10TH ANNUAL

2009 EDITION

ONLINE FRAUD REPORT

Online payment fraud trends, merchant practices and benchmarks

CyberSource®

Report & Survey Methodology

This report is based on a survey of U.S. and Canadian online merchants. Decision makers who participated in this survey represent a blend of small, medium and large-sized organizations based in North America. Merchant experience levels range from companies in their first year of online transactions to the largest e-retailers and digital distribution entities in the world. Merchants participating in the survey reported a total estimate of $60 billion for their 2008 online sales. Survey respondents include both non-CyberSource and CyberSource merchants.

The survey was conducted via online questionnaire by Mindwave Research. Participating organizations completed the survey between October 21st and November 11th, 2008. All participants were either responsible for or influenced decisions regarding risk management in their companies.

Summary of Participants Profiles

Online Fraud Survey Wave	2003	2004	2005	2006	2007	2008
Total number of merchants participating	333	348	404	351	318	400
Annual Online Revenue						
Less than $500K	29%	34%	50%	37%	29%	31%
$500K to Less than $10M	43%	39%	24%	30%	35%	28%
Over $10M	28%	27%	26%	33%	37%	41%
Duration of Online Selling						
Less than One Year	10%	12%	14%	11%	5%	11%
1-2 Years	19%	14%	19%	11%	13%	12%
3-4 Years	44%	30%	23%	18%	18%	13%
5 or More Years	27%	44%	45%	61%	67%	64%
Risk Management Responsibility						
Ultimately Responsible	49%	50%	60%	54%	55%	58%
Influence Decision	51%	50%	40%	46%	45%	42%

Get Tailored Views of Risk Management Pipeline™ Metrics

To obtain customized fraud management benchmarks for your company's size and industry please contact CyberSource at 1.888.330.2300 or online at www.cybersource.com/contact_us.

For additional information, whitepapers and webinars, or sales assistance:

- **Contact CyberSource: 1.888.330.2300 or www.cybersource.com/contact_us**
- **Risk Management Solutions: visit www.cybersource.com/products_and_services/risk_management/**
- **Global Payment & Security Solutions: visit www.cybersource.com/products_and_services/global_payment_services/**

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Executive Summary

Managing online fraud continues to be a significant and growing cost for merchants of all sizes. To better understand the impact of payment fraud for online merchants, CyberSource sponsors annual surveys addressing the detection, prevention and management of online fraud. This report summarizes findings from our tenth annual survey.

Overview

Over the past three years the percent of online revenues lost to payment fraud has been stable. Merchants have consistently reported an average loss of 1.4% of revenues to payment fraud. However, total dollar losses from online payment fraud in the U.S. and Canada have steadily increased during this time as eCommerce has continued to grow. In 2008, we estimate that $4 billion in online revenues were lost to payment fraud. Just two years ago, in 2006, payment fraud reached the $3 billion revenue loss milestone (see chart #1).

Key Fraud Metrics

The percent of accepted orders which are later determined to be fraudulent has also been relatively stable. In 2008 merchants reported an overall average fraudulent order rate of 1.1% in the U.S. and Canada. Over the past six years the average percent of accepted orders which turn out to be fraudulent has varied from 1.0% to 1.3%. Among industry sectors, Consumer Electronics reported the highest fraudulent order rate, averaging 2%.

The share of incoming orders merchants decline to accept due to suspicion of payment fraud was down significantly. Put more simply, merchants are accepting a higher percentage of orders. In 2008 the overall order rejection rate due to suspicion of fraud dropped to 2.9% compared to 4.2% in 2007.

As the growth of online sales has slowed during 2008, it appears merchants are now focusing even more attention on sales conversion and reducing their order rejection

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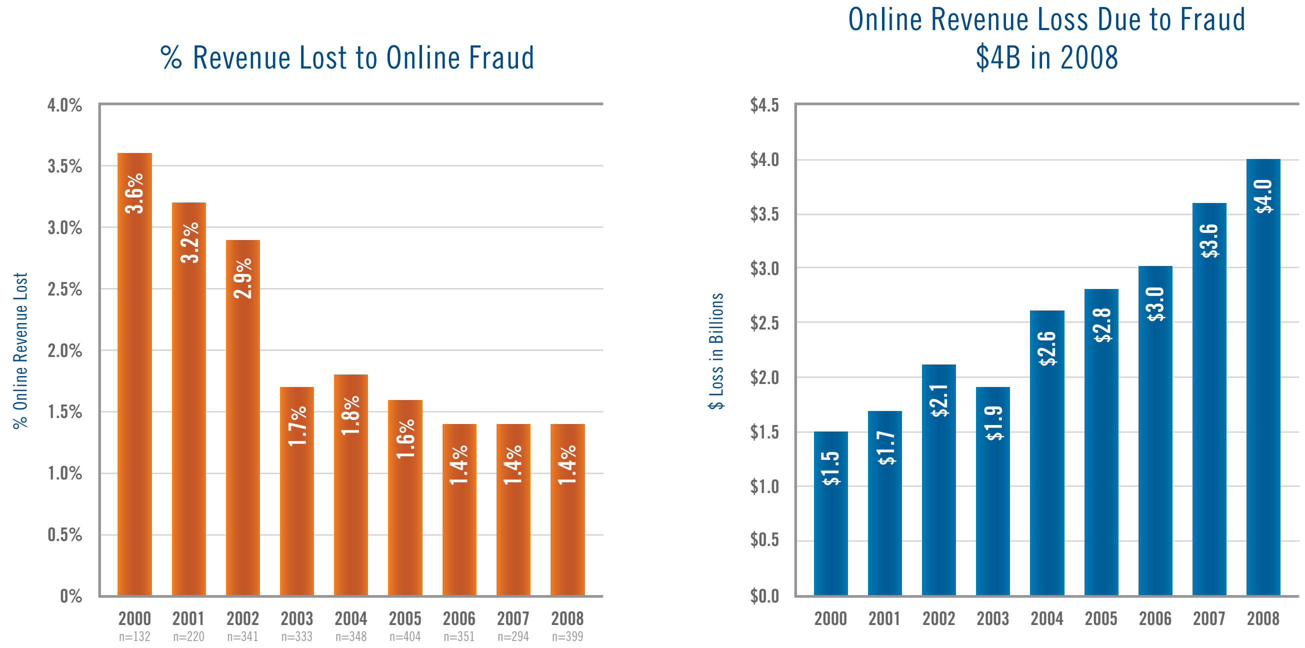


Although the rate of revenue loss due to online payment fraud was stable in 2008, total dollars lost to fraud have increased due to online sales growth.

rates due to suspicion of fraud. The survey results indicate most merchants have successfully increased their order acceptance rate with little or no increase in fraud rates. It remains to be seen if online merchants can continue to control fraud rates while increasing order acceptance in 2009.

Chargebacks Understate Fraud Loss by as Much as 50%

This year's survey again probed the percent of fraud losses accounted for by chargebacks. Overall, merchants continue to report that chargebacks accounted for less than half of fraud losses. The remainder occurred when merchants issued credit to reverse a charge in response to a consumer's claim of fraudulent account use.

International Order Risk 3½ Times Higher Than Domestic Orders

On average, merchants now say the rate of fraud associated with international orders is over three-and-one-half times as high as domestic orders. In 2008 fraud rates on international orders continued to climb, reaching an average of 4.0%, up from 2.4% in 2005. Merchants also reject international orders at a rate three-and-one-half times higher than domestic orders.

Manual Review Rates

Over the past six years the overall percent of online orders that enter manual fraud review has fluctuated between 22% and 27%, about 1 out of 4, on average. In some segments fraud risk is low enough for merchants to rely entirely on automated review, which lowers the aggregate review ratio. But most merchants do manually review orders for fraud risk and these merchants, on average, review 1 out of every 3 orders. Over the past five years merchants who engage in manual order review have maintained this average review rate. Large online merchants, who typically employ more automation, continue to have much lower manual review rates. Over the past three years large merchants ($25M+ in online sales) performing manual order review have, on average, reviewed approximately 15% of orders. Looking back over the past several years of survey data we conclude that most merchants have made little progress in reducing their reliance on manual review and are likely reviewing far more orders today than they were just a few years ago.

Efficiency Gains Required

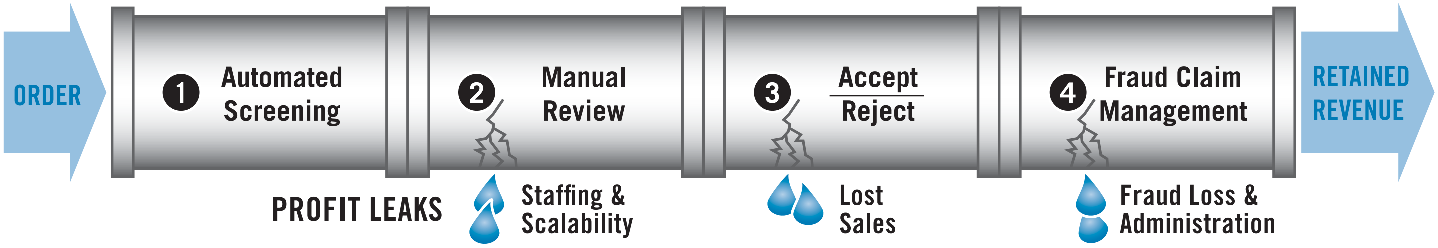
As eCommerce sales continue to grow and budgets and resources remain relatively fixed, merchants face the challenge of screening more online orders while keeping order rejection and fraud rates as low as possible to maximize sales and profits. Continued reliance on manual review presents a serious challenge to scalability. Can merchants grow their review staffing sufficiently to keep pace with fraud? Only 13% of online merchants expect to increase manual review staff in 2009. This is the lowest level of planned staff increases we have seen in the survey. At the same time, merchants reported increased interest in implementing more automated fraud detection tools, in some cases two or three times higher than last year's reporting.

Total Pipeline View

Businesses that focus solely on managing chargebacks may not be seeing the complete financial picture. Online payment fraud impacts profits from online sales in multiple ways. Besides direct revenue losses, the cost of stolen goods/services and associated delivery/fulfillment costs, there are the additional costs of rejecting valid orders, staffing manual review, administration of fraud claims, as well as challenges associated with business scalability. Merchants can gain efficiency by taking a total pipeline view of operations and costs. While the fraud rate is one metric to monitor (and contain within industry and association limits), an end-to-end view is required to arrive at the best possible financial outcome.

In 2008, these "profit leaks" in the Risk Management Pipeline™ impact as much as 40+% of orders for mid-sized merchants and as much as 19+% of orders for larger merchants—restricting profits, operating efficiency and scalability. This report details key metrics and practices at each point in the pipeline to provide you with benchmarks and, hopefully, insight. Custom views of these benchmarks and practices are available through CyberSource—see end of report for contact information.

