AML & REGULATORY COMPLIANCE
WEBCAST SERIES - FALL 2017

Results of the 2017 RSM AML Survey

September 28, 2017
Presenters

Ty Beasley
Principal, Risk Advisory Services, RSM
ty.beasley@rsmus.com

Nick Mustafa
Director, Risk Advisory Services, RSM
nick.mustafa@rsmus.com

Patricio Perez
Partner, Risk Advisory Services, RSM
patricio.perez@rsmus.com
RESULTS OF THE 2017 RSM AML SURVEY
## Table of contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives</td>
<td>6</td>
</tr>
<tr>
<td>Methodology</td>
<td>7</td>
</tr>
<tr>
<td>Description of Sample</td>
<td>8</td>
</tr>
<tr>
<td>Executive Summary</td>
<td>13</td>
</tr>
<tr>
<td>Implications for Action</td>
<td>19</td>
</tr>
<tr>
<td>Detailed Findings</td>
<td>20</td>
</tr>
<tr>
<td>Structure of BSA/AML Compliance Function</td>
<td>21</td>
</tr>
<tr>
<td>Risk Tolerance</td>
<td>39</td>
</tr>
<tr>
<td>Training</td>
<td>45</td>
</tr>
<tr>
<td>Technology</td>
<td>50</td>
</tr>
</tbody>
</table>
Objectives

The overall objective of this research was to profile AML departments of U.S.-based commercial banks ($500MM and $20B). Specifically, the profile included the following dimensions:

• AML department size and structure
• Operating philosophy
• Costs
• Compliance processes
• Current technology infrastructure used for transaction monitoring
The **AML Practices Assessment Research** was conducted using a stratified random sample of 132 qualified respondents (6.8% response rate) at U.S. commercial-bank holding companies with assets between $500MM and $20B. Respondents were senior-level officers and managers responsible for oversight of the BSA program.

### AML Practices Assessment Research

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respondents:</strong></td>
<td>132 qualified respondents</td>
</tr>
<tr>
<td><strong>Response Rate:</strong></td>
<td>6.8%</td>
</tr>
<tr>
<td><strong>Fielding:</strong></td>
<td>Jan. 9, 2017 – Mar. 4, 2017</td>
</tr>
<tr>
<td><strong>Maximum Margin of Error:</strong></td>
<td>±8.53% at 95%</td>
</tr>
<tr>
<td><strong>Mail Out:</strong></td>
<td>1,951</td>
</tr>
</tbody>
</table>
Description of sample: Comparison to national counts

<table>
<thead>
<tr>
<th>Demographics</th>
<th>Pre-weighted Base: Respondent pool</th>
<th>*Weighted Base: FDIC Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Size</td>
<td>n = 132</td>
<td>n = 1,309</td>
</tr>
<tr>
<td>$500MM-&lt;$1B</td>
<td>52  39%</td>
<td>655  50%</td>
</tr>
<tr>
<td>$1B-&lt;$10B</td>
<td>72  55%</td>
<td>617  47%</td>
</tr>
<tr>
<td>$10B-&lt;$20B</td>
<td>8   6%</td>
<td>37   3%</td>
</tr>
<tr>
<td>Region</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midwest</td>
<td>51  39%</td>
<td>372  28%</td>
</tr>
<tr>
<td>Northeast</td>
<td>25  19%</td>
<td>299  23%</td>
</tr>
<tr>
<td>South</td>
<td>40  30%</td>
<td>447  34%</td>
</tr>
<tr>
<td>West</td>
<td>16  12%</td>
<td>191  15%</td>
</tr>
</tbody>
</table>

*Data weighted by region and asset size

Source: AML Practices Assessment Research
Barlow Research (2016-2017) & FDIC
Description of sample: Type of bank

Q: Are you employed by a… (n = 131)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Q: Which of the following best describes your responsibilities in regard to the oversight and management of your organization’s Bank Secrecy Act (BSA)/Anti-Money Laundering (AML) activities? (n = 132)

- Primarily responsible for BSA/AML activities: 74%
- Involved but not primarily responsible: 26%

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Description of sample: Title of respondent

Q: What is your title? (n = 122)

- BSA/AML Officer or Director: 53%
- Chief Compliance Officer: 16%
- Chief Risk Manager or Officer: 10%
- Compliance Officer or Vice President: 9%
- Operations Officer or Manager: 4%
- Risk Manager or Officer: 3%
- Other: 3%
- CEO/President: 2%

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Executive Summary
Executive Summary

The BSA/AML function is highly centralized; only 1% of respondents reported the function was decentralized at their bank. What’s more…

• Over nine out of 10 respondents come from a single bank (60%) or a single bank holding company.

