



The Forrester Wave™: Enterprise Fraud Management, Q1 2013

by Andras Cser, February 13, 2013

KEY TAKEAWAYS

SAS And FICO Provide EFM And Enhance Your Business Intelligence Capabilities

Today's economic environment has forced S&R professionals to consider alternatives to pure-play fraud management systems. Players in the market can now offer integrated compliance (anti-money-laundering/know your customer) and device fingerprinting as well as business intelligence capabilities.

The EFM Market Is Growing As S&R Pros Look For Cross-Channel Behavioral Profiling

The EFM market is growing because more S&R pros see EFM as a way to address their top challenges managing new and emerging fraud across their channels. This market growth is due in large part to S&R pros increasingly trusting EFM vendors to act as strategic partners that advise them on top EFM decisions.

Rule Flexibility, Real-Time Interdiction, And Visual Data Are Key Differentiators

As black box, statistical-model-only EFM solutions become outdated and less effective, improved rule authoring flexibility and versioning, real-time interdiction, and visual data representation will dictate which providers will lead the pack. Vendors providing these capabilities position themselves to deliver fast ROI and effective, proactive EFM.



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The Eight Providers That Matter Most And How They Stack Up

by [Andras Cser](#)

with [Stephanie Balaouras](#) and Elizabeth Langer

WHY READ THIS REPORT

In Forrester's 15-criteria evaluation of enterprise fraud management vendors, we identified the eight most significant vendors in the category — 41st Parameter, ACI Worldwide, CA Technologies, CyberSource, FICO, FIS, NICE Actimize, and SAS — and researched, analyzed, and scored them. To help security and risk (S&R) professionals select the right partner for their fraud management initiatives, this report details our findings about how well the vendors fulfill our criteria and where they stand in relation to each other.

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Forrester conducted demonstration-based product evaluations in October and November 2012 and interviewed eight vendor and user companies: 41st Parameter, ACI Worldwide, CA Technologies, CyberSource, FICO, FIS, NICE Actimize, and SAS.

Related Research Documents

[Prevent Insurance Crime With The Four Cornerstones Of Better Fraud Management](#)
December 6, 2012

[Mobile Authentication: Is This My App? Is This My User?](#)
December 5, 2012

[Identity And Access Management: 2012 Budget And Planning Guide](#)
December 15, 2011

[Enterprise Fraud Management Predictions: 2011 And Beyond](#)
December 8, 2010

S&R PROS NEED EFM SOLUTIONS TO COMBAT BALLOONING FRAUD COSTS

Forrester has seen a dramatic increase in enterprise fraud management (EFM) solutions during the past several years; it's become clear that current approaches can't keep up with the volume of fraudulent activity or creativity of the fraudsters. Business owners are weary of heavy-handed antifraud practices, and fraud budgets are ballooning; Forrester estimates that fraud management budgets increased 10% to 15% in 2012. Why the increase? Because fraud teams:

- **Are desperate to stem staggering fraud losses.** Forrester estimates that globally, merchants are paying between \$200 billion and \$250 billion in fraud losses annually, while banks and financial services organizations are losing between \$12 billion and \$15 billion annually.¹
- **Struggle to balance tougher antifraud efforts with customer experience.** Online retailers, insurance companies, banks, and other providers that offer services to customers face a brutal reality, a Catch-22: If they stop more transactions that are suspicious in an attempt to reduce fraud losses, they anger customers trying to complete legitimate transactions, who will go elsewhere. If they do nothing, they guarantee an increase in fraud but will have fewer unhappy customers. At all the companies Forrester interviews, fraud management and marketing departments constantly battle over this balance.
- **Have hired more and more fraud analysts to keep up with the volume of fraudulent activity.** As fraud increased, fraud teams reacted by hiring more and more analysts. Unfortunately, hiring more fraud analysts has not been enough. False positive rates of 50 to 1 (50 outsourced cases for one real fraudulent case) are fairly poor and an artifact of the past.

