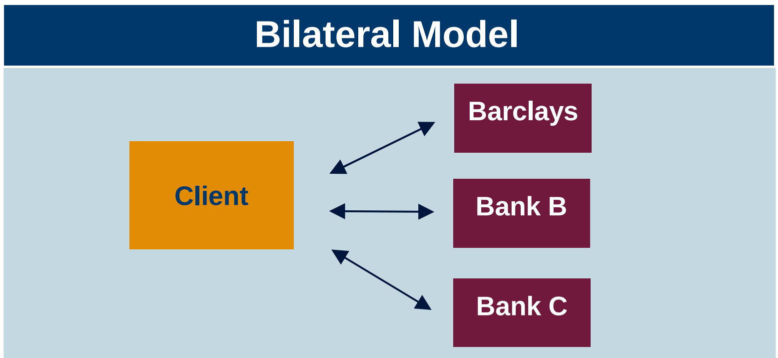
BARCLAYS CAPITAL

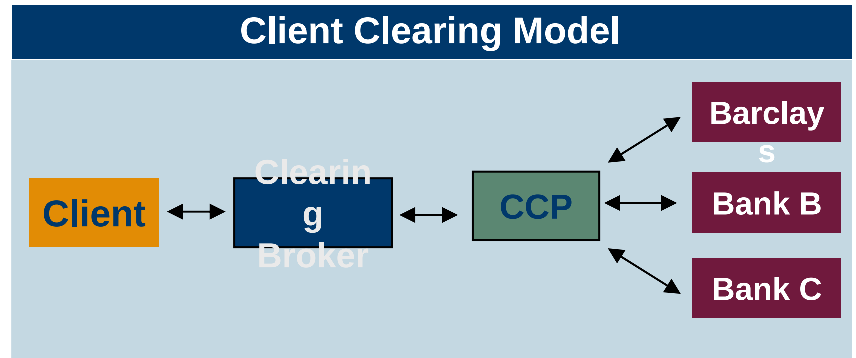
Canadian Annual Derivatives Conference

October 14, 2010

Introduction: What is OTC Clearing / Intermediation?

- Clearing/Intermediation refers to the various post execution operations that are associated with an underlying trade
- Clearing encompasses various asset classes, but current regulatory pressure is focused on OTC derivative products





- Voice Execution bilaterally agreed upon with Client and Dealer
- Counterparty exposure is to multiple trading counterparties
- Must have ISDAs in place with all trading partners
- Margin requirements are based upon Dealer methodologies
- Operational model is not efficient:
    - Non-standard post-trade processes
    - Multiple wires and collateral calls
    - Inconsistent marks and valuations

- Voice execution bilaterally agreed upon with Client and Dealer
- Bilateral exposure with a client is replaced by a mutualized exposure with a CCP
- Margin requirements are based upon CCP margin methodologies
    - Clients expected to post margin that is greater than margin in bilateral structure
    - Dealers to post margin to CCP
- Operational model is more efficient – standardized post-trade process

