Strategic Treasurer
Consultants in Treasury

Treasury & Fraud Control:

Crime Does Pay

GFOASC Presentation – October 4, 2017

TD Bank

Agenda

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Craig Jeffery formed Strategic Treasurer LLC in 2004 to provide corporate, educational, and government entities direct access to comprehensive and current assistance with their treasury and financial process needs.

His 20+ years of financial and treasury experience as a practitioner and as a consultant have uniquely qualified him to help organizations craft realistic goals and achieve significant benefits quickly.

Strategic Treasurer is a consulting firm advising on treasury, financial risk and risk technology issues.

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1. CONTEXT: Crime Does Pay
2. AREAS OF EXPOSURE
3. LAYERS OF SECURITY: Examples
   - Account Access
   - System Access
4. TREASURY SECURITY FRAMEWORK
   - Four Pillars
5. ACTION ITEMS
6. QUESTION & ANSWER

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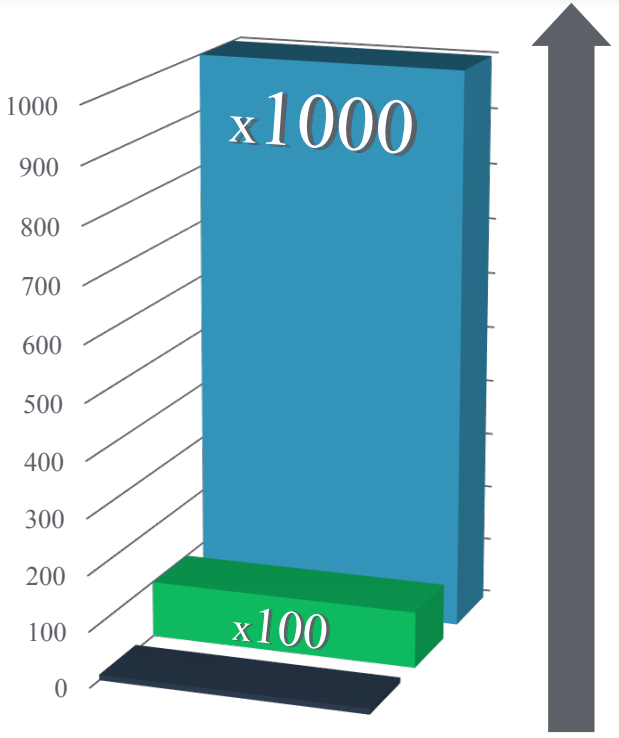
Crime Does Pay

Crime Does Pay

System Level Fraud



SYSTEM FRAUD
Typical Payout Range:

$1M-10M+

WIRE (BEC) FRAUD
Typical Payout Range:

$130K+

CHECK FRAUD
Typical Payout Range:

$1K-2K

The above values are taken from calculations off of FBI, Banking Data and Strategic Treasurer estimates.

System-level fraud, or the complete takeover of an organization's internal systems, have the potential to pay out $1,000,000-$10,000,000 depending on the size of the organization being targeted.

The risk/reward calculus for criminals has changed as the potential payouts are larger than ever. While many corporates are on the watch for check fraud, the larger targets remain unplanned for and vulnerable to attack.

Case Study: Bangladesh

Central Bank of Bangladesh

Situation

- $951mm Messages Sent
- $101mm Wired
- $850mm Stopped by AML
- $20mm Recovered
- $81mm Net Loss with some Residual Recovery
- No Further Recovery Expected

