Introduction

It’s an exciting time to be in eCommerce. In the US alone, online retail sales will reach an estimated $334 billion this year, accounting for 10% of all US retail sales. By 2018, the market is projected to be worth nearly half a trillion dollars. Online events ticket sales are experiencing similar expansion, with revenues in the US expected to grow by an average rate of 3.1% every year to 2019.

While more consumers choose to purchase event tickets online, consumer preferences are also shifting towards digital tickets. Unfortunately, it’s not only legitimate customers who prefer e-tickets to paper tickets. Digital tickets are attractive to fraudsters as well, because they are received immediately upon purchase and do not require providing a shipping address that could expose their location. Riskified’s data from online ticketing merchants shows that fraud rates are nearly twice as high in digital tickets compared to physical tickets.

Many traditional fraud prevention methods, such as AVS and billing-shipping distance checks, require a physical address. Since consumers are not required to provide a physical address in digital goods orders, such as e-tickets, merchants must find ways to verify the orders using the data that is available in these orders - namely email and IP addresses. The unfortunate reality is that industry growth is occurring in an area where many merchants find it difficult to accurately distinguish between legitimate and fraudulent transactions.

Riskified has the privilege to work with great ticketing merchants, including viagogo and Ticket Evolution. Generally speaking, merchants in the ticketing industry are all too aware of the need to protect themselves from fraud and have a good understanding of fraudulent purchasing patterns and behavior. In an effort to bring things into sharper focus, the following report includes fraud-related patterns we have identified through our work in the US ticketing industry.
Pricey Tickets = Higher Risk of Fraud

Since fraudsters are looking to make money, they target higher value items. This is true across verticals, and events ticket sales are no exception. Our data shows there is a strong correlation between ticket price and fraud rates, meaning the percent of fraud-related chargebacks and orders declined due to fraud out of all incoming orders is higher in expensive tickets.

The above graph shows fraud rates in digital tickets sold in the US. The rate of fraud in tickets sold for a price of $51-$115 is 3.08% - nearly three times higher than in tickets sold for a price of $50 or less. In expensive tickets sold at a price of over $200 a piece, fraud rates exceed 20%. In other words, our data from the US market shows that more than 2 of every 10 digital ticket orders in the <$200 price range are fraudulent!

Fraudsters Try to Fly Below the Radar

While it is not surprising that fraud rates are strongly correlated with ticket price, some less obvious patterns emerged from the data as well. For example, while one might expect fraudsters would try to purchase many tickets at a time, our data shows this is not the case.

When trying to determine the connection between the rate of fraud and the amount of tickets purchased in a single order, we found that in the US digital tickets market, orders of 2-3 tickets exhibit the highest rate of fraud.
Presumably, fraudsters expect that if they try to purchase a high amount of tickets, their order will be scrutinized more closely by merchants. Thus, in an attempt to avoid attracting unwanted attention, they opt to purchase a small number of tickets per order.

It's interesting to see that while the rate of fraud in single ticket orders is relatively high, it is lower than in orders of 2-3 tickets. This may be because most consumers prefer to attend events either in pairs or in small groups, making it more difficult for fraudsters to resell single tickets.

**Fraudsters Try to Capitalize On A Window of Opportunity**

Unlike fashion items or electronics sold online, tickets are sold for a particular event taking place at a specific time and location. This provides us with a unique data point - the timeframe between the ticket purchase and the event itself. We analyzed this timeframe to see if we could glean meaningful correlations for fraud prevention purposes.

*A possible explanation for the fact that fraud rises in the days prior to the event is that fraudsters are most interested in buying tickets once they are sure there is strong demand.*
Additionally, it’s worth taking note of the fact that while fraud rates in tickets purchased on the day of the event are high (at 3.76%), they are slightly lower than in the three days leading up to the event. This may be due to the fact that the classic fraud method of operation is to purchase tickets using stolen credit card details and the resell the tickets for a profit. Fraudsters might be less confident they will manage to both purchase and resell tickets on the same day of the event.