BARCLAYS CAPITAL

Market Development: Evolution of OTC Client Clearing

The anticipated OTC Clearing agenda until 2011

Barclays is the first dealer to clear a CDS trade at CME and IRS trade at

Barclays is the first dealer to move a client to "full-scale" OTC Clearing

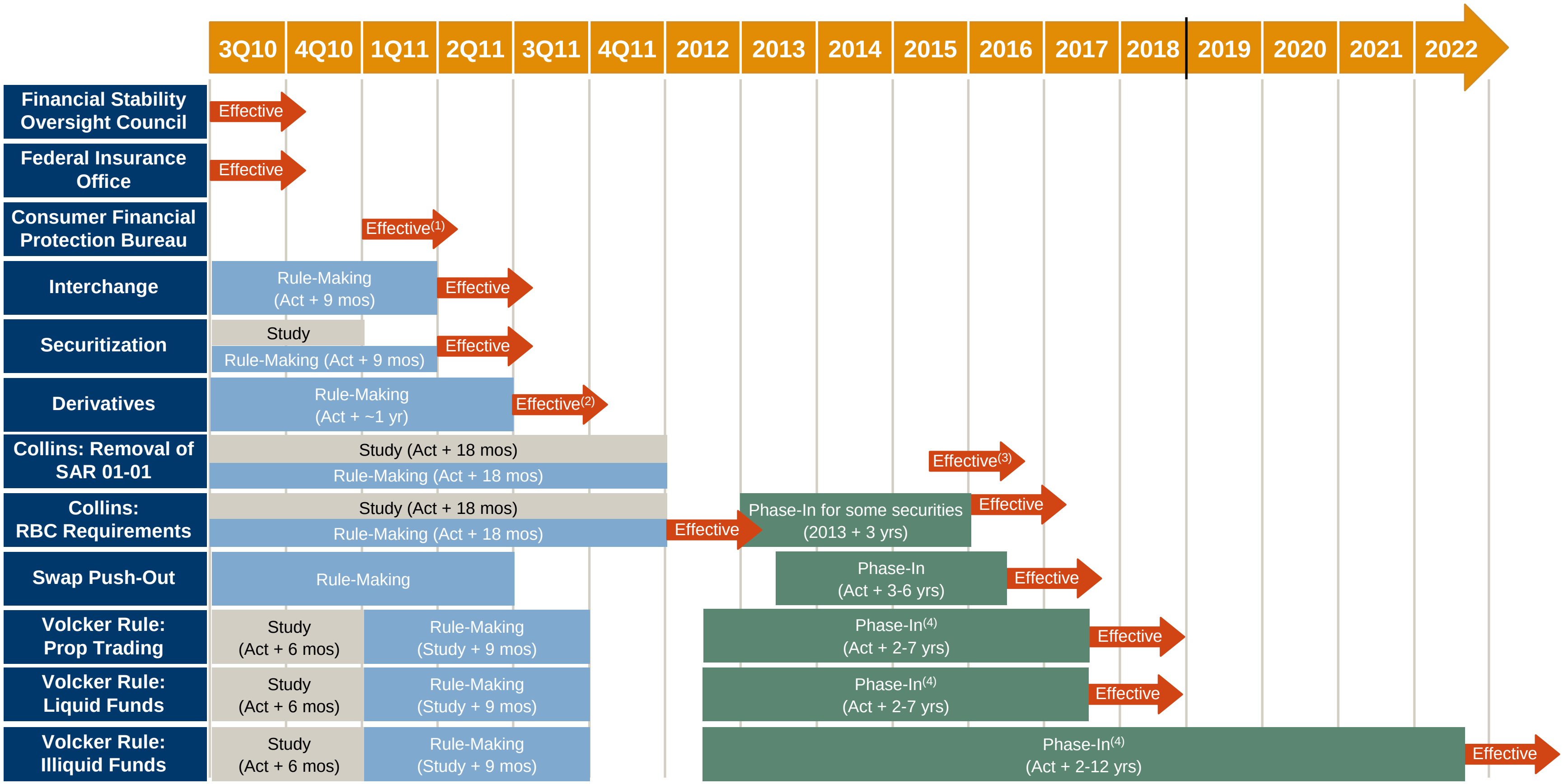
Mar '09	Jun '09	Oct '09	Dec '09	Mar '10	Jun '10	Jul '10	Sep '10	Q4 '10	2011
D2D CDS clearing starts through ICE	**June 2nd:** Dealers sign Fed Letter committing to offer Buyside access to CCPs	CME CDS pilot program begins	**Dec 15th /16th:** CME/ICE/LCH launch D2C capabilities	**March 1st:** Dealers and buyside issue Fed letter centered on OTC clearing	**June 25th:** FinReg approved by lawmakers	**July:** President Obama signed bill into law	EU draft paper published ICE to launch European D2C offering	CME to launch rates offering (Tentative)	July/August FinReg becomes law LCH FCM model anticipated

Key Points

- On December 15th 2009, Barclays established an early lead by clearing first CDS and IRS client trades
- Mainstream client clearing of OTC products has not occurred yet. Key factors include:
  - Complexity of operational build out at a large scale
  - CCP build-out underway
  - Lack of legislative clarity (CFTC and SEC rule writing not complete)
  - Robust risk management of OTC derivative clearing positions
  - “Wait and see” approach of the buy side

Dodd-Frank Act: Implementation Timeline

The Dodd-Frank Act requires studies, rulemakings and implementations in particular timeframes, although delays are possible.