Risk Management Pipeline



Merchants review 32% of orders, on average

51% of fraud management budget is spent on review staff costs

81% of these merchants have no plans to change manual order review staffing during 2009

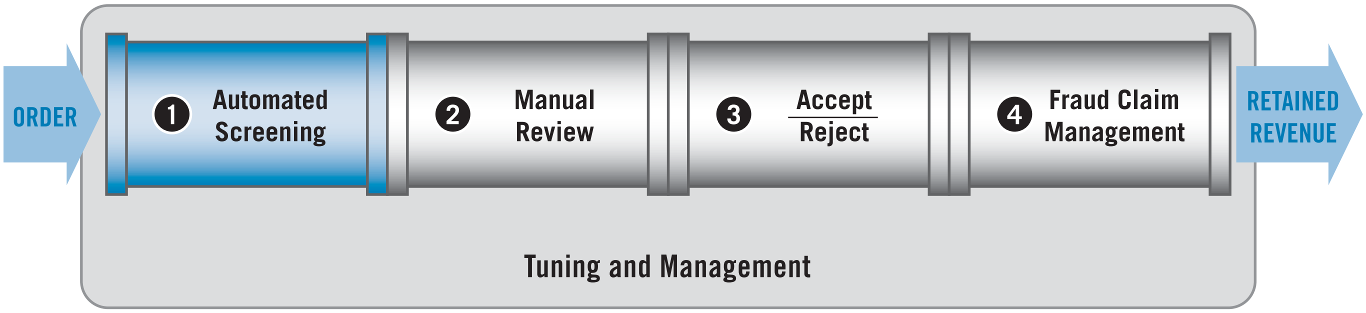
2.9% Avg. Reject Rate for US/Canadian orders (all merchants)

10.9% Avg. Reject Rate for Non-US/Canadian orders (merchants who accept these orders)

1.4% Average Fraud Loss

42% from chargebacks
58% from issued credits

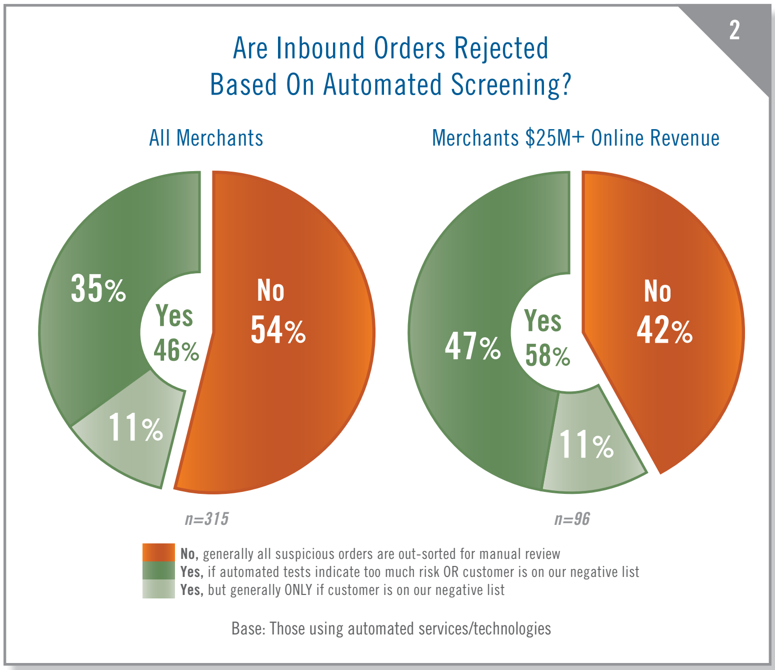
Stage 1: Automated Screening



Fraud Detection Tools Used During Automated Screening

We define detection tools as those used to identify the probability of risk associated with a transaction or to validate the identity of the purchaser. Results of tests carried out by detection tools are then interpreted by humans or rules systems to determine if a transaction should be accepted, rejected or reviewed. A wide variety of tools are available to help merchants evaluate incoming orders for potential fraud.

Merchants handling large online order volumes typically employ an initial automated order evaluation to determine if an incoming order might represent a fraud risk. Some merchants will allow this initial automated screen to cancel orders without further human intervention. 46% of all merchants cancelled some orders as a result of their automated screening process and 58% of large merchants indicated they cancelled some orders at this stage (see chart #2).



Base: Those using automated services/technologies

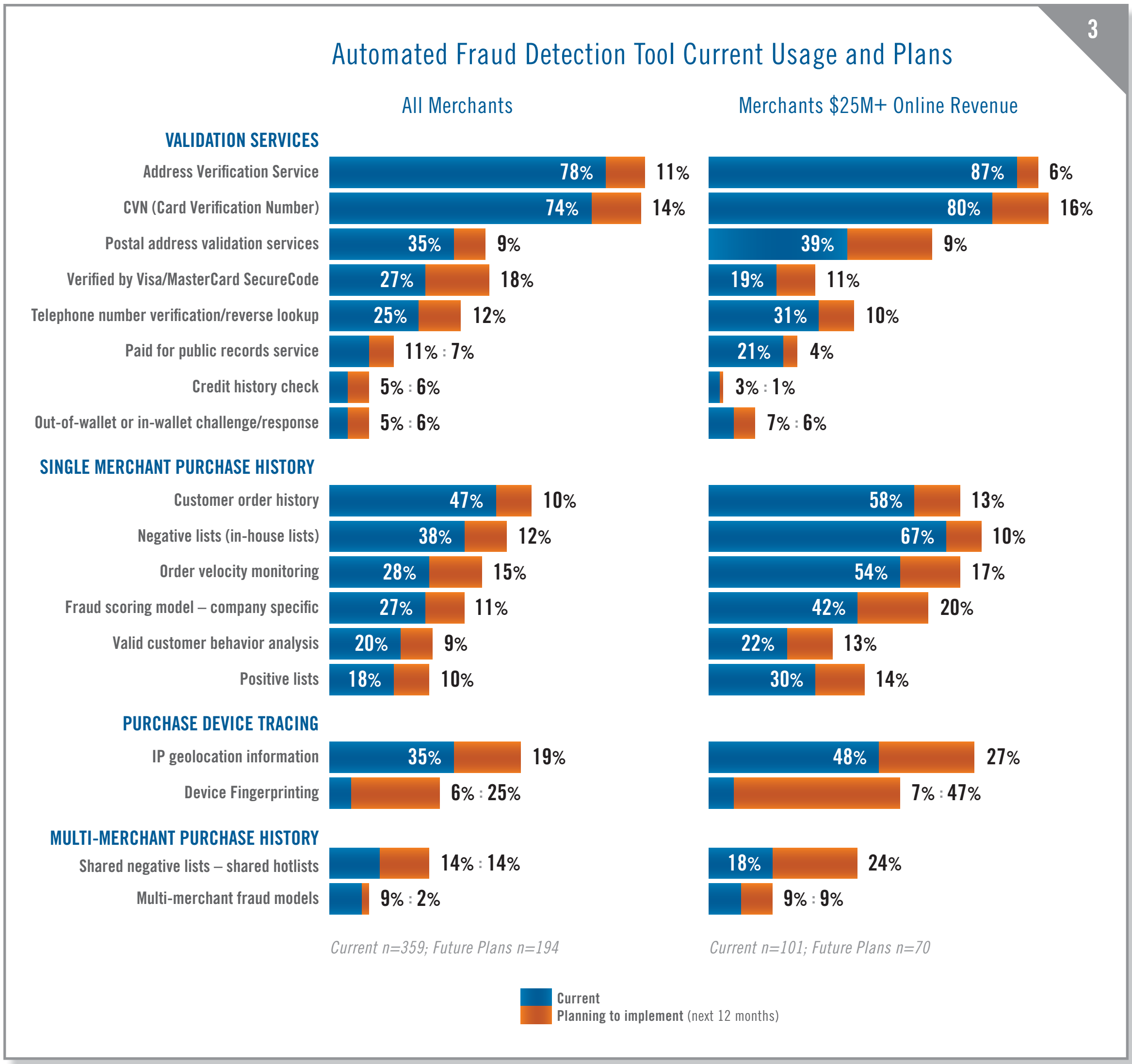
In 2008, two-thirds of merchants reported using three or more fraud detection tools for automated screening, with 4.7 tools being the average. Larger merchants dealing with higher order volumes reported using 6.3 detection tools, on average.

The most popular tools used to assess online fraud risk are shown in chart #3 which shows the current and planned adoption of different tools. Note that the tool usage profile for merchants over $25M in online sales is different than the overall average. These larger merchants generally use tools across all four dimensions of detection, and more often use their customer history and proprietary data during the automated order screening process. They have a higher use of company-specific risk scoring models, negative and positive lists, and sophisticated order velocity monitoring tools.

Overall 96% of merchants use one or more validation tools. These tools are often provided by the card associations to help authenticate cards and card holders. The tool most often mentioned by merchants is the Address Verification Service (AVS) which compares numeric address data with information on file from the cardholder's card issuing bank. AVS is generally available for US cardholders and for limited numbers of cardholders in Canada and the UK. AVS is subject to a significant rate of "false positives" which may lead to rejecting valid orders as well as missing fraudulent orders.[1] If the cardholder has a new address or a valid alternate address (such as seasonal vacation home), this information may not be reflected in the records of the cardholder's issuing bank, so the address would be flagged as invalid. Merchants typically do not rely solely on AVS to accept or reject an order.

Card Verification Number (CVN; also known as CVV2 for Visa, CVC2 for MasterCard, CID for American Express and Discover) is the second most

[1] CyberSource analyzed 9.4 million credit card transactions where AVS was used and the final status of the transaction was known. If a merchant were to reject orders based solely on an AVS "no match" they would reject 5.7% of their orders but fail to detect 83% of the fraudulent orders. This represents an 18:1 false positive ratio.



commonly used detection tool. The purpose of CVN in a card-not-present transaction is to attempt to verify that the person placing the order has the actual card in his or her possession. Requesting the card verification number during an online purchase can add a measure of security to the transaction. However, CVN numbers can be obtained by fraudsters just as credit card numbers are obtained. CVN usage by online merchants has significantly increased in the last five years, rising from 44% in 2003 to 74% today.

Large merchants were asked to identify the three most effective tools they use. To eliminate the bias that the more commonly used tools have the potential to receive more mentions, we normalize the data by looking at the percent of merchants using a particular tool who cite that tool as one of their top three choices.

Company specific fraud screens received the highest rating as being an effective tool by merchants who use this tool. Half of the 42% of large merchants who use custom fraud models rated them as one of their three most effective tools. These fraud screens are risk scoring models which are tuned using an individual merchant's historical data on factors associated with online orders. Since fraudsters learn over time and vary their strategies we typically find most risk scoring models need regular tuning with new analysis and data in order to maximize their effectiveness.

Out-of-wallet or in-wallet challenge systems, while used by only 7% of large merchants today, was rated by 43% of these merchants as being one of their three most effective tools. The use of challenge systems tends to be limited to merchants who have frequent repeat purchases by customers or bill customers on a regular schedule.

Device Fingerprinting (also used by only 7% of large merchants today) was rated by 43% of these merchants as being one of their three most effective tools. These favorable opinions may well contribute to the very high intention by other large online merchants to add this tool in the next twelve months.

Planned Automated Screening Tool Usage 2009

Device Fingerprinting Highest on "Plan to Buy" Lists

Merchants showed an increased intent to implement every one of the 14 detection tools we looked at in both 2007 and 2008. Some tools showed dramatic increases in the percent of merchants who say they intend to implement them in 2009. Four tools had 15% or more of merchants planning to adopt them in 2009; and, for three of these four tools the plans to implement them have more than doubled over last year. These tools are Device Fingerprinting, IP Geolocation and Order Velocity Monitoring

Device Fingerprinting examines and records details about the configuration of the device from which the order is being placed. This can aid in flagging fraud attacks where a variety of fraudulent orders are launched from a common device or set of devices. Nearly 50% of large online merchants indicated they were planning to add Device Fingerprinting in the next twelve months.

IP geolocation tools also showed a dramatic increase in merchant interest. This tool attempts to identify the geographic location of the device from which an online order was placed. It provides an additional piece of information to compare against other order information and order acceptance rules to help assess the fraud risk of an order. In some cases only an internet service provider's address is returned so the ultimate geographic location of the device remains unknown. Fraudsters may also employ anonymizers / proxy servers to hide their true IP address and location.

As in several years past, card association payer authentication services (e.g. Verified by Visa, MasterCard SecureCode) figure prominently in many merchants' future plans. 2008 survey results show that one out of four merchants currently use one or more of the available payer authentication services. 18% of respondents say they are interested in deploying these systems in the next twelve months as a new tool to manage fraud. However, despite significant interest in implementing payer authentication systems over the past few years, we have seen relatively slow actual adoption of payer authentication since we started tracking this tool in 2003.

