BNM-OECD* Conference on Financial Education and Financial Consumer Protection in Asia-Pacific

Empowering financial consumers in the digital age

PRESENTATIONS

11-12 December 2019
Sasana Kijang, Kuala Lumpur, Malaysia

*The OECD contribution to this event is supported by the Government of Japan.
Opening remarks
EMPOWERING FINANCIAL CONSUMERS IN THE DIGITAL AGE

DIGITALISATION AND ITS IMPLICATIONS FOR FINANCIAL POLICY MAKERS

Greg Medcraft
Director for Financial and Enterprise Affairs
Organisation for Economic Co-operation and Development
Outline

1. Digitalisation, cryptoassets and blockchain
2. OECD findings: consumer insights and ICOs
3. Emerging lessons for regulators/policy makers
1. CONSUMER INSIGHTS: ATTITUDES AND BEHAVIOURS RE CRYPTOASSETS

Why invest? – “To make money quickly” (41%)

How? Various ways, including paying on a credit card (13%)

28% cannot afford to lose the money invested

29% do not understand cryptocurrencies very well, 34% to some extent
2. INITIAL COIN OFFERINGS (ICOs)

ICO risks and market failures:

- Conflicts of interest, information asymmetries
- Inadequate AML/CFT checks
- Improper valuations
- Unclear tax requirements

Indicative ICO process:

- Concept, founding team
- Whitepaper
  - Possible conflicts of interest
  - Possibly not incorporated, At concept stage, No skin-in-the-game
- Technical paper
  - Non-standardised, Non-vetted disclosure, information asymmetries
- Terms & conditions
- Token issuance
  - Receipt of funds & distribution of tokens
  - Listing of token in trading platform
  - Listing not guaranteed
    - Unregulated trading platforms
    - High volatility, counterparty risks
    - Systematic risk (correlation to BTC)
- Marketing campaign
  - Operational risks (DLT-related)
  - Cyber risk
  - Potential misalignment of interests
- Platform building
- Service/product launch
3. EMERGING LESSONS FOR REGULATORS

1. **Focus on market fundamentals**: orderly financial markets – financial stability; business conduct; consumer protection and market efficiency.

2. **Leverage existing rules**: market issues raised by new blockchain-based products or business models may be already covered elsewhere.

3. **Regulatory certainty is important – but is a fine balance**: if new rules needed, take the long view, use principles, be tech-neutral.

4. **Build capacity and understanding in regulators**: to allow authorities to respond appropriately and not rush in.

5. **Cooperate internationally**: to learn from one another and to arrive on common approaches, in order to avoid fragmentation and arbitrage given global nature of digital assets and blockchain networks.

6. **Inform, empower and protect consumers**: Collect data to understand their attitudes and better tailor communications at them. Tell them about the risks they face, monitor marketing techniques, assess emerging issues, develop appropriate financial consumer protection frameworks.
OECD and digitalisation of financial services: understand impact, promote dialogue, and provide policy solutions

**Pensions**
- Use of technology to enhance interactions with pension members
- Impact of technology on business models
- Regulatory approaches to Fintech

**Insurance**
- The sharing economy and insurance
- AI applications
- InsurTech

**Robo-Advice**
- Benefits and challenges
- Robo-advice platforms and role in promoting savings for retirement

**Initial Coin Offerings (ICOs)** for inclusive SME financing
**(Digital) Short-term consumer credit** and inclusiveness

In the Spotlight and Keynotes
DLT-Enabled Ecosystem
B2B Data Synchronization

Distributed Ledger Technology (DLT) can be either permissionless (public) or permissioned platforms, and the latter is the most suitable for enterprise applications, especially in support of B2B partnership.
Cross-Border Know-Your-Customer (KYC)

Individual users can retrieve their profile information from a bank they choose, then authorize the use of those data by another bank for credit applications.

1. Individual user sends a request to Bank A to populate his/her KYC account with KYC and bank account information, using a hashed HKID (and potentially other fields) for lookup.

2. Bank A retrieves the information from their database and sends the information to the user, which logically belongs to the user but physically stored in the distributed ledgers, i.e. everyone will own a copy, but in a hashed form which cannot be reverse-engineered.

3. The user sends the information to Bank D for credit application, but technically, the user sends the hashed ID over to Bank D and Bank D finds the information in the data node hosted by themselves.

4. Bank D can either use API to connect the data from KYC Blockchain network or use the portal to conduct KYC information enquiries.

5. The approved credit information will then be propagated to all parties in the ecosystem using the hashed ID.
Gold Mine in Blockchain

The transparency of data in Blockchain enables tons of business case.

<table>
<thead>
<tr>
<th>Hash Address</th>
<th>Exporter</th>
<th>Importer</th>
<th>Bank</th>
<th>Customs</th>
<th>Tax</th>
<th>Regulator</th>
<th>Logistic</th>
<th>Insurer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buyer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seller</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Category</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase Order</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Origin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Route</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invoice</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terms</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Trade Finance Platform Strategy

Many large banks are members of multiple networks.

<table>
<thead>
<tr>
<th>Corda</th>
<th>Hyperledger (超级账本)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marco Polo</strong></td>
<td><strong>eTC</strong></td>
</tr>
<tr>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>14</td>
<td>7 + 5</td>
</tr>
<tr>
<td>P</td>
<td>P</td>
</tr>
<tr>
<td>OAF</td>
<td>OAF</td>
</tr>
<tr>
<td>V</td>
<td>V</td>
</tr>
<tr>
<td>RWA</td>
<td>Effort &amp; Risk</td>
</tr>
<tr>
<td>T</td>
<td>T</td>
</tr>
<tr>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Oct 17 → Q4 18</td>
<td>Sep 2018</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Proprietary (独家)</strong></th>
<th><strong>Voltron</strong></th>
<th><strong>Batavia</strong></th>
<th><strong>DTC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>12</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>P</td>
<td>LC</td>
<td>LC &amp; OAF</td>
<td>BPU</td>
</tr>
<tr>
<td>V</td>
<td>5~10d → 1d</td>
<td>-</td>
<td>SaaS</td>
</tr>
<tr>
<td>T</td>
<td>SME</td>
<td>All</td>
<td>SME</td>
</tr>
<tr>
<td>D</td>
<td>May 2018</td>
<td>Apr 2018</td>
<td>Jul 2018</td>
</tr>
</tbody>
</table>
Supply Chain Traceability

Deloitte’s supply chain solution includes physical inspection results which are then validated against on-chain and immutable records.
Data Design

Blockchain platform captures an immutable trail of the product, with inspector providing assurance of data reliability. No financial data is on-chain.
Track & Trace

Transaction History - HUJ Co. Inc. (3)

Transaction Details - 111222

Company Types

© 2016. For information, contact Deloitte China.
Forwarder Financing

As forwarders are providing longer credit periods to shippers than what they receive from carriers, banks can fill the liquidity gap through network interoperability.
Property Ecosystem

Property agents, mortgage providers, and other supporting industries can achieve high synergy from sharing different kinds of data.

Bank provides affordability information for property agents, finances landlords based on future rental cash flow, and detects duplicated financing.

Ecosystem can cross-sell home insurance efficiently with digitized flow.

Telecommunication supports home moving and provides address proof on the platform.

Buyer will only visit properties that they can afford, and the post purchase process is highly digitized.

All rental payments will be electronic, and financing can be obtained with a trust worthy agreement.

Agent can obtain sales authorization electronically, avoid bring the same customers to a property they have already seen, and avoid visiting property the customers cannot afford with mortgage.

REIT can tokenize property for retail investors, and securitize rental, mortgage, etc.

Property management digitizes equipment traceability, maintenance, and service level monitoring.
Healthcare Ecosystem

The first phase can focus on the liquidity improvement among healthcare providers, but the network will provide much more future benefits in future.
Telecommunication

The current use cases are around number portability, roaming charge settlement, and inter/intra-company settlement, but there are huge potentials in data commercialization.

- **Telecommunication Ecosystem**

  - **Bank** acts as a FX liquidity provider and can provide cheaper alternatives to cross-border settlement solutions.
  - Mobile Number Portability (MNP), not using DLT node for lookup, talk, but for data update of NPDB, for high performance.
  - Roaming charge settlement, not because clearing houses are costly, but because of the high fraud (US$ 38B p.a.), dispute, and FX loss.
  - Customers purchasing plans bundled with phones provide huge amount of behavioral information for commercialization.

© 2016. For information, contact Deloitte China.
Next Generation Corporate Banking

Mid-market corporates are facing huge risk on currency and commodities when they are developing their regional and global coverage. Risk monitoring and mitigating tools are both in demand and also creating new revenue for the bank.
Huge synergy is available in cross-industry and later on, cross-border ecosystem, enabled by Distributed Ledger Technology (DLT) that allows sensitive customer data sharing without breaching privacy laws.

- Global asset management firms can provide micro-investment products with a global reach to underbanked and millennial population.
- Insurance firms consume and also produce lots of customer risk appetite and behavioral information, highly useful for bank underwriting.
- Telecommunication provides customer reach, big data for propensity model (especially those with TV channels), and virtual wallets (such as airtime).
- Customer identity and Know-Your-Customer (KYC) information resides with established financial institutes can effectively enable customer solicitation and onboarding for digital banks.
- Mobile phones capture lots of behavioral information from phone usage pattern to social analytics.
- Payment gateways and operators have access to the merchant business health and enable preventive SME portfolio management.
- Retail marketplaces create Q2O customer journeys such as sales finance, multi-merchant loyalty program, and risk appetite.
OTC & Crypto Post-Trade Ecosystem

The real-time synchronization enabled by distributed ledger technology (DLT) will largely improve the liquidity and efficiency of the system, as well as reduce counterparty, credit, and operational risks.
Technology Convergence
Trade Finance Ecosystem

For a minimal viable platform (MVP), not everyone need to be running a node.
Legacy system should be integrated with DLT data node through APIs.
Integration Approach

Carriers, forwarders, and banks can choose to use a common application, host a DLT node themselves for data synchronization, or integrate with cloud-hosted APIs.
Financial Education and Financial Consumer Protection

Naoyuki Yoshino
Dean/CEO, Asian Development Bank Institute (ADBI)
Professor Emeritus, Keio University, Japan
nyoshino@adbi.org, yoshino@econ.keio.ac.jp

Peter Morgan
Co-Chair, Senior Project Consultant
ADB Institute (ADBI)

Trinh Long, Research Assistant, ADBI
Conditions of Sustainable Growth

1. Domestic Savings → Investment
2. Human Capital Development (including Financial Education)
3. Infrastructure investment
   long term investors are needed
   Insurance and Pension funds
4. Sound financial system
Development of Financial Technology

1. Easy access to financial products through mobile phone

2. Financial products can be supplied from overseas → Needs for financial education

3. Households can shop around various financial products through mobile phone and heavy use of credit cards

4. Financial education will be very important (by use of Internet & mobile phones)

5. Machine learning and Big-data analysis → Unexpected shock, Data Privacy
## Traditional Banks versus Fin Tech Industry

**Banking Sector**
1. CB regulation
2. Capital Requirement
3. Reserve Requirement
4. Deposit Insurance
5. Liquidity provision

**Fin Tech Industry**
1. Free Entry and competition
2. Low costs
3. No strict regulation
4. No BIS regulation
5. Risk of Bankrupt
   - No protection
Full Use of Fin Tech by Banking Business

- Savings’ Deposits
- BIG DATA ANALYSIS
- LOANS
- BIG DATA ANALYSIS
- Goods
- New Innovations
- Transaction Accounts
- Payments
- Buyer
- Fin Tech
- Seller
Consumer Protection and confidentiality of data

1. Regulation of Fin Tech
   (1) Financial Stability and increase national welfare
   (2) Increase efficiency

2. Blockchain and De-centralized payment system
   (1) Secured transaction monitored by FSS (or FSA)
   (2) Non-registered transaction

3. Data privacy and big data analysis
   (machine learning)

4. Digitization of human life
Financial Education Promotion Council

What kind of subjects and items should be taught at each level of school education?

