EMV Preparedness Survey
for the
U.S. Convenience and Retail Fueling Industry
August 9, 2019
Version 1.0

Document Summary

From June 10 to July 8, 2019 Conexxus fielded an electronic survey to determine the level of preparedness of the retail fueling industry for the EMV liability shift for both automated fueling dispensers (AFDs) set to take place in October 2020 and all other transactions which went into effect in October 2015. This document details the results of that survey.

Questions? Please email: info@conexxus.org
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1 Introduction

According to the 2018 NACS State of the Industry (SOI) report, the United states has over 153,000 retail fueling and convenience stores. These stores perform 160M transactions per day with annual sales totaling more than $654B. Approximately 80% of stores sell fuel and well over 60% of stores are owned by a single store operator.

Many stores carry “branded” fuel. While the brand (e.g., major oil) may not own the store, it has significant influence on equipment and solutions that the site installs. For major oils, as well as chains with larger store counts, it is typical to support multiple vendors for each component in the payment ecosystem (e.g., dispensers, POS, EPS, PINPad terminals). Due to the many combinations of equipment that can occur, development, testing, and certification requirements increase in order to fully support EMV across all stores in the chain or brand.

From June 10 to July 8, 2019 Conexxus fielded an electronic survey to determine the level of preparedness of the U. S. retail fueling industry for the EMV liability shift for both automated fueling dispensers (AFDs) set to take place in October 2020 and all other transactions which went into effect in October 2015.

In an attempt to maximize the total number of responses, Conexxus reached out to over 1600 individuals (CEO, CFO, payment professionals) at 1100 organizations representing individual sites, retail chains, major oils, and fuel distributors and wholesalers. Recipients were encouraged to choose one person within their company with the most knowledge of the topic to complete the survey, in order to avoid duplicate responses. Utilizing convenience sampling methods, 88 unique completed surveys were received, of which 79 respondents own or operate a total of 26,284 retail sites. Not all questions were asked of every respondent (varied by company classification and answers to specific questions earlier in the survey) and not every respondent chose to provide answers to all asked questions. Therefore, the sample for each question varied and is shown in the results reported below. If the reported data is a number by itself or a number followed by a percentage in parenthesis, the number represents the total count for that answer to the question. In column headings where a number is shown in parenthesis, this indicates the sample size for the question.

No company identifying information (e.g., name or email address of respondent, company name) were captured as to encourage accurate disclosure. The following report details the aggregate results from the survey.
2 Executive Summary

Industry will not be EMV compliant on the fuel island by October 1, 2020

The survey included a cross section of major oils, fuel distributors/wholesalers, and company owned/retail site operators. The survey confirmed that the vast majority of sites were in-store EMV operational, while a small minority of sites are EMV operational on the fuel island.

While questions about contactless EMV and fraud were asked, this summary only provides information on the results from the contact EMV questions (when the card is inserted in reader).

For respondents who own and operate sites:

In-store contact EMV status – 86% surveyed report fully deployed.

- For those reporting no sites deployed with inside EMV, all indicated that it was their intention to implement.
- For those that were not fully deployed, almost 87% of the sites have functional hardware installed, but almost 44% of the sites are waiting on software.

Fuel island contact EMV status – 13% surveyed report fully deployed

- Almost 70% indicated they had 0 (zero) sites deployed
- 9% indicated the rollout was completed for less than 25% of their sites.
- Those reporting no sites deployed with outside EMV, 80% indicated they intended to implement it, while 17% were undecided.
- For respondents that were undecided or had decided not to implement, the cost of upgrading (43% of respondents) along with the risk not justifying the expense (also 43% of respondents) were the top reasons.
- For those that were not 100% deployed, only 23% of the sites have functional hardware installed, with the remainder needing new hardware or upgrades.
- The top challenge cited by respondents not 100% EMV ready was lack of available software (52%).
- 42% reported that they already are, or will be 100% deployed by the liability shift date of Oct 1, 2020.
- 25% of respondents did not know when they might be ready.

For major oil and fuel distributors/wholesalers responding about the requirements they are imposing on branded sites:
• Only 10% of the respondents indicated they are not requiring indoor contact EMV.
• 30% indicated they were not requiring outside contact EMV.
• For indoor contact EMV, almost 60% indicated they had certified solutions ready for deployment from ALL of their vendors.
• For outdoor contact EMV, no respondents had certified solutions ready for deployment from ALL of their vendors.
  o Over 28% are waiting on software from one or more vendor
  o Almost 15% are waiting on hardware.
3 Survey Sample Description

3.1 Company Classification
Respondents self-identified as to whether they were a major oil, fuel distributor or wholesaler or a retail site operator.

