

**Meeting between Federal Reserve Staff
and Representatives of LCH.Clearnet
September 29, 2011**

Participants: Jeff Stehm, Stuart Sperry, Stephanie Martin, Susan Foley, Jeff Walker, Stu Desch, Lyle Kumasaka, Chris Clubb, Melissa Leistra, Danielle Little, Malcolm Britton, and Mark Haley (Federal Reserve Board); Barry Maddix (Federal Reserve Bank of Boston); Kirstin Wells, John McPartland, Richard Heckinger, Anna Voytovich, Katie Wisby, Kelly Emery, Ralph Shnackel, and Keri Trolson (Federal Reserve Bank of Chicago); Stephanie Heller, Jim Mahoney, Annmarie Rowe-Straker, Patrick Dwyer, Brian Marchellos, and Joanna Barnish, (Federal Reserve Bank of New York)

Chris Jones, Andrew Howat, Dan Maguire, Simon Wheatley, and Susan Milligan
(LCH.Clearnet)

Summary: At the request of LCH.Clearnet staff, Board and Reserve Bank staff met with representatives from LCH.Clearnet to discuss LCH.Clearnet Limited's settlement and collateral practices and supporting banking arrangements. The meeting was held to help inform the Board's rulemaking in relation to Section 806 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 ("Dodd-Frank Act"), regarding designated financial market utilities' potential access to Federal Reserve Bank accounts, services, and borrowing privileges.

LCH.Clearnet staff provided Board and Reserve Bank staff with a presentation and opened the meeting with an overview of LCH.Clearnet Group Limited and of its operating subsidiaries.¹ The presentation followed with an overview of LCH.Clearnet Limited's risk management framework, including a discussion of the clearinghouse's settlement processes, financial resources, and banking arrangements. These discussions included an overview of LCH.Clearnet Limited's Protected Payments System and the clearinghouse's margining system. LCH.Clearnet staff concluded the presentation with a discussion of LCH.Clearnet Limited's SwapClear services.

During the discussion, LCH.Clearnet staff mentioned that Federal accounts and services might be of use to the clearinghouse, but that further research and analysis were required to determine the benefits that these may provide.

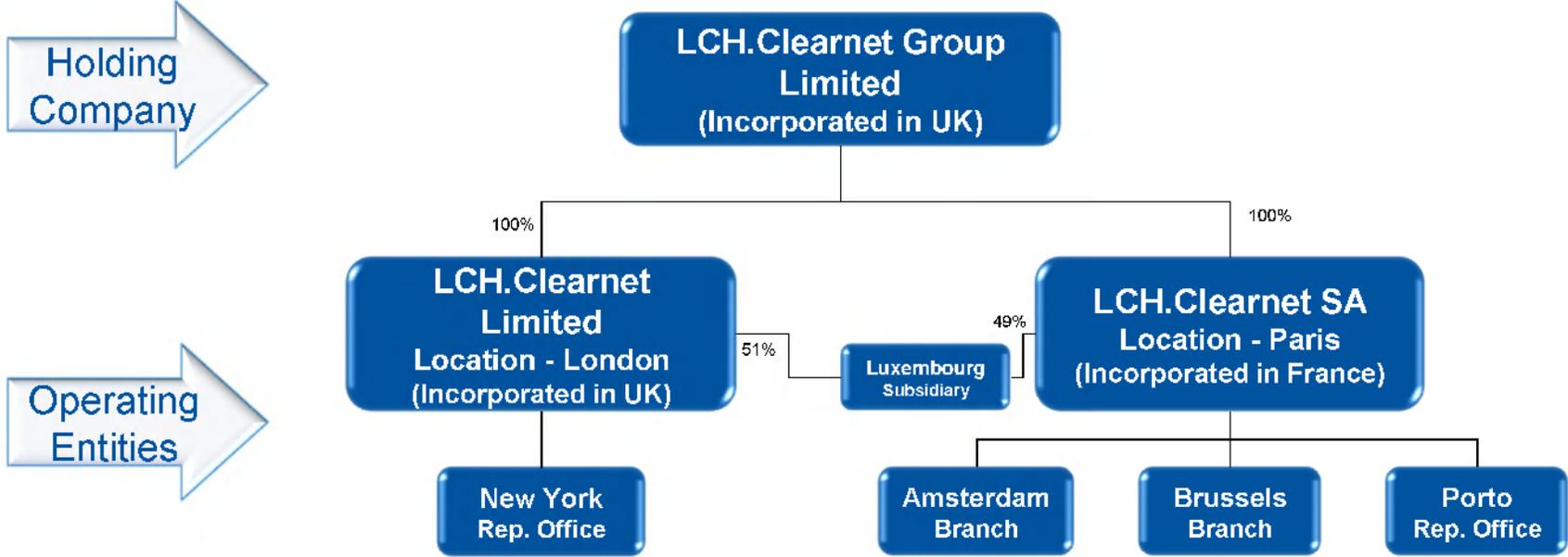
¹ A version of this presentation redacting confidential information is attached to this public summary.

