

金融科技



Tamkang
University
淡江大學

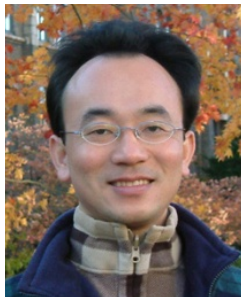
FinTech: Financial Technology

FinTech 金融科技課程介紹 (Course Orientation for Fintech: Financial Technology)

1052FinTech01

MIS EMBA (M2263) (8595)

Fri, 12,13,14 (19:20-22:10) (D409)



Min-Yuh Day

戴敏育

Assistant Professor

專任助理教授

Dept. of Information Management, Tamkang University

淡江大學 資訊管理學系

<http://mail.tku.edu.tw/myday/>

2017-02-17



金融科技

FinTech

Financial Technology

淡江大學105學年度第2學期 課程教學計畫表

Spring 2017 (2017.02 - 2017.06)

- 課程名稱：**金融科技**
(FinTech: Financial Technology)
- 授課教師：戴敏育 (Min-Yuh Day)
- 開課系級：資管所碩專班 (TLMXJ1A)
- 開課資料：選修 單學期 3 學分 (3 Credits, Elective)
- 上課時間：週五 12,13,14 (Fri 19:20-22:10)
- 上課教室：D409 (淡江大學台北校園)

課程簡介

- 本課程介紹Fintech金融科技基本概念與研究議題。
- 課程內容包括
 - Fintech 金融科技的演進：貨幣與金融服務
 - Fintech 金融科技：金融服務科技創新
 - Fintech 金融科技與金融服務價值鏈
 - Fintech 金融科技商業模式創新
 - 金融服務消費者心理與行為
 - 區塊鏈技術
 - Python Pandas 財務大數據分析
 - 人工智慧與深度學習金融科技
 - 金融科技財富管理：機器人理財顧問
 - 投資組合最佳化與程式交易
 - 金融科技智慧問答系統
 - Fintech 金融科技個案研究

Course Introduction

- This course introduces the **fundamental concepts** and **research issues** of **Financial Technology (Fintech)**.
- Topics include
 - Evolution of Fintech: Money and Financial Services
 - Fintech: Technology Innovation in Financial Services
 - Fintech and Financial Services Value Chain
 - Fintech Business Models Innovation
 - Consumer Psychology and Behavior on Financial Services
 - Blockchain Technology
 - Finance Big Data Analytics with Pandas in Python
 - Artificial Intelligence and Deep Learning for Fintech
 - Robo-Advisors for Wealth Management in Fintech
 - Portfolio Optimization and Algorithmic Trading
 - Intelligent Question Answering System for Fintech
 - Case Study on Fintech

課程目標 (Objective)

- 瞭解及應用 金融科技 Fintech 基本概念與研究議題。
(Understand and apply the fundamental concepts and research issues of Financial Technology (Fintech).)
- 進行 金融科技 Fintech 相關之資訊管理研究。
(Conduct information systems research in the context of Financial Technology (Fintech).)

課程大綱 (Syllabus)

週次 (Week)	日期 (Date)	內容 (Subject/Topics)
1	2017/02/17	Fintech 金融科技課程介紹 (Course Orientation for Fintech: Financial Technology)
2	2017/02/24	Fintech 金融科技的演進：貨幣與金融服務 (Evolution of Fintech: Money and Financial Services)
3	2017/03/03	Fintech 金融科技：金融服務科技創新 (Fintech: Technology Innovation in Financial Services)
4	2017/03/10	Fintech 金融科技與金融服務價值鏈 (Fintech and Financial Services Value Chain)
5	2017/03/17	Fintech 金融科技商業模式創新 (Fintech Business Models Innovation)
6	2017/03/24	Fintech 金融科技個案研究 I (Case Study on Fintech I)

課程大綱 (Syllabus)

週次 (Week)	日期 (Date)	內容 (Subject/Topics)
7	2017/03/31	金融服務消費者心理與行為 (Consumer Psychology and Behavior on Financial Services)
8	2017/04/07	教學行政觀摩日 (Off-campus study)
9	2017/04/14	區塊鏈技術 (Blockchain Technology)
10	2017/04/21	期中報告 (Midterm Project Report)
11	2017/04/28	Python Pandas財務大數據分析 (Finance Big Data Analytics with Pandas in Python)
12	2017/05/05	人工智慧與深度學習金融科技 (Artificial Intelligence and Deep Learning for Fintech)

課程大綱 (Syllabus)

週次 (Week)	日期 (Date)	內容 (Subject/Topics)
13	2017/05/12	Fintech 金融科技個案研究 II (Case Study on Fintech II)
14	2017/05/19	金融科技財富管理：機器人理財顧問 (Robo-Advisors for Wealth Management in Fintech)
15	2017/05/26	投資組合最佳化與程式交易 (Portfolio Optimization and Algorithmic Trading)
16	2017/06/02	金融科技智慧問答系統 (Intelligent Question Answering System for Fintech)
17	2017/06/09	期末報告 I (Final Project Presentation I)
18	2017/06/16	期末報告 II (Final Project Presentation II)