Implementing payer authentication should reduce exposure to card-not-present fraud loss either by authenticating the buyer's identity or by shifting fraud liability back to the card issuing bank (interchange incentives also apply). Further, certain card types, in some countries, are beginning to require that payer authentication solutions be used as a condition of accepting the associated cards (e.g. Maestro Cards in the United Kingdom). But, if merchants have a sufficiently high direct fraud loss rate, the card association may not permit the merchant to shift liability even if the merchant has implemented a payer authentication system. Over the next few years, these systems may help reduce the incidence of online credit card fraud if a critical mass of consumers register their cards and accept the new checkout procedures.

Successful adoption of payer authentication will require merchants to put procedures in place to handle customers who have not adopted verification services or who use cards or payment types which are not supported. International expansion and the growing popularity of online payment types such as electronic checks, PayPal™, Bill Me Later®, etc. drive the need for alternative fraud management techniques.

Automated Decision/Rules Systems

Automated Order Screening

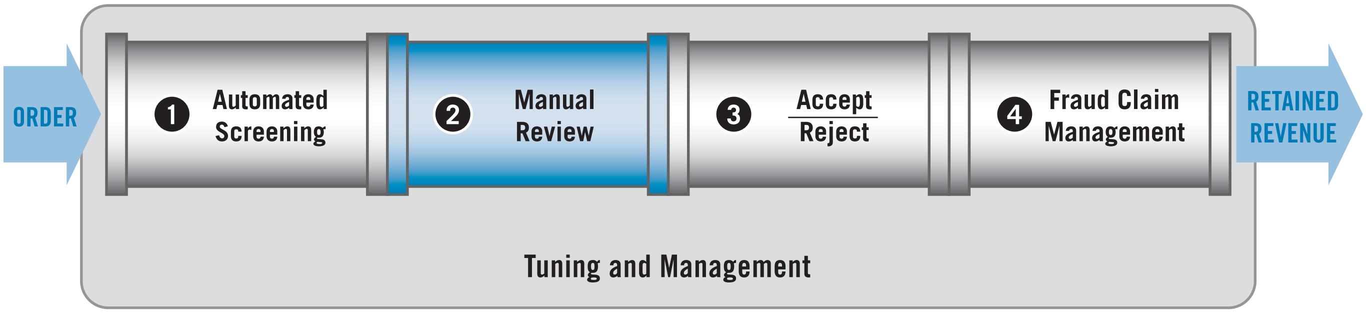
Automated order decisioning / screening systems are now used by 56% of merchants (up from 25% in 2005). Eight out of ten larger online merchants use such systems. These tools help companies automate order screening by applying a merchant's business rules in the real-time evaluation of incoming orders.

Decision and rules systems automate the evaluation of test results generated by fraud detection tools and determine whether the transaction should be accepted, rejected, or suspended for review. As the number of tools used grow, it is becoming increasingly important for merchants to employ automated systems to interpret and weigh the multiple results for each product or transaction profile (versus a "one size fits all" screen) to optimize business results. Because fraud patterns are dynamic, and the introduction of new products, services or markets often requires a unique set of acceptance rules, it is imperative that these systems also quickly adapt to the changing environment. Half of large merchants say their screening system allows business managers to create and modify screening rules without assistance from external experts or internal information technology staff.

Results of Automated Screening

The automated order screening process generates three outcomes: 1) order acceptance without further review, 2) orders flagged for further review and 3) automatic order rejection. 46% of merchants indicated they reject some orders based on automated screening tests and 58% of large merchants indicated doing so.

Stage 2: Manual Review



Orders which do not pass the automated order screening stage typically enter a manual review queue. During this stage, additional information is collected to determine if orders should be accepted or rejected due to excessive fraud risk.

Manual review represents a critical area of profit leakage. It is expensive, limits scalability, and impacts customer satisfaction. For many merchants it represents half of their fraud management budget. Only 13% of merchants say they have budget available to increase review staff now or in the next twelve months. This presents significant challenges to profit growth since, even at a stable percent of orders sent to review, the total number of orders that must be reviewed increases in step with the total increase of online sales.

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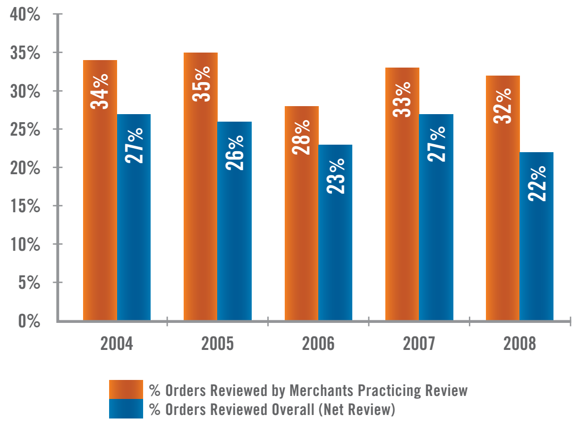
Manual Review Trends

Over the past 5 years, on average, 1 out of 4 online orders were manually reviewed. Merchants performing manual review have on average reviewed 1 out of every 3 orders received.



Manual Order Review Rates

In what should be a highly automated sales environment, most merchants are manually checking orders. In fact, during the past six years, overall, 1 out of every 4 orders transacted online have been manually reviewed (see chart #4). Over the same period, merchants who conduct manual review typically reviewed 1 out of 3 orders they received.

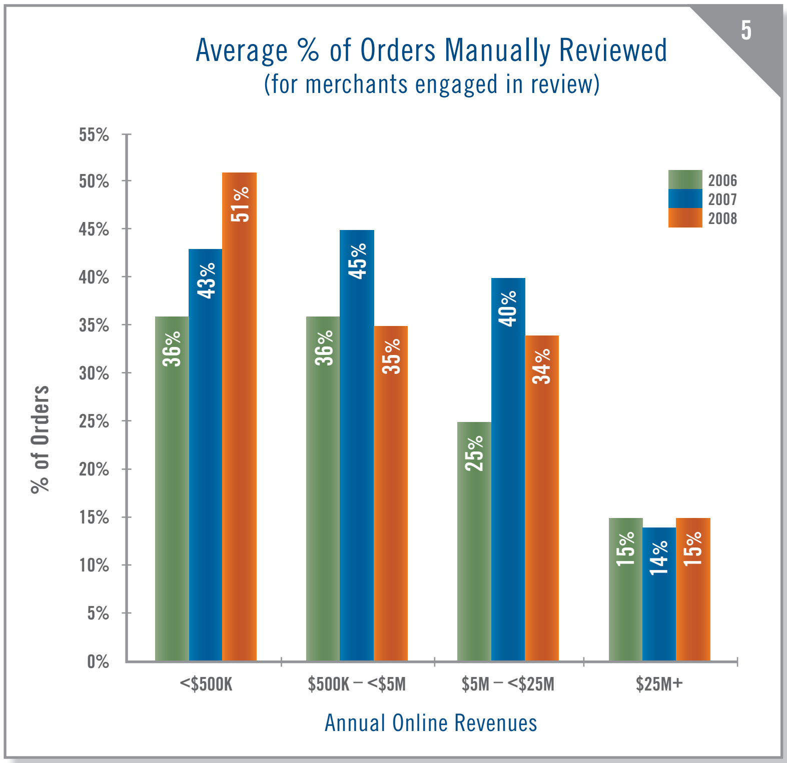
Merchants of all sizes use manual review to manage payment fraud. Chart #5 shows smaller merchants review a higher percentage of orders (perhaps because lower order volumes permit such practice) but even larger merchants review a significant percentage of online orders—and likely devote more resources to this task than is operationally scalable.

One consequence of using more fraud detection tools during automated screening is a greater chance of one or more flags being raised, resulting in an order being selected for manual review. Adding additional tools to detect fraud may result in downstream impacts and costs if these tools are not carefully integrated into a merchant's review process and tuned to a merchant's specific situation.

Merchants expecting increased online sales will need to take at least one of the following actions: 1) divert more staff time to the order review process; 2) increase staffing levels; 3) allow more time to process orders and ship good ones; or 4) improve accuracy of initial automated sorting and make the subsequent review process more efficient.

Review Tools & Practices

Given the reported limitations on hiring additional manual review staff, there is increased focus on investing in tools and systems to increase the productivity and effectiveness of review staff. While the primary focus should be on improving initial automated sorting accuracy to decrease need for review, attention to streamlining the review process is also warranted.



Tools Used/Planned During Manual Review

While many of the tools or detector results used during automated screening can also be used during manual review, several additional tools and processes are employed by manual reviewers. Attempting to validate an order by contacting the customer is standard practice for 7 out of 10 merchants and 82% of large merchants. However, most organizations have policies regarding how quickly they must clear orders through manual review and how long they will wait for customers to respond to requests for additional information. Most merchants try to clear orders through manual review in one business day and say they will not wait more than three business days for a customer to respond to a request for more information (see charts #7 and #8).

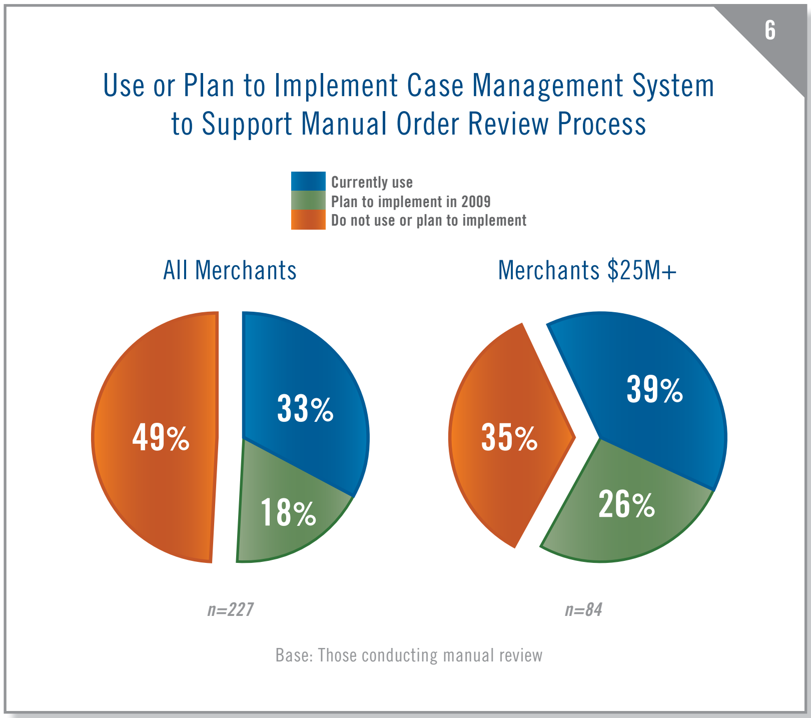
Another practice used only in manual review is to contact the card issuer. This action is taken by almost half of merchants overall and 60% of large merchants. Telephone number validation / reverse lookup is the third most popular tool with 56% of merchants using it during manual review vs 25% during automated screening.