<table>
<thead>
<tr>
<th>Company Classification broken out by respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Oil</td>
</tr>
<tr>
<td>Fuel Distributor/Wholesalers</td>
</tr>
<tr>
<td>Company Owned/Retail Site Operators</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company Classification broken out by sites represented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Oil</td>
</tr>
<tr>
<td>Fuel Distributor/Wholesalers</td>
</tr>
<tr>
<td>Company Owned/Retail Site Operators</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

3.2 NACS Store Count Categories
The NACS annual SOI report utilizes 5 categories (A, B, C, D, and E) to classify store count size. Some questions are broken out utilizing these same categories.

<table>
<thead>
<tr>
<th>NACS Store Count Categories broken out by respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (1-10 stores) **</td>
</tr>
<tr>
<td>B (11-50 stores)</td>
</tr>
<tr>
<td>C (51-200 stores)</td>
</tr>
<tr>
<td>D (201-500 stores)</td>
</tr>
<tr>
<td>E (501+ stores)</td>
</tr>
</tbody>
</table>
| *The total respondent for this question is N=79. 9 survey respondents do not operate sites. ** Note that 11 respondents were single store operators.
### 3.3 Region

#### Areas of the Country Where Respondents Operate Sites

<table>
<thead>
<tr>
<th>Region</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New England (Maine, Rhode Island, Vermont, Connecticut, New Hampshire and Massachusetts)</td>
<td>8.88%</td>
</tr>
<tr>
<td>Mid Atlantic (New York, New Jersey, and Pennsylvania)</td>
<td>13.92%</td>
</tr>
<tr>
<td>South (Virginia, West Virginia, Kentucky, Delaware, Maryland, North and South Carolina, Tennessee, Arkansas, Louisiana, Florida, Georgia, Alabama, and Mississippi)</td>
<td>43.04%</td>
</tr>
<tr>
<td>Midwest (Michigan, North and South Dakota, Iowa, Minnesota, Kansas, Nebraska, Ohio, Indiana, Illinois, Wisconsin, and Missouri)</td>
<td>34.18%</td>
</tr>
<tr>
<td>Southwest (Texas, Arizona, New Mexico and Oklahoma)</td>
<td>24.05%</td>
</tr>
<tr>
<td>Rocky Mountain (Montana, Idaho, Colorado, Utah, Wyoming and Nevada)</td>
<td>17.72%</td>
</tr>
<tr>
<td>Pacific (California, Oregon and Washington)</td>
<td>20.25%</td>
</tr>
</tbody>
</table>

*Note: This will not equal 100% in total as respondents could select more than one region. Data related to store count per region is not available. N=79 as only those who answered “Yes” to “own and operate stores” were prompted for this question.*

---

<table>
<thead>
<tr>
<th>NACS Store Count Categories broken out by sites represented</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (1-10 stores)</td>
</tr>
<tr>
<td>B (11-50 stores)</td>
</tr>
<tr>
<td>C (51-200 stores)</td>
</tr>
<tr>
<td>D (201-500 stores)</td>
</tr>
<tr>
<td>E (501+ stores)</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
4 Major Oil and Fuel Distributor Only Questions

The questions in this section were only asked of those respondents who self-identified as either major oil or fuel distributor/wholesaler company classification. These companies are responsible for ensuring tested and certified EMV solutions exist for their branded sites, regardless of whether or they actual own and operate them.

