Industry Forum

MTRA 2019 ANNUAL CONFERENCE
OMNI WILLIAM PENN, PITTSBURGH, PA
<table>
<thead>
<tr>
<th>Time</th>
<th>Agenda</th>
<th>Presenter/Leader</th>
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</thead>
<tbody>
<tr>
<td>1:30</td>
<td>Welcome and IAC Introductions</td>
<td>Amy Greenwood-Field, IAC Chair Counsel, Dentons US LLP</td>
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<td>1:45</td>
<td>In the World of BlockChain</td>
<td>Tayeba Maktabi, Fintech Policy Advisor Federal Reserve Bank of San Francisco</td>
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<td>2:30</td>
<td>Payments Fraud - Trends and Technologies to Stay Ahead of the Curve</td>
<td>Jaswinder Randhawa, Moderator PwC SF, Risk and Compliance Leader</td>
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<td>Amelia Childress, Head of Compliance Operations, Square (invited)</td>
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<td>Derek McMillan, Head of Compliance, MoneyGram International</td>
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<td>Melissa Strait, CCO, Stripe</td>
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<td>3:30</td>
<td>Best Practices for the MSB Industry</td>
<td>Keisha Whitehall Wolfe, Moderator Counsel, Mayer Brown LLP</td>
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<td>Paul Dwyer, MSBA Chairman and CEO of Viamerica Corporation</td>
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<td>Clay Roberts, Deputy Global Head of Financial Crimes Compliance, Western Union</td>
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<td>4:00</td>
<td>Hot Topics From Industry Advocates</td>
<td>Ron Schwartzman, Moderator COO and CCO, UniTeller Financial Services, Inc.</td>
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<td>Luis Alvarez, Money Transmitter Alliance</td>
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<td>Adam Fleisher, The Money Services Round Table</td>
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<td>Kathy Tomasofsky, Executive Director, The Money Services Business Association</td>
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<td>4:30</td>
<td>The California Consumer Privacy Act is coming: What do MSBs Need to Know?</td>
<td>Adam Fleisher, Attorney Morrison &amp; Foerster LLP</td>
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<td>5:00</td>
<td>Open Forum/ Q&amp;A</td>
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Welcome and IAC Introduction

Amy Greenwood-Field, IAC Chair
Counsel, Dentons US LLP
Industry Advisory Council

- Since the last conference, the MTRA Board has developed an Industry Advisory Council. The Council serves as a liaison between industry and regulators and will consult, advise, and assist the Board on Money Services Business regulatory issues.

- The Council consists of 15 members chosen by the Board to serve 2 year terms.
2019-2021 IAC Members

Amy Greenwood-Field, Chair, Dentons US LLP
Gina Anderson, DolEx Dollar Express, Inc.
Hugo Cuevas-Mohr, Mohr World Consulting
Ben Duranske, Beam
Paul Dwyer, Viameicas Corporation

Rosemary Gallagher, The Western Union Company
Alex Ketter, Ria Financial
Alberto Laureano, Barri Financial Group LLC
Anastasia Raissis, Amazon
Jas Randhawa, PwC

Edi Reber, MoneyGram International
Martha Rhea, Klarna Inc.
B. “Skeet” Rolling, InComm Financial Services, Inc.
Ron Schwartzman, UniTeller Financial Services, Inc.
Keisha Whitehall Wolfe, Mayer Brown
In the World of BlockChain

Tayeba Maktabi, Fintech Policy Advisor
Federal Reserve Bank of San Francisco
In the World of Blockchain

Tayeba Maktabi
Federal Reserve Bank of San Francisco
The views expressed here today are my own and do not necessarily reflect those of the Federal Reserve Bank of San Francisco, the Federal Reserve System, or the Board of Governors of the Federal Reserve System.
FRBSF Fintech

Fintech

Consult an SF Fed Fintech Analyst

Do you need help navigating the regulatory and supervisory system in support of your business model or involvement with financial technologies? SF Fed Navigate fintech analysts can assist.

About Navigate

Our team of fintech analysts studies the impact of financial technologies to understand a range of issues.

MEET THE TEAM>

Regulatory Guidance

Check the Fed’s Consumer Compliance Outlook for laws, regulations, and supervisory guidance that may be relevant to firms working with new financial...
Overview

- What is Blockchain and how does it work?
- What are some ways companies are using Blockchain?
- What are regulators thinking about?
WHAT IS BLOCKCHAIN?
Distributed Ledger Technology (DLT) vs Blockchain

- Directed Acyclic Graph (DAG)
- Blockchain
- Hybrids & Others
What is Blockchain/DLT?

