Omise Proposal for Blockchain-based KYC/AML Solution

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Challenges with Current Financial Platforms

There are many challenges that impact consumer and financial institutions.

**Consumer**
- 73% of the population in Southeast Asia is unbanked, limiting access to financial services.
- Payment settlement and asset transfer can take days; varies by payment method.
- International remittance is costly.
- Fractional reserving limits accessibility to assets in real-time; may require days for consumers to access desired funds.
- Repetitive KYC processes are required for each bank and financial service.

**Financial Institutions**
- Lack of appetite to innovate on infrastructure due to heavy reliance on legacy systems.
- Cost control requirement for IT investment and operating expenses reduction.
- Difficult to prevent fraud or double-spending, due to outdated systems (10+ yrs) especially if information is not up-to-date.
- Disincentivized to participate in lending due to global regulatory requirements (e.g., AML).
- Low profitability due to low interest rates.

1. Double-spending is the problem where a digital transaction (debit or credit) can occur twice, as a result of duplication of information (e.g., account balance).
Select Financial Services Trends
Global trends are shifting the requirements for financial services platforms to succeed

- **Online/Mobile Access**: Increasing online/mobile device usage is leading to a rise in digital payments, 70% rise in mobile payments in 2016¹

- **Faster Payments**: Consumers are desiring more convenient and faster payment settlement and asset transfer

- **Cross-Border Transactions**: Growing globalization is enabling greater international business, e-commerce and remittances

- **Data Privacy & Security Concerns**: Consumer willingness to share data is rising, with demand for greater security and privacy standards

¹. ThreatMatrix Q4 2016 Report
Benefits of Blockchain Technology

Blockchain technology can provide many benefits to financial services globally, in a secure and efficient way.

- Can be integrated with existing API’s and online/mobile user interfaces
- Once scaled, can have global reach and massive transaction volume at unprecedented speed
- Decentralization and consensus mechanism ensure that the network cannot be manipulated (e.g., at least 66% of validators must agree)
- Distributed ledgers and time-stamps solve the double-spending problem! and provide transparency of transactions and balances
- Digital signatures and smart contracts minimize potential for extortion and enable compliance
- Cryptography provides advanced security

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Evolution of KYC/AML Processes
Currently, there are many challenges with KYC/AML, that can be addressed by a blockchain-based identity solution

**Today**
- KYC/AML procedures and policies are complicated and inconsistent globally
- Users and institutions repeat redundant processes (e.g., authentication)
- Poor coordination and delayed updates between institutions can lead to inaccurate information
- Difficult to prevent fraud or the double-spending problem due to lack of visibility into transaction origination
- Centralized databases and dated security systems leave identity data vulnerable

**Tomorrow**
- Smart contract architecture ensures compliance to standards
- Decentralized application for identity data collection and sharing reduces repetitive KYC/AML (e.g., one-time verification)
- Real-time updates and multi-party access allow for data to be continuously accurate (e.g., change of address, new credit card)
- Distributed ledgers linked to identity data enable monitoring of assets and activity
- Ethereum-rooted consensus omits risk of single point of failure (e.g., data breach)

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Digital Identity Solution Flow

Customer identity data can be authenticated, continuously updated and accessed by all approved financial institutions.

- User data is authenticated by a regional or national certification body (e.g., ASEAN organization), compliant with regional procedures and policies.
- Digital signatures confirm the correctness of information and approve access to data.
- A hash of the data is recorded onto the public and immutable blockchain.
- Approved parties (e.g., regulators, banks) receive the hash, that provides access to authenticated data and regular updates.
- Through a user interface and API atop of the blockchain, parties can interact with the data (e.g., KYC/AML).
Regional Integration of Digital Identity Solution

A blockchain-based, identity solution for KYC/AML can be integrated with the other regional platforms

- Fintechs and 3rd party data collectors can collaborate to create an ecosystem of identity data sharing for KYC/AML
- ASEAN financial institutions and regulators can connect to the digital identity application via regional platform portal and API
- Potential to integrate identity data with settlement data and even non-financial information; to develop unique consumer insights and analytics to tailor products
- Opportunity for blockchain-based solution to improve efficiency of internal processes (e.g., core banking, data storage)
Opportunities for Regulators
Regulators can also play a role in developing a streamlined identity solution by supporting blockchain innovation

- Standardize KYC/AML requirements and processes within regions (e.g., across ASEAN countries and financial institutions)
- Advocate for open data and open banking policies to better facilitate data sharing between financial institutions, 3rd party providers and users
- Promote regulation that supports blockchain development to help foster greater innovation
APEC Roadmap
Moving forward, APEC must develop a roadmap to build a blockchain-based identity solution for KYC/AML

**Define Scope & Partnership**
- Identify use cases for a blockchain-based identity application (e.g., KYC/AML, online payments, core banking)
- Define criteria and standards for an ASEAN solution
- Conduct a request-for-proposal from blockchain providers
- Select partner(s) to develop digital identity solution to support KYC/AML

**Conduct Pilot**
- Onboard all new participants (e.g., users, ASEAN banks)
- Connect identity platform with payment settlement systems
- Begin integration of other multifaceted identity data outside the scope of KYC/AML (e.g., biometrics)
- Incorporate solution with ancillary services (e.g., analytics, artificial intelligence)

**Launch Solution**
- Conduct proof-of-concept of chosen identity module, with regional partners (e.g., 3 banks) and a certification body, to test functionality and scalability
- Align on solution features to meet participant needs
- Tailor API and user interface to ensure compatibility with various financial services infrastructure
Overview of Omise

Omise is a fintech that has the capabilities to develop an innovative, blockchain-based identity solution.

Company Background

- Founded in 2013, venture-backed payments company
- HQ in Thailand, with locations in Japan, Singapore and Indonesia
- Helping over 6,000 merchants move towards digital money and card processing
- Products: online payments gateway (Omise), OMG Network and decentralized exchange (OmiseGO)
- Awarded ‘Digital Startup of the Year’ at Digital Thailand Big Bang event (2017)

Online Payments Gateway

Mission: “Online payment available for all”

A wide range of processing solutions for any business need, with fast, flexible and seamless payment experiences.

Ethereum Financial Network

Mission: “Unbank the Banked”

Interoperable and decentralized financial network enabling value and data exchange, built on the Ethereum blockchain.