LexisNexis® Risk Solutions 2018 True Cost of Fraud℠ Study

Lending Edition

September 2018

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The LexisNexis® Risk Solutions 2018 True Cost of Fraud℠ Study helps **lenders** grow their business safely even with the growing risk of fraud.

The research provides snapshots of current fraud trends in the United States and spotlights key pain points that lenders should be aware of as they add new **transaction and account opening** mechanisms, as well as continuing to expand in the online and mobile channels.

How do I navigate and manage the cost of fraud while strengthening customer trust and loyalty?

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The study included a comprehensive survey of 186 risk and fraud executives in **lending** institutions.

Fraud Definitions

- Fraud is defined as the following:
  - Fraudulent transactions due to identity fraud, which is the misuse of stolen payments methods (such as credit cards) or personal information
  - Fraudulent requests for refunds/returns, bounced checks
  - Fraudulent applications (i.e., purposely providing incorrect information about oneself, such as income, employment, etc.)
  - Account takeover by unauthorized persons.
  - Use of accounts for money laundering.
- This research covers consumer-facing retail fraud methods
  - Does not include insider fraud or employee fraud
- The LexisNexis Fraud Multiplier℠ cost
  - The total amount of costs related to fees, interest, merchandise replacement and redistribution per dollar of fraud for which the merchant is held liable.

Research was conducted March – May 2018.

Lending Institutions Include:

Auto Lenders

Finance Companies

Mortgage Companies

Non-Bank Credit Card Issuer

Non-Bank Personal Loan Issuer

Digital segments are defined as:

Small/Mid Digital

Earns < $50 million in annual revenues; 50% or more through the online and/or mobile channels.

Large Digital

Earns $50 million+ in annual revenues; 50% or more through the online and/or mobile channels.

	Annual Revenue Size/Digital			Online Marketplace Lenders (100% digital)	Type of Firm	
	Small/Mid Digital (<$50M)	Large Digital ($50M+)	Non-Digital		Credit & Lending	Mortgage
# Completions	35	48	103	25	133	53

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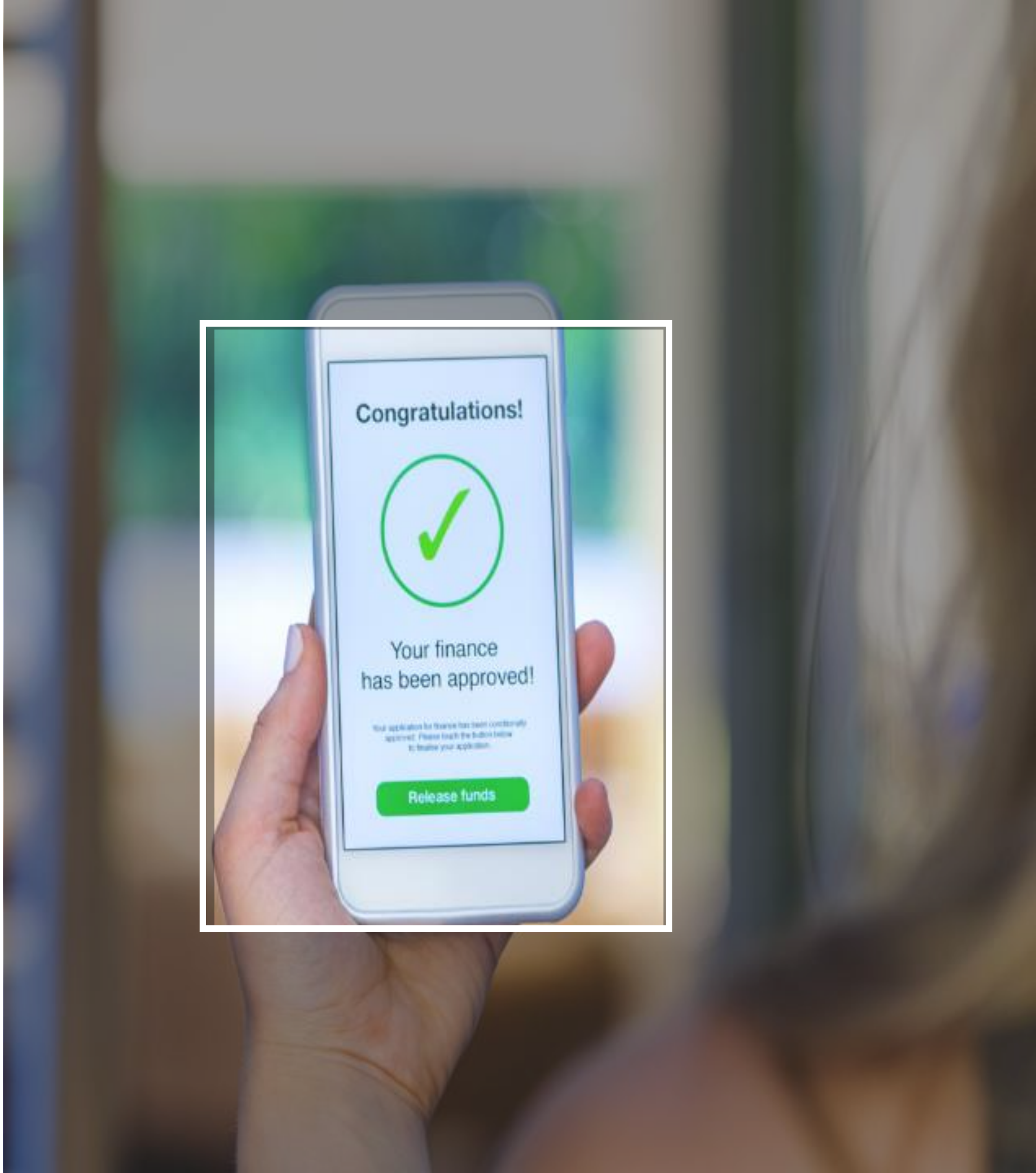
Executive Summary: Key Findings



Key Findings

1

The cost and challenge of fraud continues to grow among US lenders.

- The average cost of fraud has risen 8.1% across lenders since 2017.
- Every $1 of fraud now costs these firms $3.05 compared to $2.82 last year.
- And, the level of fraud as a percentage of revenues has moved upwards (1.61% to 1.92% on average).
- This continues to cause a majority of lenders to feel that fraud is inevitable.

2

Both lenders and mortgage firms are experiencing high fraud volumes and costs.

- While lenders have more average monthly fraud attempts than mortgage firms, both are battling sizeable volumes and high fraud costs.
- Every $1 of fraud costs lenders $3.01; for mortgage firms, it is $3.07.
- And, identity fraud – including synthetic identities – accounts for just over half of fraud losses for lenders and mortgage firms.

3

But it is large digital lenders who continue to be hit harder with fraud costs and face difficulties with identity verification.

- Every $1 of fraud costs large digital lenders an average of $3.37, which is up from $3.07 in 2017 – and higher than non-digital firms ($3.10). This includes the lost transaction face value for which firms are held liable, plus fees/interest, fines, legal fees, labor for investigation, and external costs for expense recovery.
- Over half of large digital lenders' fraud continues to result from identity fraud (including synthetic identities). And identity verification remains the key challenge with both the online and mobile channels.

Key Findings (cont.)

4

Large digital *creditors* are feeling the pain of fraud more than others, in part due to the mobile channel.

- Large digital creditors experience a higher cost of fraud than digital mortgage firms of the same size ($3.47 for every $1 of fraud vs. $3.27).
- They are also victim to nearly 2x as many fraud attempts as mortgage firms.
- The mobile channel is driving much of this, with higher fraud through mobile web browsers and mobile apps; identity verification is citied as the top challenge with the mobile channel.
- This aligns with most large digital creditors being concerned about fraud risk from mobile devices.

5

Transacting internationally increases fraud risks and costs even more for larger digital lenders.

- Large digital lenders with international transactions experience on average 40% of fraud losses from business dealings outside the US.
- Over half of fraud losses can be attributed to identity theft; debit transactions account for the single largest source of fraud by transaction method.
- As a result, the LexisNexis Fraud Multiplier℠ is higher for this segment than for other large digital lenders ($3.59 vs. $3.07).

6

Online marketplace lenders*, while experiencing a lower cost of fraud, still face challenges.

- Online marketplace lenders (100% digital) tend to be small/mid (<$50M).
- Fraud tends to result from credit and debit transactions, through the online channel.
- Customer identity verification is a key online challenge for them, even though they use an average of 5 solutions, including some more advanced ones.
- Balancing the speed of verification with the risk of customer friction is more challenging for them than for other digital lenders.
- Their fraud costs are lower, but still high at $2.96 for every $1 of fraud.

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Key Findings (cont.)

7

Digital lenders may not be fighting fraud optimally.

- Large digital lenders continue to be more likely to track fraud costs and transactions by both channel and payment method.
- They also continue to use an automated flagging system combined with an average of 6.3 fraud mitigation solutions.
- However, they are still conducting as many manual reviews and experiencing the same level of false positives as in 2017.
- This suggests that large digital lenders have not found the right combination of solutions to meet their specific fraud risks.

8

Findings show that using the right combination of tools is crucial to combatting fraud risks and cost.

- Survey findings show that those who layer solutions by identity authentication and transaction/ identity verification experience:
  - fewer fraud costs; and
  - fewer false positives.

1

The cost and challenge of fraud continues to grow among US lenders.

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The cost of fraud for lenders has risen by 8.1% since 2017.

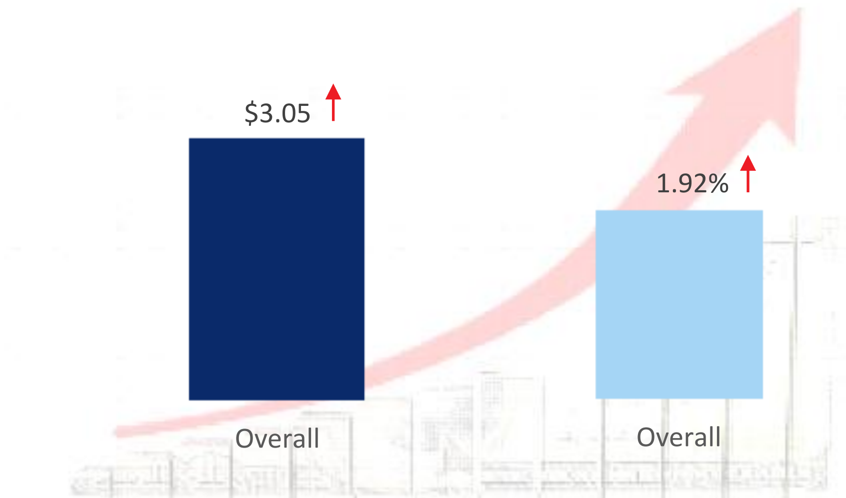
For every $1 of fraud, it costs lenders $3.05 compared to $2.82 last year.

Fraud costs are comprised of losses related to the transaction face value for which firms are held liable, plus fees/interest incurred during application/underwriting/processing stages, fines and legal fees, labor/investigation, and external recovery expenses.

As a result of the growth in these costs, a majority of lenders continue to feel that fraud is inevitable.

LexisNexis Fraud Multiplier℠

Fraud Costs as a % of Annual Revenues



Fraud Perceptions (% 4 and 5 on 5 point scale)

	LexisNexis Fraud Multiplier℠	Fraud Costs as a % of Annual Revenues	Fraud is inevitable
2017	$2.82	1.61%	70%

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Q16: In thinking about the total fraud losses suffered by your company, please indicate the distribution of various fraud costs over the past 12 months.
Q10: What is the approximate value of your company's total fraud losses over the past 12 months, as a % of total revenues?

↑ Significantly different than 2017 within Segment

2

Both lenders and mortgage firms are experiencing high fraud volumes and costs.

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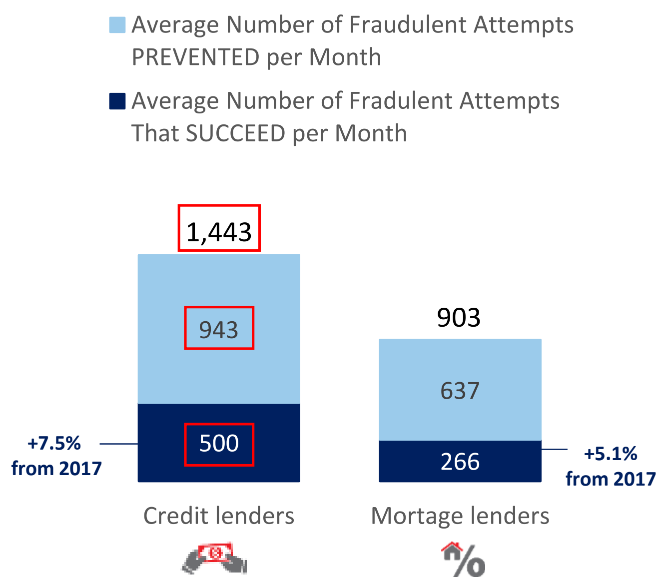
Overall, the average monthly volume of successful and prevented fraud transactions among credit lenders remains significantly higher than that of mortgage lenders.

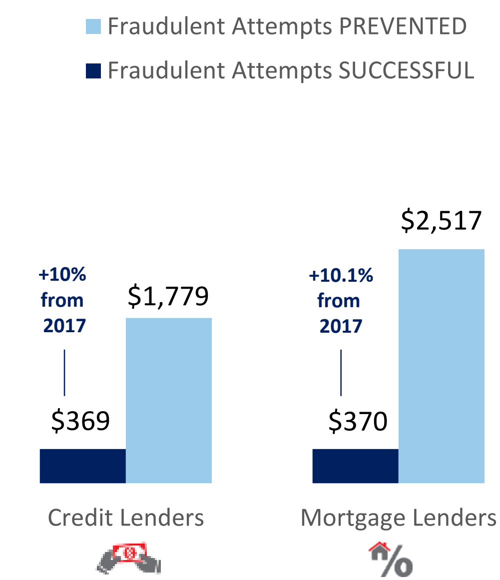
Although the volume of fraud is greater for credit lenders, the percentage of prevented vs. successful fraud transactions between credit and mortgage lenders is similar (as is the average value of successful fraud).

Avg. # of Total Fraud Attempts Per Month



2017 TOTAL	1,362	851
Avg. # Prevented	897	598
Avg. # Successful	465	253
% Successful	34%	30%

Average $ Amount Per Fraud Transactions per Month



$329	$1,588		$334	$2,339	2017 TOTAL

Q22: In a typical month, approximately how many fraudulent transactions are prevented by your company?
Q23: What is the average value of such a transaction?
Q24: In a typical month, approximately how many fraudulent transactions are successfully completed?
Q25: What is the average value of such a transaction?