1. *Created on enactment and Treasury to transfer authority to bureau within 6 months with ability to extend out to 18 months.*
2. *Includes clearing, reporting and exchange trading requirements. Most provisions of the derivatives title become effective on the later of Act + 360 days or 60 days after final rulemaking, with some exceptions. Most rulemakings are also to occur within Act + 360 days, with some exceptions.*
3. *Becomes effective as of Act + 5 years except for debt and equity instruments issued after 5/19/10, for which the Act will be deemed effective as of 5/19/10.*
4. *Becomes effective as of rule-making + 1 year or Act + 2 years, but longer transition periods are possible.*

Rationale: Why the focus on OTC Client Clearing?

Catalysts of Change

- Historically, large financial institutions were not widely regarded as having significant bankruptcy risk – Lehman changed this
- Existing protections against default risk were considered sufficient, although the overall legal/asset protection framework was never severely tested
- Collateral retention resulted in growing wave of systemic risk sweeping tangential counterparties
- Outstanding contracts and notional size grew to an alarming rate
- Lack of market transparency lead to significant concentration risks (e.g., AIG)

Regulatory Drivers

- Centralized clearing and execution of OTC derivative instruments
- Standardization of derivative contracts
- Commitment to Regulators to support the ongoing assessment of all viable clearing houses as they come to market
- Additionally we have committed to broaden the range of cleared products within 2010 (and beyond)

Industry Response

- Launched inter-dealer clearing via ICE in the US and Europe
- Standardized CDS single name contracts
- G14 Dealers signed Fed commitment letter to provide buyside access to clearing by December 15th 2009
- Implemented global data repositories commitments for various asset classes
- Committed to various submission and clearing targets for inter-dealer activity
- Transparency study completed outlining clearable products, liquidity/depth analysis, and open issues with existing clearing houses

Key Provisions For OTC Derivatives Clearing in FinReg

- Clearing of OTC Derivatives via Central Counter Parties (CCPs)
- Trading of derivatives on exchange/exchange-like facilities
- Dissemination of trade information

Key Implications of Clearing

Collateral/Margin	• Subject to margin requirements of each CCP for cleared products • Stringent acceptable collateral requirements from CCP for both IM and VM • Potentially higher margin requirements for bilateral non-cleared transactions
Capital/RWA	• Capital charges for cleared and non-cleared transactions • Silo default guaranty fund structure may lead to higher charges
Clearing House Fees/Clearing Broker Commissions	• CCP related fees for clearing of trades – ticket based, DV01, per mm notional • Collateral charge for non-cash collateral (10 bps on LCH, 5 bps on ICE Clear) • Clearing Broker's commission
Infrastructure	• DTCC Warehouse, 3rd party vendor fees • Other administrative costs (Legal, infrastructure, resources etc)
Liquidity	• Greater awareness of market pricing and reporting may lead to tighter bid-ask spreads for investors i.e. SEF provision in Finreg bill • Liquidity differential for cleared versus bilateral trades

Potential strategic client benefits include, and are not limited to:

Asset Protection Framework/ Counterparty Risk Management	• Safeguards client assets in newly regulated OTC framework (in case of clearing member default) • Provides for segregation of client margin
Implementation of Portability	• Allows clients to transfer positions and associated collateral to clients' pre-defined backup Clearing Members
Operational Efficiency / Standardization	• Delivers seamless trade processing and creates standard framework for OTC transactions • Standardizes margin pricing • Facilitates a more robust environment for portfolio compression
Reduction of Systemic and Contagion Risk	• Provides multi-layers of default contributions to protect the clearing house mechanism • Time-and event-tested CCPs
Improved Standing with Stakeholders	• Ensures adherence to regulatory mandates • Addresses investor and shareholder counterparty risk exposure • Offers capital relief for regulated entities

