



Introduction to FinTech



28 January 2016

# Bio



## IncubAsja Ventures

Co-Founder/
Managing Partner



Gerben Visser



Co-Founder/
Managing Partner







# Singapore Fintech Landscape



## FinTech is of Strategic Importance for a Broad and Diverse Set of Stakeholders

Financial software



Service providers



Media



#### FinTech Companies



Security



#### Investors



#### Government



#### Universities



#### **Financial Institutions**



#### Payment



#### **Telecommunications**



... but there is a lack of structure, collaboration and interaction in Singapore



# Overview of FinTech

# Defining FinTech



"FinTech is the delivery of innovative financial products and services through the application of technology, to make financial systems more efficient."



# FinTech Development



## FinTech, as an Industry, continues to be developed at a much rapid pace today







**TransferWise** 



First Mobile Commerce **Transaction** 

World's first P2P Lending **Platform** 

Bringing financial inclusion the unbanked

Largest money transfer fintech platform

Raises \$94 billion in assets via mobile

1997

2005

2007

2012

2014

1994

**Emergence** of Internet Banking

1998

PayPal was established

2006

Largest peerto-peer lending platform

2008

Satoshi Nakamoto registered Bitcoin

2014

Apple joins Mobile Payment with Apple Pav





**!!!!Lending**Club



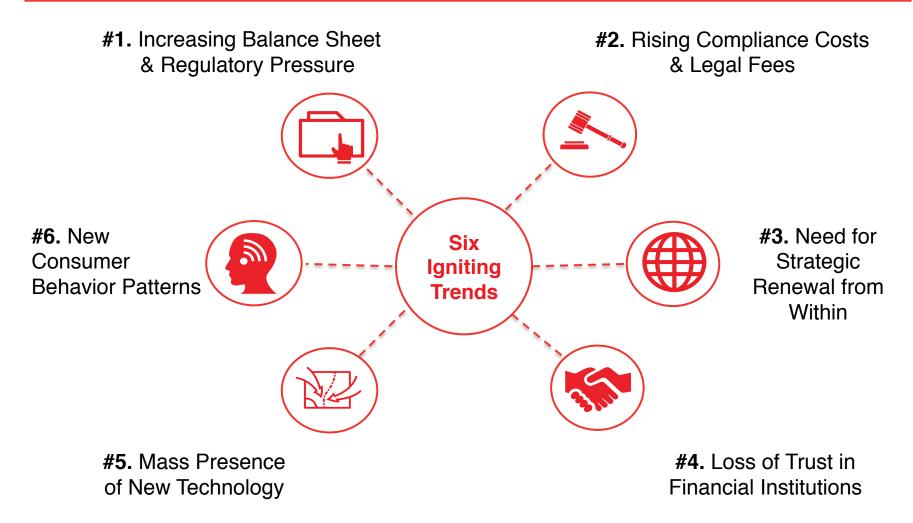


Source: Accenture (2014), InvestinTech (2014), Meniga (2013), Auxmoney (2013), BusinessInsider (2014)



# Igniting the FinTech Revolution





Source: Banking Reports, Five Banking Innovations from Five Countries, 2015



# FinTech Application



#### FinTech can be applied across a wide range of verticals ...



Investing, Trading & Brokerage



Wealth Management



Alternative Lending



Risk Management



Crowd-Funding



Big Data Analytics & Intelligence



Digital / Crypto-Currencies



Content & Research Provision



Payments, Transfers & Remittance



Banking & Accounting Services

... and broadly supports various platforms & infrastructure.



