New Challenges for Operational Risk Measurement and Management – A Regulator's Perspective

Roger T. Cole

Board of Governors of the Federal Reserve System

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Today's Agenda

- Results from the 2007 U.S. Range of Practice Exercise
- Integrating Operational Risk Measurement and Management
- Regulatory Challenges for Implementation and Qualification
  - Global Perspectives
  - U.S. Perspectives

Focus of my Introductory Remarks

- U.S. Basel II implementation
- Observations from recent market turmoil
- Implications of lessons learned for Operational Risk AMA
- Concluding Comments

U.S. Implementation Process for Core Banks/BHCs

- Basel II rule effective April 1
- Six months to submit Board-approved plan (October 1)
- Notify supervisors 60 days ahead of parallel run start date
- 36 months to start first transition year

U.S. Implementation Process

- Must have fully functioning AMA to start parallel run
- Qualifying criteria provide essential elements required for AMA
- Recognize expectation for continuing development of AMA

Some Observations from Recent Turmoil

- Context
  - Coming off of long period of asset price increases, benign economic conditions and large amounts of investable funds reaching for yield
  - Moving up the “originate to distribute” (“OTD”) learning curve
  - Inherent aspect of OTD is risk transformation (e.g., credit transformed to credit variations, market, liquidity and operational risk)

Lessons Learned from Recent Turmoil

- Supervisors must continue to stress the importance of sound underwriting of the underlying assets.
- Supervisors must continue to provide positive incentives and clear consequences for regulated financial firms to make sure risk management practices and controls keep pace with changes in financial markets and business models.
- Supervisors must continue to ensure that information disclosed by ratings agencies and issuers about complex products clearly differentiates risk characteristics, states limitations on their effective use, and is not subject to biases created by conflicts of interest.

Lessons Learned from Recent Turmoil

- Risk management basics are highly relevant
  - Tone and culture set at the top
  - Enterprise risk management
  - Attention to detail in executing risk management
    - Identification – all risk types and exposures
    - Measurement – use credible assumptions and data and recognize limitations of models
    - Monitoring – up and down the line
    - Controls – independent
  - Internal/External transparency

Observations for Operational Risk

- OTD is the transformation of risks
  - For the originator:
    - Fees and reduced credit risk
    - Increased market risk to the extent some tranches are retained
    - Increased operational risk and reputational risk
  - For the investor:
    - Increase in all risk dimensions as a tradeoff for increased return on investment

Loss Event Matrix

Based on data from the 2005 LDCE conducted in the U.S.

Event Type Distribution of LDCE Losses

Losses ≥ $10,000 Occurring in Years When Data Capture Appears Stable

	Internal Fraud	**External Fraud**	**Empl. Practices & Workplace Safety**	**Clients, Products & Business Practices**	**Damage to Physical Assets**	**Bus. Disruption & System Failures**	**Execution, Delivery & Process Mgmt.**	**Other**	**Total # Losses Per Year**
Corporate Fin.	3.5%	5.1%	18.5%	23.9%	0.7%		**38.3%**	10.1%	59
Trad. & Sales	0.7%	0.4%	2.3%	2.7%	0.4%	3.3%	**90.2%**		1,335
Retail Banking	4.0%	**59.5%**	6.2%	7.3%	0.9%	0.4%	20.4%	1.1%	11,049
Cmcl. Banking	1.1%	**60.2%**	3.4%	7.0%	0.1%	0.6%	**27.2%**	0.4%	935
Pmt. & Set.	14.5%	12.3%	3.9%	0.8%	0.2%	1.2%	**67.0%**	0.1%	820
Agency Svcs.	0.1%	0.7%	0.8%	6.1%	0.2%	2.8%	**89.3%**		929
Asset Mgmt.	0.1%	14.1%	4.3%	5.5%	0.0%	1.5%	**74.6%**		449
Retail Brok.	1.8%	3.2%	19.1%	**45.5%**		0.1%	**30.3%**		1,333
Other	5.4%	21.6%	22.0%	5.0%	1.5%	0.3%	**43.4%**	0.9%	1,462
All BL's	3.8%	**41.8%**	7.6%	9.2%	0.7%	0.7%	**35.3%**	0.8%	100.0%

Note: A small fraction of losses (3.2%) were fraud losses not separately categorized as internal or external fraud. These losses were allocated to the internal and external fraud categories based on the aggregate distribution of internal and external fraud losses within each business line.

OTD Risk Transformation for Operational Risk

- Example:
  - Subprime residential mortgages originated/purchased in “retail banking” business lines with high incidence of “external fraud” loss event type
  - Upon distribution OR includes the “trading and sales” business line and the “clients, products and business practices” event type along with other event types
  - Note high severity of 80 percent on the overall “clients, products and business practices” event type (following table)

Losses by Event Type

Based on data from the 2005 LDCE conducted in the U.S.

