



University of
Zurich^{UZH}

Institute of Law

Financial Law

Post Trading Systems: Clearing and Settlement

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Main points

Post-trading systems

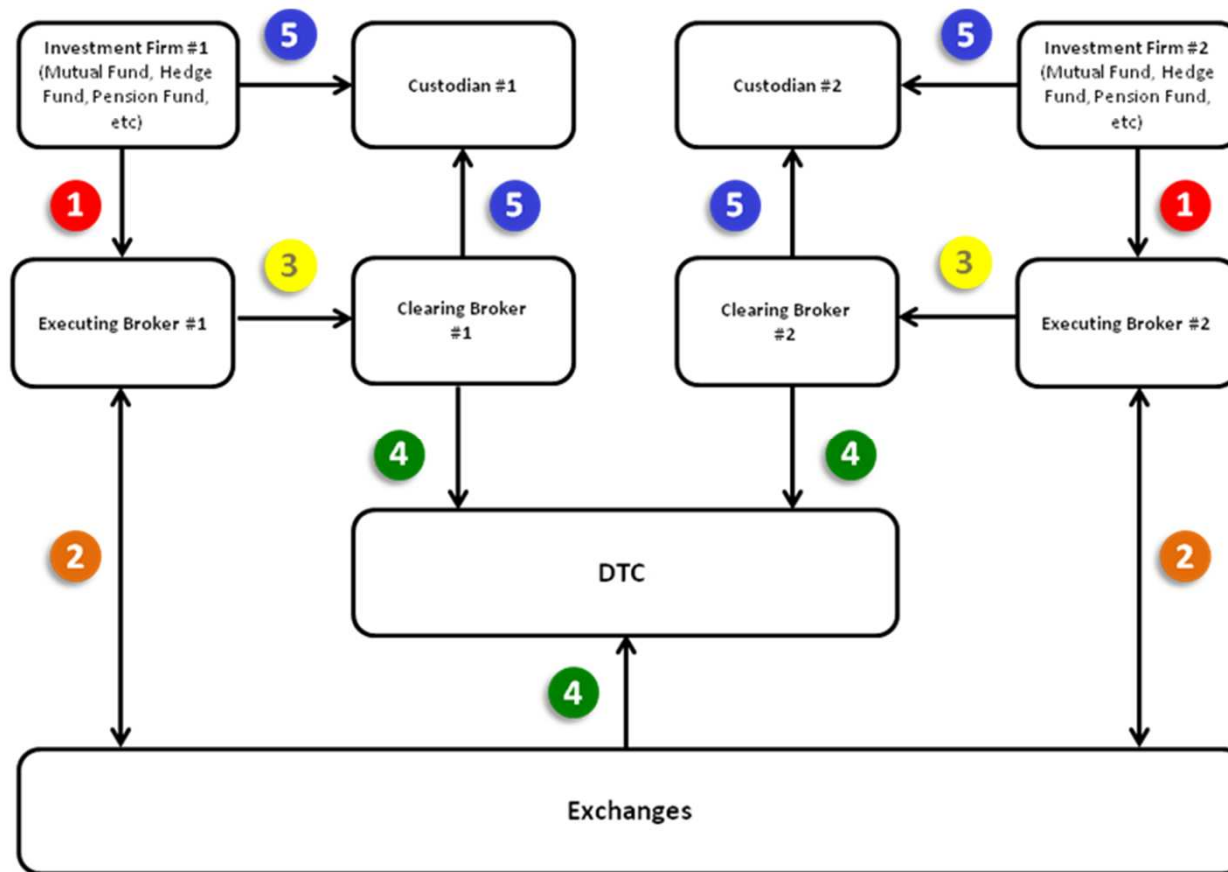
Centralised clearing for derivatives contracts

