

Global Identification Standards and Risk Management Regulations*

* The content that follows has been presented in various forms to regulators and financial institutions throughout the world

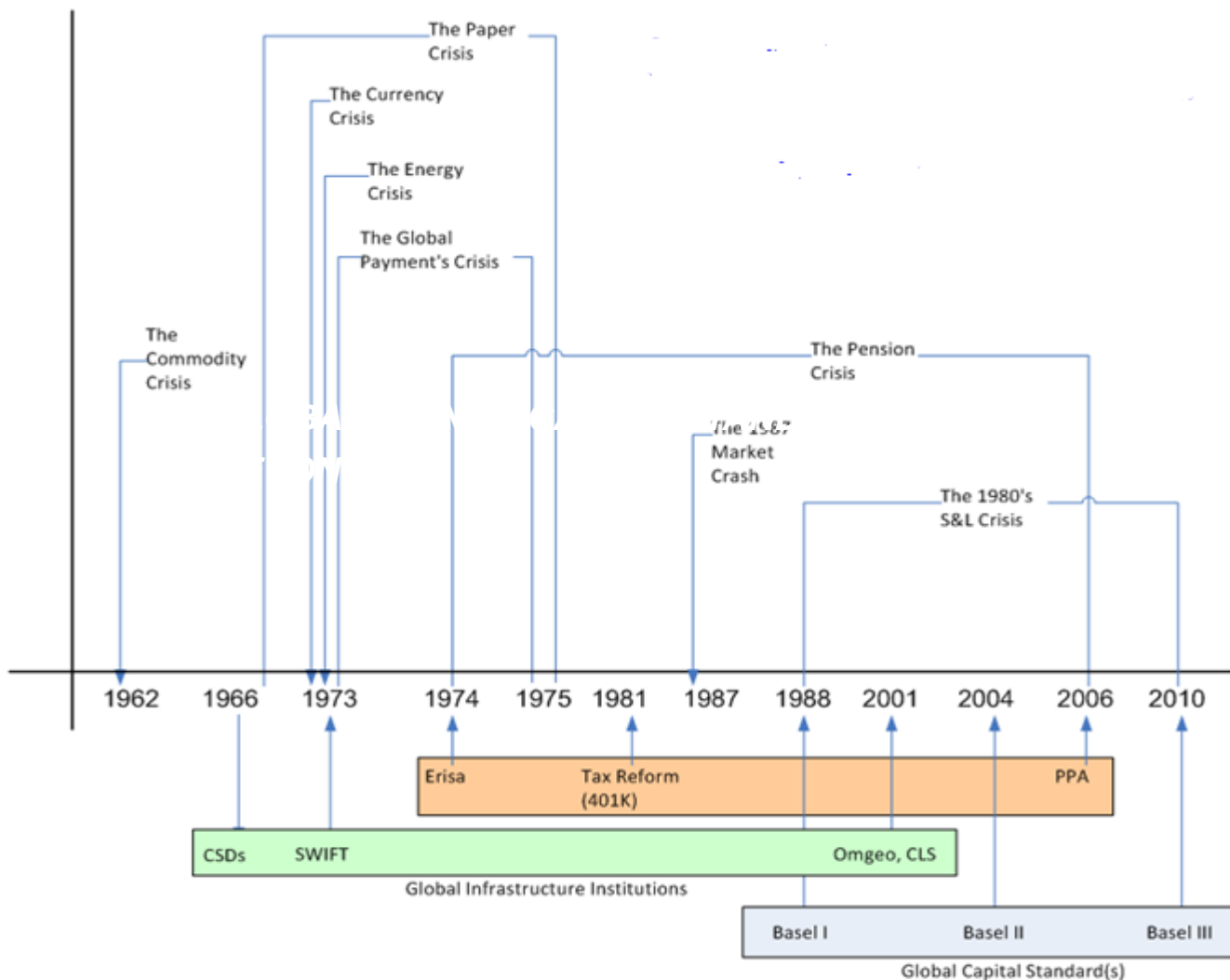
Presented at the

PRMIA CRO Summit

November 29, 2011



Financial Crisis in the Modern Era



The Lehman Revelation

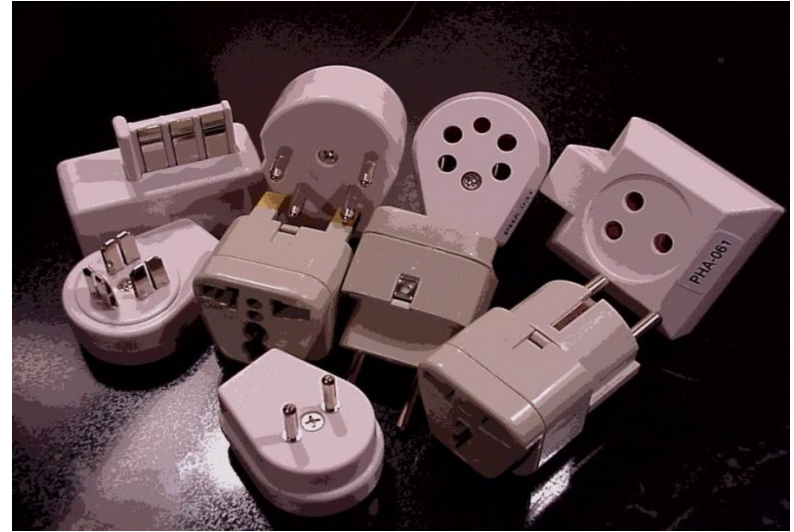


What Was Your Exposure to Lehman Brothers in:		
These Products?		These Business Relations?
Unique Securities Issues Outstanding		Bond Indenture Trustee
Lehman Brothers Bank, FS	2,717	Commodity Trading Adviser
Lehman Brothers Finance SA	467	Counterparty
Lehman Brothers Treasury Co.BV	3,657	Custodian
Lehman Brothers Holdings Inc.	2,228	Collateral Depot Agent
Neuberger Berman Inc.	7	Dealer
		Depository Agent
		Escrow Agent
Unique Issuing Identities	204	Fiduciary
		Floor Broker
Subsidiary Issuers	79	Futures Commission Merchant
		General Partner
		Investment Adviser
		Index Vendor
		Limited Partner
		Market maker
		Prime Broker
		Reference Entity
		Real Estate Manager
		Syndicate Manager
		Underwriter