EFM Solutions Provide More Effective, Reliable, And Automated Fraud Identification

To stop fraud without compromising customer experience or hiring large numbers of fraud analysts, fraud teams need more effective, reliable, and automated processes to sort out suspicious transactions. Today's EFM solutions have a number of innovative and emerging capabilities, including:

- **Behavioral modeling that helps fraud teams detect anomalies from “good behaviors.”** Creating analytical models and rules for emerging fraudulent activities isn't just difficult, it's downright impossible. Forrester's clients say that they can't keep up with creating rules for new patterns of fraud. Because of this, understanding how a user and his peer group behave under normal (nonfraudulent) and abnormal (fraudulent) circumstances is critical to detect anomalies from past behaviors. Every vendor evaluated in this Wave has at least plans to model good and bad behaviors to augment their existing analytical and rules-based risk models.
- **Use cases and essential functionality that fraud teams from many industries can use.** Fraud management and accompanying solutions have traditionally been vertical-specific. However, we have observed that most vendors in the EFM space have an install base that spans multiple

verticals, such as banking, insurance, retailer, and healthcare. Vendors base their solutions on the following common use cases: 1) application, account origination, registration; 2) account maintenance, profile changes; and 3) payment and other high-risk transactions. A versatile solution needs to provide robust fraud management for all of these use cases for all verticals.

- **Contextual information from mobile apps and other channels that improve fraud detection.** Simply looking at transactions without client-side context yields poor fraud management results: The more geospatial and velocity information the solution can capture at transaction origination, the more effective fraud management will be. All vendors included in this Wave have plans to enhance detection of mobile- and/or telephone-based context for transactions to manage fraud better by using SDKs and APIs.
- **Real-time decision-making and interdiction capabilities to stop fraud before it happens.** The argument about whether it's worthwhile to use real-time fraud management techniques is over: To preventively and proactively fight fraud before it causes financial losses, companies are using real-time interdiction capabilities wherever they can. Such capabilities require typical raw response times under 200 milliseconds. Vendors have been looking at revamping their solutions (hosted or on-premises) to be able to provide real-time decision-making. Forrester expects that longer term, solution providers will also need to provide real-time model updates and model selection and refinement.
- **Social network and link analysis to expose and break up complex fraud rings.** To understand how good (nonfraudulent) and bad (fraudulent) transactions are related to one another and to find fraud rings and collusions, which is especially important with employee fraud management, vendors are offering tabular sorting and searching of transactions. Most vendors already offer or plan to develop visual tools for link analysis.
- **Hosted and SaaS delivery options to reduce ongoing maintenance.** Because of increased reliance on easily available shared fraud data, such as whitelists, blacklists, and model templates, even traditional vendors such as ACI and FICO offer SaaS-based delivery for their solutions.

EFM MARKET EVALUATION OVERVIEW

To assess the state of the enterprise fraud management market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top enterprise fraud management vendors.

Evaluation Criteria Focus On Advanced Capabilities, Strategy, And Market Presence

After examining past research, user need assessments, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria. We evaluated vendors against 15 criteria, which we grouped into three high-level buckets:

- **Current offering.** We looked at how the solution allows for the definition of users and rules, how statistical models work, and how the solution allows for real-time interdiction and fraud prevention. We also looked at how the solution supports visual link analytics to detect fraud rings and collusion. We evaluated integration capabilities of the solution with third-party systems and case management of outsourced transactions for fraud analysts.
- **Strategy.** We investigated the level of differentiation in the vendor's current features and future plans, sized up the vendor's staffing strength (number of people developing and selling the solution), and listened to the vendor's customers to gauge customer satisfaction. We also examined the partner ecosystem and pricing and delivery models of the solution. Finally, we looked at the vendor's financial viability given revenues and profitability.
- **Market presence.** We sized the vendor's market presence bubble based on current number of customers, growth of the install base, strength of the customer advocacy group, and number of transactions the vendor processes. Finally, we considered the number of verticals and geographies where the vendor has a significant footprint.

Evaluated Vendors Have Solid Revenues, Cross-Channel EFM, And Other Functionality

Forrester included eight vendors in the assessment: 41st Parameter, ACI Worldwide, CA Technologies, CyberSource, Fair Isaac Corporation (FICO), FIS, NICE Actimize, and SAS. Each of these vendors has (see Figure 1):

- **At least \$10 million in annual subscription and product license revenues.** Included vendors had at least \$10 million in annual subscription and product license revenues on or before June 30, 2012.
- **Demonstrated capabilities for effective, cross-channel fraud management.** Included vendors had demonstrated, effective, cross-channel fraud management capabilities that span account origination, account maintenance, and payment transactions performed via such cross-channels as online, phone, point of sale, and kiosks.
- **Transactional fraud management capabilities and case management.** Included vendors and their solutions support fraud management based on nonauthentication transactions and have a case management system.
- **Significant mindshare with Forrester's customers.** Forrester included vendors that appear in Forrester's interactions with its clients and nonclients through inquiries, briefings, and other conversations related to fraud management.