Chair Person, Naoyuki YOSHINO

Central Bank of Japan
Financial Services Agency (FSA)
Ministry of Education
Consumer Protection Agency (Government of Japan)
Bankers Association of Japan
Securities Dealers Association
Insurance Association
Trust Bank Association
Investment Trust Association
Financial Planners Association
Finance is taught, but for only a few hours

### Figure 22. Actual Teaching of Financial and Economic Education

<table>
<thead>
<tr>
<th></th>
<th>Teach it</th>
<th>Don’t teach it</th>
<th>Have taught it</th>
<th>No response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall (n=4462)</td>
<td>41.9%</td>
<td>29.4%</td>
<td>27.7%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Junior High School (n=3085)</td>
<td>40.3%</td>
<td>28.7%</td>
<td>29.9%</td>
<td>1.1%</td>
</tr>
<tr>
<td>High School (n=1487)</td>
<td>45.4%</td>
<td>30.9%</td>
<td>23.0%</td>
<td>0.7%</td>
</tr>
</tbody>
</table>

**Actual Time Spent Teaching Financial and Economic Education**

<table>
<thead>
<tr>
<th>Category</th>
<th>0 hour</th>
<th>0%</th>
<th>1~5 hours</th>
<th>20%</th>
<th>6~10 hours</th>
<th>40%</th>
<th>Over 10 hours</th>
<th>80%</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Junior high school, Grade 10</td>
<td>187</td>
<td>12.5%</td>
<td>585</td>
<td>20.6%</td>
<td>154</td>
<td>34%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school, Grade 11</td>
<td>248</td>
<td>16.8%</td>
<td>359</td>
<td>23.6%</td>
<td>96</td>
<td>25%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school, Grade 12</td>
<td>173</td>
<td>11.2%</td>
<td>376</td>
<td>26.0%</td>
<td>156</td>
<td>84%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
For the Students

1. Subjects are nothing to do with their daily life, 72.9 %

2. Difficult to understand, 62.6 %

3. Lack of textbook material 26.6 %

Teachers’ awareness

Teachers admit importance of financial education in order to become wise consumer 73.5%
Size of Institutional Investor/GDP

source: IMF, A Bird’s-Eye View of Finance in Asia, 2015

life Insurance and Pension Funds
I. Financial life planning and household expense management

A. Money management and decision making

<table>
<thead>
<tr>
<th>Goals</th>
<th>Primary School Students</th>
<th>Secondary School Students</th>
<th>High School Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goals by category have been set in reference to the four aspects in learning assessment.</td>
<td>1st and 2nd grades</td>
<td>3rd and 4th grades</td>
<td>5th and 6th grades</td>
</tr>
<tr>
<td>a. Understanding that resources are limited (i.e., budgets are constrained).</td>
<td>1. Learning the value of goods and money, and making much of them. (Living Environment Studies, Moral Education)</td>
<td>5. Understanding the limitedness of goods and money and the importance of money. (Social Studies)</td>
<td>9. Understanding the limitedness of goods and money, and thinking of better ways to use them. (Home Economics)</td>
</tr>
<tr>
<td></td>
<td>2. Learning that one cannot have all that one wants.</td>
<td>10. Being able to exercise moderation in spending, while reviewing one's spending habits. (Moral Education)</td>
<td>11. Being able to buy things according to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14. Understanding the scarcity of goods and services, and trying to make better decisions. (Social Studies &lt;Civics&gt;, Technology and Home Economics &lt;Home Economics&gt;)</td>
<td>22. Understanding the scarcity of resources, and being able to make better decisions in purchasing goods and services. (Civics, Home Economics)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15. Establishing a favorable lifestyle whereby one makes the most of time and goods. (Moral Education)</td>
<td>23. Learning one's living cost and the cost of education, etc., and acquiring the attitude to give thought to expenses spent on oneself out of the total household expenses.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16. Understanding household income and expenditure.</td>
<td>24. Understanding the importance of long-term and well-planned money management. (Home Economics)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17. Being able to choose, purchase, and use necessary goods and services adequately. (Technology and Home Economics &lt;Home Economics&gt;)</td>
<td>25. Being able to practically balance income and expenditure in school events, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18. Managing income and expenditure practically, for example, by controlling spending during a school excursion.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>19. Being careful not to overspend invisible money such as various cards. (Technology and Home Economics &lt;Home Economics&gt;)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Financial Education can be given by internet and mobile phone

1. University on Air (University on Television)
2. Education by use of internet
3. Web education
4. Mobile phones are available in many places
5. Can study by use of mobile phone
6. Credit can be obtained (Online education)
Bank of Japan survey of adult financial literacy

- Representative sample of **25,000 individuals aged 18 to 79**
  - Chosen in proportion to Japan’s demographic and economic structure
- Survey questions
  - Includes respondents’ **age, gender, level of general education and financial education, income, occupation and the frequency of reading financial and economic news**
  - **25 true/false questions**, including 18 questions on financial knowledge and 7 on financial decision-making skills
  - **Experience of buying stocks, investment trusts (mutual funds) and foreign currency**
Regional Disparities in Japan

Financial literacy and financial product purchased
Cluster Analysis of Prefectures

Dendrogram from cluster analysis
(1) Score of Male and Female, Age

Proportion of those who had **high score (21/25-25/25)**, roughly top 20% (as figure 35 in BoJ book)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>All</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>20.9%</td>
<td>26.5%</td>
<td>15.5%</td>
</tr>
<tr>
<td>Age&lt;30</td>
<td>10.1%</td>
<td>12.9%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Age&gt;=30&amp;Age&lt;40</td>
<td>16.6%</td>
<td>22.7%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Age&gt;=30&amp;Age&lt;40</td>
<td>20.7%</td>
<td>26.6%</td>
<td>14.8%</td>
</tr>
<tr>
<td>Age&gt;=50&amp;Age&lt;60</td>
<td>25.8%</td>
<td><strong>30.8%</strong></td>
<td>20.9%</td>
</tr>
<tr>
<td>Age&gt;=60&amp;Age&lt;70</td>
<td>28.1%</td>
<td><strong>35.1%</strong></td>
<td>21.9%</td>
</tr>
<tr>
<td>Age&gt;=70</td>
<td>23.9%</td>
<td><strong>31.8%</strong></td>
<td>16.8%</td>
</tr>
</tbody>
</table>
Distribution of financial literacy, product purchases and education by income

By income group

Source: Authors
Distribution of purchases of financial products by financial literacy score

Stock, Trust, Foreign Currency

By literacy group

Source: Authors
V. Empirical approach

- Financial literacy equation:
  \[ FL_i = \alpha_0 + \alpha_1 {FEDU}_i + \alpha_2 X_i + \epsilon_i \quad (1) \]

- \( FL_i \): Financial literacy score

- \( FEDU_i \): Financial education: dummy variable, taking value of one if individual \( i \) took financial education at school/work and 0 otherwise
  - We focus on financial education outside the home in this study

- Control variables: financial literacy, age, education level, income level, occupation, prefecture dummies.

- Identification: Assume financial education is endogenous. Use IV approach. Instrumental variable: Whether financial education is offered or not.
Empirical approach (3)

- To examine the role of financial education at home → augmented our HH asset allocation equation:

\[ A_i = \beta_0 + \sum_j \beta_j (FEDU_i # FHOMEx_i) + \beta_2 X_i + \epsilon_i \]  (3)

- There are 4 options (j):
  - No financial education at school/work or at home
  - No financial education at school/work but at home
  - Financial education at school/work but not at home
  - Financial education at both school/work and home
- Use the first option as reference group.
- Dependent variables and control variables as in equation (2)
### VI. Empirical results (1)

#### Effect of financial education on financial literacy

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OLS</td>
<td>IV</td>
<td>IV</td>
<td>IV</td>
</tr>
<tr>
<td>Financial education at school</td>
<td>0.224***</td>
<td>0.138***</td>
<td>0.067***</td>
<td>0.085***</td>
</tr>
<tr>
<td></td>
<td>[0.020]</td>
<td>[0.024]</td>
<td>[0.024]</td>
<td>[0.032]</td>
</tr>
<tr>
<td>Financial education at home</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial education at school*Financial education at home</td>
<td></td>
<td></td>
<td></td>
<td>0.123***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>[0.044]</td>
</tr>
<tr>
<td>Other control variables</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Intercept</td>
<td>-1.003***</td>
<td>-0.995***</td>
<td>-1.053***</td>
<td>-0.996***</td>
</tr>
<tr>
<td></td>
<td>[0.057]</td>
<td>[0.057]</td>
<td>[0.056]</td>
<td>[0.057]</td>
</tr>
<tr>
<td>R-sq</td>
<td>0.281</td>
<td>0.280</td>
<td>0.291</td>
<td>0.280</td>
</tr>
<tr>
<td>N</td>
<td>25,000</td>
<td>25,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
</tbody>
</table>
## Empirical results (2)

### Financial education & asset allocation:

<table>
<thead>
<tr>
<th></th>
<th>Any Financial Products</th>
<th>Stock</th>
<th>Investment Trust</th>
<th>Foreign Currency</th>
<th>Crypto Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>Financial education</td>
<td>0.144***</td>
<td>0.141***</td>
<td>0.146***</td>
<td>0.124***</td>
<td>0.113***</td>
</tr>
<tr>
<td></td>
<td>[0.011]</td>
<td>[0.011]</td>
<td>[0.012]</td>
<td>[0.011]</td>
<td>[0.009]</td>
</tr>
<tr>
<td>Financial literacy</td>
<td>0.099***</td>
<td>0.069***</td>
<td>0.074***</td>
<td>0.038***</td>
<td>-0.019***</td>
</tr>
<tr>
<td></td>
<td>[0.003]</td>
<td>[0.003]</td>
<td>[0.003]</td>
<td>[0.003]</td>
<td>[0.002]</td>
</tr>
<tr>
<td>Male</td>
<td>0.061***</td>
<td>0.097***</td>
<td>0.003</td>
<td>0.011**</td>
<td>0.042***</td>
</tr>
<tr>
<td></td>
<td>[0.007]</td>
<td>[0.006]</td>
<td>[0.006]</td>
<td>[0.005]</td>
<td>[0.004]</td>
</tr>
<tr>
<td>Other control variables</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.249***</td>
<td>0.138***</td>
<td>0.218***</td>
<td>0.124***</td>
<td>0.072***</td>
</tr>
<tr>
<td></td>
<td>[0.026]</td>
<td>[0.023]</td>
<td>[0.022]</td>
<td>[0.019]</td>
<td>[0.017]</td>
</tr>
<tr>
<td>R-sq</td>
<td>0.273</td>
<td>0.253</td>
<td>0.190</td>
<td>0.120</td>
<td>0.068</td>
</tr>
<tr>
<td>Number of observation</td>
<td>25,000</td>
<td>25,000</td>
<td>25,000</td>
<td>25,000</td>
<td>25,000</td>
</tr>
</tbody>
</table>
Start up businesses and farmers
Financial Education for SME owners

Hometown Investment Trust Funds
(Springer)
A Stable Way to Supply Risk Capital
Yoshino, Naoyuki; Kaji Sahoko (Eds.) 2013,
Japan, Cambodia
Vietnam, Peru, Mongolia
Access to Digital Technology, Internet

(1) Purchasing Type of Hometown Trust
(2) Investment Type of Hometown Trust
(1) Internet On-line trading

Start-ups

Farmers

Innovators

Internet Company

Advertise

FSA: Registration

Consumers
Internet Sales of Products

Agricultural Funds
Beans and Wine
Financing for Start-ups along Railway (Hometown crowd funding)  
(2) Investment Type
1, Reduction of Costs of Land Purchase
2, Leasing contract
3, future tax revenues can be used for repayment
4, Land owners keep their ownership
Financial Education for SMEs

1. Bookkeeping
2. Daily revenue and expenses
3. Long-term planning
4. Accurate reporting of their business
5. Reduce default loan losses
   SME database
6. Asset Management by SME
7. Pension Contribution by SME (50%)
   Asset Management of Reserves
# Factor Loadings of Financial Variables after Direct Oblimin Rotation

<table>
<thead>
<tr>
<th>Variables (Financial Ratios)</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Z1</td>
</tr>
<tr>
<td>Equity_TL</td>
<td>0.009</td>
</tr>
<tr>
<td>TL_Tassets</td>
<td>-0.032</td>
</tr>
<tr>
<td>Cash_Tassets</td>
<td>-0.034</td>
</tr>
<tr>
<td>WoC_Tassets</td>
<td>-0.05</td>
</tr>
<tr>
<td>Cash_Sales</td>
<td>-0.937</td>
</tr>
<tr>
<td>EBIT_Sales</td>
<td>0.962</td>
</tr>
<tr>
<td>Rinc_Tassets</td>
<td>0.014</td>
</tr>
<tr>
<td>Ninc_Sales</td>
<td>0.971</td>
</tr>
<tr>
<td>EBIT_IE</td>
<td>0.035</td>
</tr>
<tr>
<td>AP_Sales</td>
<td>-0.731</td>
</tr>
<tr>
<td>AR_TL</td>
<td>0.009</td>
</tr>
</tbody>
</table>

*Note: The extraction method was principal component analysis. The rotation method was direct oblimin.*
Grouping Based on Principal Component (Z1-Z2) and Cluster Analysis

Group “3”

Group “2”

Group “1”

Note: Group 1 = healthiest SMEs; group 2 = in-between SMEs; group 3 = least healthy SMEs.
Households’ Debt Overhang
Lessons from Japan
Household debt level in South Korea and US

South Korea: HH debt to disposable income (%)

US: HH debt to disposable income (%)

Source: Bank of Korea/Haver Analytics

Source: Federal Reserve Board/Haver Analytics
Why Do You Borrow money From Money Lenders?