CCP Overview

Clearing Platforms

	Products		Regions				Clearing Offering	
	Credit	Rates	US	Europe	Asia	Global	Dealer to Dealer (D2D)	Dealer to Client (D2C)
CME Group	✓	✓	✓			✓		✓
CME Clearing Europe	-	✓		✓			✓	✓
ICE Trust US LLC	✓	-	✓				✓	✓
ICE Clear Europe	✓	-		✓			✓	✓
LCH.Clearnet Ltd	-	✓				✓	✓	✓
LCH.Clearnet SA	✓	-					✓	
IDCG		✓	✓					✓
Eurex	✓	✓		✓				✓
JSCC					✓			✓
SGX Asia Clear	✓	✓			✓			✓

US

- **CME**
  - Launched Credit Client Clearing on Dec 15 2009
  - Regulated by CFTC, applied for 4d account, currently under 30.7
  - CDS European and Rates solution in 2010
  - Rates Pilot launch expected in September 2010
- **ICE Trust US**
  - Launched Client Clearing on Dec 15 2009
  - Regulated by Fed Reserve of NY and NY State Banking
  - Plan to launch ICE Clear Europe by Q3 2010
- **IDCG**
  - Strategic alliance with NASDAQ OMX and regulated under CFTC
  - Initial Product Offering to include USD Swaps 2-30 years
  - No timelines for 'Go Live'
- **LCH Clearnet**
  - See information to right

Europe

- **ICE Clear Europe**
  - Intends to offer client clearing in Q3 '10
  - Operationally very similar to US Entity and well positioned to be first clearing house in Europe
  - Recognized by UK's FSA and operates under exemption from SEC
- **LCH Clearnet**
  - Launched in 1999 by LCH. Clearnet, SwapClear is the only clearing service for OTC Interest Rate Swaps
  - Launched Client Clearing for Interest Rate Swaps on Dec 16 2009
  - Regulated by the UK Financial Services Authority
  - CDS Dealer Clearing offering to be launched at end of Q1 2011
  - Survived the Lehman Bankruptcy, etc.
- **CME**
  - CME announced delay in Credit launch. FSA Margin sign-off in Sept, and recommence working groups in Q4.

BARCLAYS CAPITAL

**More in depth CCP Highlights/ Comparison included in the Appendix*

Regulatory Reforms on Derivative Trading

Basel Proposal on Derivatives

The Proposal aims to capture major on- and off-balance sheet risks and derivative exposures that are under-estimated by the current rules

Proposed Changes	Commentary

Proposed Changes

General Wrong-Way Risk:

- Counterparty exposure will be estimated using higher of current or distressed market factors
- A 1.25 multiplier will be applied to the correlation factor of the IRB formulae for large regulated financials with assets of $100 billion or more and all unregulated financial counterparties, regardless of size

Specific Wrong-Way Risk:

- Exposure estimates for CDS and equity options will be more conservative when there is a legal connection between the counterparty and the underlying name

Credit Valuation Adjustment (CVA) Risk:

- A new add-on capital charge will be levied for CVA risk which arises from relative credit deterioration of a counterparty
- The capital charge will be estimated on a hypothetical zero-coupon bond exposure to each counterparty using 99% / 10 day(1) VaR and Stress VaR methods

Collateral Management Risk:

- Minimum close-out period for large netting sets (> 5,000 transactions), illiquid collateral and exotic derivatives is extended to 20 days
- Downgrade triggers for collateral posting may not be incorporated into models
- Supervisory haircuts for securitization collateral is doubled
- Resecuritization instruments are not eligible for collateral

Commentary

- The incentive to migrate from simpler approaches to IMM is largely eliminated
- Bank holding companies with significant broker-dealer activity in derivative trading and repo/securities lending markets will be adversely impacted
- Proposed changes reinforce the incentive for banks to use central counterparties(2)
- While OTC derivatives transferred to exchanges would draw 0% risk weight, increased margin requirements would require more collateral
  - Initial and variation margining requirements will be standardized and set by the central clearing party (CCP)
  - Overall margin requirements will be mitigated by offsetting / netting for the broker-dealer banks
- Onerous operational requirements are introduced for counterparty risk management capabilities including:
  - Stress testing of counterparty risk estimates
  - Back-testing and validation of counterparty risk models
  - Independent review of counterparty risk management capabilities