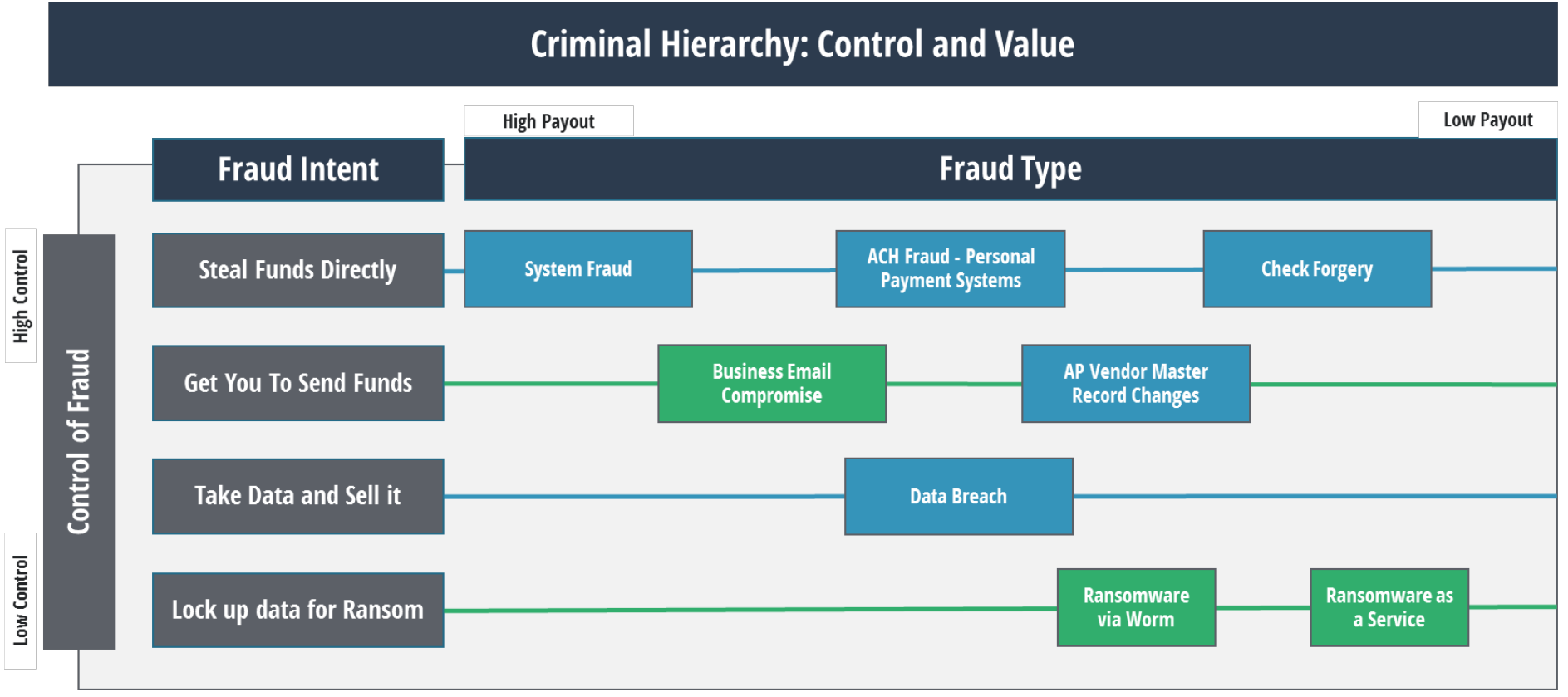
Protection Gaps

- Perimeter
  - Firewall
  - Routers
- Interior
  - IDs
  - Passwords
  - Keys
- System
  - Left open (test mode)
- Other

Results

- $81mm Stolen
- "Early Retirement"
- Massive Continued Negative Press

The Criminal Playbook



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Current vs. Ideal Business Environment

The Current Business Environment

Fraudulent activity is on the rise

The security measures used by most organizations are insufficient

Organizations make easy targets for criminals

The Ideal Business Environment

The security measures in place by firms would be robust

It would be easier to identify when and where fraudulent activity is occurring

Fraudulent activity would result in fewer successes and smaller payouts.

In today's world, crime does pay. Given the current business environment, it is easy for criminals to get past organizational security measures and walk away with high payouts.

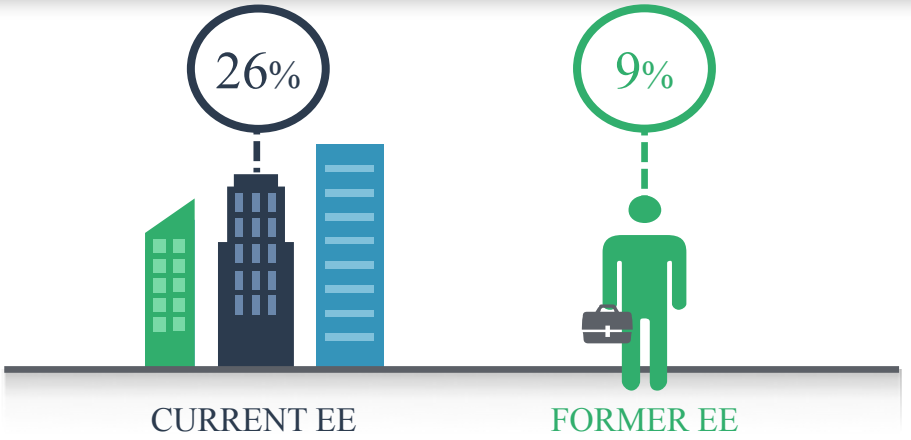
In order to rectify this, the calculus for criminals must be changed. Firms must take on a more muscular security approach so that fraud becomes more difficult to pull off and is less rewarding for those that are successful.

