

CASE STUDY

# EMV 3DS Drives Higher Approval Rates

Case Study results from over 9 months and 6 million transactions



Site: [squareup.com](https://squareup.com)

Industry: Financial services

Parent Company: Block, Inc.

Headquarters: San Francisco, CA

## CHALLENGES

- Experiencing higher false declines than expected for card-not-present transactions
- Declines led to negative shopper experiences

## BROADCOM SOLUTIONS

- Arcot Rules Engine
- Arcot Network Score
- EMV® 3-D Secure (3DS)

## BENEFITS

- Sharing consistent, meaningful data signals via 3DS, merchants can obtain higher approval rates without higher fraud exposure

## Introduction

Square provides business technology solutions to over 4 million sellers and processes more than \$200B in annual payments. Square's technology platform enables businesses to sell anywhere, work more efficiently, manage inventory, communicate with customers, book appointments, and course meals, order online, and more.

## The Challenge

Square was experiencing higher false declines than expected for card not present transactions in the U.S. market. These declines led to negative shopper experiences across many Square sellers.

## Goals of the Pilot

Square and Arcot wanted to determine if sharing additional data with issuers via frictionless EMV® 3-D Secure (3DS) could provide higher approval rates for card-not-present payments.

## Strategy & Implementation

Square provided intelligence and additional data to issuers via EMV 3DS across most Square eCommerce transactions. Issuers used this information within the Arcot Rules Engine and Arcot Network Score to make intelligent risk decisions without friction.

### Square:

- Sent a larger number of transactions to 3DS Data Only including all risk profile transactions, not just high-risk transactions.
- Sent transactions with the 3DS Requestor Challenge Indicator flag of "06" to ensure they are processed frictionlessly by the ACS.
- Kept fraud liability on the transactions.
- Submitted the transactions to authorization with an ECI of 06 and the account authentication value (AAV) cryptogram.

### Arcot:

- Processed transactions without friction (no challenge).
- Ensured issuers have access to the rich 3DS data in the Arcot rules platform.
- Educated issuers about the pilot and maintained regular dialogue with issuers on performance improvement.

The Square and Arcot pilot showed chargeback rates improved by

**6%**

3DS authentication success rates improved by

**19%**

## Results and Success Metrics

Square observed the following results during authorization:

Financial Institution	Improvement to Authorization Rate
Financial Institution 1	+377 bps
Financial Institution 2	+646 bps
Financial Institution 3	+23 bps
Financial Institution 4	+228 bps
Financial Institution 5	+53 bps

In addition, the pilot showed chargeback rates improving by 6% and 3DS authentication success rates improving by 19% overall.

## Conclusion—Key Takeaways

Merchants who share intelligence with issuers via 3DS Data Only can expect to see real improvements to their authentication success rates and authorization success rates. By sharing consistent, meaningful data signals via 3DS, merchants can obtain higher approval rates without higher fraud exposure.

### Square Comments

“Arcot’s implementation of 3DS Data Only has been very positive for our authorization rates. By enabling the seamless sharing of consistent and meaningful data signals with issuers, we’ve seen significant improvements in both authentication and authorization success rates. This approach not only enhanced approval rates but also kept fraud rates in check, showcasing Arcot’s commitment to merchant success. The team was supportive and great to collaborate with.”

### Arcot Comments

“The Square team went above and beyond to build trust with our issuers on this initiative. The results of this pilot showcase Square’s innovation and commitment to provide industry-leading performance for their sellers and the payments ecosystem as a whole.”

If you want to start an EMV 3DS Data Only Pilot with Arcot, please reach out to [erin.nichols@broadcom.com](mailto:erin.nichols@broadcom.com).



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