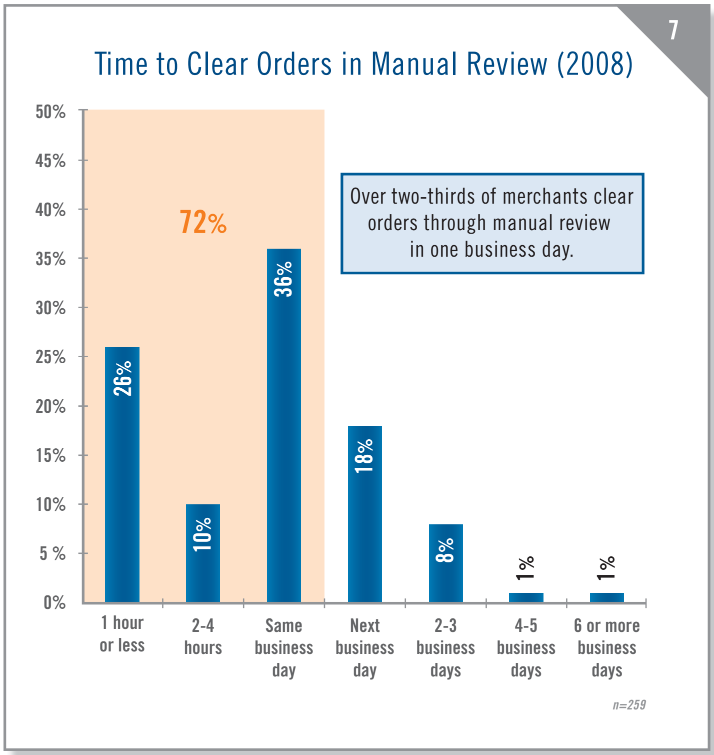
In 2008, two-thirds of merchants reported using four or more fraud detection tools for manual review, with 4.9 tools being the average. Larger merchants reported using 6.1 detection tools, on average.

Use of Case Management Systems

Currently 1 out of 3 merchants report having a case management system that supports their manual review process and staff. Over half of merchants either currently use a case management system or plan to implement one in 2009. For large online merchants 65% report currently using or planning to implement a case management system.

Merchants using a case management system are also more likely to be able to track fraud rates on orders which have gone through manual review. 74% of merchants using case management systems report tracking fraud rates for manually reviewed orders vs only 42% being able to do so when not using a case management system. Surprisingly, 44% of merchants performing manual order review say they do not track the fraud rates of orders which have been manually reviewed, and 24% of large merchants say they do not have this information. Without knowing the fraud rate on orders going through manual review, and who reviewed them, it is difficult to determine training needs or other actions to improve the effectiveness of manual review.





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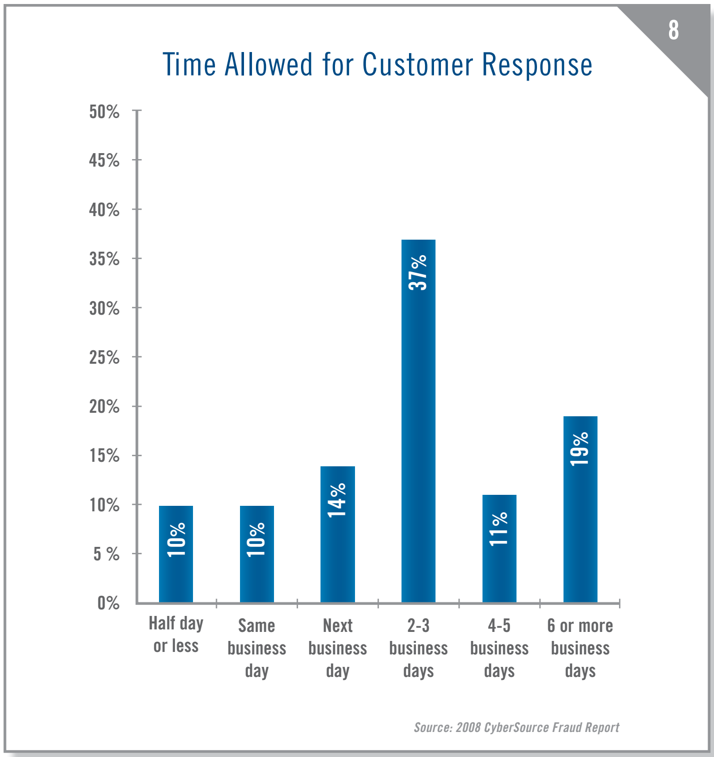
Time to Clear Orders in Manual Review (2008)

Over two-thirds of merchants clear orders through manual review in one business day.

n=259



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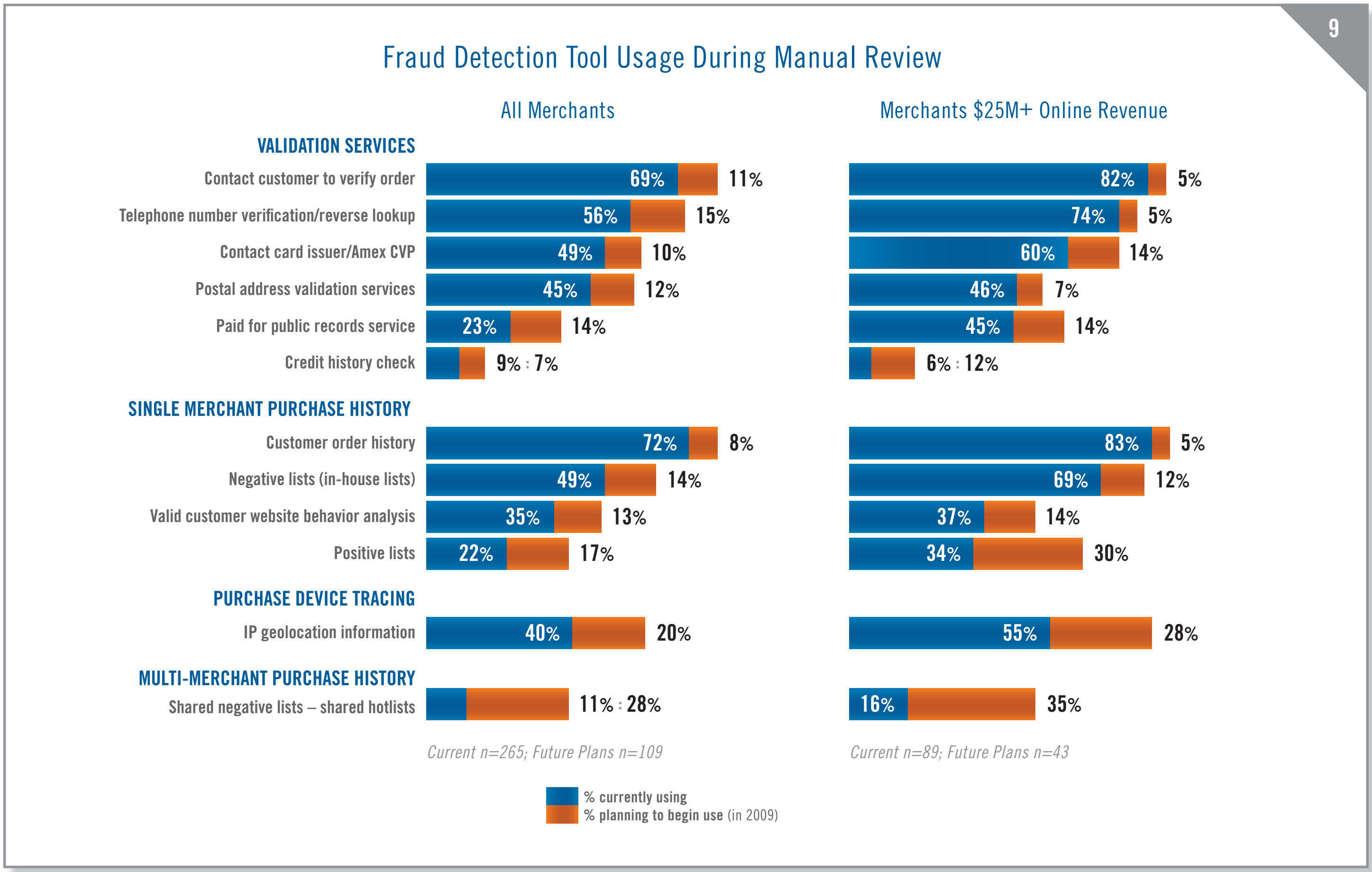
Time Allowed for Customer Response

Source: 2008 CyberSource Fraud Report



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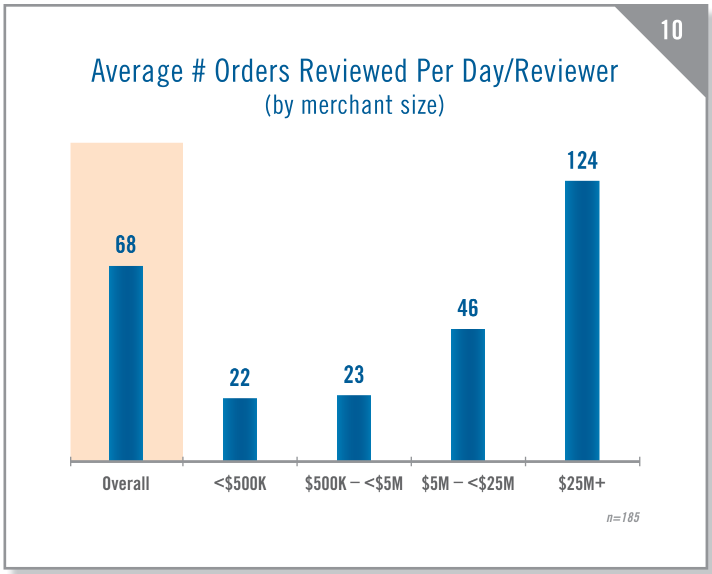
Fraud Detection Tool Usage During Manual Review

Current n=265; Future Plans n=109

Current n=89; Future Plans n=43

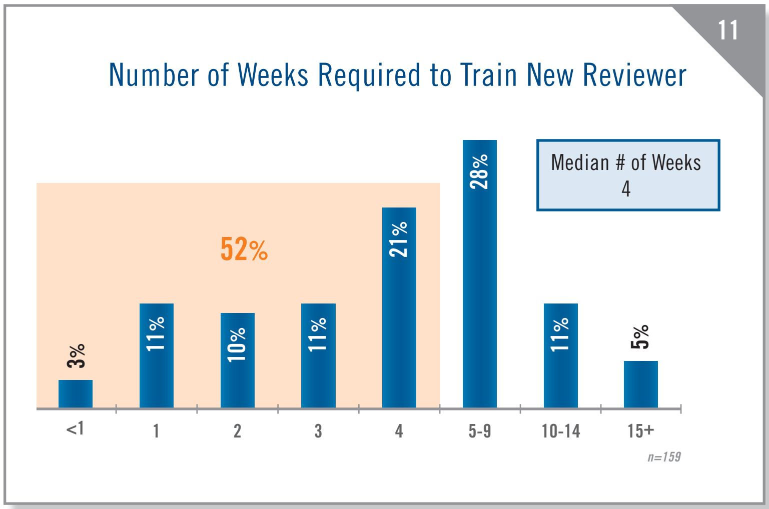


The most popular tools currently used in the manual review process are shown in chart #9, including the percent of merchants planning to add each tool in 2009.

Review Operations Efficiency

Reviewer Efficiency

The average number of orders a reviewer processed in a day ranged from 22 for small merchants to 124 for large (see chart #10). Large merchants who typically have case management systems achieve a 5X higher throughput per reviewer in the manual review stage, possibly due to greater use of review systems and detection tools during manual review. On average reviewers spent 7 minutes reviewing each order in 2008.