Compliance / KYC / AML / Fraud



Cloud Computing / Omni Channel



**Cyber-Infrastructure Security** 



**Trade Execution / Settlement** 



# **Buy-Side Application**



#### Across the Buy-Side, similar processes are adopted ...



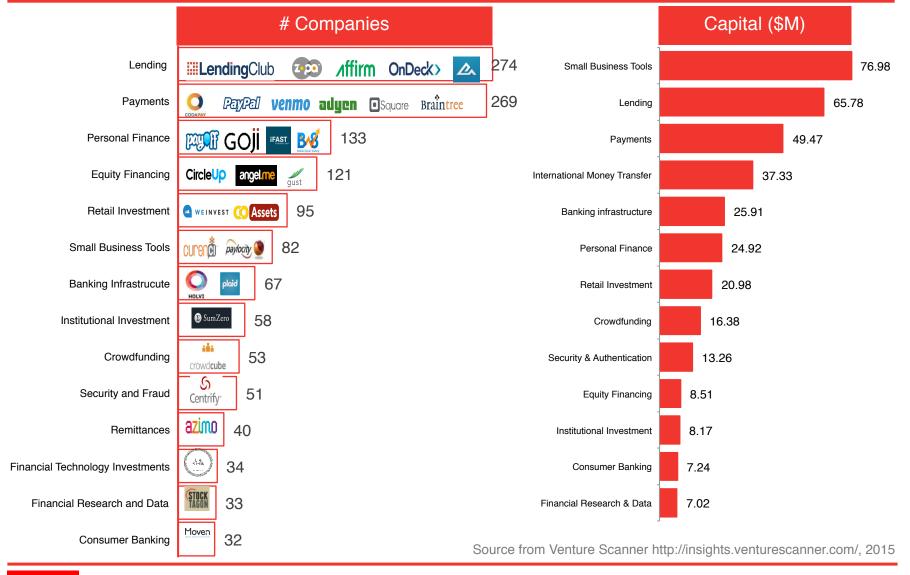
## ... and FinTech Innovation can be systematically applied respectively.





# Investment into FinTech Verticals

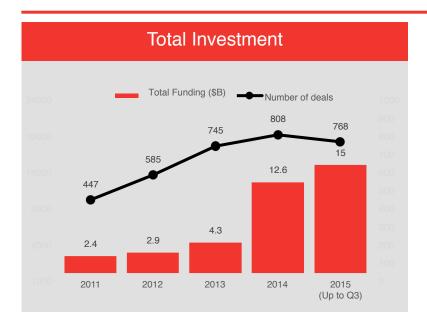


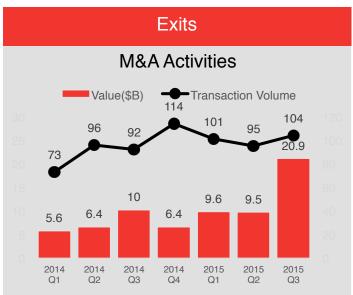




# FinTech Activities







\$40B

M&A Value

300 M&A Deals

M&A Value 2015 Q2-Q3

\$15B

3X **Total Funding Total Investment** 2015 YTD From 2013-2014

+50.64% +17.63%

YoY **Funding Growth** 

YoY **Deal Growth**  Notable IPO

#### Notable M&A

Company	Sector	Value	Company	Buyer	Sector	Value
LendingClub	P2P Lending	\$1B	SunGard	FIS	Banking Software	\$9.1B
WorldPay	Payment	\$3.3B	Skrill.	Optimal Payment	Payment	\$1.2B
First Data	Big Data	\$2.6B	Advent Software	SS&C Technologies	Investment Management	\$2.6B

Source from CB Insights & Berkery Noyes, Financial Technology and Information Industry M&A Report For 2015 Q3



# P2P Lending



Peer to Peer (P2P) Lending is a method of debt financing that enables individuals to borrow and lend money through an online platform - without the use of an official financial institution as an intermediary.

#### **Asset Classes of Loans**



**Auto Loans** 



Credit Card Payoff



Refinancing



**Debt Consolidation** 



**Major Purchases** 



**Business Use** 



**Medical Expenses** 



Mortgages



Invoice Financing



**Others Asset Classes** 

#### **Quick Success Factors**

#### **Country-Specific Conditions**

- Strong Financial Markets
- Clear Bank Lending Regulations
- Strong Legal Framework

#### **Borrowers**

- · Poor Confidence in Banks
- High Level of Degree of Comfort with Online Platforms
- Seeking to fill the Financial Gap due to the Lending Freeze

#### **Investors**

- Poor Confidence in Banks
- Desire for Alternative Investments and Higher Yield

#### **P2P Lending Start-ups**

- Initial Lending Capital
- Favourable P2P Lending Regulatory Support
- · Positive Customer Reviews
- Competitive Interest Rates for Borrowers and Lenders



# Cryptocurrency



## **Description**

- Cryptocurrencies are a subset of alternative currencies, or specifically of digital currencies
- The first cryptocurrency is Bitcoin
- Cryptocurrencies typically feature decentralized control and a public ledger (such as bitcoin's) blockchain which records transactions
- The blockchain is seen as the main technological innovation of Bitcoin

