Implementing an AMA for Operational Risk
May 20, 2005
Federal Reserve Bank of Boston

AMA Implementation: Where We Are
and Outstanding Questions

Michael F. McGlinn
A Consistent, Focused Strategy

Personal Financial Services

Corporate & Institutional Services

Asset Administration

Asset Servicing
Asset Management
Information Services

Worldwide Operations & Technology

Two Client Distribution Channels

One Core Business

Single Global Securities Processing & Information Platform

Basel II - Operational Risk
**Financial Performance Reflects Excellent Growth Trends**

<table>
<thead>
<tr>
<th>Category</th>
<th>Full Year 2004</th>
<th>% Change vs. Prior Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets Under Administration</td>
<td>$2.6 Trillion</td>
<td>+23%</td>
</tr>
<tr>
<td>Assets Under Management</td>
<td>$572 Billion</td>
<td>+19%</td>
</tr>
<tr>
<td>Trust Fees</td>
<td>$1.3 Billion</td>
<td>+12%</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>$2.3 Billion</td>
<td>+9%</td>
</tr>
<tr>
<td>Noninterest Expenses</td>
<td>$1.5 Billion</td>
<td>+5%</td>
</tr>
<tr>
<td>Net Income</td>
<td>$506 Million</td>
<td>+25%</td>
</tr>
</tbody>
</table>

**Full Year 2004** vs. **2003**

- Fees / Revenues: 74% vs. 72%
- Trust Fees / Revenues: 57% vs. 55%
Industry Leader in Serving the Affluent Market

#1 Personal Trust Bank in U.S.

Target Market: Affluent Individuals with at least $1 million in investable assets

The Wealth Management Group

The recognized leader in providing sophisticated financial solutions to high net worth families.
TARGET MARKET: Individuals or Families with $75+ million in investable assets

Delivering comprehensive, investment solutions through a multi-manager investment program.
TARGET MARKET: Individuals or Families with $25 to $75 million in investable assets

Delivering high-touch trust, investment management and banking solutions to individuals through 83 offices in 17 states.
TARGET MARKET: Affluent Individuals with at least $1 million in investable assets

$1 Million  $25 Million  $75 Million

Client Investable Assets

Source: SNL Financial
We have a **116-year** heritage - we have been Northern Trust since 1889 and are undiluted by mergers and acquisitions. The growth that we have achieved through the years has been overwhelmingly sourced from **organic growth**.
Positioned for Success and Profitability

2004 Fees

- **Asset Management**
  - Cash
  - Active
  - Passive
  - Securities Lending
  - Manager of Managers
  - Foreign Exchange
  - Transition Management

- **Risk Management Services**
  - Attribution Analysis
  - Value at Risk
  - Multinational Pooling
  - Compliance Monitoring
  - Market Event Analytics

- **Information Services**
  - Accounting
  - Reporting
  - Valuation
  - Rates of Return
  - Fund Services
  - Multinational HQ Reporting

- **Securities Services**
  - Safekeeping
  - Settlement
  - Investment Manager Outsourcing
  - Income Collection
  - Corporate Actions

---

**Basel II - Operational Risk**

......

(1) - Includes fees relating to Custody Services and Other Services

(2) - Includes fees relating to Investment Management, Securities Lending and Foreign Exchange Trading
Spotlight: Recent Acquisition Announcement

Acquisition: Baring Asset Management’s Financial Services Group

- $63 billion in fund administration assets, $28 billion in custody assets, $32 billion in trust assets
- 170 clients, 770 employees in 5 locations
- Enhanced product capability and expertise
A Leading Investment Manager

Northern Trust Global Investments

# 9 **Assets Under Management** \(^{(1)}\)

# 8 **Worldwide Institutional Assets Under Management** \(^{(2)}\)

# 4 **U.S. Tax-Exempt Assets** \(^{(2)}\)

# 3 **Institutional Index Manager** \(^{(2)}\)

# 6 **Bank Run Mutual Fund Family** \(^{(3)}\)

---

(1) Global Investor Magazine - GI 100
(2) Pensions & Investments
(3) FRC, March 31, 2004, based on long-term funds

---

**RECORD**

Assets Under Management as of December 31, 2004

$572 Billion

- **Equities**
  - $233 Billion
- **Fixed Income**
  - $232 Billion
- **Short Duration**
  - $103 Billion
- **Other: $4 Billion**
  (Alternative Asset Classes)

---

**Basel II - Operational Risk**
Five Key Projects

- Qualification for the Advanced Measurement Approach (AMA) requires implementation of leading practices:

  1. Operational Risk Management Policy
  2. Loss Event Data Collection
  3. Risk and Control Self-Assessment
  4. Structured Scenario Analysis
  5. Key Risk Indicator Identification & Collection
Operational Risk Management Policy

- Define New Roles & Responsibilities
  - Senior Risk Management Officer (SRMO)
  - Corporate Operational Risk Group (CORG)

- Define New Governance Model
  - Corporate Operational Risk Council (CORC)

- Develop Common Language
Policy Issues

- Appropriate Level of Detail

- Shooting at a moving target
  - Do we describe future state or current state?

- Consensus vs. Completion
Loss Event Data (LED) Collection

- 6 years of LED in Focus Database
  - Coded to Basel Risk Codes Level 1 & 2
  - Bedrock for QIS 4 Capital Modeling

- Transition to new Integrated Operational Risk Database
  - Many more fields to better use data
  - More natural interface for capital modeling

- Excellent starting point, basis for EVT modeling
LED Issues

- Legal
- Near Miss Events
- Integration of acquisitions
Risk and Control Self-Assessment

- Customize for each area:
  - Processes, Activities, Risks and Controls (PARC)
  - Quantify through scoring risks and controls (Frequency and Severity)

- Multi-tasking for the next several months
  - Software customization being done by vendor
  - Installation and testing to be done by Northern
  - Builds for each high priority area are underway
  - We will populate the system with RCSAs upon production status

- Institutionalizing the process is a 2nd half 2005 goal
RCSA Issues

- Legal
- Public Relations
- Capital Allocation
- QA – Consistency & Completeness
Structured Scenario Analysis

- Required in Basel and Supervisory Standards
  - Benefit from experiences you haven’t yet had
  - Better model capital with better estimate of tail events

- Pilot almost finished to develop approach
  - Facilitated sessions with 5 key areas
  - Learning curve to estimate possible frequencies and severities
  - Very positive feedback about value of the exercise

- Ongoing effort yet to be defined, depends on
  - Value to the business & to capital modeling exercise
    - Current thinking: Use scenario analysis output to construct an alternate tail
  - Direction from the Regulators
Structured Scenario Analysis Issues

- Clear Definition and Goals
- Comfort level estimating frequency and severity
- Potential Gaming
- Comfort with multiple modeling exercises involving alternate tail distributions
Key Risk Indicators (KRI s)

- Measures of important changes to the risk profile
  - Useful if they have predictive value
  - Unclear as to best practices in the industry

- Pilot is beginning to identify an approach
  - Facilitated introductory sessions
  - Trying to tie to ongoing metric work (Dashboard project)
  - Very open to industry and regulatory directions

- Unclear as to eventual role in effort
KRI Issues

- Thresholds – when does a KRI become really important?

- KRI Correlations – What are the compounding effects when several KRIIs crest at the same time
Five Key Projects Issues

- How do we tie the projects together?
- Where is it okay for them to be independent?

1. Operational Risk Management Policy
2. Loss Event Data Collection
3. Risk and Control Self-Assessment
4. Structured Scenario Analysis
5. Key Risk Indicator Identification & Collection
Summary & Questions

Thank You