- Others: 1.1%
- Good images from advertisement: 9.2%
- Closeness and convenient location: 10.8%
- Famous money lender company: 11.9%
- Can borrow without being seen: 12.4%
- Can borrow directly from Internet: 23.2%
- Collateral is not necessary: 27.0%
- Low interest rate: 31.4%
- Simple procedure: 46.5%
- Prompt lending: 52.4%
Theoretical Model

\[ rL_{t-1} + C_t = Y_t + \Delta L_t \] ........................(1)

\[ C_t = cY_t \]

\[ Y_t = (1 + a)Y_{t-1} \]

\[ a = \frac{\Delta Y}{Y} = \frac{\Delta p}{p} + \frac{\Delta y}{y} \]

From (1), we can get -

\[ rL_{n-1} + cY_n = Y_n + (L_n - L_{n-1}) \]

\[ \iff L_n = (1 + r)L_{n-1} - (1 - c)Y_n \]

\[ \iff L_n = (1 + r)[(1 + r)L_{n-2} - (1 - c)Y_{n-1}] - (1 - c)Y_n \]

\[ \iff L_n = (1 + r)^n L_0 - (1 - c)\left\{ (1 + r)^{n-1}(1 + a) + (1 + r)^{n-2}(1 + a)^2 + \cdots + (1 + a)^n \right\} Y_0 \]

\[ \iff L_n = (1 + r)^n L_0 - \frac{(1 - c)(1 + a)}{(r - a)}\left\{ (1 + r)^n - (1 + a)^n \right\} Y_0 \]

\[ L_n = (1 + r)^n L_0 - \frac{(1 - c)(1 + a)}{(r - a)}\left\{ (1 + r)^n - (1 + a)^n \right\} Y_0 < 0 \]

\[
\frac{L_0}{Y_0} < \left( \frac{(1 - c)(1 + a)}{(r - a)} \right) \left\{ 1 - \left( \frac{1 + a}{1 + r} \right)^n \right\}
\]
\[ \frac{L_0}{Y_0} < \frac{(1-c)(1+a)}{(r-a)} \left\{ 1 - \left( \frac{1+a}{1+r} \right)^n \right\} \]

1. \( \frac{L_0}{Y_0} \) = [Initial Loan/Income] ratio
2. \( r \) = Interest Rate
3. \( n \) = number of years of borrowing
4. \( a \) = growth rate of income
5. \( c \) = marginal propensity to consume
Loan/Income Ratio of Japan

MPC=0.70, Income Growth=1.6%
a. Ceiling on borrowing ratio: \( \frac{L}{Y} = \frac{1}{3} \)
b. Interest rate ceiling: 20%
c. Borrowers’ information: The law required all individual borrowing within a household to be aggregated to obtain the total household borrowing
d. Self-regulatory association of moneylenders: A self-regulatory association of moneylenders
e. Consumer care hotline:
Borrowing Ratio for Varying $n$ ($a = 7\%$, $\beta = 0.45$)
Estimated Borrowing Ratio for Varying $n$

<table>
<thead>
<tr>
<th>$n$</th>
<th>$r$</th>
<th>$\beta$</th>
<th>$a$</th>
<th>$L_0/Y_0$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.15</td>
<td>0.5</td>
<td>0.07</td>
<td>0.93</td>
</tr>
<tr>
<td>3</td>
<td>0.15</td>
<td>0.5</td>
<td>0.07</td>
<td>0.95</td>
</tr>
<tr>
<td>5</td>
<td>0.15</td>
<td>0.5</td>
<td>0.07</td>
<td>0.98</td>
</tr>
<tr>
<td>7</td>
<td>0.15</td>
<td>0.5</td>
<td>0.07</td>
<td>1.03</td>
</tr>
<tr>
<td>9</td>
<td>0.15</td>
<td>0.5</td>
<td>0.07</td>
<td>1.10</td>
</tr>
<tr>
<td>11</td>
<td>0.15</td>
<td>0.5</td>
<td>0.07</td>
<td>1.20</td>
</tr>
<tr>
<td>13</td>
<td>0.15</td>
<td>0.5</td>
<td>0.07</td>
<td>1.31</td>
</tr>
<tr>
<td>15</td>
<td>0.15</td>
<td>0.5</td>
<td>0.07</td>
<td>1.45</td>
</tr>
</tbody>
</table>
SDG Investment, Possible Distortion of Portfolio Allocation and Financial Education

Naoyuki Yoshino
Dean, Asian Development Bank Institute (ADBI)
SDG Investments: 17 Goals
OCEAN HEAT CONTENT

Ocean heat content anomaly

Data provided by the National Oceanographic Data Center.
GLOBAL SEA LEVEL

Global sea-level rise

Data from C.K. Shum, Chungyen Kuo, Benoit Muyssignac, Junkun Wan.
KPMG’s Definition of SDG

In order to measure the consistency to each SDG, four points are mainly taken into consideration; demographics (the population prediction in specific country or region), income growth, technology (renewable energy sources, knowledge sharing cultures, and so on), and collaborations (among governments, companies, international organizations, academia and so on). The higher these four indicators’ levels are, the more actively SDGs investment can be held,
According to NRI, the consistency and contribution level to SDGs should be quantitatively defined. NRI sets 4 key performance indicators in investigating the business activities: innovation, business opportunity, impact and cost. Using the example of hydrogen energy, technological growth through innovation is essential in order to create the hydrogen energy market first of all. When a company succeeds activating the hydrogen energy business, business opportunity can be broadly expanded. Social impact of hydrogen energy is huge and can contribute to the achievement of SDGs. At the same time, however, risk factors should be taken into account such as the rise of energy prices or the high product costs.
PwC (Price Waterhouse Coper)

PwC has developed the indicators which consider the business level for achieving the Global Goals including SDGs. Confirming the right company to satisfy the SDGs strategy is crucial in the global market. The indicators include such as leadership (business and financial strategies), employee engagement (awareness and bottom up initiatives), reporting (risk assessment and management), and collaborations (among suppliers, consumers, government, NGO and so on).
3.1. Utilizing HIT funds for green energy projects

Investors (households) utility function depends on rate of return and risk. Eq (1). Shows utility function of investors which is function of rate of return and risk:

$$U = U(r, \sigma) = r - \beta \sigma^2$$

(1)

where \(r\) denotes the rate of return, \(\sigma\) denotes the risk and \(\beta\) is the weight for the risk. If investor gives more weight to the risk, then \(\beta\) will be larger. Smaller \(\beta\) means that the investor is not so much concerned about risk.

Eq. (2) shows the total rate of return of households’ investment. We are assuming that households are putting their money either in bank deposit or in HIT funds that will be invested into green energy projects.

$$r_t = \alpha_t r^D_t + (1 - \alpha_t) r^E_t$$

(2)

In Eq. (2), we are assuming that \(\alpha\) percent of the households assets is going to bank deposits and rate of return of bank's deposit or the deposit interest rate is \(r^D_t\). On the other hand \((1 - \alpha)\) percent of their assets are investing in HIT funds and \(r^E_t\) denotes rate of return of HIT funds.

$$\sigma^2_t = \alpha_t^2 (\sigma^D_t)^2 + (1 - \alpha_t)^2 (\sigma^E_t)^2 + 2\alpha_t (1 - \alpha_t) \sigma^D_t \sigma^E_t$$

(3)
Multi-Factor Model (including SDG)

\[ U = R - \beta \sigma^2 - \gamma(\text{SDG}) \]

\[ \text{SDG}_A = -a_1(\text{CO}_2) - a_2(\text{NOX}) \]

\[ \text{SDG}_B = -b_1(\text{CO}_2) - b_2(\text{NOX}) \]

\[ \text{SDG} = \alpha \text{SDG}_A + (1 - \alpha) \text{SDG}_B \]
Global Taxation on Pollution

Tax levied on Asset A
\[ T_A = t_1x a_1 x(CO_2) + t_2x a_2 x(NOX) \]

Tax levied on Asset B
\[ T_B = t_1x b_1 x(CO2) + t_2x b_2 x(NOX) \]

Revised rate of return on asset A
\[ RA = R_A - t_1x a_1 x(CO_2) + t_2x a_2 x(NOX) \]

Revised rate of return on asset B
\[ RB = R_B - t_1x b_1 x(CO2) + t_2x b_2 x(NOX) \]

Investors look RA and RB instead of RA and RB
Global tax on CO$_2$ and NOX

\[ U = R - \beta \sigma^2 - \gamma(\text{SDG}) \]
Session 1
Finance Digitalization Strategy in Japan

11\textsuperscript{th} December, 2019

Eiichiro Kawabe
Deputy Commissioner for International Affairs
Financial Services Agency, Japan

The views expressed through the presentation may not necessarily represent official views of the JFSA.
Using IT, financial services such as payment can be unbundled or rebundled with e-commerce by new FinTech players.

Data accumulation/analysis can change business model drastically.

Example of FinTech in Japan

- **e-payment**
  
  Many e-payment methods are under severe competition. Recent cashback initiatives by Japanese government to mitigate consumption tax-hike and develop cashless economy would spur this competition.

- **Robo-adviser asset management**
  
  After a customer answers several questions, an asset management company offers Robo-adviser asset management plan based on his/her risk-profile. Under the plan, it automatically proceeds investment, rebalancing asset allocation, and tax-saving management.

- **Household accounting service**
  
  Under a contract, an app automatically collects transaction information from financial institutes, then it provides detailed household accounting report every month.
**Current Environment**

- Accumulation of limited customer information
- Bespoke services limited to high net worth individuals and large corporations
- One-size-fits-all products driven by supply-side logic

**Ongoing Changes**

- Automatic accumulation of customer life-logs
- AI capability for big data analysis and deep learning

**Future**

- Accumulation of detailed customer information
- Bespoke services available for all
- Creating shared values based on customer information

---

**Current Environment**

- Offer only limited financial products
- Rely on entry-point analysis and, due to moral hazard and information asymmetry, serve narrower range of customers at higher interest/premium/fees
- No advice or incentive provided to attain better customer lifestyle/business operation.

**Ongoing Changes**

- Offer combination of financial and non-financial services
- Rely on ongoing monitoring, attain more accurate assessments of customer conditions and serve wider range of customers at lower interest/premium/fees
- Provide advice and incentives for better lifestyle/business operation
Finance Digitalization Strategy [Aug 28, 2019]

5 Key Initiatives by the JFSA

(1) **Data strategy** – data utilization and privacy protection [e.g., adapting “information bank” by financial institutions]

(2) **Supports for further Innovation** - “FinTech Innovation Hub” [incl. Support Desk and POC hub]

(3) **Function-based, cross-sectoral financial regulations** [payment regulations to be a flexible structure, financial intermediary]

(4) **Digitalization of financial regulation and infrastructure** [RegTech / SupTech Ecosystem]

(5) **Global issues** [Governance of decentralized financial systems, FinTech Summit, cooperation with foreign authorities, cyber security, responses to new concepts of crypto-assets]

**Outcomes** - from July 2018 to June 2019:

- “FinTech Innovation Hub” launched; interviewing with FinTech firms.
- Functionalized “FinTech Support Desk” and “FinTech Proof-of-Concept Hub”
- International networking enhanced FinTech Summit 2018 and Blockchain Round-Table
- Infrastructure for data usage by financial institutions

**New Environments:**

- Data usage
  - Big data
  - Data policy
- New proposal of crypto-assets
(1) Data strategy for utilization and privacy protection

- Promoting data utilization with careful consideration of protecting personal information

- Encouraging financial institutions’ data projects, such as “information bank,” in order to provide advanced services

- Protecting customers’ interests in terms of privacy and others. Promoting initiatives aligned with digitalization, such as support for private business to implement innovative customer identification

- Developing a utilization framework for information other than personal one based on the concept of Data Free Flow with Trust, carefully considering personal information protection, while international data policies for free, safe and secure data distribution develop
(2) Innovation support

- Supporting various players aiming to create new financial services

- Enhancing information gathering and support by **FinTech Innovation Hub**, which is the JFSA cross-sectional team to grasp FinTech trends and have dialogues with FinTech companies.
- Promoting innovation support by **FinTech Support Desk** and **FinTech Proof-of-Concept Hub**
- Promoting initiatives that utilize **open architectures**.