Significantly different from other segment within category at the 95% Confidence Interval

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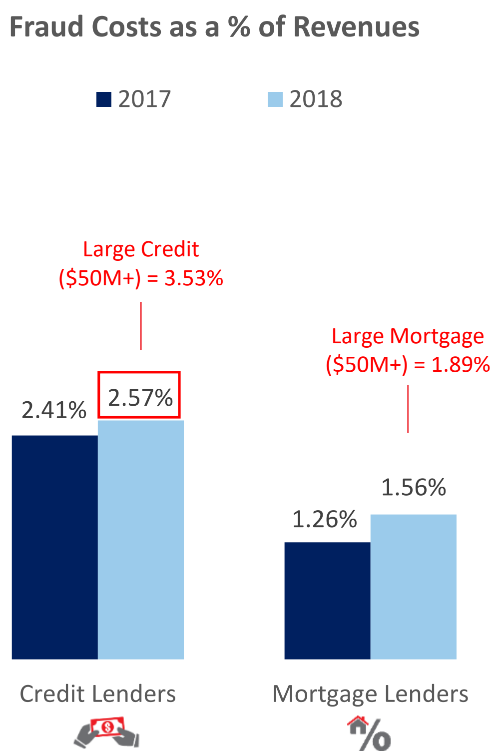
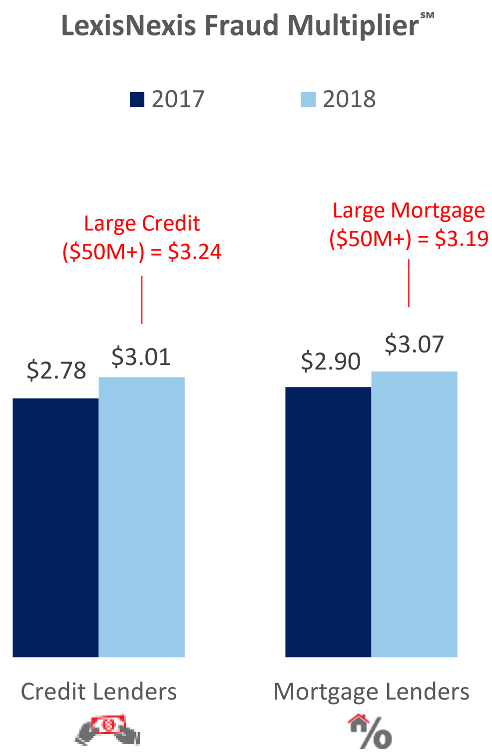
While the cost for every $1 of fraud is similar between credit and mortgage lenders ($3.01 vs. $3.07), bottom-line negative impact remains higher for credit lenders at 2.57% of revenues.





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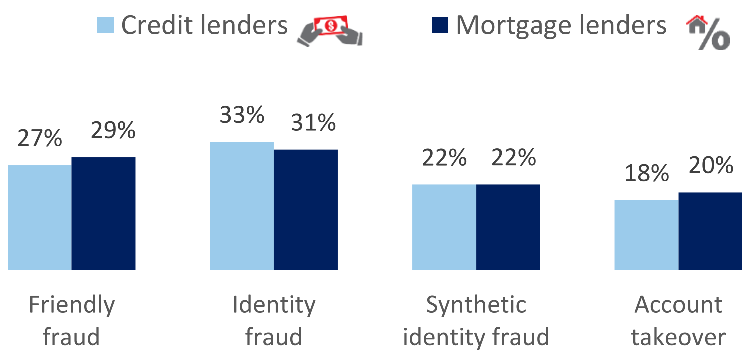
Q10: What is the approximate value of your company's total fraud losses over the past 12 months, as a % of total revenues?
Q16: In thinking about the total fraud losses suffered by your company, please indicate the distribution of various fraud costs over the past 12 months.

Significantly different from other segment within category at the 95% Confidence Interval

The distribution of fraud losses remains similar between credit and mortgage lenders.

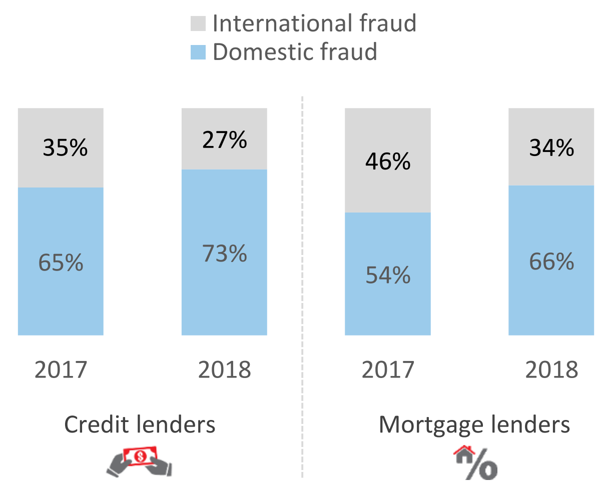
Though credit lenders remain more likely that mortgage lenders to track fraud costs by both channel and transaction method, more mortgage lenders are tracking both of these methods this year than compared to last.

% Distribution of Fraud Losses by Method

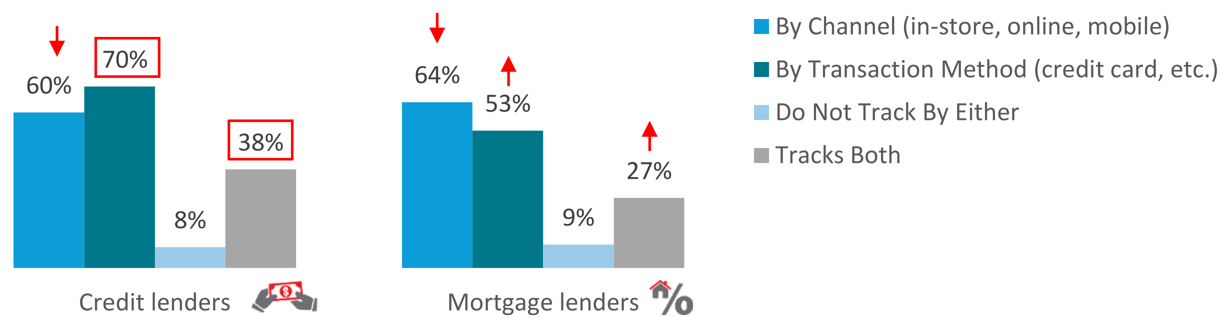


2017 TOTAL	21%	25%		30%	26%		25%	25%		21%	24%

% Distribution of Fraud Losses by Geography



% Tracking Fraud Costs by Channel & Transaction Method



2017 TOTAL	72%	62%	7%	42%	87%	30%	0%	17%

Significantly different from 2017 within segment at the 95% Confidence Interval

Q12: Please indicate the percentage distribution of the following fraud methods as attributed to your total annual fraud loss over the past 12 months.
Q13: Please indicate the percent of fraud costs generated through domestic orders compared to international orders in the last 12 months.
Q14: Does your company track the cost of fraudulent transactions by channels or methods?

Significantly different from other segment within category at the 95% Confidence Interval

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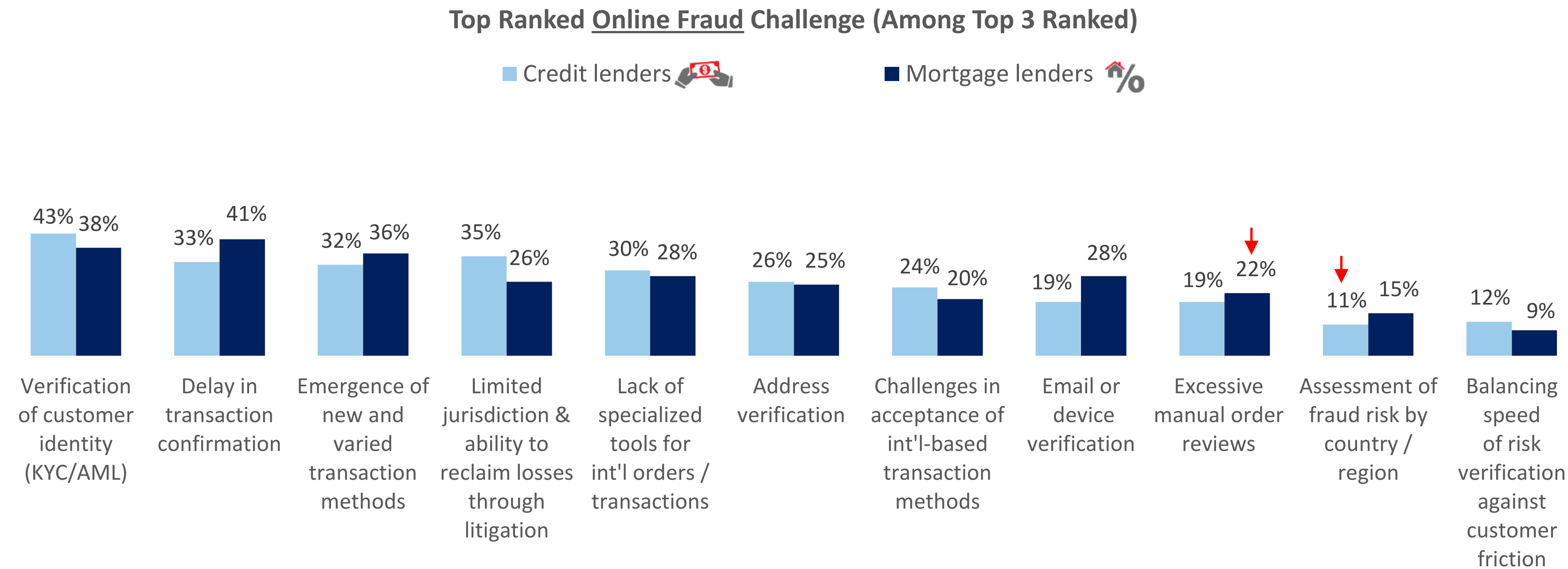
Credit and mortgage lenders continue to have similar online fraud challenges, with identity verification among the top 2.



2017 TOTAL	39%	35%	29%	32%	23%	33%	40%	27%	31%	34%	31%	27%	24%	19%	21%	37%	18%	32%	22%	21%	

Significantly different from 2017 within segment at the 95% Confidence Interval

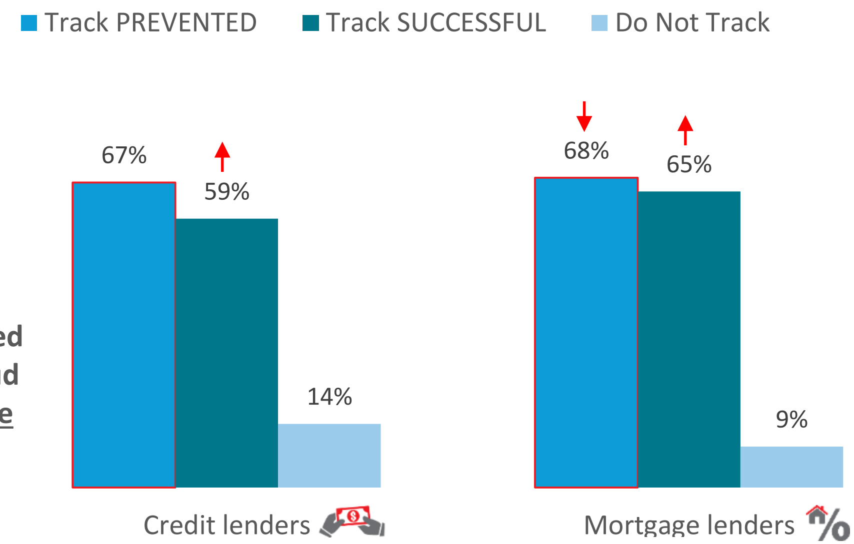
Q20: Please rank the top 3 challenges related to fraud faced by your company when serving customers in the Online Channel.

More credit and mortgage lenders are tracking successful fraud by transaction type compared to last year.

But mortgage lenders are significantly more likely than credit lenders to track success fraud by both transaction type and channel.

Both credit and mortgage lenders remain less likely to track prevented fraud by channel.

% Tracking Prevented and Successful Fraud by Transaction Type

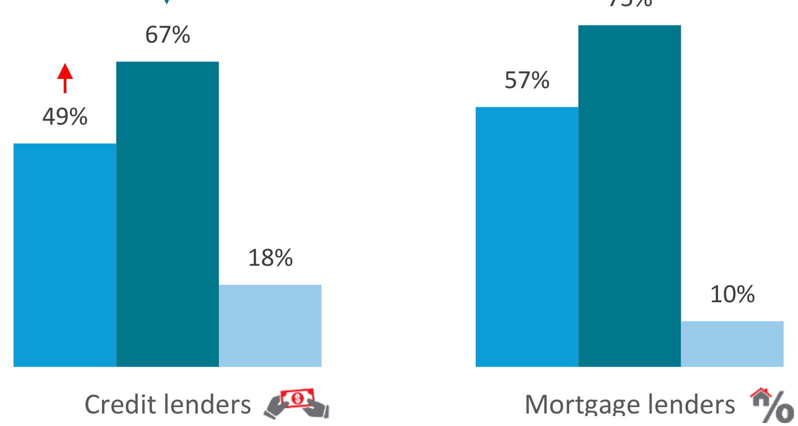


	Credit lenders			Mortgage lenders		
2017 TOTAL	67%	39%	19%	78%	51%	3%

Tracks Both=40%

Tracks Both=57%

% Tracking Prevented and Successful Fraud by Channel



	Credit lenders			Mortgage lenders		
2017 TOTAL	29%	63%	24%	55%	77%	4%

Significantly different from 2017 within segment at the 95% Confidence Interval

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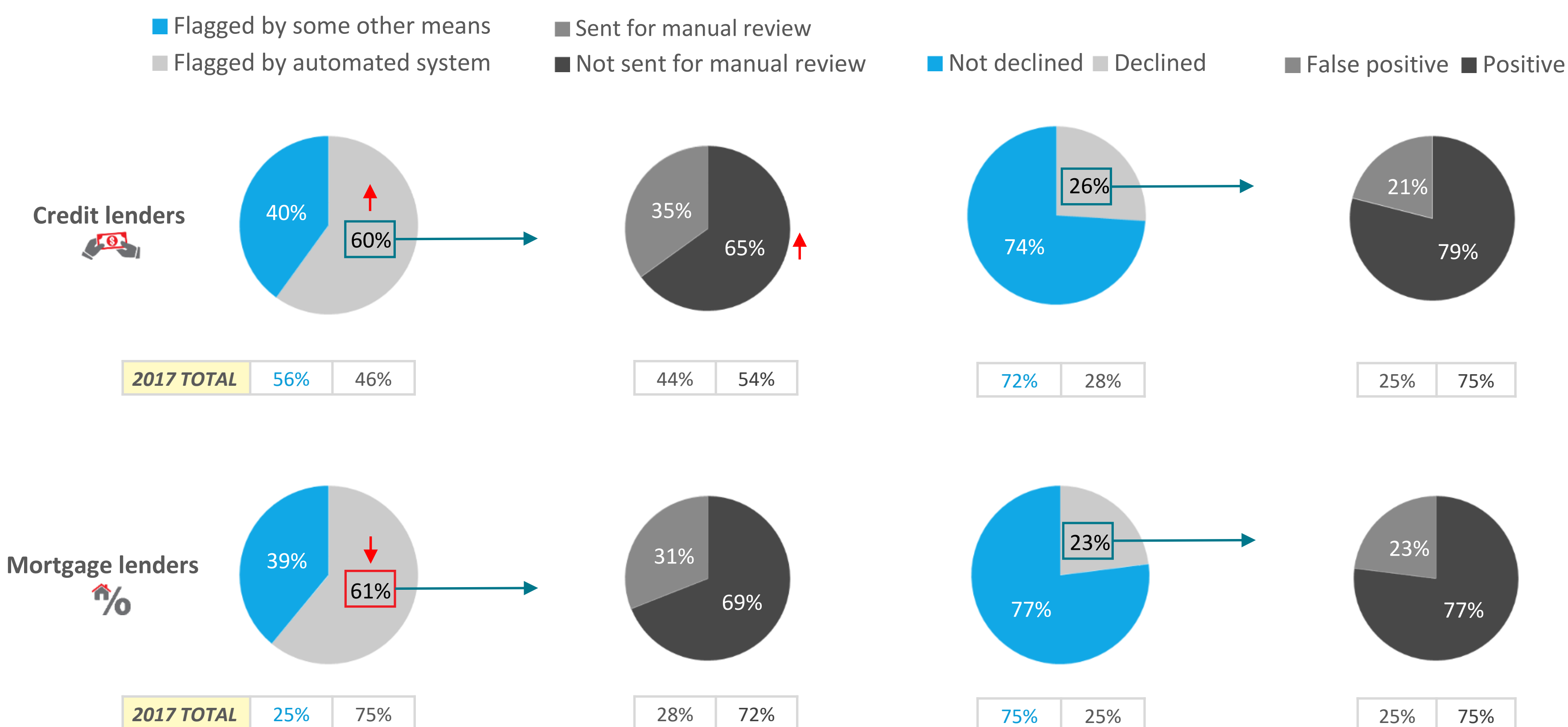
Q26a: Does your company track prevented vs. successful transactions by type or channel?

