



Recommended Screening-Checks for Placed Orders in Industry Internal Tool- OMS

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Abstract— *This paper gives the information and proposed solution regarding Screening Checks for Industry Internal Tool-Order Management System. After placing orders by customers through shopping website the industry people should verify the orders in different ways to avoid loss. Need to do Screening and in different checks for Maximize acceptance of valid orders, Increase customer service productivity, More tailored and effective screening strategies, Minimize online fraud losses. Free up your teams to focus on their core competency – running your business. Here mainly proposing screening checks sectors are Credit card information checks, Basic Information checks, financing information checks, Electronic information checks.*

Keywords— *E-commerce, E-commerce Security, Benefits and Features of fraud screening, Internal Fraud Case study, Fraudulent orders, Recommended screening checks*

I. INTRODUCTION

Electronic commerce or ecommerce is a term for any type of business, or commercial transaction that involves the transfer of information across the Internet. It covers a range of different types of businesses, from consumer based retail sites, through auction or music sites, to business exchanges trading goods and services between corporations. It is currently one of the most important aspects of the Internet to emerge. Transacting or facilitating business on the Internet is called ecommerce. Ecommerce is short for "electronic commerce."

After placing orders by customers through shopping website the industry people should verify the orders in different ways to avoid loss. Need to do Screening and in different checks for Maximize acceptance of valid orders, Increase customer service productivity, More tailored and effective screening strategies, Minimize online fraud losses. Free up your teams to focus on their core competency – running your business. Most payment processing companies will automatically check orders for obvious signs of fraud and / or allow you to set the conditions yourself through their admin area. Checks are often made on AVS, CVV but may include transaction amount, known bad IP addresses or ranges as well as rapid multiple orders amongst others. The important consideration is not to rely 100% on your payment processor to pick up on fraudulent orders and that is why we recommend manually reviewing each and every order. Here mainly proposing screening checks sectors are Credit card

information checks, Basic Information checks, financing information checks, Electronic information checks.

According to a report by Forrester Research, Inc, US online retail sales this year are expected to be around \$211.4 billion. It is also projected that online sales will reach \$316 billion by 2010. This e-commerce growth is expected to account for 12 percent of total retail sales in 2010; up from nearly 7 percent in 2004. This is predicated on the growing population of online shopping households, combined with effective multi channel integration and site improvements from retailers. Although online retailers are becoming more confident with the handling of direct fraud, there is a growing dissatisfaction at the increasing costs associated with risk management, manual review and the rejection of potentially valid orders.

There is no 'silver bullet' solution to the problem of managing and reducing costs of online fraud. Efficient management of online fraud involves a toolkit based approach combining a series of fraud prevention tools and techniques to maximize operational efficiency and sales conversion, while minimizing the fraud risk. [7]

II. AIM OF THE STUDY

- Understand the concept of E-commerce
- Understand E-commerce Security
- To know Benefits and Features of fraud screening
- Understand what is a fraudulent order? And Internal fraud
- Analyse and Understand Recommended screening checks for placed orders

III. RELATED WORK

With the development of Internet, e-commerce, with its advantages of high efficiency and low cost, has become important business mode. But security has always been one of the largest barriers to e-commerce. This paper analyses the security technology of E-commerce system, and proposes a secure model to improve e-commerce system. [1]

Privacy, security, payment, identity, contract. : Many issues arise - privacy of information, security of that information and payment details, whether or not payment details (eg credit card details) will be misused, Identity theft, contract, and, whether we have one or not, what laws and legal jurisdiction apply. [2]

E-commerce Security is a part of the Information Security framework and is specifically applied to the components that affect e-commerce that include Computer Security, Data security and other wider realms of the Information Security framework.[3].

Hopefully, there is a way to look at the online credit card fraud from a different angle. By using the minFraud/GeoIP service from MaxMind's, the check is not focused towards verifying the authenticity of the credit card details, but rather, by determining if the person placing the order is the real credit card holder. By changing the angle of its analysis and using a different list of criteria, this tool can give ecommerce businesses the information needed to identify fraudulent orders.

