Continuous Assurance Model

Brad Ames, CPA, CISA, CRMA
Stephen Kozlowski, CPA
November 9, 2013
Agenda

Continuous Assurance Model
• Ongoing Risk Assessments
• Ongoing Control Assessments

Integration with 3 Lines of Defense

Illustrations
• Automated Application Controls
• Employee Expenses
• Manual Journal Entries

Questions & Answers
Continuous Assurance Model

Continuous Assurance

Continuous Auditing by Internal Audit

Audit Testing of Continuous Monitoring Performed by Management

Ongoing Risk Assessment

Ongoing Control Assessment
Continuous Auditing
Ongoing Risk Assessment

Identify and assess levels of risk to the achievement of business objectives. Considers a combination of financial and unstructured data

- Analyzing trends
- Correlating outliers
- Highlighting potential exposures
Continuous Auditing: Ongoing Control Assessment

Assurance related to control objectives
Considers the interrelationship of IT and manual control mix

• Automated controls are designed in the application
• IT general controls across the entity
• Manual business process controls

Optimized by monitoring change to a baseline
Ongoing Control Assessments Leverage Interdependent Controls

Define Control Objectives
- Authorization
- Completeness
- Accuracy

Determine Key Controls

Business Process Control Objectives
- Automated (Application) Controls
  - Changes
  - Security
  - Incidents
  - Outliers and Transactions

IT General Controls:
- Database
- Operating System
- Network

Evaluate Baseline Condition of Controls (Still Active and Functioning) and Measure for Subsequent Changes
CA Relationships to Third Line of Defense

Continuous Assurance:
Results of Continuous Monitoring and Continuous Auditing Process

Audit Testing of Continuous Monitoring

Continuous Monitoring

Continuous Auditing

1st Line of Defense
Operational Management

2nd Line of Defense
Risk Management

3rd Line of Defense
Assurance

Changes, Security, Incidents, Outliers, Transactions and Unstructured Data
IT Operations, Business Applications, and Processes
Transition Continuous Audit Techniques to Second Line of Defense

Continuous Assurance
Results of Continuous Monitoring and Continuous Auditing Process

Audit Testing of Continuous Monitoring

Transition Continuous Audit Techniques

Optimize Continuous Auditing

Changes, Security, Incidents, Outliers, Transactions and Unstructured Data
IT Operations, Business Applications, and Processes
## Ongoing Control Assessment Illustration

### Application Controls Benchmark Report

**Base Audit:** SOX - C2C App Controls - Velocity - 2008 (2008067)

<table>
<thead>
<tr>
<th>Base month</th>
<th>July</th>
<th>Base year</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compare month</td>
<td>January</td>
<td>Compare year</td>
<td>2016</td>
</tr>
</tbody>
</table>

Initial base month and base year are determined by date of last audit.

**Customer-to-Cash Controls**

- [ ] All controls
- [ ] AUTO - Sales Order sys includes Cost Mdata C2C 0 (01)
- [ ] AUTO - Sales Order sys includes Material Mdata C2C 02 (02)
- [ ] AUTO - Pricing data sys copied C2C 03 (03)
- [ ] AUTO - Backlog Pricing sys adjustd C2C 04 (04)
- [ ] AUTO - Order Loads sys checked C2C 05 (05)
- [ ] AUTO - Credit Filter sys applied C2C 06 (06)
- [ ] AUTO - Rev Acct sys set C2C 07 (07)
- [ ] AUTO - Rev Post sys includes transit delay C2C 08 (08)
- [ ] AUTO - Invoice sys req's PGI C2C 09 (09)
- [ ] AUTO - Rev sys requires PGI C2C 10 (10)
- [ ] AUTO - A/R Aging sys good C2C 11 (11)
- [ ] AUTO - EDI Payment sys in place C2C 12 (12)
- [ ] AUTO - Lockbox Payment auto posts C2C 13 (13)

- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged
- [ ] unchanged

(new entries) (changed entries) (deleted entries)
Ongoing Control Assessment: Optimize by Benchmarking Automated Controls

- 122; 58%
- 55; 26%
- 33; 16%

Total Working Hours

- Before benchmark implementation: 6300
- After implementation: 352

5,948 Hours Saved
Ongoing Risk Assessment: Gain a Better Perspective of Employee Expenses by Matching Card Service Reports