**FinTech Innovation Hub**

- Gathering information/Promoting innovation
  - Interviews with FinTech 100 companies ⇒ 10 Key Findings
- Networking/Public consultation
  - FinTech Summit
  - Meetup with JFSA

**Interaction with FinTech startups (From Meetup with JFSA)**
For Fintech start-ups

**“FinTech Support Desk”** (consultation desk)  [since December 2015]
- Work as a one-stop contact channel for FinTech businesses
- Answer FinTech startups’ queries within 5 working days (on average)
- Received 919 inquiries since its inception till end-September 2019

For PoC collaboration by Financial institutes and start-ups

**“FinTech PoC Hub,”** (innovation hub)  [since September 2017]
- Aim to support innovative projects that lead to user convenience and/or productivity of companies in Japan.
- For each selected proof-of-concept (PoC) project the FSA will set up a special working team, in cooperation with relevant authorities as necessary.
- A special working team will continually support a project by giving advice on issues related to compliance and supervision etc., that participants of a PoC project would like to clarify.
(3) Function-based, cross-sectoral financial regulations

- In order to respond to the digital transformation of financial services, developing regulatory frameworks into more function-based and cross-sectoral ones

- Realizing flexible and convenient **cash-less payment** methods by developing a cross-sectoral and flexible regulatory framework on payment fields

- Realizing a convenient **one-stop channel** by developing cross-sectoral regulatory frameworks for **financial intermediation**

Cross-sectoral and flexible regulatory frameworks for payment fields

Cross-sectoral regulatory frameworks on financial services intermediation

- **Credit card**
- **Cash payment**
- **Bank transfer**
- **Debit card**

Transfer by prepaid card and fund transfer service providers

- Consider realization of seamless payment that combines pre-paid and post-pay

- Consider a new category between banks and fund transfer service providers

1 million yen Payment amount per case

(Source) Excerpts from the materials submitted by Finance Minister Aso in the Council on Investments for the Future (February 13, 2019)
(4) Digitalization of financial regulation and infrastructure

- Developing efficient financial regulation and infrastructure through digitalization

- Working on the **RegTech/SupTech Ecosystem** through inviting ideas from financial institutions and conducting a proof-of-concept experiment in cooperation with financial institutions. [*Key concept: effectiveness, efficiency, flexibility, real-time, data sharing, simplicity, confidentiality*]

- JFSA started RegTech/SupTech initiatives including:
  - **Unifying data request** together with Bank of Japan
  - **RPA** (Robotic Process Automation) in data analysis
  - Study on utilizing **granular data**

<table>
<thead>
<tr>
<th>Current</th>
<th>Future</th>
<th>Policy Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring</td>
<td>Ongoing monitoring</td>
<td>Monitoring reform by Big Data analysis</td>
</tr>
<tr>
<td>Data</td>
<td>Forward-looking analysis</td>
<td>Fruitful dialogues with financial institutions based on accurate assessment</td>
</tr>
<tr>
<td>System</td>
<td>Accurate assessment of business condition</td>
<td>Reduction of monitoring cost</td>
</tr>
<tr>
<td></td>
<td>Gathering more detailed and real-time information off site</td>
<td>Utilizing Big Data</td>
</tr>
<tr>
<td></td>
<td>More precise data</td>
<td>Terminating current data request or sharing it with BOJ</td>
</tr>
<tr>
<td></td>
<td>IT system which can handle new monitoring concept</td>
<td>New IT system including AI</td>
</tr>
</tbody>
</table>

**RegTech/Suptech Ecosystem**
(5) Global issues

- Ensuring cyber security and grasping the latest trends in technology such as blockchain

- Holding Governance Forum (*tentative name*), in which a wide range of stakeholders have discussions on **governance issues of decentralized financial systems**, in light of discussions at the "G20 High-Level Seminar on Financial Innovation"

- Disseminating the progress of FinTech in Japan by organizing **“Fintech Summit”** and strengthening frameworks for **cooperation with foreign authorities on FinTech**

- Considering responses to a **new concept related to crypto-assets**

- Strengthening a **cyber security** management system including outsourcing

---

G20 High-level Seminar on Financial Innovation (June 8th 2019 in Fukuoka)

JFSA has Exchanged Letters on FinTech Co-operation Framework
Fintech trends in Asia Pacific and policy and regulatory responses: The Malaysia’s Experience

Suhaimi Ali
Financial Development and Innovation
Bank Negara Malaysia
Generally, Malaysia has widespread access to most basic financial services...

<table>
<thead>
<tr>
<th>Deposit A/C</th>
<th>Adult pop’n with bank A/C (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>97%</td>
</tr>
<tr>
<td>MY</td>
<td>95%</td>
</tr>
<tr>
<td>TH</td>
<td>81%</td>
</tr>
<tr>
<td>CN</td>
<td>80%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Retail Lending</th>
<th>Household debt/GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>88%</td>
</tr>
<tr>
<td>MY</td>
<td>84%</td>
</tr>
<tr>
<td>TH</td>
<td>78%</td>
</tr>
<tr>
<td>CN</td>
<td>49%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MSME Lending</th>
<th>MSME Financing Gap (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK¹</td>
<td>7%</td>
</tr>
<tr>
<td>MY</td>
<td>7%</td>
</tr>
<tr>
<td>TH</td>
<td>10%</td>
</tr>
<tr>
<td>CN</td>
<td>17%</td>
</tr>
</tbody>
</table>

1 Data for UK excludes micro-enterprise financing gap

<table>
<thead>
<tr>
<th>E-Payments</th>
<th>E-payment per capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>404.9</td>
</tr>
<tr>
<td>MY</td>
<td>110.6</td>
</tr>
<tr>
<td>TH</td>
<td>63.0</td>
</tr>
<tr>
<td>CN</td>
<td>96.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Asset Mgmt.</th>
<th>AUM/financial asset (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>15%</td>
</tr>
<tr>
<td>MY</td>
<td>11%</td>
</tr>
<tr>
<td>TH</td>
<td>14%</td>
</tr>
<tr>
<td>CN</td>
<td>4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insurance</th>
<th>Total Premium/GDP (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>10.8%</td>
</tr>
<tr>
<td>MY</td>
<td>4.8%</td>
</tr>
<tr>
<td>TH</td>
<td>5.3%</td>
</tr>
<tr>
<td>CN</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

Source: BNM, BIS (CPMI), World Bank, BCG, Credit Suisse, Swiss Re, UK Finance
...but there remains scope for improving the level of financial capability among Malaysians

Financial knowledge & capability

1 in 3 rate themselves to have low financial knowledge

43% understand money compounds over time

22% believe money grows linearly

Personal financial management

76% Have a budget

but

40% Find it difficult to keep to the budget

Dealing with financial difficulties

90% Cannot survive more than 6 months in event of loss of income

52% Have difficulties raising RM1000 for emergencies

Preparing for retirement

41% Rely on EPF savings as main source of income for retirement

~50% Have low confidence of having adequate income for retirement
In recent years, Malaysia’s fintech ecosystem has shown promising growth

Number of fintech companies in Malaysia

Source: Fintech News Malaysia, BNM
BNM facilitates innovation based on principles of proportionality, neutrality and equality

3 principles

**Equality**
Provide a level playing field for both incumbents and new entrants

**Proportionality***
Regulation that is proportionate to benefits and risks

**Neutrality**
Prioritise desirable outcomes over preference to specific technologies

* refer slide 7

5 approaches

1. **Regulatory coordination:**
   Driving the fintech agenda in close collaboration with other key agencies such as SC, MDEC, MCMC

2. **Policy & operational flexibility:**
   Operating a regulatory Sandbox to enable live-testing of emerging businesses in a safe and contained market environment

3. **Outreach, education and guidance:**
   Conducting educational and public outreach programmes for fintechs to communicate and clarify regulatory expectations

4. **Regulatory Adaptations:**
   Recalibrating existing regulation and publishing new policies to facilitate new innovation

5. **Enabling shared infrastructure:**
   Implementation of open/digital infrastructure in collaboration with other industry players to catalyse the growth of fintech
FTEG drives and coordinates BNM’s efforts to facilitate digital innovation in the financial sector

<table>
<thead>
<tr>
<th>1 Coordination</th>
<th>2 Flexibility</th>
<th>3 Outreach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Identity</td>
<td>Regulatory Sandbox</td>
<td>Fintech Hacks</td>
</tr>
<tr>
<td>Digital Assets</td>
<td>Innovation Lab</td>
<td>Accelerator and Booster programmes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4 Adaptation</th>
<th>5 Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interoperable Credit Transfer Framework</td>
<td>Open API</td>
</tr>
<tr>
<td>Outsourcing &amp; Risk Management in Technology</td>
<td>Distributed Ledger Technology (DLT)</td>
</tr>
<tr>
<td>Insurance and Takaful Aggregator Framework</td>
<td></td>
</tr>
<tr>
<td>Standardised parameters for eKYC</td>
<td></td>
</tr>
<tr>
<td>Digital Banking</td>
<td></td>
</tr>
</tbody>
</table>

Education, redress & facilitation

- AKPK
- FEN
- MyKNP
In general, however, no proportionality of regulations on consumer protection/market conduct and ML/TF areas to protect financial consumers and preserve integrity of the financial system...

**Financial consumer protection regime in Malaysia**

1. **Financial consumer protection functions**
   - Legal mandate, dedicated functions, industry codes, gatekeeping regime, FTFC

2. **Disclosure and sales practices**
   - Product transparency & disclosure regime, proper advice, prohibited conducts

3. **Customer account handling and maintenance**
   - Early notification of changes to terms, clear settlement process, proper account handling, fair debt collection

4. **Secrecy and data protection**
   - Secrecy provision, personal data protection, customer info protection

5. **Assistance & redress mechanisms**
   - Complaint mgmt. @ FSPs, Ombudsman, DMP @ AKPK, BNM LINK

6. **Deposit insurance and guarantee scheme**
   - PIDM – deposit insurance, takaful and insurance benefit protection

7. **Financial education and consumer empowerment**
   - FEN, Integration of FE elements into school curriculum, AKPK for adult financial education

8. **Competition**
   - Arrangement with MyCC on competition matters i.e. tied selling & collusive behavior.

9. **Access to basic products**
   - Basic savings & current accounts, mySalam, Tenang, Sihat (Healthy) Malaysia
underpinned by 6 fair treatment of financial consumer outcomes imposed on financial service providers

1. Financial consumers have the confidence that they are dealing with a FSP where the fair treatment of its financial consumers and consideration of their best interests are integral to its corporate culture and core values; (corporate culture)

2. Financial consumers are not subject to unfair discriminatory practices, including unfair contract terms that significantly disadvantage financial consumers; (fair terms)

3. Financial consumers are provided with clear, relevant and timely information for them to make informed decisions before, during and after the point of sale, including the costs, risks and important exclusions or limitations; (provision of information)

4. Staff, representatives and agents of a FSP exercise due care, skill and diligence when dealing with financial consumers; (fair dealing)

5. Financial consumers receive suitable advice and recommendations that take into account their financial needs and circumstances; (advice and recommendation) and

6. Financial consumers’ complaints and claims are handled in a prompt, fair and effective manner. (redress)
The National Strategy on Financial Literacy aims to improve the financial well-being of Malaysians through five strategic priorities.

Formulated by the Financial Education Network
BNM, SC, MOE, PIDM, AKPK, PNB, EPF

Financial literacy agenda to be incorporated in the 12th Malaysia Plan to ensure sustained nationwide efforts

The recent trend of digitalisation and rapid advancements in technology provide great opportunity to support action plans under each strategic priority.
Action plans under each strategic priority outline focused approaches to enhance impact and outreach

**Strategic Priority 1: Nurture values from young**
- Expand financial education fundamentals into the curriculum for pre-school, primary and secondary schools
- Reinforce financial education through co-curriculum activities
- Introduce capacity development and support for teachers
- Encourage financial education advocates among students, parental groups and the community

**Strategic Priority 2: Increase access to financial management information, tools and resources**
- Make basic financial education information easily understood, available and accessible to all
- Heighten awareness and intensify financial education initiatives through nationwide outreach campaigns

**Strategic Priority 3: Inculcate positive behaviour among targeted groups**
- Impart financial knowledge to promote positive financial behaviour among the youth
- Encourage financial education at the workplace to promote financial resilience, which will have positive impact on employees' productivity
- Foster good money management practices through community-based financial education
- Equip the self-employed with financial knowledge to encourage self and business sustainability

**Strategic Priority 4: Boost long term financial and retirement planning**
- Promote use of innovative guides and tools to improve long-term financial planning
- Create awareness and promote the benefits of seeking professional advice on financial planning
- Promote voluntary savings channels and platforms to encourage income diversification
- Educate Malaysians to make long-term financial plans for retirement

**Strategic Priority 5: Building and safeguarding wealth**
- Promote better understanding of risks and returns to build wealth
- Improve awareness on the innovation of financial products and services and its implications
- Raise awareness on financial scams and fraud
- Develop and publish materials relating to sophisticated financial products and services
FinTech trends in Thailand

Securities  Digital Assets  Crowdfunding
The SEC has power to determine the undertaking of business in any manner is not a securities business under the Securities and Exchange Act B.E. 2535 ("the SEA").