• People responsible for the BSA/AML function typically hold the title of Chief Compliance or Risk Officer or the BSA/AML Officer or Director.
Executive Summary

A strong relationship exists between asset size & BSA/AML operating budget. Smaller banks differ from large banks on a number of dimensions including:

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Small Banks</th>
<th>Large Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median annual operating budget</td>
<td>$200,000</td>
<td>$50,000</td>
<td>$250,000</td>
</tr>
<tr>
<td>Budget growth anticipated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% respondents expecting budget increase</td>
<td>36%</td>
<td>24%</td>
<td>49%</td>
</tr>
<tr>
<td>Median increase expected</td>
<td>10%</td>
<td>5%</td>
<td>15%</td>
</tr>
<tr>
<td>Average increase expected</td>
<td>15%</td>
<td>6%</td>
<td>18%</td>
</tr>
<tr>
<td>Number of employees (% with 5 or fewer FTEs)</td>
<td>71%</td>
<td>87%</td>
<td>53%</td>
</tr>
<tr>
<td>Median FTEs</td>
<td>3</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Average FTEs</td>
<td>16</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>Range</td>
<td>.5-500</td>
<td>1-160</td>
<td>.5-500</td>
</tr>
<tr>
<td>FTE growth anticipated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase</td>
<td>29%</td>
<td>11%</td>
<td>48%</td>
</tr>
<tr>
<td>Remain unchanged</td>
<td>70%</td>
<td>89%</td>
<td>51%</td>
</tr>
</tbody>
</table>
Executive Summary

Effectiveness is the main focus for the BSA/AML function (both regulatory compliance & risk mitigation). Fully 95% of respondents are satisfied with the effectiveness of their BSA/AML function; 86% are satisfied with its efficiency.

There appears to be opportunities to continue to improve efficiency and to cut costs. Over 8 of ten respondents outsource some functions. Efficiency potential is a function of suspicious activity levels & risk tolerance – i.e., low activity volume & high risk tolerance = less time/staff.

<table>
<thead>
<tr>
<th>Percentage highly satisfied with:</th>
<th>Total</th>
<th>Small Banks</th>
<th>Large Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effectiveness of BSA/AML function</td>
<td>95%</td>
<td>94%</td>
<td>98%</td>
</tr>
<tr>
<td>Efficiency of BSA/AML function</td>
<td>86%</td>
<td>87%</td>
<td>86%</td>
</tr>
<tr>
<td>Percent outsourcing BSA/AML functions</td>
<td>84%</td>
<td>82%</td>
<td>85%</td>
</tr>
<tr>
<td>• BSA/AML Internal audits</td>
<td>62%</td>
<td>59%</td>
<td>65%</td>
</tr>
<tr>
<td>• AML model validation</td>
<td>51%</td>
<td>48%</td>
<td>58%</td>
</tr>
</tbody>
</table>
Executive Summary

• Neither large nor small banks appear to be making significant investments in BSA/AML training.

• The median training budget is $5,000 ($3,000 for small banks; $8,000 for large banks). Large banks do not spend a lot of money on training relative to their number of employees. While 29% of large banks expect to increase their training budgets, 78% of the total sample expect the training budget will remain the same.
Executive Summary

Nearly nine in ten banks use software to identify suspicious activity. While effectiveness is mentioned by nearly two-thirds (64%) as the primary objective for software use, nearly a third (29%) are looking for increased efficiency.

Budgets for all types of software are higher among larger banks.

<table>
<thead>
<tr>
<th>Median Annual Budget for Software</th>
<th>Small Banks</th>
<th>Large Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspicious activity monitoring</td>
<td>$16,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>OFAC sanctions screening</td>
<td>$3,765</td>
<td>$20,000</td>
</tr>
<tr>
<td>Customer risk scoring</td>
<td>$0</td>
<td>$30,000</td>
</tr>
<tr>
<td>Case management</td>
<td>$0</td>
<td>$30,000</td>
</tr>
<tr>
<td>SAR reporting</td>
<td>$0</td>
<td>$30,000</td>
</tr>
<tr>
<td>Currency transaction reporting</td>
<td>$0</td>
<td>$30,000</td>
</tr>
</tbody>
</table>
Implications for Action
Detailed Findings
Structure of BSA/AML Compliance Function
Nearly all organizations had a centralized BSA/AML structure.

