CONFIDENCE AMID CHAOS

Managing Fraud and Scams with Data and Analytics

Canada

The LexisNexis® Risk Solutions Cybercrime Report

LexisNexis®
RISK SOLUTIONS

CONTENTS

Executive Summary

FRAUDSTERS ARE SHIFTING BEYOND NEW ACCOUNT OPENING

Globally, bot attacks began to level-off while human-initiated attacks grew double-digits. Fraudsters shifted towards account takeover and scams continued to grow as scam centers commercialize.

FRAUD ATTEMPTS IN CANADA RAMP-UP

Canada experienced substantial growth in attacks, as monthly fraud attempts surged and both bot attacks and human-initiated attacks grew double-digits.

CONTINUE TO GUARD AGAINST SCAMS

Canada was more than twice as likely to report a 20%+ increase in scams year-over-year compared to the US.

SECURE ACROSS CHANNELS

Protecting across channels is key. The online channel is particularly vulnerable to attacks. Enabling solutions across the customer journey helps safeguard against bad actors.

Methodology

2023 Cybercrime Report

Findings come from the 2023 Global Cybercrime Report, "Confidence Amid Chaos" as well as analysis of transactions that occurred through LexisNexis® Digital Identity Network® in 2023. The report summarizes 92B transactions that occurred between January – December 2023 around the world.

- Device, location, behavior and threat data help verify legitimacy of transactions
- "Attacks" are defined as high-risk transactions

LexisNexis® True Cost of Fraud™ Studies

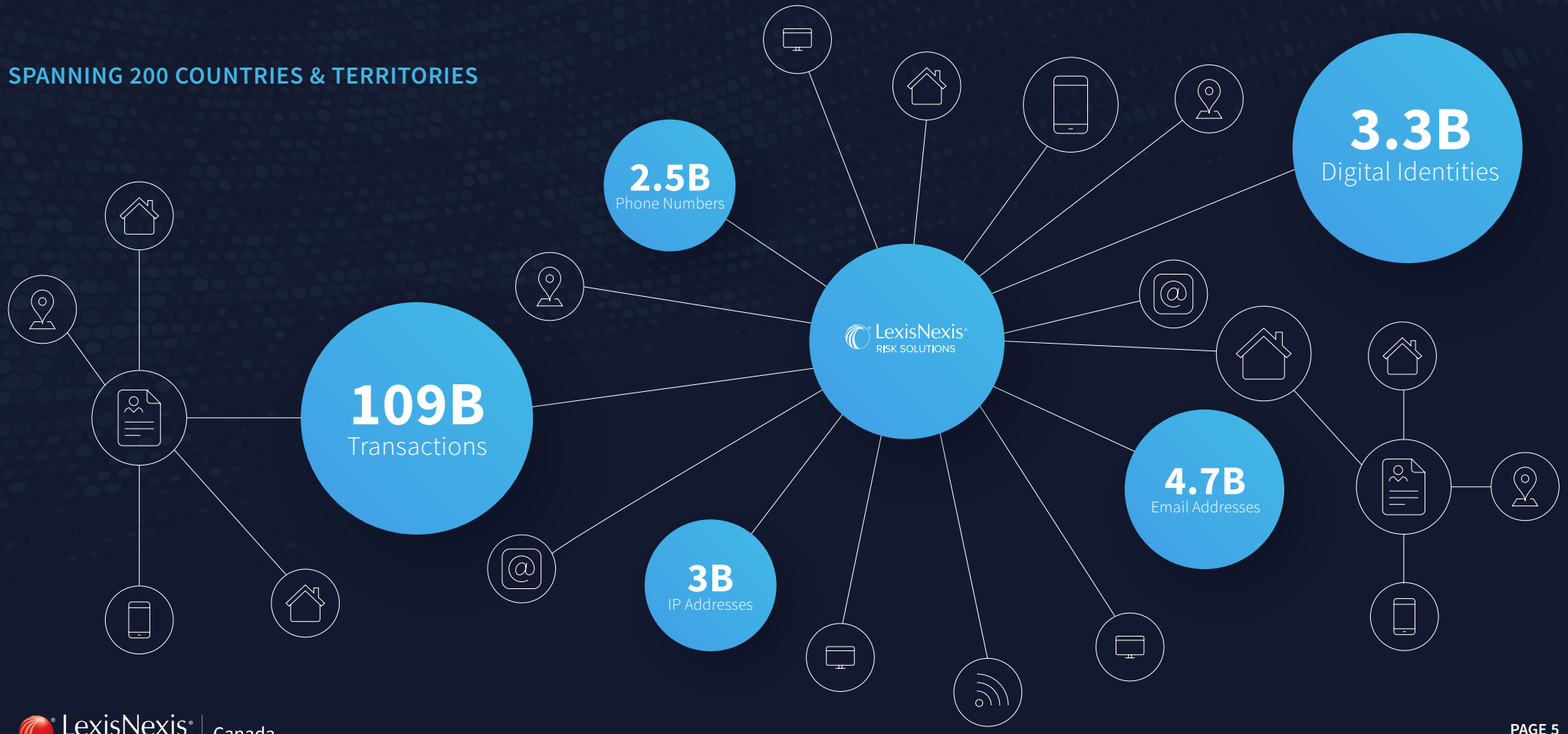
Findings come from the 7th Annual LexisNexis® True Cost of Fraud™ Study: Financial Services and Lending Report and 2023 LexisNexis® True Cost of Fraud™ Study: Ecommerce and Retail

- Data collection occurred between July and August of 2023 as part of a global commissioned double-blind study conducted by Forrester® Consulting
- Representation includes responses from fraud and risk executives across midsize to large financial services and lending organizations and ecommerce and retail organizations

LexisNexis® Digital Identity Network®

The 2023 Cybercrime Report derives from analysis of transactions through LexisNexis Digital Identity Network. In 2023, our Digital Identity Network® processed 109B transactions across geographies, industries, and the customer journey (from New Account Opening and beyond). LexisNexis® Risk Solutions has one of the world's largest digital identity networks, helping organizations spot and stop potential fraud.