## **Types of Cryptocurrency:**

SHA-256-Based







Script-Based





BYTECOIN



CryptoNote-Based

Other proof-

of-work



MONERO





Non-proofof-work







## **History of Cryptocurrency**

1998: Wei Dai published an anonymous, distributed electronic cash system

2008. The first decentralized cryptocurrency, Bitcoin, was created by Satoshi Nakamoto

2011: Namecoin was created as an attempt at forming a decentralized DNS

2011: Litecoin was released, using scrypt technology

2014: The cryptocurrencies have decentralized applications, smart contracts, side chains or assets

Description of "b-money" was published



Bitcoin created



Namecoin created



Litecoin created



2<sup>nd</sup> Generation of Cryptocurrencies



## Blockchain



#### **Description**

- Blockchain implementation consists of two kinds of records: transactions and blocks
- Transaction: the actual data to be stored in the block chain.
- Blocks: records that confirm when and in what sequence certain transactions became journaled as a part of the blockchain database
- Every node in a decentralized cryptocurrency has a complete or partial copy of the blockchain (no master data center)

## **Applications:**

- Cryptocurrencies exchange Notary services
- Cyberattack protection
- Transparency and efficiency in land registry
- Scholarship matching

## Companies:





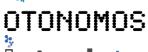
















**Koinify** 

#### **How Blockchain Bitcoin Works**

TRANSACTION



**MINERS** 



**BLOCK** 



BLOCK **PUZZLE** 



PROOF OF **WORKS** 



**MINERS** 



**VERIFICATION** 

Transactions are broadcasted to all miners

Miners create a block

Miners try to solve puzzle

Miners solve puzzle and get proof of work

Miner broadcasts its proof of work to other miners

Miners verify the proof of work



## Robo-Advisor



## Robo-advisors naturally appeal to younger investors...



#### Available & accessible

- 24/7
- Through mobile or Internet



## **Better transparency**

- Disclose all information
- Automated advising process



Under 35 60%

#### **Minimum Asset Requirement:**

\$5,000

#### **Management Fee:**

< \$10,000: Free

>\$10,000: 0.25% per year

# of Clients: 30,000



#### **Lower costs**

- Middle men not required
- More affordable



## Fast & simple solutions

- One-click
- Generate solutions in minutes



#### **Unbiased & Neutral**

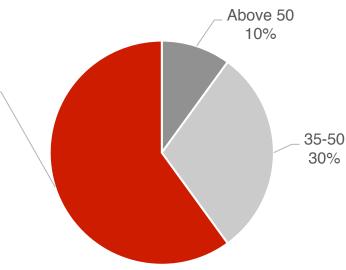
- Reliable
- Important in lending & risk accessing