- **Peer-to-Peer**: no central authority
- **Distributed**: same copy available to everyone in the network
- **Cryptographically Secured**: tamper-proof
- **Consensus**: changes to the blockchain can only be made via consensus
- **Add-Only**: data can only be added with time-sequential order
- **Permissioned/Permission-less**
HOW DOES BLOCKCHAIN WORK?

Two parties want to exchange a unit of value. This could be digital currency or information, such as a CV.

This request is broadcast to a decentralised database that forms a public ledger of all transactions. The request is known as a block.

Collectively, the network validates the block, ensuring changes haven't been made and that the transaction can be processed.

The verified block is added to a 'chain' of previously approved blocks - which becomes the blockchain. Verified blocks are time-stamped, authenticating them.

Now approved, the information, or payment, is delivered to the relevant party.

hays-journal.com
Start with a transaction....
Transfer funds from my wallet...

**Hot Wallets:** connected to the internet
- Online
- Desktop
- Mobile

**Cold wallets:** off-line storage of keys
- Hardware
- Paper
Transfer funds using private and public keys....

- **I will pay $500**
  - **Sign (Encrypt)**
    - **PRIVATE KEY**
    - **DFCD3454 BBEA788A**
    - Miners compete to put in blocks
    - All nodes verify new blocks

- **I will pay $500**
  - **Verify (Decrypt)**
    - **PUBLIC KEY**
Transaction is validated through “mining”...

**Task:** To share 10 BTC with Jennifer

- Transaction data is shared with Bitcoin users from the memory pool.
- Miners compete to validate the transaction using proof of work.
- The miner who solves the puzzle first shares his result across the other nodes.
- If maximum nodes grant their approval, the block becomes valid and is added to the Blockchain.

Now, the Bitcoins (10 BTC) associated with the transaction is received by Elsa.

Simultaneously, the miner who solved the puzzle gets a reward of 12.5BTC ($98,475.125).
Transactions are immutable

- Distributed - a copy of the blockchain is kept at each node
- Consensus verification – 51% (currently 9k nodes on Bitcoin)
- Once a transaction is recorded on the blockchain, it can never be changed or hidden
Where do I exchange my cryptocurrency?

Kings of Crypto
Digital assets exchanges are making millions in trading revenue per day.

- Binance
- Upbit
- Huobi
- Bittrex
- Bithumb
- OKEx
- Bits Blockchain
- Bitfinex
- Bit-Z
- GDAX
- Bitstamp
- WEX
- Kraken
- HitBTC
- CoinEgg
- BTCC
- EXX
- Gemini
- Poloniex
- BitFlyer

Daily revenue (Est.)

0.5M 1.5M 2.5M 3.5M USD

Sources: Daily revenue estimated with CoinMarketCap reported 24Hr volume and
How do you track cryptocurrencies?

- Blockchain.com/explore
- Blockexplorer.com
- Live.blockcypher.com
How do you track cryptocurrencies?

Pseudo-anonymous transactions
- Chainalysis
- CipherTrace

Privacy coins
- Zcash – “zn-SNARKS” technology hides transactions data
- Monero – “RingCT” technology and stealth addresses to obscure data
What Happens When Things Go Wrong?
Hacking, Fraud, and Loss

- $9M lost each day due to scams
- Fraud consists of 30% of all crypto scams in 2018
- $4.5B lost in 2019

Examples:
- Coincheck – hackers stole $500M in tokens
- Bitconnect – shut down and vanished with $250M
- QuadrigaCX – exchange lost $190M when owner died
Price Manipulation Schemes

- Pump and Dump
- Wash Trading
- Long/short Liquidation Hunting
- Whale Moves
- Dark Pool Trading
- Shilling
- Spoofing
What are some ways companies are using DLT?
Money Transfer

Transferring cryptoassets across a blockchain

Examples:

**Abra** – P2P transfer of digital currencies supporting 50 fiat currencies and over 30 cryptocurrencies.

**IVY** – global remittances for institutions, supports 74 KYC data points

**Chain** – cloud blockchain enables FIs to issue, store, transfer digital assets.
Trade Finance

Use DLT to streamline international trade transactions

Example:

- **Voltron** – Digitize paper-based letters of credit to reduce fraud and speed up documentation processing
- **Marco Polo** – streamline accounting for businesses to track payment guarantees and expedite receivables discounting.
- **Batavia** – uses smart contracts to help all participants in a cross-border trade track and monitor open transactions
Smart Contracts

Self-executing contracts with terms of the agreement written in computer code. When conditions are met, the contract is executed automatically.