Self-Assessment: Sample Questions

Do you have/In the past year have you:	FULL	+5	PARTIAL	+3	NONE	+1
1. A single, current bank account management database that includes: accounts, signers and controls?						
2. Performed an assessment of the security for our treasury environment?						
3. A formal treasury control framework or security framework?						
4. Assigned specific fraud topic monitoring to various individuals?						
5. Internal system monitoring for fraud or unauthorized activity?						
6. A policy blocking the use of: BYOD, Mobile for *transaction initiation*?						
7. Performed *initial* background checks on hire for all employees, contractors/temporary workers in Treasury?						
8. Systematic communication and a training program about fraud and controls for those involved in payments.						
Total: (>32=Strong; <16=Weak)						

Significant Rise in External Fraud

From Whom Did You Experience Fraud? (2016)



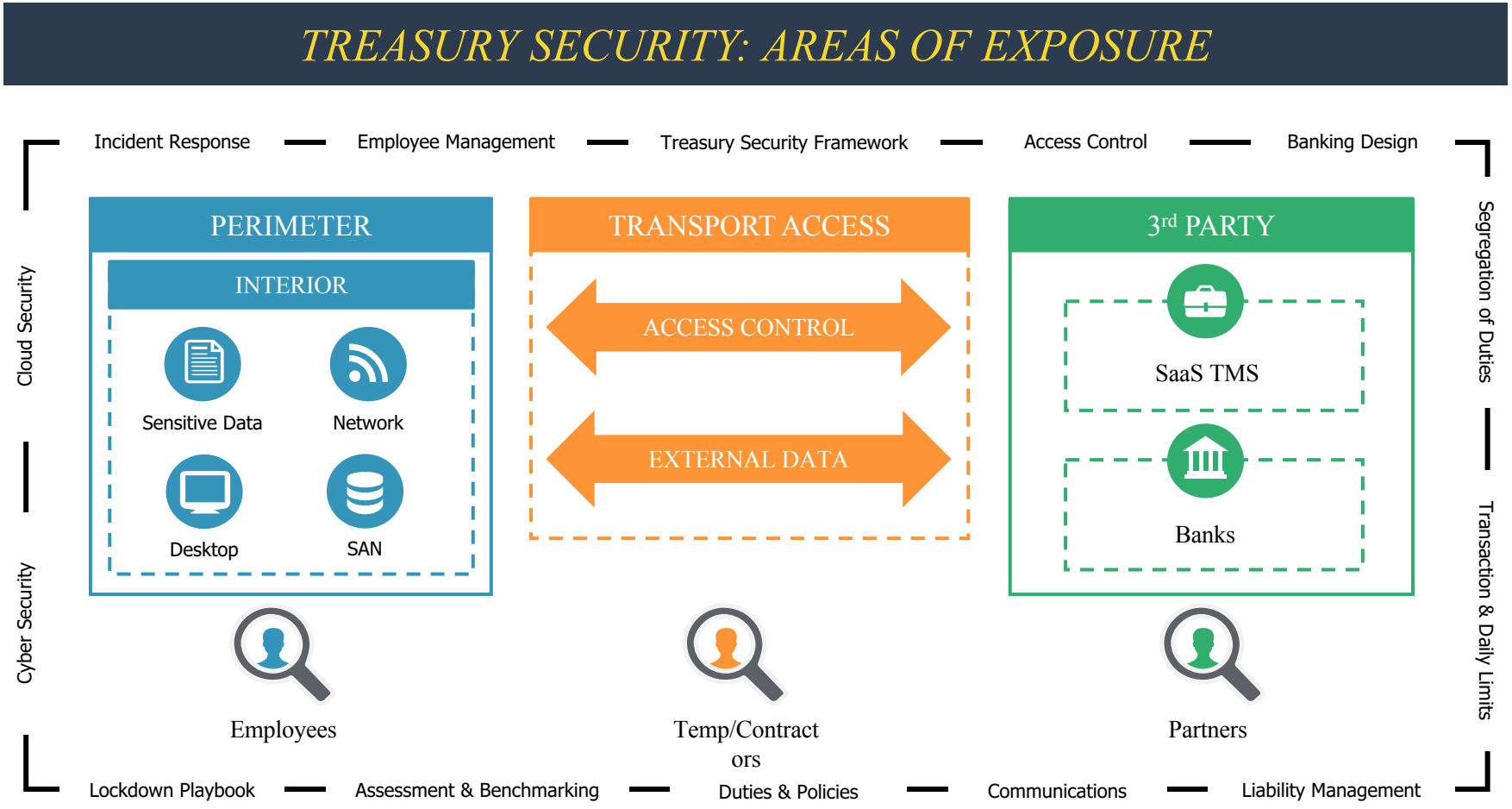
In 2016, over 1/3 of respondents identified their corporation's employee roster (current + former) as a source of fraud for their firm. 59% of firms also claimed non-EE as a source and 11% claimed unknown and/or other sources as well.

