

Digital Business

Topic 7: Digital Transformation in Businesses & Services

Learning Objectives

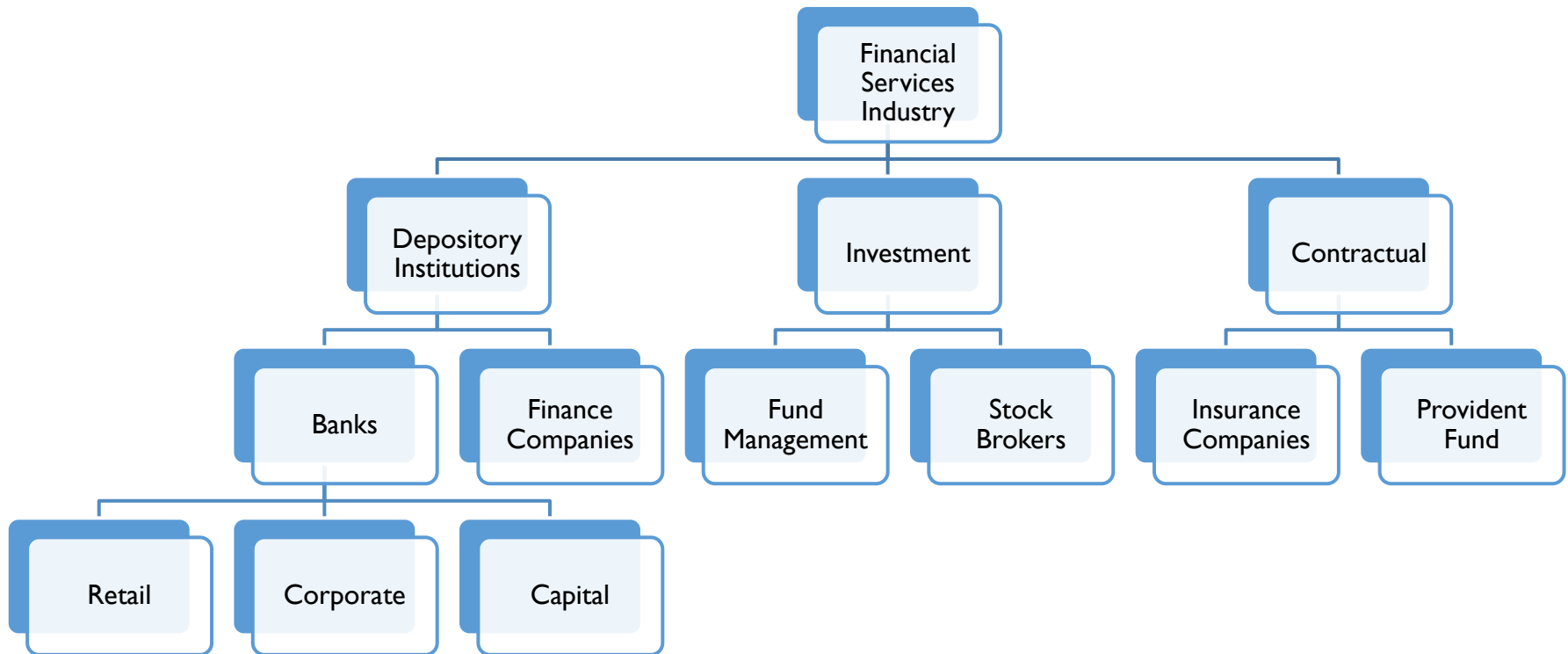
- ▶ Identify examples of digital transformation in various industries such as banking & financial services, retail services, etc.
- ▶ Identify the trends and challenges in digital transformation in various industries such as banking & financial services, retail services, etc.

Transformation in Financial Services

FinTech

Intro to Financial Services

Industry Segmentation



Note: List is not exhaustive.

Intro to Financial Services

Industry Participants

- ▶ Singapore is home to over 700 local and foreign financial institutions
- ▶ Includes firms that are engaged in activities such as investing, lending, insurance, securities trading and securities issuance. Some of the companies include:
 - ▶ Banks (e.g. DBS, OCBC, UOB)
 - ▶ Finance Companies (e.g. Hong Leong Finance, Sing Investments & Finance, Singapura Finance)
 - ▶ Investment Funds (e.g. Aberdeen, Schroders, LionGlobal)
 - ▶ Stock Brokerages (e.g. Philips Capital, DBS Vickers)
 - ▶ Insurance companies (e.g. NTUC Income, Prudential, Great Eastern)
 - ▶ Credit card companies (e.g. VISA, MasterCard)
 - ▶ Money Changing and Remittance Businesses (e.g. Raffles Money Change, Pay2Home)
 - ▶ And more..

Intro to Financial Services

Industry Activities

- **Retail/Personal/Consumer Banking**
 - Deposits/ Withdrawals
 - Loans (Personal/ Mortgage/ Motor/ etc)
 - Credit/ Debit cards
 - And more..
- **Private Banking**
 - Wealth management
 - And more..
- **Corporate/ Institutional/ Commercial Banking**
 - Cashflow management
 - Foreign exchange
 - Commercial loans
 - Trade finance
 - And more..
- **Investment Services**
 - Hedge fund management
 - Asset management
 - And more...
- **Insurance Services**
 - Insurance brokerage
 - Insurance underwriting
 - Reinsurance
 - And more..