SPANNING 200 COUNTRIES & TERRITORIES




GLOBAL INSIGHTS

Globally, Digital Identity Network Transactions Continue to Climb Year-Over-Year

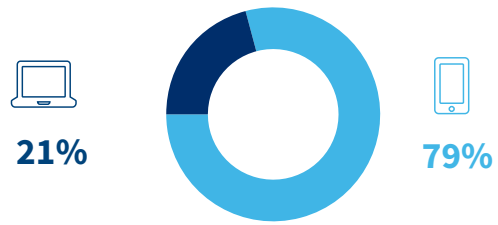
WORLDWIDE TRANSACTIONS PROCESSED AND ANALYZED

Growth YOY*

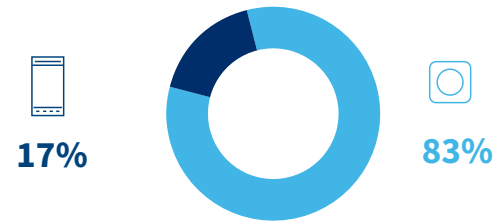
+15% ▲

TRANSACTIONS BY CHANNEL

Desktop / Mobile



Mobile Browser / Mobile App



TRANSACTIONS BY USE CASE

Digital transactions occurring via a desktop or mobile device increased by double-digits, globally. Across the customer journey, password resets, detail changes, and payments transactions grew the most year-over-year on a percentage basis.

		Growth YOY
New Account Creations	1.1B	+13% ▲
Logins	67B	+14% ▲
Payments	15B	+20% ▲
Detail Changes	0.5B	+21% ▲
Password Resets	0.5B	+115% ▲

**Transactions analyzed excludes non-transaction-based events as well as transactions from organizations considered outliers based on extremely high or zero recorded reject rates*
Source: LexisNexis® Risk Solutions Cybercrime Report, 2023

Bot Attack Volumes Begin to Level Off While Human-Initiated Attacks Grew Substantially

HUMAN-INITIATED ATTACKS

Sophisticated attacks on individual online transactions typically driven by direct human interaction.

1.3B

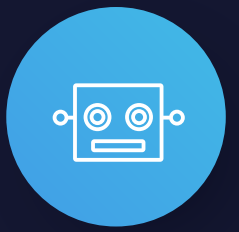
Growth YOY
+40% ▲

OVERALL ATTACK RATE

Ratio of high-risk human-initiated transactions to overall transactions.

1.5B

Growth YOY
+19% ▲



BOT ATTACKS

High velocity automated attacks that typically mass-test stolen identity credentials on a particular use case originating from a machine or series of machines.

3.6B

Growth YOY
+2% ▲

Source: LexisNexis® Risk Solutions Cybercrime Report, 2023

Attack Patterns Varied Significantly Across Regions

APAC

+20% ▲	transaction volume YOY
-5% ▼	human-initiated attacks YOY
-12% ▼	bot volume YOY
-23% ▼	attack rate YOY

EMEA

+20% ▲	transaction volume YOY
+28% ▲	human-initiated attacks YOY
+9% ▲	bot volume YOY
+6% ▲	attack rate YOY

LATAM

+15% ▲	transaction volume YOY
+20% ▲	human-initiated attacks YOY
+35% ▲	bot volume YOY
+4% ▲	attack rate YOY

North America

+12% ▲	transaction volume YOY
+66% ▲	human-initiated attacks YOY
-4% ▼	bot volume YOY
+43% ▲	attack rate YOY

Source: Data analysis from the LexisNexis® Digital Identity Network® platform, January to December 2023

By Industry, Ecommerce Was Specifically Targeted

Financial Services

- **+17% ▲** transaction volume YOY
- **+29% ▲** human-initiated attacks YOY
- **-6% ▼** bot attacks YOY
- **1.2%** attack rate YOY

Ecommerce

- **+7% ▲** transaction volume YOY
- **+80% ▲** human-initiated attacks YOY
- **+6% ▲** bot volume YOY
- **2.8%** attack rate YOY

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Source: Data analysis from the LexisNexis® Digital Identity Network® platform, January to December 2023

Fraudsters Focused On Account Takeovers, Globally

New Account Opening is critical to protect because it is truly the “front door” to an organization. However, it is also important to secure downstream points in the customer journey, such as password resets, logins and detail changes, as fraudsters are increasingly attempting account takeovers.