From Whom Did You Experience Fraud? (2017)

2017 data saw a dramatic rise in external fraud levels, as well as a large decrease in internal fraud experience. 81% of firms indicated that external non-employees were behind the attempts made against them, while current/former employees were only responsible for 17% of attempts.

Survey data from Strategic Treasurer's Annual **Treasury Fraud & Control Survey** (2016, 2017). Underwritten by Bottomline Technology

Areas in Need of Security



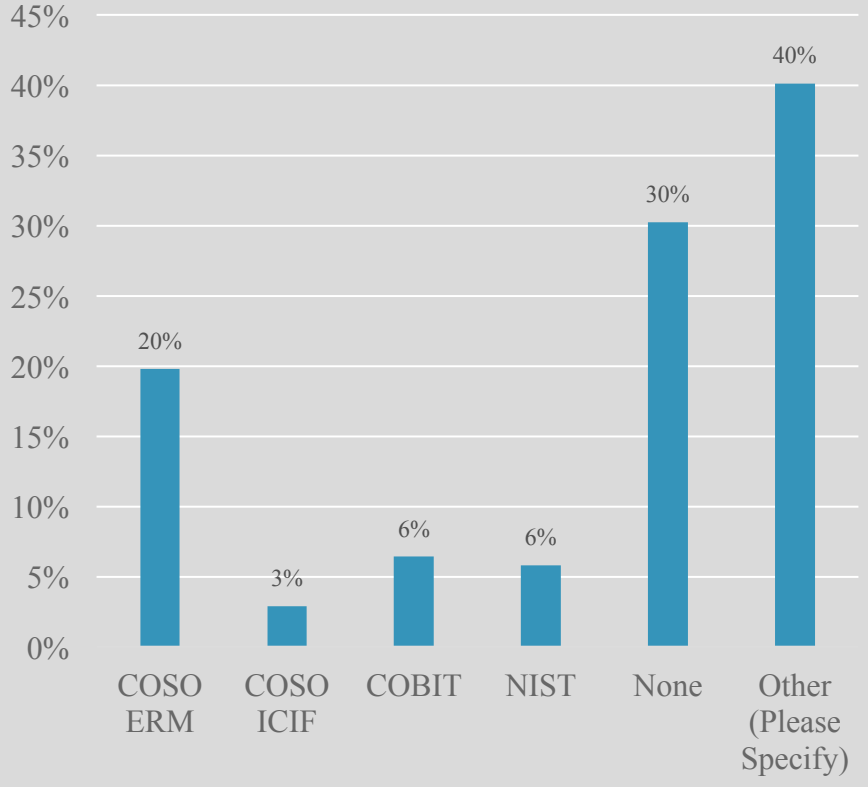
Layers of Security: Account Access & Control

- Bank Account Structural Design
- BAM System & Centralized Process
- SSO/SAML 2.0 for users/ signers who leave
- Bank Account Structural Design
- Account level controls
- Transaction level controls
- Limits
- Dual Authorization
- Out of Band (OOB) confirmation
- Resources
- EE Background Training

Layers of Security: System Access & Control

- Protect Against:
  - Key loggers | Spyware | Trojans
- Firewall/AV/Access Reporting & Monitoring
- System change management / Activity Monitoring
- Restricted IP Address
- Virtual Private Network (VPN)
- Password Complexity
- Password Change Frequency
- Keyboard / Screen Entry
- Validation (Token, etc.)
- Free Wifi
- Training

Control Framework, Type of Reconciliation



Reconciliation: Type & Description

Bank Reconciliation
The reconciliation, or comparison through resolution, of the bank statement activity to the cash books of the firm. AKA Bank-to-Book Reconciliation

GL Reconciliation
The reconciliation, or validation of the match, between the sub-ledger accounts and the control accounts on the general ledger.