Benefits and Features of fraud screening:

- Automatically screens orders in Actinic Online
- Displays full fraud check results for each order
- Provides a simple red or green traffic light to indicate whether an order is safe or not, together with supporting data
- Access to more detailed fraud check data, including a list of factors on which the fraud 'score' is based

- Facility to send feedback on fraudulent orders for inclusion in future fraud screening[4]

Internal Fraud Case study: Any organization is vulnerable to internal fraud. This is an extremely sensitive issue and as a consequence details are brief to protect the identity of those involved. This case study examines fraud perpetrated by an employee who held the position of Accounts Clerk at a large corporation. The fraud was characterized by the theft of a large number of client cheques worth a substantial sum over an extended period of time. This was achieved via a simple and effective money laundering technique. Whilst the organization had protocols to prevent the theft of cheques, the fraudster was able to circumvent these. The nature of the organization’s business meant that payments were not always expected. This meant that some invoices were not raised till after payment had been received. Additionally, sometimes a missed payment would be added to the next due payment. Consequently, the approach outlined below looks for the absence of an event per client.[5]

The following illustration shows how the scoring and assessment process can work in real time as a transaction is being processed.[6]

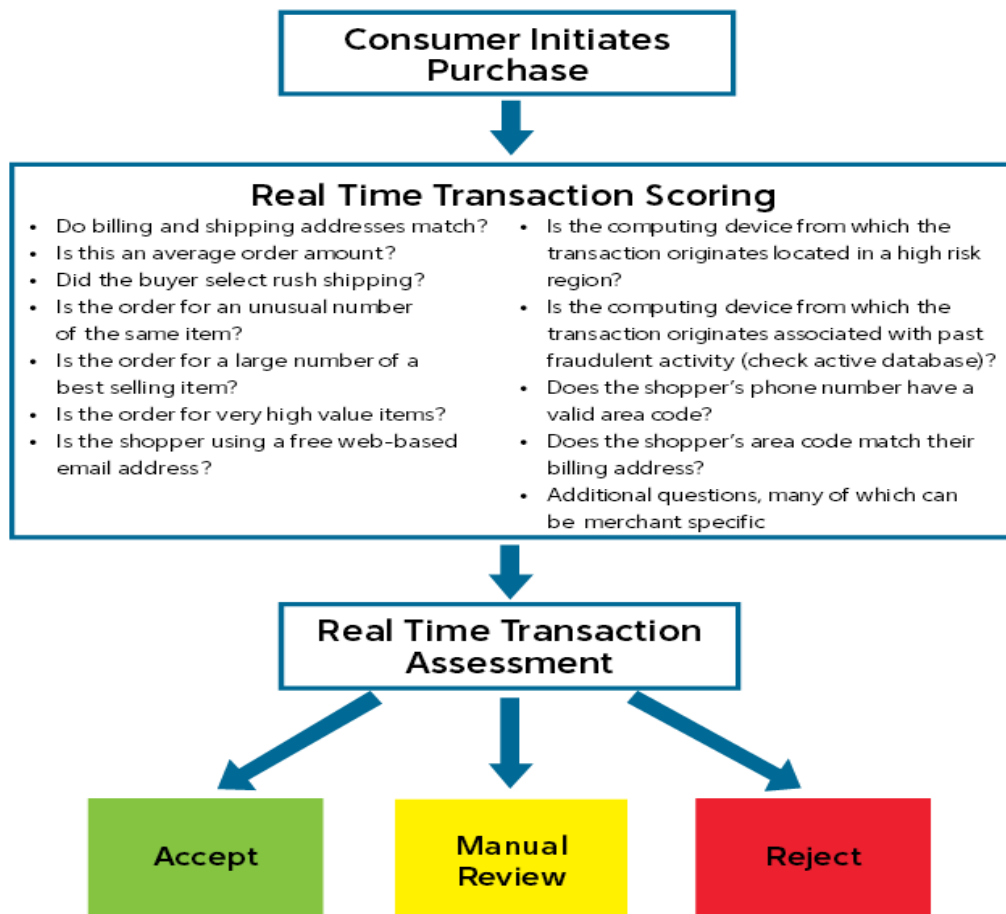
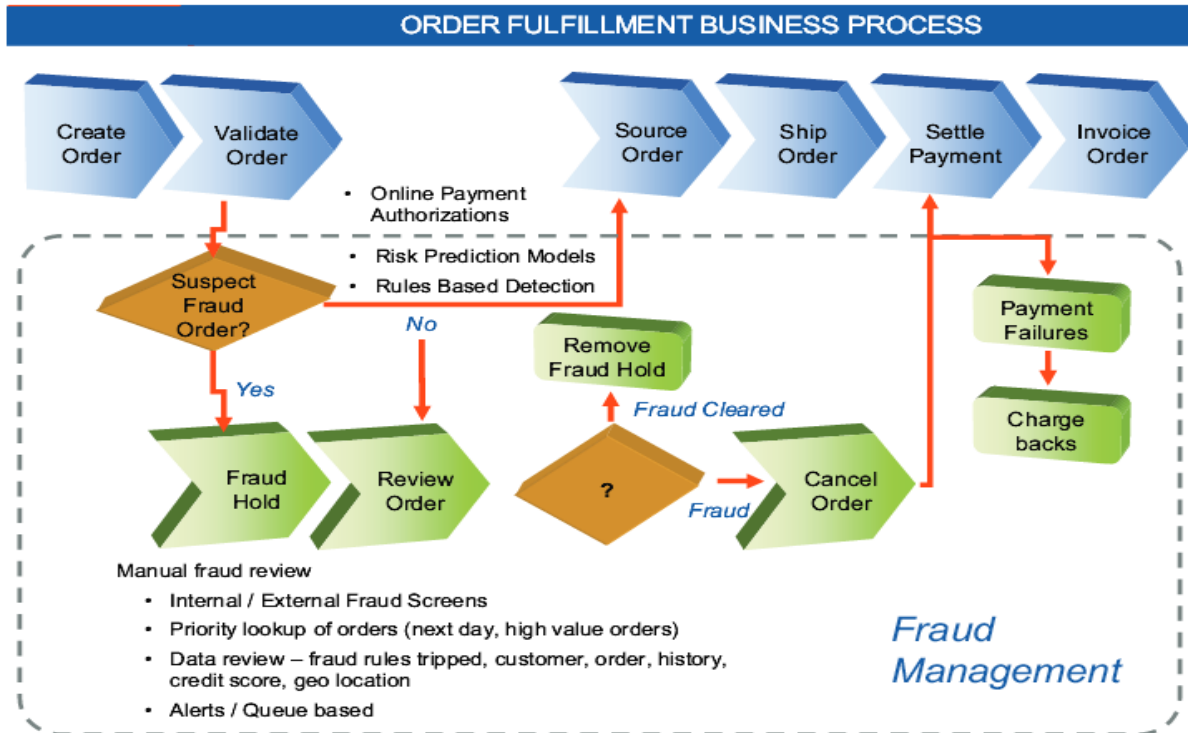


