



Smart Card
Alliance



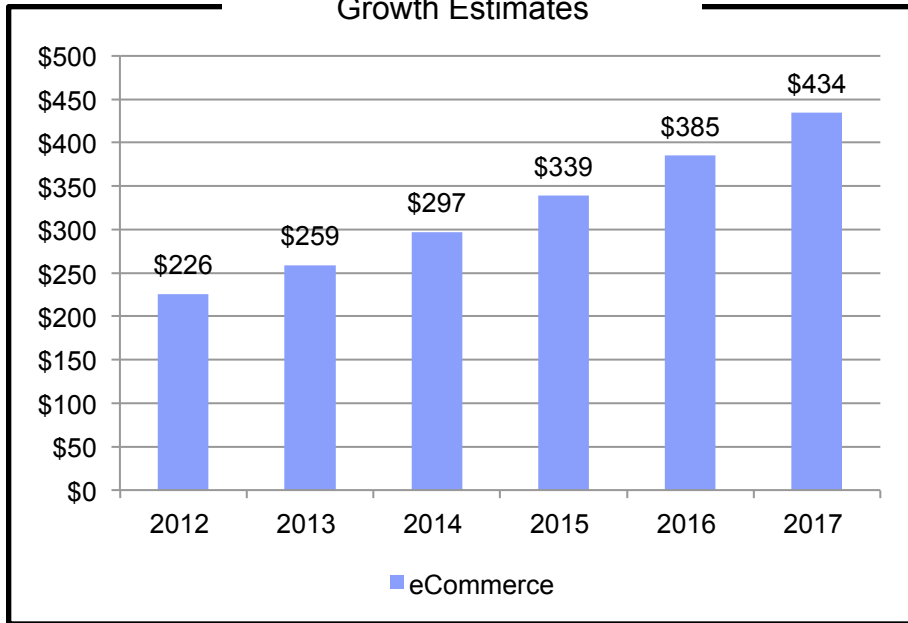
Card-not-present & EMV

- Ryan W. Barnes
- Associate Director, Consumer Product
- TSYS

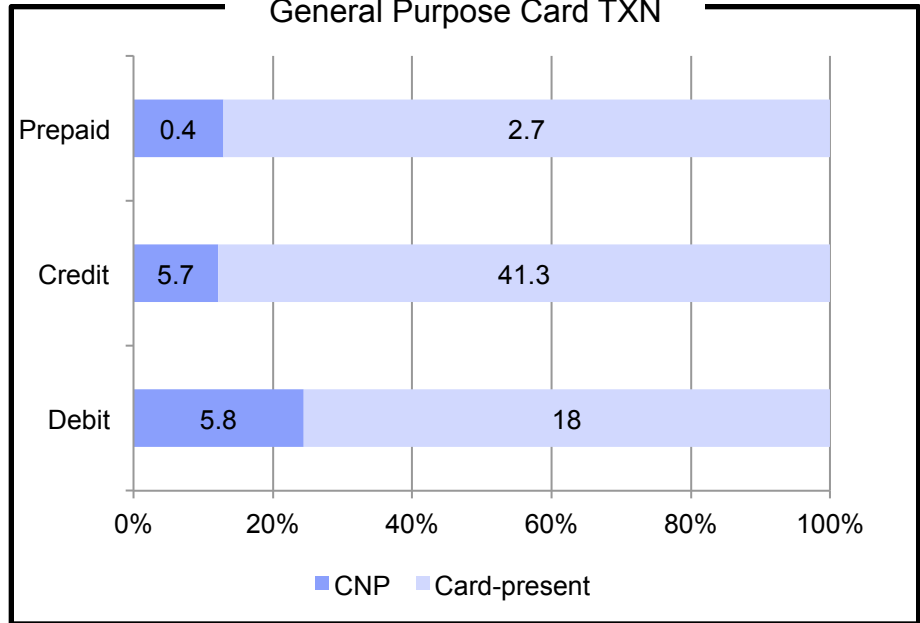