LCH.Clearnet Overview

Andrew Howat
Chris Jones
Daniel Maguire
Susan Milligan
Simon Wheatley

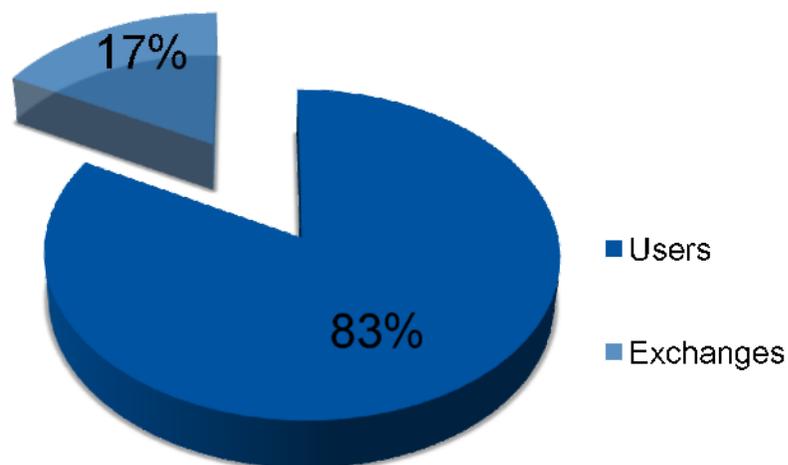
September 2011

Group Corporate Structure



LCH.Clearnet Group - Ownership

- The LCH.Clearnet group is the leading independent central counterparty group, serving local and global markets. It is the largest and most experienced clearer of OTC markets and also serves major international exchanges and platforms.
- LCH.Clearnet Group Ltd is owned 83% by users, 17% by exchanges

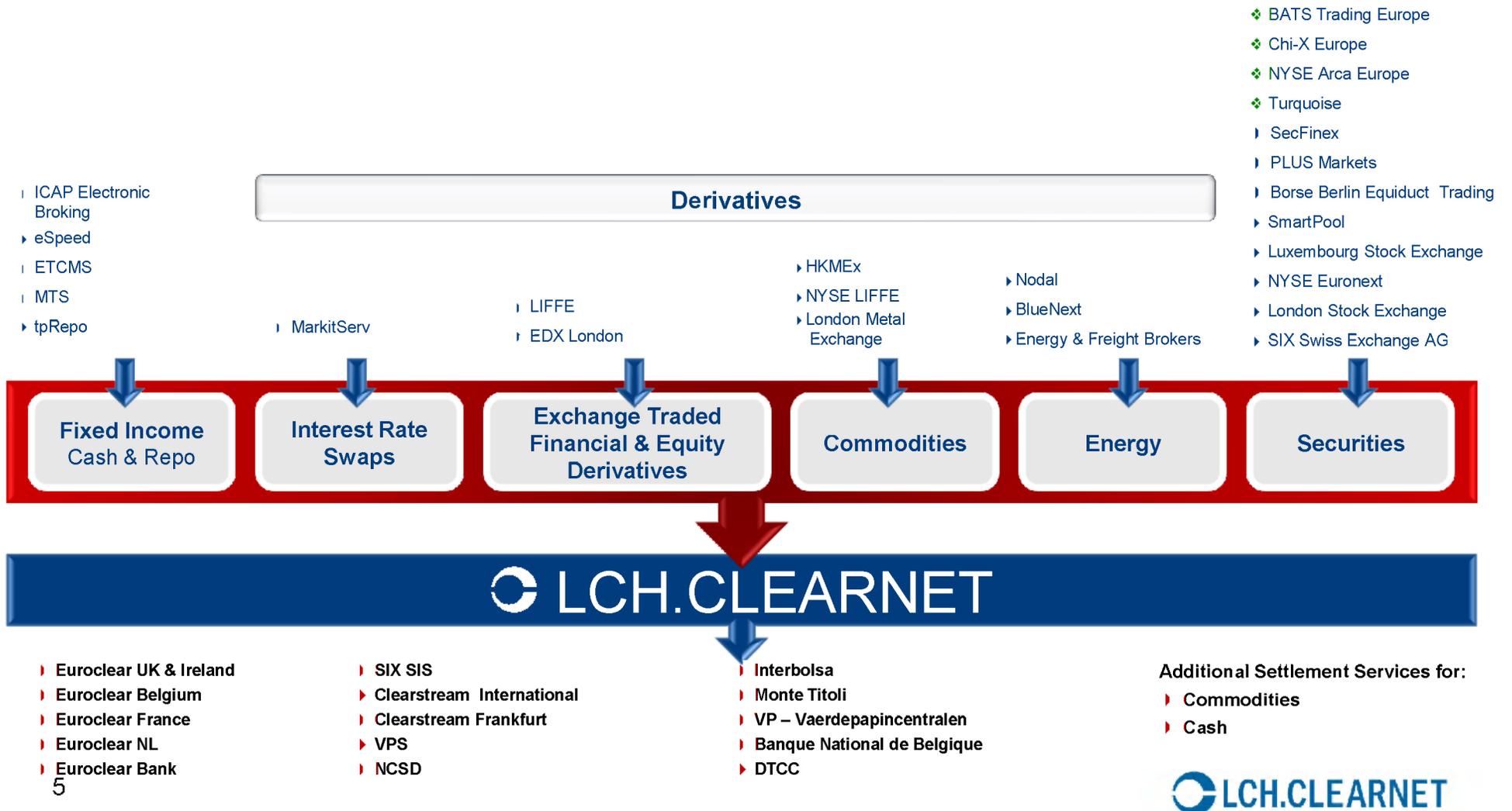


Number of members	
LCH.Clearnet Ltd	LCH.Clearnet SA
153	108
Number of Shareholders	
96	