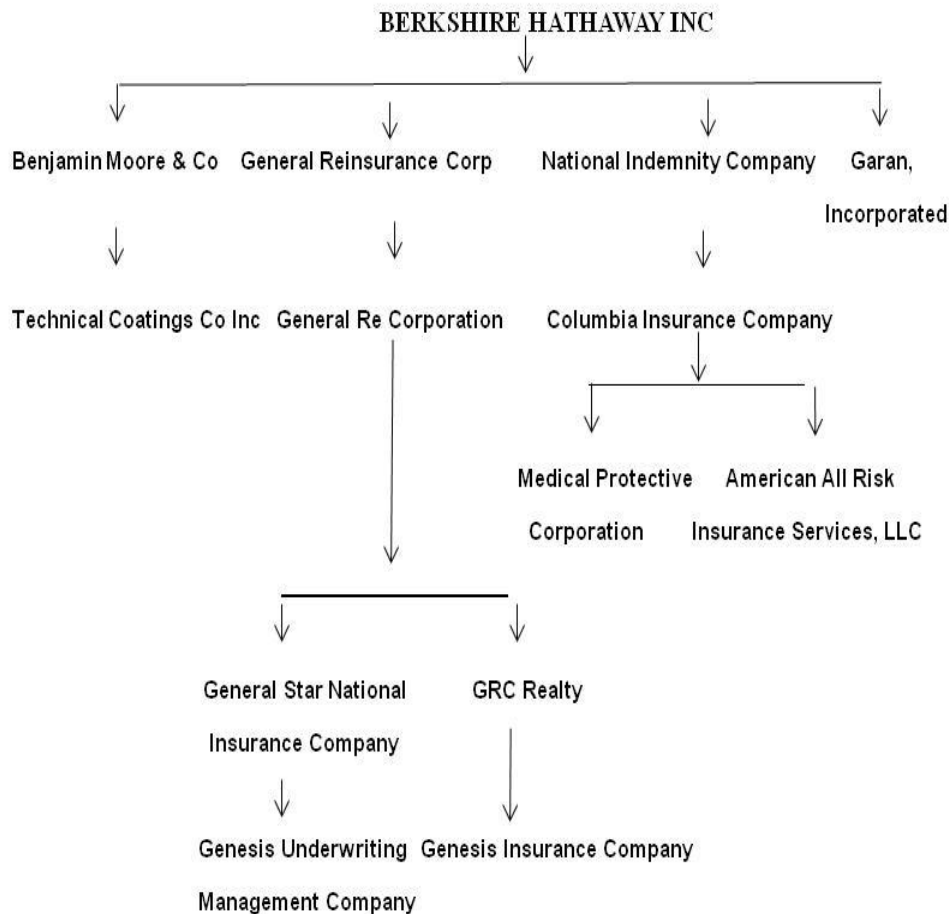
Source: S&P/Financial InterGroup

Importance of Global Standards

- What happens when there aren't global standards?
 - Lack of transparency
 - Inability to aggregate information efficiently
 - No audit trail
- What happens when there are global standards?
 - Regulators seeing that which they are mandated to oversee
 - Aggregation capabilities within and across financial enterprises
 - Traceability
 - Global Straight-Through-Processing



The Issue of Business Entity Identification



No Uniformity in IDs or Hierarchy across Single Entity as Issuer, Obligor, and/or Reference Entity

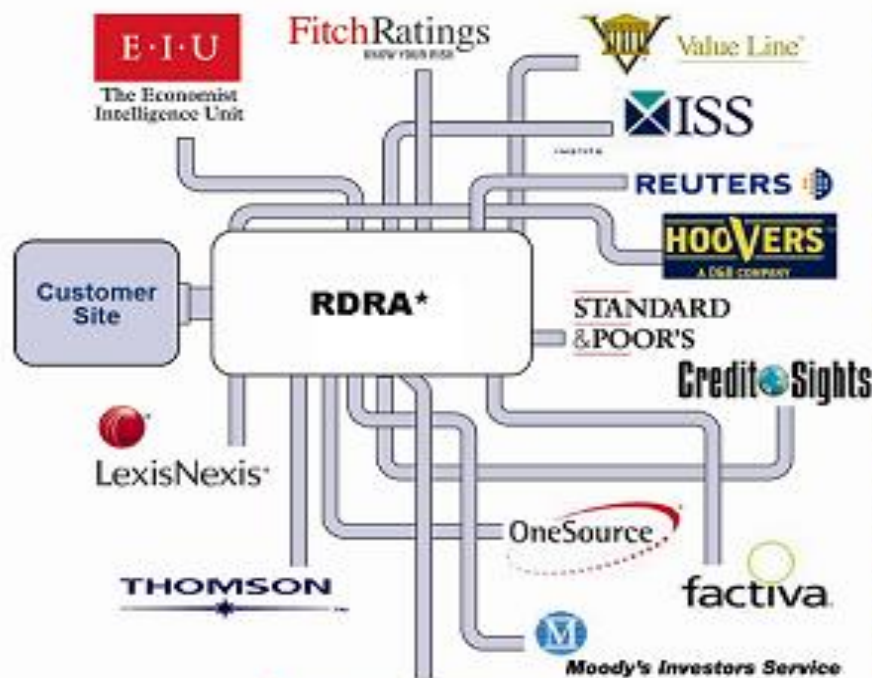
BERKSHIRE HATHAWAY INC Data Identity:	
<u>Service (partial list)</u>	<u>Identifier</u>
Avox/AvidNo.	12501262
Cusip Issuer	084670
S&P Rating	100264
Compustat Issuer	002176
Dun & Bradstreet	001024314
Edgar Online	0001067983
Red/Clip CDS	08CAD7
Fitch Rating	80090742
Telekurs	20823

Source: S&P, 2009 Financial InterGroup, 2009

Fixing the Plumbing of Entity Identification is Essential to Counterparty Risk Analysis



Need to Fix the Plumbing The Many Identities of TESCO PLC



GS1 Prefix	50000358
Edgar Online	0000885834
ISI Online	0000885834
ICC Document	00445790
Perfect Information	1113
Disclosure	S_0884709
LSE Ticker	TSCO
CUSIP Issuer	881575
CIN	G87621101
CIK	0000885834
ISIN	GB0008847096
SEDOL	0884709
UK Registration	00445790
Factiva	TSCO
First Call	C:1182700
ISS	151655
Reverse Research	218152
Investext	TESCO PLC
Street Events	TSCDY
Citywatch	GB00008847096
ExtelFinancials	157
Thomson M&A	881575
Thomson NI	881575
RIC	TSCO.L
Avid	3213705
Bloomberg	TESC:LN
D-U-N-S Number	216854067
Experian	00445790
Fitch-Research	80359989
Moody's	2714
S&P Ratings Xpress	339672
BvD Zephyr	G800445790
Hoover's	90428
Igneo Co. Insights	622
Mergent Financials	00000019052
Onesource	90171
Revere research	218152
Extel	S_0884709