4.1 Are you requiring your retail branded sites to implement EMV?

<table>
<thead>
<tr>
<th>EMV Implementation Requirements</th>
<th>Major Oil (10)</th>
<th>Fuel Distributor (6)</th>
<th>Total (16)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INSIDE CONTACT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>60%</td>
<td>66.66%</td>
<td>62.5%</td>
</tr>
<tr>
<td>Yes, but up to site to decide if they want to turn it on</td>
<td>30%</td>
<td>0%</td>
<td>18.75%</td>
</tr>
<tr>
<td>No</td>
<td>10%</td>
<td>16.66%</td>
<td>12.25%</td>
</tr>
<tr>
<td>Undecided</td>
<td>0%</td>
<td>16.66%</td>
<td>6.5%</td>
</tr>
<tr>
<td><strong>INSIDE CONTACTLESS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>50%</td>
<td>16.66%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Yes, but up to site to decide if they want to turn it on</td>
<td>30%</td>
<td>16.66%</td>
<td>25%</td>
</tr>
<tr>
<td>No</td>
<td>10%</td>
<td>66.66%</td>
<td>31.25%</td>
</tr>
<tr>
<td>Undecided</td>
<td>10%</td>
<td>0%</td>
<td>6.25%</td>
</tr>
<tr>
<td><strong>OUTSIDE CONTACT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>40%</td>
<td>33.33%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Yes, but up to site to decide if they want to turn it on</td>
<td>40%</td>
<td>16.66%</td>
<td>31.25%</td>
</tr>
<tr>
<td>No</td>
<td>20%</td>
<td>50%</td>
<td>31.25%</td>
</tr>
<tr>
<td>Undecided</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>OUTSIDE CONTACTLESS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10%</td>
<td>16.66%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Yes, but up to site to decide if they want to turn it on</td>
<td>50%</td>
<td>0%</td>
<td>31.25%</td>
</tr>
<tr>
<td>No</td>
<td>10%</td>
<td>66.66%</td>
<td>31.25%</td>
</tr>
<tr>
<td>Undecided</td>
<td>30%</td>
<td>16.66%</td>
<td>25%</td>
</tr>
</tbody>
</table>
### 4.2 Do you own and operate sites?

<table>
<thead>
<tr>
<th>Do You Own and Operate Sites?</th>
<th>Major Oil (10)</th>
<th>Fuel Distributor (6)</th>
<th>Total (16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>70%</td>
<td>33.33%</td>
<td>56.25%</td>
</tr>
<tr>
<td>Yes</td>
<td>30%</td>
<td>66.66%</td>
<td>43.75%</td>
</tr>
</tbody>
</table>
4.3  EMV Solution Status (no company owned and operated stores)

The questions in this subsection were only asked of those respondents who self-
identified as either major oil or fuel distributor/wholesaler company classification *and*
did not own or operate stores. (Companies that did own stores were asked a different set
of questions.) Two of the major oils who reported that they did not operate sites chose
not to respond to the following questions.

4.3.1  What is the status of EMV solutions for the equipment you

<table>
<thead>
<tr>
<th></th>
<th>Major Oil (5)</th>
<th>Fuel Distributor (2)</th>
<th>Total (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>INSIDE CONTACT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am waiting on software from one or more vendor(s)</td>
<td>0%</td>
<td>50%</td>
<td>14.29%</td>
</tr>
<tr>
<td>I am waiting on hardware from one or more vendor(s)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I am in lab testing</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I am in network certification testing</td>
<td>20%</td>
<td>0%</td>
<td>14.29%</td>
</tr>
<tr>
<td>I have certified solutions ready for deployment from one or more vendor(s)</td>
<td>40%</td>
<td>0%</td>
<td>28.57%</td>
</tr>
<tr>
<td>I have certified solutions ready for deployment from ALL of my vendor(s)</td>
<td>60%</td>
<td>50%</td>
<td>57.14%</td>
</tr>
<tr>
<td>INSIDE CONTACTLESS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am waiting on software from one or more vendor(s)</td>
<td>0%</td>
<td>50%</td>
<td>14.29%</td>
</tr>
<tr>
<td>I am waiting on hardware from one or more vendor(s)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I am in lab testing</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I am in network certification testing</td>
<td>20%</td>
<td>0%</td>
<td>14.29%</td>
</tr>
<tr>
<td>I have certified solutions ready for deployment from one or more vendor(s)</td>
<td>40%</td>
<td>0%</td>
<td>28.57%</td>
</tr>
<tr>
<td>I have certified solutions ready for deployment from ALL of my vendor(s)</td>
<td>60%</td>
<td>50%</td>
<td>57.14%</td>
</tr>
</tbody>
</table>
## EMV Solution Status

(Respondents could choose all that applied, therefore the total % will not equal 100%)