Forrester contacted Accertify, Detica, Fiserv, and Retail Decisions and asked them to participate, but they declined.

S&R PROS HAVE A CHOICE OF SOLID VENDORS IN A COMPETITIVE MARKET

The evaluation uncovered a market in which (see Figure 2):

- **SAS and FICO lead the pack.** SAS offers significant capabilities in analytical and statistical modeling, use of big data for risk scoring and decisioning, rule editing, and visual link analytics. The solution's rule writing is customizable and extensible. SAS has market presence in the broadest spectrum of verticals. FICO offers multiple self-adjusting statistical risk models, real-time updates of profile information, a high level of protection of reports, and one of the largest install bases of all vendors in this study.
- **FIS, NICE Actimize, CA, CyberSource, ACI, and 41st Parameter are Strong Performers.** FIS offers outstanding capabilities for rule writing and case management, a differentiated overall offering for employee fraud management, and a solid set of future plans for enhancing the product. NICE Actimize offers great real-time interdiction and case management, while CA Technologies gives its customers flexible pricing and delivery options and a differentiated mobile strategy and detailed false positive reports. CyberSource has outstanding consulting services, a solid case management system, and robust real-time interdiction capabilities. ACI excels in the fields of statistical modeling, case management, and integration. 41st Parameter offers good features in case management, handling all aspects of the customer life cycle and offering support for nonfinancial services verticals.

This evaluation of the enterprise fraud management market is intended to be a starting point only. We encourage clients to view detailed product evaluations and adapt criteria weightings to fit their individual needs through the Forrester Wave Excel-based vendor comparison tool.

Figure 1 Evaluated Vendors: Product Information And Selection Criteria

Vendor	Product evaluated	Product version evaluated	Version release date
41st Parameter	FraudNet Suite	4.5	June 2012
ACI Worldwide	ACI Proactive Risk Manager	8.00	June 2011
CA Technologies	RiskMinder and eComMinder	3.0, 6.9, respectively	July 2012, March 2012, respectively
CyberSource	CyberSource Decision Manager	N/A	N/A
FICO	FICO Falcon Fraud Manager	6.2	May 2012
FIS	FIS Memento	N/A	N/A
NICE Actimize	Integrated Fraud Management Suite	4.0.1	December 2011
SAS	SAS Enterprise Fraud Management	3.2	June 2011

Vendor selection criteria

At least \$10 million in annual subscription and product license revenues. Included vendors had at least \$10 million in annual subscription and product license revenues on or before June 30, 2012.

