Evolution Of The Internal Audit Function:
From Controls Testing To Corporate Performance Management Insight
Agenda

- Evolving mandate for audit & business requirements
- Business controls auditing/monitoring maturity model
- Importance of real-time controls monitoring
- Q&A
Figure 4: Importance of internal audit’s contribution to monitoring each risk

- **Stakeholders**
  - Fraud and ethics: 90% (Important), 67% (Very important)
  - Data privacy and security: 90% (Important), 71% (Very important)
  - Business continuity: 54% (Important), 92% (Very important)
  - Large program risk: 47% (Important), 41% (Very important)
  - Mergers, acquisitions, and JVs: 59% (Important), 30% (Very important)
  - Regulations and government policies: 42% (Important), 38% (Very important)
  - Reputation and brand: 64% (Important), 21% (Very important)
  - Financial markets: 59% (Important), 21% (Very important)
  - New product introductions: 46% (Important), 15% (Very important)
  - Talent and labor: 59% (Important), 10% (Very important)
  - Energy and commodity costs: 44% (Important), 9% (Very important)
  - Government spending and taxation: 60% (Important), 11% (Very important)
  - Economic uncertainty: 46% (Important), 5% (Very important)
  - Commercial market shifts: 41% (Important), 6% (Very important)
  - Competition: 38% (Important), 7% (Very important)

- **CAEs**
  - Fraud and ethics: 28% (Important), 71% (Very important)
  - Data privacy and security: 27% (Important), 60% (Very important)
  - Business continuity: 54% (Important), 92% (Very important)
  - Large program risk: 42% (Important), 41% (Very important)
  - Mergers, acquisitions, and JVs: 47% (Important), 30% (Very important)
  - Regulations and government policies: 42% (Important), 38% (Very important)
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  - Competition: 38% (Important), 7% (Very important)

Source: PwC State of Internal Audit 2012
## Table 3. Percentage of Audit Plan Composition for 2012

<table>
<thead>
<tr>
<th>Audit Focus Area</th>
<th>Percentage (All Participants)</th>
<th>Percentage (Fortune 500)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td>28%</td>
<td>36%</td>
</tr>
<tr>
<td>Operational</td>
<td>27%</td>
<td>24%</td>
</tr>
<tr>
<td>Compliance</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Fraud</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Strategic business risk</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Effectiveness of risk management</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Cost/Expense reduction or containment</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Third-party relationships</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>Credit/Liquidity</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>Change management</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Reputational risks</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Mergers and acquisitions</td>
<td>1%</td>
<td>2%</td>
</tr>
<tr>
<td>Crisis management</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
<td>3%</td>
</tr>
</tbody>
</table>

Source: IIA Pulse of the Profession 3-12
Must Provide Transparency To Business Activities

Chart 1: How much will various stakeholders increase or decrease their demand for evidence of effective compliance in the next three years?

- Business partners: 71% Increase, 29% No change, 0% Decrease
- Regulators: 91% Increase, 8% No change, 0% Decrease
- Investors: 56% Increase, 44% No change, 0% Decrease
- Employees: 30% Increase, 70% No change, 0% Decrease
- Senior management: 65% Increase, 35% No change, 0% Decrease
- Audit committee or other board committee: 78% Increase, 22% No change, 0% Decrease
- Board directors: 68% Increase, 32% No change, 0% Decrease
- Non-governmental organizations (NGOs): 46% Increase, 52% No change, 2% Decrease

Source: Compliance Week & PwC State of Compliance Survey 2012
Internal Audit Maturity Model

Scheduled Control Auditing
- Continuous process
- Reduced overhead
- Able to correlate data across complex transactions
- Exceptions auto-discovered
- 100% audit coverage

Continuous Control Auditing
- Continuous process
- Run-time transaction rules (monitoring of conditions, variables & events)
- Preventive controls that stops transactions at run-time

Ad-Hoc Control Auditing
- Limited # of samples
- Manual data extractions
- More frequent audits
- Rules & algorithms used for analysis
- ~ 50% audit coverage
- Point-in-time, manual analysis
- Time-consuming, error-prone processes

Predictive Business Activity Monitoring
- KPI to KRI monitoring
- Advanced data analytics
- Timely notification & decision support that enables the business to course correct
- Provides continuous business assurance
Level 1 Business Control Maturity - Detective

<table>
<thead>
<tr>
<th>Driver</th>
<th>Compliance (period-based)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Check-in-the-box (prescriptive risk management)</td>
</tr>
<tr>
<td>Control Classification</td>
<td>Period-based control testing &amp; reporting</td>
</tr>
<tr>
<td>Audit</td>
<td>Design control (to mandate requirement), test &amp; report</td>
</tr>
<tr>
<td>Value</td>
<td>Required (considered a sunk-cost to the business)</td>
</tr>
<tr>
<td>Measurement</td>
<td>Pass/fail (historical)</td>
</tr>
</tbody>
</table>
## Level 2 Business Control Maturity - Preventative

<table>
<thead>
<tr>
<th>Driver</th>
<th>Risk management (real-time event-driven rule analysis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Enable business to respond (minimize loss, lagging indicator of failure)</td>
</tr>
<tr>
<td>Control Classification</td>
<td>Continuous monitoring (real-time action)</td>
</tr>
<tr>
<td>Audit</td>
<td>Design control (with business) &amp; risk event analysis (automated control that business monitors, decision support for risk mitigation)</td>
</tr>
<tr>
<td>Value</td>
<td>Alerted (suggested remediation/mitigation actions)</td>
</tr>
<tr>
<td>Measurement</td>
<td>Threshold +/- pass/fail (actual)</td>
</tr>
</tbody>
</table>
Level 3 Business Control Maturity - Predictive

<table>
<thead>
<tr>
<th>Driver</th>
<th>Dynamic business activity monitoring for Corporate Performance Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Enables business to change outcome (leading indicator of success or failure)</td>
</tr>
<tr>
<td>Control Classification</td>
<td>Continuous monitoring (real-time action)</td>
</tr>
<tr>
<td>Audit</td>
<td>Design control (with business), KPI/KRI monitoring &amp; analysis to project forward-looking outcomes</td>
</tr>
<tr>
<td>Value</td>
<td>Informed (decision support that drives corrective actions)</td>
</tr>
<tr>
<td>Measurement</td>
<td>Threshold +/- pass/fail (future), associative intelligence</td>
</tr>
</tbody>
</table>
Importance Of Real-Time Controls Monitoring
Importance Of Real-Time Control Monitoring

**Traditional Batch Transaction Data Analysis**

**Multiple Steps:**
1. Identify sample of cargo sales
2. Identify term changes made to cargo customers.
3. Combine both results to inspect cargo customer sales

**Single System**
Customer system

**Result**
- **Shortcoming:** Limited sources
- **Shortcoming:** Data latency
- **Shortcoming:** Period-based
- Manual, point-in-time analysis, false/positives & cost

**Automated Transactional Data Analysis**

**Single Automated Step**
1. Were cargo customer terms adjusted?
2. Are there any cargo items that might be out of the ordinary?
3. Were the customer contract terms changed, and revenue related transactions which might be considered suspicious?

**Multiple Systems**
1. Cargo System
2. Customer System
3. Revenue System

**Result**
- Detailed Analysis
- Reports generated
- **Advantage:** Correlation across multiple sources and events in real-time
- **Advantage:** Automated, consistent & 100% coverage

**Advantage:** More comprehensive
Q & A