eCommerce Trends

Growth Estimates



General Purpose Card TXN

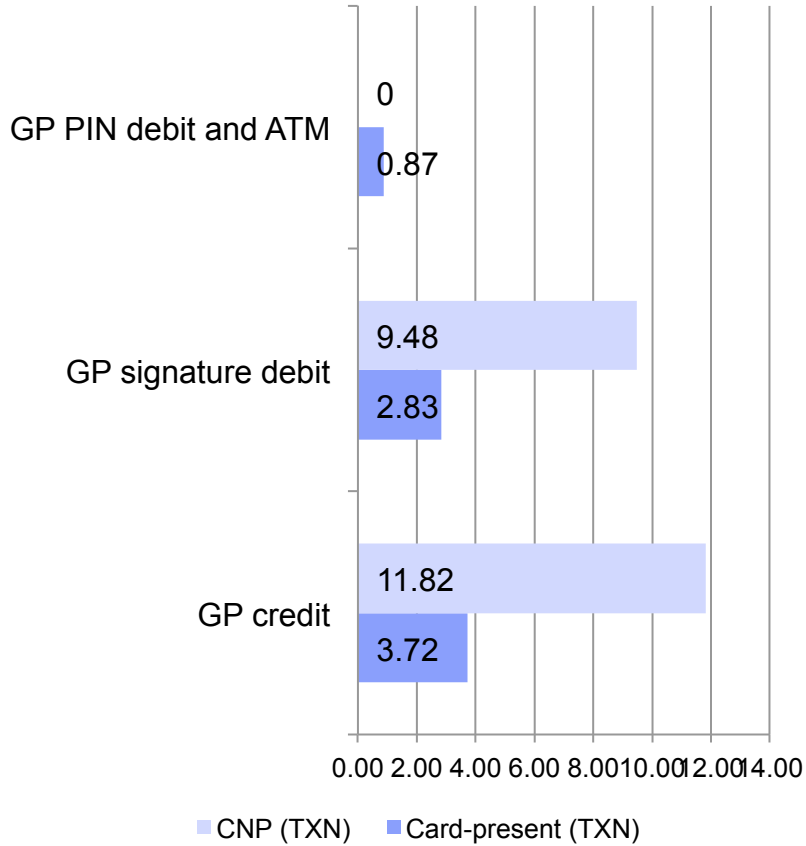




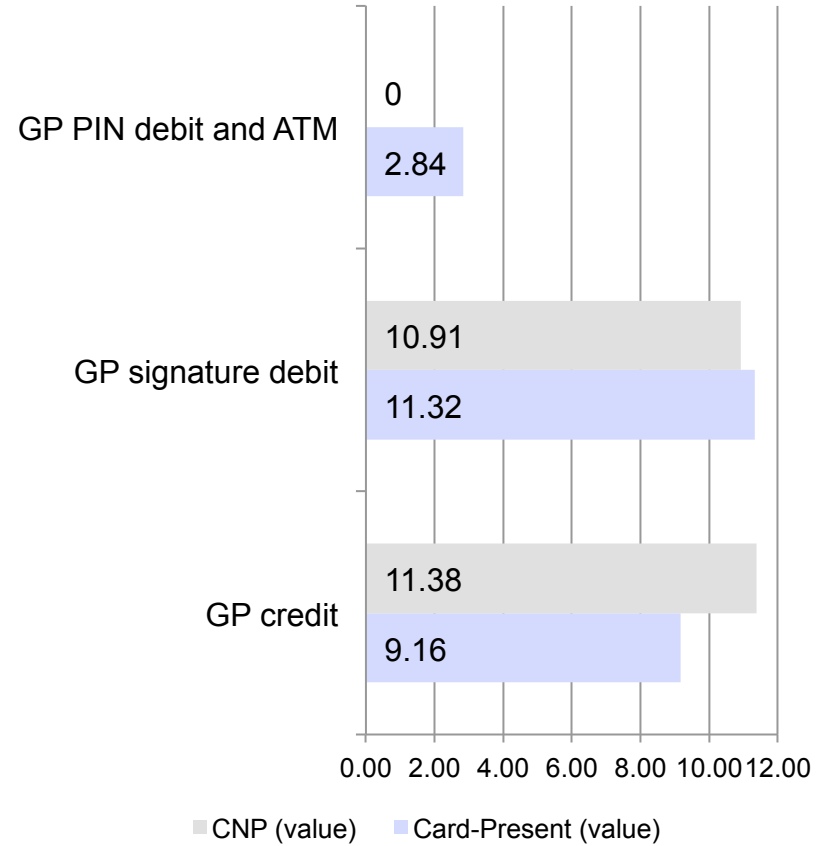
Fraud Rates