INDUSTRY OVERVIEW	NEW ACCOUNT CREATIONS	LOGINS	PASSWORD RESETS	DETAIL CHANGES	PAYMENTS
TRANSACTIONS	+13%	+14%	**+115%**	+21%	+20%
ATTACK RATE	9.2%	0.8%	**13.7%**	3.8%	4.2%
ATTACK RATE CHANGE	-1%	+18%	**+135%**	+232%	+13%

Source: Data analysis from the LexisNexis® Digital Identity Network® platform, January to December 2023

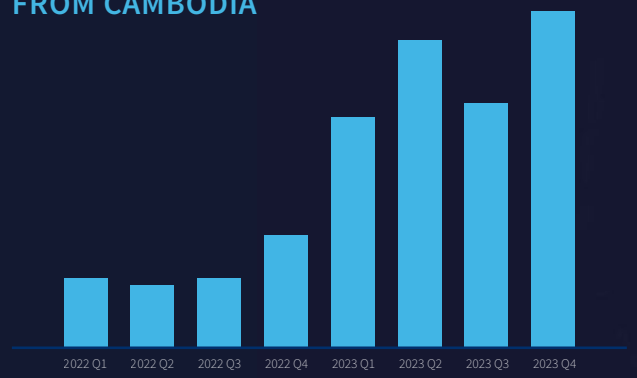
Scams Proliferate Worldwide

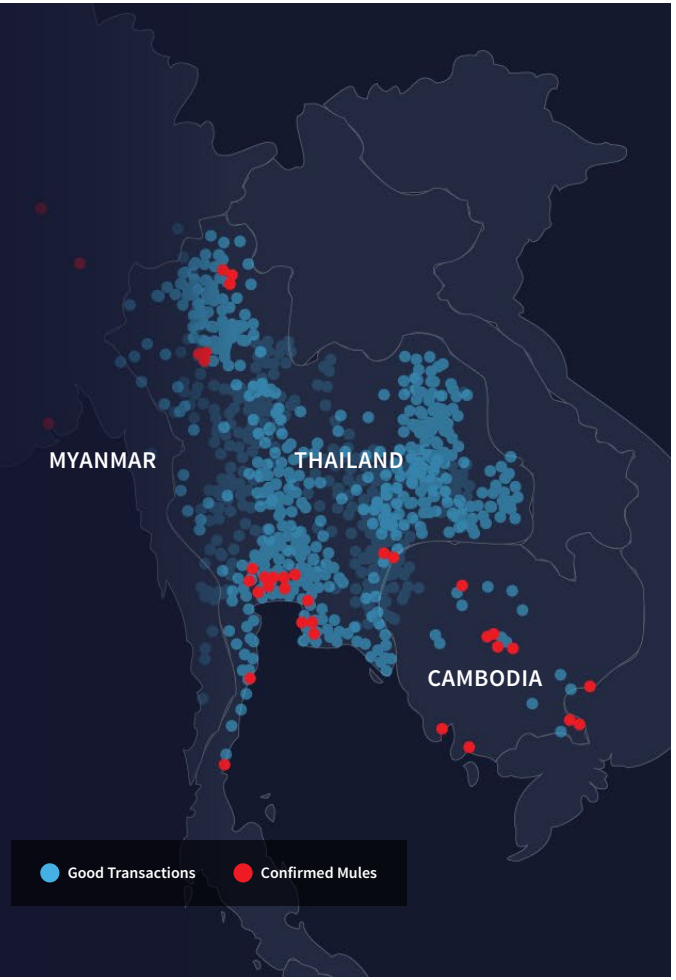
The rise in scams is coinciding with the growth of scam centers

Scam Centers

- Media reports describe organized enterprises that develop phishing sites and mobile malware, as well as call centers staffed by captive operators.
- Human trafficking groups supply the call centers with workers.
- Scam centers appear in data from Digital Identity Network, such as a clear increase in high-risk digital events coming from border areas in Cambodia and Myanmar, and in high-altitude behavioral biometrics telemetry.

CONFIRMED FRAUD ATTEMPTS FROM CAMBODIA



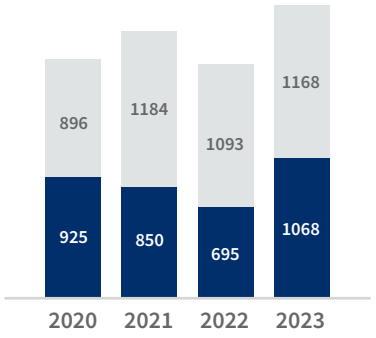


Source: LexisNexis® Risk Solutions Cybercrime Report, 2023

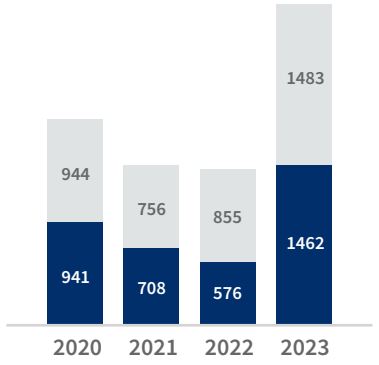
CANADIAN FRAUD TRENDS

In Canada, Average Monthly Fraud Attempts, and Successful Fraud Attempts, Surged for Financial Services and Lending