Q: In general, how would you describe the structure of your organization’s BSA/AML compliance function? (n = 127)

BSA/AML budgets at smaller banks had a median of $50K

Expectations for BSA/AML Budget at Banks Assets $500MM-$1B

- Remain the Same: 76%
- Increase: 24%
  - 11%-20%: 7%
  - 5%-10%: 66%
  - <5%: 27%

Total annual operating budget for BSA/AML (median): $50,000
- Avg. = $120,951
- Range = $0 - $800,000

In the next 12 months, do you expect your organization’s annual operating budget to...

(n = 50)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
BSA/AML budgets at larger banks were much larger (median of $250K) than at smaller banks.

**Expectations for BSA/AML Budget at Banks Assets $1B-<$20B**

- **$250,000**
  - Total annual operating budget for BSA/AML Assets $1B-<$20B (median)
  - **Increase 49%**
  - **13% Increase**
  - **34% Increase**
  - **36% Increase**
  - **13% Increase**
- **Remain the Same 48%**
- **Decrease 3%**

**Expected % Increase**

- **51%+**
- **21%-50%**
- **11%-20%**
- **5%-10%**
- **<5%**

**Source:** AML Practices Assessment Research Barlow Research (2016-2017)
Asset size and high-range annual BSA/AML operating budgets are more strongly correlated than low-range budgets.

What is your organization’s total annual operating budget for BSA/AML compliance? (n = 9)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Outsourcing was prevalent, particularly for BSA/AML internal audits and AML model validation testing.

**Outsourcing BSA/AML Functions**

- **BSA/AML internal audits**: 62%
- **AML model validation testing**: 53%
- **Quality control reviews**: 8%
- **AML risk assessments**: 5%
- **Regulation interpretation**: 2%
- **Do not outsource**: 16%

Q: Which BSA/AML compliance functions, if any, does your organization outsource? (n = 127)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Larger banks were more likely to outsource for BSA/AML internal audits and AML model validation testing.

Q: Which BSA/AML compliance functions, if any, does your organization outsource?

- BSA/AML internal audits: 65% ($1B-$20B), 59% ($500MM-$1B)
- AML model validation testing: 58% ($1B-$20B), 48% ($500MM-$1B)
- Quality control reviews: 8% ($1B-$20B), 7% ($500MM-$1B)
- AML risk assessments: 5% ($1B-$20B), 5% ($500MM-$1B)
- Regulation interpretation: 1% ($1B-$20B), 3% ($500MM-$1B)
- Do not outsource: 18% ($1B-$20B), 15% ($500MM-$1B)

Statistically significant difference

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Over 70% of banks had five or fewer FTEs responsible for BSA/AML

Number of BSA/AML Employees

Q: How many full time equivalent (FTE) employees are responsible for BSA/AML and sanctions compliance at your entire organization? (n = 128)

Median Number of FTEs = 3
Avg. Number of FTEs = 16
Range of FTEs = 0.5 - 500

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Small banks have less than half the number of FTEs responsible for BSA/AML compared to large banks.

**Number of BSA/AML Employees**

<table>
<thead>
<tr>
<th>Assets $500MM-&lt;$1B</th>
<th>Assets $1B-$20B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median Number of FTEs</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Avg. Number of FTEs</strong></td>
<td>13</td>
</tr>
<tr>
<td><strong>Range of FTEs</strong></td>
<td>1 - 160</td>
</tr>
<tr>
<td>87%</td>
<td>53%</td>
</tr>
<tr>
<td>65%</td>
<td>35%</td>
</tr>
<tr>
<td>22%</td>
<td>24%</td>
</tr>
<tr>
<td>8%</td>
<td>14%</td>
</tr>
<tr>
<td>2%</td>
<td>9%</td>
</tr>
<tr>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>0%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Q: How many full time equivalent (FTE) employees are responsible for BSA/AML and sanctions compliance at your entire organization? (Assets $500MM-$1B: n = 52; Assets $1B-$20B: n = 76)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Approximately three out of four large banks had at least one Certified AML Professional while this is only true for about half of small banks. 