Examples:
- **Propy** – issuance of titles using smart contracts in the real estate market
- **Mediachain** – helps musicians get paid for royalties in full and on time (acquired by Spotify)
Internet of Things

Connection of any device with an on/off switch to the internet

Examples:

- **Helium** – wireless network on a blockchain to track devices
- **Chronicled** – deliver end-to-end tracking of medical or food supply shipping
- **ArcTouch** – connect devices such as voice assistants, wearables, and smart TV’s
Supply Chain Tracking

Creating transparency and efficiency for logistics and supply chain management companies.

Example:
- **DHL** – track shipments and maintain integrity of transactions
- **Maersk** – tracking shipments digitally across international borderer in real-time
- **ShipChain** – end-to-end shipping solution on the blockchain
- **Walmart** – food safety and pharmaceutical drug tracking solution
Privacy and Data Protection

Using blockchain to protect and control sensitive personal data

Examples:
- **Civic** – allows consumers to decide who has access to their personal data
- **Ocular** – houses biometric data on the blockchain to help governments detect identity theft.
Healthcare

Using DLT to store and share patient medical data

Example:
Blackberry – building a secure global ecosystem for the storage and transfer of medical data over DLT
MedRec – MIT project to allow for the secure transfer of medical data between patients and service providers
Taipei Medical University – uses DLT to improve medical record-keeping
Government

- **Voting** – South Korea testing E-Voting; 150 voters in W Virginia voted via Voatz app
- **Record Keeping** – Delaware uses DLT to archive public records and documents
- **Supervision** – FRB Boston experiment with a supervisory node on the blockchain
- **Bonds** – World Bank launched bond-i, the world’s first bond to be created, allocate, transferred, and managed using DLT
What are Regulators Thinking About?
Key Consideration: Security and Stability

Micro-level:
- Wallets are attractive hacking targets
- Consumer protections are not mature
- "51 person attack"

Macro-level
- Widespread substitution away from balances at banks could affect money creation and financial stability
- Widespread adoption and use of DLTs could lead to systemic and operational issues
Key Consideration: Legal / Jurisdictional

Macro-level

- AML/BSA/CTF compliance can be circumvented

- Exchanges, wallets may be held offshore, creating complicated jurisdictional questions for law enforcement

"On the Internet, nobody knows you’re a dog."
Table: Regulatory Environment at the National Level

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<th>Security</th>
<th>Commodity</th>
<th>Currency/FX</th>
<th>Banking Product</th>
<th>Consumer Product</th>
<th>Asset</th>
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<tbody>
<tr>
<td>SEC</td>
<td>CFTC</td>
<td>FinCEN</td>
<td>FDIC</td>
<td>CFPB</td>
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How we define digital currency informs who should have regulatory oversight authority.
Regulatory Environment at the Federal Level

- Money transmitter rules
  - Apply to both developers and exchanges involved in the sale of an ICO-derived token
  - AML and KYC rules apply
- New York BitLicense
  - Any person involved in “virtual currency business activity” in New York must obtain the license
  - Texas and other states have different approaches
- State judges have made different rulings on whether cryptocurrencies are considered currencies.
Regulatory Environment at the Federal Level

Banking Engagement
- Fairly limited for real cryptocurrencies
  - Definitional issues impact authorities
- Use of the underlying blockchain/DLT in other situations is growing
  - Trade Finance
  - Wholesale/International Payments
  - Other Asset Transfers

FinCEN Guidance
THANK YOU

Tayeba Maktabi
https://www.frbsf.org/banking/fintech/
SFFed.Fintech@sf.frb.org
Best Practices for the MSB Industry

Keisha Whitehall Wolfe, Moderator, Counsel, Mayer Brown LLP
Paul Dwyer, MSBA Chairman and CEO of Viamericas Corporation
Clay Roberts, Deputy Global Head of Financial Crimes Compliance, Western Union
MSB Best Practices
Objectives/Goals of MSB Best Practices

- Assist MSBs with developing a high-quality compliance program to meet AML/BSA requirements, and more effectively control risk and assist law enforcement

- Allow banks to be able to confidently engage in relationships with MSBs that utilize these best practices

- Financial institutions can use these best practices to address regulatory expectations

- These best practices are not designed to be a one-size-fits-all solution or to establish minimum standards
Overview of Best Practices

• A Primer on Money Services Businesses
• Building an Effective AML Program
  o Risk Assessment
  o Pillars
  o Culture of Compliance
• Know Your Customer/Transactor
• Know Your Agent and Counterparties
Overview of Best Practices (cont.)

• Reporting and Monitoring
  o SARs & CTRs
  o Sanctions
  o Transaction Monitoring

• Information Sharing
  o Section 314

• Licensing Requirements

• Compliance Certifications
Unlike Minimum Standards, Best Practices…

• Enable industry to stay on top of emerging market threats and better address the real terrorism financing and money laundering risks that exist

• Enhance investigations and collaboration with law enforcement

• Promote flexibility and innovation in order to provide the best service to customers in a competitive environment

• Increase the effectiveness of AML programs to stay ahead of regulatory scrutiny
Why Adopt Best Practices?