Fraud Rates Differ by Event Type

Across verticals, it is common to see fraudsters target certain items or brands more than others. For example, examining the data of high-end fashion retailers shows fraud rates are higher in sneakers than in sweaters. Electronics merchants know GoPro cameras are a “risky” product often targeted by fraudsters. We analyzed our data from the US ticket industry to see how fraud rates vary across music concerts and major league sporting events.

Take a Load off with Country & Folk Music

First, we analyzed our data to see if there is a correlation between the type of music being performed and the rate of fraud in tickets sold to the concert. You might expect that the fraud rate would be fairly similar across all music genres, but in fact, there appears to be a significant divergence in the rate of fraud.

The highest fraud rate is in e-tickets to hip-hop, rap, electronic music, dance music, and music festivals. On the other hand, the rate of fraud in tickets to rock & pop concerts is slightly below average. Fraudsters seem to be less interested in tickets to folk music and family music shows.

Fraud rates vary by music genre

* Based on Riskified data of US digital ticket sales & fraud rates
Fraudsters Love Football (and Hockey!)

When looking at US major league sports, the highest rate of fraud is in tickets to football and hockey games, while there is a low rate of fraud in tickets to baseball games.

Different sports also show divergent fraud rates. The highest rate of fraud is in tickets to football and hockey games, while there is a low rate of fraud in tickets to baseball games.

There seems to be a negative correlation between the amount of games played in a season and the rate of fraud in tickets to the games. The fewer games in a season - the more fraud. The National Football League (NFL), which schedules the fewest home games per season, also has the highest fraud rate. In contrast, Major League Baseball (MLB), which schedules 81 home games per season, has the lowest fraud rate of the four major sports leagues. Presumably, the less games in a season, the higher the demand - and by extension, the ticket price - for each game.

*Based on Riskified data of US digital tickets sales & fraud rates
Stopping Ticketing Fraud

The shift in consumer preferences towards e-tickets will continue to increase with time. This is a challenge for ticketing industry merchants who must balance the need to meet rising consumer expectations, such as near-instant turnover times, with the need to minimize losses due to fraud. Riskified enables merchants in the ticketing industry to confidently sell both digital and physical tickets by offering instant ‘approve’ and ‘decline’ decisions, backing approvals with a 100% chargeback guarantee.

What allows Riskified to guarantee our decisions is our exceptionally high level of accuracy. Using proxy detection, behavioral analytics, device and browser fingerprinting, elastic data linking, and machine learning models, we make more accurate decisions about better data.

For example, by automatically linking data across all transactions in the Riskified ecosystem, we can identify that an order for tickets to a music festival were placed by the same consumer who just purchased a round-trip flight to the festival location. This provides us with more context and allows us to quickly approve the order. The final result is accurate, real-time, order approvals that allow ticketing merchants to provide consumers with a frictionless shopping experience while remaining protected from fraud.

We believe eCommerce merchants do not need to be fraud prevention experts. We built the world’s best fraud team and developed cutting edge fraud detection technology so that merchants can be free to focus on building their business.

Ticket Evolution is one of the successful US ticketing merchants we’ve had the pleasure of working with. “Since integrating with Riskified, not only have our chargebacks been reduced, but we’ve also seen a noticeable increase to top-line sales and fulfillment rates. As finance director, Riskified gives me the peace of mind to focus on tasks other than fraud management.” Neil Asinger, Director of Finance at Ticket Evolution

Data is what drives our fraud detection and prevention abilities, and we’re always interested to hear about what our partners are experiencing. Please help us to keep the conversation going. We’d love to hear about your fraud management challenges and success and are interested to know whether the fraud patterns we’ve shared in this report match with what you are seeing.

Interested to learn more? We love talking about risk management! Visit www.riskified.com or email sales@riskified.com