

FAILURES & WHITE



SPACES IN FINANCIAL
SERVICES

TEST AUTOMATION TOOLS

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Why QA in Finance Needs Special Attention








Emphasize why financial services (banking, fintech, insurance, trading) have higher-than-average Quality Assurance needs compared to other industries.

Core Drivers

-  Regulatory Compliance (PCI-DSS, GDPR, SOC2, PSD2)
-  Hybrid Tech Stack: COBOL + APIs + Web + Mobile
-  Zero-Downtime Releases: 24/7 critical systems
-  Audit Expectations: Tamper-proof, traceable logs
-  Complex Flows: KYC, OTP, trading, cross-border



Risks If Not Addressed

-  Compliance Fines (e.g., €6M GDPR violations)
-  Losses from Transaction Failures or Delays
-  Reputational Risk from Banking App Outages
-  Breaches Due to Poor Authentication Testing
-  Flaky tests = False Confidence in Releases

Failures in Real Finance Scenarios

- ✗ No secure offline/on-prem runner without license
- ✗ Flaky with 500+ banking flows (crashes, memory bloat)
- ✗ Weak logs: fails PCI-DSS audit expectations
- ✗ Can't handle OTP, CAPTCHA, or secure iFrames (e.g., Stripe)
- ✗ Groovy-only scripting blocks integration with Python/COBOL teams

Example:

“**Katalon** failed to detect the CVC field inside a Stripe payment iFrame – breaking a core payment flow in fintech.”

White Spaces in Finance Testing

- ✚ No native COBOL/mainframe support
- ✚ Not scalable for CI/CD due to license lock (KRE/TestOps)
- ✚ No audit-grade explainable logging or test forensics
- ✚ Poor support for multi-step secure flows (e.g., KYC, MFA)

“Good for web/API basics — but cracks under fintech complexity.”

— QA Lead, Fintech Case Study

Key Failures in Finance Use Cases

- ✗ Cloud-first tool: complex or risky in air-gapped banks
- ✗ AI-based test healing = black-box (non-auditable)
- ✗ No native support for desktop apps (Swing, Java terminals)
- ✗ Agent model fails in segregated networks
- ✗ No local debugging: hard to triage production test failures

📌 **Example:**
“Agent failed to execute tests in a segregated core banking network — blocking validations for KYC workflow.”

White Spaces in Finance Testing

- 🧩 No explainable test trail for auditors (AML/PCI needs)
- 🧩 Can't simulate offline or biometric-based KYC steps
- 🧩 Weak support for COBOL portals or terminal-based flows
- 🧩 Not resilient in high-security environments with no internet

“**ACCELQ's** intelligence is powerful — but not trustworthy for audit logs.”

Key Failures in Finance

- ✗ No on-prem or offline deployment support
- ✗ AI/NLP-based test logic = black-box (not explainable)
- ✗ Fails on CAPTCHA, biometrics, native browser dialogs
- ✗ Visual testing skips Canvas, PDF, multi-tab elements
- ✗ VM delays disrupt latency-sensitive CI/CD (e.g., trading apps)

! **Example:**
“Skipped candlestick chart validations on a trading dashboard — due to canvas rendering not being captured by Functionize.”

White Spaces in Financial QA

- ✚ Incompatible with compliance auditing (no trail or trace)
- ✚ Cannot simulate secure KYC/payment flows (e.g., 3D Secure)
- ✚ Poor fit for regulated zones needing execution control
- ✚ No fallback for critical banking UI components (e.g., native dialogs)

“Fast for web testing, but **Functionize** misses the details that finance depends on.”

Key Failures in Finance

- ✗ High cost (\$15K–\$20K+/seat/year) blocks small QA teams
- ✗ Windows-only agents (no Linux/Mac/CI runners)
- ✗ Large memory footprint → sluggish test suites
- ✗ Steep learning curve for modular/risk-based logic
- ✗ Lacks test data masking and log control for PCI workflows

! **Example:**
“Tosca suite broke post-Windows update; re-validating entire model repo took days — delaying release.”











White Spaces in Financial QA

- ✚ No flexible licensing for CI/CD or distributed teams
- ✚ No real-time dashboards for audits or traceability
- ✚ Poor agility for fast-release fintech cycles
- ✚ Incompatible with modern stacks (Node, Python microservices)

“**Tosca** has power—but fintechs need speed, flexibility, and affordability.”

Shared Gaps Across All Tools in Finance QA



 Security & Isolation	➔	 No true offline / air-gapped execution (ACCELO, Functionize)
 Audit Readiness	➔	 AI-based tests lack explainability (Functionize, ACCELO)
 Cost & CI/CD Scaling	➔	 License limits block scale in CI (Katalon, Tosca)
 Stack Flexibility	➔	 No unified support for mixed tech (COBOL + React + DB + API)
 Observability & Logs	➔	 No audit-grade logs or runtime test forensics

“All four tools show promise—but none yet meet the full-stack, secure, compliant needs of BFSI out-of-the-box.”