Time to Ramp New Staff

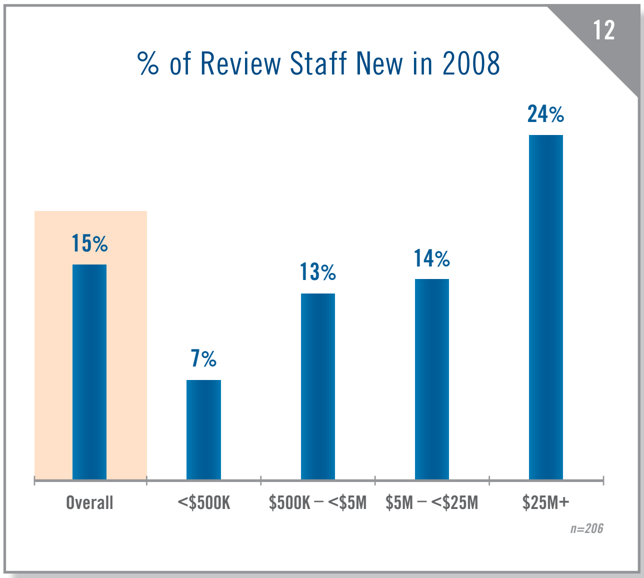
New to this year's survey—merchants were asked how long it takes for an order reviewer to attain acceptable proficiency in his or her job. While the learning curve varies by type and size of online merchant, the median time reported was 4 weeks. Larger merchants reported a median of 6 weeks for a reviewer to achieve acceptable proficiency. Chart #11 shows the distribution of learning times reported.

Staff Tenure

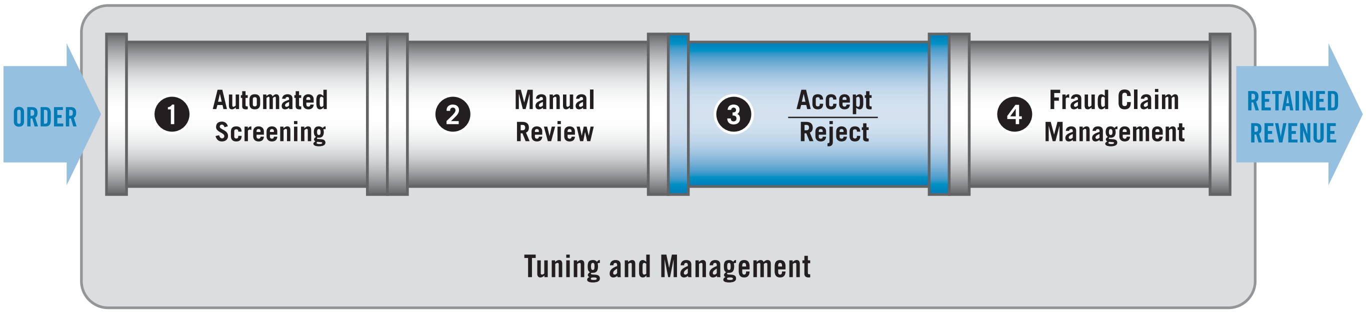
Given the cost and time required to recruit and train new staff, merchants need to focus on staff retention. Fraud rates or order rejection rates can increase if highly experienced review staff leave an organization and are either not replaced or replaced by less experienced reviewers. 85% of review staff have been on the job for one year or more. Merchants report on average that 15% of their review staff were new in 2008. For large merchants 24% of their staff were new in 2008 (see chart #12). Efficient training and methods to ensure consistent and accurate disposition of orders will be key as merchants seek to optimize operating efficiency.

Final Order Disposition

Automated screening and manual order review ultimately result in order acceptance or rejection. A relatively high percentage of orders manually reviewed are ultimately accepted (see next section)—highlighting the need for merchants to improve automated screening accuracy and reduce the need for review. A look at order reject and acceptance rates follows in Stage 3 of the pipeline review.

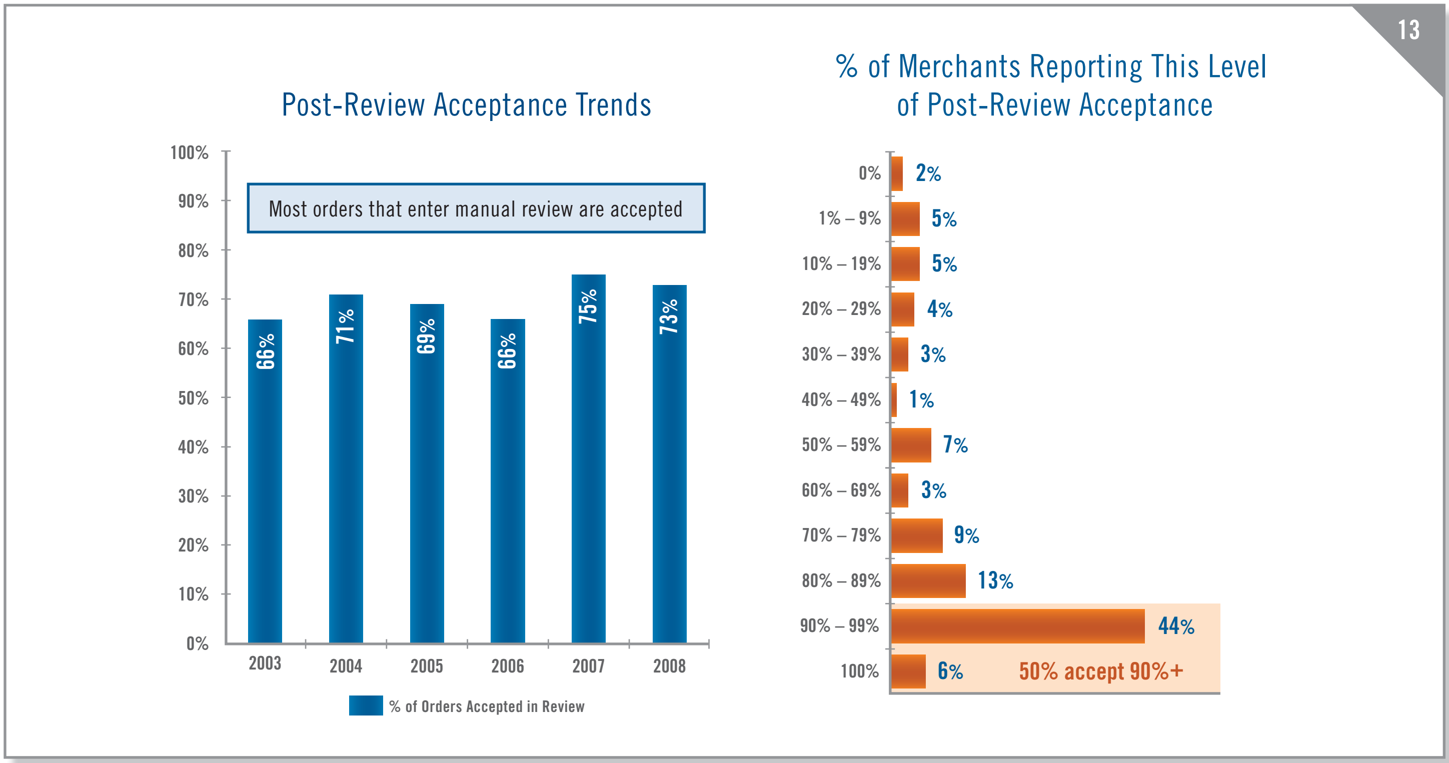


Stage 3: Order Dispositioning (Accept/Reject)



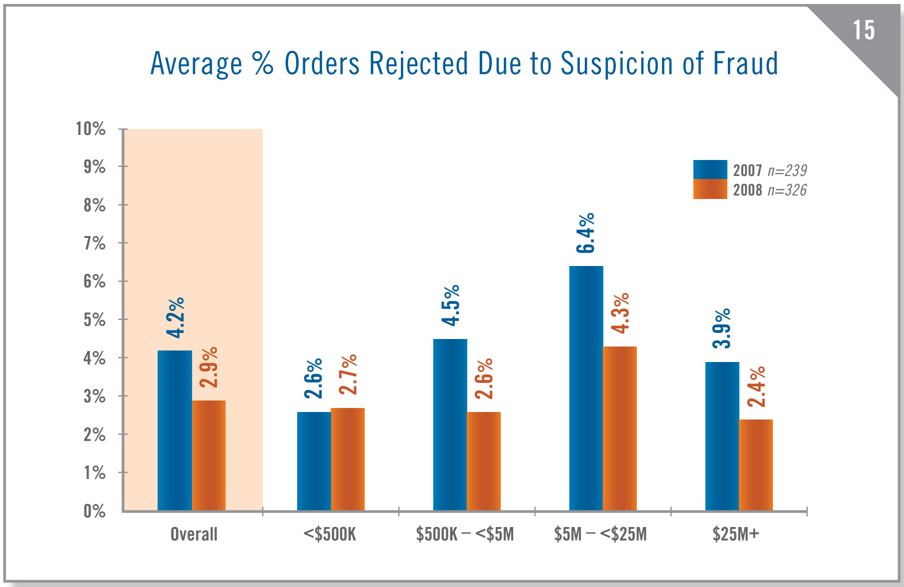
Post-Review Order Acceptance Rates

Merchants who manually review orders indicated they ultimately accepted nearly ¾ of the orders they manually reviewed (see chart #13). This was similar to the proportion reported in 2007. 50% of merchants report they accept 90% or more of orders they manually review. These merchants are incurring significant expense to find the 10% of the review queue they believe to be too risky to accept. Clearly, most merchants require better methods to determine which orders are to be outsorted for manual review, so only truly suspicious orders receive human attention.



Overall Order Rejection Rates

Order reject rates can reflect true fraud risk or signal "profit leaks" in terms of valid order rejection or unnecessarily high rates of manual review. In 2008, for the first time in several years, merchants participating in the survey reported a significant drop in their order rejection rates from 4.2% in 2007 to 2.9% (see chart #14).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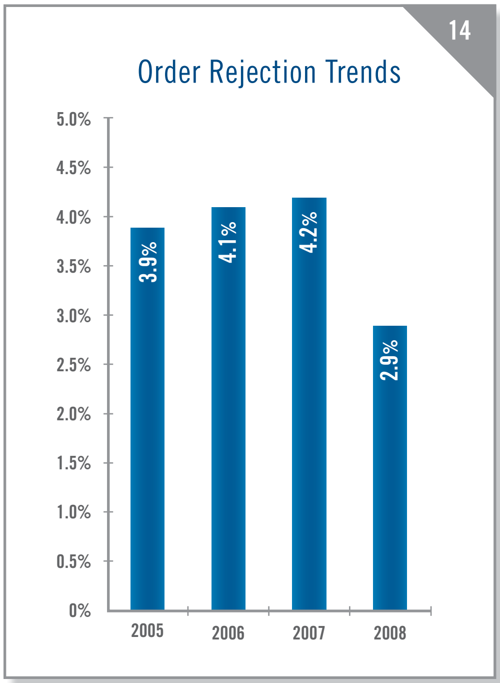
Average % Orders Rejected Due to Suspicion of Fraud

Order rejection rates dropped in 2008 for almost every size of merchant (see chart #15) except the very smallest, and for every industry segment (see chart #16).

It is likely that, as online sales growth slows and merchants seek to sustain revenue levels, merchants will look for ways to accept more orders and reduce orders rejected due to suspicion of fraud. In 2008 merchants were able to successfully reduce order rejection rates while holding fraud rates stable. It remains to be seen if order rejection rates can be reduced further in 2009 without an increase in fraud rates or manual order review.

Order rejection rates also vary by type of product and merchant profile. Chart #16 shows that segments which have high cost of goods sold and/or lower gross margins, tend to have higher order rejection rates. Each fraud loss in this arena has a large negative profit impact. Consumer electronics and jewelry/apparel are two examples of online segments that tend to have higher-than-average order rejection rates.