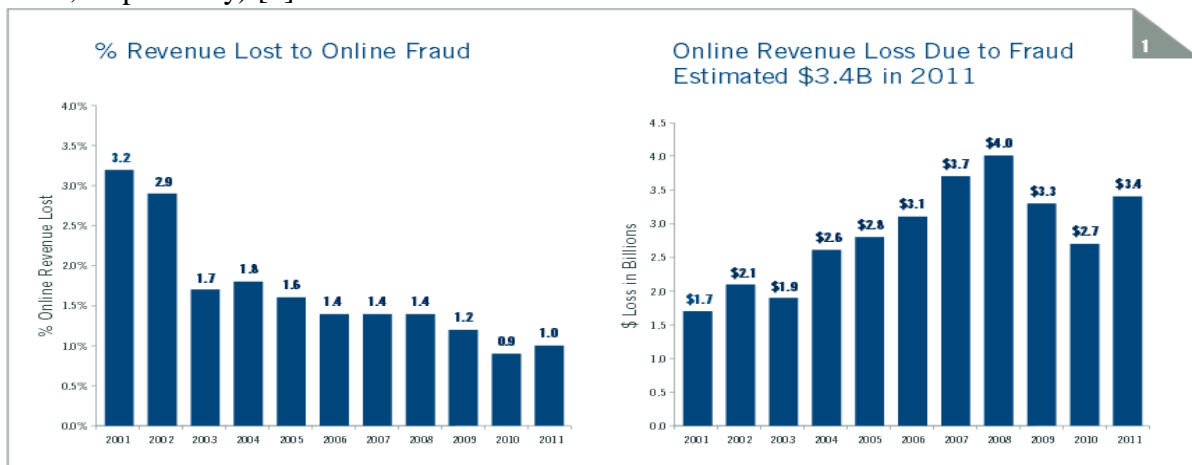
Figure 1. This is a simplified illustration of how a transaction scoring and assessment process can become an automated part of processing any on-line transaction. Note that in a real instance there may be hundreds of questions and factors that go into evaluating the risk of a transaction. Also, a good automated risk assessment system should provide merchants with flexibility around the actions they can take based on scoring.

Order Fulfillment Business Process: As illustrated in the Chart C, the order fulfillment business process ranges from the creation of the order to the ultimate shipping out and invoicing of the order. The order validation process is the activity dedicated to the fraud related processes. The objectives of the fraud processes during this phase of the order lifecycle are:

- Reduce the number of false positives to avoid loss of sales due to unverifiable cancels and customer ‘insult’.
- Reduce the percentage of orders requiring manual review to a manageable 3-10% without an increase in chargeback rates.
- Increase the efficiency of the manual review process to improve fraud review turn around times.[7]



International Order Acceptance is Riskier: Accepting international orders is riskier than domestic orders. Merchants reported an international fraud rate by order rate of 2.0%, more than three times higher than domestic. In response to the higher perceived risk, merchants rejected international orders at a rate nearly three times higher than domestic orders (7.3% vs. 2.8%, respectively).[8]



Fraudulent orders: Most payment processing companies will automatically check orders for obvious signs of fraud and / or allow you to set the conditions yourself through their admin area. Checks are often made on AVS, CVV but may include transaction amount, known bad IP addresses or ranges as well as rapid multiple orders amongst others.

The important consideration is not to rely 100% on your payment processor to pick up on fraudulent orders and that is why we recommend manually reviewing each and every order. The steps below are a guide to checking for fraudulent orders.

- * Closely check all orders and double check totals in your payment provider control panel.
- * Check the IP address of the order. Use a site such as Hexillion to match the IP address of the computer with the address of the customer.
- * Check the address and telephone number of the customer. Use a service such as White Pages or Infobel, you can also often search on a person's name on Google to find out details about the buyer.
- * Always double check orders where the customer uses a free email account such as Hotmail, Yahoo, gmail etc.
- * Always double check orders where the shipping address is a PO Box.
- * Always triple check orders where the shipping address is different to the billing address.
- * If in doubt telephone / email the buyer to check their credentials.
- * If you are still in doubt, cancel the order and don't ship. Chargebacks will cost you more and may compromise your merchant account.
- * Avoid accepting personal checks - they can easily be stopped.[9]

Retail Crime Survey – e-commerce retailers fight online fraud: Online retailers should offer e-money as a payment option in order to stay safe from fraudsters, as the latest figures on retail crime suggest an increase in online fraud. The research from the 2013 British Retail Consortium (BRC) Retail Crime Survey reports that incidents of fraud are up 15% year on year with the majority of retail fraud committed online. Ukash offers online retailers a safe alternative to credit and debit card payments.[10]