Payment and settlement systems

Foreign exchange settlement and CLS Bank

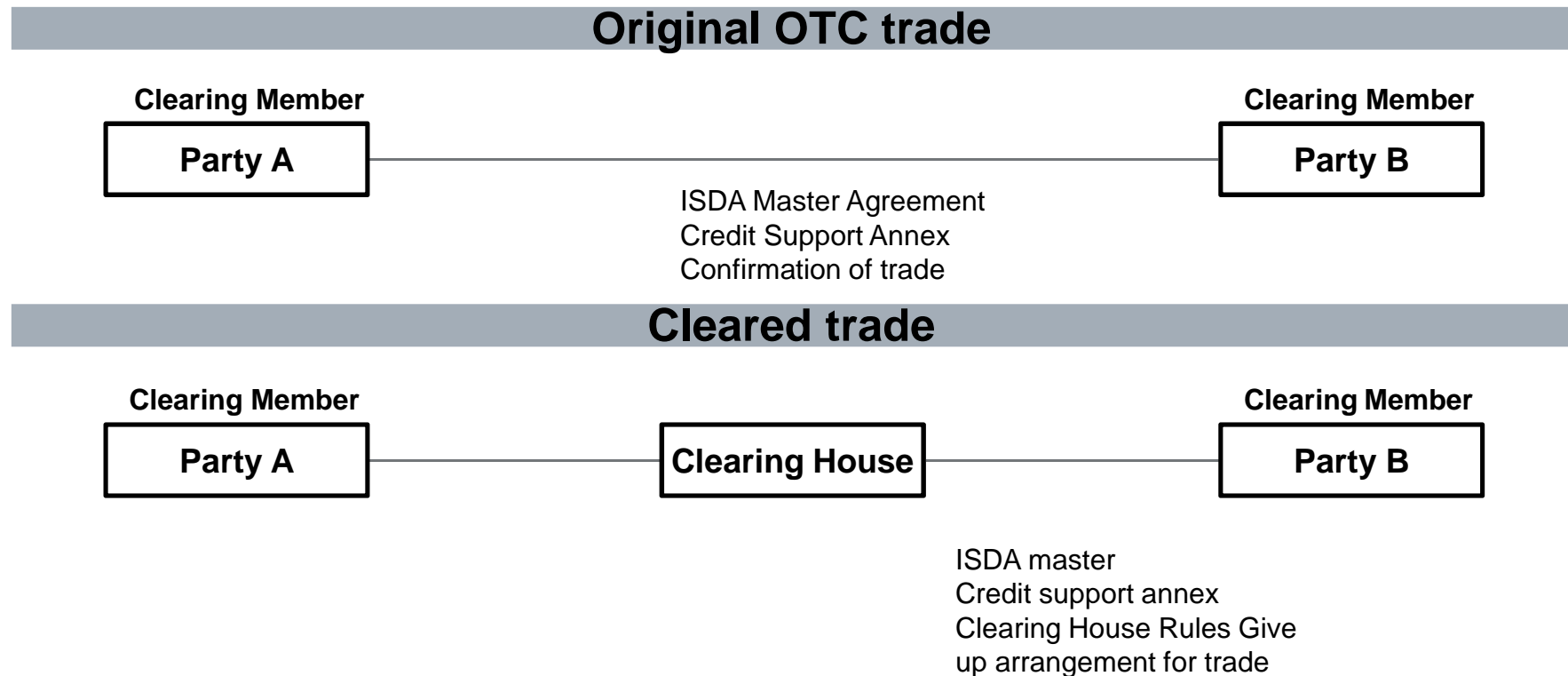


Mechanics of a OTC-Trade





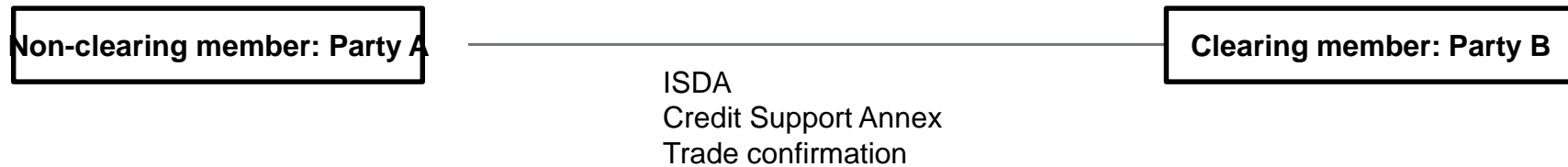
OTC Derivative Regulation: The Mechanics of Clearing