Yet, even within similar groups of online merchants we see that some merchants achieve low order rejection rates while still keeping fraudulent order rates under control. Examining the large consumer electronics merchants in the sample we find that half of these merchants report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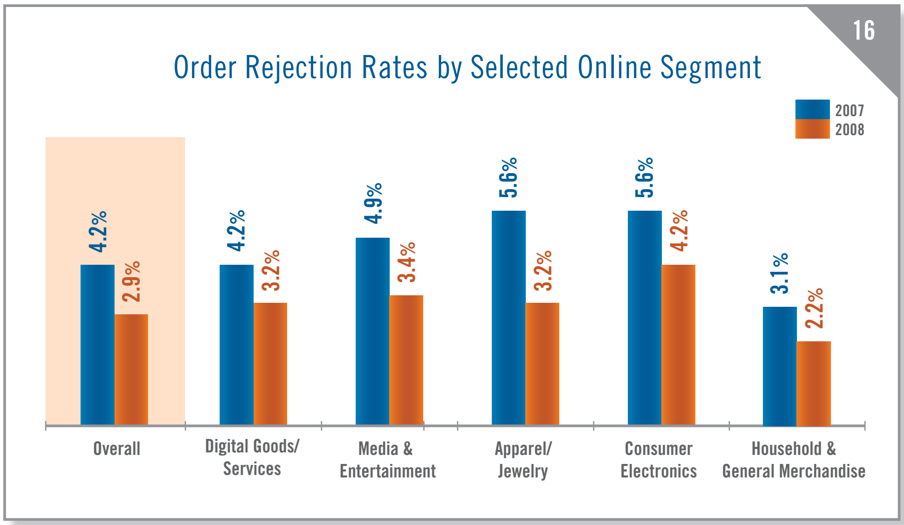
Order Rejection Trends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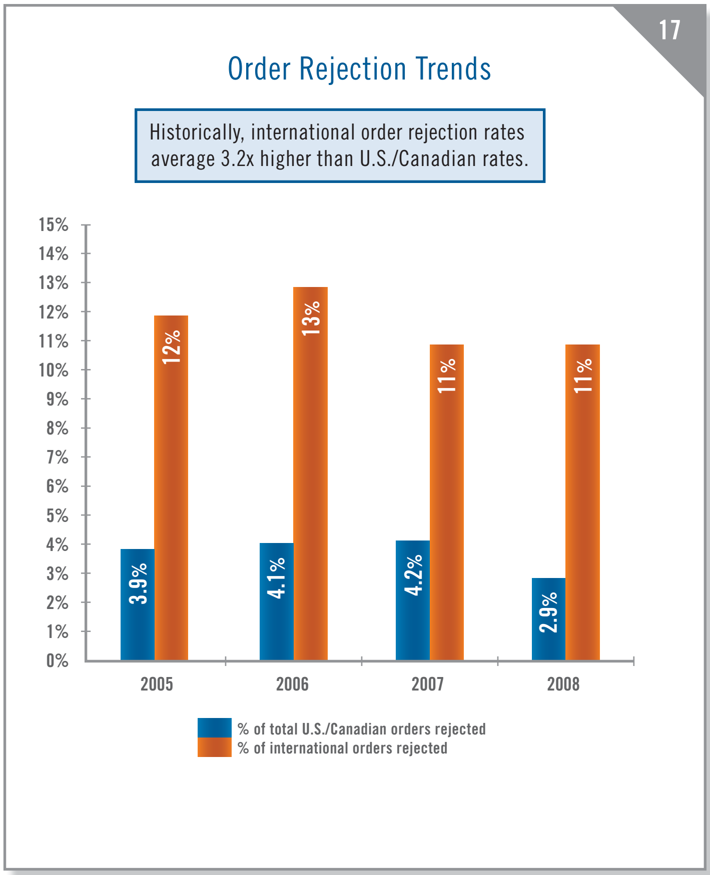
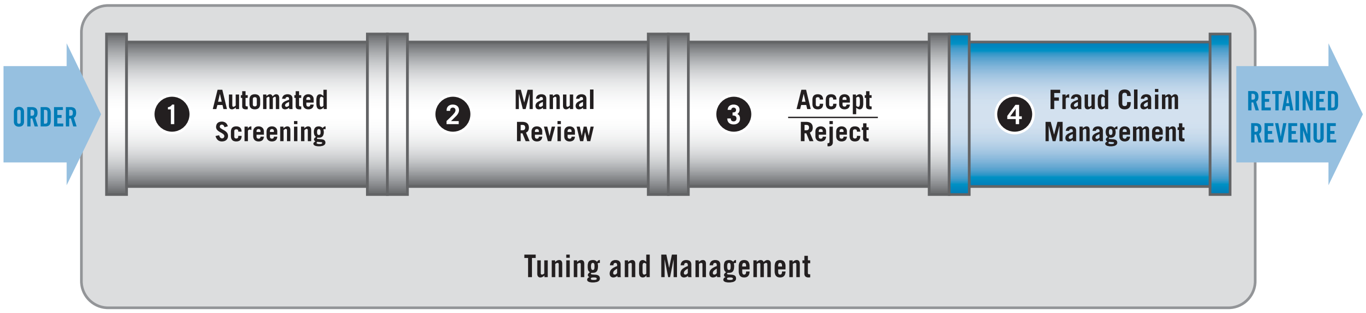
Order Rejection Rates by Selected Online Segment order rejection rates of 2% or less while maintaining fraudulent order rates at or even below the average for their segment.

International Orders Riskier

Merchants consistently report a much higher level of order rejection on international orders due to suspicion of payment fraud. In 2008, merchants report their rejection rate on these orders is over three and one half times that of domestic orders as shown in chart #17. The actual fraud rate experienced on international orders supports this cautious approach, as merchants report the fraud risk on international orders is also over three and one half times that of domestic orders.



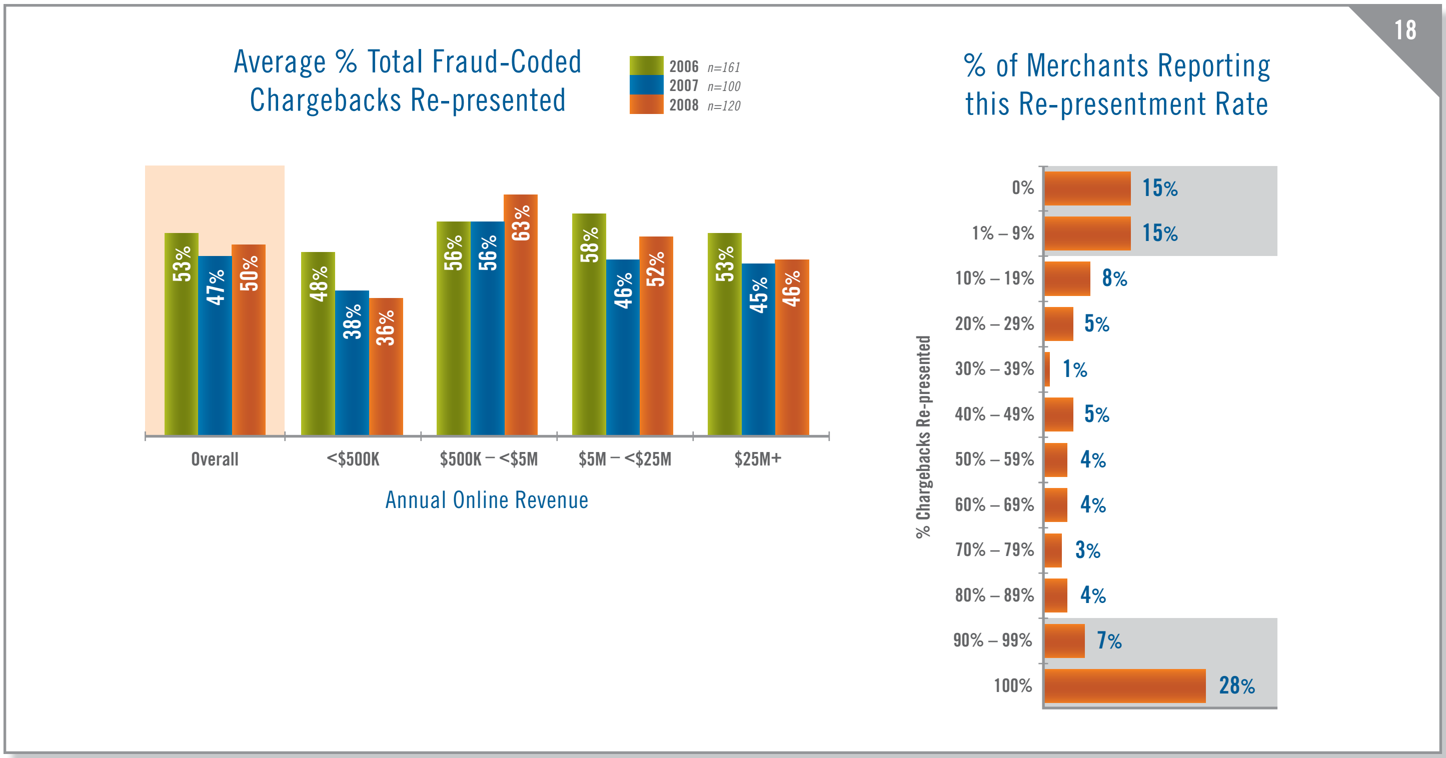
Stage 4: Fraud Claim Management

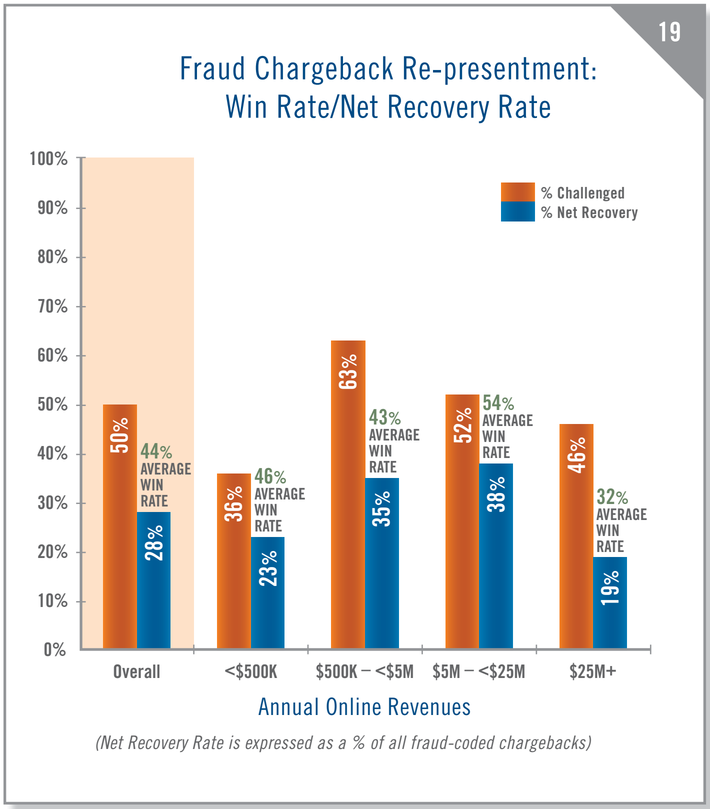


Fighting Chargebacks

This year's survey once again examined online merchants' practices associated with reviewing and contesting chargebacks ("re-presentment"). Over the past four years the share of fraud-coded chargebacks merchants contest has averaged 43% to 53%, with the 2008 average at 50%. Medium and large merchants report contesting 52% and 46% respectively of their fraud-coded chargebacks in 2008. However, when we look at the distribution of merchants' answers to this question we find that over one third of merchants are disputing 90% or more of their fraud chagebacks while three out of ten merchants are disputing less than 10% of their fraud chargebacks (see chart #18).

Merchants report that they win, on average, 44% of the chargebacks they dispute which is very similar to the 42% win rate reported in 2006 and 40% in 2007. Simply using the average percent of chargebacks that are disputed (50%) times the average win rate of 44% results in a net recovery rate of 22% (meaning 22% of all fraud-coded chargebacks are recovered). However, given the wide disparity in the chargeback re-presentment rate, when these are calculated on a merchant-by-merchant basis and then averaged, the re-presentment win rate rises to 28% (see chart #19 on next page), the same recovery rate that was found in 2007. Therefore, disputing most fraud chargebacks and having an efficient re-presentment process can help enhance profitability and reduce fraud loss.