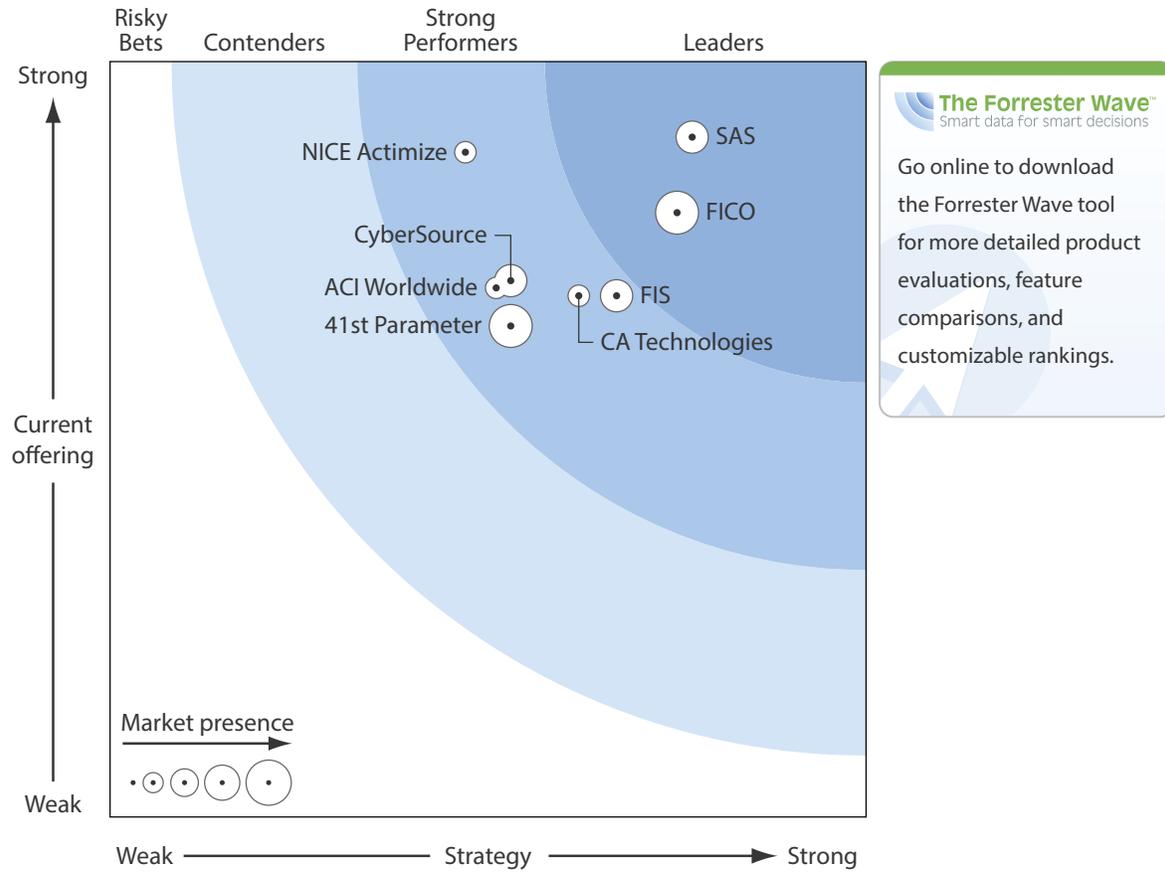
Demonstrated capabilities for effective, cross-channel fraud management. Included vendors had demonstrated, effective, cross-channel fraud management capabilities that span account origination, account maintenance, and payment transactions performed via such cross-channels as online, phone, point of sale, and kiosks.

Transactional fraud management capabilities and case management. Included vendors and their solutions support fraud management based on nonauthentication transactions and have a case management system.

Significant mindshare with Forrester's customers. Forrester included vendors that appear in Forrester's interactions with its clients and nonclients through inquiries, briefings, and other conversations related to fraud management.

Source: Forrester Research, Inc.

Figure 2 Forrester Wave™: Enterprise Fraud Management, Q1 2013



Source: Forrester Research, Inc.

Figure 2 Forrester Wave™: Enterprise Fraud Management, Q1 2013 (Cont.)

	Forrester's Weighting	41st Parameter	ACI Worldwide	CA Technologies	CyberSource	FICO	FIS	NICE Actimize	SAS
CURRENT OFFERING	50%	3.25	3.50	3.45	3.55	4.00	3.45	4.40	4.50
Users and rules	20%	4.00	3.00	4.00	3.00	4.00	4.00	5.00	5.00
Statistical models	15%	0.00	5.00	5.00	3.00	4.00	5.00	4.00	5.00
Real-time interdiction and channels	15%	5.00	3.00	5.00	5.00	5.00	2.00	5.00	5.00
Link analytics and localization	15%	3.00	2.00	2.00	3.00	3.00	1.00	4.00	4.00
Case management and reporting	20%	4.00	4.00	2.00	5.00	4.00	5.00	5.00	4.00
Prebuilt integration and compliance standards support	15%	3.00	4.00	3.00	2.00	4.00	3.00	3.00	4.00
STRATEGY	50%	2.65	2.55	3.10	2.65	3.75	3.35	2.35	3.85
Differentiating and unique features of the solution	10%	4.00	2.00	4.00	2.00	3.00	5.00	1.00	3.00
Vendor staffing	10%	1.00	1.00	2.00	2.00	3.00	2.00	2.00	5.00
Future plans	10%	3.00	4.00	4.00	4.00	5.00	4.00	5.00	5.00
Customer satisfaction	10%	4.00	0.00	3.00	3.00	2.00	3.00	0.00	3.00
Partners	10%	2.00	1.00	3.00	3.00	2.00	2.00	3.00	5.00
Delivery and solution pricing models	25%	4.00	4.00	4.00	2.00	5.00	4.00	3.00	3.00
Financials and stability	25%	1.00	3.00	2.00	3.00	4.00	3.00	2.00	4.00
MARKET PRESENCE	0%	4.50	3.00	2.50	3.50	4.50	3.50	2.50	4.00
Installed base	50%	4.00	2.00	2.00	3.00	4.00	4.00	2.00	3.00
Verticals	50%	5.00	4.00	3.00	4.00	5.00	3.00	3.00	5.00