Credit lenders are on par with mortgage lenders this year for use of an automated flagging system and they've seen a decline in the number of manual reviews.

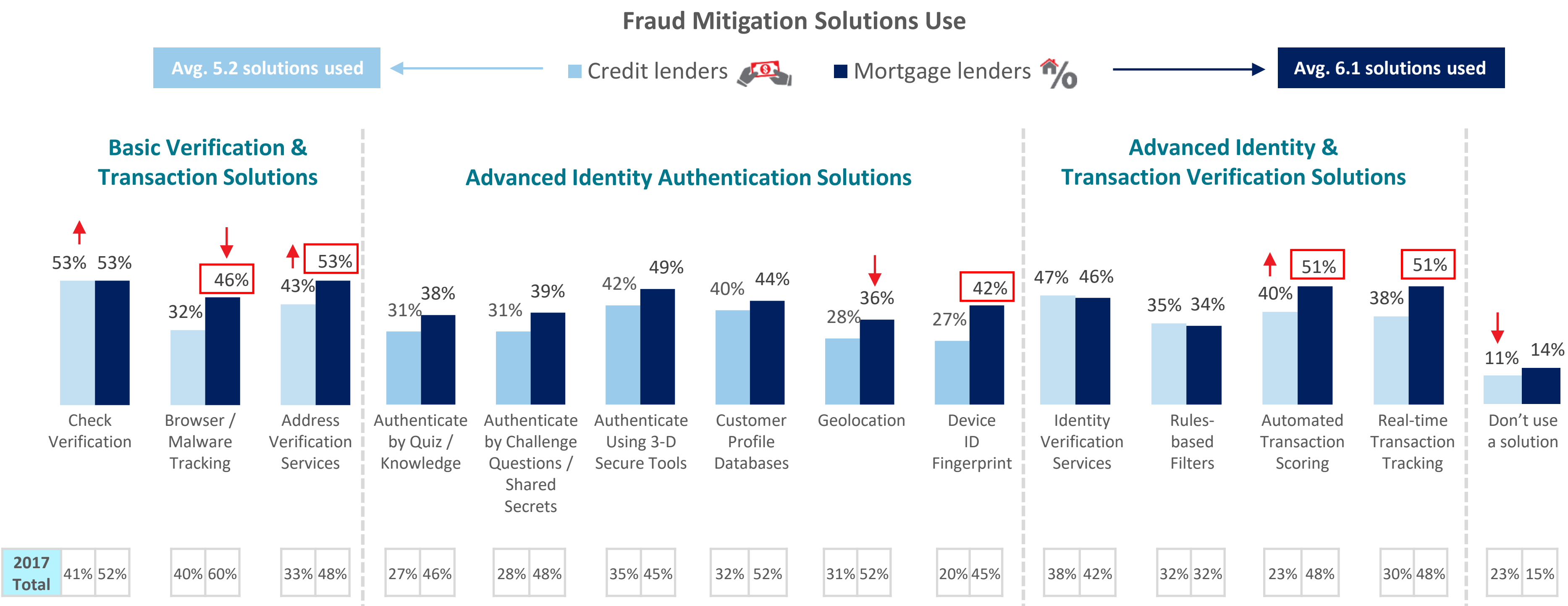
Volumes of manual reviews, declined transactions, and false positives are similar between lender types.



Significantly different from 2017 within segment at the 95% Confidence Interval

Q36: Of all the transactions your company flagged as potentially fraudulent in the past 12 months, what percentage was flagged by your automated system? Q37: Of this (…), what proportion are sent for manual review? Q38: What percentage of transactions that your company initially flags as potentially fraudulent are ultimately declined? Q39: What percentage of declined transactions turned out to be false positives?

Mortgage lenders continue to use more solutions than credit lenders, including more advanced identity authentication and transaction verification ones.



Significantly different from 2017 within segment at the 95% Confidence Interval

Q27: Which of the following best describes your awareness and use of the fraud solutions listed?

Significantly different from other segment within category at the 95% Confidence Interval

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3

But it is large digital lenders who continue to be hit harder with fraud costs and face difficulties with identity verification.

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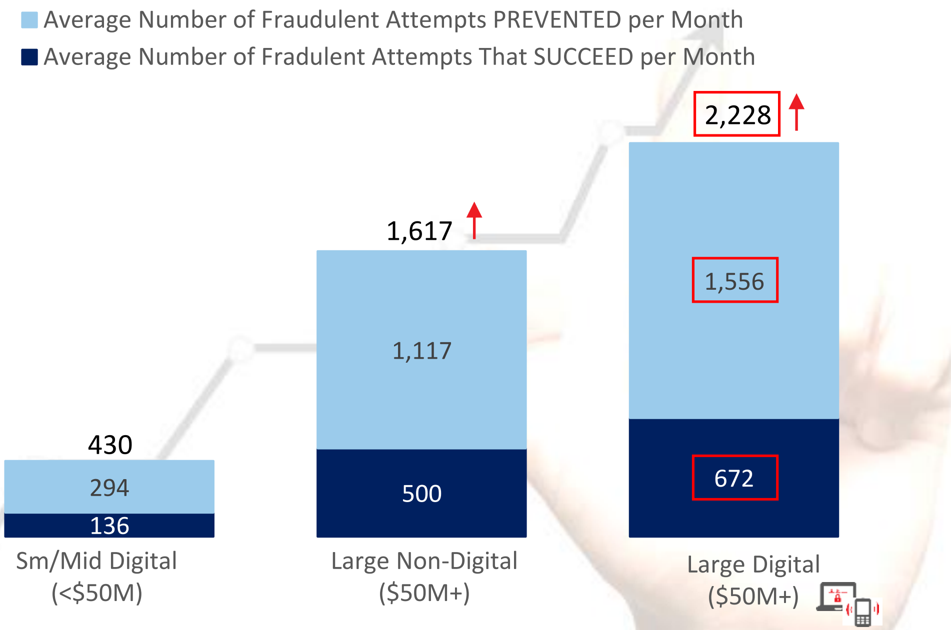
The volume of fraud attempts continues to grow, especially for larger digital lenders.

Successful fraud volume for these large digital lenders has grown ~32% since 2017 vs. single-digit growth for non-digital lenders of the same size.

While speed of approval is a major benefit to consumers who apply for credit and loans online, it's also an opportunity for fraudsters. Whether using stolen or synthetic identities to gain credit or commit loan stacking, many fraudsters are able to hit several creditors at once and get approved before the others obtain credit and activity reports.

Avg. # of Total Fraud Attempts Per Month



	Sm/Mid Digital	Large Non-Digital	Large Digital
2017	413	1,458	1,959
Avg. # Prevented	284	996	1,458
Avg. # Successful	129	462	508

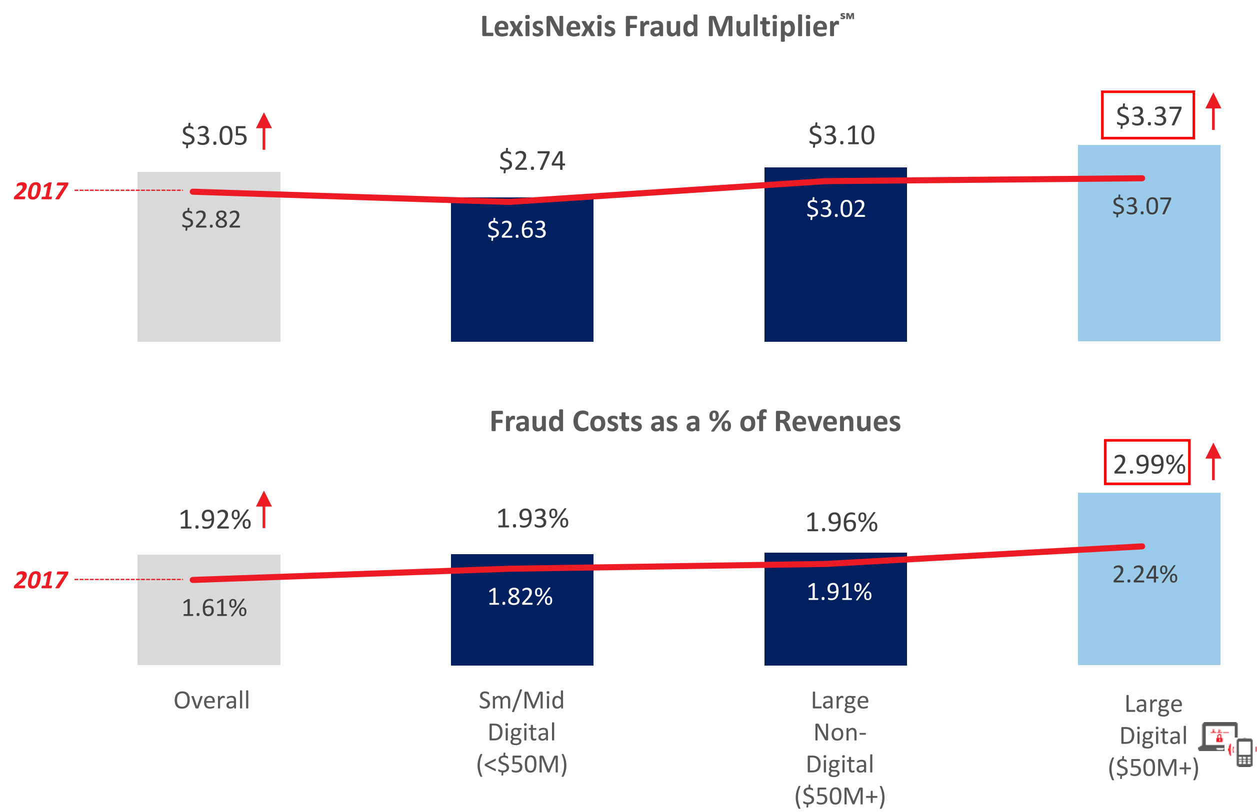
Q22: In a typical month, approximately how many fraudulent transactions are prevented by your company?
Q24: In a typical month, approximately how many fraudulent transactions are successfully completed at your company?

Significantly different from other segments within category at the 95% Confidence Interval

Significantly different than 2017 within Segment

This results in higher fraud costs for large digital lenders, with the LexisNexis Fraud Multiplier℠ increasing by 9.8% since 2017.

For every $1 of fraud, it costs large digital lenders $3.37 compared to $3.10 for non-digital firms of the same size. There has been an increase among small/mid digital lenders as well, but to a much lesser degree.



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Q20: Please rank the top 3 challenges related to fraud faced by your company when serving customers in the Online Channel.

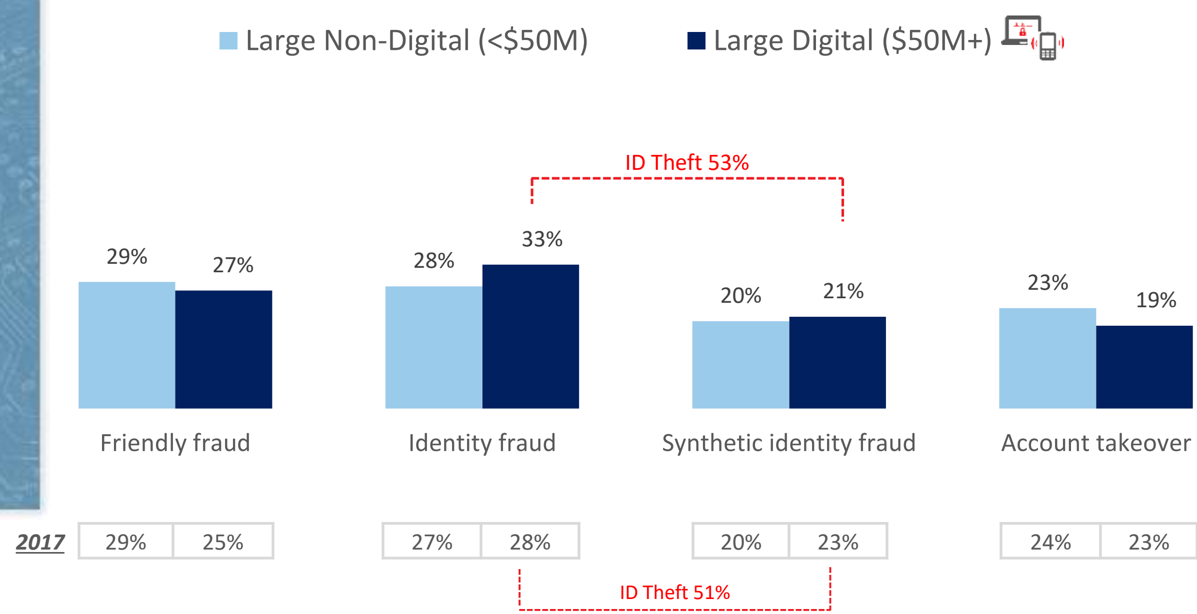
Significantly different from other segments within category at the 95% Confidence Interval

Significantly different than 2017 within Segment

Over half of large digital lenders' fraud losses can still be attributed to identity fraud, including synthetic identities.

Large non-digital lenders continue to experience somewhat more of their fraud losses through friendly fraud and account takeovers.

% Distribution of Fraud Losses by Method

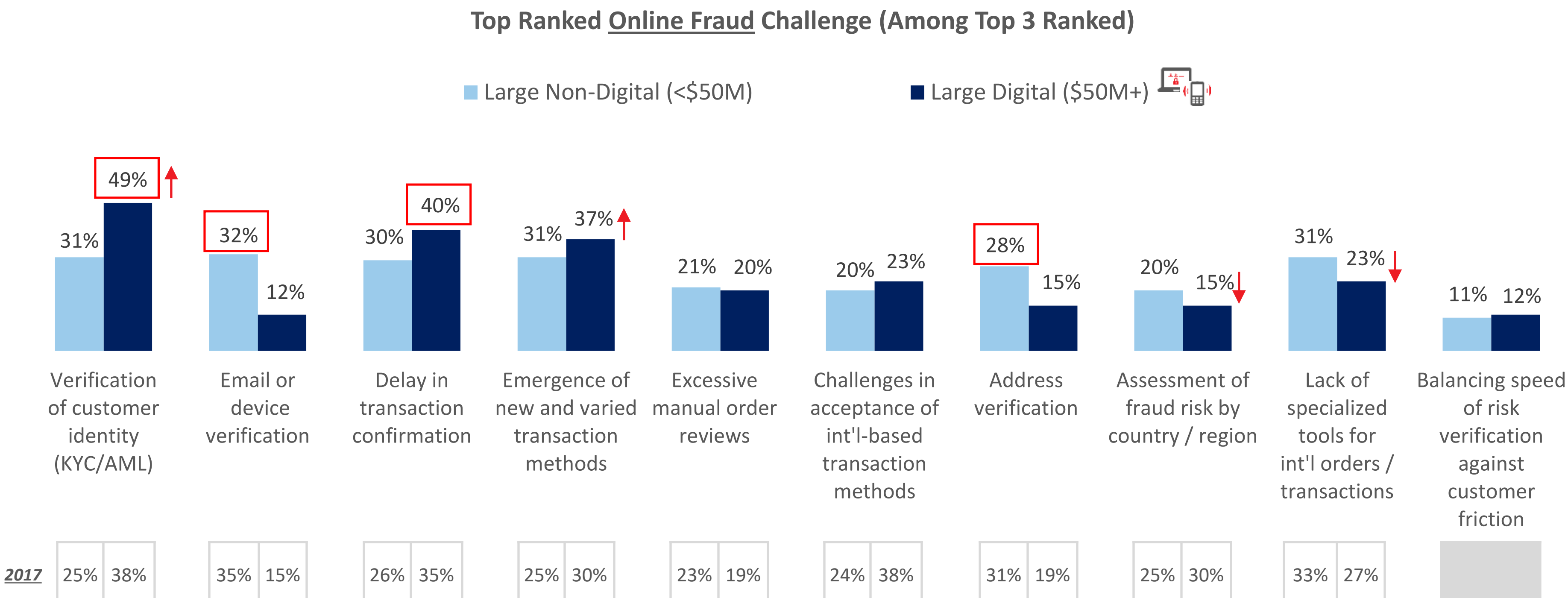


Q12: Please indicate the percentage distribution of the following fraud methods as attributed to your total annual fraud loss over the past 12 months.