### Incidence of Certified FTEs

<table>
<thead>
<tr>
<th></th>
<th>Certified AML Professional</th>
<th>Certified Regulatory Compliance Manager</th>
<th>Certified Fraud Professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>1.0</td>
<td>1.0</td>
<td>0</td>
</tr>
<tr>
<td>Avg.</td>
<td>1.0</td>
<td>1.2</td>
<td>0.3</td>
</tr>
<tr>
<td>Range</td>
<td>0-7</td>
<td>0-10</td>
<td>0-2</td>
</tr>
</tbody>
</table>

Q: How many of your organization's FTE employees are... (Cert. AML Professional: n = 122; Cert. Reg. Compliance Manager: n = 103; Cert. Fraud Professional: n = 97) 

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Nearly thirty percent of banks expected to increase FTEs over the next 12 months; many that expected to increase FTEs have experienced changes in volume.

**Expectations for # of FTEs**
- **Increase**: 29%
- **Remain the same**: 70%
- **Decrease**: 1%

**Top Reasons for Change**

**Top reasons for increase:**
- New policy/software to stay efficient (21%)
- Volume change (20%)
- Acquisition/merger change (11%)

**Top reasons to remain the same:**
- No change needed (34%)
- Staff personnel change (20%)

In the next 12 months, do you expect the number of FTE employees responsible for BSA/AML and sanctions compliance to... (n = 126)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)

"Looking into purchasing software that will help with the manual tracking."

"Our SAR filings have tripled year-over-year and the number of cases has increased 26% year-over-year. In addition, after a core conversion in first quarter of 2016, our department now prepares and files all CTRs for 16 branches."

"We are a small community bank that has been working with the same core people for years."

Explain why your organization’s FTE employees will increase, decrease or remain the same. (n = 98)
Larger banks were looking to invest in more BSA/AML FTEs

**Expected Change in # of FTEs**

**Assets $500MM-<$1B**
- 89% Remain the Same
- 11% Increase

**Assets $1B-<$20B**
- 51% Remain the Same
- 48% Decrease

**Statistically significant difference**

Q: In the next 12 months, do you expect the number of FTE employees responsible for BSA/AML and sanctions compliance to… (Assets $500MM-<$1B: n = 51; Assets $1B-<$20B: n = 75)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
The range of times reported for key activities suggest opportunities to increase efficiency and to mitigate risk

<table>
<thead>
<tr>
<th>Average time required (in hours) to:</th>
<th>Total sample</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct Enhanced Due Diligence (EDD)</td>
<td>114</td>
<td>6.2</td>
<td>2.0</td>
<td>1.0</td>
<td>.5-48</td>
</tr>
<tr>
<td>Investigate an escalated alert</td>
<td>116</td>
<td>5.7</td>
<td>2.0</td>
<td>2.0</td>
<td>.25-48</td>
</tr>
<tr>
<td>Clear a suspicious activity alert</td>
<td>113</td>
<td>2.5</td>
<td>1.0</td>
<td>1.0</td>
<td>.25-48</td>
</tr>
</tbody>
</table>

Q: How long, on average, does it take your organization to …

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
The range of times for key activities suggest the opportunities and risks exist for both large and small banks

<table>
<thead>
<tr>
<th>Average time required (in hours) to:</th>
<th>Base</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conduct Enhanced Due Diligence (EDD)</strong></td>
<td>114</td>
<td>6.2</td>
<td>2.0</td>
<td>1.0</td>
<td>.5-48</td>
</tr>
<tr>
<td>• Assets: $500M up to $1B</td>
<td>69</td>
<td>6.1</td>
<td>2.0</td>
<td>1.0</td>
<td>1-48</td>
</tr>
<tr>
<td>• Assets: $1B up to $20B</td>
<td>45</td>
<td>6.4</td>
<td>2.0</td>
<td>1.0</td>
<td>.5-48</td>
</tr>
<tr>
<td><strong>Investigate an escalated alert</strong></td>
<td>116</td>
<td>5.7</td>
<td>2.0</td>
<td>2.0</td>
<td>.25-48</td>
</tr>
<tr>
<td>• Assets: $500M up to $1B</td>
<td>47</td>
<td>5.1</td>
<td>2.0</td>
<td>2.0</td>
<td>1-35</td>
</tr>
<tr>
<td>• Assets: $1B up to $20B</td>
<td>69</td>
<td>6.3</td>
<td>3.0</td>
<td>1.0</td>
<td>.25-48</td>
</tr>
<tr>
<td><strong>Clear a suspicious activity alert</strong></td>
<td>113</td>
<td>2.5</td>
<td>1.0</td>
<td>1.0</td>
<td>.25-48</td>
</tr>
<tr>
<td>• Assets: $500M up to $1B</td>
<td>46</td>
<td>1.9</td>
<td>1.0</td>
<td>1.0</td>
<td>.25-20</td>
</tr>
<tr>
<td>• Assets: $1B up to $20B</td>
<td>67</td>
<td>3.2</td>
<td>1.0</td>
<td>1.0</td>
<td>.25-48</td>
</tr>
</tbody>
</table>