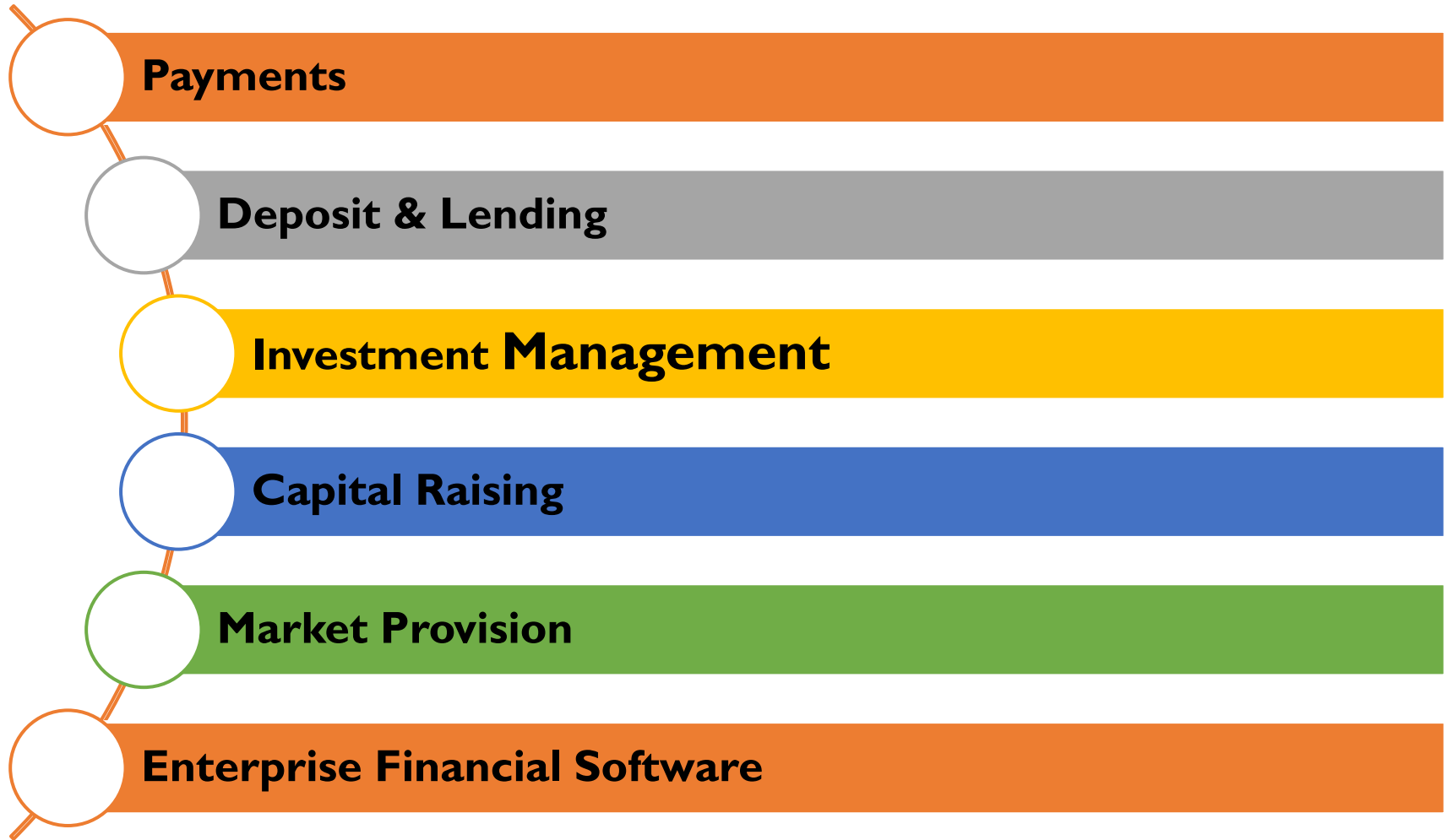
Example of FinTech



Source: <https://www.youtube.com/watch?v=0iGzgbzI2hM>

Read More: <https://www.cnbc.com/2018/06/08/how-ant-financial-grew-larger-than-goldman-sachs.html>

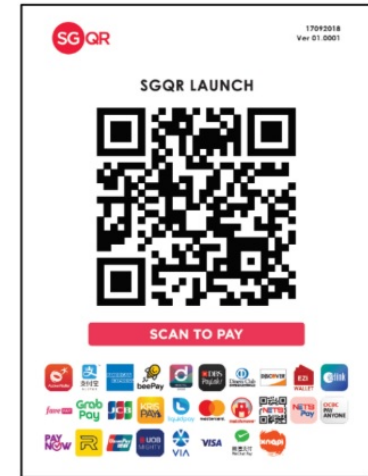
FinTech Focus Areas



FinTech Focus Areas - Payments

- ▶ Largest domain in terms of interest from investors.
- ▶ Payment is about **payment services** including **payment back-end infrastructure, card issuing, merchant acquiring, mobile payment, seamless solutions and point of sales solution.**
- ▶ 3 Sub-Areas:
 - ▶ **Payments Back-end Infrastructure** - refers to payment processing providers' solutions for accepting electronic payments, point of sale terminals, and card providers and also mobile payments.
 - ▶ **Consumer Payments** - include mobile wallets and seamless payment solution to enable payers to pay on the go and peer-to-peer transfer of money.
 - ▶ **Cryptocurrency** - provide access to digital cryptocurrency markets such as Bitcoin.

Example of FinTech in Payments: Payments Back-end Infrastructure

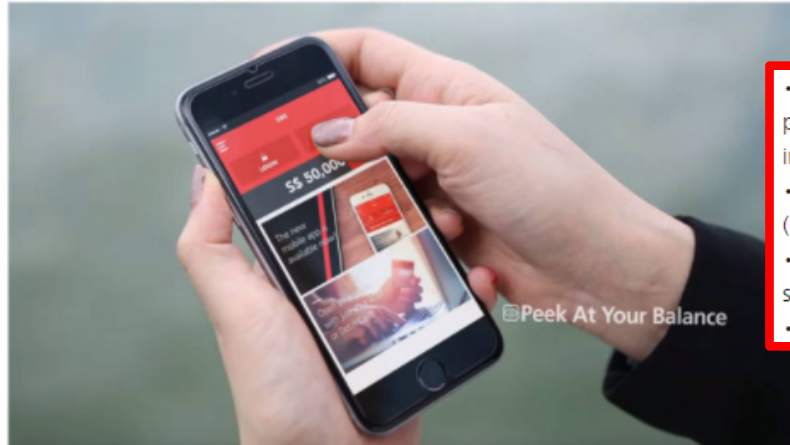


Example of FinTech in Payments: Payments Back-end Infrastructure

- ▶ <https://www.pymnts.com/news/payment-methods/2018/singapore-paynow-reduce-cash-checks/>
- ▶ <https://www.todayonline.com/singapore/customers-can-tap-paynow-pay-bills-receive-money-companies-aug-13>
- ▶ <https://www.channelnewsasia.com/news/singapore/sgqr-qr-code-cashless-payment-singapore-rolls-out-unified-10727568>

- ▶ More to be covered in Topic 9

Example of FinTech in Payments: Consumer Payment



- Personalised profile and customised quicklinks – Customers can customise their own profiles with a picture or nickname, and can also create shortcuts for their favourite mobile banking services (First in industry)
- Payments made easier – Customers can use a list of recent and favourite payees for faster transactions (First in industry)
- Instant account opening – Customers can open an additional banking account with just a few simple steps
- Touch ID – Customers can log on to their account securely with their fingerprint

SINGAPORE, 29 March 2016 - As Singapore's largest bank and a leading bank in Asia, DBS is further upping the ante in the innovation space with the official launch of "DBS digibank", a breakthrough mobile app designed to make banking simpler, smarter and faster for its customers. The new "DBS digibank" app delivers a groundbreaking "mobile-first" experience and builds on the bank's continuous efforts to innovate on its digital offerings to enhance the customer experience.