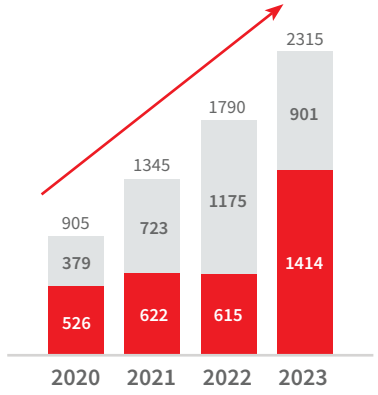
US FINANCIAL SERVICES



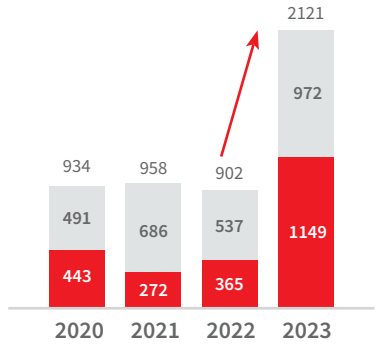
US LENDING



CANADA FINANCIAL SERVICES



CANADA LENDING



Avg. # of Prevented Monthly Fraud Attacks

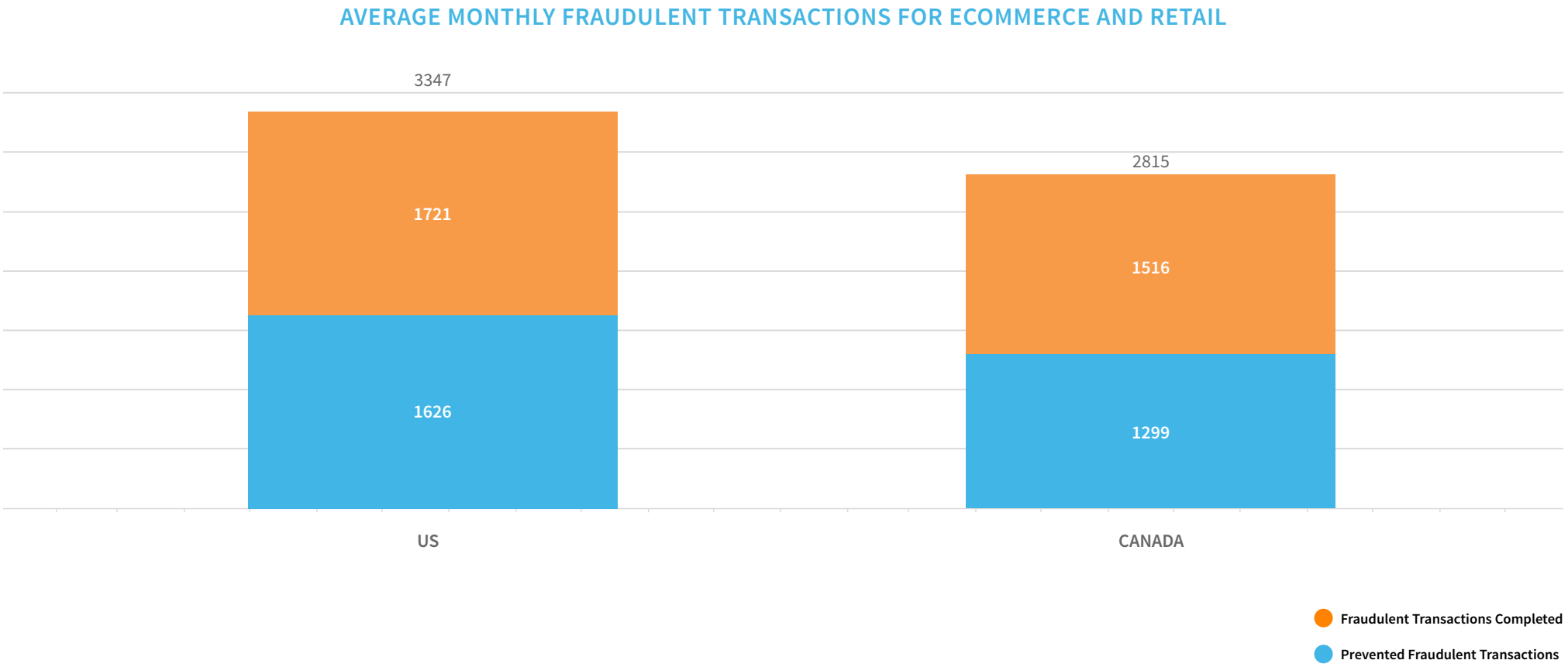
Avg. # Successful Monthly Fraud Attacks (US)

Avg. # Successful Monthly Fraud Attacks (Canada)

Questions: In a typical month, approximately how many fraudulent transactions does your company prevent? In a typical month, approximately how many fraudulent transactions are successfully completed at your company?

Source: 7th Annual LexisNexis® True Cost of Fraud™ Study: Financial Services and Lending Report, 2023

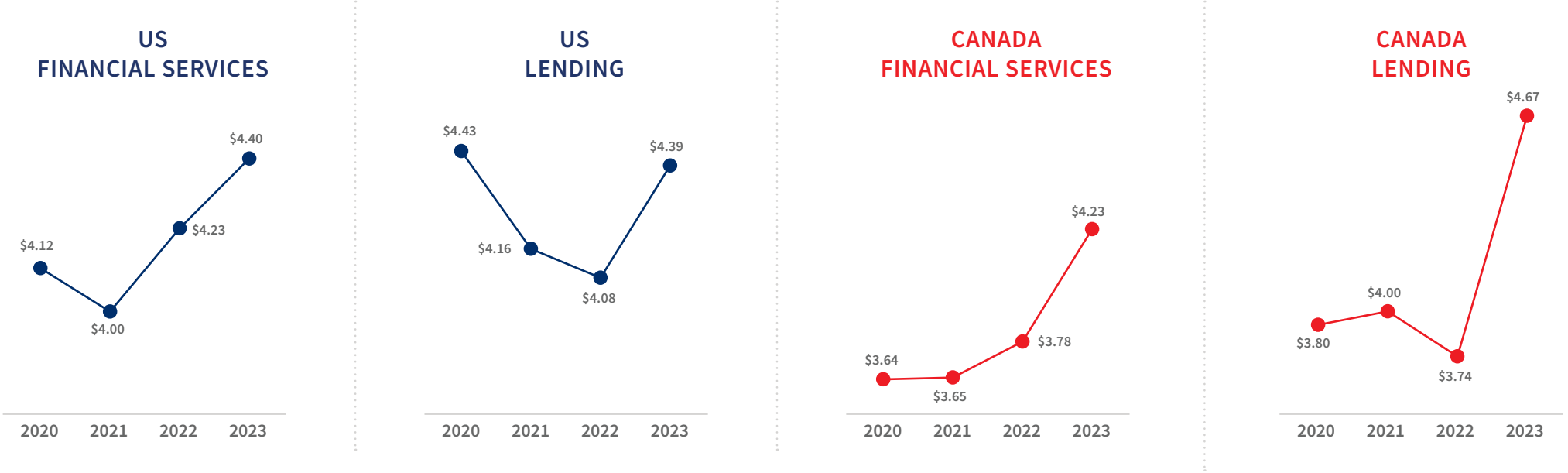
Ecommerce/Retail Average Monthly Fraud Attempt Volume Exceeded Financial Services/Lending Volumes