The adoption of Best Practices may lead to benefits, such as:

- Reliability in products and management
- Collaboration between the private sector and local authorities
- A framework / venue for ongoing industry and regulatory collaboration to address emerging classes of threats
- A more leveled playing field
- Avoidance of unnecessary compliance costs / more efficient compliance investments
Why Adopt Best Practices? (cont.)

Reduction in compliance breakdowns:

- Document policy and procedures
- Risk-based decisions documentation
- Management of compliance operations
- Documenting “cutting room floor” decisions
- Increase effectiveness of AML regime
Extensions of Best Practices Approach

Beyond AML / CFT, a Best Practices approach…

Can create a framework for ongoing collaboration in other areas, such as:

- Consumer protection / fraud prevention
- Information security
- Disaster recovery / business continuity
- And other areas…
Hot Topics From Industry Advocates

Ron Schwartzman, Moderator, COO and CCO, UniTeller Financial Services, Inc.
Luis Alvarez, Money Transmitter Alliance
Adam Fleisher, The Money Services Round Table
Kathy Tomasofsky, Executive Director, The Money Services Business Association
Money Transmitter Alliance (MTA) & The Industry Negative Database

Presented by:
Lou Alvarez, MTA President
September 10, 2019
MTA money service business members will be able to search the Industry Negative Database during the onboarding process or as an additional due diligence check to ascertain whether agent applicants have been previously terminated by other money service businesses for:

**Agent Complicity** – *Money Laundering, Terrorist Financing or other predicate AML activity*

**Questionable Activity** – *Behavior that indicates an Agent or employee may be engaged in illicit activity*

**Criminal/Law Enforcement Exposure** – *Law enforcement inquires or shared intelligence*

**Payment Mis-Appropriation** – *Intentionally misappropriation of payments/misuse of the product*

The Money Transmitter Alliance was formed by participating Money Service Business members to align with industry guidance and create and manage an Industry Negative Database developed for the purpose of voluntarily sharing information, to prevent the unwitting enrollment of high-risk individuals and entities in compliance with Section 314(b) of the USA PATRIOT Act.
Current Members of MTA:

- Barri
- Intercambio Express
- MoneyGram
- Sigue
- UniTeller
- ViaAmericas
- Western Union

MTA Board Members Elected December 2018:

- President: Lou Alvarez, Western Union
- Vice President: Alberto Laureano, Barri
- Treasurer: Dan Jablonski, Sigue
- Secretary: Arron Henry, MoneyGram
- Asst. Secretary: Ron Schwartzman, UniTeller

History and Current Status of MTA:

- Money Transmitter Alliance Incorporated filed September 2018.
- Board Elected December 2018.
- First Annual Meeting held February 2019.
- Completed security assessment of the vendor platform May 2019.

Currently:
- Finalizing details with the vendor to host the Industry Negative Database and run the screening analysis process.
Benefits of Membership

Form part of a collaborative group of financial institutions dedicated to protecting your organization against illicit activity and exploitation of services by criminals.

- Recognized by FinCEN as an association of Financial Institutions for purposes of Section 314(b).
- Exclusive access to the Industry Negative Database
- Enhancement of your Anti-Money Laundering (AML), Fraud and Combatting Financing of Terrorism (CFT) Programs
- Opportunity to serve as a member of the Money Transmitter Alliance Board of Directors
- Member group voting in the management of the Alliance
- Annual Membership Dues are tiered for Members
- Continue to maintain autonomy when determining whether to onboard a new agent applicant that may pose an AML, CFT or fraud risk to your organization.
- Membership open only to U.S. FinCEN registered Money Service Businesses.
Topics that are keeping us up at night:

1) Access to Banking
2) Agent and Consumer Fraud
3) FinTech
4) Remittance Taxes
The California Consumer Privacy Act is coming: What do MSBs Need to Know?

Adam Fleisher, Attorney
Morrison & Foerster LLP
Open Forum/Q&A
The Money Services Business Association cordially invites you to attend

2019 Money Transmitters Regulatory Conference
Networking Reception

Join MSBA Board members to hear first-hand the benefits of membership and the work the association is doing.

Hosted by

BBVA
Transfer Services

MONEYDART GLOBAL SERVICES

Machaen Enterprises
Surety Bond Specialist

Date: Tuesday, September 10, 2019 • 5:30 PM – 7:00 PM
Location: Lawrence Welk Room • William Penn Hotel, Pittsburgh, PA