	Frequency	Severity
Internal Fraud	3.8%	0.9%
External Fraud	41.8%	5.6%
Employment Practices & Workplace Safety	7.6%	1.7%
Clients, Products & Business Practices	9.2%	80%
Damage to Phys. Assets	0.7%	1.4%
Business Disruption & System Failure	0.7%	0.8%
Execution, Delivery & Process Management	35.3%	9.6%

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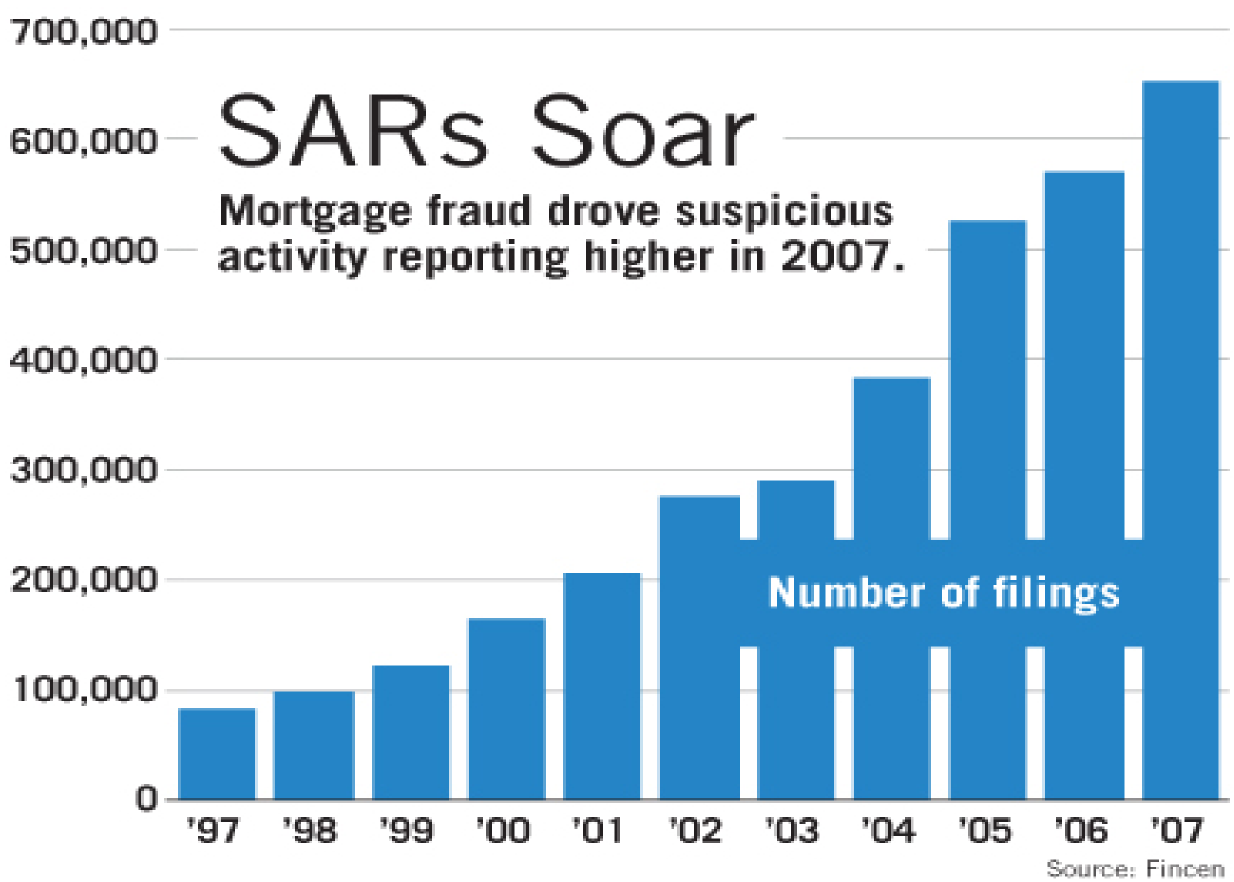
Operational Risk in OTD

- Fraud at origination

American Banker, January 2008



Operational Risk in OTD

- Model/Valuation Error
  - Over-reliance on models based on historic data that failed to reflect the increased prevalence of risk tiering
  - Correlation error based on the assumption of continuing benign economic conditions
  - Lack of forward looking element/ judgment

Operational Risk in OTD

- Litigation
  - Some litigation provisions taken
  - Ongoing litigation
  - What is the UL potential?

Operational Risk in OTD

- Data Quality (and the lack thereof)
  - As a loss event
    - Fraudulent
    - New product/risk layering
    - Model failures
    - External credit ratings
  - As an AMA qualifying criteria
    - Senior management commitment to resources to fully support four required elements for AMA
    - Infrastructure to produce enterprise wide data

Reputation Risk in OTD

- Not in Pillar 1 of Basel II, but still critical
  - Off balance sheet support
    - SIVs
    - MMMFs
  - Protect prime customer relationships
  - Closely related to liquidity risk and the trust/ confidence of market participants
  - Important considerations for management in Pillar 2

Concluding Comments

- OTD transforms risks, creating operational risk
- A key lesson learned from OTD challenges is the need to add a forward perspective to historic data analysis – a key element of AMA
- An actuarial approach to loss event analysis provides a good starting point and context for decomposing/analyzing recent operational risk loss events, but judgment is also important
- The AMA provides an important tool for integrating risk measurement and management