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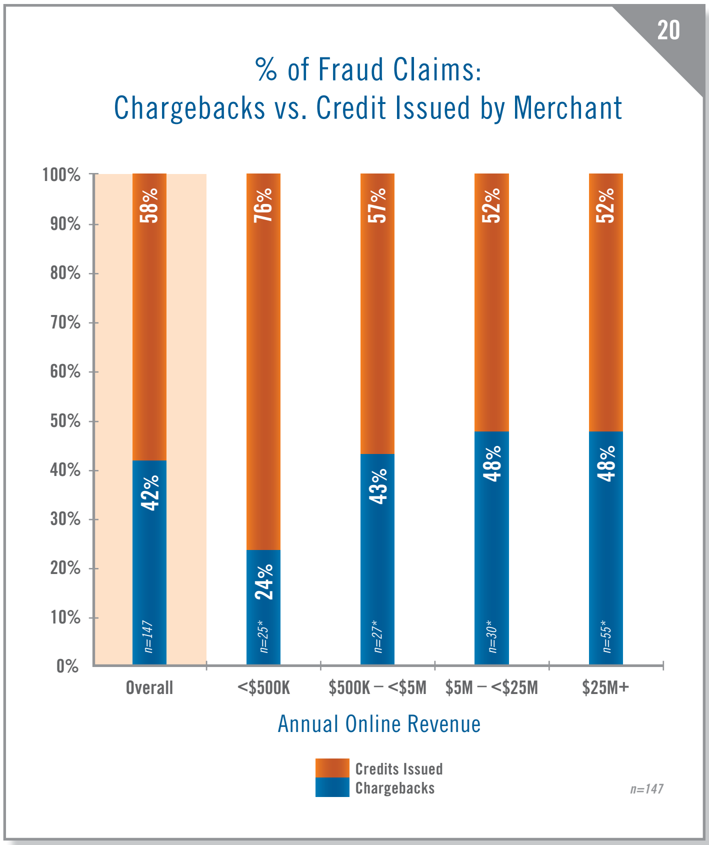
Fraud Chargeback Re-presentment: Win Rate/Net Recovery Rate

(Net Recovery Rate is expressed as a % of all fraud-coded chargebacks)



20

% of Fraud Claims: Chargebacks vs. Credit Issued by Merchant

Chargeback Management Tools

Of course disputing chargebacks is not an easy or cost-free process. Merchants must manage and organize all order, delivery and payment information to successfully dispute fraudulent orders with financial institutions. Merchants are beginning to adopt automated systems for handling this aspect of the pipeline. One out of five merchants reported using chargeback management tools in 2008 and 37% of large merchants reported using these tools. In our 2006 survey we asked merchants to provide estimates of how many hours it takes, on average, to handle a fraud chargeback. The average time spent overall was 1.8 hours with a median time of 1.0 hours to handle a fraud chargeback (total time consumed for research, documentation, submission). The largest merchants reported a median time of 30 minutes per fraud chargeback. Clearly, fraud chargeback management is a significant expense for merchants.

Chargebacks—Only Half the Problem

How a fraudulent order is handled can have a significant impact on bottom line profits. Fraudulent orders are presented to the merchant via two main routes: as a chargeback or as a direct request from a consumer for credit (they claim fraudulent use of their account). Although chargebacks are the most often cited metric, merchants report that chargebacks actually account for less than half of all fraud claims. This is true for all sizes of merchants (see chart #20).

In 2007 large ($25M+ online sales) merchants reported that 57% of their fraud was presented in the form of a fraud-coded chargeback but in 2008 this dropped back to 48%. Considering the financial impact of both fraud claim routes (chargebacks and credit issuance/reversal) some merchants encourage direct consumer contact to address fraud claims and thus avoid the additional chargeback fees levied by the merchant bank/processor. If a consumer contacts the merchant first then the decision is in the merchant's control to either handle the dispute directly with the consumer or to advise them to initiate a fraud chargeback process. In any event, if merchants are evaluating fraud losses solely on the basis of chargebacks, the actual rate of fraud loss the business is experiencing may be as much as two times higher due to direct credit issuance/charge reversal.

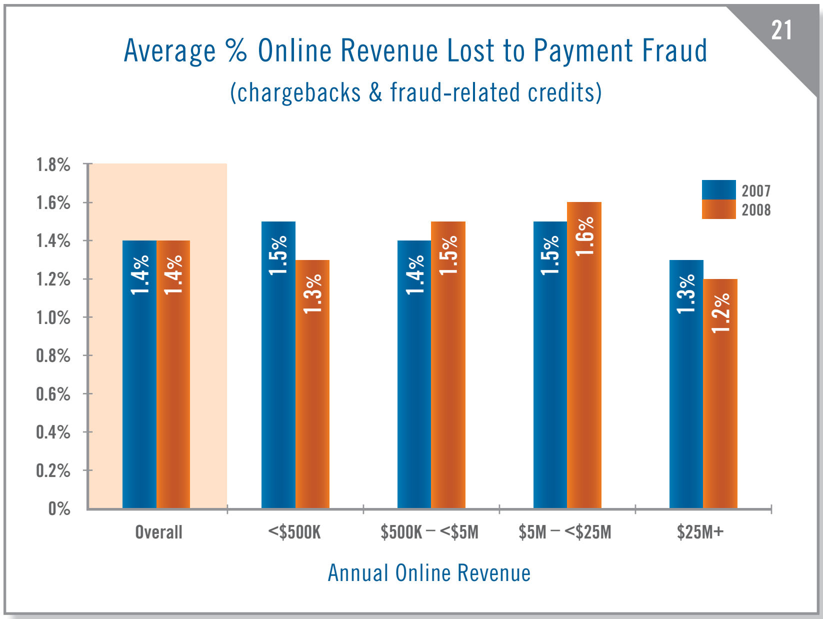
Fraud Rate Metrics

When monitoring the level and trend of online fraud loss, we focus on three key metrics: 1) Overall revenue lost as a percent of total online sales; 2) percent of accepted orders which turn out to be fraudulent (domestic and international); and 3) the average value of a fraudulent order relative to a valid order. Fraud rates vary widely by merchant and depend on a variety of factors such as online sales volume, type of products or services sold online, and how such products/services are delivered and paid for. It is important that merchants track key fraud metrics over time and evaluate their performance relative to their peer group (both size and industry). **Note: this report provides benchmarks on total fraud rates (chargebacks + credits issued directly to consumers by merchants).** As such, these metrics tend to be higher than those reported by banks and credit card associations which generally base reported rates on chargeback activity only.

Depending on which products or services are being sold online, fraud loss risk tolerances and order rejection rates can vary significantly. Merchants selling high cost goods with relatively low gross margins, like most consumer electronics products, tend to err on the side of rejecting more orders to avoid expensive fraud losses. Merchants who are less subject to fraud attacks can achieve similar fraud loss rates while rejecting relatively few orders. Over the past few years, as fraud rates have remained relatively stable, we have compiled data on fraud practices and benchmarks by industry.

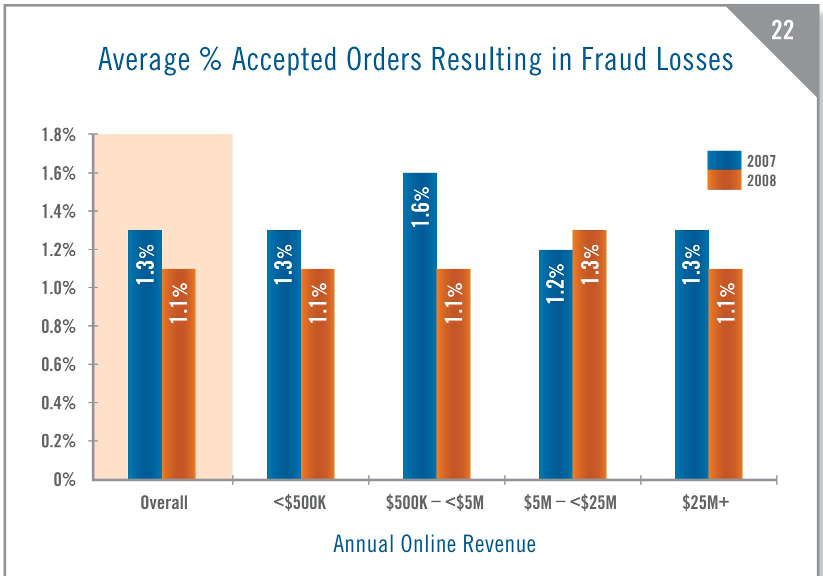
Direct Revenue Loss Rates

Very large merchants typically use more tools and have more experience and resources to manage online fraud so their fraud rates tend to be lower than the overall rate. Revenue loss measurement includes not only the value of orders on which fraudulent chargebacks are received, but also the cost of any credits issued to avoid such chargebacks. Figures include both chargebacks and credits issued directly by the merchant in response to fraud claims.



Fraudulent Order Rate for Accepted Orders

Another key metric is the number of accepted orders that later turn out to be fraudulent. Expressed as a percent of total orders, this metric is typically lower than the revenue loss percent since the average value of fraudulent orders tends to be greater than the average value of valid orders, which causes the fraud rate as measured by revenues to be higher. Overall, 38% of merchants reported experiencing a fraudulent order rate of 1% or more in 2008 which was the same percent reported in 2007.



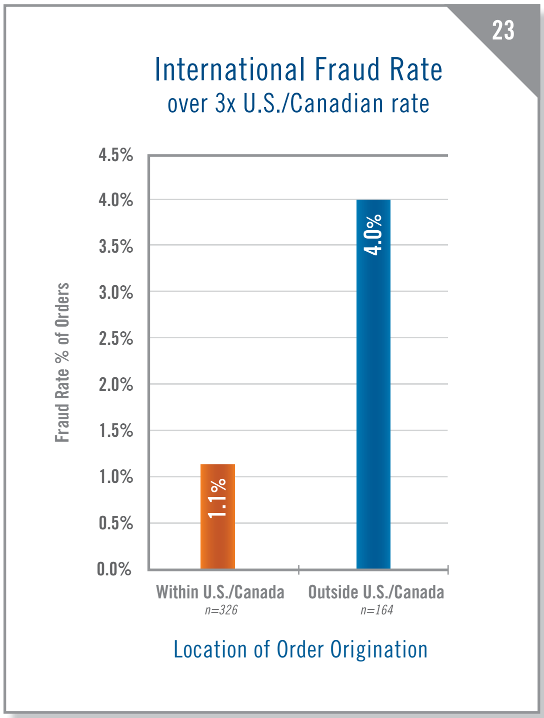
A fraud chargeback was received on the orders OR a credit was issued directly to a customer who claims not to have placed an order

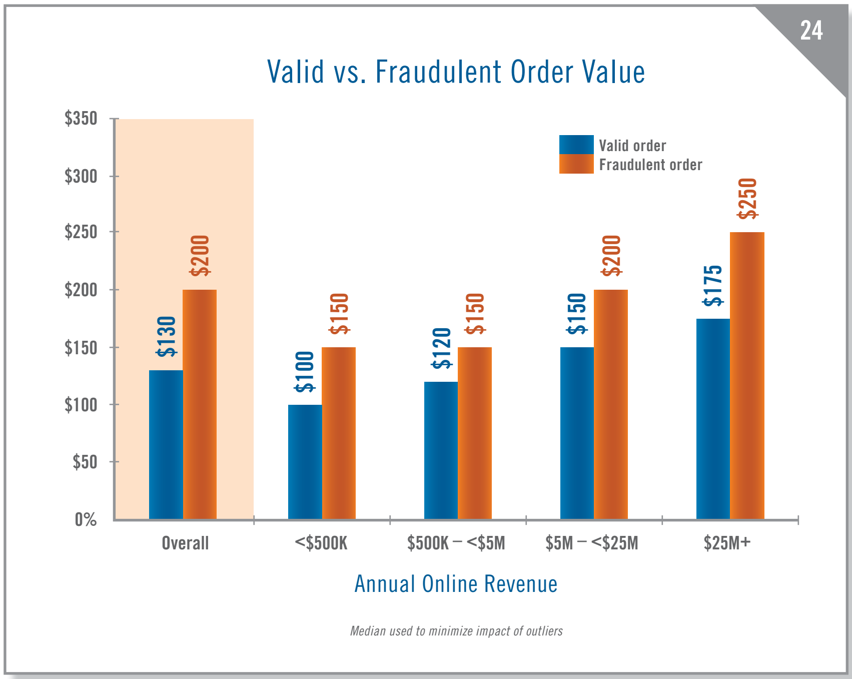
International Orders Carry Higher Risk

Fifty-two percent of merchants surveyed accepted orders from outside the U.S. & Canada in 2008. International sales accounted for an average of 17% of total orders for these merchants. That same group reported that the actual direct fraud rate on international orders averaged 4.0%, or more than 3.6 times the overall fraud rate for domestic online orders. Though international markets represent an attractive opportunity, online merchants must make sure that their fraud detection and management systems are robust enough to handle the additional risk involved. Merchants who sell online outside of the U.S. & Canada report that they reject international orders due to suspicion of fraud at a rate that is over three and one half times the U.S. and Canadian average rate of 2.9% — rejecting approximately 1 out of every 9 international orders received.