CNP vs. Card-present

Transactions



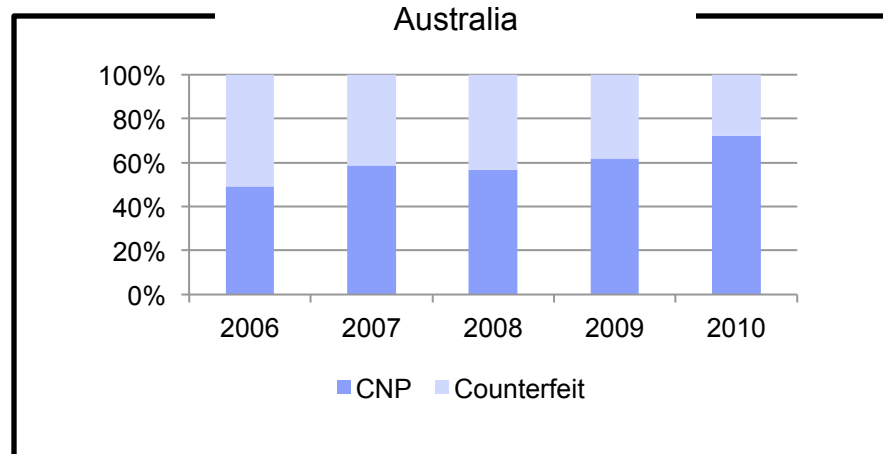
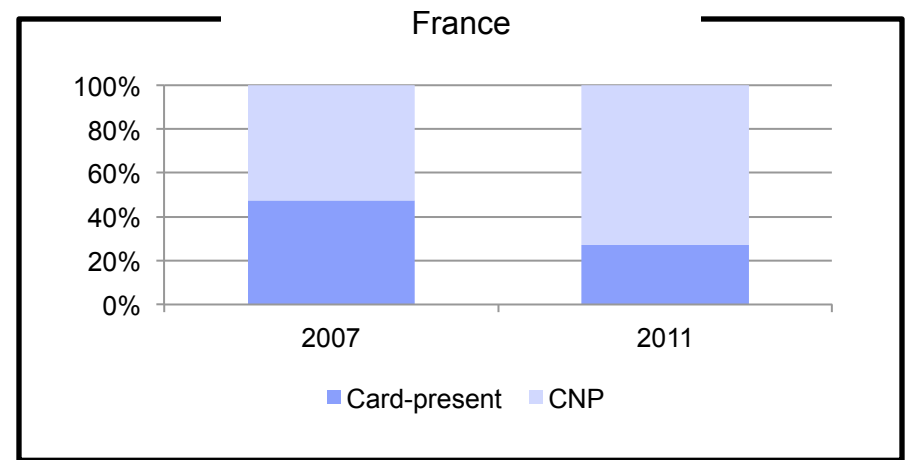
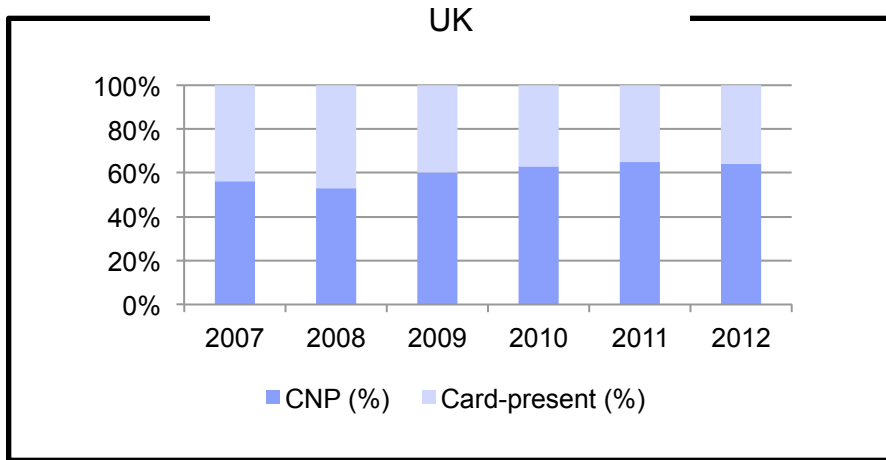
Volume/Value