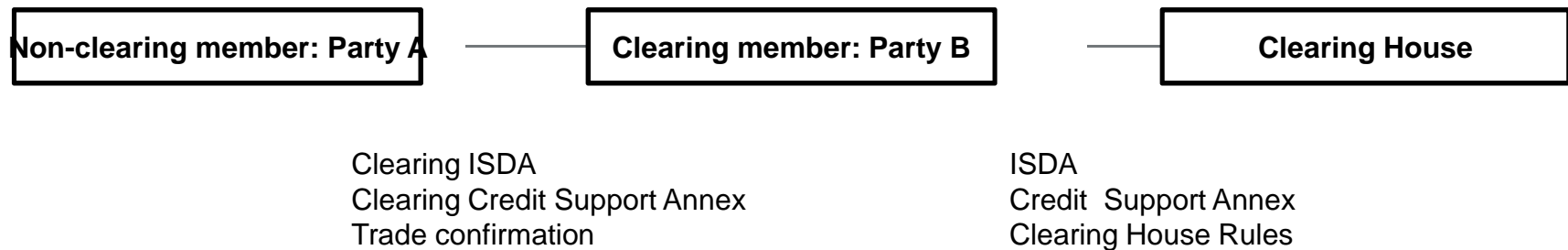


Clearing for Non-Clearing Members

Original OTC trade



Cleared trade





Post-Trading Systems – centralised clearing

- **Objective today: reduce systemic risk**
- **Credit Default Swaps (CDS)**
- **Possibly a bottom-up approach**
- **Law**
- **Regulation**
- **Supervision**
- **Codes and Practices**
- **Ethics, etc**
- **CDS contracts - “required” to be traded on exchanges and cleared through clearing houses or CCPs. EU Regulation & US Dodd-Frank Act**



Post-Trading Systems

- **With exceptions, central clearing counterparties (CCP) clear (net, guarantee, settle) exchange traded, standardized financial contracts, in particular:**
- **Purchase/sale of equities, other securities**
- **Certain derivatives**
- **Main exceptions were various swaps such as energy and interest rate swaps that are traded over-the-counter (OTC) but cleared by a CCP, and credit default swaps**
- **From very little or no regulation, say, 20 years ago, CCPs are now subject to national regulation**



Post-Trading Systems - clearing

- **Strong regulatory pushes to use CCPs for OTC derivatives clearing**
- **US Dodd-Frank Act Title VII requires clearing of OTC derivatives, and responses by industry participants**
- **European Commission proposed Regulation to use at least one eurozone CCP for credit default swaps clearing, and industry responses**
- **Dodd-Frank Act, Title VIII – Systemically-important Derivatives Clearing Organization (SIDCOs) – systemic risk**



Credit Default Swaps Clearing

- **The latest product to be centrally cleared is Credit Default Swaps (CDS)**
- **Overall, there are eight competing proposals, three in the US and five in Europe (two of the European proposals are by US CCPs)**
- **Coordination of regulatory initiatives by the “CDS CCP Regulators’ Workshop”**
- **Central banks, securities regulators, IOSCO, EBF, ISDA, CPSS, etc**
- **In the US, a remarkable MOU among Federal reserve, SEC, Commodity Futures Trading Comm**



Trade Information Warehouse

- **An existing feature in CDS data handling is the Trade Information Warehouse (TIW) that is operated by Depository Trust and Clearing Corporation in New York**
- **TIW was developed in response to the back office and documentation pile-up that existed in 2005**
- **Many CDS contracts in TIW have been netted (or “torn up”) because they could be offset by the parties**
 - **The TIW holdings have been reduced to \$ 27 trillion from \$ 44 trillion, June 2009 versus April 2008**
 - **About 2.2 million contracts outstanding (about 10% non-dealer)**
- **TIW has sought bank registration to become a regulated entity to allow for interface with CCPs outside USA**