**Questionable Spend Frequency By Merchant Code**

- Alcohol/Tobacco/Duty Free
- Clothing/Shoe Stores
- Department Store
- Drug/Medical Services
- Furniture/Electronic/Appliances
- Jewelry/Bags and Leather Goods
- Non-standard Transportation
- Personal Services

**Questionable Spend Total Charge By Merchant Code**

- Alcohol/Tobacco/Duty Free
- Clothing/Shoe Stores
- Department Store
- Drug/Medical Services
- Furniture/Electronic/Appliances
- Jewelry/Bags and Leather Goods
- Non-standard Transportation
- Personal Services
## Ongoing Risk Assessment: Manual Journal Entries

### Grid Analysis

<table>
<thead>
<tr>
<th>MJV Amount (%)</th>
<th>TB Amount ($)</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% to 9%</td>
<td>&lt; 1 Million</td>
<td>Country A</td>
</tr>
<tr>
<td></td>
<td>1 to 4 Million</td>
<td>Country I</td>
</tr>
<tr>
<td></td>
<td>&gt; 4 Million</td>
<td>Country H</td>
</tr>
<tr>
<td>10% to 29%</td>
<td>&lt; 1 Million</td>
<td>Country B</td>
</tr>
<tr>
<td></td>
<td>1 to 4 Million</td>
<td>Country C</td>
</tr>
<tr>
<td></td>
<td>&gt; 4 Million</td>
<td>Country G</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Country E</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Country F</td>
</tr>
<tr>
<td>&gt; 30%</td>
<td>&lt; 1 Million</td>
<td>Country J</td>
</tr>
<tr>
<td></td>
<td>1 to 4 Million</td>
<td>Country D</td>
</tr>
</tbody>
</table>

### Cluster Analysis

- Risky MJVs
  - 48.19%
  - 25.5%
  - 91.4%
- 18.19%
- 6.28%

--

© Copyright 2013 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. HP confidential.
Ongoing Risk Assessment: Manual Journal Entries

Benford’s Analysis

Cluster Analysis

- China
- India
- UK

Graph showing observed vs. expected values with clusters indicated for China, India, and UK.
CA/CM Application Architecture

Major Source Data feeds
- FlashPRO
- Trident
- Aspen/Infominer
- Eclipse
- EDW
- VCI (Credit Inf.)
- HR data
- Vista/JDEdwards
- AssureNet/R.Net
- Emp Exp Mgt

Wave 1
- SAS Server

Wave 2
- ACL AX Server

Audit Data Standards
- SAP KPI Tool

Dashboards:
- LHJE
- Fixed Assets
- Contra

Financial Solutions team, PPS Finance Business strategy
Finance and Compliance (SOX) team
Channel and Contra Practice area

DSAS Database
- Fixed Assets
- Contra
- Channel
- Special Pricing

Automation of datasets
Automated CA/CM solutions

SAS Server
ACL AX Server

Audit Data Standards

© Copyright 2013 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. HP confidential.
Audit Data Standards

DSAS Database Table Content Query

<table>
<thead>
<tr>
<th>DB Schema:</th>
<th>Audit Data (Standards)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table:</td>
<td>GL_Details - last updated on 06/25/2012</td>
</tr>
<tr>
<td>Maximum number of rows:</td>
<td>10 (0 = no limitation)</td>
</tr>
</tbody>
</table>

Select the fields to include in the query (Blank = select all):

- JOURNAL_ID
- JE_HEADER_DESC
- JE_LINE_DESC
- SOURCE
- BUSINESS_AREA
- FISCAL_YEAR
- PERIOD
- EFFECTIVE_DATE
- ENTRY_DATE
- USER_ID
- GL_ACCOUNT
- AMOUNT
- AMOUNT_CD
- AMOUNT_CURRENCY
- ENTRY_DATE_TIME
- REPORTING_AMOUNT

Enter filter values for the query:

- Filter for JOURNAL_ID:
- Filter for JE_HEADER_DESC:
- Filter for JE_LINE_DESC:
- Filter for SOURCE:
- Filter for BUSINESS_AREA:
- Filter for FISCAL_YEAR:
- Filter for PERIOD:
Thank you

Brad Ames (brad.ames@hp.com)
Stephen Kozlowski (sp.kozlowski@rutgers.edu)