*Reference Data
Registration
Authorities

▶ DATAMONITOR

Sources: Alacra, DTCC, Financial InterGroup, GS1

Global Identification of Instrument, Contract and Financial Events Also Essential



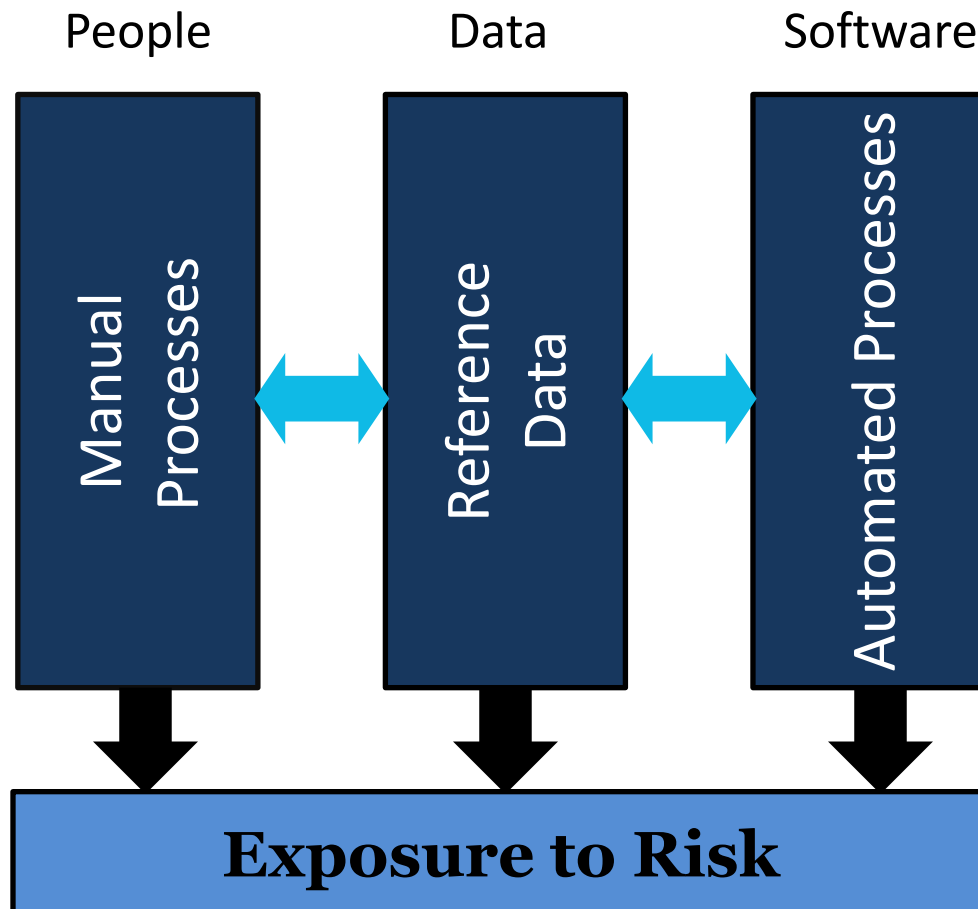
Multiple IBM Common Stock Global Identifiers

- CUSIP (US) 459200101
- AUSTRIA 851399
- COMMON CODE 9703799
- ISIN US4592001014
- ITALY 550304
- JAPAN 584006000
- NETHERLANDS 45480
- SEDOL 2005973
- SEDOL: CANADA-TORONTO 201382
- SEDOL: FRANCE-PARIS 5217689
- SEDOL: GERMANY-FRANKFURT 5199204
- SEDOL: JAPAN-TOKYO 6003649
- SEDOL: JAPAN TOKYO 6464956
- SEDOL: MEXICO-MEXICO CITY 2667715
- SEDOL: NETHERLANDS-AMSTERDAM 4463353
- SEDOL: NETHERLANDS-AMSTERDAM 5199323
- SEDOL: PERU-LIMA 2436517
- SEDOL: SWITZERLAND – SWISS S.E. 4514325
- SEDOL: UNITED KINGDOM- LONDON 40868
- SEDOL: USA – NEW YORK 2005973
- SICOVAM 12964
- SVM 9254608
- VALOR 941800
- WPK 851399