CDS Clearing Initiatives

- **ICE Trust US is operational:**
- **It is a New York-based trust bank regulated by the FRBNY**
- **The Clearing Corporation in Chicago is a sister company that provides operational support**
- **It received regulatory approval 4th March 2009 and has done weekly clearing cycles of existing CDS from TIW**
- **Up to 17th June 2009 it cleared \$1,071 billion notional value of CDS (index products only)**
- **Due to netting, the remaining open interest is about \$145 billion notional value (netting out 86% of the contracts)**
- **It also has an operational entity in London**



CDS Clearing Initiatives

- **CME CMDX (Chicago) is operational but has not cleared any CDS (it is also pursuing a London-based initiative)**
- **NYSE Euronext/LCH.Clearnet (London and New York) has been operational since December 2008 with no cleared CDS**
- **Eurex Clearing AG (Frankfurt) will offer CDS clearing in the second half of 2009**
- **LCH.Clearnet SA (Paris) plans to be operational in late 2009**
- **SGX (Singapore) is “considering” a CDS CCP**



Open Issues

- **CPSS-IOSCO Working Group to review international standards for OTC derivatives**
- **Cooperative oversight and data sharing and reporting requirements under discussion among relevant parties**
- **Buy-side participation, access/membership requirements and market structure are still evolving**
- **Regulatory rules by US and EU not yet finalised – US deadline of Sept 2011, and EU deadline by Jan 2012 (acknowledged not going to meet deadlines)**




Clearing - Advertisements

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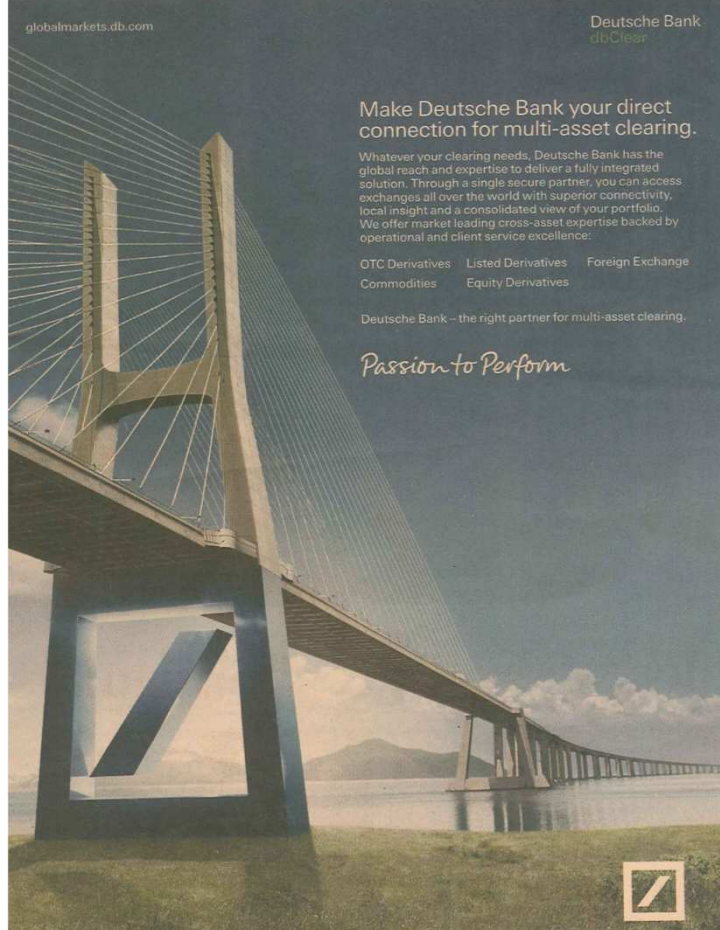
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Payment, clearing and settlement systems

- Bank to bank payments - payment versus payment (PvP)
 - Normal inter-bank payment systems and foreign exchange markets
 - Herstatt bank failure (1975) (PvP problem in foreign exchange markets)
- Securities payments - Delivery v payment (DvP)
 - capital market transactions
 - stock exchange and settlement houses
 - Dematerialisation of securities markets



Payment systems

Supervised and regulated by central banks

2 types:

- 1) Real-time gross-settlement systems (RTGS)

- 2) Multilateral netting system

Central banks acts ultimate guarantor for payment exposures to protect against failure of counterparties to payments or liquidity failure.