<table>
<thead>
<tr>
<th></th>
<th>Major Oil (5)</th>
<th>Fuel Distributor (2)</th>
<th>Total (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outside Contact</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am waiting on software from one or more vendor(s)</td>
<td>20%</td>
<td>50%</td>
<td>28.57%</td>
</tr>
<tr>
<td>I am waiting on hardware from one or more vendor(s)</td>
<td>20%</td>
<td>0%</td>
<td>14.29%</td>
</tr>
<tr>
<td>I am in lab testing</td>
<td>20%</td>
<td>0%</td>
<td>14.29%</td>
</tr>
<tr>
<td>I am in network certification testing</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I have certified solutions ready for deployment from one or more vendor(s)</td>
<td>80%</td>
<td>20%</td>
<td>71.43%</td>
</tr>
<tr>
<td>I have certified solutions ready for deployment from ALL of my vendor(s)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Outside Contactless</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am waiting on software from one or more vendor(s)</td>
<td>60%</td>
<td>50%</td>
<td>57.14%</td>
</tr>
<tr>
<td>I am waiting on hardware from one or more vendor(s)</td>
<td>20%</td>
<td>0%</td>
<td>14.29%</td>
</tr>
<tr>
<td>I am in lab testing</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I am in network certification testing</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>I have certified solutions ready for deployment from one or more vendor(s)</td>
<td>20%</td>
<td>50%</td>
<td>28.57%</td>
</tr>
<tr>
<td>I have certified solutions ready for deployment from ALL of my vendor(s)</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
4.3.2 When do you expect to have certified solutions for deployment from ALL your vendor(s)?

<table>
<thead>
<tr>
<th>CERTIFIED SOLUTION AVAILABILITY</th>
<th>Major Oil (5)</th>
<th>Fuel Distributor (2)</th>
<th>Total (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INSIDE CONTACT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have them now</td>
<td>40%</td>
<td>50%</td>
<td>42.9%</td>
</tr>
<tr>
<td>2019</td>
<td>60%</td>
<td>0%</td>
<td>42.9%</td>
</tr>
<tr>
<td>First half of 2020</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Second half of 2020</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>First half of 2021</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Second half of 2021</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2022</td>
<td>0%</td>
<td>50%</td>
<td>14.29%</td>
</tr>
<tr>
<td>2023</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2024 or beyond</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

| INSIDE CONTACTLESS                |               |                      |           |
| I have them now                  | 40%           | 50%                  | 42.86%    |
| 2019                             | 40%           | 0%                   | 28.57%    |
| First half of 2020                | 20%           | 0%                   | 14.29%    |
| Second half of 2020               | 0%            | 0%                   | 0%        |
| First half of 2021                | 0%            | 0%                   | 0%        |
| Second half of 2021               | 0%            | 0%                   | 0%        |
| 2022                             | 0%            | 50%                  | 14.29%    |
| 2023                             | 0%            | 0%                   | 0%        |
| 2024 or beyond                    | 0%            | 0%                   | 0%        |

<p>| OUTSIDE CONTACT                   |               |                      |           |
| I have them now                  | 0%            | 0%                   | 0%        |
| 2019                             | 0%            | 50%                  | 14.29%    |
| First half of 2020                | 40%           | 0%                   | 28.57%    |
| Second half of 2020               | 40%           | 0%                   | 28.57%    |
| First half of 2021                | 20%           | 0%                   | 14.29%    |
| Second half of 2021               | 0%            | 50%                  | 14.29%    |
| 2022                             | 0%            | 0%                   | 0%        |
| 2023                             | 0%            | 0%                   | 0%        |
| 2024 or beyond                    | 0%            | 0%                   | 0%        |</p>
<table>
<thead>
<tr>
<th></th>
<th>Major Oil (5)</th>
<th>Fuel Distributor (2)</th>
<th>Total (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTSIDE CONTACTLESS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have them now</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2019</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>First half of 2020</td>
<td>20%</td>
<td>50%</td>
<td>28.57%</td>
</tr>
<tr>
<td>Second half of 2020</td>
<td>20%</td>
<td>0%</td>
<td>14.29%</td>
</tr>
<tr>
<td>First half of 2021</td>
<td>20%</td>
<td>0%</td>
<td>14.29%</td>
</tr>
<tr>
<td>Second half of 2021</td>
<td>40%</td>
<td>0%</td>
<td>28.57%</td>
</tr>
<tr>
<td>2022</td>
<td>0%</td>
<td>50%</td>
<td>14.29%</td>
</tr>
<tr>
<td>2023</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2024 or beyond</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
5 Questions for Site Owners/Operators
The questions in this section were only asked of those respondents who answered affirmative to owning/operating sites. This could include major oils and fuel distributors/wholesalers.