Unstructured Corporate Event Notification

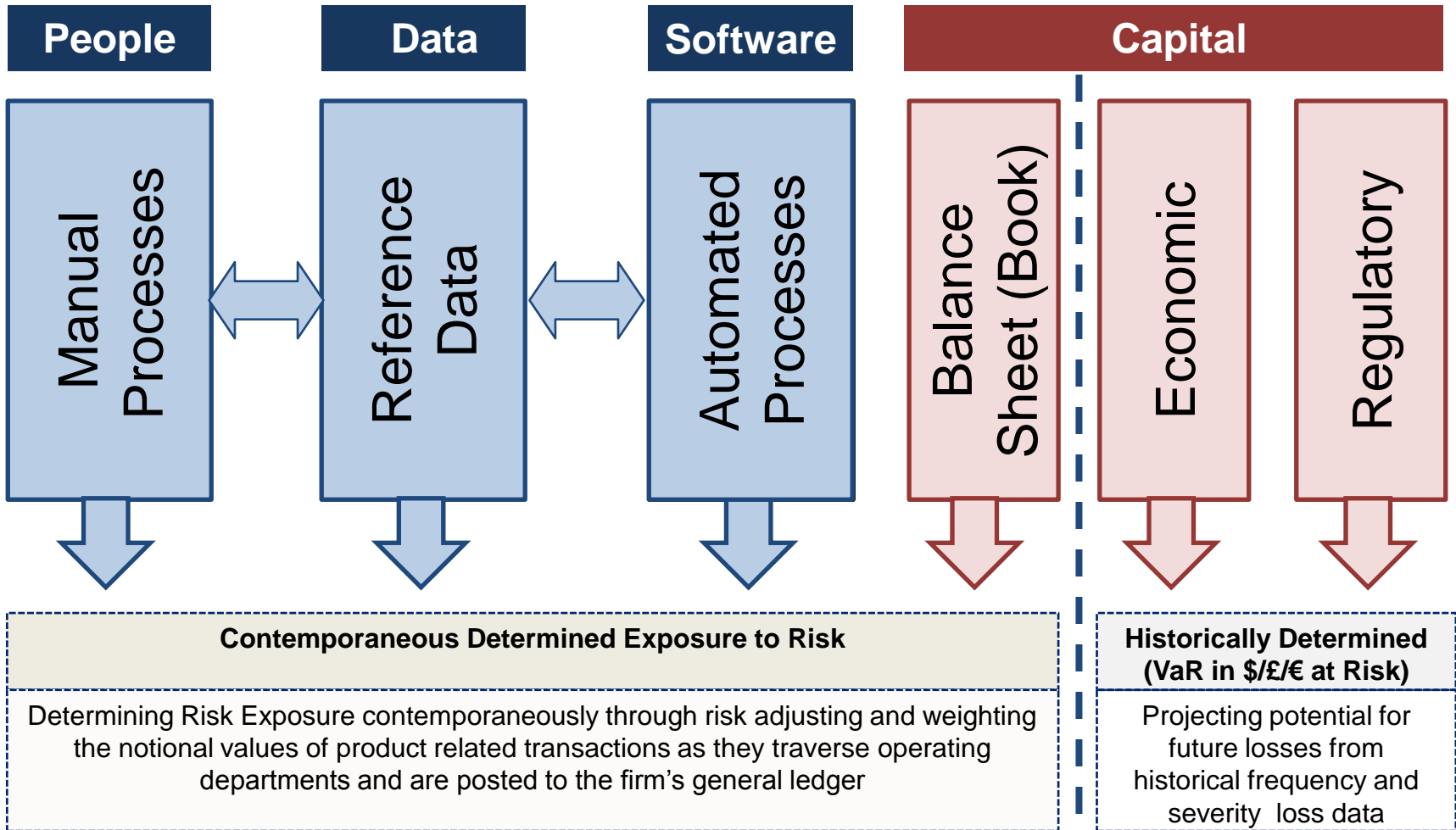
OPT:01:"ELECTRONIC DATA SYSTEMS CORPORATION"
UPDTEXT: 643251:;#:0099; "SMKINFORMATION SERVICES"
EXTENDED THE OFFER TO PURCHASE SHARES OF ELECTRONIC DATA COMMON STOCK FROM HOLDERS OF 99 OR FEWER SHARES HELD AS OF RECORD DATE SEPTEMBER 20, 2002, UNTIL 07-18-2003. TERMS: HOLDERS WILL RECEIVE CASH AT A RATE TO BE DETERMINED AT THE CLOSE OF BUSINESS ON THE DATE OF TRANSFER, LESS A PROCESSING FEE OF \$1.50 PER SHARE. THE OFFER WILL EXPIRE ON JULY 18, 2003 (05:00 PM EDT). THERE IS NO PROTECT PERIOD OR WITHDRAWAL PRIVILEGE AVAILABLE. NOTE: HOLDERS MAY PURCHASE ADDITIONAL SHARES TO REACH 100 AT A DEPOSIT PRICE TO BE DETERMINED, PLUS A \$1.50 PER SHARE PROCESSING FEE. THE OFFER IS NOT REGISTERED WITH THE SEC. A MAXIMUM NUMBER OF 10,000 SHARES PER WEEK WILL BE ACCEPTED ON A FIRST COME, FIRST SERVE BASIS:

Lack of Global Identification and Faulty Reference Data Causes Operational Risk



Significant **operational risk** is created as the consequence of the failed / insecure interaction of manual (operations) and automated (applications) with **data**

Extending this View to The Risk Dynamic



Other Industries Have Solved their Global Identification and Data Issues Long Ago



“Long lines were forming at checkout counters. Inventory management and price-labeling were manual and error prone. Labor-intensive check-ins stymied delivery to outlets. Error rates, pilferage and unaccounted inventory discrepancies began to soar. Leading retailers including Kroger Co. and A&P, along with manufacturers such as H.J. Heinz and General Foods, insisted the industry take on the task of solving these problems, for themselves, and leveraged available technologies to create one of the fabled success stories of the information age, the creation of the Universal Product Code.”

Dr. Robert Mark, Allan D. Grody,
The Financial Industry Needs Its Own Universal Product Code
American Banker
June 25, 2010

Bringing Automation through Data Tagging to Capture Data



Tagged Documents and Data Examples

More Work for Computers—Less for People

XML Message Format*

```
<Customer>
<Type>Margin </Type>
<Name>"John Doe"</Name>
<Identificationnumber> 999-99-9999
</Identificationnumber>
<Addressline1> 1313 Blueview Terrace </Addressline1>
<Cityormunicipality>Boston</Cityormunicipality>
<Stateorprovince>MA</Stateorprovince>
<Ziporpostalcode>12345</Ziporpostalcode>
</Customer>
```

*XML Trade Transaction Format

XBRL Message Format*

```
<SEC-HEADER>
9876543210-09-003850.hdr.sgml : 20090331
<ACCEPTANCE-DATETIME>20090423150842
<ACCESSION-NUMBER>9876543210-09-003850
<TYPE>8-K
<PUBLIC-DOCUMENT-COUNT>8
<PERIOD>20090331
<ITEMS>2.02
<ITEMS>9.01
<FILING-DATE>20090331
<DATE-OF-FILING-DATE-CHANGE>20090331
<FILER>
<COMPANY-DATA>
<CONFORMED-NAME>ABC COMPANY
<CIK>9876543210
<ASSIGNED-SIC>6331
```

*SEC Edgar Ring Header Format

The Direction Had Been Set in the Financial Services Industry as well



Towards a Global Reference Data Utility...

*“The implementation of reference data standards has proven difficult. With **no global owner of reference data** and friction between the needs of the domestic and cross-border market users, progress has been slow. Future progress will require greater efforts by market infrastructure operators and international institutions with global reach.”*

Final Monitoring Report,*
Group of Thirty,
May, 2006

*This report was issued after a nearly two decade implementation to shorten the settlement times in global capital markets following studies of the causes of the US's 1987 financial crisis

Recent US Regulators' Solicitation of Interest in Standardizing Data



US Treasury's Office of Financial Research (OFR)

*"...prefer to adopt a universal standard developed and implemented by the financial industry... through a consensus process... participation of international standard setting bodies would be beneficial... by July 15, 2011... **plans to issue a regulation mandating the use of such a standard...**"*

Securities and Exchange Commission (SEC)

*"...unique opportunity to facilitate the establishment of a **comprehensive and widely accepted system for identifying entities that participate** not just in the SBS market, but **in the financial markets generally...**"*

"...A common set of reference identifiers for participants and products could yield significant efficiencies in both the public and private sectors... financial firms could eliminate the use of multiple proprietary reference systems and move to a single, widely accepted system..."