So it's not surprising that identity verification not only remains a top challenge when conducting financial transactions online, but has grown as an issue since last year.

Delay in transaction confirmation also remains a key issue, while emergence of new and varied transaction methods grew directionally this year.

Even though challenges in acceptance of international-based transaction methods and assessment of fraud risk by country/region have declined directionally since 2017, they are still challenges for large digital lenders with international transactions (as we'll see later).



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Q20: Please rank the top 3 challenges related to fraud faced by your company when serving customers in the Online Channel.

Significantly different from other segments within category at the 95% Confidence Interval

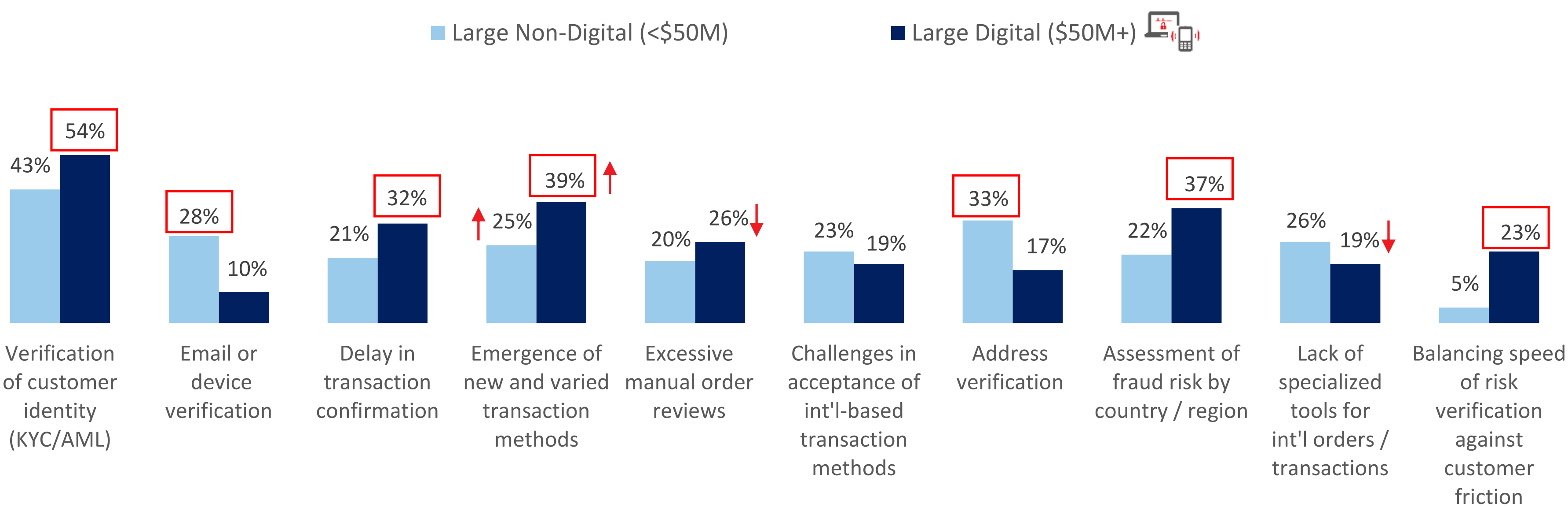
Significantly different than 2017 within Segment

And identity verification continues to be a top challenge for large digital lenders in the mobile channel.

Emergence of new and varied transaction methods rose to be a top challenge this year, while delay in transaction confirmation and assessment of fraud risk by country/region remain key issues.

Directional decreases since 2017 for excessive manual order reviews and lack of specialized tools for international transactions do not necessarily mean that these are now less critical issues for large digital lenders. Since this is a ranking question (top 3), the addition of and selection of balancing speed of risk verification against customer friction may have taken the place of these in the top 3 for some.

Top Ranked Mobile Fraud Challenge (Among Top 3 Ranked)



	Verification of customer identity (KYC/AML)		Email or device verification		Delay in transaction confirmation		Emergence of new and varied transaction methods		Excessive manual order reviews		Challenges in acceptance of int'l-based transaction methods		Address verification		Assessment of fraud risk by country / region		Lack of specialized tools for int'l orders / transactions		Balancing speed of risk verification against customer friction
2017	36%	49%	32%	12%	21%	39%	16%	20%	17%	35%	30%	24%	34%	12%	23%	33%	30%	32%	

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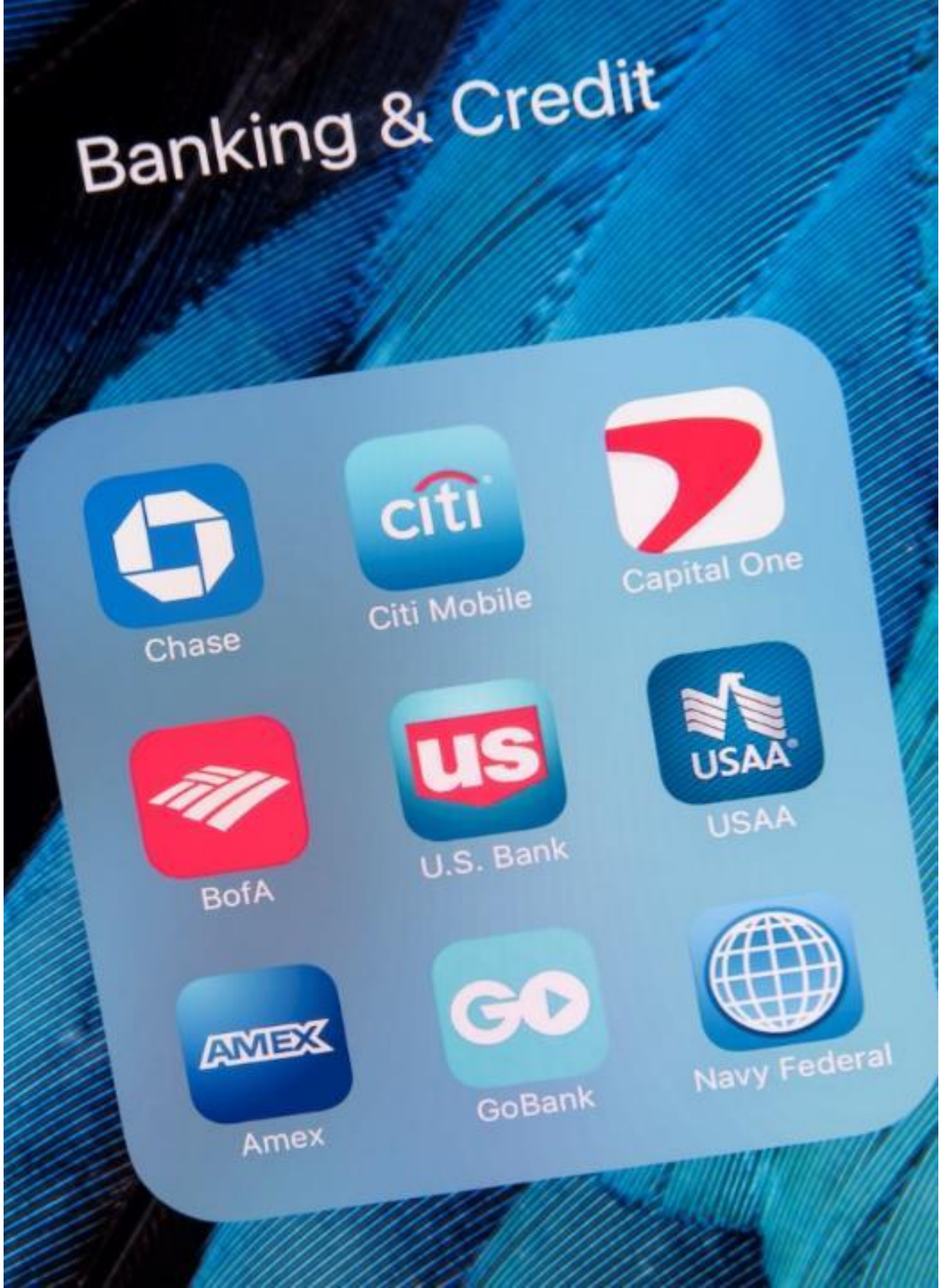
Q20: Please rank the top 3 challenges related to fraud faced by your company when serving customers in the Online Channel.
Significantly different from other segments within category at the 95% Confidence Interval
Significantly different than 2017 within Segment

4

Large digital creditors are feeling the pain of fraud more than others, in part due to the mobile channel.



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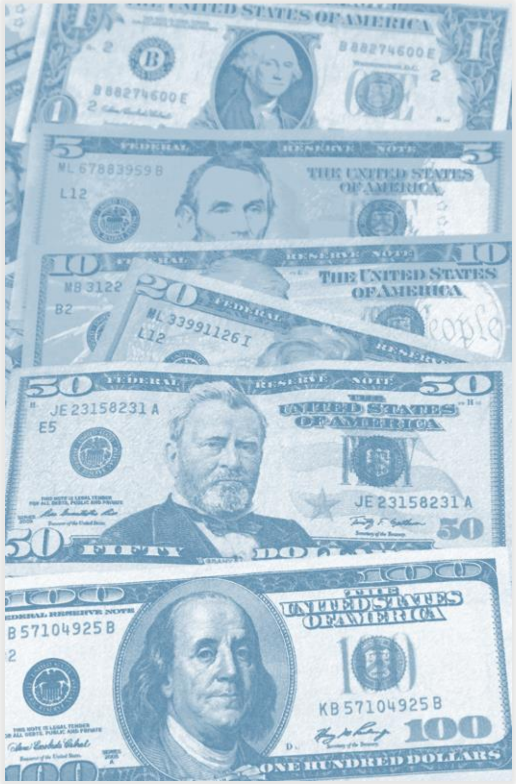
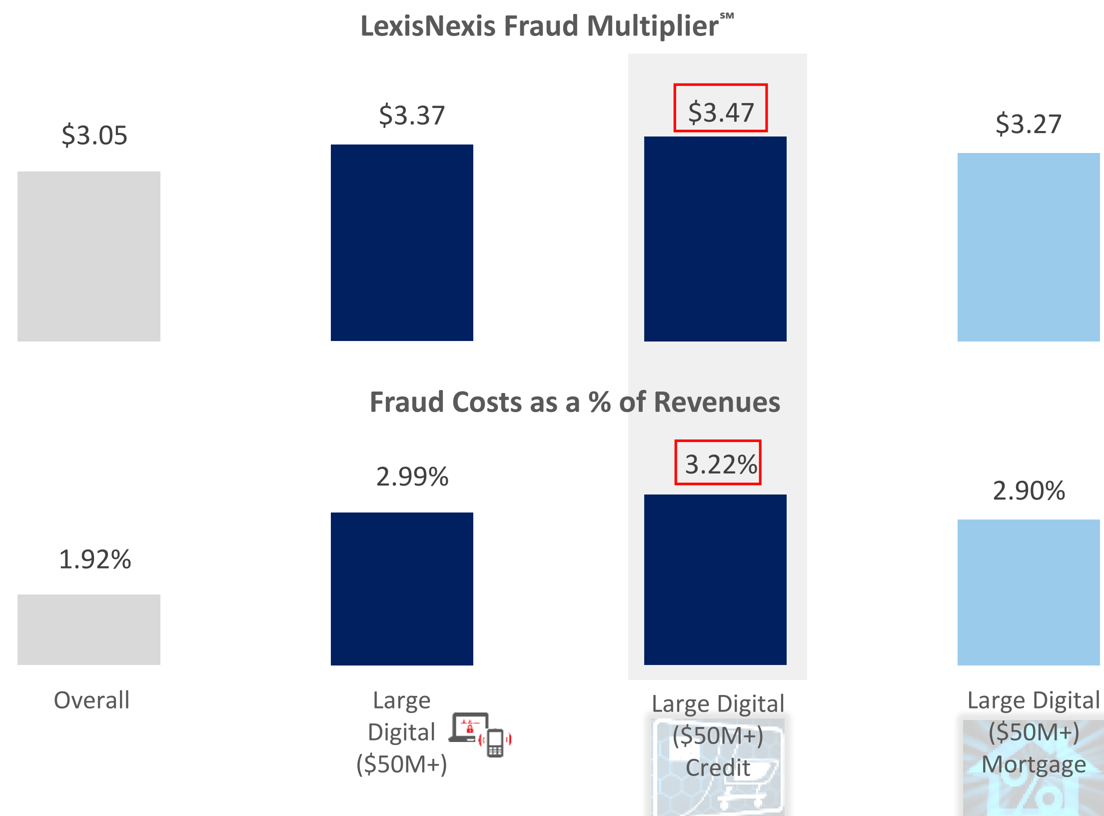


When considering the type of lender, large digital creditors experience higher fraud costs than their mortgage counterparts.

As shown later, some of this is related to the impact of the mobile channel.



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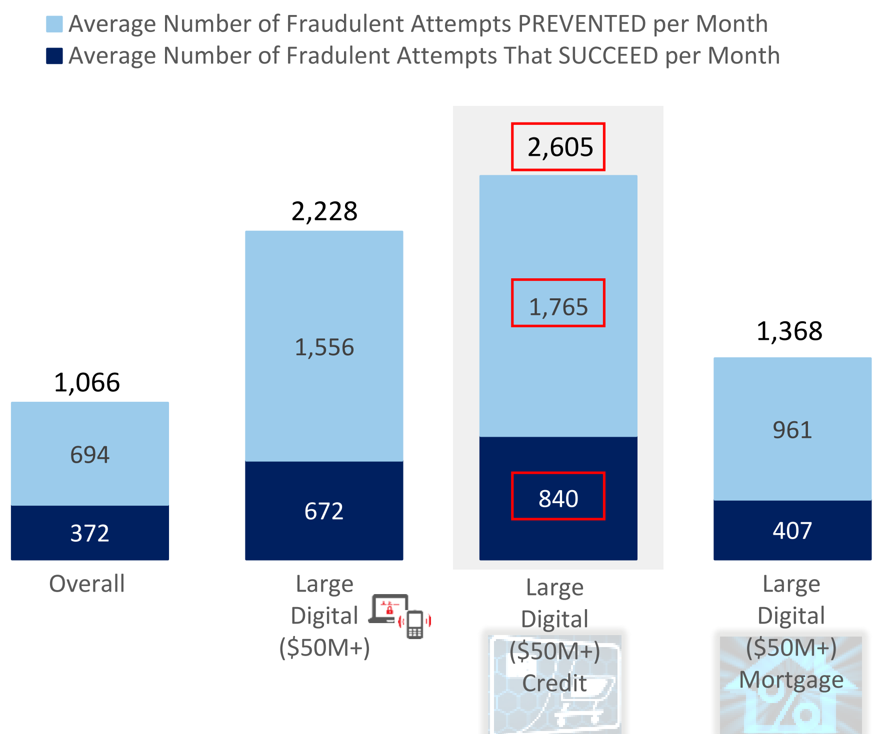
Q20: Please rank the top 3 challenges related to fraud faced by your company when serving customers in the Online Channel.

Significantly different from other segments within category at the 95% Confidence Interval

Fraudulent attempts on large digital creditors are nearly 2x as high than for large digital mortgagees.

Although the volume of fraud is greater for credit lenders, the percentage of prevented vs. successful fraud transactions between credit and mortgage lenders is similar (32% and 30% respectively).