To reduce moral hazard, necessary to foster greater sense of responsibility thru appropriate regulation. Involves a trade-off between liquidity and reducing unnecessary credit exposure



Payment systems

RTGS – instant settlement with finality as soon as a payment order arrives. , provided sufficient funds available in the account of sending bank

‘Settlement’ refers to actual transfer of funds from a sending to a receiving bank

‘Finality’ means that the settlement is unconditional and irrevocable

‘real-time’ means that payment orders are continuously executed, while gross settlement means that for each payment order, the total gross amount of funds is transferred.



Payment systems - netting

Clearing houses receives and records all payment orders and checks whether minimum criteria are fulfilled before calculating the net settlement obligations of each participant.

Settlement agent then completes actual transfer of funds.

Clearinghouse can be operated by a private bank or public authority or nonbank organisation

Settlement house however needs support of a guarantor, and therefore central banks are usually the guarantor because of access to liquidity and reserve currencies



Payment systems – Netting systems

Settlements in netting systems do not occur immediately upon receipt of payment orders. Instead, the system immediately informs the receiver whether the order meets some minimum criterion, but the actual settlement does not occur until the end of the day. At that point, 'the system calculates the net payments or settlement obligations for all participants, and then the settlements are completed.'

Difference between RTGS and netting system is that netting systems have only 'contingent finality'. The finality is conditional upon the probability of settlement failure. Finality highly dependent on daily success of settlement.

Also, netting system not operated by a single agent – because involves clearing and settlement. Role of clearinghouse important in netting. p. 186



Payment systems

EU – TARGET 2 payment system. RTGS system

US – Federal Reserve provides ‘daylight’ overdraft system (pricing of overdrafts)

EU – in contrast, ‘collateralize’ the overdrafts by requiring each bank to deposit high-grade securities (funds or government bonds) to cover any daily credit exposures of banks making payments.



Continuous Link Settlement System and CLS Bank Settlement of foreign exchange transactions

- 17 central banks operate CLS System which governs operations of CLS bank
- CLS bank provides a guarantee for delivery of foreign exchange to counter party banks by drawing on the foreign exchange reserves its participating banks deposit in the system. This reduces settlement risk in foreign exchange markets (reduces Herstatt risk).
- Not really clearing, but keeps data and records payments and charges a small fee for settling foreign exchange transactions.
- 55 banks own shares of CLS Bank and benefit from its use.



Dematerialisation of securities and intermediated securities

Securities as institutional backbone of financial markets

Change in operational patterns since 1960s

- Holding of investment securities through financial intermediaries
- Transfer of investment securities through debits and credits to securities accounts held with intermediaries

Comprehensive reform of investment securities law since 1990s:

- Substantive scope/depth: rethinking the concept („intermediated securities“)
- Geographical scope: global exercise
- **Private interests vs. public policy choices?**



Operational Framework

Traditional concept of securities is centered around physical certificate representing a claim/right:

- Transfer of claim requires transfer of possession of certificate
- Claim can only be made by presenting certificate

