

Tools for Identifying and Mitigating Operational Risk

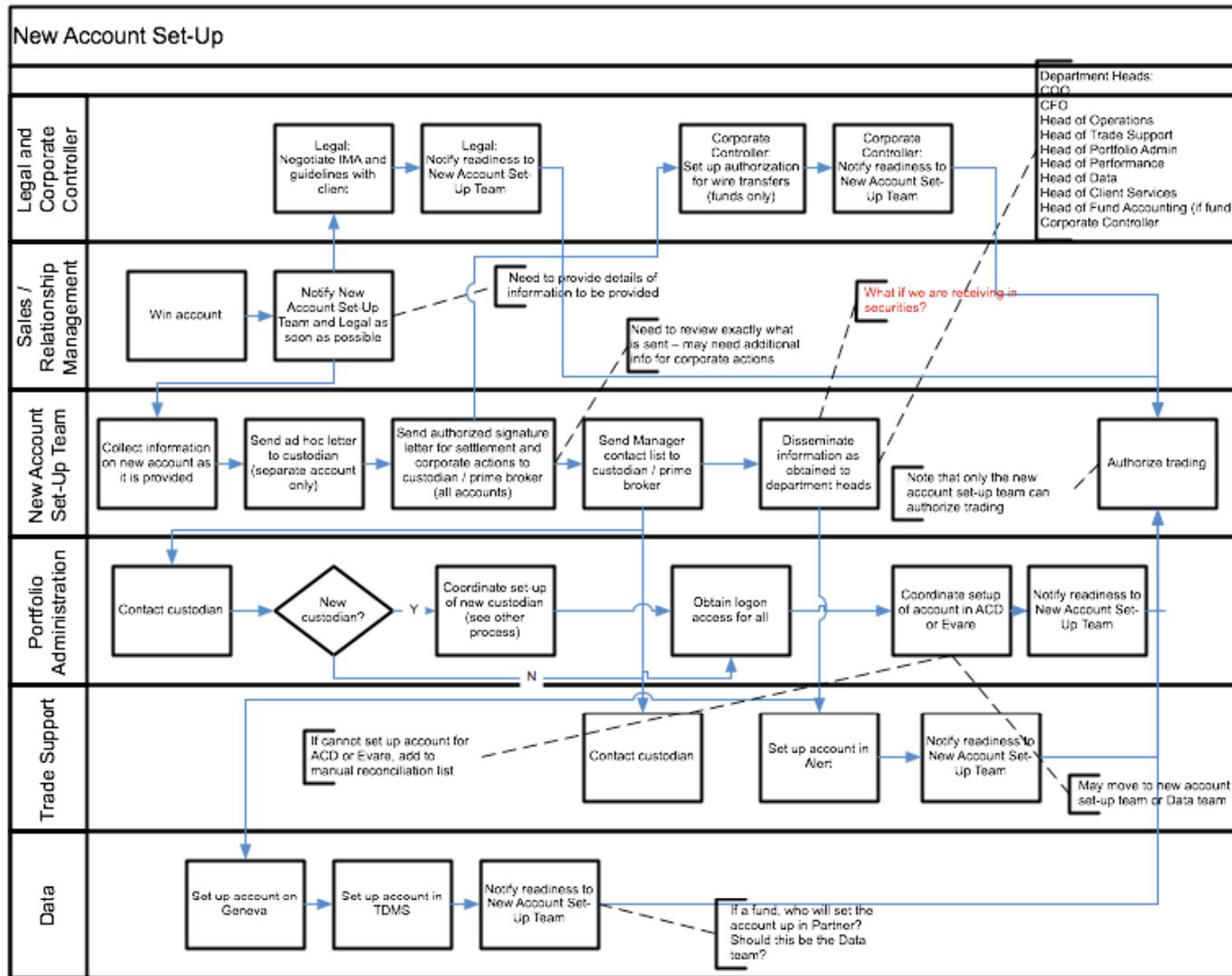
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Tools for Identifying Operational Risk

Workflow diagrams
Metrics
Error logs
Employee surveys and exit interviews
Due diligence meetings
Operational reviews
Job swaps
Testing
Work-from-home day
Two-week vacation with no connectivity
Mock SEC exams
Mock due diligence reviews
Ongoing risk evaluation process
Create a culture that rewards exposure of risk



Workflow Diagrams



Workflow Diagrams

- Every time a vertical blue line crosses a horizontal black line, there is a hand-off
 - Hand-offs are areas of high operational risk
- Review all workflows at least once a year to ensure they are still correct
- Each team—*and each system*—should have its own “swim lane”
- An absence of workflow diagrams *or an unwillingness to create them* is a red flag
- Use workflow diagrams as a critical part of the training and cross-training process