FIGURE : FRAUD INCIDENTS BYTYPE

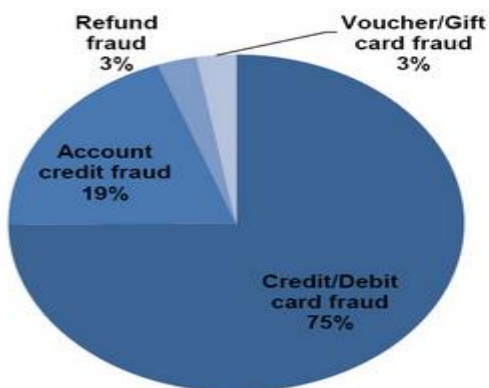
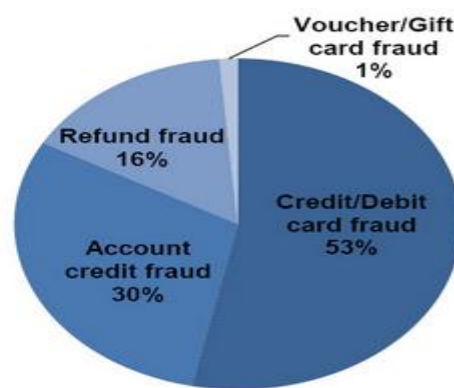


FIGURE : FRAUD BY COST, 2012-13



IV. PROPOSED RECOMMENDED SCREENING CHECKS FOR PLACED ORDERS IN INDUSTRY INTERNAL TOOL

Different kinds of proposed checks their descriptions: Different kinds of checks are given in the table below:

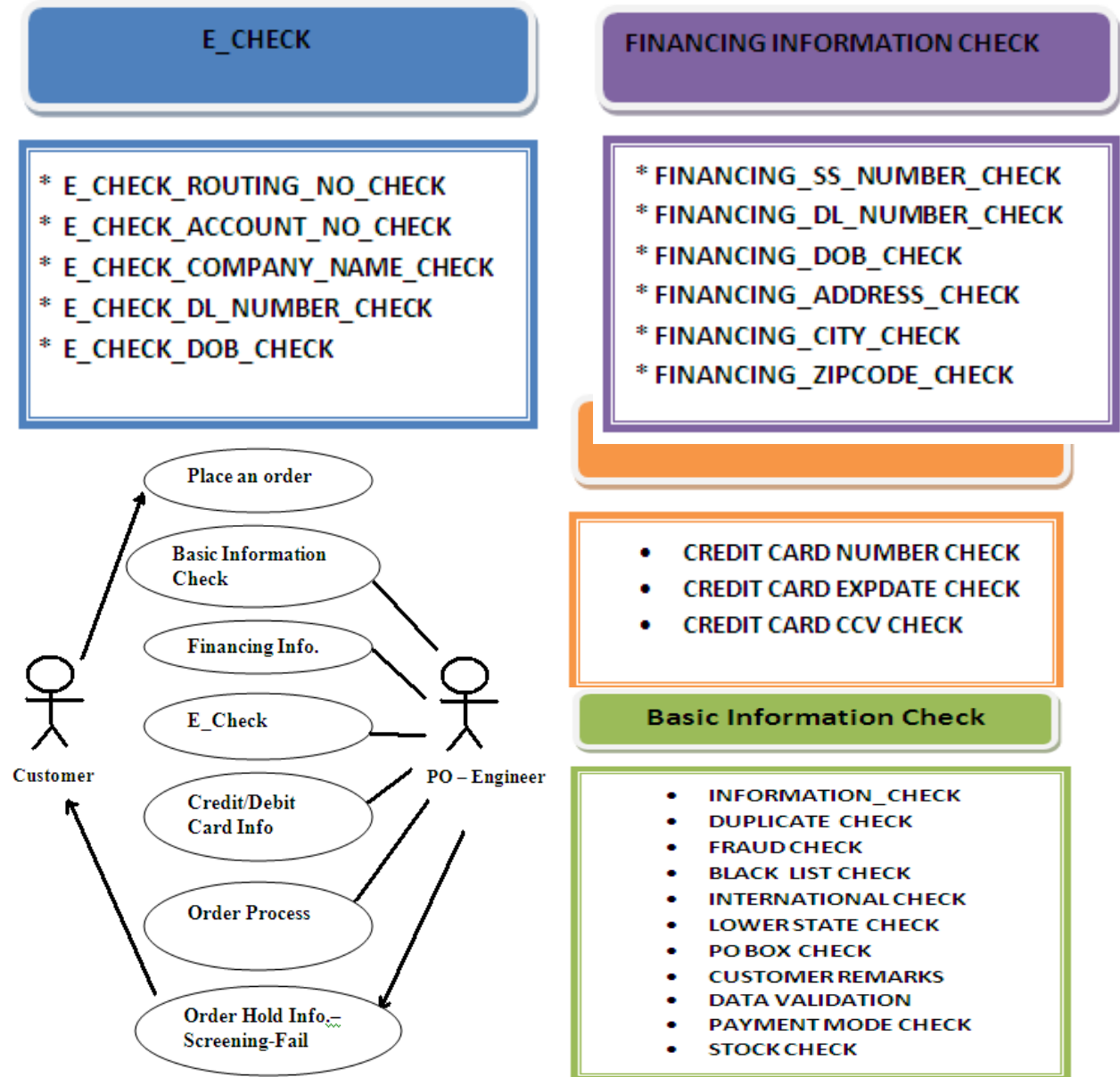


Fig.: Usecase diagram for Screening Check.

Check	Description
1.NEW	PASSED: When an order is placed. Communication: A message is sent to the customer depending on mail configuration settings.
2.INFORMATION_CHECK	PASSED: If the basic information needed to process an order is available. IDEALLY, BASIC INFORMATION COMPRISES OF ALL THOSE FIELDS THAT HAVE BEEN MARKED AS MANDATORY. FAILED: When the basic information is not available.

<p>3. DUPE_CHECK</p>	<p>PASSED: If there is no duplicate order within thirty minutes of an order being placed. The dupe check is validated using the following: Session ID User ID Item name Quantity mapped to each item.</p> <p>If an order is placed with the same details within thirty minutes then this is considered a duplicate order.</p> <p>FAILED: WHEN THERE IS A DUPLICATE ORDER WITHIN THIRTY MINUTES. THIS GENERALLY OCCURS WHEN THE CUSTOMER CLICKS ON THE SUBMIT BUTTON MULTIPLE TIMES.</p>
<p>4. FRAUD_CHECK</p>	<p>PASSED: A fraud check is a preventive check that helps Mercantila to filter possible fraud cases. This check is based on the email id,shipping address, billing address, item name, vendor name, schema name or payment details.</p> <p>FAILED: When even one of the above mentioned parameters match a fraud list.</p> <p>COMMUNICATION: A MESSAGE IS SENT TO THE CUSTOMER DEPENDING ON MAIL CONFIGURATION SETTINGS.[5]</p>
<p>5. BLACK_LIST_CHECK</p>	<p>PASSED: FRAUD_CHECK is a preventive check and the BLACK_LIST_CHECK confirms the fraud check.</p> <p>FAILED: If an order is black listed Mercantila denies the particular service requested by the customer.</p> <p>COMMUNICATION:A MESSAGE IS SENT TO THE CUSTOMER DEPENDING ON MAIL CONFIGURATION SETTINGS.</p>