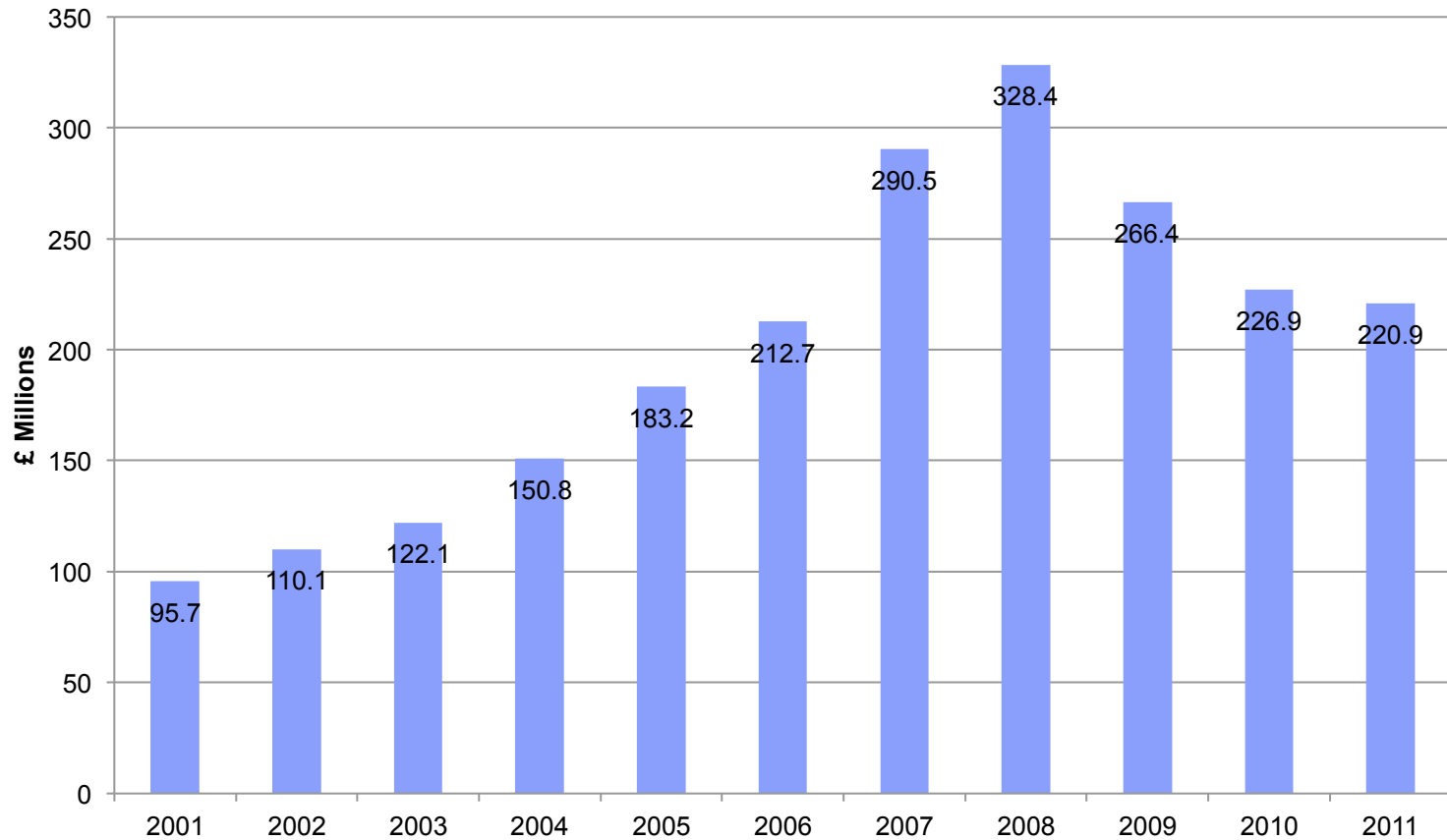
Fraud Composition

Select examples from past EMV implementations



3D Secure

UK Case: Card-not-present fraud



The Basic Problem

Strong EMV authentication measures do not translate in CNP environment

Must authenticate via alternative means

Factors of Authentication:

The “Has”-”Knows”-”Is/Does” convention

- Ownership factors
- Knowledge factors
- Inherence factors



The Building Blocks

Ownership

Knowledge

Inherence

1) Signature Card Present

Mag Stripe

Signature

2) EMV Card Present

Chip

PIN

3) Pizza over the phone

Static Code

Account #

4) Internet purchase – Fleece Jacket

IP Address

UN/PW/Security Questions

5) Remote Login at work

Dynamic Token

UN/PW/Security Questions

Application

IP Address

Cookies

Biometrics

Landline Phone Number

P.O. Box

IMEI, MEID (device)

IMSI, CSIM (subscriber)

Account History

Static Token

PII (ex. SS#)

UN/PW/Security Questions

Dynamic Token

Chip

Mag Stripe

PIN

Signature

Account #

Hard vs. Soft Considerations



Advantages

Issuer

Hard

- Fraud reduction

Soft

- Ease of purchase

Merchant

Hard

- Fraud reduction

Soft

- **Ease of purchase**
- **Business intelligence**



Disadvantages

Hard

- **Required investment**
- Maintenance/compliance
- **Reissuance due to data breach**

Soft

- Interchange loss → TXN Abandonment
- Interchange loss → consumer reluctance to conduct eCommerce