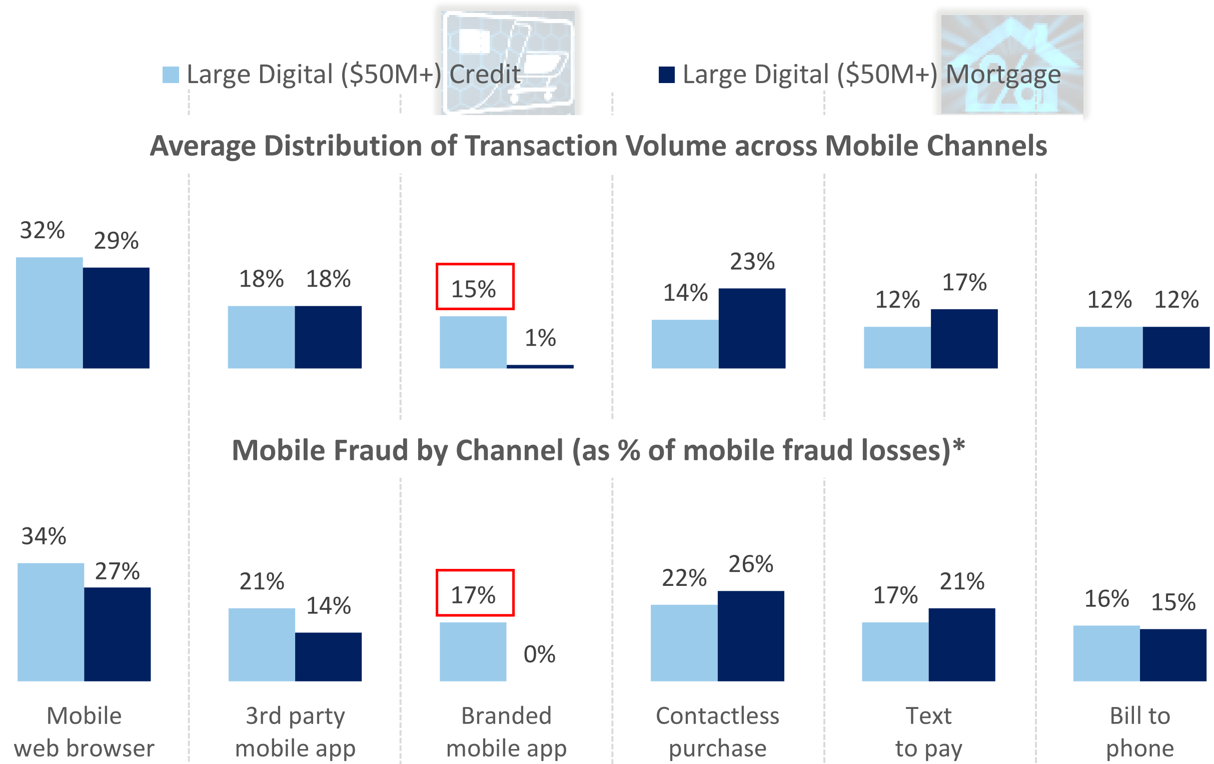
Avg. % of Total Fraud Attempts Per Month



Q22: In a typical month, approximately how many fraudulent transactions are prevented by your company?
Q24: In a typical month, approximately how many fraudulent transactions are successfully completed at your company?
Significantly different from other segments within category at the 95% Confidence Interval

This appears to be related to the mobile channel, where large digital creditors are experiencing higher fraud losses through mobile browsers and apps.

Large digital creditors have significantly more traffic going through branded mobile apps than large digital mortgagees and experience a sizeable portion of fraud here as well. They also experience directionally higher amounts of fraudulent activity through less secure mobile web browsers and 3rd party mobile apps. Easier access through mobile browsers and apps opens the door for the unbanked and underbanked segments, which could be contributing to this.



*% can add to more than 100% since answers based on whether using a channel, which differs by lender and therefore base sizes change for each method

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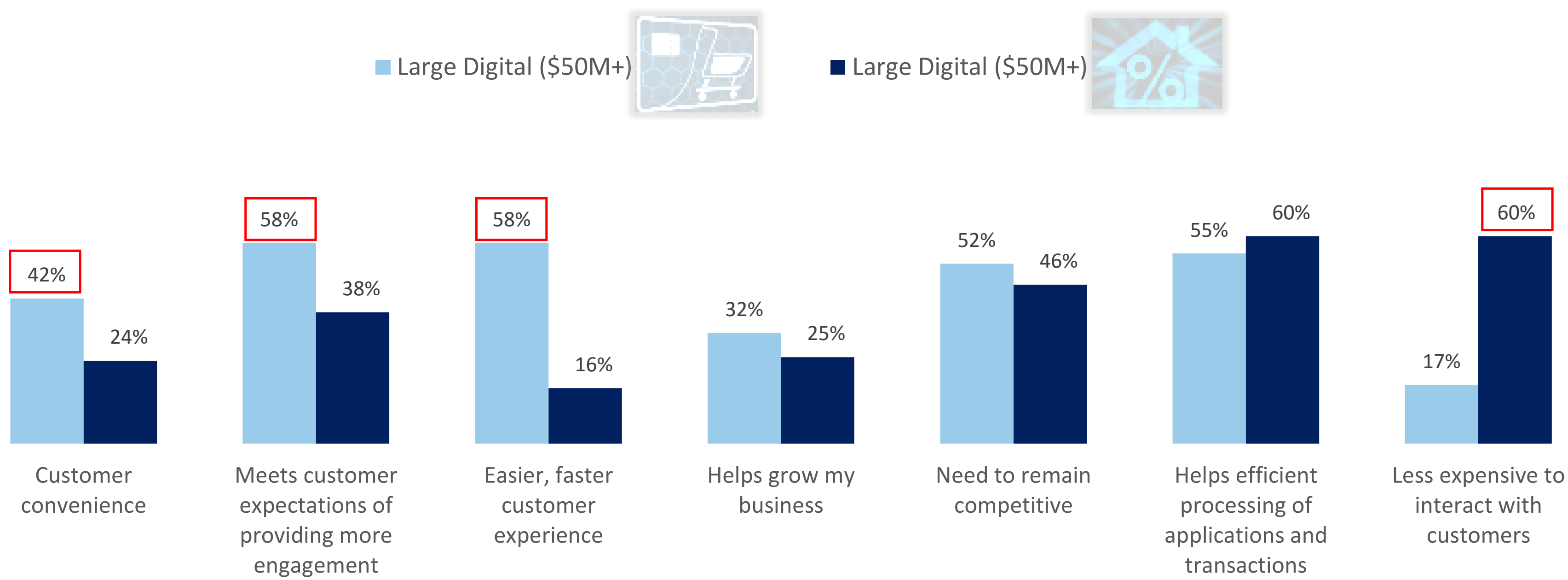
Significantly different from other segment within category at the 95% Confidence Interval

Q4: what is the distribution of transactions through each of the mobile channels your company uses/accepts?
Q17: Please indicate the distribution of fraud across the various mobile channels you use/accept.

Though fraud has become a mobile channel issue, large digital creditors recognize the need for offering this option to optimize the customer experience.

Mobile Channel Drivers



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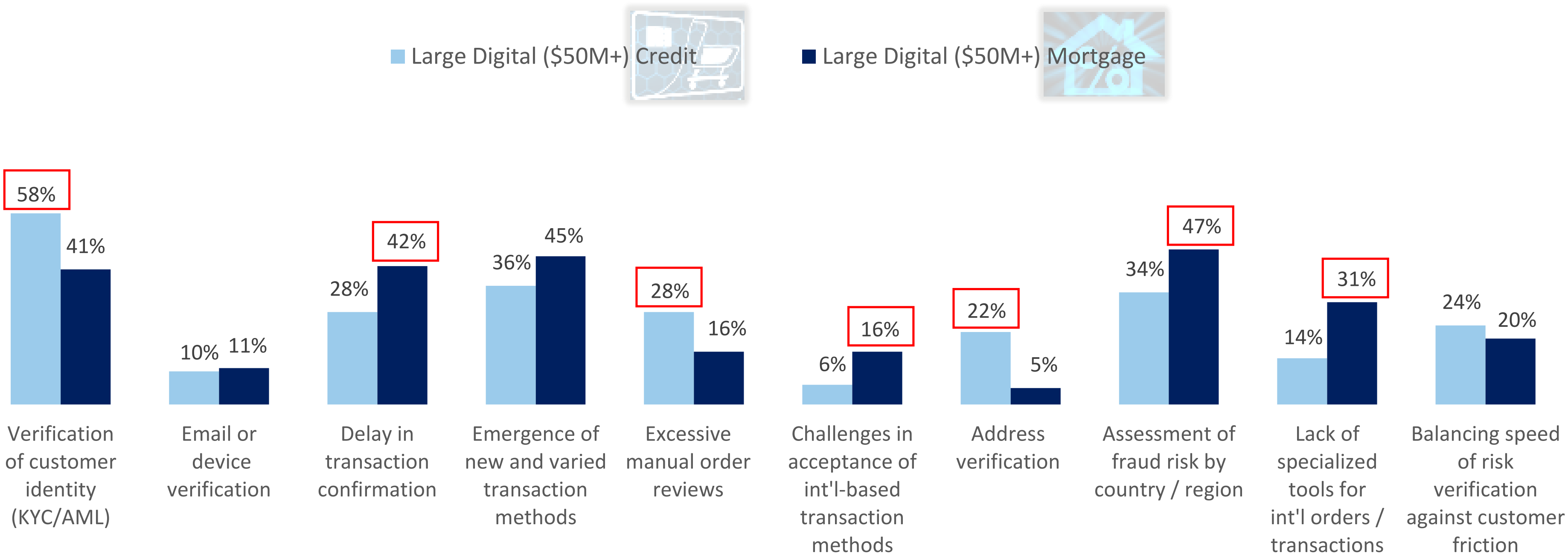
Q5: What were the reasons your company decided to start accepting mobile account origination or transactions?

Significantly different from other segments within category at the 95% Confidence Interval

Unfortunately, identity verification is a significant challenge through the mobile channel for large digital creditors.

The emergence of new/varied transaction methods and assessment of fraud risk by country/region further add to the difficulties that large digital creditors face with this channel.

Top Ranked Mobile Fraud Challenge (Among Top 3 Ranked)



Q20: Please rank the top 3 challenges related to fraud faced by your company when serving customers in the Online Channel.

Significantly different from other segments within category at the 95% Confidence Interval

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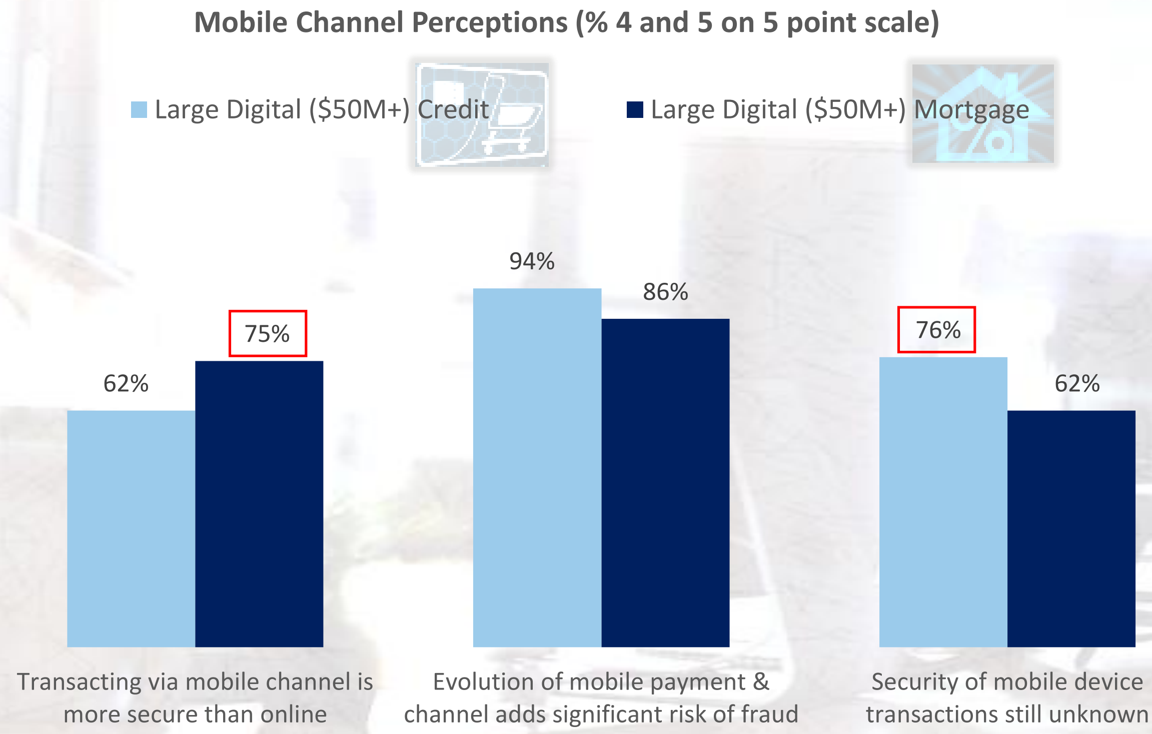
As a result, large digital creditors have concerns about the security of and fraud risks from mobile devices.

They are also significantly more likely than large digital mortgage firms to indicate that combatting automated botnet activity is overwhelming and hard to manage. Large digital mortgagees on the other hand, are more comfortable with the mobile channel, with a majority believing that it is more secure than transacting online.

74% of large digital creditors using the mobile channel agree that automated botnet activity is overwhelming; only 24% of large digital mortgage firms say this.



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Q33: Using a 5-point scale, where "5" is "agree completely" and "1" is "do not agree at all", please rate the extent to which you agree or disagree with the statements below.

Significantly different from other segments within category at the 95% Confidence Interval

5

Transacting internationally increases fraud risks and costs even more for larger digital lenders.

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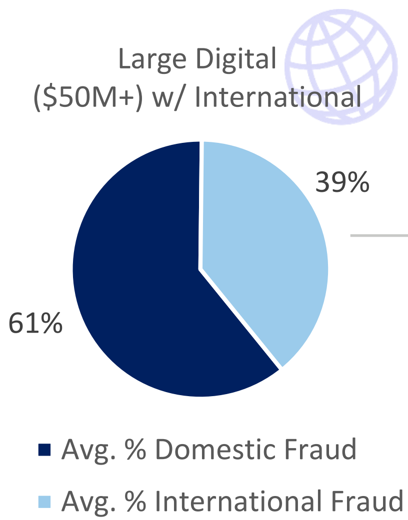
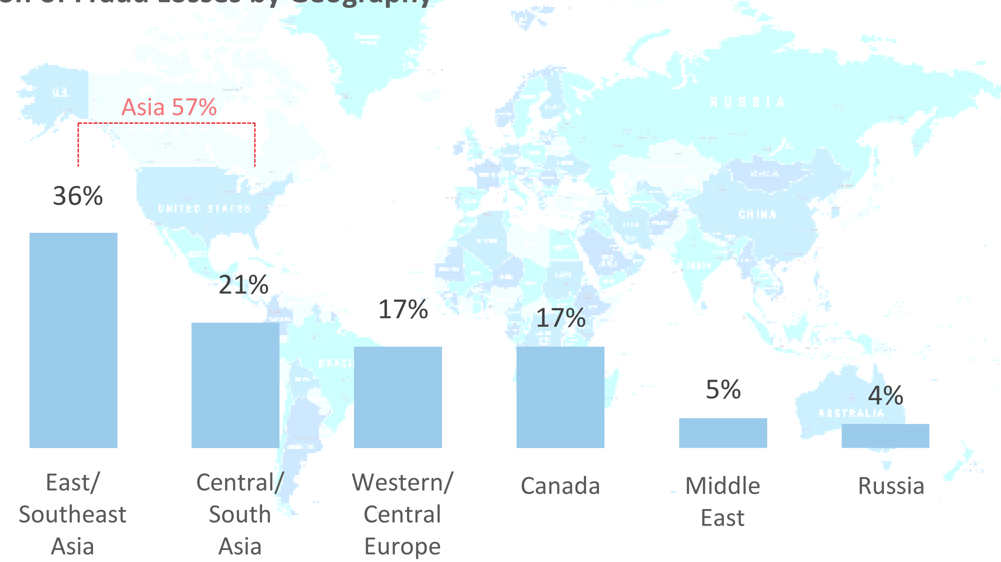
Large digital lenders with international transactions attribute nearly 40% of their fraud losses to non-domestic business.