Group Management Structure



Business Lines – Source and Settlement



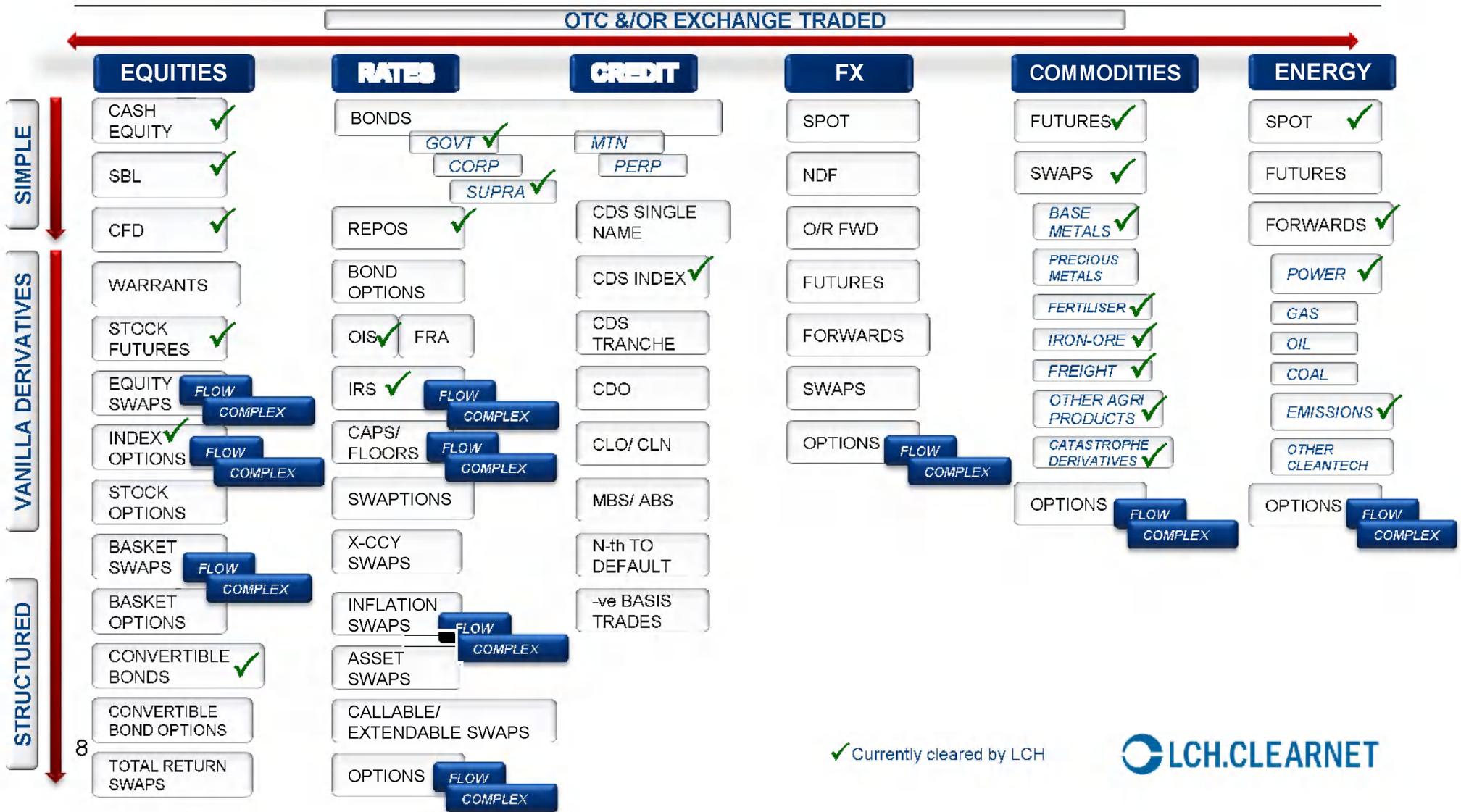
Market Position

- No. 1 in European equities
- No. 1 in European commodities
- No.1 in interest rate swaps
- No. 2 in global fixed income & repo
- No. 3 in global futures & options
- 11 years experience in clearing OTC interest rate swaps

LCH.Clearnet Group - Market Activity

	Continental Europe	UK	Global
Equities	✓	✓	✓
Derivatives	✓	✓	
Commodities	✓	✓	✓
Energy	✓	✓	✓
Freight	✓	✓	✓
Fixed Income	✓	✓	
IR Swaps	✓	✓	✓
CDS	✓		

Products



8

✓ Currently cleared by LCH



Some Key Statistics

- Over 1.6 billion contracts (of all kinds) cleared in 2010
- Approx. €30 billion equivalent total cash collateral held daily (Sept 2011)
- Approx. €37 billion equivalent total non-cash collateral held daily (Sept 2011)