5.1 Contact EMV Inside

5.1.1 What percentage of your sites have contact EMV currently working inside at the POS?

<table>
<thead>
<tr>
<th>Inside Contact Deployment</th>
<th>Respondent Count (78)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>3.85%</td>
</tr>
<tr>
<td>&lt; 25%</td>
<td>2.56%</td>
</tr>
<tr>
<td>25%-50%</td>
<td>2.56%</td>
</tr>
<tr>
<td>50%-75%</td>
<td>2.56%</td>
</tr>
<tr>
<td>75%-100%</td>
<td>2.56%</td>
</tr>
<tr>
<td>100%</td>
<td>85.90%</td>
</tr>
</tbody>
</table>

5.1.2 Do you plan on implementing contact EMV inside at some point in the future for at least some of your sites?
This question was only for site owners who have 0% deployment contact inside.

<table>
<thead>
<tr>
<th>Inside Contact Plans</th>
<th>Respondent Count (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>100%</td>
</tr>
<tr>
<td>No</td>
<td>0%</td>
</tr>
<tr>
<td>Undecided</td>
<td>0%</td>
</tr>
</tbody>
</table>
## 5.1.3 Inside Contact EMV Challenges

These questions were asked of respondents that do not currently have 100% deployment of inside contact EMV. A total of 6,997 sites are represented across the 10 respondents who chose the answer the question.

<table>
<thead>
<tr>
<th>Inside Contact EMV Challenges</th>
<th>Site Count (6,997)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hardware Status</strong></td>
<td></td>
</tr>
<tr>
<td>I have deployed hardware that is functional as is</td>
<td>86.77%</td>
</tr>
<tr>
<td>I have deployed hardware but it needs to be upgraded</td>
<td>9.68%</td>
</tr>
<tr>
<td>I have not deployed hardware</td>
<td>1.32%</td>
</tr>
<tr>
<td>I have some sites that I won’t be upgrading</td>
<td>0.08%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>2.14%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Software Status</strong></th>
<th>Site Count (6,997)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have software in lab testing</td>
<td>42.87%</td>
</tr>
<tr>
<td>I have software in network certification testing</td>
<td>0%</td>
</tr>
<tr>
<td>I have certified software available; I just haven’t deployed it yet</td>
<td>9.76%</td>
</tr>
<tr>
<td>I am waiting on software from vendor(s)</td>
<td>43.57%</td>
</tr>
<tr>
<td>I have some sites that I won’t be upgrading</td>
<td>0.07%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>3.73%</td>
</tr>
</tbody>
</table>

### What is preventing you from being 100% deployed?
(Respondents could choose all that applied, therefore the total % will not equal 100%)

<table>
<thead>
<tr>
<th>Respondent Count (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of available hardware</td>
</tr>
<tr>
<td>Lack of available software</td>
</tr>
<tr>
<td>Waiting on certification</td>
</tr>
<tr>
<td>Not sure how to pay for it</td>
</tr>
<tr>
<td>Effort, complexity</td>
</tr>
<tr>
<td>Other priorities</td>
</tr>
<tr>
<td>My fuel brand has told me a solution is not available yet</td>
</tr>
<tr>
<td>I am waiting to deploy indoor and outdoor at the same time</td>
</tr>
<tr>
<td>Other: (Specific reasons included deployment is in progress or is starting soon, EMV is painfully slow and creating long lines)</td>
</tr>
</tbody>
</table>
## Inside Contact EMV Challenges

<table>
<thead>
<tr>
<th>Expectation for 100% deployment for sites you want to upgrade?</th>
<th>Respondent Count (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>40%</td>
</tr>
<tr>
<td>First half of 2020</td>
<td>20%</td>
</tr>
<tr>
<td>Second half of 2020</td>
<td>10%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>30%</td>
</tr>
</tbody>
</table>

### 5.2 Contact EMV Outside

In the following tables, responses are split out by respondent’s store count using the NACS store count categories, where:

- A = 1-10 Stores
- B = 11-50 Stores
- C = 51-200 Stores
- D = 201-500 Stores
- E = 501+ Stores

#### 5.2.1 What percentage of your sites have contact EMV currently working outside at the dispenser?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>56%</td>
<td>70.59%</td>
<td>84.62%</td>
<td>100%</td>
<td>66.67%</td>
<td>69.7%</td>
</tr>
<tr>
<td>&lt; 25%</td>
<td>4%</td>
<td>11.76%</td>
<td>15.38%</td>
<td>0%</td>
<td>16.67%</td>
<td>9.09%</td>
</tr>
<tr>
<td>25%-50%</td>
<td>8%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>3.03%</td>
</tr>
<tr>
<td>50%-75%</td>
<td>4%</td>
<td>5.88%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>3.03%</td>
</tr>
<tr>
<td>75%-100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>16.67%</td>
<td>1.52%</td>
</tr>
<tr>
<td>100%</td>
<td>28%</td>
<td>11.76%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>13.64%</td>
</tr>
</tbody>
</table>
5.2.2 Do you plan on implementing contact EMV outside at some point in the future for at least some of your sites?