Over half of these losses are linked to East/Southeast Asia and Central/South Asia.



% Distribution of Fraud Losses by Geography



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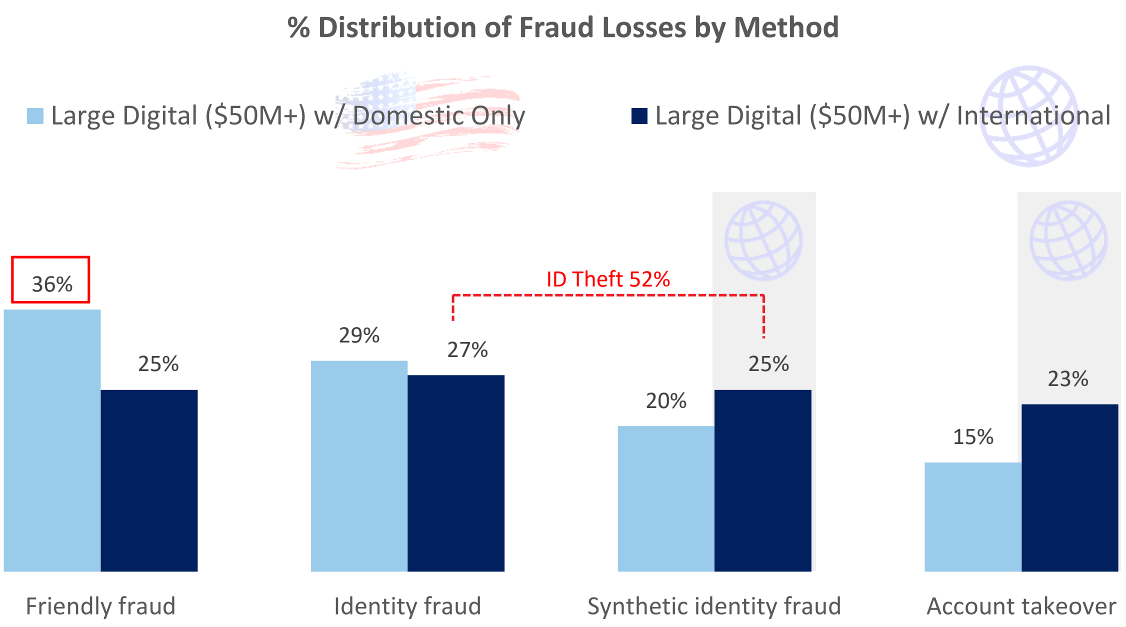
Q13: Please indicate the percent of fraud costs generated through domestic transactions compared to international transactions in the last 12 months.
Q14c: Please allocate 100 points across the following to indicate the distribution that each region represents of your total international fraud costs.

Identity fraud, including synthetic identities, accounts for over half of fraud losses among large digital lenders doing business internationally.

Account takeovers represent a sizeable distribution of losses (23%) for those with international transactions vs. those with domestic only.



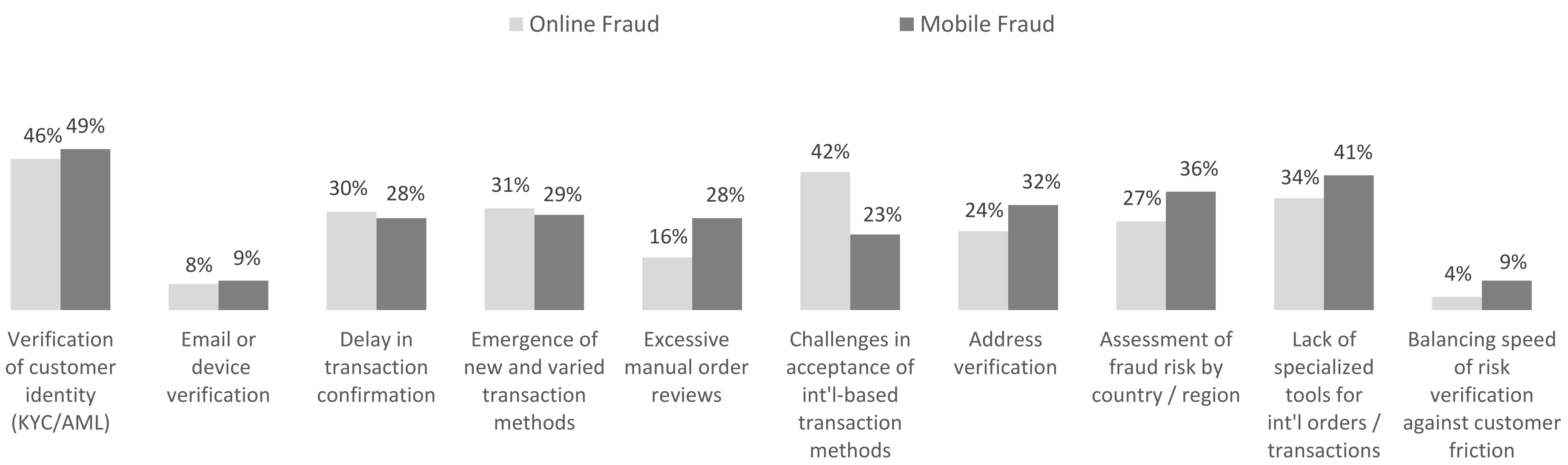
Significantly different from other segments within category at the 95% Confidence Interval

Q12: Please indicate the percentage distribution of the following fraud methods as attributed to your total annual fraud loss over the past 12 months.

This aligns with identity verification being a top challenge when conducting transactions though the online and mobile channels.

Additionally, large digital lenders with international transactions are facing various other challenges through the online and mobile channels, including challenges in acceptance of international-based transaction methods, lack of specialized tools for international transactions, assessment of fraud risk by country/region, address verification, and emergence of new and varied transaction methods.

Top Ranked Fraud Challenges (Among Top 3 Ranked): Large Digital ($50M+) w/ International



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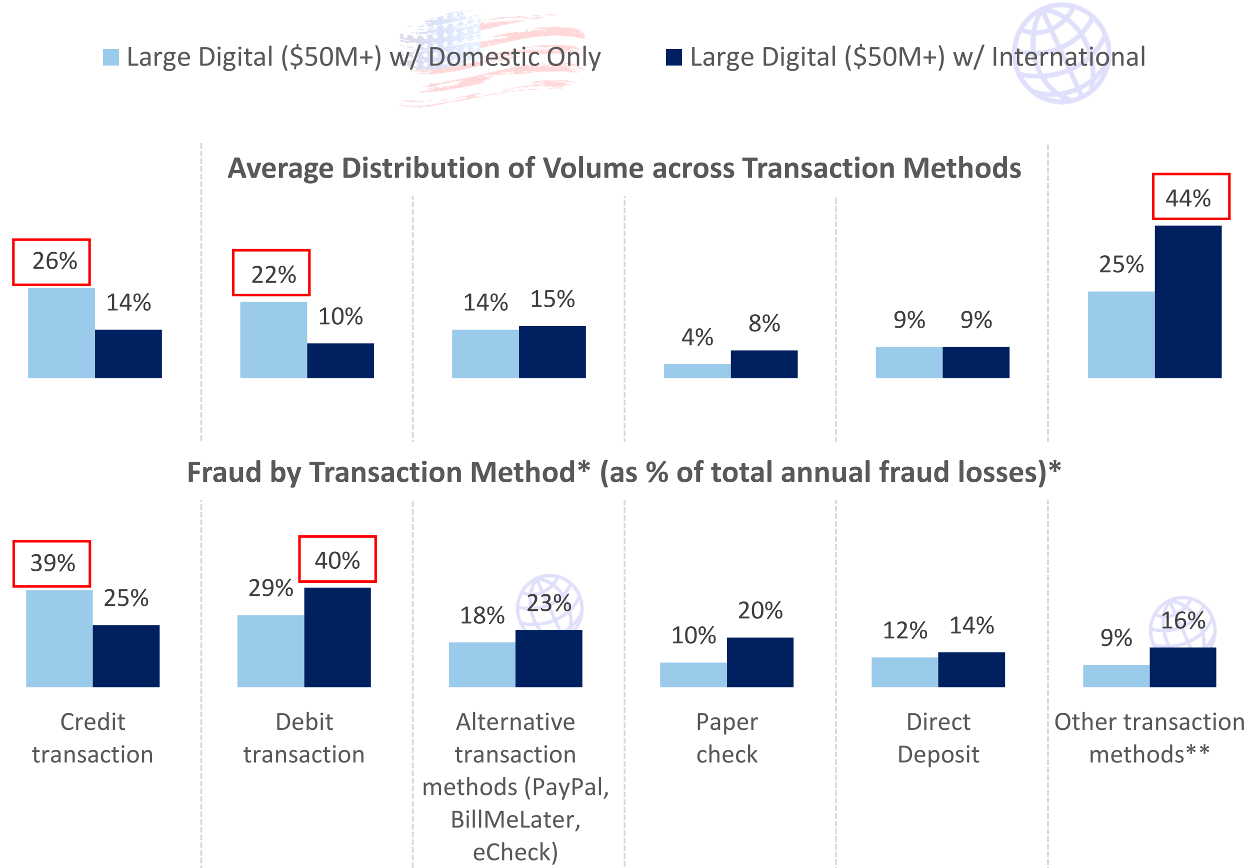
Q20: Please rank the top 3 challenges related to fraud faced by your company when serving customers in the Online Channel.

Alternative and other non-traditional methods account for a sizeable volume of transactions/disbursements among large digital lenders with international business. However, traditional debit transactions account for the largest percentage of fraud.

Large digital lenders with international transactions experience somewhat higher fraud through alternative and other transaction methods than domestic-only lenders (49% vs. 36%).



**Other transaction methods include cash, mobile device- based wallets*

*% can add to more than 100% since answers based on whether using a channel, which differs by lender and therefore base sizes change for each method

Significantly different from other segment within category at the 95% Confidence Interval

Q3: Please indicate the percentage for each method used (over the past 12 months) to fund transactions or disburse funds.
Q18: Please indicate the percentage distribution of the payment methods used to commit fraud against your company.

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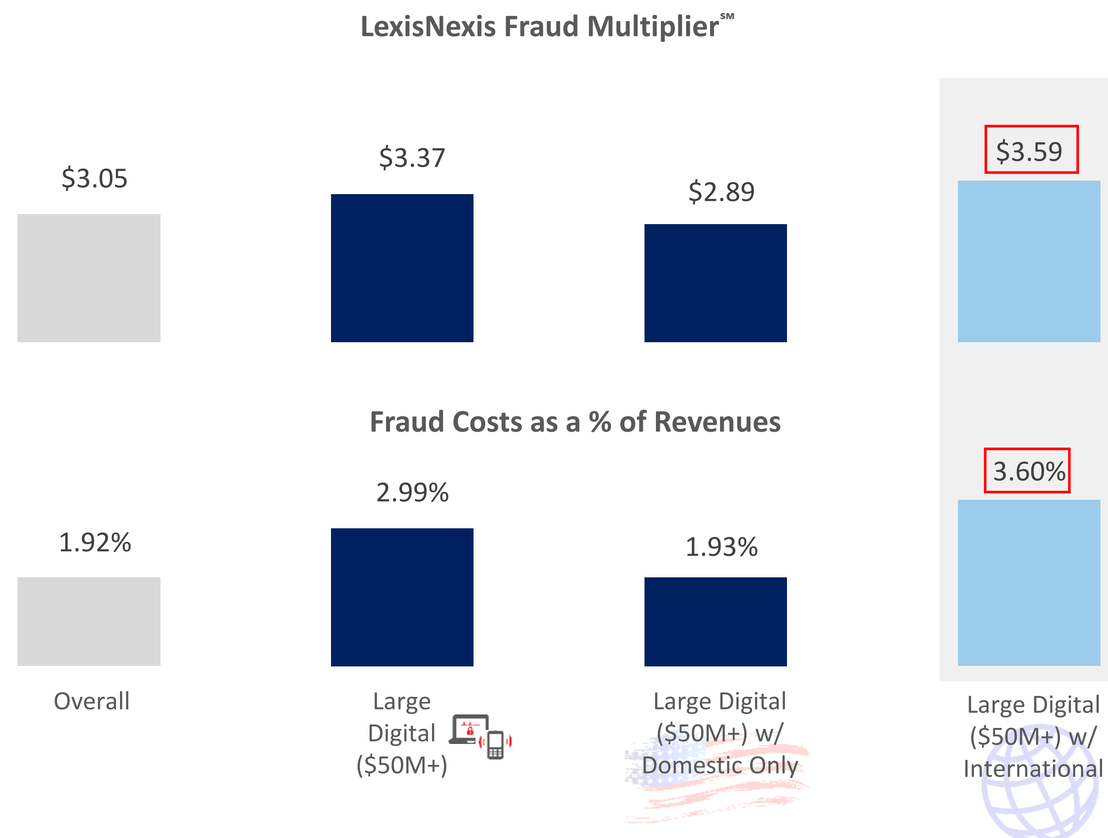
All of this together results in a higher cost of fraud for large digital lenders that conduct international transactions.

Some of this, as shown later, is likely related to much lower use of some of the more advanced fraud prevention solutions that support identity verification and authentication. Of fraud costs, there is also a sizeable component related to fees, interest, and fines.



Q20: Please rank the top 3 challenges related to fraud faced by your company when serving customers in the Online Channel.

Significantly different from other segments within category at the 95% Confidence Interval

6

Online marketplace lenders*, while experiencing a lower cost of fraud, still face challenges.

*Caution: small number of cases; findings should be treated more directionally

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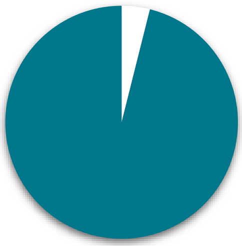
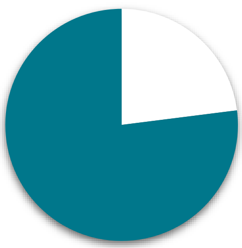
Marketplace Lender Snapshot*



78% of marketplace lenders surveyed are Small/Mid (<$50M)



The majority of transactions <u>and</u> fraud are through the ONLINE channel

Total fraud losses = **1.42%** of annual revenue; every $1 of fraud costs them **$2.96**

International fraud mostly originating from:

East/ Southeast Asia

West/Central Europe

Uses an avg. of **3.5** fraud solutions

Majority uses automated tracking system

- ✓ **Higher % of transactions through 3rd PARTY MOBILE WALLETS and company's BRANDED APP than other digital lenders**
- ✓ **Most fraud resulting from CREDIT and DEBIT transactions**
- ✓ **Verification of customer identity is a KEY challenge, especially through the online channel**
- ✓ **Balancing speed of verification with risk of customer friction is MORE CHALLENGING than for other digital lenders**
- ✓ **Top solutions usage is advanced: automated transaction scoring, customer profile databases, and authentication using 3-D secure tools; there is less use of other solutions, including device/ID, geolocation, or real-time transaction tracking.**

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*Caution: small number of cases; findings should be treated more directionally

7

Digital lenders may not be fighting fraud optimally.

