deluxe+
PAYMENTS & DATA

Future of the Payments Industry

Innovations and Trends

© 2024 Deluxe Corporation

1

deluxe+
PAYMENTS & DATA

Introduction

2

2

dlx About Your Speaker

Jason W. Allred, Sr. is the Senior Manager of Governance, Risk and Compliance for Deluxe. Before joining Deluxe in April 2023, Jason served as a financial services cloud security architect for IBM Corporation and has an accomplished resume that spans 22 years of information security experience across the financial services, hospitality and defense industries. Noteworthy accomplishments from Jason's portfolio of experience include having architected and implemented GRC frameworks, authoring information security and governance related polices and processes, and leading dozens of successful audits spanning multiple compliance domains including S-Ox, GLBA, FISMA, FedRAMP, SOC 1, SOC 2, FFIEC and PCI-DSS. Jason is a degreed professional having earned his Master of Business Administration degree from Tarleton State University in 2009. Further, Jason holds information security certifications including Certified Information Systems Auditor (CISA), Certified Risk and Information Systems Control (CRISC), and he is a Payment Card Industry Internal Security Assessor (PCI ISA). Jason is a veteran of the United States Air Force and Texas State Guard, and he resides in Joshua, Texas.

3

3

Importance of the Payments Industry

4

4

dlx Payments: The Cornerstone of Global Commerce

» Economic Backbone
- Fundamental to the functioning of a global economy
- Supports economic activities by enabling smooth transfer of money between individuals, businesses, and governments

» Financial Inclusion
- Critical in providing access to financial services for unbanked and underbanked populations
- Helps integrate more people into the formal economy

» Cost Reduction and Efficiency
- Reduces the costs associated with cash handling and transaction processing
- Enhances the speed and efficiency of transactions, benefitting both consumers and businesses

» Financial Stability
- Underpinning financial stability by mitigating risks and supporting liquidity management
- Reliable and secure financial transactions essential for maintaining trust in the economy

5

5

Current State of the Payments Industry

6

6

dlx The 'Old School' Way of Payments

Cash

Credit Cards (traditional swipe)

Electronic Funds Transfers

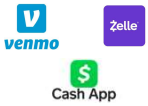
Check

7

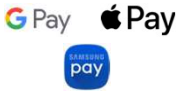
7

dlx The 'New School' Way of Payments

Mobile Payments



Mobile Wallets



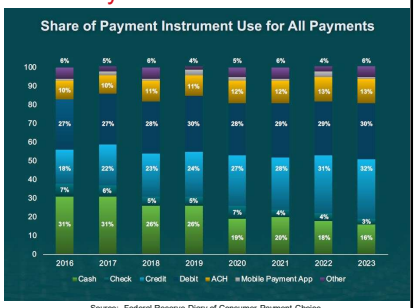
Contactless Payments

8

8

dlx Changing the Face of Payments

- Cards and account-based payments lead consumer choice
- Mobile wallets increasingly used
- Mobile payments used increasingly for person-to-person payments
- Use of cash and check continues to decrease



Source: Federal Reserve Diary of Consumer Payment Choice

9

9

Consumer Expectations

10

10

dlx Consumers Have Their Expectations

- **Choice** - Consumers want a variety of payment options, including credit cards, debit cards, mobile wallets, digital payment apps, and cash.
- **Convenience** - Consumers want a fast, easy, and secure banking experience. They also want an intuitive interface, simple transactions, and easy access to information.
- **Security** - Consumers are becoming more confident in the security of digital payment options.
- **Cash** - Consumers still expect to demand cash in the future. Cash is valuable to consumers because it's widely accepted and allows for instant settlement between individuals and retailers.
- **The Bottom Line:** Consumers are demanding a broader choice of payment options, expecting to be able to make payments anytime, anywhere, using any method.

11

11

Innovations Shaping the Future of Payments

12

12

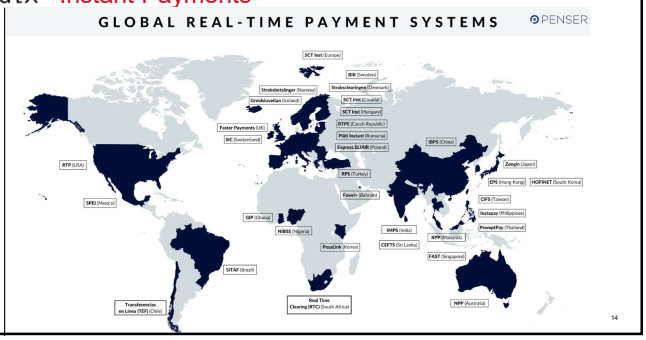
dlx Instant Payments

- Instant payments are a way to electronically transfer money between bank accounts in real time, allowing funds to be available to the recipient immediately.
- Instant payments can be used by consumers and businesses for a variety of purposes, including:
  - **Paychecks** – employees can access their paycheck and spend it the same day
  - **Bills** – consumers can pay bills on the due date to avoid late fees
  - **Working Capital** – small businesses can access funds immediately when invoices are paid
  - **Warranty Claims** – customers can receive immediate payments for damaged goods or returned items
  - **Insurance Claims** – policy holders can receive settlements on their insurance claims
- Some instant payments networks include:
  - **The Clearing House's RTP® Network** – a third-party instant payment network
  - **The Federal Reserve's FedNow Service** – a system that allows banks and credit unions to send and receive funds in real time