1. *December 2009 proposal requires 1-year horizon for CVA calculation, however the July 2010 press release mentioned a removal of 5x multiplier in CVA calibration. We interpreted this explanation as a change in VaR horizon from 1-year to 10-days.*
2. *Current rules assign 0% exposure (EAD) to central counterparties.*

Impact of Basel Proposal[1] on Bank RWAs

Banks with large trading operations and derivative books will be adversely impacted by the Basel Proposal

- Top US Banks[2]: Average RWA increase by 6-9%
  - Goldman & Morgan Stanley: + 20-35%
  - Wells Fargo: +2%
- Top Canadian Banks[2]: Average RWA increase by 3-5%
  - RBC: 5-8%
  - Scotia: 2-3%
- Top European Banks[2]: Average RWA increase by 8-11%
  - Deutsche: 27-34%
  - HSBC: 3-4%
- Top Japanese Banks[2]: Average RWA increase by 2-3%
- Top Australian Banks[2]: Average RWA increase by 2%

1. Impact of derivative counterparty capital related changes only
2. US bank estimates are as of 2010Q2, other bank estimates are as of 2009Q4

US Financial Reform on Derivatives

The Dodd-Frank Bill imposes numerous restrictions over the OTC derivative business

Summary of Wall Street Transparency and Accountability Act of 2010

	SD[1]	MSP[1]	Other	Summary
Swap Desk Spin-off	✓	✓[2]		▪ No federal assistance may be provided to swap entities[3]. Swap desks can be moved to a separately capitalized subsidiary of the bank holding companies ▪ Prohibition does not apply to banks that use swaps to hedge own risks; deal in IR & FX swaps, IG CDS that are cleared, swaps on treasuries, agencies, metals, and equity options
Mandatory Clearing	✓	✓	✓	▪ CFTC and SEC will define the rules for mandatory clearing ▪ Existing swaps are grandfathered from mandatory clearing ▪ Non-financial entities' commercial risk hedges are exempt ▪ CFTC and SEC may also exempt small banks
Capital & Margin	✓	✓		▪ Capital, initial and margin requirements will be determined by Federal agencies for depository institutions, and CFTC and SEC for non-depository institutions ▪ Initial and variation margin will be required for un-cleared swaps. Non-cash collateral may be allowed ▪ Non-depository institutions will also be subject to minimum capital and margin rules, however commercial risk hedging by end users is exempt[4] ▪ Swaps entered into before enactment are not exempt from capital and margin rules
Business[4] Conduct Standards	✓	✓		▪ SDs and MSPs will have a duty to act in the best interests[5] when advising government entities, pension plans, endowments, and retirement plans ▪ SDs and MSPs will be subject to business conduct standards including verification of eligibility of counterparties, disclosure of risks, fees, conflicts of interest to counterparties other than SDs and MSPs, etc.
Swap Reporting	✓	✓	✓	▪ CFTC and SEC are authorized and required to collect and provide swap data to public ▪ Swaps entered into before enactment of the act are not exempt from reporting requirement

1. *SD: Swap Dealer, MSP: Major Swap Participant*
2. *Insured depository institutions are exempt.*
3. *The definition of a swap entity includes swap dealers and major swap participants.*
4. *Based on a letter from Chairmen Dodd and Lincoln to Chairmen Frank and Peterson dated June 30, 2010*
5. *The "Fiduciary Duty" language is dropped from the Conference Bill*

BARCLAYS CAPITAL

Impact of Derivative Reform on US Banks

We expect the capital relief from central clearing to offset the increased counterparty capital charges under the Basel III proposals

- For the top 20 US banks, we estimated an additional $326 billion RWA for OTC derivative positions under the new Basel III rules, which represents approximately 63% increase over current levels
- Basel III allows $0 exposure for cleared derivatives and 1~3% risk weight for exposure to a clearing house
- If all clearable derivatives (2/3 of the notionals) were cleared today, we estimated that the derivative RWA would reduce by $400 billion for the top 20 US banks.