Commodities Futures Trading Commission (CFTC)

"...unique identifier format that is capable of becoming the single international standard for unique identification of legal entities in the financial sector on a global basis..."

US Federal Reserve et al

Creating a Linchpin for Financial Data: The Need for a Legal Entity Identifier

*"... **gather financial industry participants to explore the variety of issues.** This work could include encouraging market participants to host information gathering sessions..."*

Recent US Regulatory Comments

Recognizing Global Implications



*“Confidentiality of the reference data, particularly ownership information, is likely to be a hurdle that must be discussed and addressed. The **international nature of the LEI requires flexibility in confidentiality because of legal and cultural differences across borders**”*

Federal Reserve, FDIC, FINRA

Legal Entity Identifier: What Else Do You Need to Know?

June 17, 2011

Issue Moved from US Regulators to G-20's Financial Stability Board



Financial Stability Oversight Council

Annual Report to Congress
July, 2011

"The OFR has also issued a policy statement regarding the establishment of a universal "legal entity identifier" that would allow the Council to aggregate measures of risk across the system; made progress in establishing a research network that includes academics from several universities; and initiated the planning process for creating a data center to set standards for financial reporting and to improve the quality of data that the Council and market participants rely on to manage risk."

Meeting of the Financial Stability Board

Press Release July 18, 2011

"Creating a global "legal entity identifier" system. The FSB welcomed the progress of financial regulators and industry to establish a single global system for uniquely identifying parties to financial transactions, and agreed to arrange a workshop in the autumn to discuss the issues that will need to be addressed and how best to coordinate work to take this forward"

Legal Identifiers are Just A First Step in Financial Risk Management

Forbes July 28, 2011

*"We see progress on this front as the FSB (Financial Stability Board, headquartered in Switzerland at the Bank for International Settlements) recently **announced the intention to organize an LEI workshop later this year** which will include regulators, policy makers and industry representatives." Regulatory backing will be needed to ensure widespread adoption of the LEI standard..."*

G-20 Cannes Summit Final Declaration

Nov 4, 2011

"We support the creation of a global legal entity identifier (LEI) which uniquely identifies parties to financial transactions. We call on the FSB to take the lead in helping coordinate work among the regulatory community to prepare recommendations for the appropriate governance framework, representing the public interest, for such a global LEI by our next Summit (6/2012)"

G-20 Cannes Summit Final Declaration

– Data and Risk Management Agenda



“Building Our Common Future: Renewed Collective Action for The Benefit of All”

G-20
4 Nov 2011

- Basel capital and liquidity
- OTC derivatives reforms
- Compensation practices
- G-SIFI policies
- Resolution frameworks
- Shadow banking

Looking into the Risk and Data Agenda of the G-20 and the Financial Stability Board



Too Big to Fail

"We are determined to make sure that no financial firm is "too big to fail" and that taxpayers should not bear the costs of resolution. To this end, we endorse the FSB comprehensive policy framework, comprising a new international standard for resolution regimes, more intensive and effective supervision, and requirements for cross-border cooperation and recovery and resolution planning as well as, from 2016, additional loss absorbency for those banks determined as global systemically important financial institutions (G-SIFIs). "

Capital Adequacy

"Implement fully and consistently the Basel II risk-based framework as well as the Basel II-5 additional requirements on market activities and securitization by end 2011 and the Basel III capital and liquidity standards starting in 2013 and completing full implementation by 1 January 2019."

Derivatives

"We need to ensure enhanced market transparency, both on cash and financial commodity markets, including OTC, and achieve appropriate regulation and supervision of participants in these markets"

Market Structure

All standardized over-the-counter derivatives contracts should be traded on exchanges or electronic trading platforms, where appropriate, and centrally cleared, by the end of 2012; OTC derivatives contracts should be reported to trade repositories ... we commit to implement initial recommendations by IOSCO on market integrity and efficiency, including measures to address the risks posed by high frequency trading and dark liquidity, and call for further work by mid-2012 "

Data Standards and Reporting

"We support the creation of a global legal entity identifier (LEI) which uniquely identifies parties to financial transactions."... Prepare recommendations for the appropriate governance framework, representing the public interest, for a global LEI by next Summit"

Key Regulator LEI Requirements – Examples



- Self Registration
- Non-Intelligence
- Certification
- **Unique Identifier Format**
- **Common Identifier System for Participants and Products**
- **Global Utility to Support Identifiers and Associated Reference data**

