LexisNexis® Risk Solutions
2018 True Cost of Fraud℠ Study
Lending Edition
September 2018
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?
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.

Lending Institutions Include:

Digital segments are defined as:

<table>
<thead>
<tr>
<th>Type of Firm</th>
<th>Annual Revenue Size/Digital</th>
<th>Online Marketplace Lenders (100% digital)</th>
<th>Type of Firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small/Mid Digital</td>
<td>Earns &lt; $50 million in annual revenues; 50% or more through the online and/or mobile channels.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Digital</td>
<td>Earns $50 million+ in annual revenues; 50% or more through the online and/or mobile channels.</td>
<td></td>
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<tr>
<td>Non-Digital Credit &amp; Lending</td>
<td></td>
<td></td>
<td>Credit &amp; Lending</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mortgage</td>
</tr>
<tr>
<td># Completions</td>
<td>35</td>
<td>48</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>133</td>
<td>53</td>
</tr>
</tbody>
</table>

Research was conducted March – May 2018.
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.
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 cited as the top challenge with the mobile channel.
- This aligns with most large digital creditors being concerned about fraud risk from mobile devices.

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).

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.
Key Findings (cont.)

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.

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

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

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
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.

**Fraud Costs as a % of Revenues**

- **Credit Lenders**
  - 2017: 2.41%
  - 2018: 2.57%
- **Mortgage Lenders**
  - 2017: 1.26%
  - 2018: 1.56%

**LexisNexis Fraud Multiplier℠**

- **Credit Lenders**
  - 2017:
    - Large Credit ($50M+): 3.53%
  - 2018:
    - Large Credit ($50M+): 2.41%
- **Mortgage Lenders**
  - 2017:
    - Large Mortgage ($50M+): 1.89%
  - 2018:
    - Large Mortgage ($50M+): 1.26%

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

12
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.
Credit and mortgage lenders continue to have similar online fraud challenges, with identity verification among the top 2.

**Top Ranked Online Fraud Challenge (Among Top 3 Ranked)**

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Credit Lenders</th>
<th>Mortgage Lenders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification of customer identity (KYC/AML)</td>
<td>43% 38%</td>
<td>33% 41%</td>
</tr>
<tr>
<td>Delay in transaction confirmation</td>
<td>32% 36%</td>
<td>32% 36%</td>
</tr>
<tr>
<td>Emergence of new and varied transaction methods</td>
<td>35% 26%</td>
<td>26% 25%</td>
</tr>
<tr>
<td>Limited jurisdiction &amp; ability to reclaim losses through litigation</td>
<td>30% 28%</td>
<td>24% 20%</td>
</tr>
<tr>
<td>Lack of specialized tools for int’l orders / transactions</td>
<td>26% 25%</td>
<td>19% 28%</td>
</tr>
<tr>
<td>Address verification</td>
<td>24% 20%</td>
<td>19% 28%</td>
</tr>
<tr>
<td>Challenges in acceptance of int’l-based transaction methods</td>
<td>19% 28%</td>
<td>19% 22%</td>
</tr>
<tr>
<td>Email or device verification</td>
<td>19% 28%</td>
<td>11% 15%</td>
</tr>
<tr>
<td>Excessive manual order reviews</td>
<td>19% 22%</td>
<td>12% 9%</td>
</tr>
<tr>
<td>Assessment of fraud risk by country / region</td>
<td>18% 32%</td>
<td>22% 21%</td>
</tr>
<tr>
<td>Balancing speed of risk verification against customer friction</td>
<td>23% 33%</td>
<td>22% 21%</td>
</tr>
</tbody>
</table>

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.

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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.

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.

### Fraud Mitigation Solutions Use

**Basic Verification & Transaction Solutions**

- **Check Verification**: 53% Credit, 53% Mortgage
- **Browser / Malware Tracking**: 32% Credit, 60% Mortgage
- **Address Verification Services**: 43% Credit, 53% Mortgage

**Advanced Identity Authentication Solutions**

- **Authenticate by Quiz / Knowledge**: 31% Credit, 38% Mortgage
- **Authenticate by Challenge Questions / Shared Secrets**: 31% Credit, 39% Mortgage
- **Authenticate Using 3-D Secure Tools**: 42% Credit, 49% Mortgage
- **Customer Profile Databases**: 40% Credit, 44% Mortgage