13

13

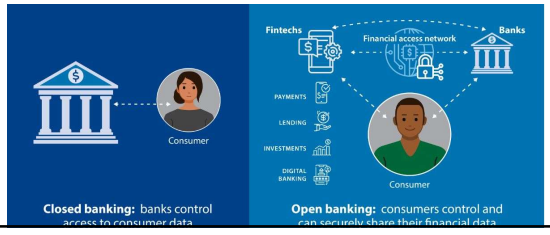
dlx Instant Payments



14

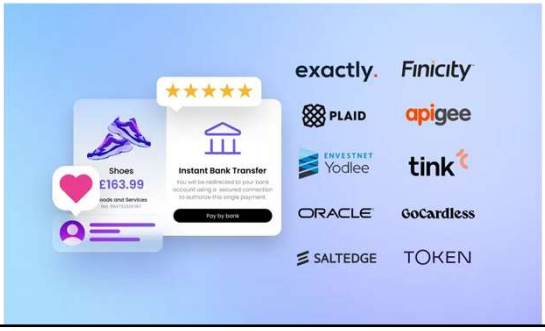
dlx Open Banking

- Open banking is a technology-based framework that allows consumers to securely share their financial data with third parties and financial institutions.
- With a consumer's permission, open banking uses application programming interfaces (APIs) to share financial data between banks and third-party service providers (e.g., currency exchanges, merchants, fintechs, etc.)



15

dlx Open Banking



16

16

dlx Cryptocurrencies

» Cryptocurrencies are digital or virtual currencies that use cryptography for security.
- Transactions are secured using cryptographic techniques, ensuring that only the intended recipient can access the funds. This also helps prevent fraud and double spending.

» Unlike traditional currencies issued by governments (like the US dollar or euro), cryptocurrencies operate on a decentralized system using blockchain technology.
- Blockchain is a distributed ledger that records all transactions across a network of computers. This ledger is public and immutable, meaning once a transaction is recorded, it cannot be altered.

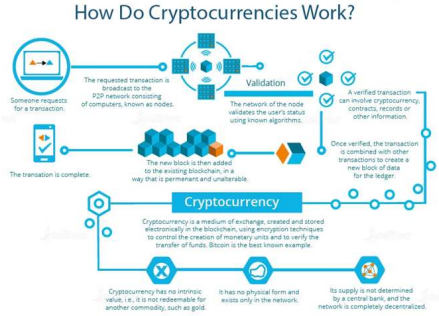
» Advantages of cryptocurrencies include privacy, global access, and decentralization.

» Challenges of cryptocurrencies include volatility and regulatory uncertainty.

17

17

dlx Cryptocurrencies



18

18

dlx Cryptocurrencies

HOW ARE CRYPTO COINS CREATED?

In crypto mining, a computer solves complex numeric puzzles to verify blocks of cryptocurrency transactions and add them to the worldwide blockchain network.

If the miner is the first to solve this puzzle before all the other computers on the network, the miner is rewarded with a cryptocurrency coin, which then enters into the worldwide supply.

In essence, miners are being offered a reward for doing the job of keeping the blockchain verified and secured, thus preventing fraud.

19

19

deluxe+ PAYMENTS & DATA

Regulatory Landscape

20

20

dlx Instant Payments

» Instant payments in the United States are regulated by a number of existing payment system laws and regulations, including:

- **Electronic Fund Transfer Act** - Regulates instant and real-time payments
- **Regulation E** - Implements the Electronic Fund Transfer Act
- **Article 4A of the Uniform Commercial Code** - Regulates instant and real-time payments
- **FedNow Service regulations** - Govern funds transfers over the FedNow Service, including the ability to delay posting payments
- **Office of Foreign Assets Control (OFAC) sanctions** - Regulate instant payments to promote compliance with sanctions requirements

21

21

dlx Open Banking

» The Consumer Financial Protection Bureau (CFPB) finalized the Personal Financial Data Rights rule in October 2024 giving consumers the right to access and share their financial data with third parties.