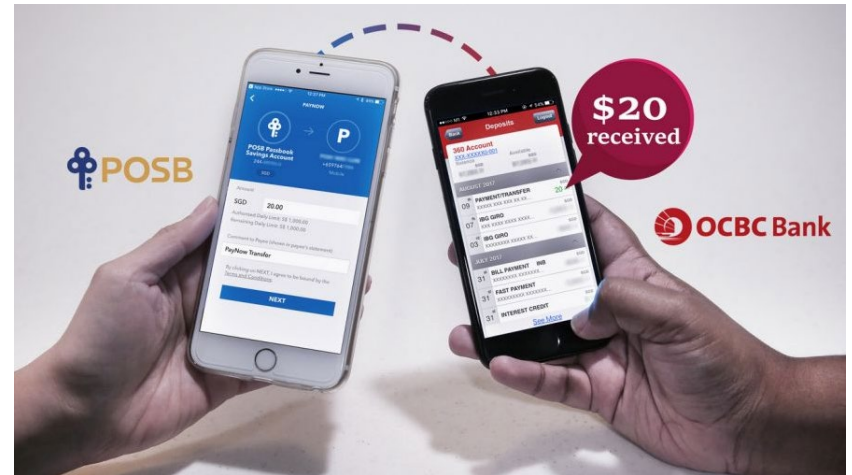
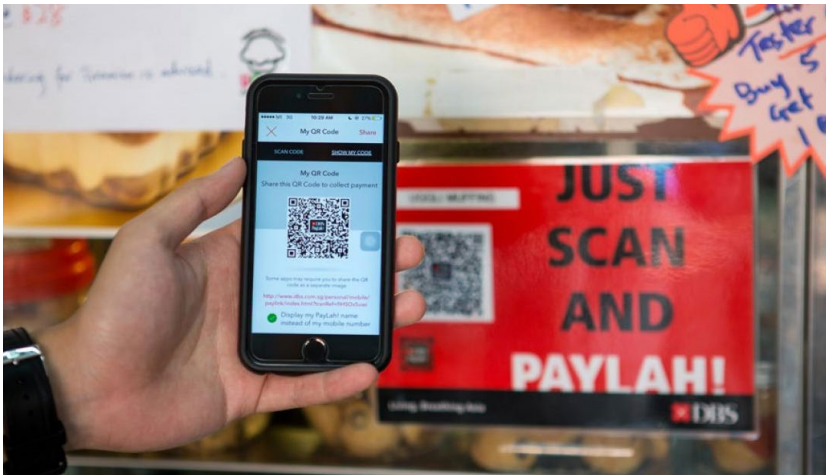
For the first time in Asia, customers are able to view their account balances on their mobile devices or Apple Watch. This function, called the "peek" feature, allows customers to choose to "peek" at any of their DBS accounts. The "account balance enquiry" function is the most used app function, followed by payments, including ATMs, online services and its call centre.

The bank went through an extensive customer immersion process in the development of "DBS digibank". In addition to the intuitive navigation, "DBS digibank" also offers customers a range of features to enhance their banking experience.

- Personalised profile and customised quicklinks – Customers can customise their own profiles with a picture or nickname, and can also create shortcuts for their favourite mobile banking services (First in industry)
- Payments made easier – Customers can use a list of recent and favourite payees for faster transactions (First in industry)

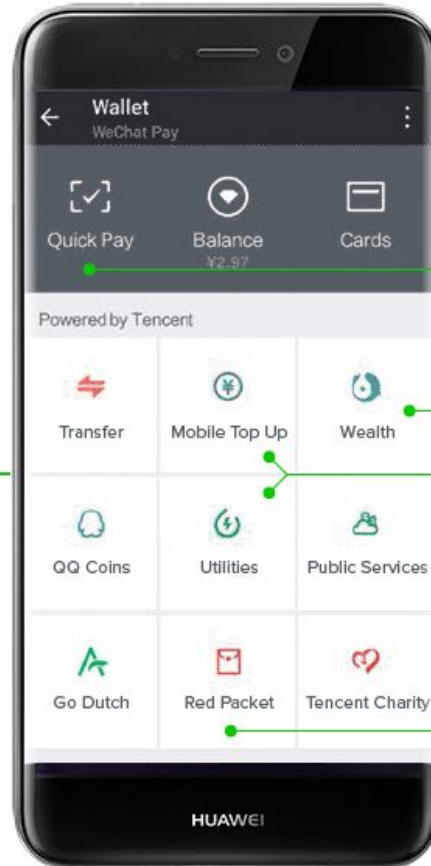
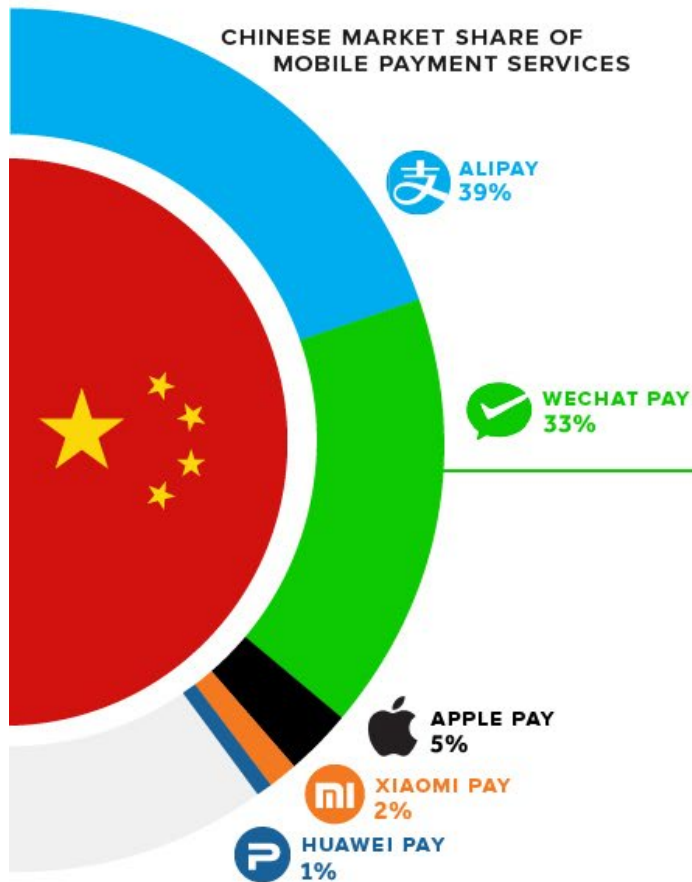
- DBS PayLah! – A mobile wallet introduced in May 2014 to make peer to peer payments easier, now has more than 300,000 registered wallets. The bank also brought this app to Apple Watch, making it the first wearable bank in Singapore
- DBS SMS Banking – In October 2014, DBS introduced SMS Banking, allowing customers to perform simple banking transactions including checking account balances, performing card payments and fund transfers to their own accounts outside of the internet banking environment
- DBS FasTrack – A first-of-its-kind app to be introduced by a bank in Singapore in September 2015, it provides a seamless ordering and payments solution for businesses while eliminating or drastically shortening customers' wait time

Example of FinTech in Payments: Consumer Payment



Example of FinTech in Payments: Consumer Payment

CHINESE MARKET SHARE OF
MOBILE PAYMENT SERVICES



AN INTRODUCTION TO



When users make a purchase in an offline store, they can provide a payment code (bar code / QR code) for vendors to scan.