Source: 2023 LexisNexis® True Cost of Fraud™ Study: Ecommerce and Retail Report

The Cost to Address Fraud Attempts Increased Substantially

The actual cost to address fraud events exceeds the fraud loss, considering additional costs such as labor/investigation, underwriting, legal fees, and other costs. Therefore, the total cost of fraud is expressed by saying that for every $1 of lost value due to fraud, the actual cost is higher based on a multiplier representing these additional costs. In Canada, the LexisNexis® Fraud Multiplier™ variable grew by almost $1 for lending organizations, and by $0.45 for financial services year-over-year.



Source: 7th Annual LexisNexis® True Cost of Fraud™ Study: Financial Services and Lending Report, 2023

Canadian Firms Were Twice as Likely as United States Firms to Report a Year-Over-Year Fraud Increase of 21% or More

FASTEST GROWING FRAUD TYPES

Canadian Financial Services

- **73%** Overall Fraud
- **68%** Scams
- **68%** Card-Testing Fraud

Canadian Lending

- **62%** Fraud that Targets Mobile Transactions
- **59%** Friendly Fraud
- **59%** Digital Wallet Fraud

Question: In the past 12 months, has your company detected less, more, or an equal amount of the following types of online fraud compared to the last year?

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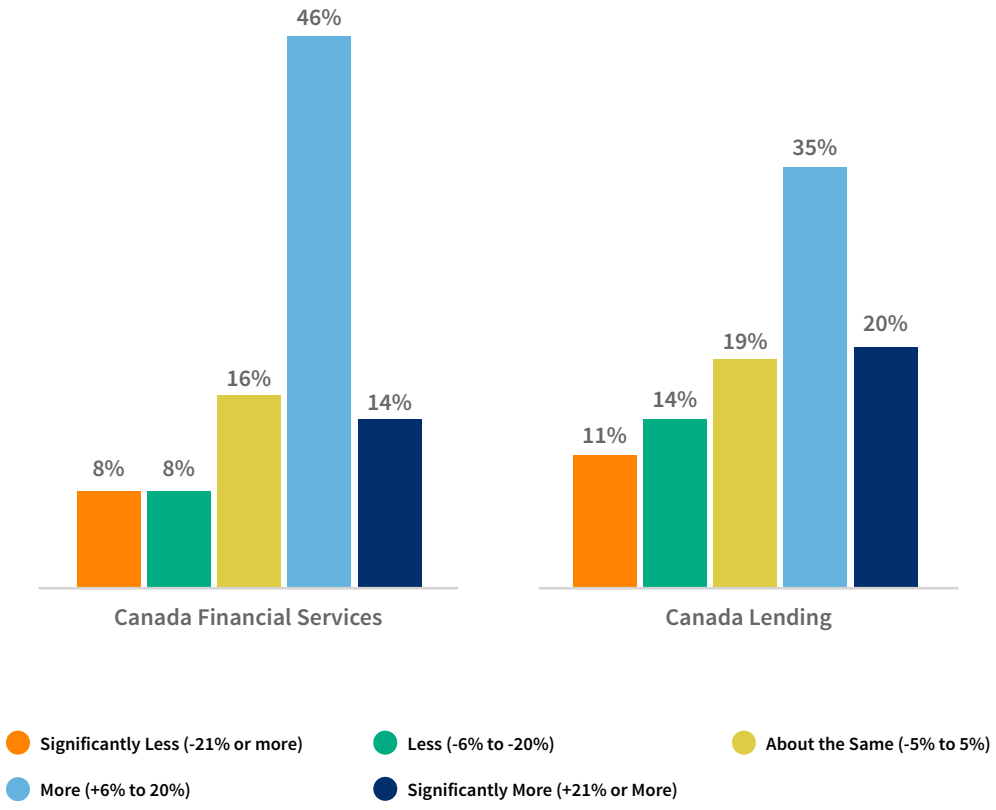
Percentages indicate the percent of respondents that noted an increase YOY.
Source: 7th Annual LexisNexis® True Cost of Fraud™ Study: Financial Services and Lending Report, 2023

55-60% of Fraud Executives Noted an Increase in Scams

RATE OF INCREASE OF AUTHORIZED TRANSFER SCAMS



~1/3 of Fraud Losses Attributed to Scams

Across Financial Services and Lending within Canada and the US

Source: 7th Annual LexisNexis® True Cost of Fraud™ Study: Financial Services and Lending Report, 2023

New Account Opening Represented the Majority of Fraud Losses

NEW ACCOUNT CREATIONS

Represented **47% of financial services fraud losses** and 43% of lending fraud losses, up from 38% and 39% in 2022, respectively.

LOGINS

Approximately one-third of fraud losses across financial services and lending occurred at login.