Metrics

- Diagnostic tool
 - Poor trade matching / affirmation rates often indicate high fail rates, reconciliation problems, client reporting errors and performance measurement issues
 - Significant increase in number of portfolios frequently correlates with a rise in operational risk
- Business management tool
 - Use metrics to predict upcoming headcount requirements in different scenarios
 - Comparing metrics across service providers (e.g., custodians, counterparties, software providers, etc.) can provide insight into service quality differences and can assist with service provider selection and management
- Ratios often provide the most insight
 - Trades per number of trade support staff or corporate actions per CA team size
 - Cancel / correct rates or fail rates as a percent of total trades
 - New account launches as a percent of total accounts
 - Late reports as a percent of total reports

Error Logs

- Are the same errors occurring over and over again
 - Or are new and different errors taking place?
- Where are errors being caught?
 - Early in the process (e.g., trade matching)
 - Late in the process (e.g., client reporting or performance measurement)
- How are errors being caught?
- Do error logs include
 - Full documentation of what happened?
 - Details on how to avoid committing the same error again?
- Responsibility for documenting an error should fall to those who committed the error
 - Great educational opportunity
 - Consider presenting the results

Employee Surveys and Exit Interviews

- On-line surveys are easy to set up and very inexpensive
 - SurveyMonkey costs \$200/year for unlimited surveys
- Survey staff on a variety of topics
 - Identifying high-risk issues and/or pain points
 - How time is allocated
 - Levels of cross training
 - Job satisfaction
- Take steps to ensure confidentiality of survey replies
 - Sometimes use of a consultant to collect responses can be helpful
- Exit interviews are an excellent method for gathering candid feedback on operational issues

Due Diligence Meetings

- Due diligence meetings are like mini-operational reviews
 - But they are free!
- Ask questions about opportunities for improvement
- Identify areas that raise the most concerns from the reviewer's perspective
- Try to understand relative strengths / weaknesses vis-à-vis competitors

Operational Reviews

- Independent review of all operational processes
 - Internal audit
 - External consultant
 - Regulator (least preferable choice!)
- Confirm staff follow stated workflows
- Look for opportunities for improvement
- Ensure reviewer is familiar with investment management processes
 - Generally, compliance oversight is insufficient since compliance people rarely have an in-depth understanding of operations and IT
 - The buy side is different from the sell side, so buy-side experience is critical

Job Swaps

- Firms with multiple offices can consider swapping peers from different teams
- Rotate staff through operational groups (e.g., trade support, reconciliation, performance)
 - Increases awareness and appreciation of what others do
- Temporary, one-day swaps can give an appreciation of the challenges others face
- Job swaps can be a terrific anti-fraud device

Testing

- Things to test:
 - Systems
 - Workflows
 - People (do they know what to do?)
- Ensure end-user teams are involved in testing at some point
 - QA groups cannot fully test new systems
 - Developers cannot test their own work—it's like catching your own typos
- Need good starting points against which to test
 - Existing systems
 - Reports that 'work'
 - Manual calculations

Work-From-Home Day

- Great opportunity to test disaster recovery plan
 - Do Bloomberg Access points work?
 - Did people take home:
 - Their laptops
 - Their secure tokens
 - Their phone tree lists
 - Have people installed Citrix on home PCs?
 - Does everyone *have* a PC? Are they still on dial-up?
 - Can you reach people on person phones / email addresses?
 - How critical are those linked-to-everything spreadsheets?
- Pick a slow day and keep everyone home
 - The day after Thanksgiving is not only slow, but many staff would appreciate working from home

Mandatory Two-Week Vacation with No Connectivity

- Old-fashioned, banking-based fraud-detection rules still have applicability today
 - Cutting off systems access and telephone access are key aspects of the policy
- Removing a staff member from all contact can identify:
 - Gaps in cross-training and documentation
 - Potential risk in client relationship management
 - Whether other staff have:
 - Adequate systems access
 - Adequate knowledge
 - Potential fraud
 - Nick Leeson and Jérôme Kerviel would have been uncovered with such policies
- Most staff would welcome such a break

Mock SEC Exams

- Start by trying to fulfill the document request list—*within the required timeframe*
- Engage a compliance consultant to conduct the mock exam
 - Policies
 - Procedures
 - Review of recordkeeping

Mock Due Diligence Reviews

- Review all operational processes from the perspective of an external client/investor or prospect
 - Compare responses to a DDQ or RFP response
 - Interview key members of operations and IT teams, as well as others within the organization (e.g., compliance, marketing support, corporate accounting)
 - Can they describe what they do?
 - Can they articulate controls?

Ongoing Risk Evaluation Process

- Put all processes, workflows and systems on a monthly or quarterly cycle for review, e.g.
 - Trading, trade matching / communication and settlement in Q1
 - Investment accounting, corporate actions and pricing in Q2
 - Reconciliation and performance measurement in Q3
 - Client reporting in Q4
- Ask new staff to evaluate risks and opportunities for improvement within their team
- Ask each team to present its workflows to another team for critique and analysis
 - Great cross-training opportunity

Create a Culture That Rewards Exposure of Risk

- In many firms, pointing out flaws is politically incorrect
 - Ensure staff feel 'safe' in reporting risk areas
- Error logs should capture near misses
- Establish an awards process for identification of key risks
 - Especially if recommendations for mitigation are identified