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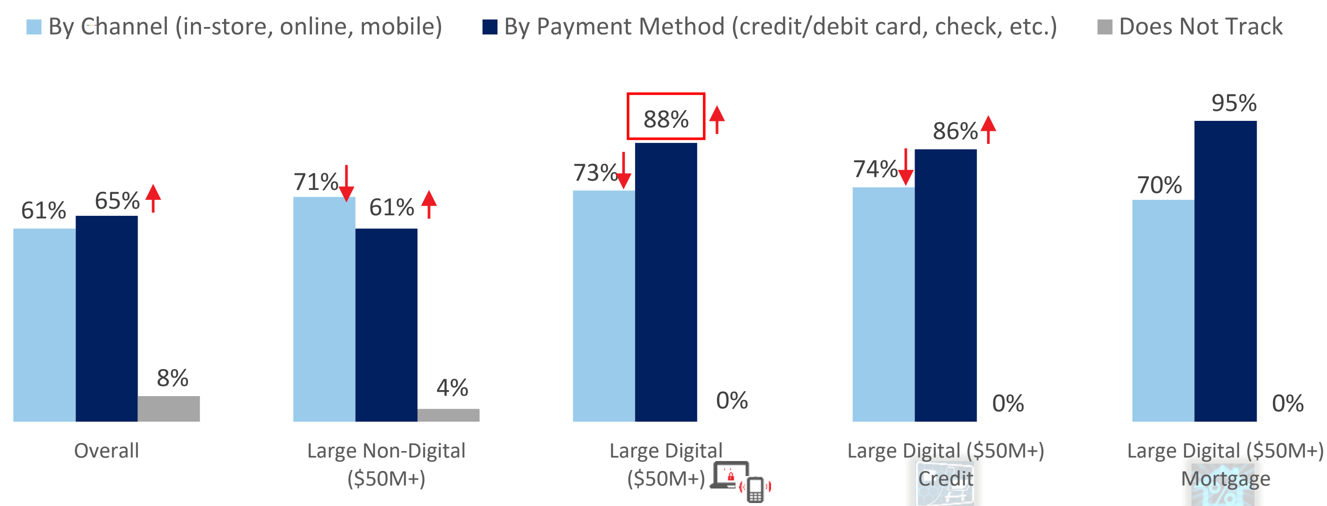
Large digital lenders continue to be more likely to track fraud costs by both channel and payment method.

Large digital lenders that track by both channel and payment method tend to experience lower fraud costs than those who only track by one or the other. That said, their cost of fraud is high nevertheless.

Large digital lenders who track both have lower fraud costs

$3.18 for every $1 of fraud vs. $4.01 for those who don't track both

% Merchants Tracking Fraud Costs by Channel & Payment Method



	Overall			Large Non-Digital ($50M+)			Large Digital ($50M+)			Large Digital ($50M+) Credit			Large Digital ($50M+) Mortgage		
2017	75%	55%	5%	84%	42%	7%	85%	80%	0%	90%	77%	0%	**	**	**

	Large Non-Digital ($50M+)	Large Digital ($50M+)	Large Digital ($50M+) Credit	Large Digital ($50M+) Mortgage
Tracks Both Channel & Pay Method (2018)	35%	61%	60%	65%
Tracks Both Channel & Pay Method (2017)	33%	65%	67%	**

Significantly different than 2017 within Segment

Significantly different at the 95% Confidence Interval

*** Incidence too low for Large Digital ($50M+) Mortgage in 2017; base size too small to show comparison findings*

Q14: Does your company track the cost of fraudulent transactions by payment channels or methods? Track successful fraud by payment channels or methods?

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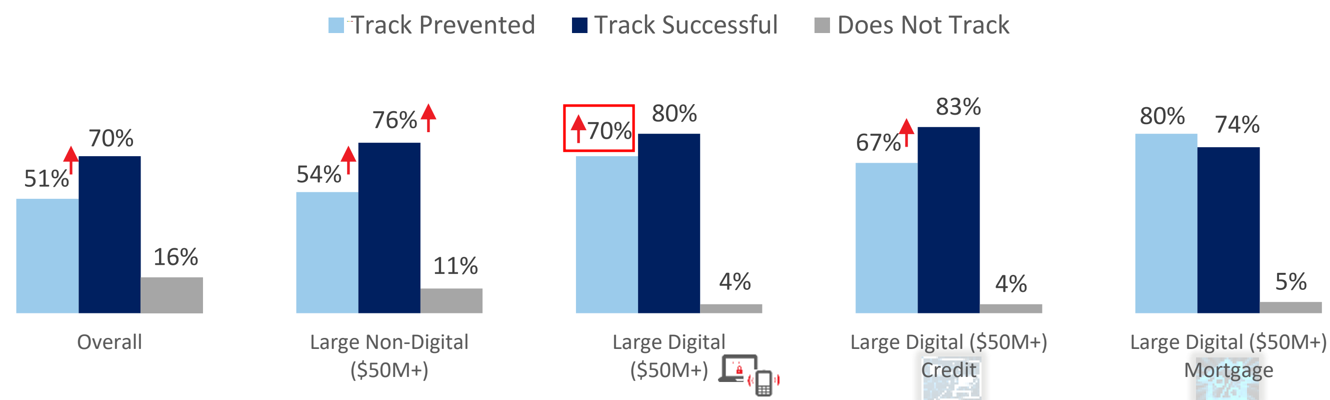
And large digital lenders continue to be more likely to track prevented and successful fraud by transaction and channel type.

Again, there is a directional relationship between tracking successful fraud transactions by both channel and payment methods and lower fraud costs. The harder hit large digital lenders and large digital creditors are somewhat less likely to track both.

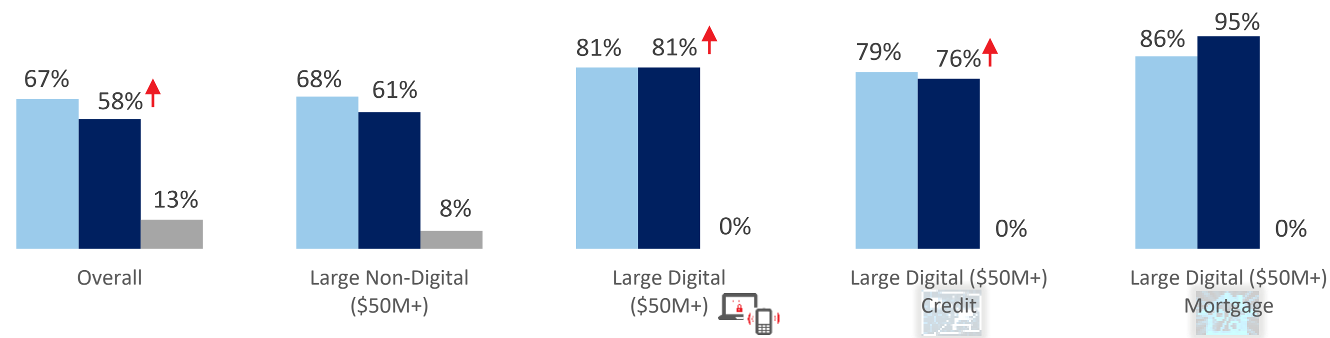
% Merchants Tracking SUCCESSFUL & PREVENTED Fraud Transactions by Channel



2017	Track Prevented	Track Successful	Does Not Track
Overall	40%	64%	18%
Large Non-Digital ($50M+)	43%	65%	17%
Large Digital ($50M+)	49%	77%	8%
Large Digital ($50M+) Credit	39%	86%	5%
Large Digital ($50M+) Mortgage	**	**	**

2018 track successful by both:
Large Digital: 62%
Large Digital Credit: 60%
Large Digital Mortgage: 69%

% Merchants Tracking SUCCESSFUL & PREVENTED Fraud Transactions by Payment Method



2017	Track Prevented	Track Successful	Does Not Track
Overall	71%	47%	13%
Large Non-Digital ($50M+)	64%	52%	11%
Large Digital ($50M+)	89%	65%	0%
Large Digital ($50M+) Credit	86%	53%	0%
Large Digital ($50M+) Mortgage	**	**	**

LexisNexis® RISK SOLUTIONS

*** Incidence too low for Large Digital ($50M+) Mortgage in 2017; base size too small to show comparison findings*

Q26: Does your company track the cost of fraudulent transactions by payment channels or methods? Track successful fraud by payment channels or methods?

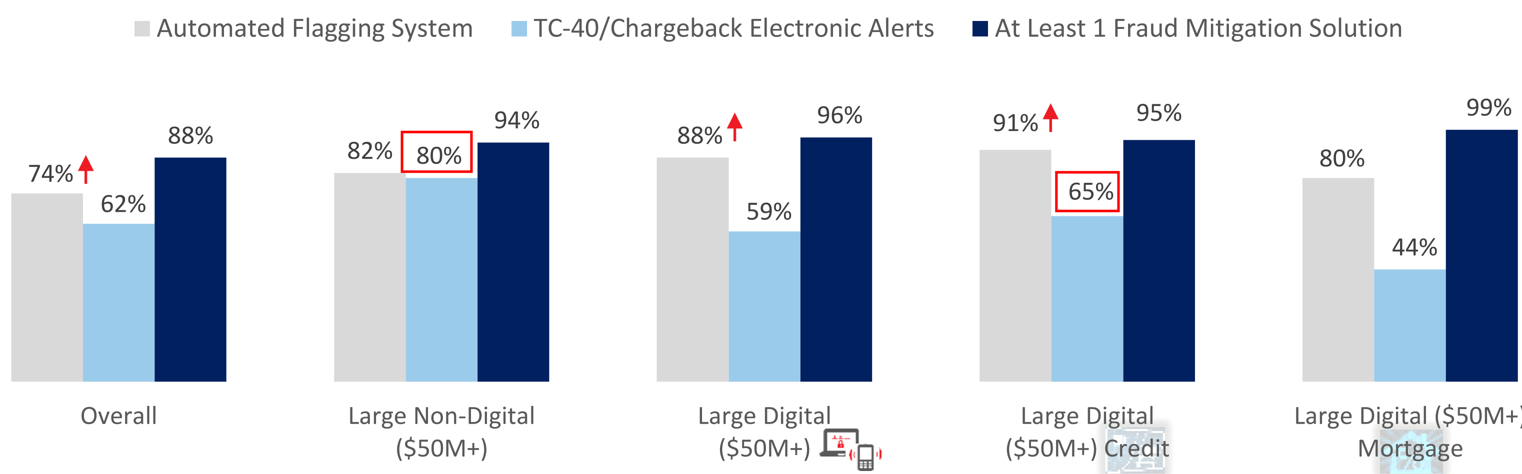
↑ Significantly different than 2017 within Segment

☐ Significantly different at the 95% Confidence Interval

Large digital lenders continue to be likely to use an auto flagging system in conjunction with fraud mitigation solutions.

Large digital lenders, particularly large digital creditors, appear to have made investments in automated flagging systems since last year. This could be related to issues experienced with fraud internationally and through the mobile channel.

% Merchants Who Use an Automated Flagging System, TC-40/Chargeback Electronic Service Alerts, or Fraud Mitigation Solution



	Overall			Large Non-Digital ($50M+)			Large Digital ($50M+)			Large Digital ($50M+) Credit			Large Digital ($50M+) Mortgage		
2017	63%		84%	75%		93%	66%		92%	76%		90%	**		**

Significantly different than 2017 within Segment
Significantly different from other segments within system or solution category at the 95% Confidence Interval

*** Incidence too low for Large Digital ($50M+) Mortgage in 2017; base size too small to show comparison findings*

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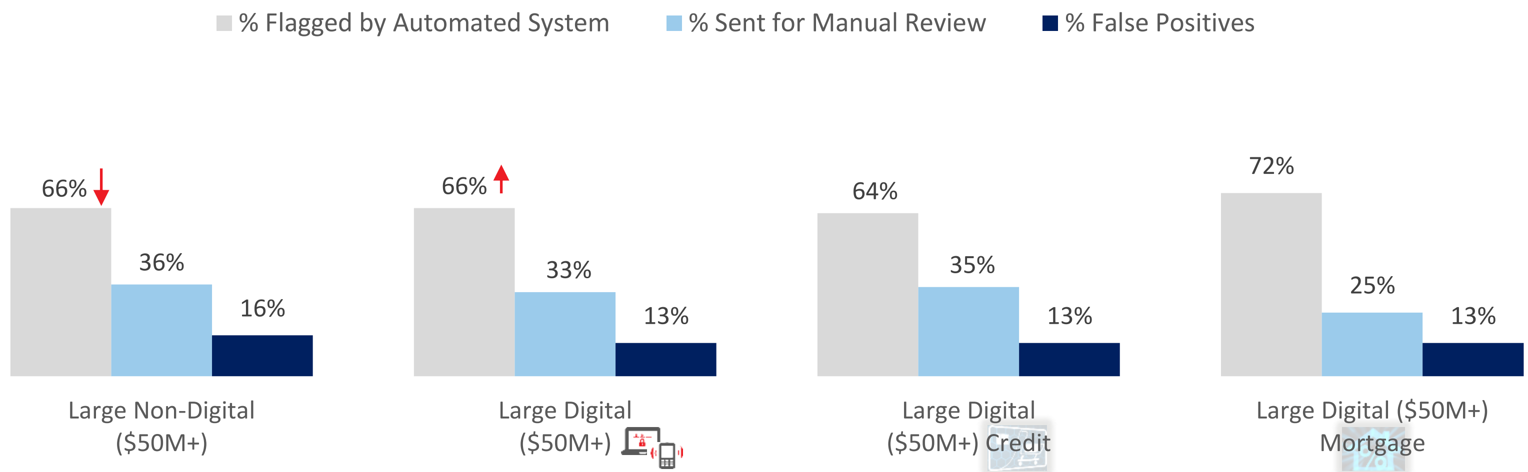
Q35: Does your company use an automated system to flag potentially fraudulent transactions?
Q35b: Does your company use an electronic service that alerts you when a TC-40 / chargeback claim has been filed based on one of your transactions?
Q27: Which of the following best describes your awareness and use of the fraud solutions listed below?

But this doesn’t seem to improve the accuracy or efficiency of the fraud identification process.

Just as many transactions are being sent for manual review as last year and the volume of false positives hasn’t decreased. Both of these factors have cost, lost revenue, and longer-term customer relationship ramifications.

% Transactions Flagged by Auto System, Sent for Manual Review, & False Positives



2017	77%	37%	21%	54%	38%	13%	55%	40%	13%	**	**	**

Significantly different than 2017 within Segment

*** Incidence too low for Large Digital ($50M+) Mortgage in 2017; base size too small to show comparison findings*

Q36: Of all the transactions your company flagged as potentially fraudulent in the past 12 months, what percentage was flagged by your auto system?
Q37: Of this (…), what proportion are sent for manual review?
Q39: What percentage of declined transactions turned out to be false positives?

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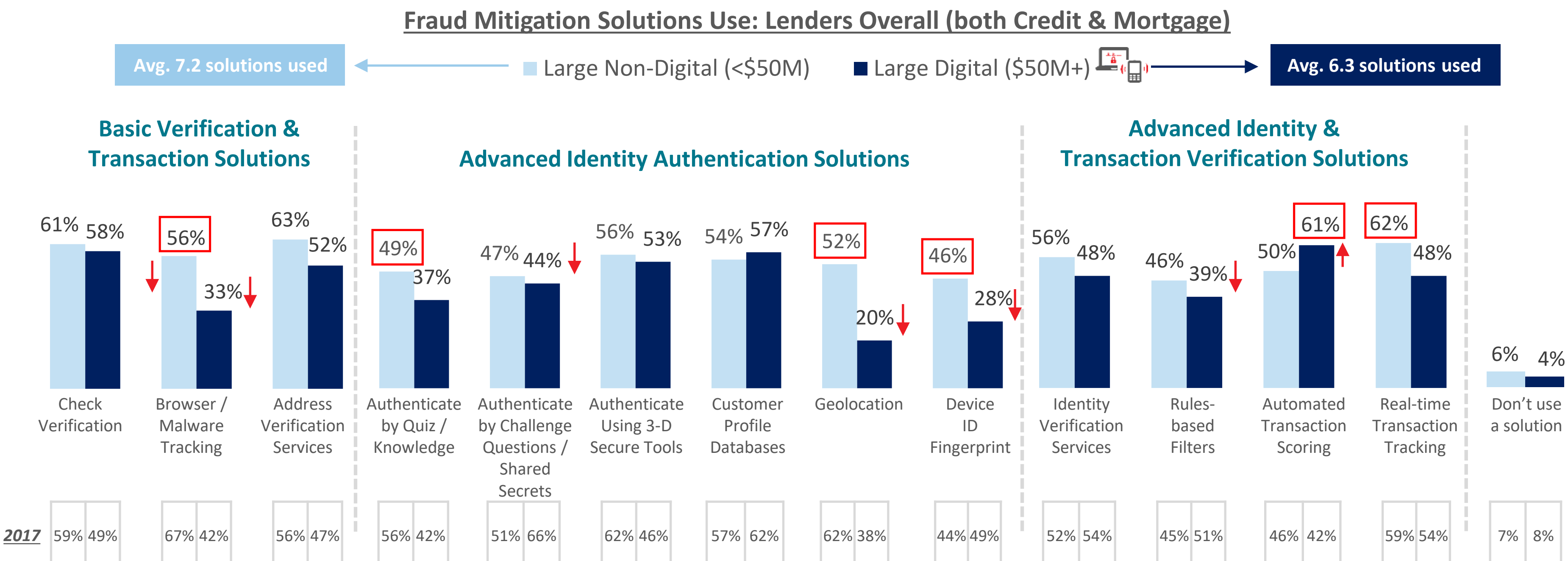
While a good share of large digital lenders overall report using authentication by 3-D secure tools and customer profile databases, the use of other advanced identity authentication solutions remains somewhat limited.