DISTRIBUTION OF FUNDS

21% of financial services fraud losses occurred at Distribution of Funds, down from 32% in 2022.

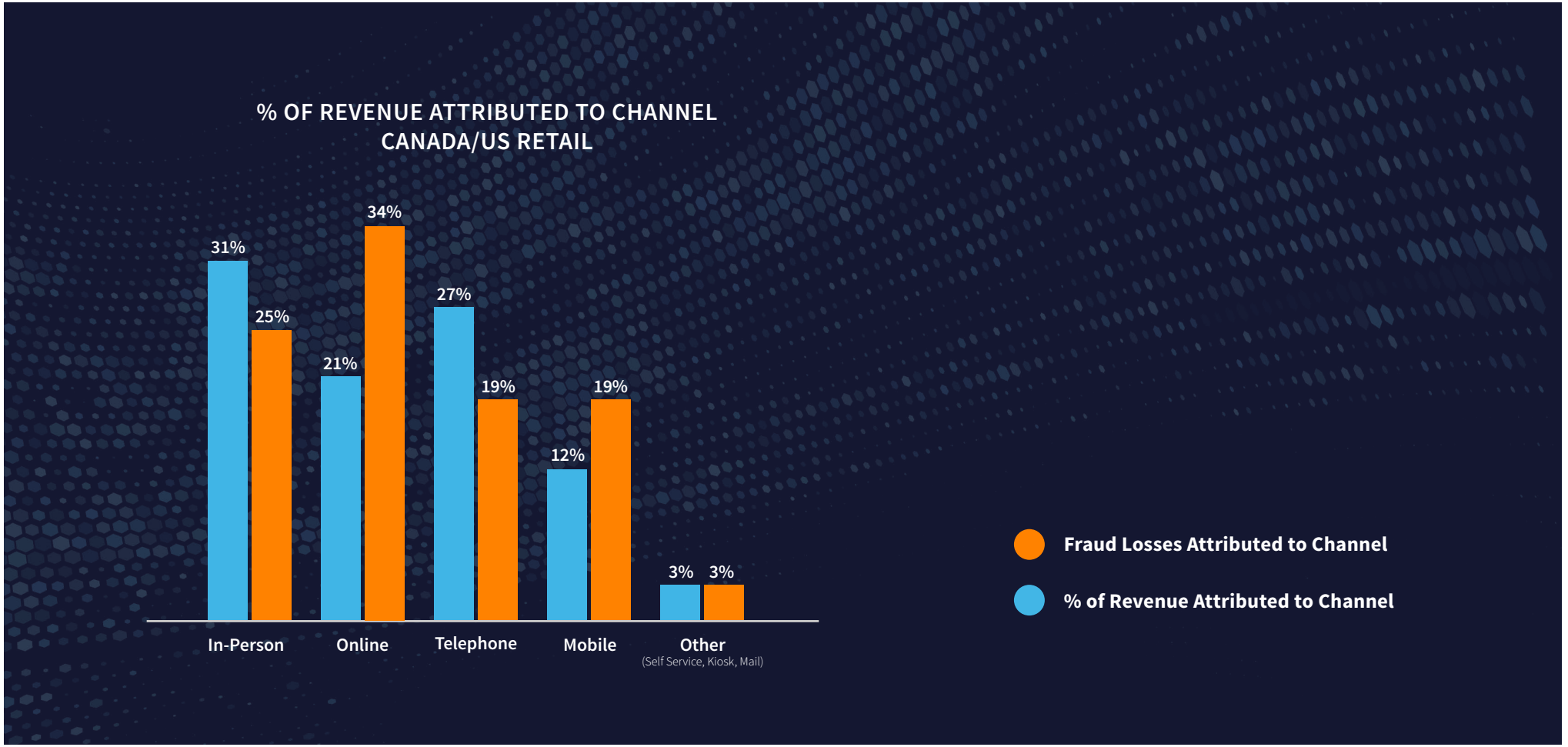
Source: 7th Annual LexisNexis® True Cost of Fraud™ Study: Financial Services and Lending Report, 2023


FRAUD TRENDS
ACROSS CHANNELS
5647./99
4096.56
2765.31
2147.54

The Online Channel Represents a Disproportionate Percentage of Fraud Losses for Financial Services...

Source: 7th Annual LexisNexis® True Cost of Fraud™ Study: Financial Services and Lending Report, 2023

...This is True for Retail As Well



Source: 2023 LexisNexis® True Cost of Fraud™ Study: Ecommerce and Retail Report

Digital Transactions Increased Significantly in Canada With Most Transactions Occurring Via a Mobile Device

TRANSACTIONS PROCESSED

9.7B

Growth in Transactions YOY
+21% ▲

TRANSACTION BREAKDOWN

Desktop / Mobile

MOBILE TRANSACTION BREAKDOWN

Mobile Browser / Mobile App

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Source: Data analysis from the LexisNexis® Digital Identity Network® platform, January to December 2023

Human-Initiated Attacks and Bot Attacks Grew Double-Digits, Exceeding Global Growth Averages

HUMAN-INITIATED ATTACKS

Sophisticated attacks on individual online transactions typically driven by direct human interaction.

ATTACK VOLUME

129M

Growth YOY

+63% ▲

AUTOMATED BOT ATTACKS

High velocity automated attacks that typically mass-test stolen identity credentials on a particular use case originating from a machine or series of machines.