All scores are based on a scale of 0 (weak) to 5 (strong).

Source: Forrester Research, Inc.

VENDOR PROFILES

Leaders

- SAS provides a strong overall offering with the best visual link analytics capabilities.** SAS's solution is a strong offering overall, with extensive feature sets for user management and rules programming, multiple and extensible statistical models, and advanced visual social network analysis with a time slider to allow fraud managers to investigate evolution of fraud rings. The solution offers great case management, extensive reporting, and data analytics based on SAS's own ecosystem. Because SAS is not a public company, it is free to innovate, which is evidenced in its data analytics and mobile-device-based user interface and dashboard and reporting

capabilities. Out of the large fraud management vendors, SAS has the broadest presence in nonfinancial services verticals such as insurance, government, and retail. Although the solution can require SAS knowledge and deep analytical and programming skills and does not offer transaction-based pricing models, it is a true power tool.

- **Veteran fraud management company FICO lives up to its reputation.** FICO is one of the most long-standing fraud management companies; its product provides robust real-time, cross-channel interdiction and easy configuration of case management fields. It offers easy alert aggregation as well as integration with third-party reporting and analytical solutions using a published database schema. The company has a differentiated mobile and cloud partnering and extensive behavioral analytics strategy. FICO has a large vertical footprint in financial services/banking, insurance, retail, government, and telecom verticals. FICO does not expose easy, business-user-friendly, configurable risk score modification in rules; it only provides minimal user configuration of statistical models and lacks a GUI workflow designer for case management.

Strong Performers

- **FIS's acquisition of Memento pays off nicely.** FIS offers robust, user-selectable statistical models, user configuration and tuning of analytical models, and widespread features for automatic model adaptation to changing fraud conditions. The solution provides proven cross-channel fraud management capabilities and one of the best case management systems with easy customization, a GUI-based workflow designer, and visually pleasing and easy-to-use dashboards. The solution demonstrated ROI typically in less than 60 days and lets analysts and fraud managers quickly detect model effectiveness erosion by showing lift curves out of the box. The solution does not provide extensive rule versioning capabilities, visual link analytics display, or real-time interdiction today (it is planned).
- **NICE Actimize built in real-time interdiction from the start.** NICE Actimize has one of the strongest and most well-rounded offerings in our evaluation. The product has great rules support with full rule versioning, infrequent statistical model updates, visual link analytics, and built-in cross-channel, real-time interdiction (a core feature of the product since its inception). Case management offers easy-to-use interfaces, an extensive and integrated GUI workflow designer, easy aggregation of alerts into cases, and beautiful dashboards. The firm's strategy is not as clear as those of the Leaders in this study. Customers we interviewed reported only moderate satisfaction and implementation times of more than 180 days. Some customers are concerned about the small install base of the solution.
- **CA Technologies excels in 3D secure implementation and robust statistical models.** CA's solutions have also been deployed for other use cases such as ATM/POS, bill pay/third-party money transfer, and multichannel payments. CA's solution offers multiple statistical models, user configuration based on profile variables of the statistical model, widespread features for automatic

model adaptation to changing fraud conditions, and solid real-time analytics. The company has a broad partner ecosystem for fraud management and a strong internal professional services unit for implementation. While ROI-based pricing is lacking, the solution supports full and hierarchical multitenancy, transaction-based pricing and offers it as both a SaaS and an on-premises solution. The solution lacks comprehensive link analytics, a broadly functional case management system, and easy customization of case management fields and dashboards.