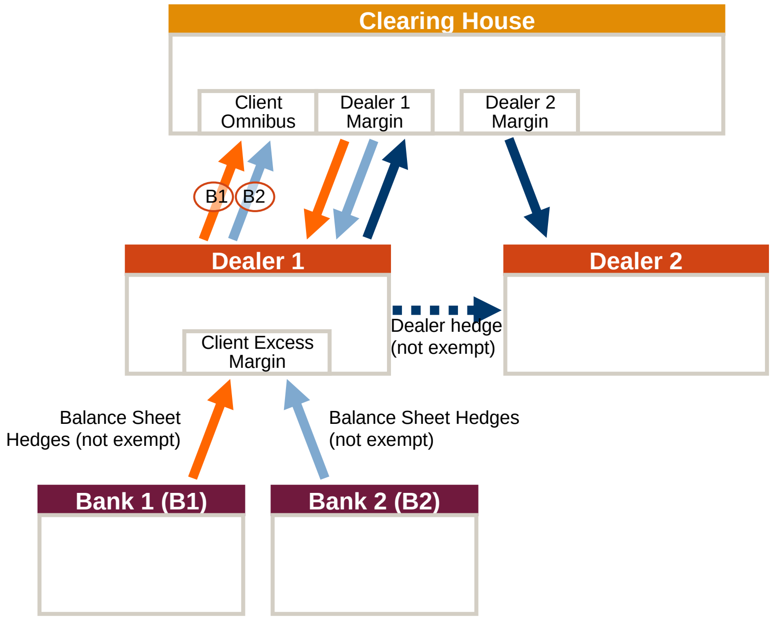
We expect the U.S. banks to post additional $100 billion of collateral to meet the initial margin requirements for centrally cleared derivative transactions

- The cost of <u>initial</u> margin requirement will offset some of the benefits of capital relief from central clearing
- We do not expect the U.S. banks to post material amounts of collateral to meet the <u>variation</u> margin requirements
  - Currently the U.S. banks' derivative exposure is well collateralized in aggregate
    - 70% of aggregate current exposure is collateralized
    - 85% of the collateral is in cash
    - 92% of bank-to-bank exposure is collateralized (84% by cash, 8% by securities)
  - U.S. bank's aggregate derivative fair value position is net positive
    - U.S. banks may even be a "net receiver" of variation margin depending on the magnitude of corporate end user exemptions

Clearing a Dealer – Bank Trade

The broker-dealer banks may benefit from the derivative legislation, however cost of balance sheet hedging is expected to increase

Illustration[1] of Dealer-Bank Trades



Dealer Bank Perspective

- Most dealers manage to a flat derivative book
- When the dealer trades are cleared:
  - (+)[2] Counterparty capital charge will be zero under Basel II/III
  - Margin rules generally recognizes offsetting transactions. Initial margin for cleared trades will be small for a flat book
  - Netting:
    - Cleared dealer-to-dealer trades will net-down the balance sheet
    - Client trades when executed <u>and</u> cleared will have no effect
    - Client trades when cleared only will gross-up the balance sheet
- When the trades are not cleared (e.g., non-standardized swaps):
  - (-)[3] Counterparty capital charges will be significantly higher under Basel III
  - Dealers and other banks will still require initial and variation margin