ATTACK VOLUME

296M

Growth YOY

+18% ▲

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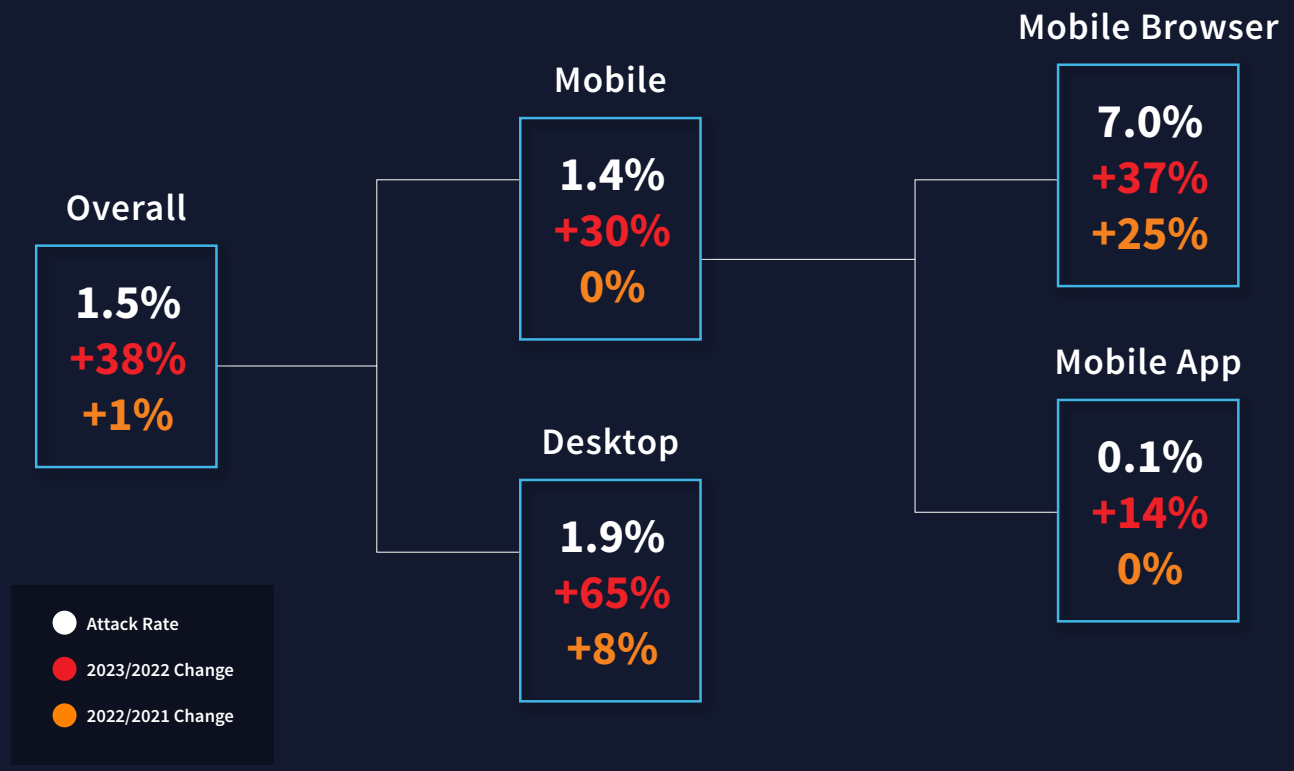
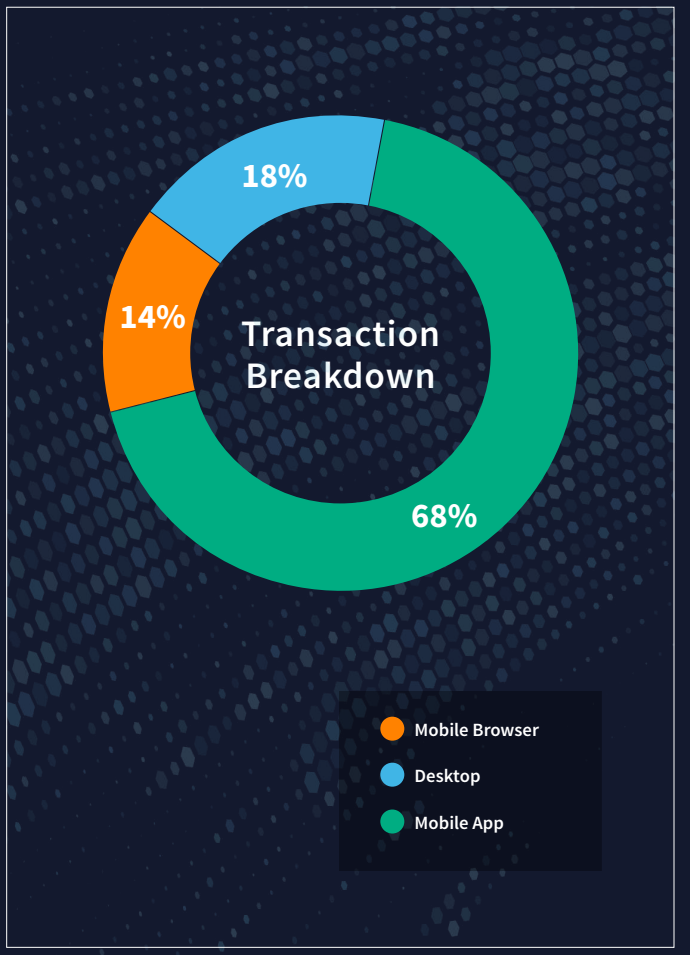
Source: Data analysis from the LexisNexis® Digital Identity Network® platform, January to December 2023

Attack Rates Grew By Double-Digits Across Channels, Substantially More Than the Prior Year

The attack rates across channels increased significantly in 2023 compared to 2022. Mobile browser continues to have the highest attack rate at 7.0%, with 14% of Canadian transactions being processed through the mobile browser channel. The mobile app channel processed the most transactions (68% of all Canadian transactions) and had the lowest attack rate of 0.1%.