Access to WeChat's wealth management products.

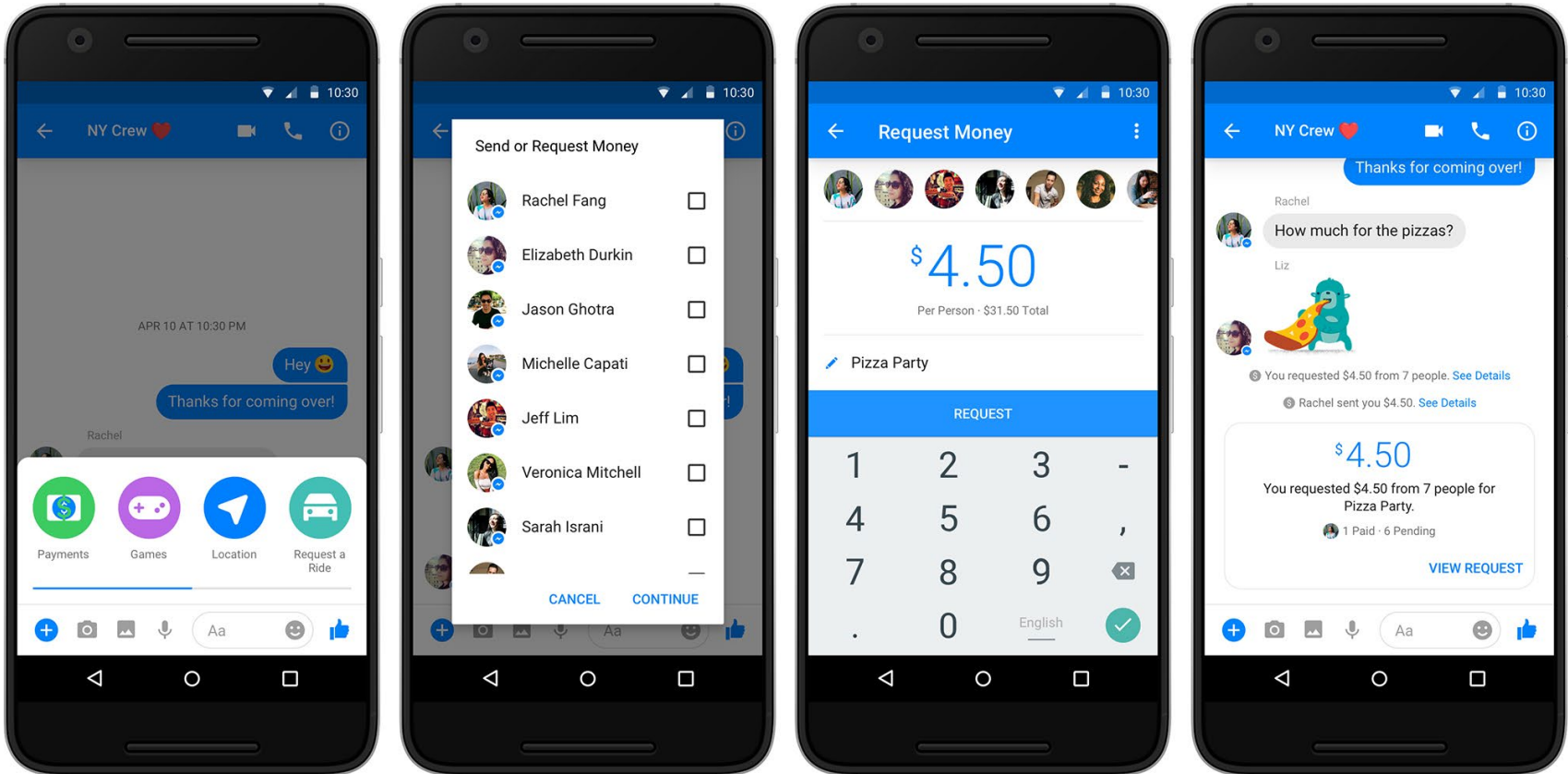
An easy way to pay your utility and phone bills..



During Lunar New Year In 2017, WeChat users sent over 14 billion digital red packets!

Example of FinTech in Payments: Consumer Payment

Facebook Messenger



Example of FinTech in Payments: Consumer Payment



Source: <https://youtu.be/ewJ-lpvWDEU>

Read More: <https://edition.cnn.com/2017/02/21/africa/mpesa-10th-anniversary/index.html>

Example of FinTech in Payments: Cryptocurrency



Source: https://youtu.be/ZT26y_l-jtl

Read More: <https://www.coindesk.com/bitcoin-futures-will-go-live-on-ices-crypto-trading-platform-in-december/>

FinTech Focus Areas – **Deposits & Lending**

- ▶ Deposit and lending focus on **personal services** in the area of **loans** and **management of their finances and saving**.
- ▶ 3 Sub-Areas:
 - ▶ **Personal Finance** - focuses on supporting individuals and household and budgeting as well as managing their financial decisions and activities.
 - ▶ **Digital Banking** - interactive online services for customers to do their banking services such as paying bills, transfer funds, and access to checking and savings accounts.
 - ▶ **Alternative Lending** - complements the others by focusing on providing customers with credit scores and peer-to-peer loans without going to traditional financial institutions.

Example of FinTech in Deposits & Lending: Personal Finance

- ▶ DBS launched **POSB Smart Buddy programme**, a watch that helps students to track their savings and spending habits.



Source: <https://www.channelnewsasia.com/news/singapore/posb-launches-digital-watch-that-teaches-students-to-manage-9127520>

Example of FinTech in Deposits & Lending: Digital Bank



2 billion out of the world's 7 billion do not have access to financial services
1/3 of the global population
1 billion are in Asia



62%
bank account ownership



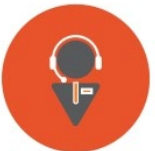
27%
save normally



18%
receive wages or pay bills



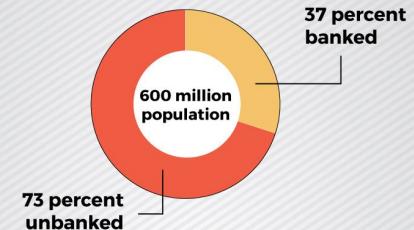
11%
borrow from formal sources



Service providers can offer basic services through mobile phones, point-of-sale devices and agent networks, removing the need for bank branches and ATM access.