Client Bank Perspective

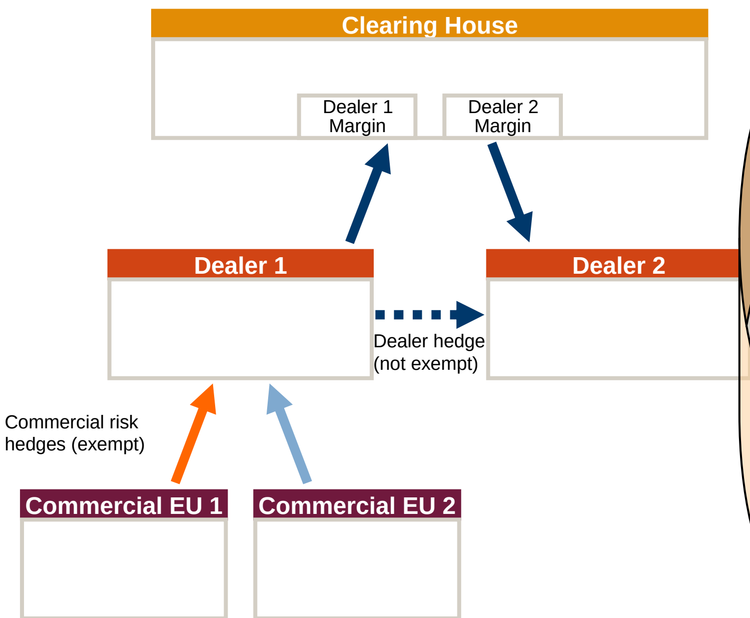
- Balance-sheet hedging trades are not exempt from mandatory clearing
- When the client banks' swaps are cleared:
  - (+) Counterparty capital will be small under Basel I or zero under Basel II/III
  - (-) Client banks will have to post initial margin through dealer banks
- When the trades are not cleared:
  - (-) Counterparty capital charges will be significantly higher under Basel III[4]
  - (-) Client banks will still have to post initial and variation margin with dealer banks

1. *Please note that, this is an oversimplified illustration of derivative transactions between broker dealers and banks. Arrows indicate groups of similar trades and direction of trades. For example, opposing arrows imply offsetting transactions.*
2. *"Plus" symbol indicates a favorable development relative to current requirements.*
3. *"Minus" symbol indicates an unfavorable development relative to current requirements.*
4. *Note that, some US banks will not be subject to Basel II/III*

Clearing a Dealer – Commercial End User Trade

Commercial end users are exempt from mandatory clearing requirements, however dealer banks are expected to pass on the cost of clearing of their hedging trades

Dealer- Commercial End User[1] Trades



Dealer Bank Perspective

- Commercial end-user trades will be exempt from mandatory clearing, however the dealer banks' hedging trades will have to be cleared
  - (-) Counterparty capital charge for the commercial end user trades will be considerably higher under the Basel III proposals
  - (-) Dealers will not be able to ask for initial margin from commercial end users, however they will have to post initial and zero-threshold variation margin for their hedging trades
- To the extent the dealer banks cannot find natural hedges (e.g. oil company trades can hedge airline trades), they will pass on the cost of margin and increased capital requirements to commercial end users

Commercial End User Perspective

(-)

- Commercial end user's commercial risk hedging trades will be exempt from mandatory clearing requirements
- Commercial end user's <u>un-cleared</u> trades will also be exempt from capital and margin rules unless its derivative portfolio is deemed to pose a risk to financial stability of the U.S[1].
- Commercial end users will have the option to
  - Clear and post initial and zero-threshold variation margin with the clearing house, or
  - Not clear and pay a higher price for their commercial risk hedges.

1. *Note that, commercial end user exemption is ambiguous in the Conference Bill which prompted a letter from Chairmen Dodd and Lincoln dated June 30, 2010 clarifying the intention of the derivative legislation*

BARCLAYS CAPITAL

Key Takeaways

- Cleared or not cleared, all derivatives will be subject to margin requirements
  - Cleared derivatives: Clearing houses will determine and dictate margin rules
  - Un-cleared derivatives: The bank regulators, CFTC and SEC are going to define new margin requirements for OTC transactions

- Basel III creates a significant incentive for banks to clear derivative transactions
  - Cleared derivatives: Capital charge will be negligible
  - Un-cleared derivatives: Capital charge will be 60-70% higher than today's levels

- Commercial end-users are exempt from clearing and mandatory margin requirements, however their bank counterparties are expected to pass-on cost of regulations:
  - Exempt derivatives will create higher capital charge for banks
  - Banks' hedging trades will not be exempt and create a non-flat position with the clearing house (unless banks can find another exempt end-user to take the other side of the trade)

- Smaller banks will loose some of their commercial end-user and correspondent banking business to larger dealer banks which can provide more competitive pricing:
  - Dealer banks with larger derivative books will be less impacted by the single-sided clearing requirement
  - Cost of clearing for cleared-only trades will be higher than executed-and-cleared trades