» The requirements of the rule include:

- **Consumer Control** - Consumers can access their financial data and authorize third parties to share it securely.
- **Standardized Data Access** - A standardized format for data sharing will make information more consistent and accessible.
- **Data Privacy and Security** - The rule emphasizes strong data privacy and security measures to protect consumer information.
- **No Fees** - Financial institutions must make consumers' financial data available at no charge.
- **Third-Party Restrictions** - Third parties can only use the data for one year without reauthorization from the consumer. They also can't sell consumer data or use it for targeted advertising.

22

22

dlx

23

23

dlx Payment Cards

» PCI compliance is a requirement for any organization that stores, processes, or transmits cardholder data.

- **Mandated by credit card companies -** Visa, Mastercard, Discover, and American Express require PCI compliance to help ensure the security of credit card transactions.
- **Applies to all entities -** PCI compliance applies to all entities, regardless of size or the number of transactions. This includes businesses that accept card data in-store, online, over the phone, or on an app.
- **Enforced by the PCI Security Standards Council** - The PCI Security Standards Council (PCI SSC) manages and enforces the security standards.

» For Deluxe and all affiliated payment gateway brands, the focus is adherence to the PCI Data Security Standard (PCI DSS).

24

24

dlx Payment Card Security Data Security Standard (PCI DSS)

PCI Data Security Standard – High Level Overview	
Build and Maintain a Secure Network and Systems	1. Install and Maintain Network Security Controls. 2. Apply Secure Configurations to All System Components.
Protect Account Data	3. Protect Stored Account Data. 4. Protect Cardholder Data with Strong Cryptography During Transmission Over Open, Public Networks.
Maintain a Vulnerability Management Program	5. Protect All Systems and Networks from Malicious Software. 6. Develop and Maintain Secure Systems and Software.
Implement Strong Access Control Measures	7. Restrict Access to System Components and Cardholder Data by Business Need to Know. 8. Identify Users and Authenticate Access to System Components. 9. Restrict Physical Access to Cardholder Data.
Regularly Monitor and Test Networks	10. Log and Monitor All Access to System Components and Cardholder Data. 11. Test Security of Systems and Networks Regularly.
Maintain an Information Security Policy	12. Support Information Security with Organizational Policies and Programs.

25

25

dlx How Can I Tell if an Entity is PCI DSS Compliant?

» Ask for the entity's PCI DSS Attestation of Compliance (AOC)
- The Attestation of Compliance (AOC) is a documented representation on an entity's PCI DSS compliance.
- The AOC should be signed by an executive of the entity and their QSA, a.k.a. 'auditor' (dates of signature within the past year).
- The entity should be audited each year and, if they passed the audit, a new AOC should be available with updated signatures and dates of signature. This is an annual requirement!

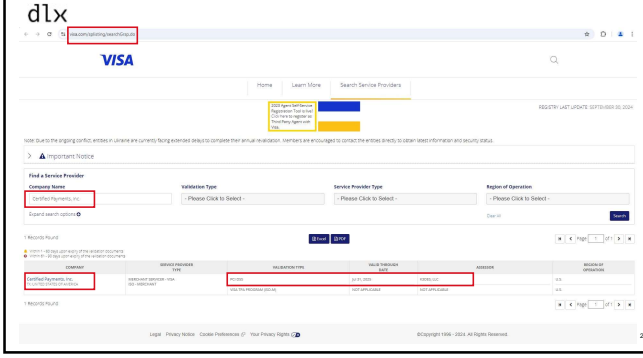
» Look up the entity's PCI DSS Compliance on the Visa Global Registry of Service Providers
- Go to https://www.visa.com/splisting/searchGrsp.do
- Enter the Company Name
- Enter the Validation Type – PCI DSS
- Click the 'Search' button

» Search results will return the company name and the associated details of the PCI DSS validation including who conducted the validation and the date of compliance.

26

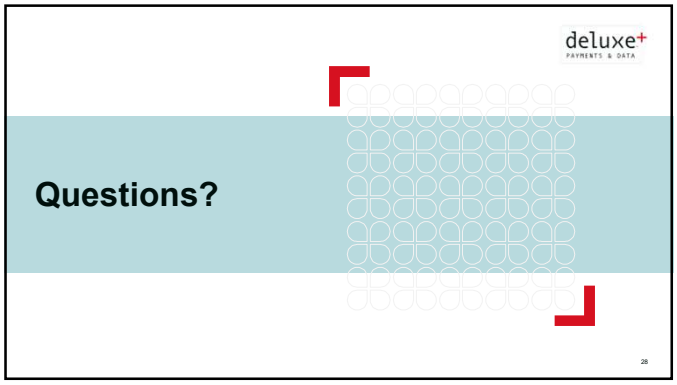
26

dlx



27

27


deluxe+
PAYMENTS & DATA
Questions?
28

28

deluxe+
PAYMENTS & DATA
Thank
You

29

deluxe+
PAYMENTS & DATA

30