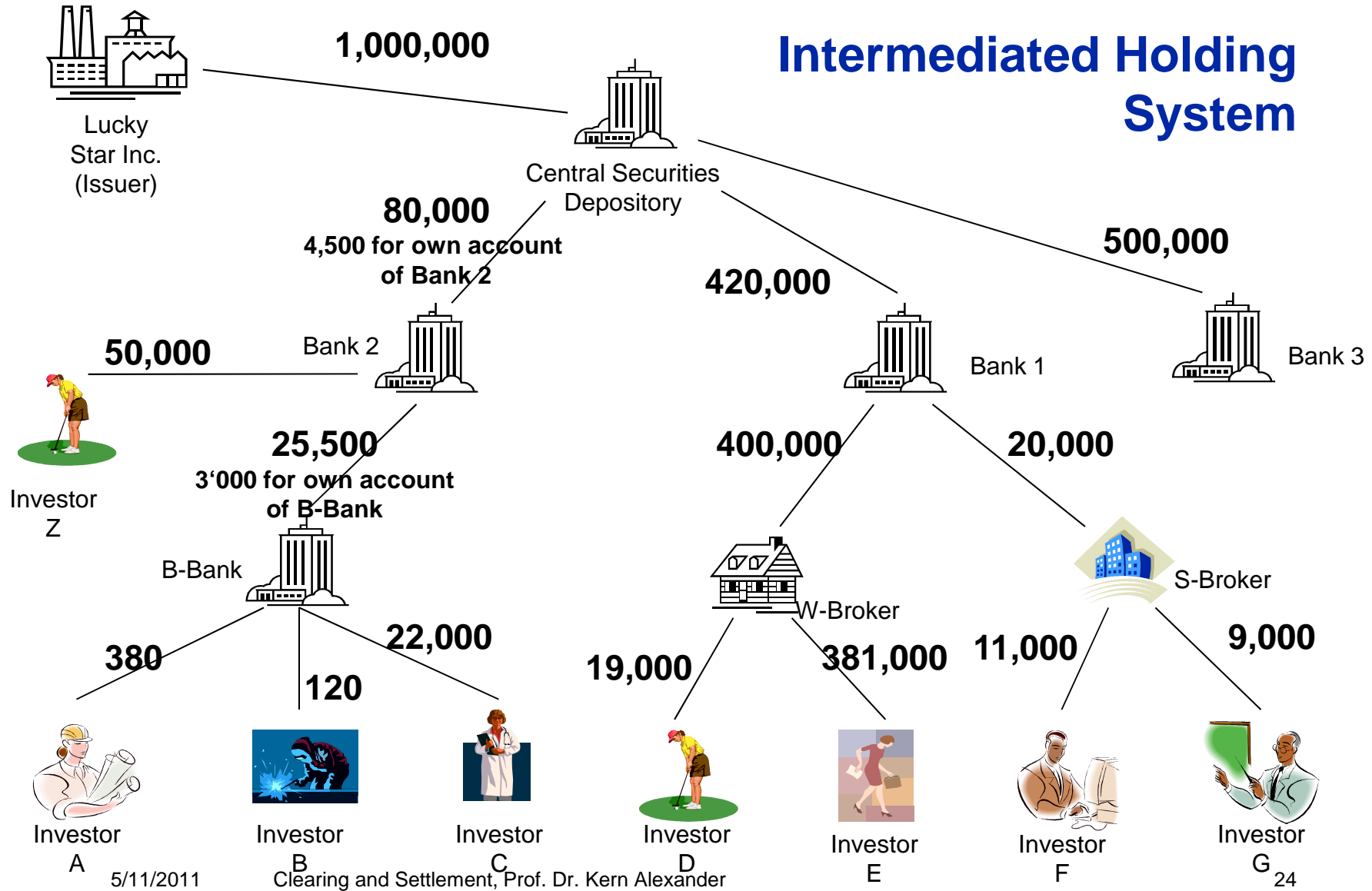
Increasing transaction volumes → „Paper crunch“

Industry response:

- Immobilization
- Dematerialization

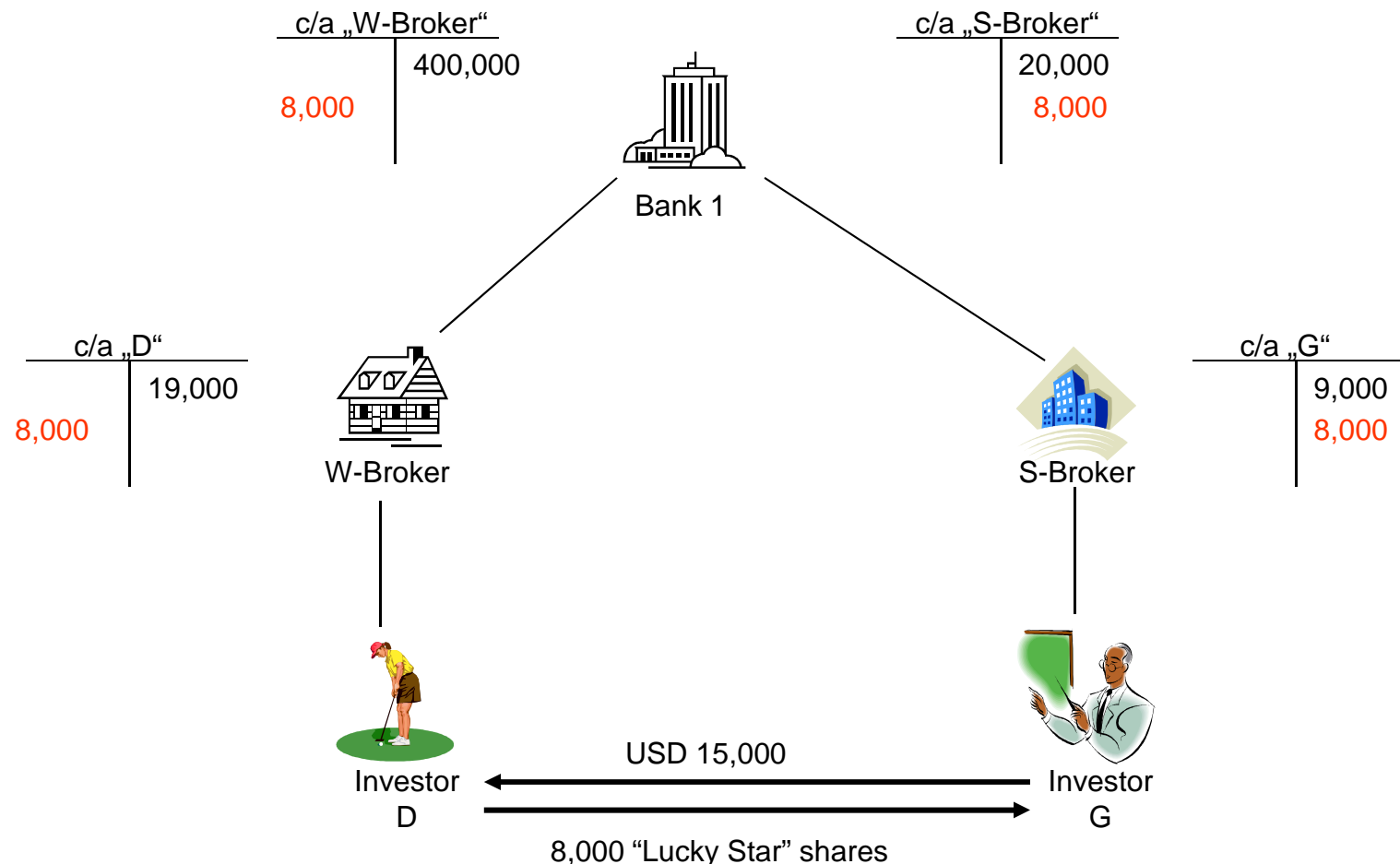
Cross-border holding of securities (internationalization)

Emergence of „intermediated holding system“





Transfer of Securities in the Intermediated Holding System





Legal framework

In most jurisdictions, legal framework for intermediated holding of securities still based on traditional concepts of securities, property, and contract law