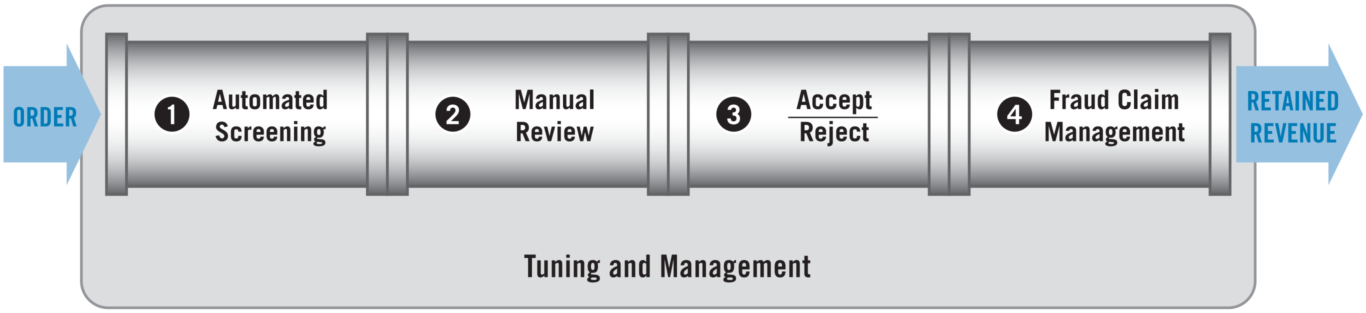
Average Value of Fraudulent Order Higher than a Valid Order

Historically, fraudulent orders tend to have higher values on average than valid orders. In 2008, the median value of a fraudulent order was $200 compared to $130 median value reported for valid orders. This relationship of higher fraudulent order values vs. valid order value was found for all merchant size categories as chart #24 shows. Since fraudulent orders tend to be somewhat higher in value than valid orders, merchants will tend to outsort more high value orders for manual review and verification. Large online merchants reported that the median value of an order flagged for manual review was $245.





Tuning & Management



Maintaining and Tuning Screening Rules

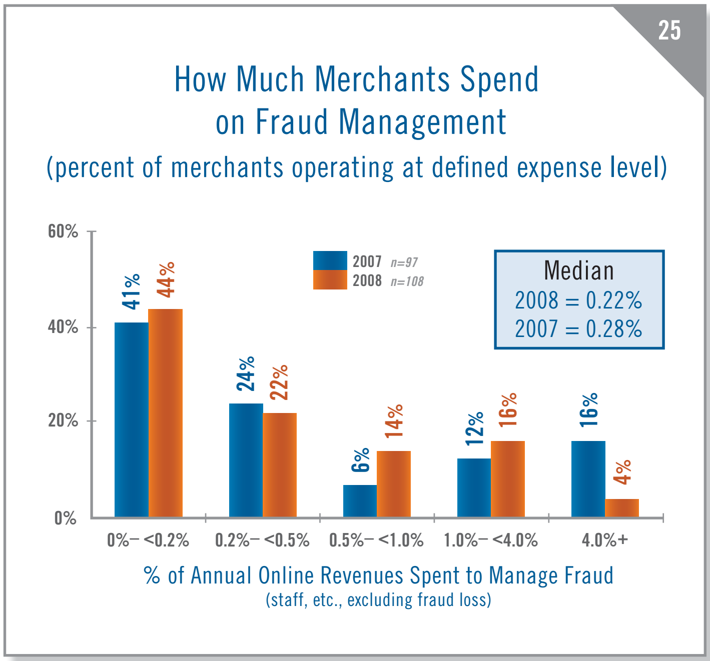
28% of merchants say they have an automated order screening system in place that allows business managers to modify decision rules without assistance from internal IT staff or external parties (up from 16% found in 2006). The ability to adjust automated order screening systems quickly helps manage the order review flow, tailor rules to new products, and adapt to new fraud trends as they are encountered. Without this ability merchants cannot easily minimize reject rates, review costs or fraud rates. Additionally, giving business managers the capability of adjusting business rules on-the-fly reduces the costs and burden of IT support.

Global Fraud Portals

Some online merchants are integrating fraud tools and strategies via fraud management portals. These portals employ a combination of flexible rules systems that interact with a portfolio of "truth services" around the globe, allowing business managers to set payment type, product type and market-specific screens. Case management systems are being integrated with these portals with accompanying enhancements to streamline workflow. Global fraud portals typically include hierarchical management, as companies strive to centralize fraud management across multiple lines of business and geographies.

Merchant Budgets for Fraud Management

How much are online merchants spending to mitigate fraud risk? In both 2008 and in 2007 survey results show that 34% of merchants spend 0.5% or more of their online revenues to manage online payment fraud while 66% spend less than 0.5%. In 2008, across all merchants, the median ratio of fraud management expense to sales was 0.22%, down from 0.28% in 2007, although some merchants in high risk categories are spending significantly more. These spending estimates focus on the cost of managing fraud risk (internal and external systems and services, management development, and review staffs). Direct fraud loss (chargebacks, lost goods and associated shipping costs), as well as the opportunity cost associated with valid order rejection are not included here (see chart #25).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How Much Merchants Spend on Fraud Management

(percent of merchants operating at defined expense level)

% of Annual Online Revenues Spent to Manage Fraud
(staff, etc., excluding fraud loss)

26

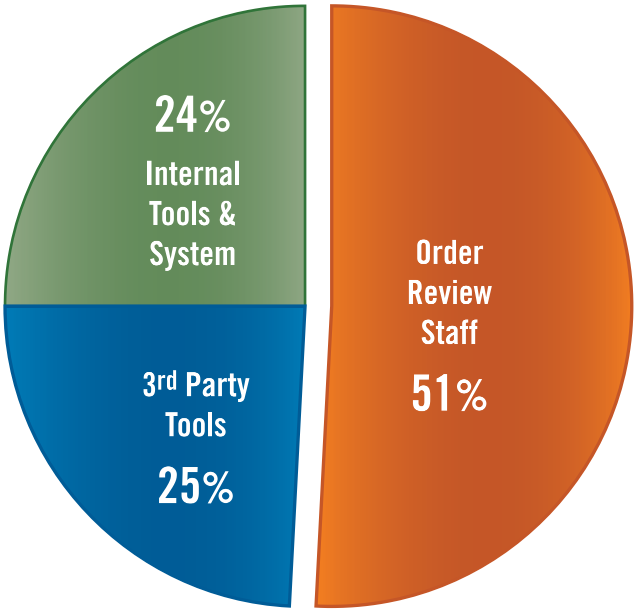
Planned Staffing Levels

	⇧ Increase	⇔ Same	⇩ Decrease
2009	13%	81%	6%
2008	21%	71%	8%

n=238, 248

Base: Those with 1 or more full-time manual review staff

Average % Spending Allocation for Fraud Management 2008



n=400

Budget Allocation

For the past three years merchants have consistently spent just over half their fraud management budgets on review staff (see chart #26). The remainder is allocated as follows: 25% for third party tools or services and 24% on internally developed tools and systems.

Clearly, review staff costs are the dominant factor, and only 13% of merchants cite plans to increase review staffing in 2009. Reducing the need for manual review and increasing the efficiency and effectiveness of reviewers is key to growing online business profits and managing the total cost of online payment fraud. One place to start is by improving the automated detection of risky orders so as to reduce manual order review volumes.

Clearly the continued reliance on manual review we have seen in the data over the last few years is not an optimal long term strategy for managing online fraud. As budgets come under increasing pressure merchants will need to redouble their efforts to automate more of the fraud management process, while keeping valid order conversion high and fraud loss low.

Resources & Solutions

To find information on CyberSource's industry-leading risk management solutions, self-paced webinars on decision management, and other whitepapers on electronic payment management, visit our Resource Center at www.cybersource.com. For sales assistance phone: 1-888-330-2300; or e-mail: sales@cybersource.com.

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Risk Management/Order Screening

Global Fraud Management Portal with CyberSource Intelligent Review Technology. A hosted rules and case management system that provides on-demand access to over 150 validation tests and services across all four dimensions of detection. Detectors include: multi-merchant transaction history checks, worldwide delivery address and phone verification, device fingerprinting, IP geolocation, purchase velocity, identity morphing and custom data from your systems. Case management system provides consolidated data review, workflow management and built-in callouts to validation services to streamline review.

Managed Services. CyberSource provides client services to help you analyze, design and manage your order screening and fraud detection processes—everything from screening strategies and risk threshold optimization analysis to ongoing monitoring, order review and chargeback management/recovery. Our managed services include business performance guarantees.

Payer Authentication. Verified by Visa, MasterCard SecureCode

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CyberSource processes your payments in our high availability datacenters located in the U.S., Europe, and Japan. All datacenters are certified PCI-compliant and include sophisticated processing management logic to help prevent payment failures and rate downgrades.

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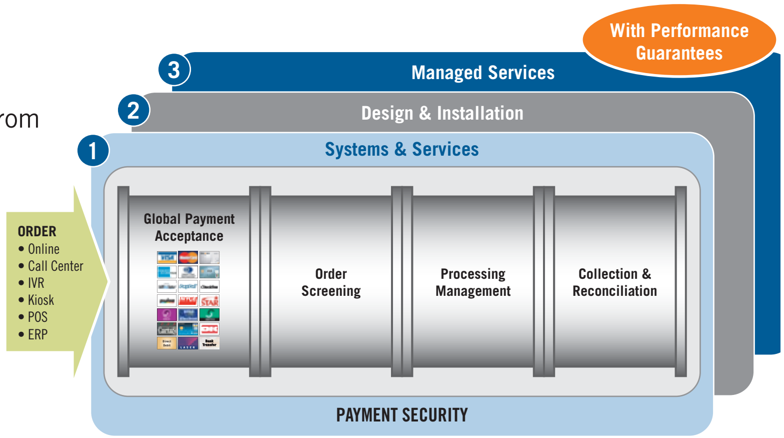
A full array of online and exportable payment reporting capability is available to streamline reconciliation activity. Further, systems can be installed to automate up to 90% of the tasks associated with payment reconciliation and chargeback re-presentment.



Payment Security

Remove Payment Data From Your Network. CyberSource provides secure storage and hosted payment acceptance services that let you process without storing or even transmitting payment data. A great way to streamline PCI compliance and mitigate security risk.

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