Unique Identifier Format

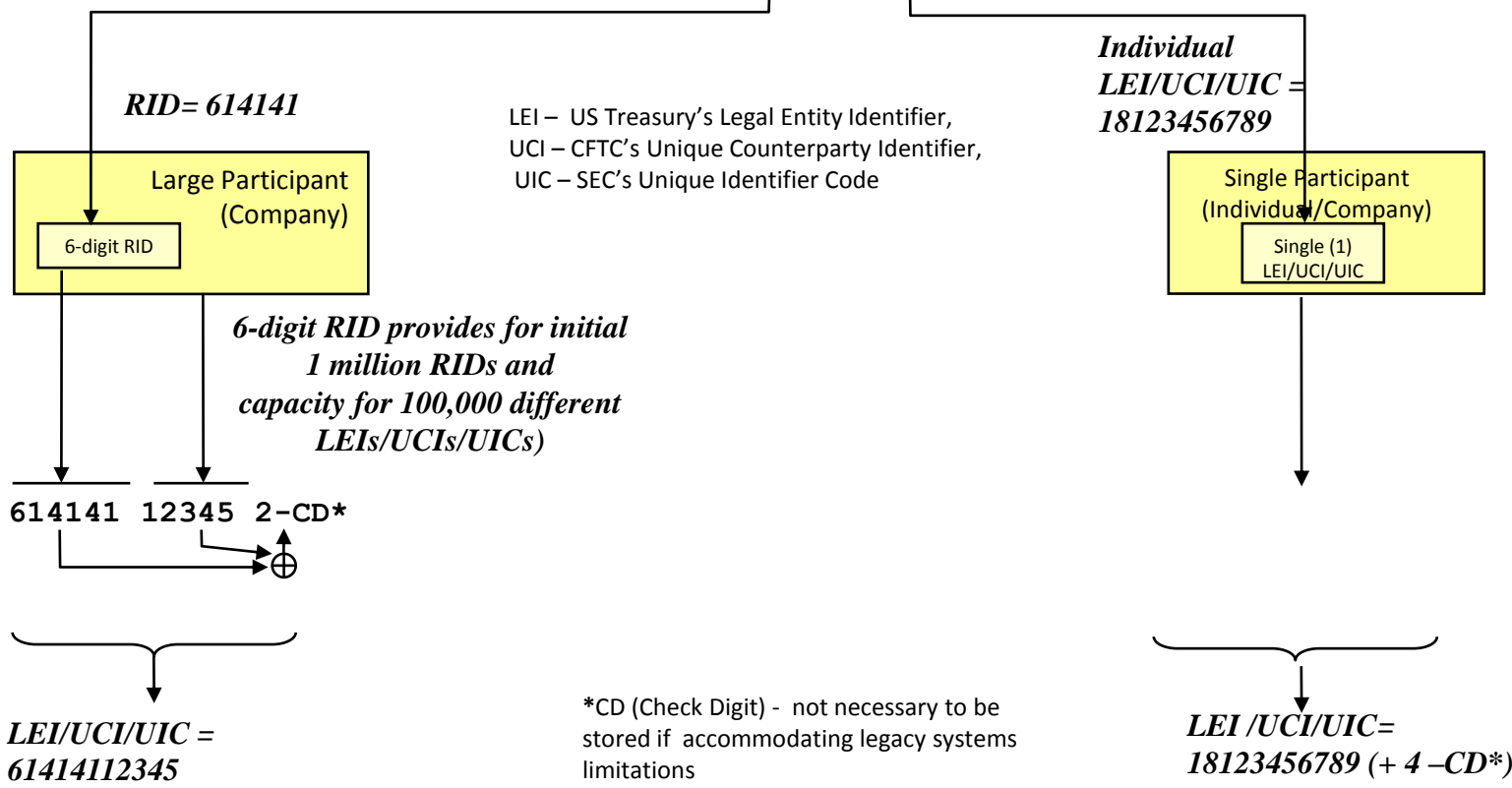


U3 Global Identification System

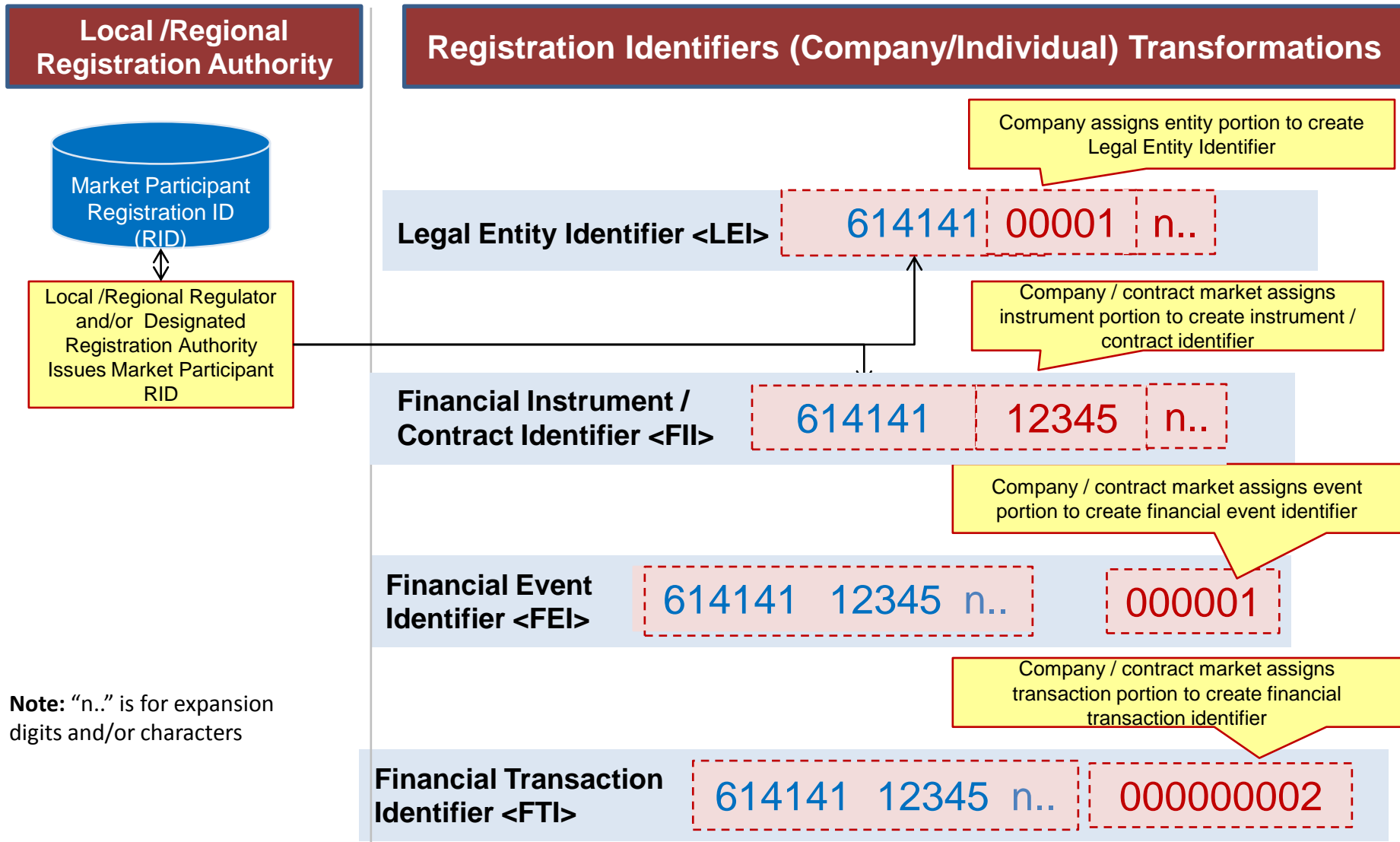
A **Unique, Unambiguous and Universal Method and System for Assigning and Administering Global Standards for: Financial Market Participants, Financial Instruments and Contracts, and Financial Events**