The SEC may exempt a securities company from undertaking or prescribe a securities company to undertake in a different manner from provisions under Division 2: Supervision and Control of Chapter 4: Securities Business of the SEA, in whole or in part.

The SEC has discretionary power to prescribe required paid-up capital of a securities company as the SEC thinks fit. There is no minimum amount of required capital specified in the provision.
where the depositor is an issuer, it shall be deemed that the issuer has prepared and delivered securities certificates to the buyers in accordance with form or procedure specified by law upon compliance with rules and procedure specified by the depository center.

licensed depository center can provide service through scripless system for all types of securities.

the securities and exchange act

enhancing competitiveness of the capital market
To prevent money laundering, fraud, and other risks, the Thai government would like to regulate both digital tokens and cryptocurrencies.

**Cryptocurrency**
- Electronic data unit created to be medium of exchange for:
  - goods
  - services
  - other digital assets
  - other rights

**Investment token**
- Electronic data unit specifying right to participate in an investment:
  - e.g. revenue or profit sharing right (similar substance as securities)
- Offered through ICOs

**Utility token**
- Electronic data unit specifying right to acquire specific goods/services
- Offered through ICOs

Include any other electronic data unit with similar purposes as specified by SEC Board
Activities governed by the Decree

SEC Board is empowered to exempt certain types of offering or businesses from provisions of the Decree.
To limit potential losses, retail investors are subjected to investment limit: maximum 300,000 baht per project.

Limit on offering amount to retail investors is either 4 times of equity or 70% of total issuance amount, whichever is higher.
Digital Asset Businesses

Upcoming new licenses
• Digital Asset Advisory Service
• Digital Asset Fund Manager

Digital asset exchanges / brokers / dealers

★ Licensed by Minister of Finance
★ In Compliance with standards set by SEC e.g.
  • Adequate capital
  • Proper risk management (incl. against cyberthreats)
  • Know Your Client / Customer Due Diligence process
  • Measures to prevent anti-money laundering
Crowdfunding

Crowdfunding is a way that SMEs and startups can raise fund from the public through funding portals. This helps increase access to capital for the companies and increase investment options for the investors.
Crowdfunding

Thai company (non-listed)

1. Issuer pitches project + discloses info to funding portal.

2. Funding portal screens project & issuer, then pitch goes live.

3. Investors pledge money with escrow agent.

4. Issuer proceeds with the project & periodically report progress to investors.

Funding Portal approved by SEC

Investment Limit
Retail: ≤ 100,000 Baht/year
Non-retail: unlimited

Offer to retail: < 20 million Baht/
total < 40 million Baht
Offer to non-retail: unlimited

Investment-based crowdfunding process

Thai company (non-listed)

Investment Limit
Retail: ≤ 100,000 Baht/ company
and ≤ 1 million Baht/ year
Non-retail: unlimited

Offer to retail: < 20 million Baht/
total < 40 million Baht
Offer to non-retail: unlimited
Session 2
CRYPTOASSETS IN ASIA: CONSUMER ATTITUDES, BEHAVIOURS AND EXPERIENCES

Adele Atkinson, Head of Financial Education, OECD
Miles Larbey, Head of Financial Consumer Protection, OECD

11 December 2019
Cryptoassets

Total market capitalisation of crypto-assets

- Crypto assets total market capitalisation (left-hand scale)
- Bitcoin price (right-hand scale)

Source: ECB Cryptoassets – trends and implications, June 2019

Notes: The data used here follow the “circulating supply” definition of market capitalisation, which corresponds to the “free float” for each crypto-asset i.e. excluding the part that may be owned by a company supporting the crypto-asset. Daily data from 1 January 2017 to 31 January 2019.
Benefits:
• Investment opportunity
• Alternative funding source for entrepreneurs
• Lower costs, confidentiality, immutability

Risks:
• Price volatility, loss of investment
• Security risks – cyberattacks, frauds
• Failure of business proposals, liquidity risk
• Lack of information and understanding
• Limited financial consumer protection
Examples of policy developments

- FSB – monitoring of risks to financial stability
- IOSCO – support framework re regulatory treatment of ICOs
- FATF – AML/CFT
- Range of jurisdiction approaches
  - explicit or effective bans
  - application of existing laws
  - new or adapted regulatory regimes
- OECD – financial consumer protection and financial education
Objective: to fill data gaps and inform evidence-based financial education and financial consumer protection responses

Quantitative survey instrument developed and validated, can be used by others

Research conducted across three markets in Asia-Pacific

Project supported by funding from the Japanese Government
Most people are aware of cryptocurrencies; lower awareness of ICOs

1-1. Which of the following statements applies to you – digital or crypto currency? [S]

Random Sample of research panel participants
Awareness overwhelmingly driven by the online sources (top 3 responses, single-coded)

Where did they first hear about these cryptoassets

<table>
<thead>
<tr>
<th>Cryptocurrencies</th>
<th>ICOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social media</td>
<td>Social media</td>
</tr>
<tr>
<td>(30%)</td>
<td>(35%)</td>
</tr>
<tr>
<td>Online articles</td>
<td>Online articles</td>
</tr>
<tr>
<td>(30%)</td>
<td>(23%)</td>
</tr>
<tr>
<td>Online adverts</td>
<td>Online adverts</td>
</tr>
<tr>
<td>(19%)</td>
<td>(17%)</td>
</tr>
</tbody>
</table>

Sample: Respondents who currently hold cryptocurrencies/ICOs, including booster sample. (Single choice – top three only reported here)
30% hold cryptocurrencies; 16% hold ICOs

Random Sample of research panel participants
Ownership of cryptoassets increases with education, and is higher among the employed.

Random Sample of research panel participants
Cryptocurrency ownership varies by age

Highest proportion of cryptocurrency holders in the 25-34 age group in Malaysia and Viet Nam, but among 45-54 year olds in the Philippines

Random Sample of research panel participants
ICO ownership also varies by age (especially in the Philippines)

Highest proportion of ICO holders in the 25-34 age group in Malaysia and 25-44 in Viet Nam, but peaks at 45-54 year olds in the Philippines.

Random Sample of research panel participants
Similar proportions of men and women hold cryptocurrencies and ICOs

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cryptocurrencies</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>29%</td>
<td>31%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>20%</td>
<td>26%</td>
</tr>
<tr>
<td>Philippines</td>
<td>30%</td>
<td>34%</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>38%</td>
<td>32%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICOs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Malaysia</td>
<td>11%</td>
<td>13%</td>
</tr>
<tr>
<td>Philippines</td>
<td>11%</td>
<td>16%</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>26%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Random Sample of research panel participants
Awareness is not the same thing as understanding (still looking at general population)

- Not aware of them at all:
  - Cryptocurrencies: 20%
  - ICOs: 54%

- Aware but doesn’t understand them very well:
  - Cryptocurrencies: 29%
  - ICOs: 11%

- Understands to some extent:
  - Cryptocurrencies: 34%
  - ICOs: 21%

- Understands them very well:
  - Cryptocurrencies: 17%
  - ICOs: 13%

Remember that 30% hold cryptocurrencies and 16% hold ICOs

Random Sample of research panel participants
41% bought cryptocurrencies to make money quickly.

<table>
<thead>
<tr>
<th>Country</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>• To make money quickly (38%)</td>
</tr>
<tr>
<td></td>
<td>• As long-term saving/retirement fund (37%)</td>
</tr>
<tr>
<td></td>
<td>• To diversify a portfolio (31%)</td>
</tr>
<tr>
<td>Philippines</td>
<td>• To know more about cryptocurrencies (40%)</td>
</tr>
<tr>
<td></td>
<td>• To use as a means of payment (39%)</td>
</tr>
<tr>
<td></td>
<td>• To make money quickly (36%)</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>• To make money quickly (47%)</td>
</tr>
<tr>
<td></td>
<td>• To diversify a portfolio (34%)</td>
</tr>
<tr>
<td></td>
<td>• To know more about cryptocurrencies (33%)</td>
</tr>
</tbody>
</table>

Respondents who have ever held cryptocurrencies, including booster sample.
.... And 42% invested in ICOs to make money quickly

**Malaysia**

- To make money quickly (38%)
- As long-term saving/retirement fund (37%)
- To know more about ICOs (31%)

**Philippines**

- To make money quickly (38%)
- As long-term saving/retirement fund (31%)
- To know more about ICOs (31%)

**Viet Nam**

- To make money quickly (46%)
- To know more about ICOs (38%)
- Belief in project/ diversification (35%)

Respondents who have ever held ICOs, including booster sample
Where did advice to buy come from?
(top 3 responses, multi-coded)

<table>
<thead>
<tr>
<th>Cryptocurrencies</th>
<th>ICOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Family and friends (47%)</td>
<td>• Professional (finance) (45%)</td>
</tr>
<tr>
<td>• Professional (finance) (33%)</td>
<td>• Family and friends (38%)</td>
</tr>
<tr>
<td>• Professional (Tech) (33%)</td>
<td>• Professional (Tech) (37%)</td>
</tr>
</tbody>
</table>

Sample: Respondents who were advised to hold cryptocurrencies/ICOs, including booster sample.
And where did the money come from?

(multi-coded)

Sample: Respondents who ever held cryptocurrencies/ICOs, including booster sample.
Most ICO investors read the white paper; 11% of them said it was not easy to understand.

80% claim to have read it

38% of those said it was very easy to understand...
- 50% found it somewhat easy
- 11% said it was not easy to understand

63% found the whitepaper very useful
- 36% found it somewhat useful
- 1% said it wasn’t useful

Sample: Respondents who have ever invested in ICOs, including booster sample.
Not everyone can afford to lose the money they have invested in cryptocurrencies.

Sample: Respondents who currently hold cryptocurrencies, including booster sample.
And some have most, or all of their portfolio invested in cryptocurrencies.

Sample: Respondents who currently hold cryptocurrencies, including booster sample.
There is a high level of awareness about cryptocurrencies.

Ownership is lower compared to the level of awareness, although many say they would like to hold in future.

Many do not understand well or only to some extent (17% very well).

Making quick money is the main motivation in investing. For some, motivation is long term investment.

Online channels are the most common sources of news and information, with advice most often sought from family and friends.

A number of investors purchase cryptocurrencies using credit.

28% could not afford to lose the money invested.
Key takeaways – ICOs

Awareness and ownership of ICOs is lower than that of cryptocurrencies.

Many do not understand well or only to some extent (13% very well).

Most investors said they read some of the ICO whitepaper, although not all of them found it easy to understand.

There is a strong demand for investing into ICOs in the future.

Online channels are the main sources of information.

Main motivator for investing is to make quick money.
Policy considerations

- Conduct communication campaigns to alert consumers to the risks of cryptoassets.
- Develop targeted financial education initiatives.
- Assess whether, and if so which, regulatory requirements should apply, including financial consumer protection requirements. Consider whether there are any gaps in terms of financial consumer protection.
- Use resources or tools developed by standard setting bodies where relevant.
Policy considerations

- Collect consumer and market data to understand issues, risks and challenges arising.
- Monitor advertising especially via online channels to understand how cryptoassets are promoted, misleading representations.
- Consider adequacy of disclosure in whitepapers.
- Engage in international cooperation.
- Share information with other regulatory agencies both at a national and international level.
Next steps

• Ongoing monitoring of market developments
• Input to policy developments
• Future data collection – contact OECD Secretariat if you are interested
INVESTORS’ EXPERIENCES WITH DIGITAL ASSETS AND ASSOCIATED POLICY RESPONSES
SECURITIES COMMISSION MALAYSIA
Core Objectives:

➢ Ensure markets are fair, efficient and transparent

➢ Facilitate the orderly development of an innovative and competitive capital market

➢ Protect investors
EMERGENCE OF DIGITAL-ASSETS AND ITS ENABLING TECHNOLOGY, POSITIVES

- Speed of execution, far-reaching access as well as the attraction of a decentralised system captured the attention of issuers and investors both retail and wholesale alike

  - Potential to act as an alternative asset class for investors – ability to raise risk capital more competitively vs. conventional methods

  - Quick, direct, wider and borderless access to pool of investors

  - Potential to enhance efficiencies in the capital market including lowering transaction time, costs and enabling seamless reporting and compliance
Speed of execution, far-reaching access as well as the attraction of a decentralised system captured the attention of issuers and investors both retail and wholesale alike.

