwapClear 7. Clearing FX - ForexClear

- Mandated FX products: likely to be Options, Non Deliverable Forwards and Non Deliverable Options at 5%, 3% and <1% of market notional respectively
- Liquidity risk in FX settlement: market solution required prior to Regulatory approval to clear physically settling FX products
- NDF / NDO markets: eleven currencies against US \$ cover >85% of notional, with average duration of 30 days
- **NDF risk management:** straightforward. EMTA procedures used as back-up to Central bank fixings, with appropriate multipliers for sovereign default
- NDO risk management complex: average daily volumes of \$20bn, likely to be later delivery
- **FX Swaps / Forwards:** unlikely to be mandated. Some market interest to clear driven by anticipated impact of CRD IV
- Clearing FX Options
 - FX Settlement Herstatt Risk managed by CLS.
 - Halt risk: default during the 2 hour CLS settlement cycle. Low probability. Requires netting to mitigate
 - Liquidity risk: managed bilaterally. CCP management would require significantly higher cash margin balances or access to Central Bank liquidity
 - Market wide discussions underway
 - •Risk management biggest challenges
 - Quality of data for valuation
 - Exercise expiry process
 - Market accepted risk management model

9 Private & Confidential

SwapClear®

Disclaimer

The contents of this document are a broad overview of the SwapClear service and have been provided to you for information purposes only.

Nothing in this document should be considered to be legal advice. Accordingly, users may not rely upon the contents of this document and should seek their own independent legal advice. The Regulations, Rules and Procedures of LCH.Clearnet are published on our website (www.lchclearnet.com).

The information and any opinion contained in this document, does not constitute investment advice or a personal recommendation with respect to any applicable securities or other financial instruments. This document has not been prepared for a specific client and accordingly no reliance should be placed on it. Nothing in this document should be taken as a public offer to sell or to buy any applicable securities of financial instruments.

Copyright © LCH.Clearnet Limited 2011

All rights reserved. No part of this document may be copied, whether by photographic or any other means, without the prior written consent of LCH.Clearnet Limited.

SwapClear is a registered trademark of LCH.Clearnet Limited.

10 Private & Confidential