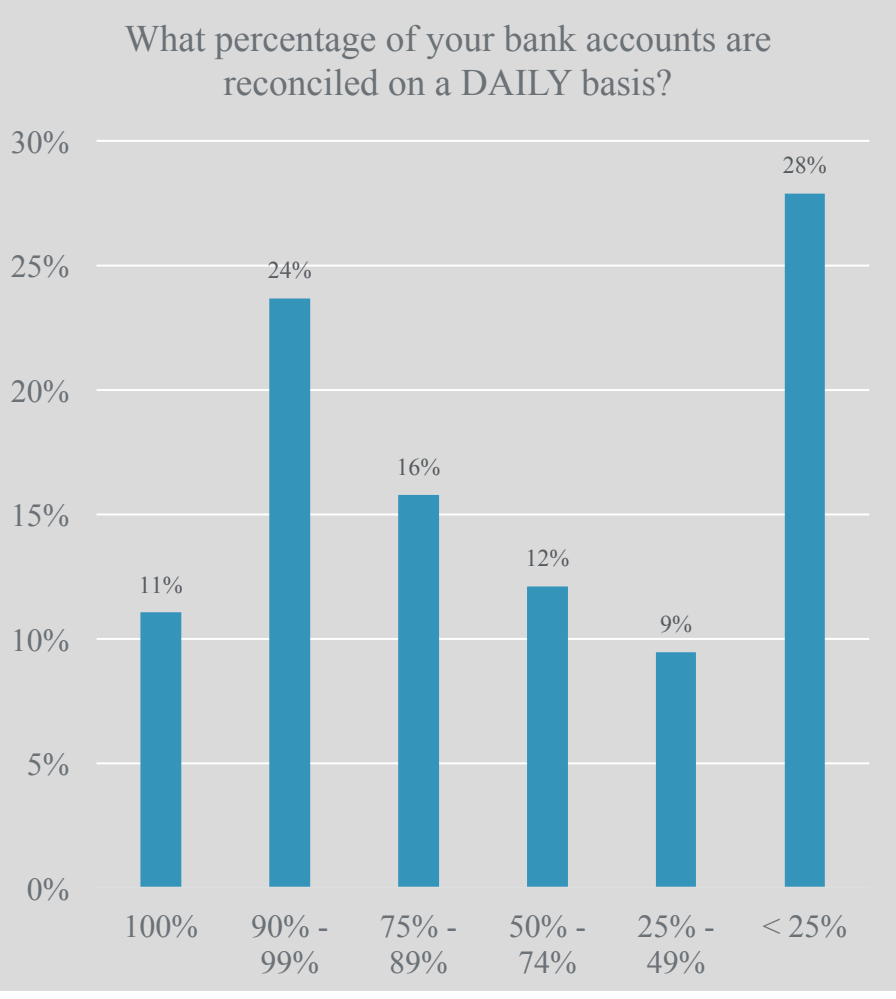
Treasury Proof
The process of validating material differences between what was expected from the prior day's cash positioning activity with the reality of what was in the account at the start of the day.