Mitigating Operational Risk

Workflow diagrams

Cross training

External operational review

Document management

Automation

Establish an ongoing risk evaluation process

Outsourcing

Educating



Workflow Diagrams

- Diagram before improving / changing operational processes
 - Ensure all processes are captured so nothing is forgotten
 - Use diagrams to identify opportunities for change
 - Especially important if evaluating outsourcing
- Diagram again after changing operational processes
 - Regulators, auditors, due diligence teams and clients love it
 - Fabulous for training
- Workflow diagrams help with cross-training and education
- Don't forget:
 - Cancel / correct scenarios
 - Account closing / change processes
 - Month-end / quarter-end processing
 - Service provider activities
 - Investment activities

Cross Training

- Cross training helps retain staff
 - People like to stay in jobs where they are learning
- More effective cross training educates staff on the impact of their actions on those working “downstream”
 - Error rates often are reduced
- Ensure teams are fully cross-trained
 - Teams should never be smaller than three people
 - First person on holiday
 - Second person out sick
 - Third person to perform the work
- Where possible, train across teams
 - Job swaps can help with this

External Operational Review

- A fresh perspective often identifies opportunities for improvement that otherwise could be overlooked
 - New workflows
 - Better systems
 - Better organizational structure
- Even those who can identify all the issues are often unable to set priorities and/or 'size' new initiatives

Document Management

- Effective document management is invaluable with:
 - SEC exams
 - GIPS® compliance
 - Disaster recovery
 - Effective communication (e.g., multiple people can examine a given file simultaneously)
 - Reducing costs
 - The real estate costs for filing cabinets can be quite high

Document Management

Critical documents to ensure are available electronically:

- Contracts
 - Client (including guidelines)
 - Vendor
 - ISDAs
- Client correspondence
- Marketing materials (including records of who received what)
 - Fact sheets
 - DDQs / RFP responses
 - Brochures
 - Pitch books
- Investment accounting data
- Custodian records
- Pricing data
- Reconciliations
- Trade confirmations
- Performance reports
 - Client level
 - Composite level
- Client reports
- Personal trade monitoring data
- Error logs
- Meeting minutes
- Policies and procedures
- Corporate accounting data

Automation

- Effective automation can reduce operational risk in a variety of ways:
 - Ensuring processes are always done
 - Ensuring processes are done the same way every time
 - Processing large volumes of work without increasing staff and/or risk
 - Reducing exposure to staff turnover and training issues
 - Ensuring information is updated and maintained on a timely basis
 - Enforcing segregation of duties
 - Establishing audit trails
 - Storage, safeguarding and retrieval of data
- Be sure to design automation for the long haul
 - Short-cutting automation because “we will never invest in non-US securities or other instrument types” later results in tinkering with live systems and interfaces, which introduces unnecessary risk

Automation

- But improperly implemented, automation can introduce new risks
 - Computers can generate errors at superhuman speeds
 - They do exactly what we tell them to do—and only that
- Beware of short-cuts
 - Performing pre-trade compliance checks on skeleton securities
- Ensure that people know how to perform functions manually prior to automating them e.g.
 - Match trades
 - Reconcile accounts
 - Calculate returns, accrued interest or amortization
- Ensure that systems are fully tested *by end users* prior to implementation
 - Testing should be performed against functional specifications (which, therefore, must already exist!) and *known* accurate results

Automation

- Ensure systems—and interfaces—stay up-to-date
- Ensure adequate, *qualified* staff to maintain all applications

Establish an Ongoing Risk Evaluation Process

- Every operational process should be reviewed at least once a year
 - Ensure staff continue to follow documented processes
 - Ensure processes are updated with new requirements and activities due to:
 - Client requirements
 - New / sunset products and services offered
 - New / sunset systems
 - New / departed staff
 - Regulatory changes
 - Vendor changes
 - Ensure offering documents and RFP responses are up-to-date
 - Identify opportunities for improvement
 - Re-evaluate risks based on recent events

Outsourcing

- Don't outsource what you don't understand
- Many outsourcing providers offer state-of-the-art platforms and best-practice processes and workflows to support their clients
 - Investing in new technology and additional staff are more likely to be high-priority initiatives for providers than for managers
- Perform adequate due diligence on your outsourcing provider
 - On-site visits
 - Check references
 - Due diligence must be performed at least annually
- Identify your risks *before* you outsource—and then afterward
 - Provides a point of comparison
- Establish effective service-level agreements
- Develop—and document—workflows for all operational processes *before and after* outsourcing
 - Make sure nothing gets lost in the transition

Educating

- Train staff
 - Job-specific training
 - Be sure they understand current processes and workflows
 - Industry conferences
 - Industry credentials (CIPM, CFA, CPA, CAIA, etc.)
 - Ensure the training is appropriate to the job
- Cross-train staff
 - Reduces key-person risk
 - Helps retain staff
 - Facilitates communication
 - Particularly helpful during holiday season and disaster recovery
- Ensure staff know how other firms perform the same functions
 - Failure to remain current with industry best practice can be a major risk for firms with very low staff turnover



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