This question was only for site owners who have 0% deployment contact outside.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>71.42%</td>
<td>91.67%</td>
<td>63.63%</td>
<td>100%</td>
<td>100%</td>
<td>80.43%</td>
</tr>
<tr>
<td>No</td>
<td>7.14%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>2.17%</td>
</tr>
<tr>
<td>Undecided</td>
<td>21.43%</td>
<td>8.33%</td>
<td>36.36%</td>
<td>0%</td>
<td>0%</td>
<td>17.39%</td>
</tr>
</tbody>
</table>

5.2.3 Why aren’t you implementing contact EMV outside?

This question was only for site owners who have 0% deployment contact outside and indicated they were either undecided about or definitely not implementing it.

<table>
<thead>
<tr>
<th>Why aren’t you going to implement outside contact?</th>
<th>Respondent Count (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t know how</td>
<td>0%</td>
</tr>
<tr>
<td>It’s too complex, requires too much effort</td>
<td>0%</td>
</tr>
<tr>
<td>Other priorities</td>
<td>14.29%</td>
</tr>
<tr>
<td>The cost is too high</td>
<td>42.86%</td>
</tr>
<tr>
<td>I’m not sure how to pay for it</td>
<td>0%</td>
</tr>
<tr>
<td>My risk for not converting doesn’t justify the expense</td>
<td>42.86%</td>
</tr>
<tr>
<td>Other (Specific reasons included waiting on decisions from management, fuel brand, networks)</td>
<td>28.57%</td>
</tr>
</tbody>
</table>
### 5.2.4 Outside Contact EMV Challenges

These questions were asked of respondents that do not currently have 100% deployment of outside contact EMV. A total of 24,242 sites are represented across 48 respondents.

<table>
<thead>
<tr>
<th>Outside Contact EMV Challenges</th>
<th>Hardware Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have deployed hardware that is functional as is</td>
<td>23.48%</td>
</tr>
<tr>
<td>I have deployed hardware but it needs to be upgraded</td>
<td>41.60%</td>
</tr>
<tr>
<td>I have not deployed hardware</td>
<td>35.20%</td>
</tr>
<tr>
<td>I have some sites that I won’t be upgrading</td>
<td>1.72%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Software Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have software in lab testing</td>
</tr>
<tr>
<td>I have software in network certification testing</td>
</tr>
<tr>
<td>I have certified software available; I haven’t deployed yet</td>
</tr>
<tr>
<td>I am waiting on software from vendor(s)</td>
</tr>
<tr>
<td>I have some sites that I won’t be upgrading</td>
</tr>
<tr>
<td>Don’t know</td>
</tr>
</tbody>
</table>

**What is preventing you from being 100% deployed?**

(Respondents could choose all that applied, therefore the total % will not equal 100%)

<table>
<thead>
<tr>
<th>What is preventing you from being 100% deployed?</th>
<th>Respondent Count (48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of available hardware</td>
<td>14.58%</td>
</tr>
<tr>
<td>Lack of available software</td>
<td>52.08%</td>
</tr>
<tr>
<td>Waiting on certification</td>
<td>29.17%</td>
</tr>
<tr>
<td>Not sure how to pay for it</td>
<td>29.17%</td>
</tr>
<tr>
<td>Effort, complexity</td>
<td>25%</td>
</tr>
<tr>
<td>Other priorities</td>
<td>29.17%</td>
</tr>
<tr>
<td>My fuel brand has told me a solution is not available yet</td>
<td>29.17%</td>
</tr>
<tr>
<td>Other: (Specific reasons included availability of certified technicians, waiting on installs, vendor delays, no certification for outside debit, can’t justify expense, brand readiness, solution is reliable, plan to upgrade closer to liability shift date)</td>
<td>16.67%</td>
</tr>
</tbody>
</table>
### Outside Contact EMV Challenges