Source: <https://development.asia/explainer/busting-10-myths-financial-inclusion>
<https://theaseanpost.com/article/banking-southeast-asias-unbanked-0>

Financial inclusion for Southeast Asia's 'unbanked'



3 critical areas where fintech can make an impact



Providing basic mobile banking services

There's a significant demand for low cost money transfer services – which can be costly for individuals with no access to traditional banking services. In some cases, remittance charges can be up to 10 percent of the transfer amount.

Providing short-term loans

By providing small dollar-value, short-term loans, fintech companies can provide business owners with the financial support they need to make stock choices and other business decisions more effectively.



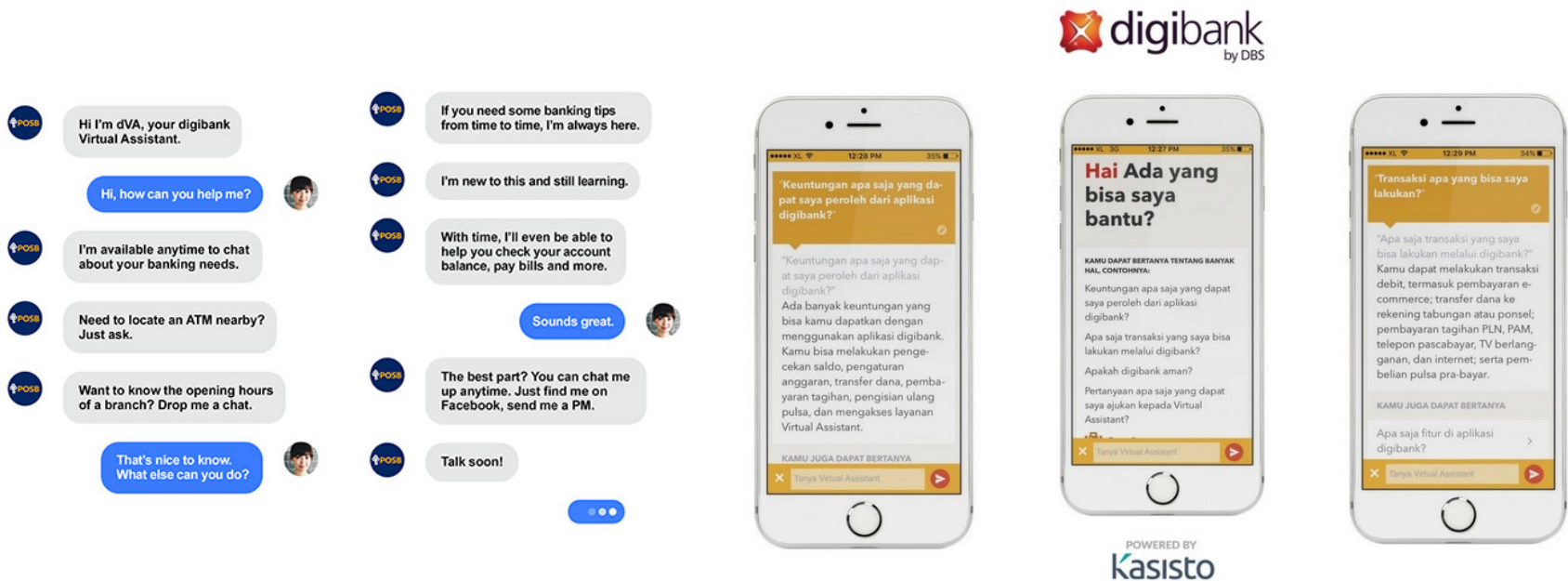
Supporting basic data and analytics

Fintech companies can employ basic technology to help unbanked store owners determine correlations between customer purchasing and other factors which could improve their ability to make a profit.



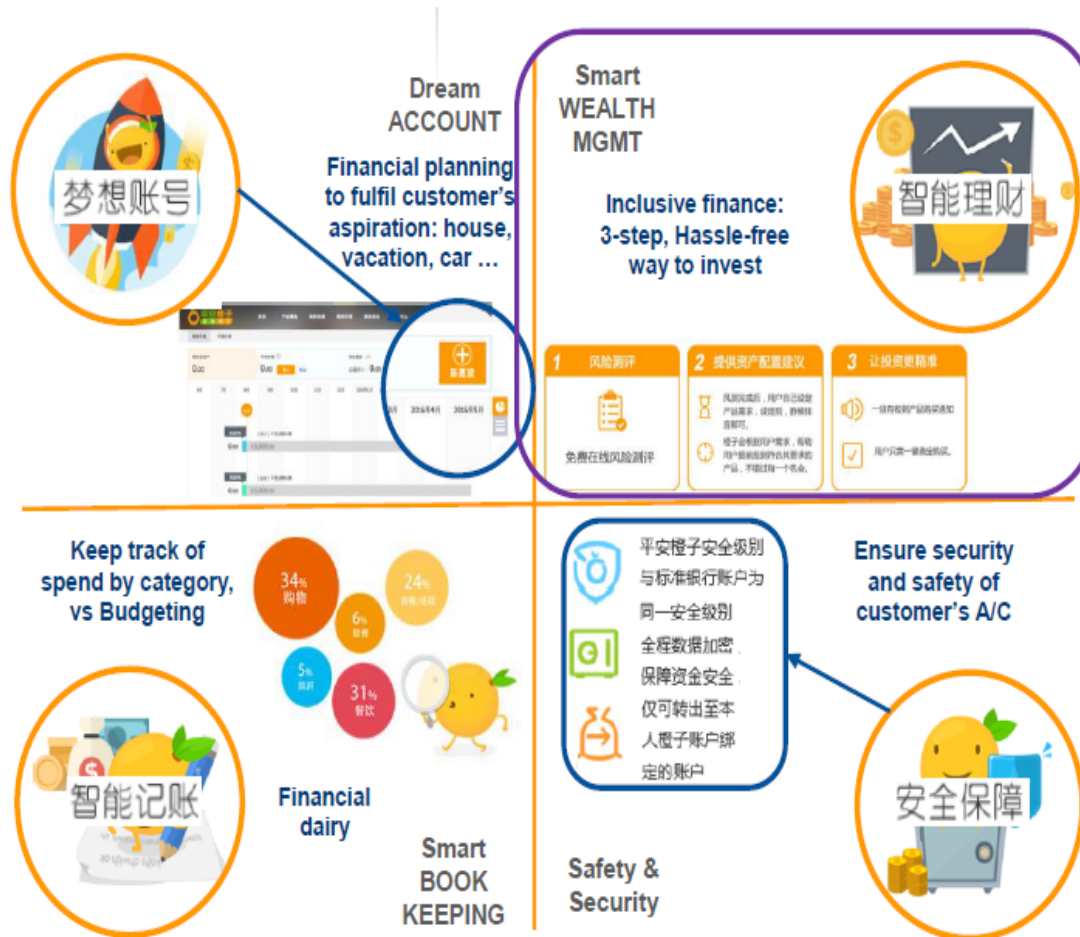
Example of FinTech in Deposits & Lending: Digital Bank