- Potential information asymmetry – low levels of transparency complicates decision-making by investors.
- Exposes issuers and participants to market and other systemic risks.
- Exposes issuers and investors, to fraud, manipulation, money laundering or financing of terrorism.
- Participants may need some technical acumen in addition to financial as well as investment literacy skills.
Exponential growth in interest and participation in the use of blockchain, blockchain-based digital assets and investing in such digital assets

- *More than 50,000 digital asset accounts in Malaysia @ 2018* actively trading that we know of ...

- *Acute upward shift in fundraising trend towards initial offerings of digital tokens*

- *Digital asset related complaints and enquiries increased significantly*
  - 99% retail
  - Significant number relate to ICOs and its legitimacy
  - Others relate to issues surrounding digital trading platforms

* NST 1.22.19
ICO cycles to a degree influenced by returns from bitcoin
ICOcycles -> opportunity to get the next best thing at a lower pre-market price
Investors driven by speculation, issuers by opportunity
OBSERVATION: INVESTORS COMPLAINTS AND EXPERIENCE WITH DIGITAL ASSETS

<table>
<thead>
<tr>
<th>Anecdotes</th>
<th>Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Dear Mr Regulator I invested in an ICO a few months ago. When tried to visit the site recently I couldn’t find it!&quot;</td>
<td>➢ 99% ICO exercises perpetuated online, 75% no physical presence in Malaysia – difficult to verify authenticity or reach</td>
</tr>
<tr>
<td>&quot;Dear Mr Regulator I invested in an ICO after reading its impressive 100 pg whitepaper. But until today I have not been able to realise my investments.&quot;</td>
<td>➢ 90% whitepapers say a lot and nothing – often used for inducement – inadequate critical information to enable investors to make informed investment decision</td>
</tr>
<tr>
<td>&quot;Dear Mr Regulator I stored my digital assets in the wallet of the digital exchange but now I can’t locate it!&quot;</td>
<td>➢ Low standards of safekeeping of participants’ assets, including custody arrangements and cyber security</td>
</tr>
<tr>
<td>&quot;Dear Mr Regulator can I invest in this digital asset?&quot;</td>
<td>➢ Regulatory certainty desired – for fair and safe access to market.</td>
</tr>
</tbody>
</table>
Support industry innovation, while ensuring the risks from digital asset activities remain under control

  - ‘Digital assets’ are prescribed as securities under securities laws if certain characteristics are present ...
  - Any offering of digital assets as well as its associated activities such as marketing or inducing others to subscribe to digital assets will require authorisation from the SC

- **31 January 2019 issued a revised Guidelines on Recognised Market**
  - Sets out the requirement for operators that facilitate the trading of digital assets to be registered with the SC
Digital space evolves rapidly, some natural progression – some intended to circumvent regulation. Embrace technology move towards digitising regulatory and supervisory monitoring of risks and compliance

Change communication approach – need to be nimble and creative (alternative channels) to ensure investor education, awareness and warnings are timely, impactful and easily understood

Mind-set among investors – falling for promise of high returns with little to no risk involved. Similarly high tolerance for loss (over 40% in some instance)

Effective information sharing and enforcement cooperation is important to manage the risks associated with global nature of digital assets – often involving multiple jurisdictions
Digital assets defined as securities if it is recorded on a distributed ledger and...

### Digital Token
- Monies paid in exchange for tokens (consideration)
- Monies and returns are pooled and managed by issuer
- A return or appreciation in value from investment is expected

### Digital Currency
- Traded on a digital platform where offers to sell and purchase or exchange of digital assets are regularly made
- Expect to benefit from a return or appreciation in the value of the digital currency that is traded on the digital platform

W.E.F. 15 January 2019
The views expressed here are entirely my own and do not necessarily represent those of the Bangko Sentral ng Pilipinas (BSP). These views focus only on financial stability/systemic risk considerations.
FinLit is Important

“…While financial literacy could not be pointed as the main root cause for the (global financial) crisis, ... it certainly played a key role in worsening its effects...”
FinLit is Important for Achieving Financial Stability

“...While financial literacy could not be pointed as the main root cause for the (global financial) crisis, ... it certainly played a key role in worsening its effects...”

“...But the lack of understanding of households on financial issues and, in particular, on credit and investment, has also a major role. As a result individuals have accepted (sometimes unknowingly) to support more financial risks than what they could afford...”
The Philippines is an Archipelago ... FinTech Is a Plus

- Population of over **100 million** with median age of **24.3** years old (based on census of Aug 2015)

- **21.4%** of the population are aged 9 years old or younger with another **20.5%** aged between 10 to 19 years old ..... That puts **41.9%** of the **100 million born in this millennium** alone (*I learned DOS. These guys grew up with Windows XP*)

- About **58%** of Filipinos have mobile phones with each one owning more than one unit

- There were **2.5 billion** monthly payments made in 2013 of which only **1%** was by electronic channel. By 2018, this increased to **4.4 billion** transactions with **10%** thru electronic means.

*Unbanked* 526 out of 1,634 cities and municipalities

*As of end-June 2019*
Some of the OECD Survey Results To Take Note

High level of awareness from survey respondents but largely from social media rather than from financial professionals.

- 66% say that they understand while 68% expect positive returns within the next 12 months.
- 45% say they did NOT consult before making the purchase/investment but those who do consult do so with professionals.

Those who acquired largely used their savings (43%) or used part of their monthly budget (47%).
Some of the OECD Survey Results To Take Note

**PURPOSE:** to know more (40%); to use as payment (39%) but really the majority is for investment (75%)

**HOLDING PERIOD:** For 6 months of less (42%), up to a year (27%), and beyond 1 year (31%)

**REACTION TO PRICE DECLINE:** Bought more (46%), sold their holdings (20%) or did nothing (34%)

**THOSE NOT HOLDING:** Cannot afford to lose money (62%)
If We Want to Just Be Picky ... Some Sampling Caveats

1. 60% of the respondents are either with their first job (33%) or just getting themselves settled in job-wise (27%)

2. 74% report monthly household incomes of less than P100,000

3. Sampling may have over-sampled Manila City (17%) but under-sampled Makati City (1%)

    Quezon City 10%
    Cebu 7%
    Davao 5%
    Caloocan 3%
    Pasay 2%
Where Does Financial Stability Come Into the Picture?

**Financial Stability**

Our objective with Financial Stability is to mitigate systemic risks (in financial markets) that can affect the economy.

**Interlinkages**

Systemic risks are created by the way financial market stakeholders are interlinked with one another.

**Actions / Behavior**

The financial market is prone to systemic risks in either good or bad times.

The health of the financial system is distinct from the health of each agent.
Pricing is the Key . . . And There Are Concerns

Only a few days ago, Bitcoin suffered an intraday crash to $681 ... and it then recovered to $7,393.

Yesterday, an order to sell 8 bitcoin (BTC), worth $60,000, tanked the price of Bitcoin on a single trading pair on crypto exchange Binance. It was either a fat-fingered mistake or there were more nefarious plans underway.

The trade was made on the trading pair between bitcoin and a stablecoin—a cryptocurrency that keeps its price pegged to a fiat currency, like the US dollar—called StableUSD (USDS).
What the Technical Side is Saying

[C]ryptocurrencies fall a long way short of being able to oust the conventional monetary system... Two limitations loom large. One is the lack of scalability, which is about providing flexibility and capacity to function as a payment system regardless of the number of transactions. The second problem is the lack of finality of payments. A payment being recorded in the ledger does not guarantee that it is final and irrevocable.

The Committee (IFRS Interpretations Committee) observed that a holding of cryptocurrency meets the definition of an intangible asset as it is capable of being separated from the holder and sold or transferred individually, and is not a monetary asset as it does not give the holder a right to receive a fixed or determinable number of units of currency.

Hyun Song Shin
Economic Adviser and Head of Research
Bank for International Settlements

IFRIC Update
June 2019
Some stablecoins do not offer redemptions at fixed prices, but at market prices instead. We say their value is variable relative to the domestic unit of account.

“Stablecoins are not an especially stable store of value. As discussed, they are a claim on a private institution whose viability could prevent it from honoring its pledge to redeem coins at face value.... stablecoins is akin to constant net asset value funds which can break the buck – i.e. pay out less than their face value – as we found out during the global financial crisis.”

“Some stablecoins do not offer redemptions at fixed prices, but at market prices instead. We say their value is variable relative to the domestic unit of account.”
The Debate Really Revolves Around Its Nature

What is it?

- If the digital asset has no underlying asset, is it even an “economic good”?
- Having an underlying asset suggests that it is of the nature of a security.
- Yet, endowing these with the ability to be a medium of exchange, store of value and a unit of account means that it has textbook features of “money.”
The Debate Really Revolves Around Its Nature

Whose oversight is it?

“In any event, financial authorities need to coordinate their actions with those taken in other policy domains, such as competition or data protection. No less importantly, they need to cooperate with their peers in other jurisdictions, given the global scope of both innovation and the business models of many new players”

Fernando Restoy
Chairman, Financial Stability Institute
Bank for International Settlements
October 2019
Should We Treat Digital Assets Like Driving?

**In driving:**

- Not everyone who wants to or has the means to drive is allowed to drive.

- Driving provides private benefits but its costs are often public (bad driving habits cause traffic jams or accidents).

- Those allowed to drive have to show some minimum level of knowledge and skill.
Potential Financial Stability / Systemic Risk Issues

**To Individuals**

1. Digital assets look like very appealing. *Do we know enough about it to act?*

2. But DAs can quickly lose their luster. *Are individuals ready to lose their principal investment?*

3. This tech world processes bytes much faster than the old paper-based world. *Are individuals able to monitor faster-paced developments?*

4. The Fallacy of Composition holds. *Do individuals have to worry about the health of the system, alongside or ahead of their own interests?*

**To the Financial System**

There is much for financial authorities to think about. Thankfully, there’s Session 5.
Cryptocurrencies in Vietnam - context and policy challenges

DUONG Thi Nhi
Head of Research Division
Insurance Research and Training Center
Ministry of Finance

(The presentation is based on personal opinion, and does not represent the relevant agencies)
Context

• At the end 2017 and early 2018, the cryptocurrencies trading activity had complicated happenings in Vietnam.

• Vietnam is one of four largest markets in Asia. The amount of access from Vietnam to some Bitcoin exchanges or virtual money information sites in the world such as Bittrex, Poloniex, Coinmarketcap ... is always in the Top 5 (CryptoCompare).

• From 2017 - mid 2018: there have been 15,600 virtual currency miners being imported into Vietnam.

• Trading virtual currencies following the multi-level business model.
Context

• In April 2018, to sell iFan & Pincoin virtual currency Modern Tech Joint Stock Company pledged: the lowest profit of 48%/month, the maximum payback period of 4 months, invite other people to join investors will receive an additional 8% commission ... Besides, they also promise to help US citizenship, use accounts to pay like Visa cards, Or will it be listed on the Nasdaq Stock Exchange (US) ...

• By the above tricks, members of Modern Tech Company has invited about 32,000 investors to participate in iFan virtual currency project. It is worth mentioning that, after the investors contributed 15,000 billion VND, they were not refunded capital, interest.

• This case is the first in the top 5 largest scams in the world in the cryptocurrency market.
Context

- These transactions mainly take place on the internet, so the investigation is extremely difficult. Therefore, when this model collapsed, people could not withdraw money to invest in the system.
- This case is a warning to many investors who are investing in virtual currencies despite all risks and hope to get rich quickly while there is no legal framework to regulate and manage virtual money business in Vietnam.
Legal and policy framework

- In Vietnam, cryptocurrencies are not recognized as a means of payment, but there are no regulations to specify it as a commodity.
- Vietnam has no legal framework to regulate and protect the interests of virtual currency investors.
- When a dispute arises from civil transactions using virtual currency, it can be declared invalid due to content violating the prohibition of the law, the parties only have to return to each other what they have received. But if the party who is obliged to repay is unable to pay, the risk of losing the property is very high.
Legal and policy framework

• On August 21, 2017, the Prime Minister issued Decision No. 1255 / QD-TTg approving the Project on the legal framework for management and handling of virtual assets, electronic money, virtual money ”: the Ministry of Justice was assigned to be the focal point to review and assess the status of virtual money and make a proposal to formulate legal documents on management of virtual money and financial virtual production; The time for completion is in 2018: good plan but slow progress, prudence because of the context.