**Advanced Identity & Transaction Verification Solutions**

- **Geolocation**: 28% Credit, 36% Mortgage
- **Device ID Fingerprint**: 36% Credit, 42% Mortgage
- **Identity Verification Services**: 47% Credit, 46% Mortgage
- **Rules-based Filters**: 35% Credit, 34% Mortgage

**Automated Transaction Scoring**: 40% Credit, 51% Mortgage

**Real-time Transaction Tracking**: 38% Credit, 51% Mortgage

- **Don’t use a solution**: 11% Credit, 14% Mortgage

**Average Solutions Used**

- **Credit lenders**: 5.2 solutions
- **Mortgage lenders**: 6.1 solutions

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**
- **Significantly different from 2017 within segment at the 95% Confidence Interval**
But it is large digital lenders who continue to be hit harder with fraud costs and face difficulties with identity verification.
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 (<$50M):**
  - Average Number of Fraudulent Attempts PREVENTED per Month: 294
  - Average Number of Fraudulent Attempts That SUCCEED per Month: 136

- **Large Non-Digital ($50M+):**
  - Average Number of Fraudulent Attempts PREVENTED per Month: 500
  - Average Number of Fraudulent Attempts That SUCCEED per Month: 1,117

- **Large Digital ($50M+):**
  - Average Number of Fraudulent Attempts PREVENTED per Month: 1,617
  - Average Number of Fraudulent Attempts That SUCCEED per Month: 1,556

<table>
<thead>
<tr>
<th>Year</th>
<th>Avg. # Prevented</th>
<th>Avg. # Successful</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>413</td>
<td>1,458</td>
</tr>
<tr>
<td></td>
<td>284</td>
<td>996</td>
</tr>
<tr>
<td></td>
<td>129</td>
<td>462</td>
</tr>
<tr>
<td></td>
<td>1,959</td>
<td>1,458</td>
</tr>
</tbody>
</table>

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 than 2017 within Segment
This results in higher fraud costs for large digital lenders, with the LexisNexis Fraud Multiplier\textsuperscript{SM} 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.
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.

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).

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

- Verification of customer identity (KYC/AML)
- 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

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)

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Large Non-Digital (&lt;$50M)</th>
<th>Large Digital ($50M+)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verification of customer identity (KYC/AML)</td>
<td>43%</td>
<td>54%</td>
</tr>
<tr>
<td>Email or device verification</td>
<td>28%</td>
<td>10%</td>
</tr>
<tr>
<td>Delay in transaction confirmation</td>
<td>21%</td>
<td>32%</td>
</tr>
<tr>
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</tr>
<tr>
<td>Lack of specialized tools for int'l orders / transactions</td>
<td>26%</td>
<td>19%</td>
</tr>
<tr>
<td>Balancing speed of risk verification against customer friction</td>
<td>5%</td>
<td>23%</td>
</tr>
</tbody>
</table>

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

LexisNexis Fraud Multiplier™

<table>
<thead>
<tr>
<th>Category</th>
<th>Fraud Costs as a % of Revenues</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>1.92%</td>
<td>$3.05</td>
</tr>
<tr>
<td>Large Digital ($50M+) Credit</td>
<td>2.99%</td>
<td>$3.37</td>
</tr>
<tr>
<td>Large Digital ($50M+) Mortgage</td>
<td>3.22%</td>
<td>$3.47</td>
</tr>
<tr>
<td>Large Digital ($50M+) Mortgage</td>
<td>2.90%</td>
<td>$3.27</td>
</tr>
</tbody>
</table>

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).
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.

![Graph showing average distribution of transaction volume across mobile channels and mobile fraud by channel as a percentage of mobile fraud losses.]

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.

**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**
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.

Mobile Channel Perceptions (% 4 and 5 on 5 point scale)

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.

- Transacting via mobile channel is more secure than online
- Evolution of mobile payment & channel adds significant risk of fraud
- Security of mobile device transactions still unknown

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

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.
This aligns with identity verification being a top challenge when conducting transactions through 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.

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

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

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

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.

*Caution: small number of cases; findings should be treated more directionally*
Digital lenders may not be fighting fraud optimally.
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.