**What % of your sites do you expect to have EMV working outside by Oct 1, 2020?**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Respondent Count (48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>14.58%</td>
</tr>
<tr>
<td>&lt; 25%</td>
<td>6.25%</td>
</tr>
<tr>
<td>25%-50%</td>
<td>18.75%</td>
</tr>
<tr>
<td>50%-75%</td>
<td>10.42%</td>
</tr>
<tr>
<td>75%-100%</td>
<td>16.67%</td>
</tr>
<tr>
<td>100%</td>
<td>33.33%</td>
</tr>
</tbody>
</table>

### Expectation for 100% deployment for sites you want to upgrade?

<table>
<thead>
<tr>
<th>Year</th>
<th>Respondent Count (48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>8.33%</td>
</tr>
<tr>
<td>2020</td>
<td>35.42%</td>
</tr>
<tr>
<td>First half of 2021</td>
<td>12.5%</td>
</tr>
<tr>
<td>Second half of 2021</td>
<td>4.17%</td>
</tr>
<tr>
<td>2022</td>
<td>4.17%</td>
</tr>
<tr>
<td>2023</td>
<td>6.25%</td>
</tr>
<tr>
<td>2024 or beyond</td>
<td>4.17%</td>
</tr>
<tr>
<td>I don’t know</td>
<td>25%</td>
</tr>
</tbody>
</table>
## 5.3 Contactless EMV

### Contactless EMV

<table>
<thead>
<tr>
<th>Are you planning to deploy contactless inside?</th>
<th>Respondent Count (54)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, and I’m 100% deployed at sites where I have contact EMV deployed inside</td>
<td>59.26%</td>
</tr>
<tr>
<td>Yes, but I’m not 100% deployed</td>
<td>18.52%</td>
</tr>
<tr>
<td>No</td>
<td>5.56%</td>
</tr>
<tr>
<td>Undecided</td>
<td>16.67%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Are you planning to deploy contactless outside?</th>
<th>Respondent Count (54)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, and I’m 100% deployed at sites where I have contact EMV deployed outside</td>
<td>11.11%</td>
</tr>
<tr>
<td>Yes, but I’m not 100% deployed</td>
<td>50%</td>
</tr>
<tr>
<td>No</td>
<td>3.70%</td>
</tr>
<tr>
<td>Undecided</td>
<td>35.19%</td>
</tr>
</tbody>
</table>

**If you are not implementing contactless, why not?**
(Respondents could choose all that applied, therefore the total % will not equal 100%)

<table>
<thead>
<tr>
<th>If you are not implementing contactless, why not?</th>
<th>Respondent Count (23)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I don’t know how</td>
<td>13.04%</td>
</tr>
<tr>
<td>Effort, complexity</td>
<td>13.04%</td>
</tr>
<tr>
<td>Other priorities</td>
<td>30.43%</td>
</tr>
<tr>
<td>The cost is too high</td>
<td>47.82%</td>
</tr>
<tr>
<td>Not sure how to pay for it</td>
<td>30.43%</td>
</tr>
<tr>
<td>Requires additional upgrades</td>
<td>60.87%</td>
</tr>
<tr>
<td>Other: (Specific reasons included will probably implement eventually, cost is ridiculous, worried about skimming and other threats to contactless, will only deploy at sites that already have necessary hardware, not sure it’s needed)</td>
<td>17.39%</td>
</tr>
</tbody>
</table>
### Contactless EMV

If you want to deploy but aren’t at 100%, what’s the primary reason for why not?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Respondent Count (43)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I need new hardware</td>
<td>16.28%</td>
</tr>
<tr>
<td>Lack of available software</td>
<td>13.95%</td>
</tr>
<tr>
<td>Waiting on certification</td>
<td>9.30%</td>
</tr>
<tr>
<td>Not sure how to pay for it</td>
<td>9.30%</td>
</tr>
<tr>
<td>Effort, complexity</td>
<td>13.95%</td>
</tr>
<tr>
<td>Other priorities</td>
<td>9.30%</td>
</tr>
<tr>
<td>My fuel brand has told me a solution is not yet available</td>
<td>11.63%</td>
</tr>
<tr>
<td>Other: (Specific reasons included provider delays, waiting until closer to October 2020, cost is too high, worried about spending money and then the technology being exploited and we’ll be charged back for the fraud)</td>
<td>16.28%</td>
</tr>
</tbody>
</table>
## 5.4 Fraud