• On April 11, 2018, the Prime Minister issued Directive No. 10 / CT-TTg on strengthening the management of activities related to Bitcoin and other similar virtual currencies to prevent and control virtual currency transactions and activities, minimize the impacts and negative effects of virtual currencies on people and society.
Legal and policy framework

• The Prime Minister requested the State Bank to instruct credit institutions and payment intermediary service providers to not conduct illegal transactions related to virtual currencies; enhance the review and timely reporting of suspicious transactions related to virtual currencies in accordance with the law.

• The statement of the State Bank shows that organizations and individuals should not invest, hold or conduct transactions related to bitcoin and other similar virtual currencies because the State does not protect them.

• The related agencies (SBV, SSC) mainly give warnings and recommendations. SSC recommends that public companies, securities companies, fund management companies and securities investment funds not conduct issuance, trading and brokerage activities related virtual money.
Legal and policy framework

• Ministry of Industry and Trade; Ministry of Finance and relevant agencies consider the temporary suspension of import of data processing machines that automatically exploit virtual money but the list of goods and services banned from import doesn’t have the name of these types of machines.

• Because there is no legal basis for cryptocurrencies to be a commodity or a service, the Ministry of Finance cannot collect any taxes on cryptocurrency trading.

• In Legal framework, no crime, penal, behavior directly linked to cryptocurrency, so it cannot be processed unless there is evidence of fraud.
Findings of the research

• **Very useful report, providing a lot of practical information:** The IOSCO Principles and Methodology, experience from other countries in supervising as well as supporting investors on cryptocurrencies, Malaysia's Proposed Regulation Framework for Issuing Digital Assets through ICOs and requirements, rules when registering with the SEC in Philippine is really a useful and timely reference.

• **Better understand about Vietnamese cryptocurrency investors:**

  • Formal transactions in banking and payment intermediaries are prohibited from trading in cryptocurrencies, but underground transactions are still strong; most holders in the age group 25-54, the woman holder position...
Findings of the research

• Only 56% think it is necessary to diversify the portfolio demonstrating the need for financial and investment education from the root knowledge.

• Important role of social media platforms, media articles, user-created profiles, interactive apps, social networking sites.

• Investors mainly use advice from family members, friends....

• 83% of Vietnamese people are willing to lose money, much higher than other countries.

• About Policy considerations: agree with all recommendations of the report. Any solution is very important and may requires separate studies to implement.
Challenges-Opportunities

- Project 1255 is important in the absence of a legal framework for cryptocurrencies: learn from experiences of Malaysia, Philippines and other countries, organizations, cryptocurrencies can be traded officially and subject to regulatory oversight with transparency.
- Organizations and individuals involved in providing services related to cryptocurrencies need to be licensed and enforce regulations according to certain standards.
- The financial agencies should build a legal corridor (including pilot area - sandbox) to ensure the control and protect the investors of cryptocurrency. When the policy has been stabilized, well understanding of the mode of operation of transactions, a wide-ranging policy and legal framework can be applied.
Session 3
CONSUMER AND DATA PROTECTION IN AN INCREASINGLY DIGITAL ENVIRONMENT

Miles Larbey, Head of Financial Consumer Protection, OECD

miles.larbey@oecd.org

11 December 2019
Financial Consumer Protection

- OECD leads the development of global financial consumer protection policy

- G20/OECD Task Force on Financial Consumer Protection, includes all G20 and OECD countries and international organisations eg IOSCO

- G20/OECD High Level Principles on Financial Consumer Protection endorsed by G20 and OECD, and part of FSB Compendium of Standards

- Principles are supported by practical policy guidance in the form of Effective Approaches
## Financial Consumer Protection Principles

<table>
<thead>
<tr>
<th>Principle</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Legal, Regulatory and Supervisory Framework</td>
<td></td>
</tr>
<tr>
<td>2. Role, powers and capabilities of Oversight Bodies</td>
<td></td>
</tr>
<tr>
<td>3. Equitable and fair treatment of Consumers</td>
<td></td>
</tr>
<tr>
<td>4. Disclosure and Transparency</td>
<td></td>
</tr>
<tr>
<td>5. Financial education and awareness</td>
<td></td>
</tr>
<tr>
<td>6. Responsible Business conduct of Financial Services Providers and Authorised Agents</td>
<td></td>
</tr>
<tr>
<td>7. Protection of Consumer assets against fraud and misuse</td>
<td></td>
</tr>
<tr>
<td>8. Protection of Consumer data and privacy</td>
<td></td>
</tr>
<tr>
<td>9. Complaints handling and redress</td>
<td></td>
</tr>
<tr>
<td>10. Competition</td>
<td></td>
</tr>
</tbody>
</table>
OECD policy agenda

Financial inclusion

Financial consumer protection

Financial literacy

Financial wellbeing
Financial services industry is undergoing a digital transformation.

Several potential benefits for consumers:

- Providing services that are tailored to individual needs and facilitate their usage
- Offering more convenient, faster, secure and timely transactions
- More fruitful interactions between consumers and FSPs through digital interfaces
- Increasing opportunities for fruitful interactions between financial services providers and consumers through digital interfaces
- Broadening the range of providers
- Extending the potential reach and access of financial services

The digitalisation of financial services
Digitalisation: benefits

• Potential benefits for consumers:
  – Providing services that are tailored to individual needs and facilitate their usage
  – Offering more convenient, faster, secure and timely transactions
  – Increasing opportunities for fruitful interactions between financial services providers and consumers through digital interfaces
  – Improving identification and verification for new customers
  – Broadening the range of providers
  – Extending the potential reach and access of financial services
Digital financial services also carry new risks for consumers:

- Misuse of unfamiliar or new products
- New types of fraud
- Lack of or uneven levels of financial consumer protection
- Data protection issues
- Inappropriate or excessive use of digital profiling
- Growing digitalisation of daily life and of financial decisions is not necessarily matched by increasing digital and financial literacy levels
The Task Force is updating the Effective Approaches to support implementation of the High Level Principles in the digital environment:

<table>
<thead>
<tr>
<th>Year</th>
<th>Principles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>Principle 2 – Role of Oversight Authorities  &lt;br&gt; Principle 4 – Disclosure &amp; Transparency</td>
</tr>
<tr>
<td>2020</td>
<td>Principle 7 – Protection from fraud and misuse  &lt;br&gt; Principle 8 – Consumer data protection</td>
</tr>
</tbody>
</table>
Financial consumer protection in the digital environment

Overarching policy considerations:

• Ensure regulatory responses apply regardless of the distribution channel, ie technological neutrality
• Ensure regulatory responses reflect the business model, size, systemic significance as well as complexity ie proportionality
• Use insights gained form data analysis to ensure evidence-based approached, including understanding of the behaviour of consumers
• Strike the right balance between potential benefits of innovation and maintaining appropriate degree of FCP
• Maintain flexibility, adaptability and continuous learning
• Cooperate with other policy makers and oversight bodies
Role of Oversight Bodies

Financial consumer protection oversight bodies need to adapt to the digital environment:

- Engage proactively with stakeholders to understand market developments, emerging issues and risks
- Establish or upgrade systems and processes for data collection
- Adapt regulatory and supervisory approaches to the digital environment, eg suptech
- Respond to technological innovation while maintain consumer protection eg Regulatory Sandboxes etc
- Ensure the appropriate skills, capabilities and resources, provide staff training and development and establish multi-disciplinary teams or working groups
Digitalisation provides opportunities to enhance transparency, and test alternatives

- Evaluate and adapt disclosure requirements for the digital environment (e.g., scroll down times etc)
- Explore different approaches enabled by digital technology (e.g., screen sizes, different formats and channels)
- Test and explore approaches in line with digital capability and embed consumer behavior
- Consider *alternatives* to disclosure enabled by technology (e.g., publication of indicators based on data (e.g., complaints), opt-outs, smart defaults, personalised frictions in decision making)
Consumer data protection

- Relevant digital developments eg open banking, online scams, greater use of data, personalisation, use of algorithms etc
- Policy and legislative developments, including OECD legal instruments – AI Principles
- Development of policy guidance tailored to issues re financial consumers:
  - Importance of consultation and information-sharing arrangements
  - Use of personalisation has benefits, but need to avoid financial exclusion
  - Algorithms or other programmes underpinning digital financial services (eg digital financial advice or automated credit scoring) should be clear and transparent, including options for recourse, and lead to fair and objective outcomes
  - Promotion of safe online transacting, protection of personal information and from cyberattacks

- Liaison and consultation with data protection authorities
- Final guidance will be developed in 2020
Collection and use of data – “risk dashboard”

- A project to develop a model approach to collection and use of data to help jurisdictions identify, monitor and quantify financial consumer protection risks using data.
- First phase: conceptual model of risk management, identification of risk indicators and development of draft risk dashboards.
- Second phase: a pilot exercise to test the draft risk dashboards, with a view to learning and adapting in light of experience.
- Working group comprising data experts from regulatory and supervisory agencies.
These charts are for illustrative purposes only and do not reflect the official views of any particular jurisdiction.
Conclusions & Next Steps

- Data is an essential part of an overall risk assessment framework for oversight authorities, although there are challenges in identifying sources of and collecting data.
- Data is often collected and used in relation to a specific function, but has greater potential to understand a market segment and identify risks holistically.
- Value of a policy or strategy on collection and use of data – “connect the dots” between different data sources.
- Importance of having the necessary organisational capabilities and other mechanisms to support effective collection and use of data.
- Final versions of risk dashboard and policy guidance published Q2 2020.
- Development of regular reporting exercise or outlook based on the dashboard on consumer risks and trends globally Q2 2020.
Digital Environment: HKMA’s initiatives on Bank Consumer Protection

Hong Kong Monetary Authority
11 December 2019
Outline

1. HKMA’s approach

2. Recent Initiatives
   - Consumer Protection in respect of Big Data and Artificial Intelligence (BDAI)
   - Consumer Protection Measures in respect of Open API Framework
   - Online Retrieval Period of e-Statement
   - Handling of Mis-transfer of Funds
HKMA’s approach

• **Characteristics of digital financial services:**
  - high speed, remote, automated decision-making, non-financial entities

• **Rapid evolution of technology and its application to financial services increase:**
  - convenience and benefits to consumers
  - financial consumer protection concerns

• **A right balance** between promoting financial innovations and appropriate consumer and investor protection
Consumer Protection in Respect of Big Data and Artificial Intelligence

- Balance between promoting financial innovations and according appropriate customer protection
- Engagement with the banking industry
- Risk-based and technology-neutral supervisory approach
- High-level principles issued on 5 Nov 2019
- Joint effort for developing worked examples and consumer education
Consumer Protection in Respect of Big Data and Artificial Intelligence

(1) Governance and accountability
- Board and senior management accountability
- Explainability of the models
- Upholding principles of customer-centric culture and fair treatment of customers
- Proper validation of the BDAI applications before launch and on an on-going basis

(2) Fairness
- Objective, consistent, ethical and fair outcomes
- Ensure customer access to basic banking services not denied unjustifiably
- Possibility of manual intervention where necessary
(3) Transparency and disclosure

- Provide proper disclosure to customers on the use of BDAI.
- Upon customers’ request, provide explanations on what types of data are used and what factors or how the models affect the BDAI-driven decisions.
- Mechanism for customers to enquire and request reviews on the decisions made by BDAI.