- ▶ DBS launched **digibank**, a **mobile-phone-based banking model that requires no human intervention**, in India in 2016 & Indonesia in 2017. This model can **make money from small accounts that other banks would never find profitable enough to accept**.



Source: https://www.dbs.com/newsroom/DBS_launches_digibank_an_entire_bank_in_the_phone_in_Indonesia

Example of FinTech in Deposits & Lending: Digital Bank



- PFM is increasingly provided via Direct banking service in China
- Do away with branch, & business through digital platform, especially mobile APP
- 7x24hr services to improve client experience with ease of access, empowerment and fast execution
- Enable wider reach of customers with lower entry barrier and provide inclusive finance

Example of FinTech in Deposits & Lending: Alternative (P2P) Lending

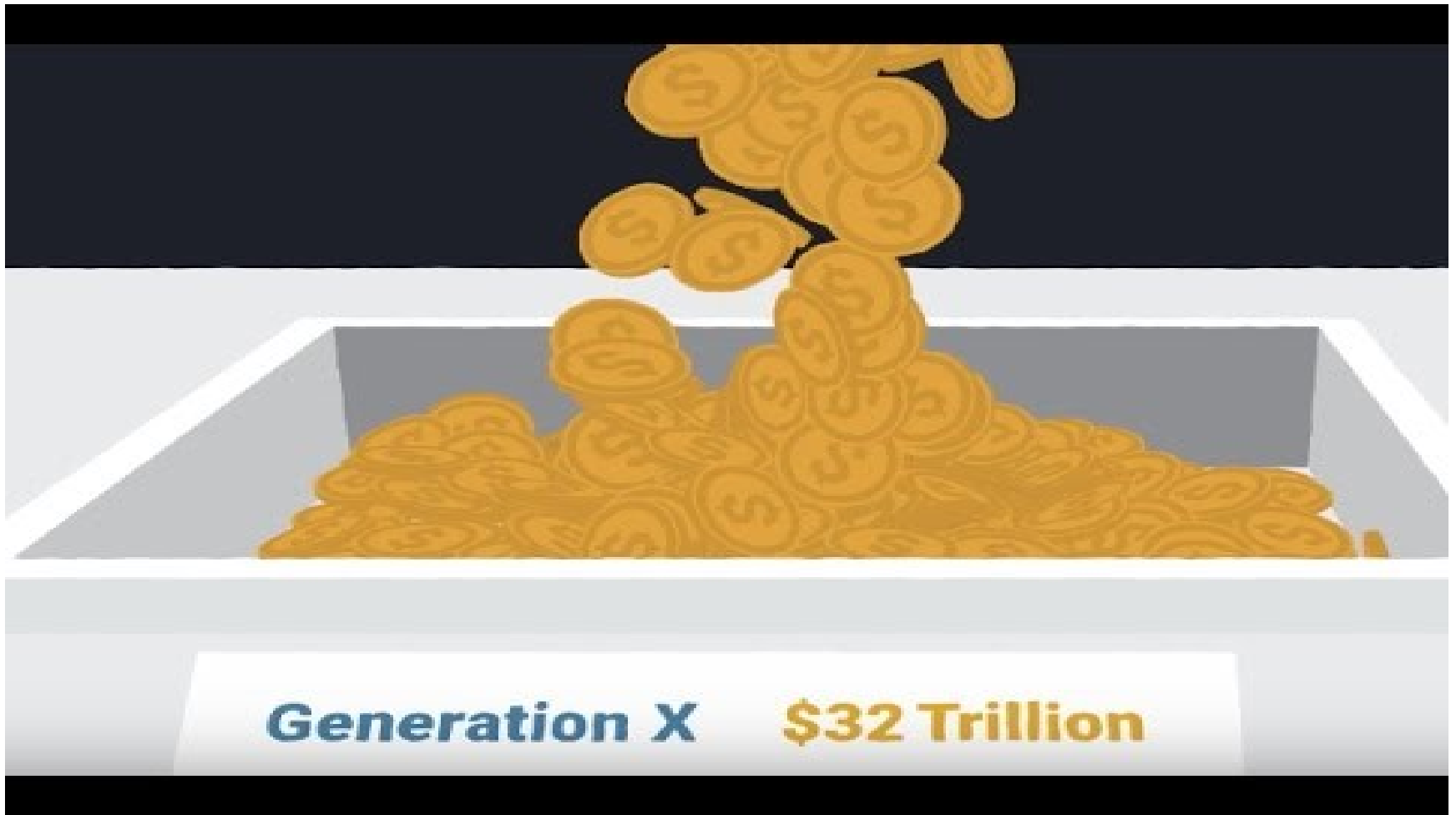


Source: <https://youtu.be/bUN4SBMNreM>

FinTech Focus Areas – **Investment Management**

- ▶ Investment Management is services that **help private and institutional investors in the process of buying and selling and managing assets and securities.**
- ▶ 2 Sub-Areas:
 - ▶ **Private Investment Management** - refers to automated processes and trading algorithms to private investors, that is private clients, or other tools to trade and manage their investments.
 - ▶ **Institutional Investments Management** - focus on tools and technologies for institutional clients, that is professional investors or wealth and hedge funds, and investment institution to manage their investment portfolios.