Tracks Both Channel & Pay Method (2018)

% Merchants Tracking Fraud Costs by Channel & Payment Method

<table>
<thead>
<tr>
<th></th>
<th>By Channel (in-store, online, mobile)</th>
<th>By Payment Method (credit/debit card, check, etc.)</th>
<th>Does Not Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>61%</td>
<td>65%</td>
<td>8%</td>
</tr>
<tr>
<td>Large Non-Digital</td>
<td>71%</td>
<td>61%</td>
<td>4%</td>
</tr>
<tr>
<td>Large Digital</td>
<td>73%</td>
<td>88%</td>
<td>0%</td>
</tr>
<tr>
<td>Large Digital ($50M+)</td>
<td>74%</td>
<td>86%</td>
<td>0%</td>
</tr>
<tr>
<td>Mortgage</td>
<td>70%</td>
<td>95%</td>
<td>0%</td>
</tr>
</tbody>
</table>

2017

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2017</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracks Both Channel &amp; Pay Method (2018)</td>
<td>35%</td>
<td>61%</td>
<td>65%</td>
</tr>
<tr>
<td>Tracks Both Channel &amp; Pay Method (2017)</td>
<td>33%</td>
<td>65%</td>
<td>67%</td>
</tr>
</tbody>
</table>

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

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

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

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

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**: 74% used an automated flagging system, 62% used TC-40/Chargeback Electronic Alerts, and 88% used at least 1 fraud mitigation solution.
- **Large Non-Digital ($50M+)**: 82% used an automated flagging system, 80% used TC-40/Chargeback Electronic Alerts, and 94% used at least 1 fraud mitigation solution.
- **Large Digital ($50M+)**: 88% used an automated flagging system, 59% used TC-40/Chargeback Electronic Alerts, and 96% used at least 1 fraud mitigation solution.
- **Large Digital ($50M+) Credit**: 91% used an automated flagging system, 65% used TC-40/Chargeback Electronic Alerts, and 95% used at least 1 fraud mitigation solution.
- **Large Digital ($50M+) Mortgage**: 80% used an automated flagging system, 44% used TC-40/Chargeback Electronic Alerts, and 99% used at least 1 fraud mitigation solution.

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?

**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**
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

<table>
<thead>
<tr>
<th>Segment</th>
<th>% Flagged by Automated System</th>
<th>% Sent for Manual Review</th>
<th>% False Positives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Non-Digital ($50M+)</td>
<td>66%</td>
<td>36%</td>
<td>16%</td>
</tr>
<tr>
<td>Large Digital ($50M+)</td>
<td>64%</td>
<td>35%</td>
<td>13%</td>
</tr>
<tr>
<td>Large Digital ($50M+) Credit</td>
<td>72%</td>
<td>25%</td>
<td>13%</td>
</tr>
</tbody>
</table>

2017 77% 37% 21%

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?

Significantly different than 2017 within Segment

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

### Fraud Mitigation Solutions Use: Large Digital Credit Lenders vs. Mortgage Lenders

<table>
<thead>
<tr>
<th>Basic Verification &amp; Transaction Solutions</th>
<th>Advanced Identity Authentication Solutions</th>
<th>Advanced Identity &amp; Transaction Verification Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>60% Check Verification</td>
<td>45% Authenticate by Quiz / Knowledge</td>
<td>53% Identity Verification Services</td>
</tr>
<tr>
<td>51% Browser / Malware Tracking</td>
<td>37% Authenticate by Challenge Questions / Shared Secrets</td>
<td>26% Fingerprint</td>
</tr>
<tr>
<td>28% Address Verification Services</td>
<td>45% Authenticate Using 3-D Secure Tools</td>
<td>29% Device ID Fingerprint</td>
</tr>
<tr>
<td>52% Authenticate by Knowledge</td>
<td>52% Customer Profile Databases</td>
<td>35% Rules-based Filters</td>
</tr>
<tr>
<td>50% Geolocation</td>
<td></td>
<td>37% Automated Transaction Scoring</td>
</tr>
<tr>
<td></td>
<td></td>
<td>56% Real-time Transaction Tracking</td>
</tr>
</tbody>
</table>

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

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Avg. 6.0 solutions used

Avg. 6.4 solutions used
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.
Recommendations
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.

Lenders, particularly digital ones, should consider a multi-layered solution approach that attacks different types of fraud.
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.
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).
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 #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.
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 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](http://risk.lexisnexis.com/financial-services) or call 800.503.2685