Members

Comprising

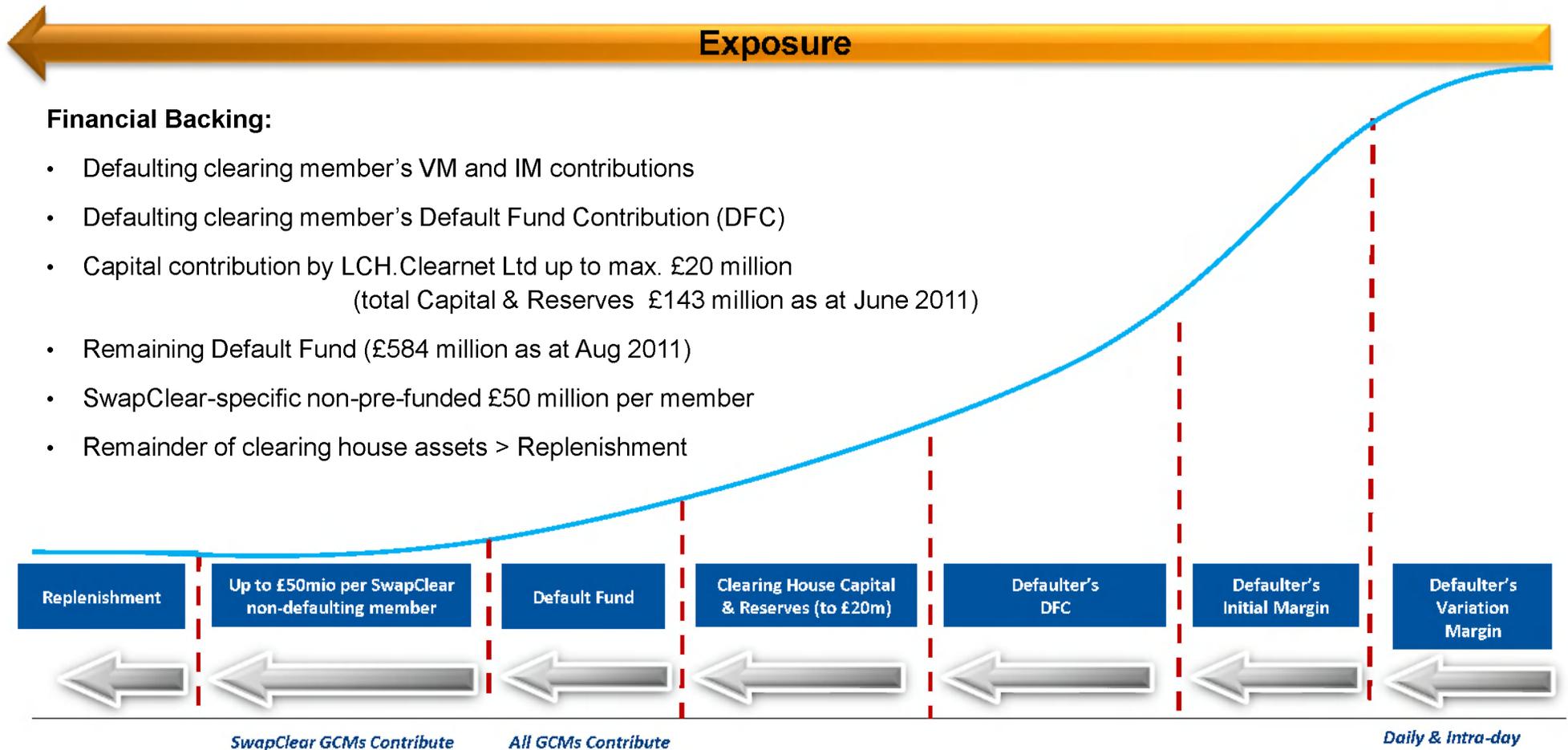
- Major financial groups (including almost all the major investment banks)
- Broker-dealers
- Specialist commodity houses

To be eligible for membership at LCH.Clearnet, firms must meet certain minimum requirements which are tailored to each asset class.

LCH.Clearnet members are of a high credit quality

- Minimum levels of Net Capital
- Appropriate banking arrangements
- Staff of sufficient experience and knowledge of the products being cleared
- Appropriate systems to cope with their clearing activities

LCH.Clearnet Limited - Layers of Protection



Default history

Robust risk management framework demonstrated by a proven track record of managing defaults:

- Drexel Burnham Lambert Limited (DBL) – 1991
- Woodhouse Drake & Carey (Commodities) Limited (WDC) – 1991
- Baring Brothers & Co. Limited (Barings) – 1995
- Griffin Trading Company (GTC) – 1998
- Lehman Brothers – 2008

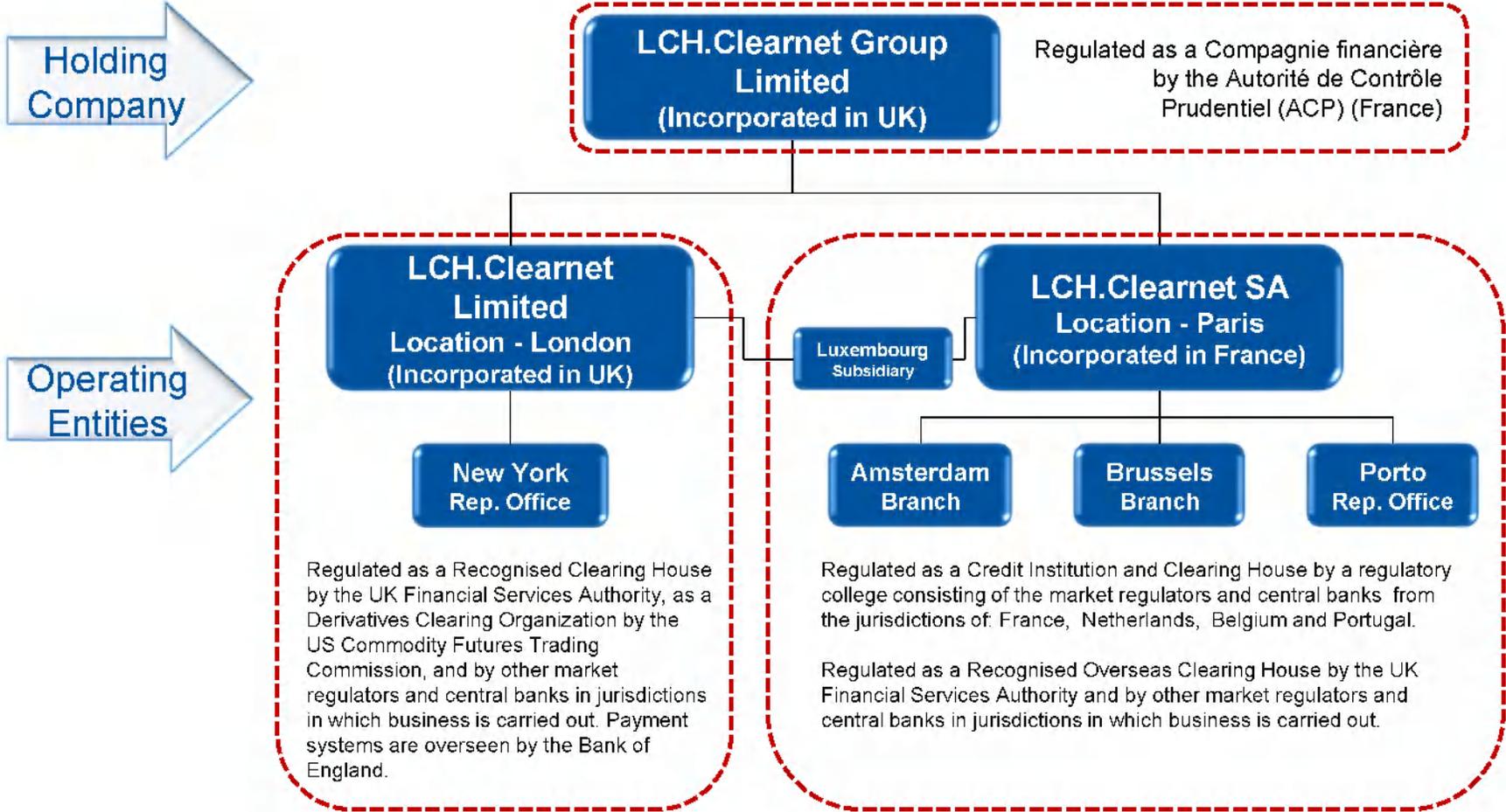
...and situations where we have avoided member default altogether:

- Yamaichi International Europe Limited (YIEL) – 1997
- Enron Metals Limited (EML) – 2001
- Refco Securities and Overseas Limited – 2005

Regulatory Environment

Simon Wheatley

Group Structure and Regulatory Supervision



LCH.Clearnet Group Limited (Holding Company)

- Incorporated in the UK
- Designated as a French “Compagnie Financière”
- Regulated primarily by the French Autorité de Contrôle Prudentiel consolidated supervision for:
 - Group capital adequacy (subject to the EU Capital Requirements Directive)
 - Overall compliance with legal and regulatory provisions
 - Corporate licensing

LCH.Clearnet Limited (Operating Subsidiary)

- Incorporated in the UK
- Designated as a UK “Recognised Clearing House” under the Financial Services & Markets Act (FSMA) 2000
 - (i.e. not a bank, and not subject to the “approved persons” regime)
- Regulated primarily by the UK Financial Services Authority (FSA) as “home state regulator”
- Secondary regulation by :
 - Bank of England (oversight of payment systems);
 - US Commodity Futures Trading Commission (US OTC business);
 - Other EU, Swiss, Hong-Kong, Singaporean, Canadian regulators

LCH.Clearnet SA (Operating Subsidiary)

- Incorporated in France
- Designated as a Credit Institution (“Banque Centrale de Compensation”)
- Regulated primarily by the French ACP, along with:
 - AMF, Banque de France (in France)
 - AFM, De Nederlandsche Bank (in the Netherlands)
 - CBFA, Bque. Nationale de Belgique (in Belgium)
 - CMVM, Bco. de Portugal (in Portugal)
 - UK Financial Services Authority (FSA) as a ROCH (Recognised Overseas Clearing House)

Regulatory History – LCH.Clearnet Group

- Since inception (2003),
- No formal regulatory breaches in
 - Conduct of Business;
 - Regulatory Capital Adequacy;
 - Anti-Money Laundering;
 - Market abuse;
 - Any other regulated activities.
- No regulatory fines.
- No regulatory disputes.
- No outstanding or pending regulatory suits.

LCH.Clearnet Ltd. – FSA Regulatory Treatment

- Recognition gives specific exemptions (compared with “firms”):
 - Immunity from litigation in UK when discharging regulatory obligations
 - Protection against “cherry picking” of assets in case of member default
 - Exemption from UK Stamp Duty Reserve Tax
- Additionally, Ltd has the following advantages:
 - EU Settlement Finality Directive designation
 - Not subject to EU Capital Requirements Directive (Ltd is not a bank or credit institution)

LCH.Clearnet Ltd - Current Regulatory Focuses

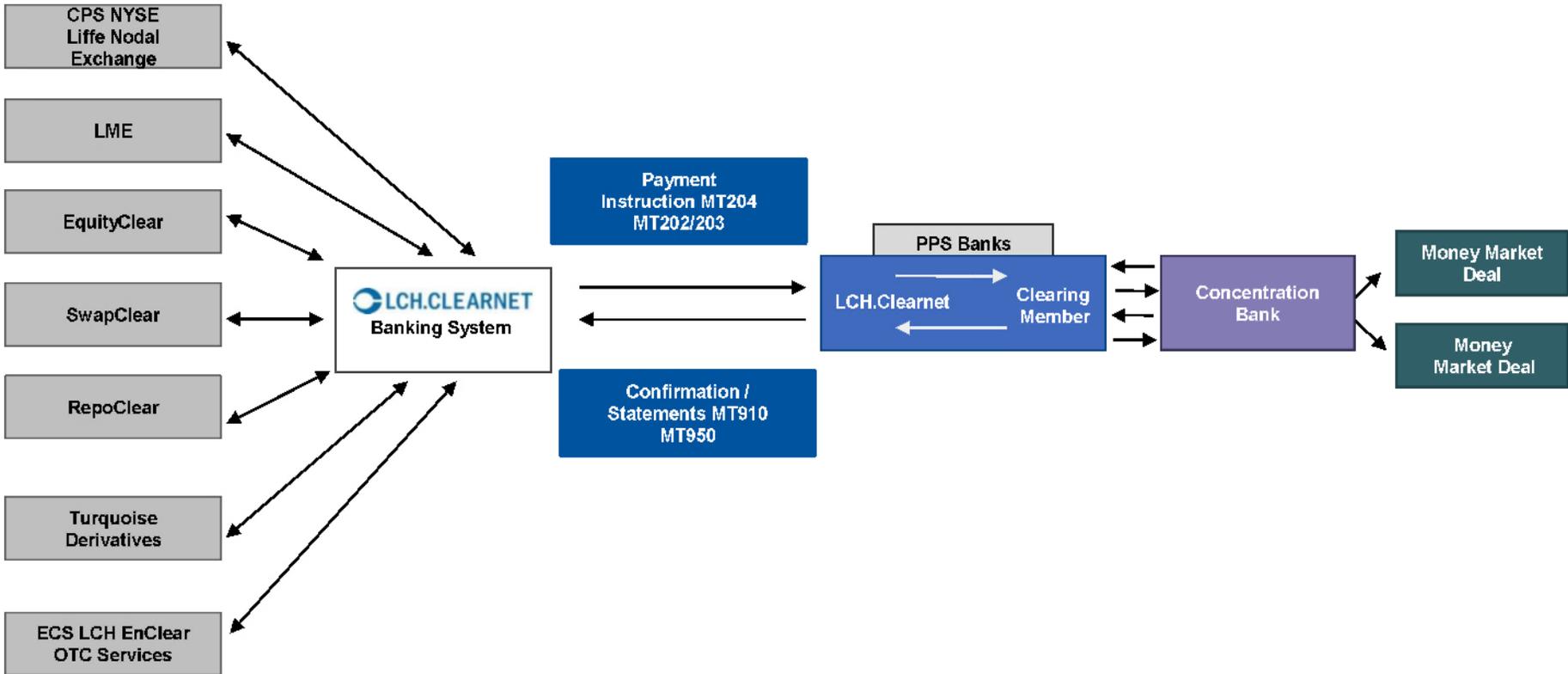
- **SwapClear**
 - Geographic expansion: US, Canada, Australia, etc.
 - Client Clearing (FCM model in US, SCCC model outside US)
- **ForexClear: working with FSA, BoE, Fed, CFTC & founder banks on NDFs release**
- **Exchanges etc: e.g. HKMEX, FEX, Chi-East, Chi-X**
- **DCO licence extension being applied for so can settle for DCMs (in 2012)**
- **FSA**
 - “Close and continuous” supervision
 - IT generally: SwapClear, RepoClear
 - Various reviews (OpRisk, RepoClear, BCP etc.)
 - Interoperability
- **Bank of England**
 - Central Bank funds
 - PPS System - payments control and improvements
- **Regulatory change is a constant**
 - FSA role to transfer to BoE by end 2013
 - European Market Infrastructure Regulations – ESMA responsibilities
 - US – Dodd-Frank etc. – potential structure, governance and general compliance implications