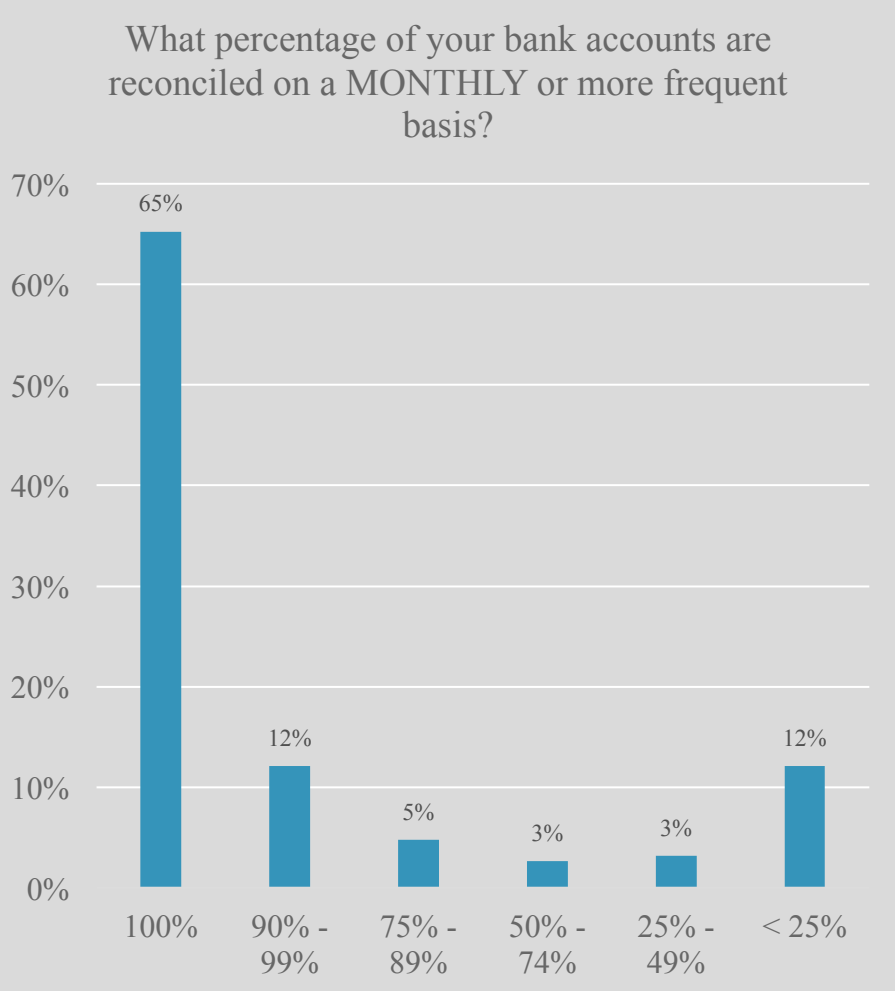
File Control
The reconciliation, or comparison, includes various processes that systematically confirms that there is file integrity. This can include various comparisons including:

1. total amounts match details;
2. nothing is missing within the file;
3. nothing is missing between the files;
4. the file is not altered.

Survey data from Strategic Treasurer's Annual **Treasury Fraud & Control Survey** (2016, 2017). Underwritten by Bottomline Technology

Reconciliation





Survey data from Strategic Treasurer's Annual **Treasury Fraud & Control Survey** (2016, 2017). Underwritten by Bottomline Technology

Client Need: Treasury Security Framework

FOUR *of* TREASURY SECURITY PILLARS

1. ASSESS & ARCHITECT
   - Greater Awareness
2. PREPARE & PREVENT
   - Stronger Defense Posture
3. MANAGE & MAINTAIN
   - Ongoing Training
   - Testing
4. RESPOND & RECOVER
   - Reporting
   - Response (Fast, Appropriate, Lockdown)
   - Rework (Restore to New Operating Model)

Questions You Might Want Answered

- What areas are weak, acceptable, strong?
- What layers exist? Are needed?
- How well do we know what other internally are doing?
- How well do we know what other are externally doing?

Action Items

1. Create: Treasury Security Framework
2. Perform: Fraud/Security Assessments, Review Layers
3. Compare: Benchmark Key Areas
4. Communicate: Treasury Security Framework
5. Calibrate: the proper level of response
6. **Train**: Find opportunities to have regular training.

Additional Resources

Download your FREE COPY of the Infographic and Results Report from the 2017 Global Treasury Fraud & Controls Survey conducted by Strategic Treasurer & underwritten by Bottomline Technologies at the address below.

StrategicTreasurer.com/
2017-Treasury-Fraud-Controls

For more information on Treasury Security and related topics, join our Treasury Security Group on LinkedIn and participate in the ongoing conversation. You can also subscribe to our YouTube Channel for video updates and follow us on Twitter: @StratTreasurer.

Contact Information

Strategic Treasurer was founded in 2004 by Craig Jeffery, a financial expert and trusted advisor to executive treasury teams since the early 1980's. Partners and associates of Strategic Treasurer span the US, the UK, and continental Europe.

This team of experienced treasury specialists are widely recognized and respected leaders in treasury and risk management technology consulting. Known for their expertise in treasury technology, risk management, and working capital as well as other cash management and banking issues, they efficiently identify issues, creatively explore ideas and options, and provide effective solutions and implementations for their valued clients.

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