<p>6. INTERNATIONAL_CHECK</p>	<p>PASSED: If the order is from USA.</p> <p>FAILED: When the order is from any country other than the USA.</p> <p>CommunicationA message is sent to the customer depending on mail configuration settings.</p>
<p>7. LOWER_STATE_CHECK</p>	<p>PASSED: If the state is a lower state.</p> <p>FAILED: When the state is not a lower state.</p> <p>Communication: A message is sent to the customer depending on mail configuration settings.</p>
<p>8. PO_BOX_CHECK</p>	<p>PASSED: If PO box number is not given in the address fields.</p> <p>FAILED: When a PO box number is given instead of an address.</p> <p>Communication: A message is sent to the customer depending on mail configuration settings.</p>
<p>9. SALES_TAX_EXEMPTION</p>	<p>PASSED:If the sales tax exemption code is set.</p> <p>FAILED: When the sales tax exemption code is not set.</p>
<p>10. SALES_TAX_CHECK</p>	<p>PASSED: If the sales tax value is correct.</p> <p>FAILED: When there is a difference in the sales tax value.</p> <p>Communication: A message is sent to the customer depending on mail configuration settings.</p>
<p>11. CUSTOMER_REMARKS</p>	<p>PASSED: If the customer remarks are not present.</p> <p>FAILED: When customer remarks are present.</p>
<p>12. DATA_VALIDATION</p>	<p>PASSED: If the shipping address and billing address are valid.</p> <p>FAILED: When shipping address and billing address are not valid.</p> <p>Communication: A message is sent to the customer depending on mail configuration settings.</p>
<p>13. CREDIT_CARD_NUMBER_CHECK</p>	<p>PASSED: If the credit card number is valid.</p> <p>FAILED: When the credit card number is not valid. If the mode of payment is not by credit card then this validation is bypassed.</p>