Protected Payments System (PPS)

Andrew Howat
Chris Jones

PPS Structure

- Structure of PPS arrangements and flows via SWIFT



Confidential Treatment Requested

Confidential Treatment Requested

SwapClear Overview

Daniel Maguire

LCH.Clearnet – US Presence

- US presence since 2009
- New York office has full time staff of 22
- 95% of LCH.Clearnet Ltd resources in NY dedicated to SwapClear:
 - Sales and marketing
 - Onboarding
 - Product/risk
 - Middle office
 - Public affairs/ regulatory

SwapClear Statistics

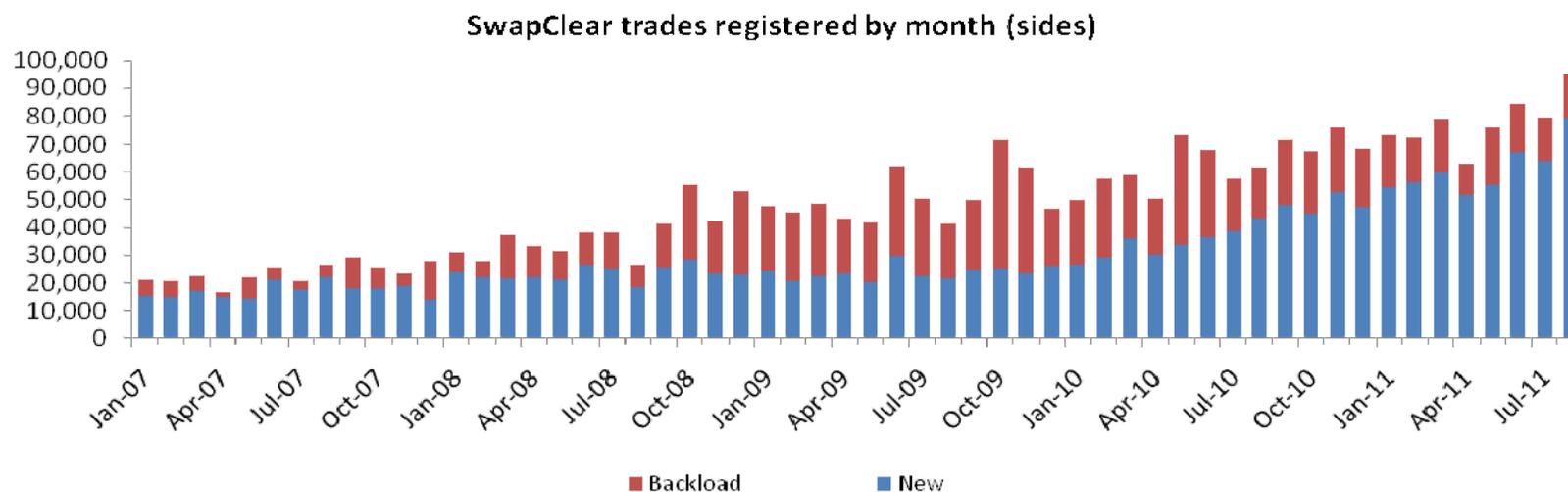
Current Statistics

- Total notional outstanding (sides), USD equivalent
- Total compression to date (sides), USD equivalent
- Total number of trades outstanding
- Market Share, % of adjusted notional, all IRS (end 2010)
- Number of clearing members
- Number of members offering client clearing
- Total number of trades cleared since inception