Source: Data analysis from the LexisNexis® Digital Identity Network® platform, January to December 2023

Similar to Global Trends Fraudsters Shifted Towards Account Takeover and Cashing Out

INDUSTRY OVERVIEW	NEW ACCOUNT CREATIONS	LOGINS	PASSWORD RESETS	DETAIL CHANGES	PAYMENTS
TRANSACTIONS	+9%	+21%	+82%	**+101%**	**+26%**
ATTACK RATE	-5%	+200%	+106%	**+44%**	**+28%**
ATTACK RATE CHANGE	5.6%	0.2%	9.0%	**5.9%**	**7.1%**
GLOBAL ATTACK RATE (COMPARISON)	9.2%	0.8%	13.7%	**3.8%**	**4.2%**

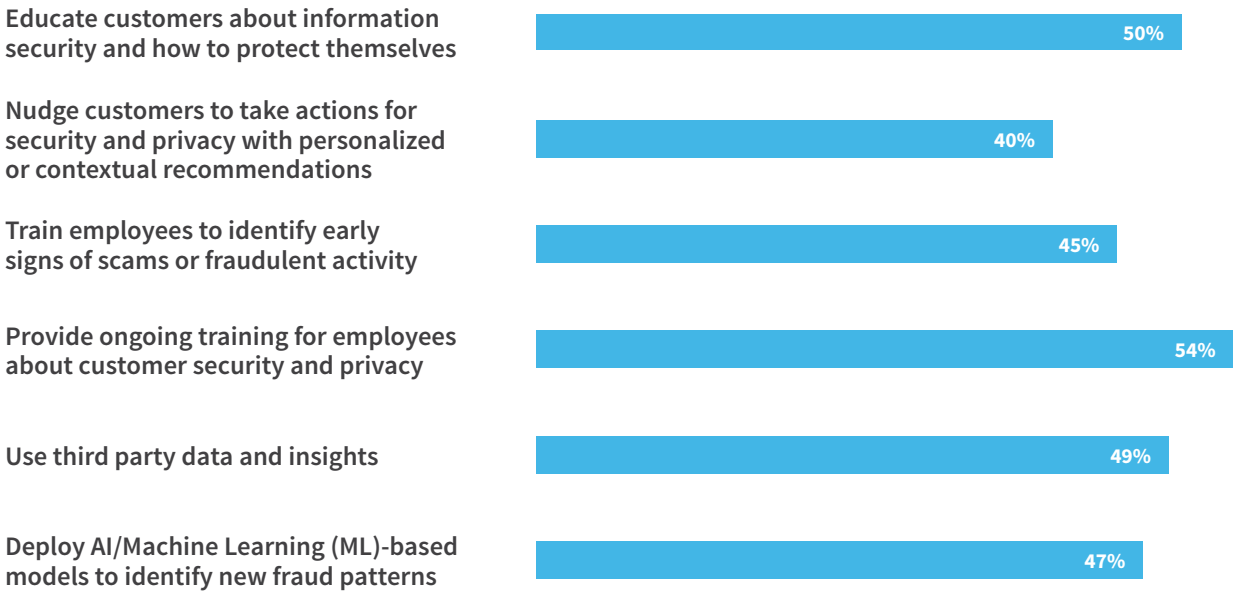
Source: Data analysis from the LexisNexis® Digital Identity Network® platform, January - December 2023


PROTECTING
YOUR CUSTOMER

LexisNexis® True Cost of Fraud™ Study Respondents Shared Their Efforts to Mitigate Scams

Canadian firms most commonly report that they work to educate customers and provide ongoing employee training to help mitigate scams.

DISTRIBUTION OF ANTI-SCAM INITIATIVES



Source: 7th Annual LexisNexis® True Cost of Fraud™ Study: Financial Services and Lending Report, 2023

Implementing a Smart Practice Approach Significantly Reduced the Cost to Address Fraud and Successful Fraud Attempts

LexisNexis Fraud Multiplier™

$4.88
1,241*

NOT USING SMART PRACTICE APPROACH

- ✓ Verify physical attributes
- • (Limited to None) Solutions to verify digital attributes
- • (Limited to None) Solutions assess device risk, location
- • (Limited to None) Solutions to assess behavior

$4.35
1,344*

FULLY USING SMART PRACTICE APPROACH

- ✓ Verify physical attributes
- ✓ Focus on optimizing fraud risk-to-friction
- ✓ Verify digital attributes (e.g., email, biometrics)
- ✓ Solutions to assess device risk, location (e.g., device ID, geolocation)
- ✓ Solutions to assess behavior

**Average # of Prevented Fraud Attacks Per Month*
Source: 7th Annual LexisNexis® True Cost of Fraud™ Study: Financial Services and Lending Report, 2023

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About LexisNexis Risk Solutions

LexisNexis® Risk Solutions harnesses the power of data, sophisticated analytics platforms and technology solutions to provide insights that help businesses across multiple industries and governmental entities reduce risk and improve decisions to benefit people around the globe. Headquartered in metro Atlanta, Georgia, we have offices throughout the world and are part of RELX (LSE: REL/NYSE: RELX), a global provider of information-based analytics and decision tools for professional and business customers. For more information, please visit www.risk.lexisnexis.com and www.relx.com.

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