Q: How long, on average, does it take your organization to …

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
The volume of activities further amplifies potential risks and opportunities

<table>
<thead>
<tr>
<th>Average frequency (per month):</th>
<th>Total sample</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Suspicious Activity Reports (SARs)</td>
<td>120</td>
<td>16.3</td>
<td>5.0</td>
<td>2.0</td>
<td>0-500</td>
</tr>
<tr>
<td>Complete investigations</td>
<td>114</td>
<td>118.6</td>
<td>15.0</td>
<td>5.0</td>
<td>1-2000</td>
</tr>
<tr>
<td>Complete EDD reviews</td>
<td>98</td>
<td>39.5</td>
<td>15.0</td>
<td>10.0</td>
<td>0-500</td>
</tr>
<tr>
<td>Conduct model and/or system validations</td>
<td>109</td>
<td>2.7</td>
<td>1.0</td>
<td>1.0</td>
<td>0-150</td>
</tr>
</tbody>
</table>

Q: How frequently, on average, does your organization …

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Banks were least satisfied (top box) with the efficiency of their BSA/AML function

Satisfaction with BSA/AML

- Effectiveness of your organization’s BSA/AML function: 95% Very Satisfied, 56% Somewhat Satisfied, 39% Neutral, 4% Somewhat Dissatisfied, 4% Very Dissatisfied (n = 121)
- Quality of your organization’s overall BSA/AML risk assessment: 95% Very Satisfied, 51% Somewhat Satisfied, 44% Neutral, 4% Somewhat Dissatisfied, 1% Very Dissatisfied (n = 121)
- Board of Directors’ involvement in your organization’s BSA/AML function: 85% Very Satisfied, 50% Somewhat Satisfied, 35% Neutral, 14% Somewhat Dissatisfied, 2% Very Dissatisfied (n = 120)
- Efficiency of your organization’s BSA/AML function: 86% Very Satisfied, 40% Somewhat Satisfied, 46% Neutral, 9% Somewhat Dissatisfied, 5% Very Dissatisfied (n = 120)

Q: How satisfied are you with the…

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Risk Tolerance
Risk tolerance varies between different bank sizes

Q: How would you characterize the risk tolerance at your organization?

Overall AML Risk Tolerance

- Assets $500MM-<$1B
  - 3% High
  - 44% Medium
  - 53% Low
  - n = 50

- Assets $1B-<$20B
  - 5% High
  - 59% Medium
  - 35% Low
  - n = 73

Statistically significant difference

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Overview of risk tolerances and perceptions

Customer, Product and Geographical Risks

- **Inherent risk of products and services**
  - High: 4%
  - Medium: 46%
  - Low: 50%

- **Inherent risk of customer base**
  - High: 7%
  - Medium: 47%
  - Low: 45%

- **Geographical risk of customers’ locations and transactions**
  - High: 15%
  - Medium: 47%
  - Low: 38%

Q: How would you characterize the… (n = 125)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Smaller banks have higher risk perceptions than larger banks

Customer, Product and Geographical Risks by Bank Size

Inherent risk of products and services
- $1B-$20B: 6% High, 63% Medium, 31% Low
- $500MM-$1B: 1% High, 31% Medium, 68% Low

Inherent risk of customer base
- $1B-$20B: 12% High, 62% Medium, 27% Low
- $500MM-$1B: 3% High, 34% Medium, 63% Low

Geographical risk of customers' locations and transactions
- $1B-$20B: 20% High, 50% Medium, 30% Low
- $500MM-$1B: 10% High, 44% Medium, 47% Low

Statistically significant difference

Q: How would you characterize the…

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Training
The median annual budget for BSA/AML training was $5,000.