Local /Regional Regulator and/or Designated Registration Authority

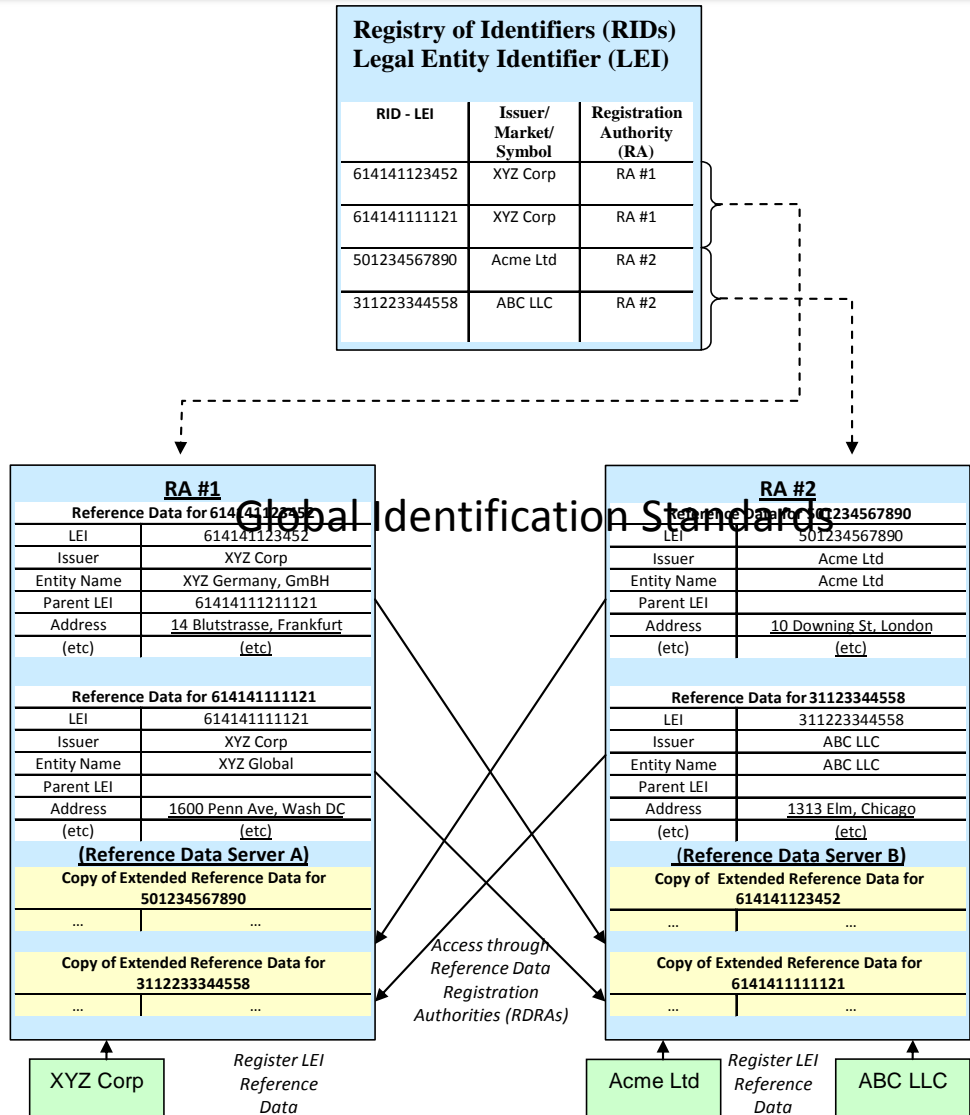
Registration Identification (RID) Database/Domain Name Server



Common Identifier System for Market Participants and Beyond....



The Global U3 ID System and Associated Reference Data



Cost of Reference Data



ANNUAL DATA MANAGEMENT COSTS PER FIRM ⁽¹⁾

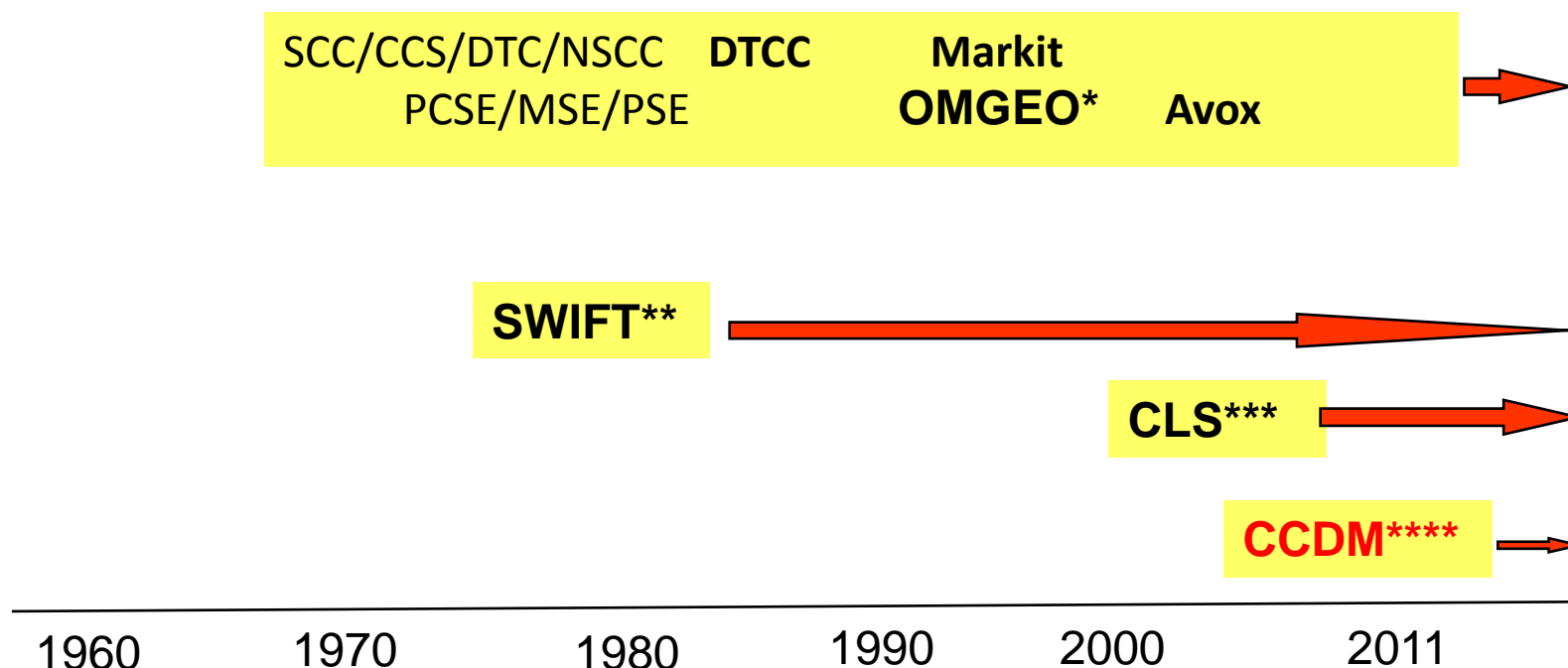
(15 Largest US Headquartered Global Financial Enterprises)