	Communication: A message is sent to the customer depending on mail configuration settings.
14. CREDIT_CARD_EXPDATE_CHECK	PASSED: If the credit card expiry date is valid. FAILED: When the credit card expiry date is not valid. If the mode of payment is not by credit card then this validation is bypassed [5]. Communication: A message is sent to the customer depending on mail configuration settings.
15. CREDIT_CARD_CCV_CHECK	PASSED: If the credit card verification number is authentic. FAILED: When the credit card verification number is not authentic. If the mode of payment is not by credit card then this validation is bypassed. Communication: A message is sent to the customer depending on mail configuration settings.
16. E_CHECK_ROUTING_NO_CHECK	PASSED: If the e Check routing number is authentic. FAILED: When the e Check routing number is not authentic. If the mode of payment is not by e Check then this validation is bypassed.
17. E_CHECK_ACCOUNT_NO_CHECK	PASSED: If the e Check account number is authentic. FAILED: When the e Check account number is not authentic. If the mode of payment is not by e Check then this validation is bypassed.
18. E_CHECK_COMPANY_NAME_CHECK	PASSED: If the company name mentioned in the e Check is valid. FAILED: When the company name mentioned in the e Check is not valid. If the mode of payment is not by e Check then this validation is bypassed. Communication: A message is sent to the customer depending on mail configuration (Mail Configuration: Maya provides a modus operandi wherein you can manage the automated mailing process. Using this option you can choose and monitor the mails sent to the customers.) settings.
19. E_CHECK_DOB_CHECK	PASSED: If the date of birth mentioned in the e Check is valid. FAILED: When the date of birth mentioned in the e Check is not valid. If the mode of payment is not by e Check then this validation is bypassed. Communication: A message is sent to the customer depending on mail configuration settings.
20. FINANCING_DOB_CHECK	PASSED: If the date of birth is valid. FAILED: When the date of birth is not valid.
21. FINANCING_ADDRESS_CHECK	PASSED: If the address is valid. FAILED: When the address is not valid. Communication: A message is sent to the customer depending on mail configuration settings.
22. PAYMENT_MODE_CHECK	PASSED: If the mode of payment is by credit card, e Check or Market Place Order. FAILED: When the mode of payment is Customer Purchase Order, Financing or Check Memo. Communication: A message is sent to the customer depending on mail configuration settings.
23. STOCK_CHECK	PASSED: If the requested stock is available. FAILED: When the requested stock is not available.

V. CONCLUSIONS

This paper highlights important considerations and best practices on screening for placed orders based on different checks for: Maximize acceptance of valid orders, Increase customer service productivity, more tailored and effective screening strategies, Minimize online fraud losses. Free up your teams to focus on their core competency – running your business. After

getting an order from the customer system or manually check the order details in various views like Basic information check of the order, Credit card information check, Financing information check and Electronic information check should be done before processing an order in Inter tool in the industry like Order management system-OMS.

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