Q: What is the total annual budget for BSA/AML training for your entire organization? (n = 50)

Median = $5,000

Average = $10,410

Range = $0-$100,000

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
The median annual budget for BSA/AML training was different between bank sizes.

### Annual Budget for BSA/AML Training

<table>
<thead>
<tr>
<th>Budget Range</th>
<th>Median</th>
<th>Avg.</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets $500MM-$1B*</td>
<td>$3,000</td>
<td>$7,721</td>
<td>$0-$50,000</td>
</tr>
<tr>
<td>Assets $1B-$20B</td>
<td>$8,000</td>
<td>$13,464</td>
<td>$500-$100,000</td>
</tr>
</tbody>
</table>

**Q:** What is the total annual budget for BSA/AML training for your entire organization? (Assets $500MM-$1B: n = 22; Assets $1B-$20B: n = 28)

Significantly more larger banks expect their BSA/AML budget to increase in the next 12 months

Q: In the next 12 months, do you expect your organization’s BSA/AML training budget to… (n = 119)

Statistically significant difference

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Employees were most commonly trained via the web while the Board of Directors was trained in-person.

**BSA/AML Training Administration**

- **Internal: Web-based**
  - Employees: 94% (n = 121)
  - Board of Directors: 25% (n = 117)

- **Internal: In-person**
  - Employees: 68% (n = 121)
  - Board of Directors: 89% (n = 117)

- **External/Seminars**
  - Employees: 43% (n = 121)
  - Board of Directors: 6% (n = 117)

- **No training**
  - Employees: 1% (n = 121)
  - Board of Directors: 1% (n = 117)

Q: How is BSA/AML training administered to your organization's...

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Certified AML and Fraud Professionals had the highest median annual hours of BSA/AML training at 20 hours.

Median Annual Number of Training Hours

Q: Please indicate the average number of hours of BSA/AML training provided to your... (Cert. AML Professionals: n = 91; Cert. Reg. Manager: n = 80; Bank Ops: n = 115; Board of Directors: n = 114)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Technology
Nearly nine in ten banks use software to identify suspicious activity

Use of Software

Q: Does your organization use software to identify suspicious activity? (n = 125)

- Yes: 86%
- No: 13%
- Do Not Know: 1%

Large banks were statistically more likely to use software to identify suspicious activity

Q: Does your organization use software to identify suspicious activity? (Assets $500MM-<$1B: n = 50; Assets $1B-<$20B: n = 75)

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
BSA/AML software is most commonly used to more effectively identify suspicious activity

Primary Objective for BSA/AML Software

- More effectively identify suspicious activity: 64%
- Make process more efficient: 29%
- Satisfy regulators: 5%
- Risk score customers more effectively: 3%
- Satisfy regulators: 5%

Q: What is your organization’s primary objective for BSA/AML compliance software investments? (n = 95)
Based on those that use software to identify suspicious activity

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Two in three larger banks use BSA/AML software to improve the effectiveness of identifying suspicious activity.

Q: Does your organization use software to identify suspicious activity?
(Assets $500MM-<$1B: n = 36; Assets $1B-<$20B: n = 59)
Based to those that use software to identify suspicious activity

Primary Objective for BSA/AML Software

<table>
<thead>
<tr>
<th>Objective</th>
<th>$500MM-&lt;$1B</th>
<th>$1B-&lt;$20B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk score customers more effectively</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>Satisfy regulators</td>
<td>31%</td>
<td>26%</td>
</tr>
<tr>
<td>Make process more efficient</td>
<td>60%</td>
<td>67%</td>
</tr>
<tr>
<td>More effectively identify suspicious activity</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

Statistically significant difference

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Banks looking to increase their budget were more focused on using software to make the process of identifying suspicious activity more efficient.

**Primary Objective for BSA/AML Software**

- **Expect operating budget to increase**
  - Risk score customers more effectively: 5%
  - Satisfy regulators: 38%
  - Make process more efficient: 54%
  - More effectively identify suspicious activity: 2%

- **Do not expect operating budget to increase**
  - Risk score customers more effectively: 2%
  - Satisfy regulators: 24%
  - Make process more efficient: 68%
  - More effectively identify suspicious activity: 7%

**Operating Budget Expectations**

Q: Does your organization use software to identify suspicious activity?  
(Increasing operating budget: n = 37; Remain the same/decrease operating budget: n = 55) Based to those that use software to identify suspicious activity

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Budgets for suspicious activity monitoring software were much higher than other BSA/AML activities.