#### **Inclusiveness**

- Accessible for less wealthy population
- Tap into unserved market segment







# Global FinTech Landscape



#### Global FinTech consists a wide array of Verticals...





# Singapore FinTech Landscape



Payments / Remittances

#### Personal Finance/Wealth

#### **Retail Banking/Investments**



→ Fundwave bit 

★

OTONOMOS

conomus

















































































**Finance Research/Analytics** 









**Institutional Investments** 







xfers



























# Future of FinTech

## The Future of FinTech



## Why Financial Institutions will not be replaced by FinTech companies:

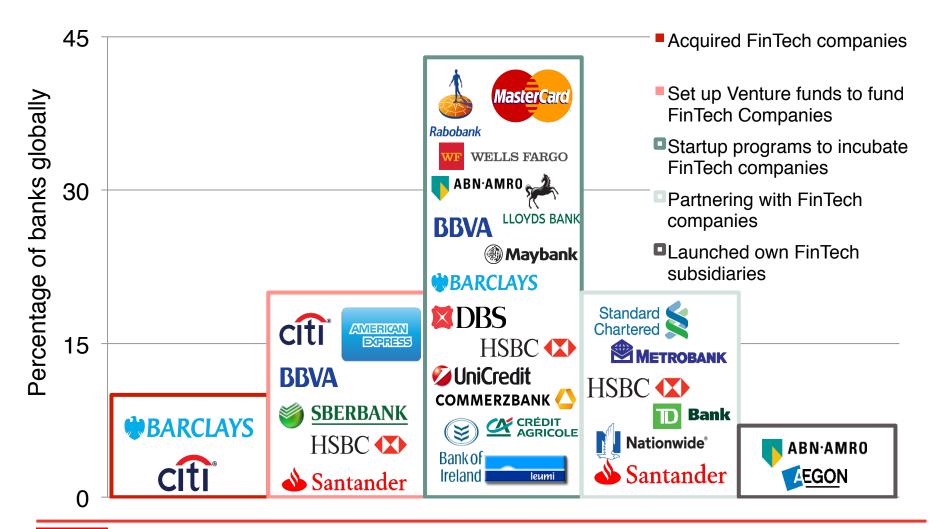
Acquisition Power — "If we can't beat 'em, we buy 'em" The Internet-Bank Analogy — iii — "Branches have, and will survive" Deposit Insurance Schemes -  $\bigcirc$  "Consumer want government protection" "Do VCs really want their money stuck?" Investment Banking — "Will an App structure an IPO for you?" Wealth Management — []\_\_\_ "Can technology replace relationships?" Regulatory License ———— Fig. -"Can they cross the application barrier?"



# Industry Reaction to FinTech



## Industry uncertain how to react, but many players are already moving





# Banks



Bank	Reactions	Portfolio
** BARCLAYS	<ul> <li>FinTech Accelerator in New York, London, CapeTown and Tel Aviv</li> <li>Cryptocurrency, Cybersecurity, Data Analytics</li> </ul>	⊳ dopay αire
Goldman Sachs	<ul> <li>Annual Builders + Innovators Summit</li> <li>Launching online lending platform next year</li> <li>Payments, Big Data, Cryptocurrency</li> </ul>	motifinvesting  Square  CIRCLE
<b>cît</b> îbank°	<ul> <li>Fintech Accelerator in US, Germany, Singapore, Brazil and Spain</li> <li>Citi Mobile Challenge Asia Pacific</li> <li>Citi FinTech unit to design mobile banking solution</li> <li>Mobile Payments, Big Data, Remittance, Cybersecurity</li> </ul>	Docu Sign Silver Tail Spindrop security
J.P.Morgan	<ul> <li>Financial Solution Lab</li> <li>Digital Currency, Lending, Personal Finance management, Payments</li> </ul>	Square PROSPER  motifinvesting SYMPHONY

**FUJLISU** 

# Payment Companies



## Organization



## Reactions

- Amex Ventures focuses their investments in start ups focusing on digital commerce and financial inclusion.
- Financial Innovation Lab
- Payments, Commercial Lending, Cybersecurity



- Regular hackathons "Masters of Code" globally
- MasterCard Start Path Global
- MasterCard Innovation Labs in America, Ireland, Kenya, Singapore, and Australia
- Payments, Big Data, Cybersecurity



- FinTech Blog
- Technology Innovation Program
- Innovation Center in San Francisco, London, Brazil, Dubai
- Payments, Big Data, Cybersecurity, Blockchain



# VC Firms - Global



VC Firm	Reactions	Portfolio	
ventures *	<ul> <li>Fund: \$1.1 billion</li> <li>380 Investments in 267 Companies</li> <li>Big Data, Payment, P2P Lending, Accounting</li> </ul>	PayRange  BataFox ripple	
formation   8	<ul> <li>Fund: \$1.07 billion</li> <li>83 investments in 66 Companies</li> <li>Digital platforms, Cyber Security, Wealth Management, Insurance</li> </ul>	RADIUS° ADDEPAR	
ANDREESSEN HOROWITZ	<ul><li>Fund: \$4.15 billion</li><li>409 investments in 269 companies</li><li>Cryptocurrency, Big Data, Payment</li></ul>	BIG DATA INTELLIGENCE  DWOLLA  Coinbase	
ACCEL® PARTNERS	<ul> <li>Fund: \$17.06 billion</li> <li>749 investments in 445 companies</li> <li>Big Data, Payment, Security, Crowdfunding</li> </ul>	OZFOREX venmo gofundme	
SEQUOIA CAPITAL	<ul><li>Fund: \$3.14 billion</li><li>996 investments in 586 companies</li><li>Security, Digital Banking, Big Data, Payment</li></ul>	<b>PayPal</b> <sup>*</sup> My bank	