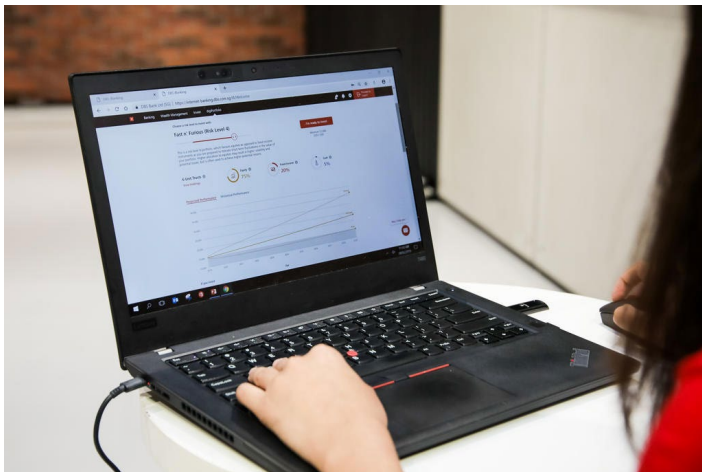
Example of FinTech in Investment Management: Private Investment Management (Robo-advisors)



Source: <https://youtu.be/L90ywD3vcIs>

Example of FinTech in Investment Management: Private Investment Management (Robo-advisors)

- ▶ DBS launched digiPortfolio, a robo-investor, in Feb 2019 to encourage more Singaporeans to invest



Read more: <https://www.straitstimes.com/business/dbs-launches-robo-investor-to-encourage-more-singaporeans-to-invest>

Example of FinTech in Investment Management: Private Investment Management (Robo-advisors)

Personal Banking > Investments > RoboInvest

A smart and easy way to start investing

Powered by WeInvest



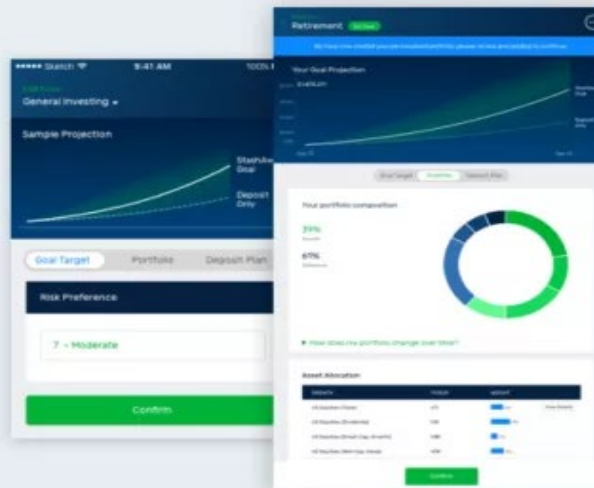
Why you'll love OCBC RoboInvest

An all-in-one platform that helps to manage investments without having to interact with a human financial consultant. It is investment made simple for today's digitised world.

Get Started

Eligibility

- OCBC Current OR Savings account holders
- Have access to OCBC Online Banking
- 21 years and above
- Non-US Citizens
- Available only on desktop




StashAway

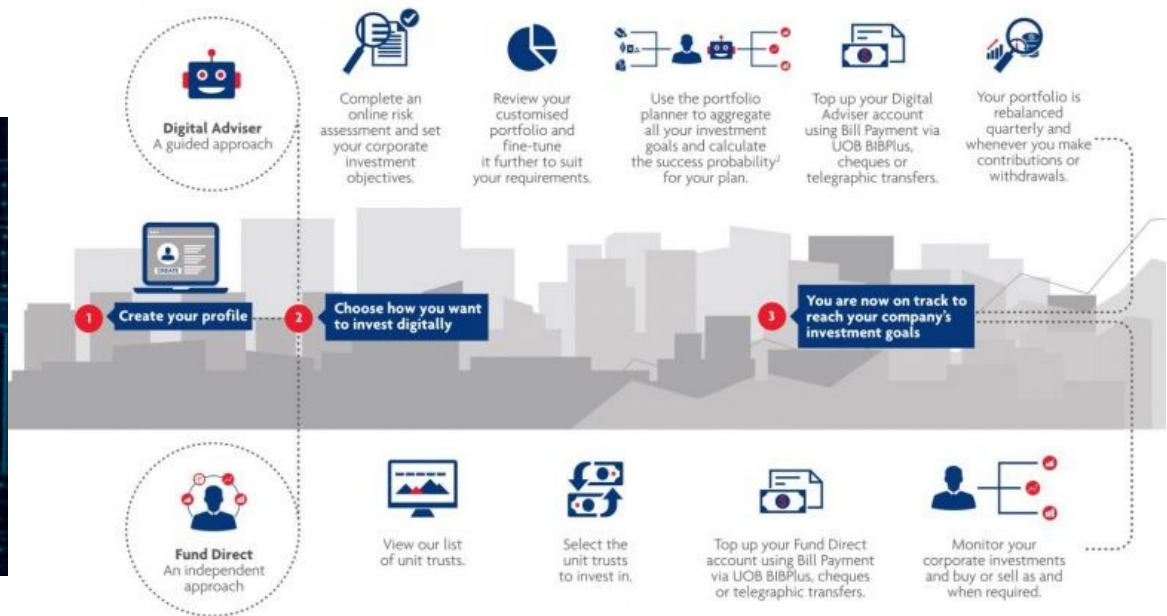


Example of FinTech in Investment Management: Institution Investment Management

- ▶ UOB offering customised digital investment portfolios to commercial/corporate investors via its UOBAM Invest platform



Your journey with UOBAM Invest



Read more: <https://www.straitstimes.com/business/banking/uob-asset-management-rolls-out-singapores-first-robo-advisory-service-for-corporate>

FinTech Focus Areas – **Capital Raising**

- ▶ Capital raising is about providing customers with access to investments and **raising capital** either in exchange for equity or in return of interest rates.
- ▶ 2 Sub-Areas:
 - ▶ **Crowdfunding** - focuses on helping companies and entrepreneurs to raise capital for the business products, projects, or social causes.
 - ▶ **Alternative Financing (Micro-Financing/ Micro-Loans)** - refers to innovative ways to raise capital without going to traditional incumbent financial institution. It is focused on small and medium sized enterprises.

Example of FinTech in Capital Raising: Crowdfunding

Pebble Raises \$3 Million+ in Four Days ,What Kickstarter Means for Entrepreneurs

The image is a screenshot of the Pebble Kickstarter campaign page. At the top, there's a blue banner with the text "What is Kickstarter? We're the world's largest funding platform for creative projects. [Learn more!](#)". Below this is the Kickstarter logo and navigation links: "Discover great projects", "Start your project", a search bar, and "BLOG", "HELP", "SIGN UP", "LOG IN". The main heading is "Pebble: E-Paper Watch for iPhone and Android", with a subtext "A Product Design project in Palo Alto, CA by Pebble Technology - [send message](#)". Below the heading are buttons for "PROJECT HOME", "UPDATES 4", "BACKERS 23,341", and "COMMENTS 1,594", along with a "REMIND ME" button. The central image shows three Pebble watches: a white one with a digital display showing "28:56", "4.08m", and "7:05"; a red one with a digital display showing "twelve thirty five" and a play button; and a black one with an analog face. To the right of the watches, a large box displays "23,341 BACKERS", "\$3,336,475 PLEDGED OF \$100,000 GOAL", and "31 DAYS TO GO". Below this, a dark grey box states "THIS PROJECT WILL BE FUNDED ON FRIDAY MAY 18, 11:00PM EDT.". A green button says "BACK THIS PROJECT \$1 MINIMUM PLEDGE". At the bottom, a section titled "PLEDGE \$99 OR MORE" shows "200 BACKERS" and "SOLD OUT (2 of 200 remaining)". A link "http://kick.st/9umfV5" is also visible.