August 31, 2011

USD 307 trillion
USD 67.0 trillion
980,000
51.8%
58
36
1.72 million

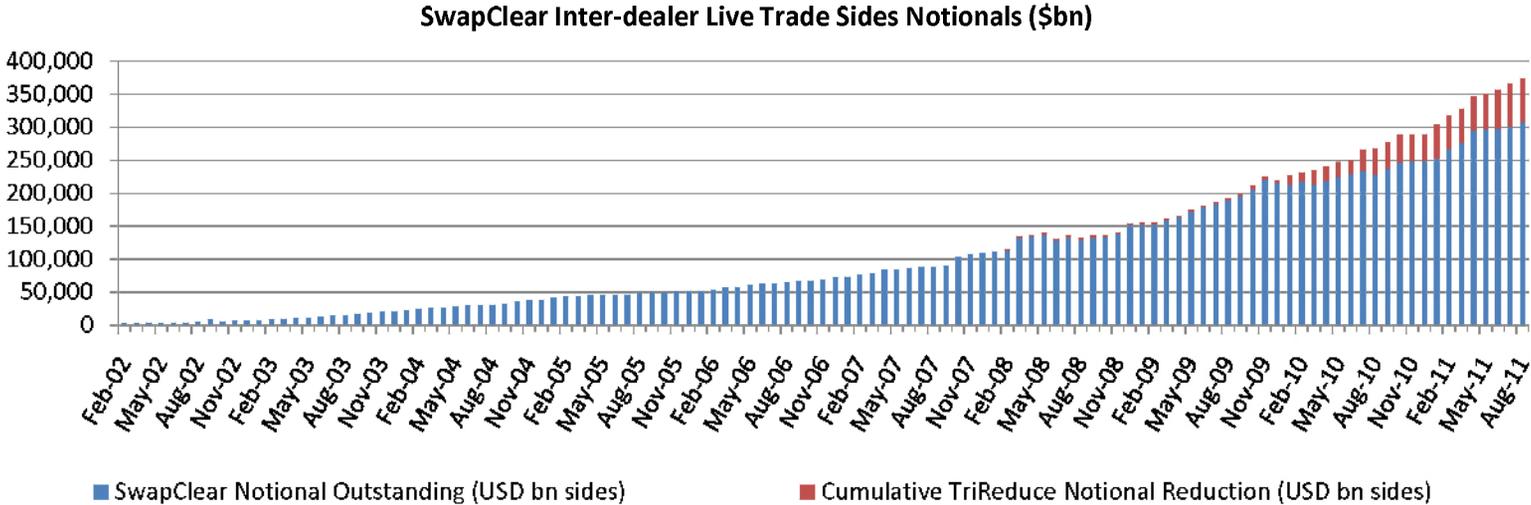
Trade Registration Performance



- Registration of new trades continues to accelerate, buoyed by the increased membership together with the commitment to clearing by major dealers
- Trade sides cleared in August 2011: **95,606** – a new SwapClear record.
- Trade sides cleared in 2010: **765,600**, representing a daily average of **2,940**, up **25.3%** on 2009.
- In 2011 to date, **624,200** trade sides have been cleared, a daily average of **3,650**.

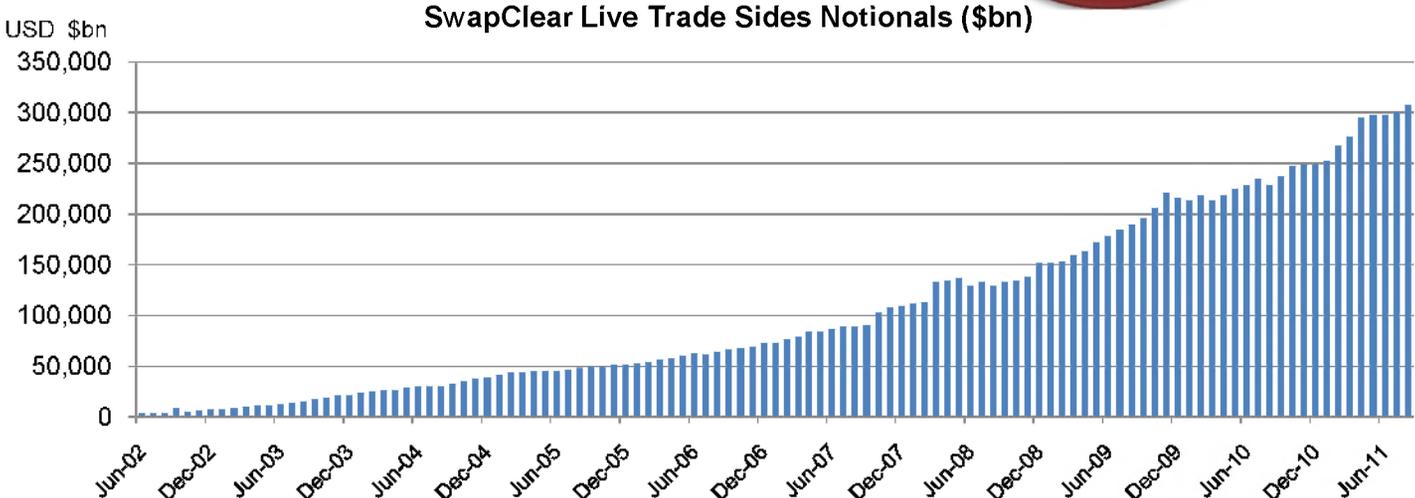
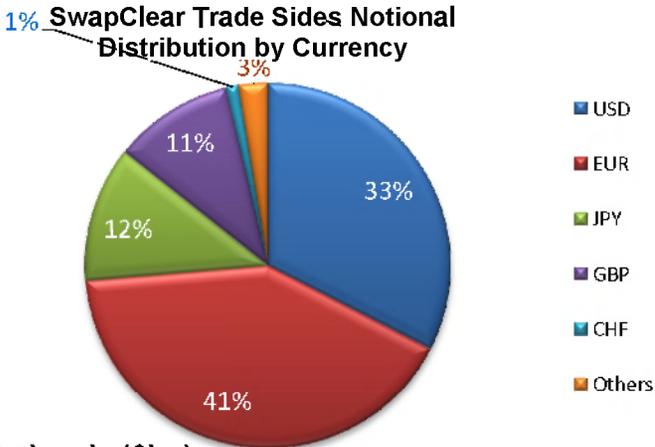
SwapClear triReduce: Trade Compression

- Increased volumes lengthen processing times and would increase the operational burden on members in the event of a member default.
- LCH.Clearnet has therefore worked with TriOptima to develop and refine a tear-up process for cleared trades using their triReduce service.
- Since the first compression run in February 2008, total notional value of trade sides removed from the service using triReduce has exceeded USD 67 tn.
- This chart illustrates how much larger the SwapClear portfolio might have been if these terminations had not been made.