And, fewer large digital lenders cited use of authentication by knowledge or shared secrets, as well as geolocation and device ID fingerprint, than previously reported.

Even though the average number of solutions used by this segment is relatively high (6.3), they continue to get hit harder by fraud. This suggests the need to further optimize which types of solutions are used and layered/bundled together to meet specific fraud risks.



Q27: Which of the following best describes your awareness and use of the fraud solutions listed?

Significantly different from other segments within category at the 95% Confidence Interval

Significantly different than 2017 within Segment

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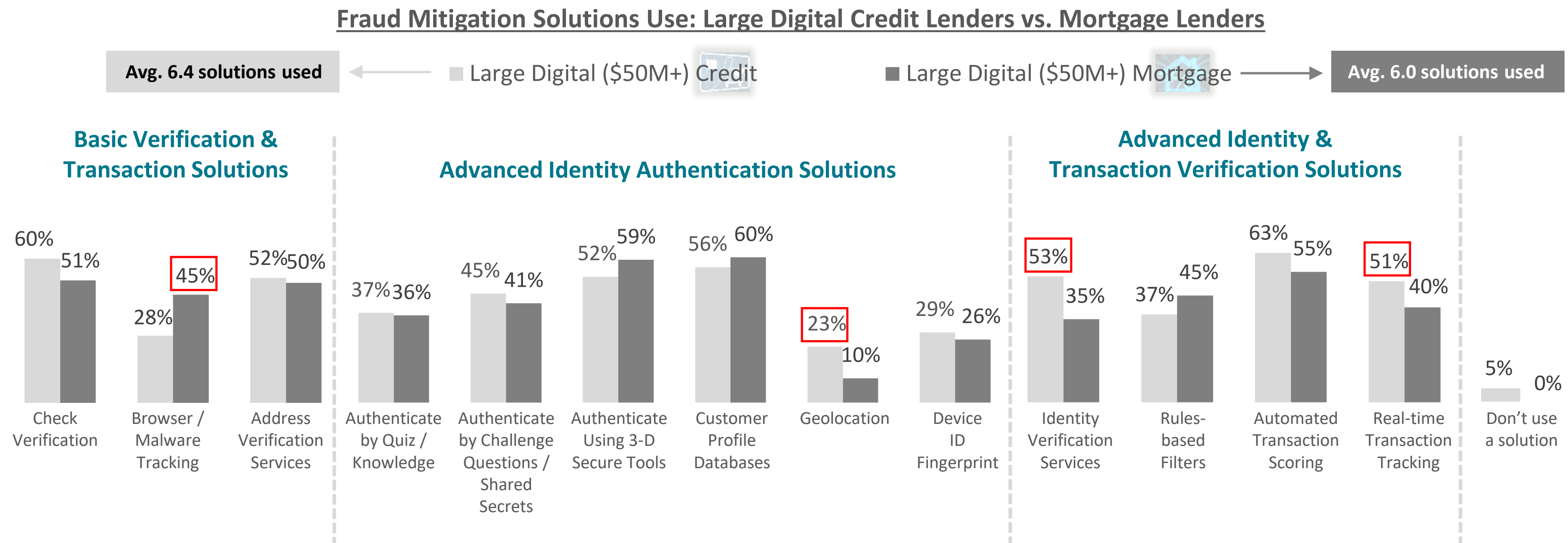
Large digital creditors are using a similar number of solutions as mortgagees.

Given that they continue to get hit harder by fraud, this suggests that they also need to further optimize which types of solutions are used and layered/bundled together.



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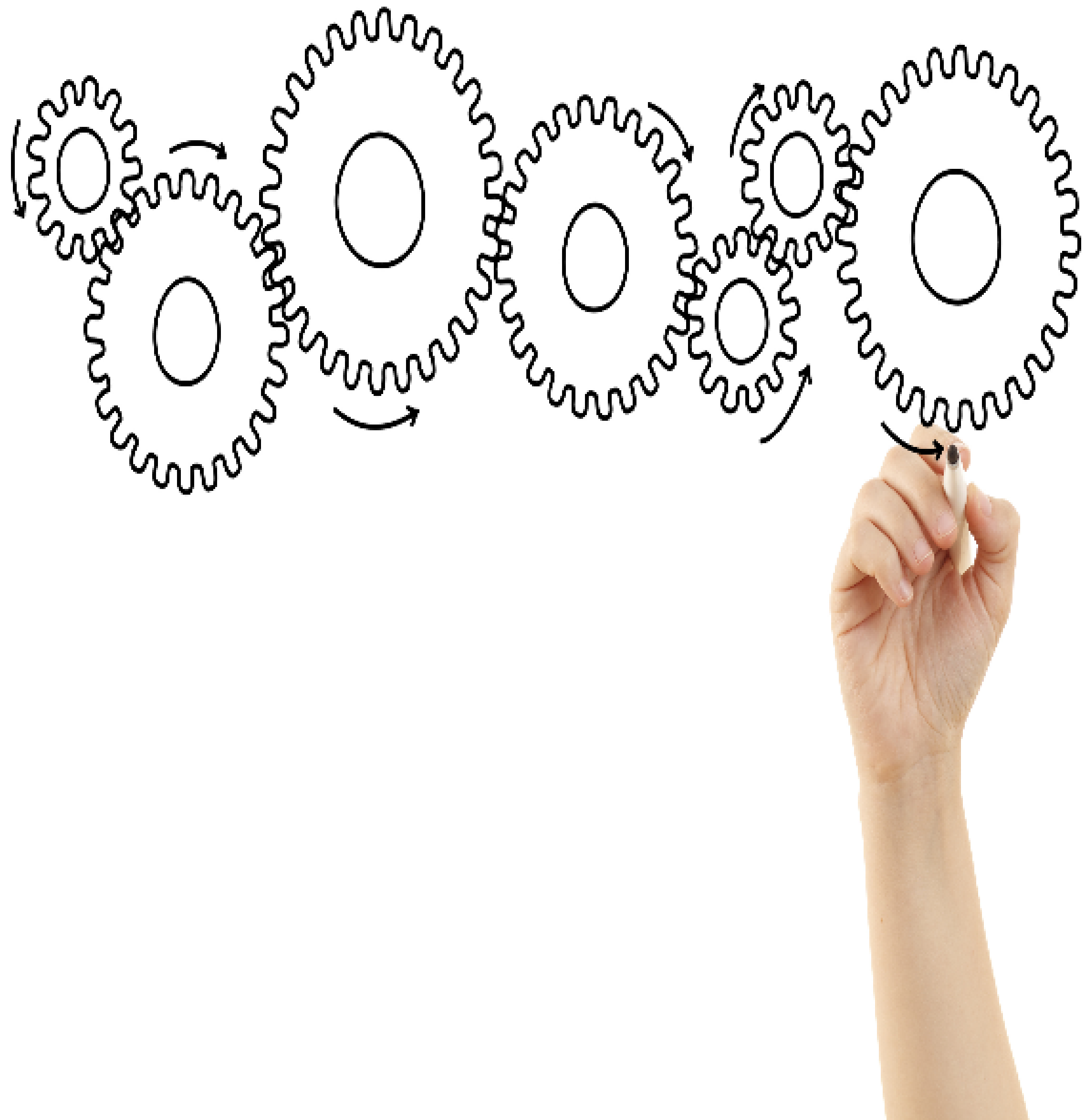
Q27: Which of the following best describes your awareness and use of the fraud solutions listed?

Significantly different from other segments within category at the 95% Confidence Interval

8

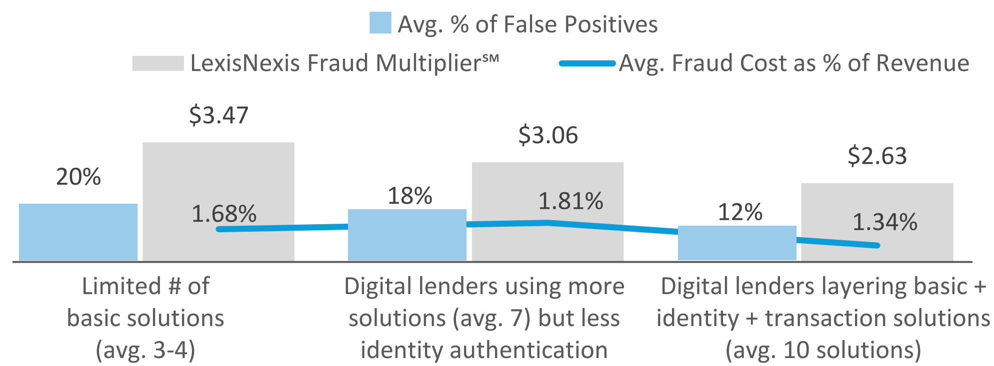
Findings show that using the right combination of tools is crucial to combatting fraud risks and cost.



Lending firms that use a multi-layered solution approach experience a lower cost of fraud.

Survey findings show that those who layer core + advanced identity authentication + advanced transaction / identity verification solutions have lower fraud costs than others per fraud event ($2.63 for every $1 of fraud versus up to $3.47) and as a percent of annual revenues. They also tend to have a lower volume of false positives.

LexisNexis Fraud Multiplier℠
Avg. Fraud Cost as % of Revenue
Avg. % False Positives
by Number & Layering of Fraud Mitigation Solutions



Layers of Protection		Limited	Limited	Multi-Layered
Common Core Solutions Used Most Often	Card verification, PIN/Signature, Check Verification, Browser Malware, Address Verification	Mostly	Many	✓
Layering of Advanced Identity Authentication Solutions	Device ID Fingerprinting, Geolocation, Authentication by Quizzes, Authentication by Challenge Questions, Authentication of Transaction by 3D Tools, Customer Profile Database	Minimal to None	Minimal to None	✓
Layering of Advanced Identity & Transaction Verification Solutions	Automated Transaction Scoring, Real-Time Transaction Tracking, Identity Verification Services, Rules-Based Filters	Minimal to None	Many	✓

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Recommendations

Recommendation #1

Lenders, particularly digital ones, should consider a multi-layered solution approach that attacks different types of fraud.

It is critical for firms to address both identity and transaction-related fraud. These are two different perspectives.

Identity verification / authentication is important for “letting your customers in” with the least amount of friction and risk.

Transaction-related fraud is about keeping the “bad guys out”.

A layered approach can reduce costs associated with manual reviews, successful fraud attempts and fewer false positives.

Recommendation #2

When layering solutions, it's important to implement a mix of different ones in order to address the unique risks generated from different channels and payment methods. It's not about the number, but rather the right combination.

Solutions used to mitigate risk in the physical / at-location transactions won't fully mitigate risk with transactions conducted through remote channels. And, different issues and risks exist between the online and mobile channels; one "overall remote channel" solution may not address both environments.

Different challenges and risks also require specific solutions that support domestic versus international transactions.

Recommendation #3

A multi-layered solution approach is particularly essential for larger digital lenders using the mobile channel in order to fight fraud generated by botnets and synthetic identities.

Botnets are challenging not just because of the volume of attacks, which they can adjust in order to minimize attention, but they can make identity verification challenging as well. They can attach themselves to mobile devices via malware, posing as the user. They also leverage synthetic identities based on pulling together various types of personally identifiable information – made available through various recent breaches.

This requires the need for a combination of data insights, including a person's footprint and identity, device assessment, geographic location, etc.; traditional solutions and those which work in isolation of each other will only pick up parts of this information, but not enough to support fraud decisions with such fast and anonymous transactions.

Recommendation #4

But small/mid digital lenders need to remain vigilant against fraud attacks as well. In some cases, they are more exposed. Fraud risks are not just the domain of larger digital firms.

While larger digital firms experience higher fraud costs, those experienced by small / mid digital lenders are high as well. Many of these smaller firms generate nearly all transactions via remote channels (i.e., online marketplace lenders), including use of mobile apps which are especially appealing to fraudsters and the under/un-banked.

Risk mitigation solutions use is more limited among these lenders. While there is use of select advanced solutions and data, such as automated transaction scoring, authentication using 3-D secure tools and customer profile databases, these smaller firms need to make sure that they are layering in other solutions to specifically address unique risks posed by the online and mobile channels (such as device ID / fingerprinting, real-time transaction tracking and geolocation).

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Recommendation #5

Lending firms should seek external providers with deep data and analytics resources to most effectively address identity-based fraud challenges. This particularly includes those conducting international transactions.

Identity fraud can be complicated, with various layers of masks and connections in the background. Investing in a layered solution approach will be much more effective if from a solutions partner that provides unique linking capabilities which identify and match hidden relationships, shed light on suspicious activities or transactions and identify collusion. These patterns are not easily uncovered by a number of risk solutions on the market today.

International transactions and newer privacy regulations – such as the GDPR – will make it increasingly difficult for companies to access and store foreign customer data essential for effective to identity verification and authentication (including digital identity data). This means that firms will need to rely more on external providers who already have deep reservoirs of current data on consumers and businesses.

Recommendation #6

Lending firms need to holistically track fraud by both payment and channel type – including that which has been successful and prevented. But this needs to be part of a broader approach that involves fraud detection solutions.

Since fraud occurs in different ways, this creates multiple endpoints and approaches that fraudsters can use to attack. They continue to test for the weakest links and where they can operate undetected. Knowing where they've been successful is important for "plugging the gaps"; but also knowing where they've tried and failed is important in order to maintain vigilance.

That said, the rise of synthetic identities makes it easier for fraud to go undetected. Without the aid of risk mitigation solutions designed to identify fraudulent identity characteristics, tracking approaches will miss certain clues; this will weaken tracking efforts.

LexisNexis® Risk Solutions can help

LexisNexis®
RISK SOLUTIONS

LexisNexis® Risk Solutions provides powerful identity verification, identity authentication and transaction scoring tools to combat fraud.

LexisNexis® Risk Solutions:

- Vast Data Resources
- Big Data Technology
- Linking & Analytics
- Industry-Specific Expertise & Delivery

Customer-Focused Solutions

Identity Verification
- Validate name, address and phone information
- Reconcile name variations, duplicates, multiple addresses, and myriad other inconsistencies and linkages
- Perform global identity checks with seamless integration and reporting capabilities

Transaction Risk Scoring
- Identify risks associated with bill-to and ship-to identities with a single numeric risk score
- Quickly detect fraud patterns and isolate high-risk transactions
- Resolve false-positive and Address Verification Systems failures

Manual Research Support
- Access billions of data records on consumers and businesses
- Discover linkages between people, businesses and assets
- Leverage specialized tools for due diligence, account management and compliance

Identity Authentication
- Authenticate identities on the spot using knowledge-based quizzes
- Dynamically adjust security level to suit risk scenario
- Receive real-time pass/fail results

For more information: visit http://risk.lexisnexis.com/financial-services or call 800.503.2685

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