Source: <https://www.forbes.com/sites/anthonykosner/2012/04/17/pebble-raises-3-million-in-four-days-what-kickstarter-means-for-entrepreneurs/#3d8ff72e1d43>

Example of FinTech in Capital Raising: Alternative (Micro) Financing



Source: <https://youtu.be/G-ngcZukb-l>

Example of FinTech in Capital Raising: Initial Coin Offerings (ICO)



**What is an
Initial Coin
Offering?**

Source: <https://www.youtube.com/watch?v=WZwMt42CzH0>

FinTech Focus Areas – **Market Provision**

- ▶ Market provisioning's goal is to **improve transparency, connectivity, and accessibility of information** in the market which allows buyers and sellers to more easily **connect and engage** with each other as well as allowing them to **compare** different financial products and services.
- ▶ 2 Sub-Areas:
 - ▶ **Comparison and Matchmaking** - online aggregator platforms that allows customers to identify and compare financial products and services.
 - ▶ **Financial Social Networks** - focus on the use of social networks to facilitate interaction among buyers and sellers and to improve financial literacy and inclusion.

Example of FinTech in Market Provision: Comparison & Matchmaking

The screenshot displays the compareFIRST website. At the top, the logo 'compareFIRST' is on the left, and the 'CASE' logo is on the right. A navigation bar includes links for 'Getting Started', 'Understanding Insurance', 'Products', and 'About Us'. A search bar with the placeholder 'Search this site for...' is located on the right. Below the navigation bar is a large banner image of a smiling family with the text 'COMPARE LIFE INSURANCE USING compareFIRST'. Below the banner, a text prompt 'Not sure what to search for?' is followed by a right-pointing arrow. A row of five colored buttons represents different insurance types: 'Direct Purchase' (blue), 'Term Life' (purple), 'Whole Life' (dark purple), 'Endowment' (green), and 'Investment-Linked' (yellow). Below these buttons is a 'Search Results' section. It features a filter 'Number of Products by Insurers' set to 'All (12)'. A horizontal scrollable list of insurer logos is shown, including AIA, AVIVA, AXA, etiqa, FWD, Great Eastern, HSBC Insurance, Manulife, income, PRUDENTIAL, Singapore Life, and TOKIO MARINE INSURANCE GROUP. Each logo is accompanied by a small icon and a vertical bar.

Example of FinTech in Market Provision: Financial Social Networks

DBS BusinessClass

An online social network for SMEs, launched in end 2014. The programme connects business owners with opportunities and latest market news.

[Find Out More](#)



SINCE 2014:

20 networking events

400 conversations

15,000 SMEs

自选

持仓盈亏

编辑

Q 输入股票代码/代码添加持仓交易

股票名称	持股量	浮动盈亏	累积盈亏
腾讯控股 (00700)	100	8.64%	8.64%
网易 (NTES)	100	0.89%	0.89%
新浪 (SINA)	23	30.91%	11.89%
招商银行 (600036)	400	12.65%	12.64%
市场	持有市值	浮动盈亏	累积盈亏
A股	5664.00	12.65%	12.64%
港股	27160.00	8.64%	8.64%
美股	6027.70	6.08%	5.33%



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INSIGHTS

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PRICES

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InvestingNot

THE SOCIAL NETWORK FOR INVESTOR

Seedly

What are you looking for today?

Ask Community Reviews Blog Event

Ask Join

Make smarter financial decisions together

Ask for opinions and get answers from other Singaporeans.

ASK A QUESTION

Property Credit Card Savings Insurance Lifestyle Investments Family More

Investments

Growing your money for your future

Asked by Anonymous

How would you invest your first 10-20k?

See all 20 answers

Asked by Anonymous

Why is my Stashaway account in negative returns now. Do they not rebalance for us. Anyone withdrawn yet?

Insurance

Protecting you for the rainy days

Asked by Anonymous

Anyone of you here surrendered your ILP or endowment before?

See all 19 answers

Asked by Charmaine Ng

Looking for a AIA policy that can join the vitality programme at low cost?

FinTech Focus Areas – Enterprise Financial Software

- ▶ Focuses on **software or IT solutions** made for the financial sector. It includes tools for **handling accounts, invoices, taxes, payroll, and shareholder management**.
- ▶ 3 Sub-Areas:
 - ▶ **Collaboration and Workflow Software** – cloud-based solutions and platforms that enable better communication and efficiency of internal processes.
 - ▶ **Accounting and Invoicing Software** - helps financial institutions to improve the time and resources spent on the bookkeeping and invoicing processes.
 - ▶ **Data and Analytics Software** - helps financial institutions to fight off fraud security issues and cyber crime.

Benefits of FinTech

1. Better Customer Experience

- ▶ Seamless, user-friendly digital experience

2. Better Convenience

- ▶ Quick & easy banking services through the use of mobile devices & digital banking apps/ apps (social media/ chat apps) that are used daily

3. Cost-Savings

- ▶ Lower financial fees, transaction costs, etc.

4. Financial Inclusion

- ▶ Brings banking services to non-banking customers, especially in rural areas

Challenges in FinTech

1. Need for Tighter Regulations

- ▶ Need to keep up with fast-changing developments in FinTech
- ▶ Regulations vs Innovation?
 - ▶ Too lax: Customers may not be protected against risks & frauds
 - ▶ Too tight: No room for innovation

2. Need for Better Data Security

- ▶ Increased amount of personal & financial data stored in the internet
- ▶ Higher risks of cyber attacks & loss of data

Summary

- ▶ **FinTech (Financial Technology)**

- ▶ A business that aims at providing financial services by making use of software and modern technology.

- ▶ **FinTech Focus Areas:**

- 1. Payments
 - 2. Deposits & Lending
 - 3. Investment Management
 - 4. Capital Raising
 - 5. Market Provision
 - 6. Enterprise Financial Software

Summary

► Benefits

1. Better Customer Experience
2. Better Convenience
3. Cost-Savings
4. Financial Inclusion

► Challenges:

1. Need for Tighter Regulations
2. Need for Better Data Security