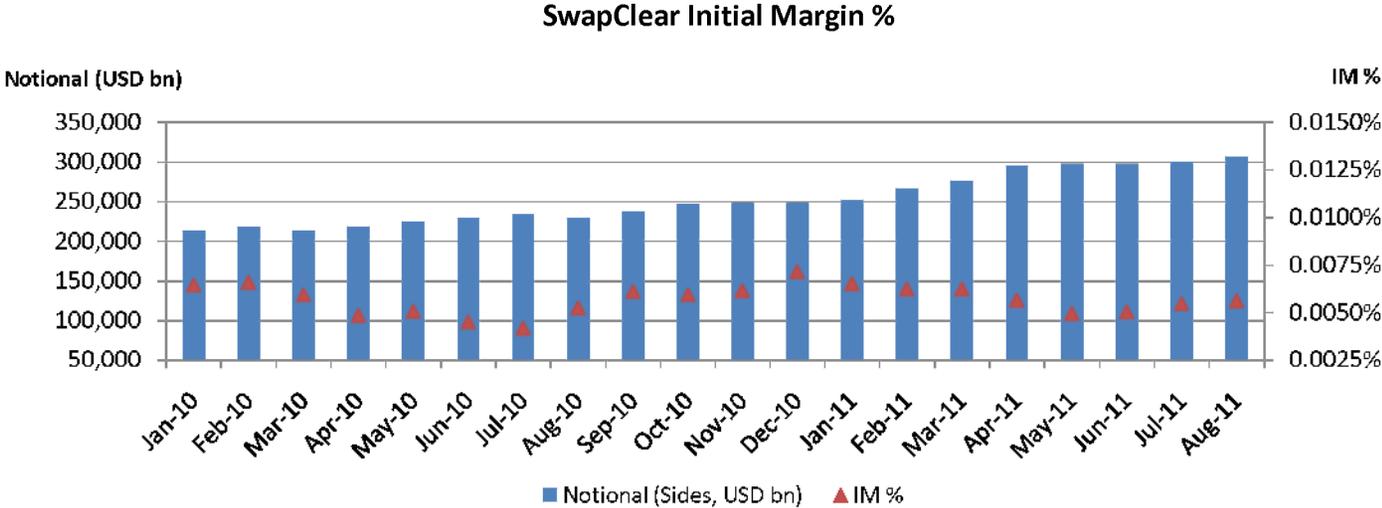
OTC IRS Cleared by SwapClear

Global leader in Interest Rate Swaps clearing
 Established in September 1999
 Outstanding notional of \$307 trillion (end August 2011)
 Largest OTC IRS product range of any Clearing House, globally
 RCH regulated by the FSA in the UK
 DCO regulated by the CFTC in the USA
 Client clearing in Europe December 2009, USA March 2011



In 2008-11, **565,146** trades have been torn up via the TriOptima triReduce service with total notional of **USD 67.0 trillion**.

Margin Requirement



- Initial margin requirement has gradually increased over time as the volume of business in SwapClear has grown.
- Post Lehman, the trend of Initial Margin as a percentage of notional was generally downwards until the end of 2009.
- Since then the IM requirement has moved in a narrow range around 0.6 bps of notional.
- At the end of August 2011, total SwapClear initial margin was GBP 13.3 bn.

Product Range

Full flexibility of OTC Interest Rate Swaps

Widest CCP product offer covering 95% of plain vanilla IRS market

Swap Products Supported

- Plain Vanilla
- Compounding
- Single currency basis
- Zero coupon
- OIS
- Pay frequency: M/Q/S/A
- Floating indices available: all liquid LIBOR indices between 1 month and 12 months
- Day count conventions: ACT/360, 30/360
- Spreads to LIBOR
- Front or backend stubs
- USD/GBP/EUR amortizers (Q4 2011)
- Additional currencies to be implemented, swaptions under review

Tenors and Currencies Supported

0-2 yrs OIS	CHF, EUR, GBP, USD
0-10 yrs LIBOR	DKK, HKD, NOK, NZD, PLN, ZAR, HUF, CZK, SGD
0-30 yrs LIBOR	AUD, CAD, CHF, JPY, SEK
0-50 yrs LIBOR	EUR, GBP, USD

Default Handling – Expertise

LCH.Clearnet Ltd managed the Lehman Brothers IRS default, a \$9 trillion portfolio of 66,390 trades in 5 currencies

Only 35% of Lehman's initial margin was used across all assets cleared in LCH.Clearnet Ltd

Robust default waterfall



Clearly defined risk neutralization process

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 Ltd

Executed approximately 60 trades

Faced SCMs as trade counterparts

Neutralized the risk within three days

Weeks 1 - 3 - Auction

DMG Members:

Continued trading to further neutralize risk

Auctioned 5 currency portfolios (EUR, USD, GBP, JPY, CHF)

Received aggressive prices

Confirmed trades on a T+1 basis

SwapClear – US Regulation

- DCO regulated by the CFTC since 2001
- Domestic accounts are subject to US bankruptcy code and CFTC regulatory framework
- US clients clear through one of 12 FCM members
- All US client funds remain onshore in the US