# VC Firms - Singapore



VC Firm	Reactions	Portfolio
TEMASEK	<ul> <li>Fund: \$266 billion</li> <li>Over 50% investment in financial services and technology</li> <li>Payment, Digital Platforms</li> </ul>	PayPal C2FO adyen ⇔ helloPay
innov8	<ul><li>Fund: \$80 million</li><li>42 investments in 38 companies</li><li>Big Data, Digital Platforms</li></ul>	MobileIron  DemystData  DATATORRENT
MONK'S HILL VENTURES	<ul><li>Fund: \$80 million</li><li>5 investments in 5 companies</li><li>Digital Platforms, Insurance, Payments</li></ul>	compare <mark>88</mark>
Life. SREDA venture capital	<ul><li>Fund: \$100 million</li><li>17 investments in 17 companies</li><li>Payments, Online Banking</li></ul>	Rocketbaı fastacash <sup>©</sup> SÜFT PAY MOBI
HATCHER	<ul><li>Fund: \$100 million</li><li>129 companies</li><li>Payments, P2P Lending, Online Banking</li></ul>	Lender Exchange  Telr innovate payments



# Tech Companies



**Tech Companies** 

Reactions

**Products** 



Apple Pay





Visa Digital Enablement Program

Samsung Pay





- Google Venture invested in Fintech companies
- Google Wallet
- Android Pay







- Fintech Innovation Lab
- Partnership with Level39 Accelerator
- Bitcoin as payments for mobile content





- Alipay
- Mybank







# Regulators



## Country

## **Functions**

## **Implementations**

Singapore



Monetary Authority of Singapore



FinTech & Innovation Group (FTIG) responsible for:

- Regulatory policies
- Technology strategy
- Risk management
- Efficiency enhancement
- Competitiveness strengthening

- Committed \$225 million over the next five years under the Financial Sector Technology and Innovation scheme.
- P2P Lending firms require licensing
- Published consultation on securitiesbased crowdfunding
- MatchMove Pay gets license for remittance

**USA** 



**SEC** 



**FinCEN** 



- Regulate industry
- Maintain fairness, order and efficient markets
- Facilitate capital Formation
- Protect consumers and investors
- Coordinate securities regulations with municipal and foreign authorities

- JOBS Act Titles III & IV(Regulation A+)
  - Title III make private company investing accessible to nonaccredited individuals (Crowdfunding)
  - Title IV (Regulation A+) raises the limit of capital companies can raise (from 5 million to 20 million or 50 million), and significantly reducing cost of compliance
- Legislated FinCEN to regulate Cryptocurrencies

# Regulators



## Country

## Functions

## **Implementations**



Financial Conduct Authority



- FCA will provide:
  - Engagement opportunities
  - Supervisory support
  - Events such as:
    Regulatory sandboxes,
    themed weeks,
    RegTech, and Cloud
    storage

- Project Innovate
- Innovation Hub
- "Pro-innovation regulatory solutions" conversations with foreign regulators
- Regulation in payments, P2P lending, crowdfunding, cryptocurrency and big data
- Call for Input on barriers to digital and mobile solutions

Australia



Australian Securities & Investment Commission



- Administers the Australian Securities and Investments Commission Act 2001 (ASIC Act)
- Digital Finance Advisory Committee to provide guidance to ASIC

- Online hub with tailored content for FinTech businesses
- Process of coming up with new regulatory guidelines for FinTech.
- Specific taskforce to study:
  - Robo Advisory
  - Cryptocurrency
  - Equity Crowdfunding
  - Financial Service Licensing



# Team





Gerben Visser Co-Founder & Managing Partner



Jose Camacho Co-Founder & Managing Partner



**Hans De Back** Co-Founder & Managing Partner



**Prakash Somosundram Sander Swinkels** Co-Founder & Managing Partner



Advisor



**Ryan Clarke** Advisor



**Colin Sampson** Advisor



**Henri Guedeney** Advisor



Ian Myles Advisor



**Ned Phillips** Advisor



Leo Shimada Advisor



**Subbu Subramaniam** CTO



**Luke Cheang** Analyst



**Lui Yong Kit** Analyst



Xie Yingyao Analyst

www.singaporefintech.com info@singaporefintech.com

Singapore Fintech @ Tanjong Pagar 26 Duxton Road Singapore, 089490





# The Singapore Fin Tech Consortium