### 5.4.1 Fraud Status

<table>
<thead>
<tr>
<th>Question</th>
<th>Respondent Count (54)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have sites that were <em>previously</em> in excessive fraud and were able to remediate out?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>68.52%</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>24.07%</td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td>7.41%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Respondent Count (54)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are any of your sites <em>currently</em> in excessive fraud for chargeback purposes?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>75.93%</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>22.22%</td>
<td></td>
</tr>
<tr>
<td>Don’t Know</td>
<td>1.85%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Respondent Count (54)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>What percentage of your sites are currently in excessive fraud?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 25%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Question</th>
<th>Respondent Count (23, after excluding those who chose not applicable as an answer)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>What regions are the sites located in that are experiencing or were experiencing excessive fraud?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New England (Maine, Rhode Island, Vermont, Connecticut, New Hampshire and Massachusetts)</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Mid Atlantic (New York, New Jersey, and Pennsylvania)</td>
<td>8.7%</td>
<td></td>
</tr>
<tr>
<td>South (Virginia, West Virginia, Kentucky, Delaware, Maryland, North and South Carolina, Tennessee, Arkansas, Louisiana, Florida, Georgia, Alabama, and Mississippi)</td>
<td>43.49%</td>
<td></td>
</tr>
<tr>
<td>Midwest (Michigan, North and South Dakota, Iowa, Minnesota, Kansas, Nebraska, Ohio, Indiana, Illinois, Wisconsin, and Missouri)</td>
<td>30.43%</td>
<td></td>
</tr>
<tr>
<td>Fraud Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Southwest (Texas, Arizona, New Mexico and Oklahoma)</td>
<td>30.43%</td>
<td></td>
</tr>
<tr>
<td>Rocky Mountain (Montana, Idaho, Colorado, Utah, Wyoming and Nevada)</td>
<td>13.04%</td>
<td></td>
</tr>
<tr>
<td>Pacific (California, Oregon and Washington)</td>
<td>13.04%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Which card brand(s) have you seen excessive fraud?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Respondents could choose all that applied, therefore the total % will not equal 100%)</td>
<td>Respondent Count (16, after excluding those who chose not applicable as an answer)</td>
</tr>
<tr>
<td>American Express</td>
<td>6.25%</td>
</tr>
<tr>
<td>Mastercard</td>
<td>50%</td>
</tr>
<tr>
<td>Visa</td>
<td>100%</td>
</tr>
</tbody>
</table>
## 5.4.2 Fraud Mitigation

### Are you doing anything between now and when you deploy outdoor EMV to mitigate fraud at the dispenser?

(Respondents could choose all that applied, therefore the total % will not equal 100%)

<table>
<thead>
<tr>
<th>Action</th>
<th>Respondent Count (54)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>42.59%</td>
</tr>
<tr>
<td>Refer people inside</td>
<td>3.70%</td>
</tr>
<tr>
<td>Turn Off pay at pump</td>
<td>0%</td>
</tr>
<tr>
<td>Fraud prevention program through a card brand</td>
<td>14.81%</td>
</tr>
<tr>
<td>Fraud prevention program through your acquirer/network</td>
<td>25.93%</td>
</tr>
<tr>
<td>Fraud prevention program in-house</td>
<td>24.07%</td>
</tr>
<tr>
<td>White listing and black listing of cards</td>
<td>7.41%</td>
</tr>
<tr>
<td>Disallowing pin bypass</td>
<td>7.41%</td>
</tr>
<tr>
<td>Other (Specific answers included zip code verification, secure locks)</td>
<td>7.41%</td>
</tr>
</tbody>
</table>

### Do you plan to continue any fraud mitigation after you deploy outdoor EMV?

(Respondents could choose all that applied, therefore the total % will not equal 100%)

<table>
<thead>
<tr>
<th>Action</th>
<th>Respondent Count (54)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>44.44%</td>
</tr>
<tr>
<td>Refer people inside</td>
<td>7.41%</td>
</tr>
<tr>
<td>Fraud prevention program through a card brand</td>
<td>14.81%</td>
</tr>
<tr>
<td>Fraud prevention program through your acquirer/network</td>
<td>25.93%</td>
</tr>
<tr>
<td>Fraud prevention program in-house</td>
<td>27.78%</td>
</tr>
<tr>
<td>White listing and black listing of cards</td>
<td>7.41%</td>
</tr>
<tr>
<td>Disallowing pin bypass</td>
<td>9.26%</td>
</tr>
<tr>
<td>Other (Specific answers included equipment with door sensor, secure locks)</td>
<td>5.56%</td>
</tr>
</tbody>
</table>