(4) Data privacy and protection

- Comply with the Personal Data (Privacy) Ordinance (PDPO).
HKMA introduced the “Open API Framework for the Hong Kong Banking Sector” in July 2018

Issued a circular in October 2019:

- Remind banks to uphold consumer protection principles
- Risk-based approach
- Clarify the use of loan intermediaries
Consumer Protection Measures in respect of Open API Framework

Banks to implement adequate measures, such as:

- Publish a list of 3rd party service providers (TSPs) partnering with banks
- Educate customers to check the list and be vigilant to fake websites or similar scams
- Conduct assessments on the TSPs and collaborated services before on-boarding and thereafter on an on-going basis

<table>
<thead>
<tr>
<th>Fair treatment of customers</th>
<th>Measures against fraud</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate disclosure and transparency</td>
<td>Appropriate customer data protection measures</td>
</tr>
<tr>
<td>Complaints handling and redress</td>
<td>Liability and settlement arrangement</td>
</tr>
<tr>
<td>Responsible business conduct</td>
<td>Customer education</td>
</tr>
</tbody>
</table>
Consumer Protection Measures in respect of Open API Framework

(Con’t)

- Clear liability and settlement arrangement, adhering to the principles that a bank customer should not be responsible for any direct loss suffered by him/her as a result of unauthorised transactions

- Regular monitoring to see if there are fake websites or similar scams, and promptly notify customers and the public

- Proper complaint handling and redress mechanism
Online Retrieval Period of e-Statement

Background
- Online retrieval period varied among banks (ranged from 6 months to 7 years)
- Customer feedback on short online retrieval period
- Customers need to download and store the softcopy themselves, but may forget

New Requirements
- Extend online retrieval period to at least 7 years
- Provide the service to customers free-of-charge
- Start to incrementally accumulate the e-Statements if banks cannot backload past e-Statements
Handling of Mis-transfer of Funds

Background

- Erroneous transfer funds to wrong recipients by customers, esp. under digital channels
- Customer feedback on difficulties in recovering the fund
- To standardise the procedures across banking industry

New Requirements

- Transferor’s bank to contact the transferee’s bank; seek consent from the transferee in returning the fund
- Transferor’s bank to provide written response to the transferor within 20 working days
Session 4
FINANCIAL AND DIGITAL LITERACY

Adele Atkinson, Head of Financial Education Unit
Insurance, Private Pensions and Financial Markets Division
Directorate for Financial and Enterprise Affairs
OECD
OECD Project on Financial Education


- 123 economies
- 277 public authorities
- Advisory board and Technical committee
- Thematic working groups

Outreach to other communities through

- OECD/INFE Research Committee
- Conferences, seminar, workshops
- Global Money Week

Regional platforms and technical assistance projects

- Asia
- Latin America
- Eurasia (CIS)
- South-East Europe
Financial Education definition (OECD, 2005; G20, 2012):

A *capacity building process* by which individuals,

*through information, instruction and/or objective advice...*

- Improve their understanding of financial products and concepts
- Develop the skills and confidence
- Make informed choices, to know where to go for help, and take other effective actions
- Become more aware of financial risks and opportunities

To improve financial well-being
Financial well-being may include:

- **Disposable income**
- **Personal wealth**
- **A sense/reality of financial control (keeping track, budgeting, managing credit)**
- **Feeling of financial security**
- **Flexibility in budget; ability to pay for discretionary items**
<table>
<thead>
<tr>
<th>Develop a national diagnosis of the impact on consumers and entrepreneurs</th>
<th>Develop and collect key indicators: supply and demand side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure coordination with private and not-for-profit sector</td>
<td>Map actors and assess online platforms and tools to understand the message conveyed</td>
</tr>
<tr>
<td></td>
<td>Involve non-public actors in the design and implementation of digital initiatives</td>
</tr>
<tr>
<td></td>
<td>Develop and enforce codes of conduct / good practices to limit conflict of interest</td>
</tr>
</tbody>
</table>

**Support the development of a core competencies framework on digital financial literacy**

**Support effective delivery of FE through digital and traditional means**

Exploit advantages of digital delivery (easier access, tailored to the audience, better support to money management, reinforcement of core competencies)

Design appropriate mix digital/traditional for priority groups and vulnerable populations

**Facilitate and disseminate evaluation of FE programmes on DFS**

Encourage the use of a standardised evaluation toolkit at the national level

Share the results at the national and international level

**More next!**

*G20 OECD/INFE Policy Guidance Note on Digitalisation and Financial Literacy: a policy checklist*
<table>
<thead>
<tr>
<th><strong>G20 OECD/INFE Policy Guidance Note: draw on data to develop or fine-tune core competencies frameworks</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate trust in digital financial services</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Avoiding over-reliance on easy access to online credit</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Avoiding digital crimes, account hacking and data theft</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Currently working on how to use digital delivery to make financial education more effective…

- Appealing – especially to digital natives
- Cost effective, scalable, quick to update
- Convenient (available 24/7), with excellent reach
- Can reduce cognitive, numeracy and time limitations – retirement income calculators, automated budget tools etc.

Global survey of OECD/INFE Full and Regular Members in January 2020 to:

- Identify good practices and case studies
- Understand the level of cooperation between the public and the private and not-for-profit sector
- Develop guidance to policymakers
OECD and digitalisation of financial services: understand impact, promote dialogue, and provide policy solutions

Blockchain Policy Centre

Pensions
- Use of technology to enhance interactions with pension members
- Impact of technology on business models
- Regulatory approaches to Fintech

Insurance
- The sharing economy and insurance
- AI applications
- InsurTech

Robo-Advice
- Benefits and challenges
- Robo-advice platforms and role in promoting savings for retirement

OECD Global Blockchain Policy Forum 2019
12-13 September 2019

OECD Going Digital project
www.oecd.org/going-digital

OECD Summit on Going Digital
11-12 March 2019

- Initial Coin Offerings (ICOs) for inclusive SME financing
- (Digital) Short-term consumer credit and inclusiveness
FINANCIAL EDUCATION IN THE DIGITAL AGE: 
EXPERIENCE FROM VIETNAM

Dr. Dinh Thi Thanh Van
Founder, Vietnam Financial Literacy Network
Associate Dean, Faculty of Finance and Banking
VNU University of Economics and Business
Email: vandtt@vnu.edu.vn or dinhthanhvan@gmail.com
Financial Inclusion and Fintech in Vietnam

- 92.7 Million Population
  - 65.8% Rural population
  - 31% Banked population

- 6.5 Million Population with income <USD 2 per day
  - 94.5% Adult literacy level
  - 2.2% Gender gap in ownership of bank accounts

- 78.5 Million Population with income <USD 10 per day
  - 139.7% Mobile penetration

**Key Trends: Savings**
- Low disposable income, high cost and time involved in travelling to the branch, long waiting time often with denial of transactions, complex processes, high transaction and other service charges are some of the key barriers for low-income customers

**Key Trends: Credit**
- Ranked at 88 globally in terms of ease of access to loans
- Almost half of the population avails credit, of which fifth avails credit from formal financial institution
- Inability to offer collateral and complex processes act as key constraints for low-income customers to avail formal credit services

Source: MicroSave, 2018
• Only a third of the adult population has bank account.
• Vietnam lag behind the ASEAN average.

Source: Global Findex 2017
Percentage of adults using mobile phone to access to accounts (%),

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Việt Nam</td>
<td>8</td>
</tr>
<tr>
<td>Indonesia</td>
<td>8</td>
</tr>
<tr>
<td>Philippines</td>
<td>7</td>
</tr>
<tr>
<td>Malaysia</td>
<td>33</td>
</tr>
<tr>
<td>Thailand</td>
<td>17</td>
</tr>
<tr>
<td>China</td>
<td>40</td>
</tr>
<tr>
<td>Cambodia</td>
<td>8</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>2</td>
</tr>
<tr>
<td>Myanmar</td>
<td>1</td>
</tr>
</tbody>
</table>

Percentage of adults using mobile phone to make and receive payments, %

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Việt Nam</td>
<td>22.7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>34.6</td>
</tr>
<tr>
<td>Philippines</td>
<td>25.1</td>
</tr>
<tr>
<td>Malaysia</td>
<td>70.4</td>
</tr>
<tr>
<td>Thailand</td>
<td>67.9</td>
</tr>
<tr>
<td>China</td>
<td>15.6</td>
</tr>
<tr>
<td>Cambodia</td>
<td>13.3</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>7.7</td>
</tr>
<tr>
<td>Myanmar</td>
<td></td>
</tr>
</tbody>
</table>

Source: Global Findex 2017
Financial Education
In Vietnam:
Boardgame for Kids
Board game for Adults
Formal Textbooks and Comic Books
Online lessons for students: game based learning
Fintech’s Customer Education

Writing the lessons on the website and apps, and books for financial education of customers

https://my.moneylover.com/ong-thu-mot-ba-chi-hai/#doc-thu
Looking over the Horizon: What Next for Policy Makers in Asia and Beyond?

Kuala Lumpur, 12 Dec 2019

Tirta Segara
Member of the Board of Commissioners in Financial Education and Consumer Protection
The Proportion of People aged 60 and over is projected to grow in all Asian Countries with Japan and South Korea aging faster than their neighbours...

... On the contrary, Indonesia will experience demographics bonus.

Indonesian Population (2020 Projection)

Source: Global Age Watch, 2015

Source: Central Bureau of Statistics, 2015
The Development of Information Technology

Financial Technology is growing very fast

<table>
<thead>
<tr>
<th></th>
<th>Population</th>
<th>Internet Users</th>
<th>Social Media Users</th>
<th>Total Active Mobile Phones</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>World</strong></td>
<td>7.593 billion</td>
<td>4.021 billion</td>
<td>3.196 billion</td>
<td>8.485 billion</td>
</tr>
<tr>
<td><strong>Asia-Pacific</strong></td>
<td>4.214 billion</td>
<td>2.007 billion</td>
<td>1.779 billion</td>
<td>4.318 billion</td>
</tr>
<tr>
<td><strong>Indonesia</strong></td>
<td>265.4 million</td>
<td>132.7 million</td>
<td>130 million</td>
<td>415.7 million</td>
</tr>
</tbody>
</table>

Source: wearesocial, 2019
But there are some Challenges Ahead..., such as Low Financial Literacy...

Source: OECD, 2017
1. **More financial products offered via Online and Retail**
   - The growth of P-to-P lending
   - Adoption of Branchless Banking, Internet Banking & Digital Banking
   - Much lower transactions cost

2. **Financial products are also offered from Overseas**
   - Cross border transactions
   - Many illegal offers (scams)

3. **More complex financial product offered**
What will Changes ...

Mobilization and Orchestration

Changing how people consume

Changing how society connected

Distributed Trust

In the hyper connected society, trust is not only function of (1) Capability, (2) Integrity, and (3) Consumer Protection, but also information from crowd communities (herding behaviour).

People now tend to trust information from other people they don’t know really well (through social media).

From only consumption, today’s consumers tend to ‘sharing’ and ‘shaping’, as well as participate in financing (funding) and participating in ownership (Co-Own).
Empowering Consumer through Financial Education...

From Awareness – Knowledge – Behaviour – Advocate

“Different Target, Different Languages”

1. Face-to-Face Financial Education Program
2. Digital Channel and Mobile Apps
   Financial education using website, mobile apps, social media, website, and other media
3. TV and Radio (featuring celebrities/social leader)
4. Include Financial Education Program in Schools’ curriculum
5. Contact Center: Kontak OJK 157
   Strengthening contact centre to become a main reference for financial information, and main channel for financial education
What Needs to be Done...

<table>
<thead>
<tr>
<th>Build solid Consumer Protection Framework, including the use of technology for Regulation (RegTech) and Supervision (SupTech)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2 Strong Consumer Protection Regulation</strong></td>
</tr>
<tr>
<td><strong>Accessible Internal Dispute Resolution</strong></td>
</tr>
<tr>
<td><strong>Credible External Dispute Resolution</strong></td>
</tr>
<tr>
<td><strong>Effective Market Conduct (On-site and Off-site Supervision)</strong></td>
</tr>
</tbody>
</table>

!!! Customer Complaints Mobilization through Social Media...
### Collaboration with Key Stakeholders

#### GOVERNMENT/ REGULATOR

<table>
<thead>
<tr>
<th><strong>The National Council on Financial Inclusion</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>National council to boost financial inclusion, chaired by the President.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Task Force on Regional Financial Access Acceleration (TPAKD)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholders forum to improve financial access in the regions (as of now: 32 Provincial Level and 132 Cities Level)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Investment Alert Task Force (13 ministries)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Task Force already warned 500 unlicensed financial activities during 2019, and closed down more than 1,200 financial apps.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Regional/Global Cooperation</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaboration between international regulator is needed to tackle illegal cross border offers or transactions.</td>
</tr>
</tbody>
</table>

#### INDUSTRY

<table>
<thead>
<tr>
<th><strong>Financial Education Program by more than 2,000 financial institutions every year</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Working Group on Financial Cons. Protection</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Quarterly Coffee Morning</td>
</tr>
<tr>
<td>2. Sharing Critical Information</td>
</tr>
<tr>
<td>3. Problem Solving</td>
</tr>
</tbody>
</table>
Ensuring inclusive growth for all by Striking THE RIGHT BALANCE between Digital Innovation and Consumer Protection...

Vision: Stability; Contributive; Inclusive; Adequate Consumer Protection

Digital Innovation
- Fintech for Millennials
- Fintech for Financial Inclusion
- Fintech for MSMEs

Promote Stability

Consumer Protection
- Transparency
- Fair Treatment
- Reliability
- Data Privacy Protection
- Effective Complaint Handling

Increase Trust
Conclusion

**Trends, Developments and Challenges ahead are also provide big opportunities to boost Financial Inclusion**

**Targeted Financial Education Program, together with Strong Policy Regulation and Solid Consumer Protection will increase the Level of Consumer’s Trust, which eventually ensure inclusive growth for all.**