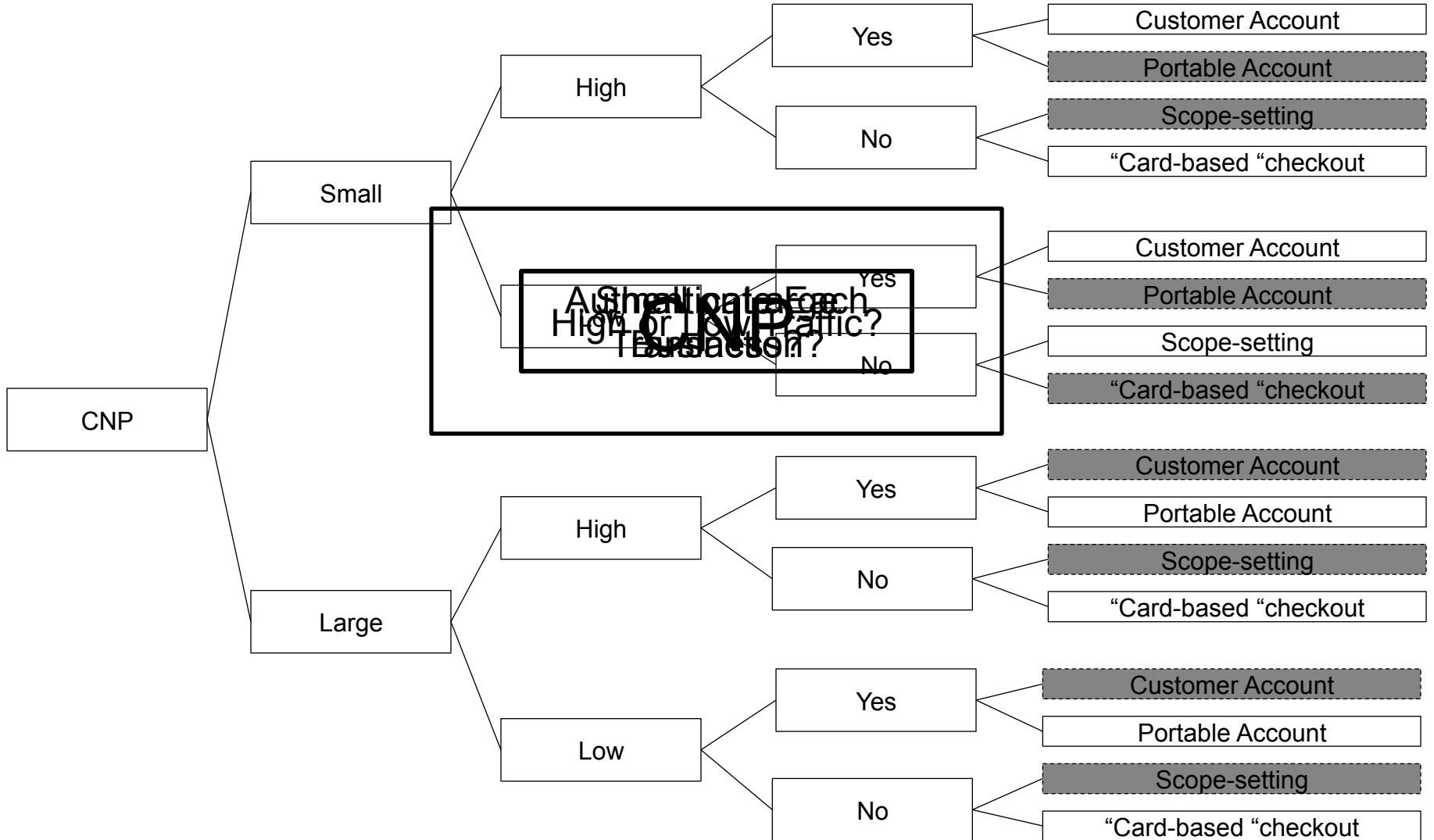
Hard

- Required investment
- Maintenance/compliance

Soft

- **Transaction abandonment**
- Consumer reluctance/fear to conduct eCommerce

Merchant Logic



Categories of Approach

- **Customer Account** – A merchant-specific site or mobile application that requires login authentication and houses payment card information (ex. Amazon)
- **Portable Account** – An account established for use at multiple e-merchants that houses payment card information (exs. PayPal, V.Me)
- **Scope Setting** – Using data to determine level of authentication required (ex. “Device fingerprinting”)
- **“Card-based” checkout** – Standard checkout procedure of entering card-based information (exs. Card#, address on file, static three-digit code)



Summary Industry Implications

- **eCommerce is growing fast, stealing share from brick-and-mortar**
- **Past experience suggests heightened risk of CNP fraud as a result of EMV implementation**
- **There likely is no “silver bullet” to address CNP fraud**
 - Myriad of solutions reliant on similar building blocks
 - Business considerations for merchants
 - Use cases
- **Prognosticators: account for eCommerce concentration**



**Smart Card
Alliance**



Speaker Contact Information **ryanbarnes@tsys.com**

- Smart Card Alliance
- 191 Clarksville Rd. · Princeton Junction, NJ 08550 · (800) 556-6828
- www.smartcardalliance.org