Separation of operational reality from underlying legal basis

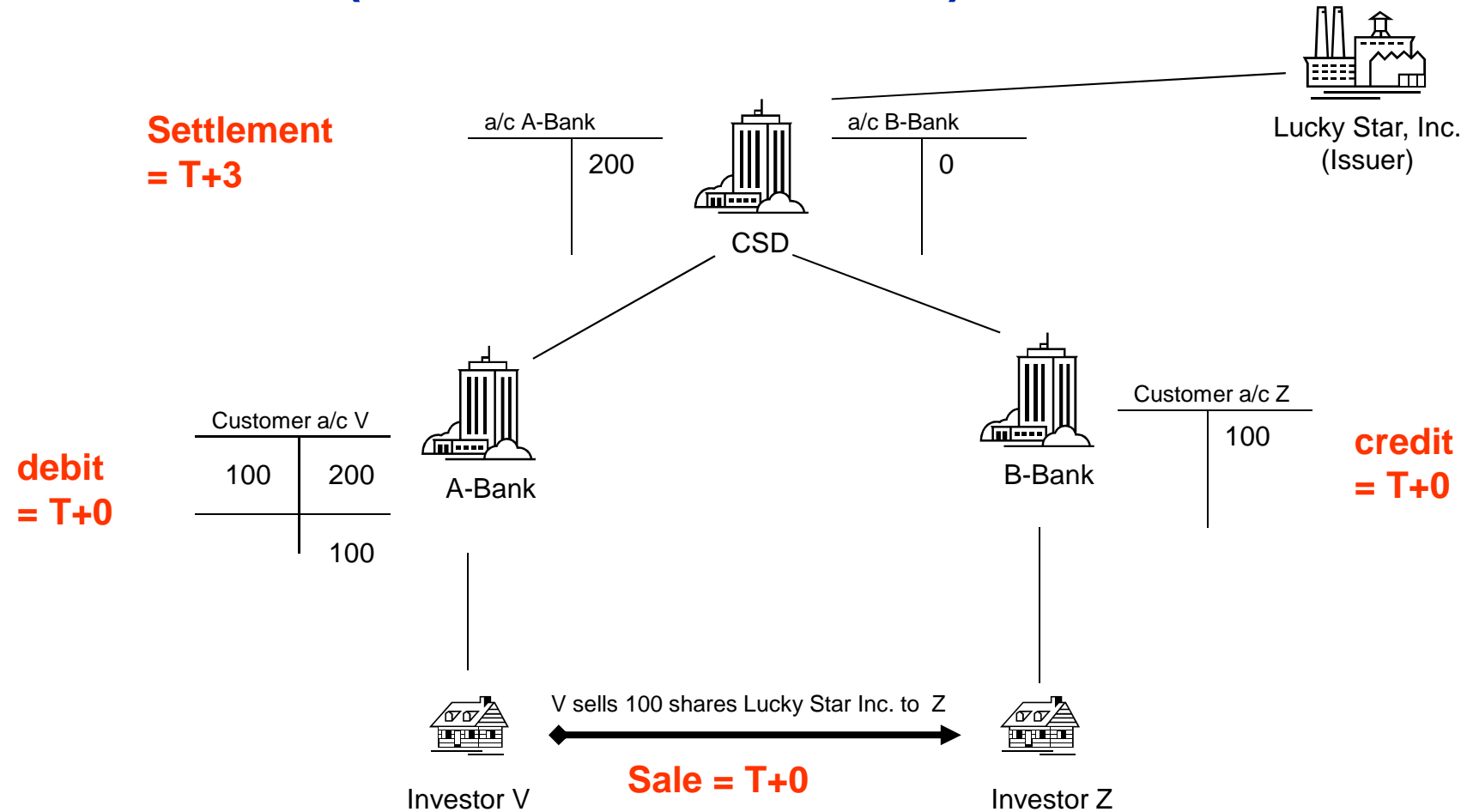
Risks:

- Legal relevance of credit to securities account
- Risks being ignored, e.g.
 - shortfall-risk
 - upper-tier attachment
- Problems in cross-border holdings
- Applicable law
- Relationship between laws based on different concepts: “black box”

But: traditional risks (forgery, theft) eliminated



Shortfall (contractual settlement)





Upper-tier attachment