Direct Costs	Cost (\$millions)
People and Facilities	\$ 50 - \$ 200
Data and Information	19 - 704
Software and Systems	2 - 57
Losses	
Fails – DTCC	108
Fails – Federal Reserve	25
Corporate Actions	29 - 103
Capital (preliminary)**	
Internal Operational Risk Capital Costs	5 - 45
External Operational Risk Capital Costs	.4
<hr/>	
* *Basel capital rules yet to be implemented	Total
	\$ 238 - \$ 1,242 (2)

1. Source: Operational Risk & Reference Data, Costs, Capital Requirements & Risk Mitigation A.D. Grody, F.C. Harmantzis, G.K. Kaple, updated Feb. 2007 - The study was based on 2004 and 2005 data for the 15 largest US headquartered Basel II AMA financial institutions. *Journal of Operational Risk*, Vol. 1, No. 3, 2006 <http://ssrn.com/abstract=849224>

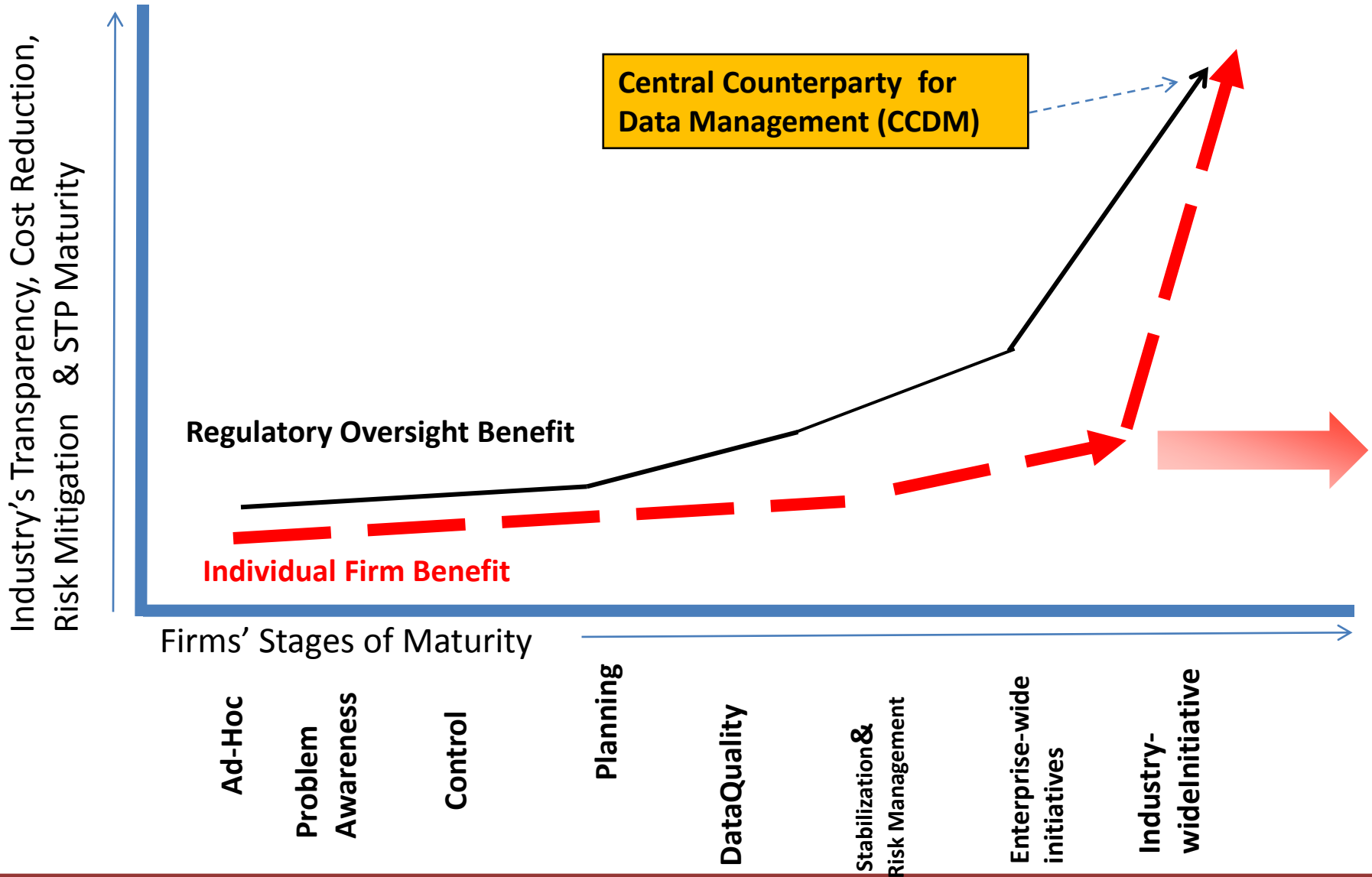
2. Since this study 12 of these 15 firms have been merged, bought, or liquidated. The resulting organizations are significantly larger and the annual average costs significantly greater per firm

Precedents for Industry Utilities



- * Omgeo, a joint venture of DTCC and Thomson/Reuters
- ** Foreign Exchange Payments/Securities Messages
- *** Foreign Exchange Netting and Settlements
- **** Central Counterparty for Data management

Finally, Enabling Firm-wide Data Management to be Transformed into Industry-wide Data Management....





- Transparency
- Risk Aggregation
- Risk Mitigation
- Regulatory Oversight
- Cost Reduction
- Straight Through Processing

Thank You

QUESTIONS?

Allan Grody

Email agrody@financialintergroup.com