Q: What is your annual budget for each of the following BSA/AML compliance software:
(Suspicious activity monitoring: n = 50; case mgmt: n = 19; OFAC screening: n = 22; customer risk scoring: n = 21; SAR: n = 20; CTR: n = 19)
Based to those that use software to identify suspicious activity

**Median Annual Budget for Software**

- **Suspicious activity monitoring**
  - Avg. $48,423
  - Range $3,765-$700,000
  - $30,000

- **Case management**
  - Avg. $26,684
  - Range $0-$99,000
  - $20,000

- **Customer risk scoring**
  - Avg. $25,404
  - Range $0-$99,000
  - $19,000

- **SAR reporting**
  - Avg. $24,752
  - Range $0-$99,000
  - $18,000

- **OFAC sanctions screening**
  - Avg. $24,757
  - Range $0-$109,000
  - $14,615

- **Currency transaction reporting**
  - Avg. $20,117
  - Range $0-$99,000
  - $10,000

*Low base (<30 respondents)*

Budgets for all types of software were higher among larger banks

**Median Annual Budget for Software**

<table>
<thead>
<tr>
<th>Software Type</th>
<th>$1B-&lt;$20B</th>
<th>$500MM-&lt;$1B</th>
<th>Asset Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspicious activity monitoring*</td>
<td>$16,000</td>
<td>$50,000</td>
<td>$1B-&lt;$20B</td>
</tr>
<tr>
<td>Customer risk scoring*</td>
<td>$0</td>
<td>$30,000</td>
<td>$500MM-&lt;$1B</td>
</tr>
<tr>
<td>Case management*</td>
<td>$0</td>
<td>$30,000</td>
<td>$500MM-&lt;$1B</td>
</tr>
<tr>
<td>SAR reporting*</td>
<td>$0</td>
<td>$30,000</td>
<td>$500MM-&lt;$1B</td>
</tr>
<tr>
<td>OFAC sanctions screening*</td>
<td>$3,765</td>
<td>$20,000</td>
<td>$500MM-&lt;$1B</td>
</tr>
<tr>
<td>Currency transaction reporting*</td>
<td>$3,765</td>
<td>$16,000</td>
<td>$500MM-&lt;$1B</td>
</tr>
</tbody>
</table>

*Low base (<30 respondents)

Q: What is your annual budget for each of the following BSA/AML compliance software? Based to those that use software to identify suspicious activity

Source: AML Practices Assessment Research
Barlow Research (2016-2017)
Five types of software were used most frequently: BAM Banker’s Toolbox, FIS-Core-Prime, Fiserv – FCRM, Jack Henry Yellow Hammer and Verafin

<table>
<thead>
<tr>
<th>Type of software</th>
<th>% use</th>
<th>Top software used</th>
<th>% use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspicious activity monitoring</td>
<td>79%</td>
<td>BAM Banker’s Toolbox</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verafin</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fiserv – FCRM</td>
<td>18%</td>
</tr>
<tr>
<td>Case management</td>
<td>70%</td>
<td>BAM Banker’s Toolbox</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fiserv – FCRM</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verafin</td>
<td>19%</td>
</tr>
<tr>
<td>OFAC sanctions screening</td>
<td>77%</td>
<td>Fiserv – FCRM</td>
<td>21%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FIS – Core – Prime</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jack Henry Yellow Hammer</td>
<td>15%</td>
</tr>
<tr>
<td>Customer risk scoring</td>
<td>70%</td>
<td>BAM Banker’s Toolbox</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verafin</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fiserv – FCRM; Jack Henry Yellow Hammer</td>
<td>15%</td>
</tr>
<tr>
<td>SAR reporting</td>
<td>70%</td>
<td>BAM Banker’s Toolbox</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fiserv – FCRM</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Verafin</td>
<td>19%</td>
</tr>
<tr>
<td>CTR software</td>
<td>76%</td>
<td>Fiserv – FCRM</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jack Henry Yellow Hammer</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FIS – Core – Prime</td>
<td>16%</td>
</tr>
</tbody>
</table>

Q: What BSA/AML compliance software does your organization use (Suspicious activity monitoring: n = 103; case mgmt: n = 92; OFAC screening: n = 100; customer risk scoring: n = 92; SAR: n = 91; CTR: n = 98) Based to those that use software to identify suspicious activity