■ **CyberSource offers fraud management for retailers and eCommerce companies.**

CyberSource's solution offers good real-time analytics, implicit link analytics and rejected and reviewed transactions influencing future transactions' risk scores, and integration out of the box with third-party data sources. The vendor has future plans for fraud management on mobile devices, cloud partnering, and providing business intelligence based on fraud. The solution lacks market presence in the banking vertical, and free-form, arbitrary programming logic in rules requires frequent model updates by CyberSource and lacks automatic adaptation to changing fraud and GUI-based link analytics. Case management is somewhat weaker than other vendors' case management systems, without a workflow designer (but with some workflow capabilities) and fields that are not easily customizable.

■ **ACI Worldwide primarily offers credit card transaction EFM based on analytics.** ACI's solution offers multiple user configurable, self-learning statistical models and publishes its database schemas, web services, and API for integration with third-party systems and has integration with third-party reporting systems. It is lacking in user configurable rule outcomes, visual link analytics, easily configurable case management fields, and customer satisfaction.

■ **41st Parameter shows quick ROI, great device fingerprinting, lacks built-in statistical models.** 41st Parameter offers a full implementation of all use cases (account origination, account management, and payments) and extensive in-house-developed device fingerprinting and has a large, satisfied customer install base with significant presence in banking and nonbanking (retail and travel) verticals. However, the solution offers no rule versioning, no statistical and analytical model, and no on-premises licensing. It has API call-based real time capabilities only. Customers are rightfully concerned about the small company size, as the vendor is not profitable and lacks an on-premises solution. The solution has no GUI for link analytics, no workflow designer for case management, no exposed database schemas.

SUPPLEMENTAL MATERIAL

Online Resource

The online version of Figure 2 is an Excel-based vendor comparison tool that provides detailed product evaluations and customizable rankings.

Data Sources Used In This Forrester Wave

Forrester used a combination of the following data sources to assess the strengths and weaknesses of each solution:

- **Hands-on lab evaluations.** Vendors spent one day with a team of analysts who performed a hands-on evaluation of the product using a scenario-based testing methodology. We evaluated each product using the same scenario(s), creating a level playing field by evaluating every product on the same criteria.
- **Vendor surveys.** Forrester surveyed vendors on their capabilities as they relate to the evaluation criteria. Once we analyzed the completed vendor surveys, we conducted vendor calls where necessary to gather details of vendor qualifications.
- **Product demos.** We asked vendors to conduct demonstrations of their product's functionality. We used findings from these product demos to validate details of each vendor's product capabilities.
- **Customer reference calls.** To validate product and vendor qualifications, Forrester also conducted reference calls with two of each vendor's current customers.

The Forrester Wave Methodology

We conduct primary research to develop a list of vendors that meet our criteria to be evaluated in this market. From that initial pool of vendors, we then narrow our final list. We choose these vendors based on: 1) product fit; 2) customer success; and 3) Forrester client demand. We eliminate vendors that have limited customer references and products that don't fit the scope of our evaluation.

After examining past research, user need assessments, and vendor and expert interviews, we develop the initial evaluation criteria. To evaluate the vendors and their products against our set of criteria, we gather details of product qualifications through a combination of lab evaluations, questionnaires, demos, and/or discussions with client references. We send evaluations to the vendors for their review, and we adjust the evaluations to provide the most accurate view of vendor offerings and strategies.

We set default weightings to reflect our analysis of the needs of large user companies — and/or other scenarios as outlined in the Forrester Wave document — and then score the vendors based on a clearly defined scale. These default weightings are intended only as a starting point, and we encourage readers to adapt the weightings to fit their individual needs through the Excel-based tool. The final scores generate the graphical depiction of the market based on current offering, strategy, and market presence. Forrester intends to update vendor evaluations regularly as product capabilities and vendor strategies evolve.

ENDNOTES

- ¹ Forbes' estimate can be found on its website. Source: Haydn Shaughnessy, "Solving the \$190 billion Annual Fraud Problem: More on Jumio," Forbes, March 24, 2011 (<http://www.forbes.com/sites/haydnshaughnessy/2011/03/24/solving-the-190-billion-annual-fraud-scam-more-on-jumio/>). LexisNexis' estimate can be found on its website. Source: "U.S. Retailers Face \$191 Billion in Fraud Losses Each Year," LexisNexis press release, November 9, 2009 (<http://www.lexisnexis.com/risk/newsevents/press-release.aspx?Id=1258571377346174>).

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« SEAN RHODES, client persona representing Security & Risk Professionals