Solution Blueprints – What QA Tools Must Add





✓ Enhancement	📌 Description	🏛️ Financial Use Case
Built-in OTP / MFA / Biometric Simulation	Simulate SMS OTP, 2FA, Face ID, fingerprint	Payment flows, login, KYC authentication
On-Prem / Air-Gapped Deployment Modes	Full test execution without internet; local runners	Core banking in secure, isolated environments
Explainable, Immutable Audit Logs	Time-stamped, role-tracked, versioned execution trails	PCI-DSS, GDPR, AML compliance & internal audits
Legacy + Modern Tech Stack Support	COBOL, 3270, REST, Kafka, React, SAP — all unified	End-to-end testing across legacy & new systems
CI/CD-Friendly Licensing	No per-seat/runtime blockers; unlimited parallelism	24×7 test automation pipelines in fintech
Streaming-Aware, Real-Time Simulation	Support for live feeds, price updates, latency-sensitive UIs	Trading platforms, market dashboards
AML/KYC/GDPR Compliance Modules	Prebuilt plugins for fraud detection, consent capture, KYC flows	Faster compliance testing without custom scripting

“To succeed in finance, test tools must become secure, explainable, and stack-agnostic by design.”


Case Snapshots: When Testing Tools Broke in Finance



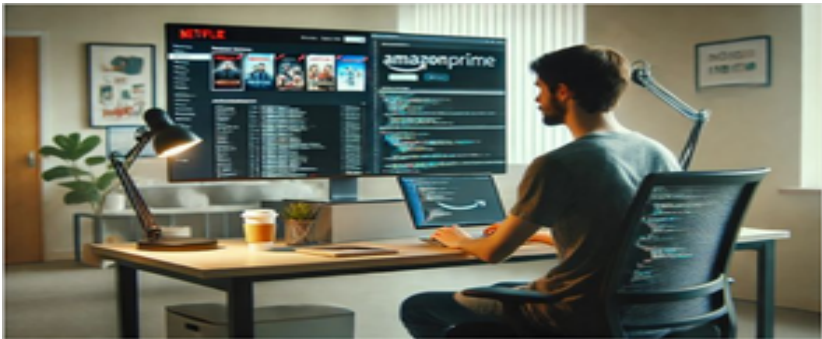
 Tool	 Real-World Failure Observed
Katalon	✗ Could not detect credit card fields inside Stripe's secure iframe , breaking checkout flow
ACCELQ	✗ Agent failed in segregated bank network , blocking batch KYC validations
Functionize	✗ Skipped candlestick charts in trading dashboard due to unsupported Canvas rendering
Tosca	✗ Entire test repo broke after Windows patch , required full revalidation , delaying release

Even top-tier tools failed under real financial conditions. Can your QA afford that risk?

Case Studies & QA Examples



Automation Testing of Payment Transactions- Case Study
Automation Testing of Payment Transactions - Testvox devised an innovative solution using Webdriver I/O and other latest technologies.
Testvox

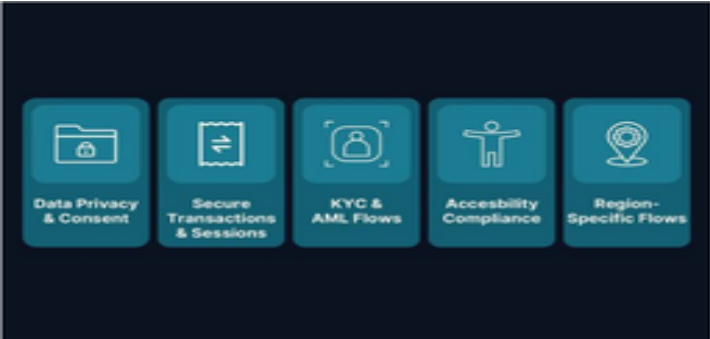


Automated Testing for Real-Time Streaming Applications
Discover the challenges, strategies, and best practices for automated testing in real-time streaming applications, ensuring scalability and low latency.
testRigor AI-Based Automated Testing Tool / Jan 3



Fintech QA Challenges

Fintech Challenges & How to Overcome Them
Discover some of the most common challenges when testing fintech apps and how to overcome them with BitBar and VisualTest.
smartbear.com



Automated Compliance Testing for Banks: A CXO's Guide
Discover how automated compliance testing helps banks stay audit-ready, reduce regulatory risks, and accelerate digital transformation with continuous, error-free monitoring.
Pcloudy / May 26




Security & Compliance Blogs



Hiding Sensitive Data during Selenium Tests
Preventing sensitive data from being exposed with Selenium WebDriver.
TestingBot



The Rise of On-Prem Device Labs for Banks in App Testing
Discover how on-prem device labs help banks secure data and test apps for performance, control, and a better user experience.
headspin.io




Quality Assurance Is Critical For Compliance in Fintech
Quality assurance helps identify and prevent compliance issues before they impact users, as well as provides the documentation and evidence necessary to demonstrate regulatory adherence.
AspirTech /

Community Reviews



Tricentis Tosca Overview
Tricentis TOSCA Overview: Key Pros and Cons | H2K Infosys Blog
Explore this in-depth Tricentis TOSCA Overview covering key pros, cons, features, and real-world uses to help you understand its enterprise testing power.



Katalon Platform
Filter 178 reviews by the users' company size, role or industry to find out how Katalon Platform works for a business like yours.
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Thank you

“Transforming quality into trust – one test at a time.”