教學方法與評量方法

- 教學方法

- 講述、討論、
賞析、模擬、
問題解決、實作

- 評量方法

- 實作、報告、上課表現

教材課本

- 教材課本
 - 講義 (Slides)
 - Fintech 金融科技相關個案與論文
(Cases and Papers related to Fintech Financial Technology)

參考書籍

1. Susanne Chishti and Janos Barberis, The FINTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries, Wiley, 2016.
2. Paolo Sironi, FinTech Innovation: From Robo-Advisors to Goal Based Investing and Gamification, Wiley, 2016.
3. Michael Heydt , Mastering Pandas for Finance, Packt Publishing, 2015
4. Yves Hilpisch, Python for Finance: Analyze Big Financial Data, OReilly Media, 2014
5. James Ma Weiming, Mastering Python for Finance, Packt Publishing, 2015
6. Fabio Nelli, Python Data Analytics: Data Analysis and Science using PANDAs, matplotlib and the Python Programming Language, Apress, 2015

作業與學期成績計算方式

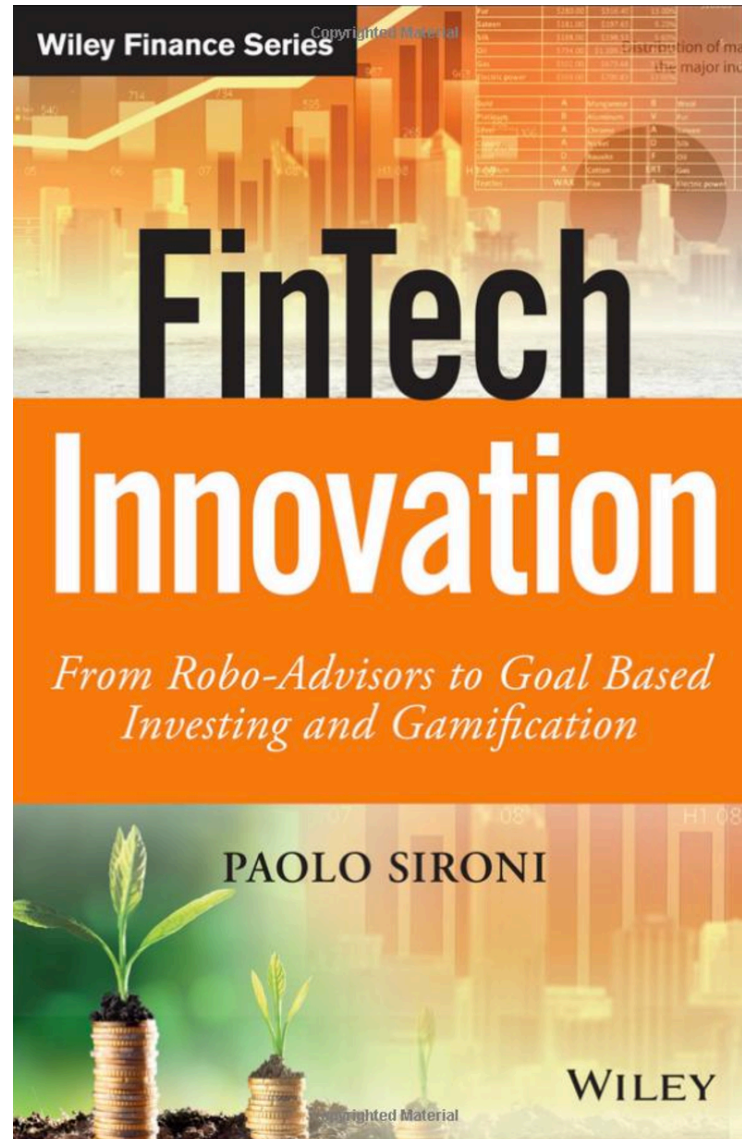
- 作業篇數
 - 3篇
- 學期成績計算方式
 - 期中評量：30 %
 - 期末評量：30 %
 - 其他（課堂參與及報告討論表現）：40 %

The FINTECH Book: The Financial Technology Handbook for Investors, Entrepreneurs and Visionaries,

Susanne Chishti and Janos Barberis, Wiley, 2016.



FinTech Innovation: From Robo-Advisors to Goal Based Investing and Gamification, Paolo Sironi, Wiley, 2016



FinTech

Financial Technology

FinTech



Financial Technology

FinTech

“providing
financial services
by making use of
software and
modern technology”

Financial Services

Money

Market

Financial Services



Financial Revolution with Fintech

A financial services revolution

Consumer Trends



1. Simplification



2. Transparency



3. Analytics



4. Reduced Friction

FinTech: Financial Services Innovation

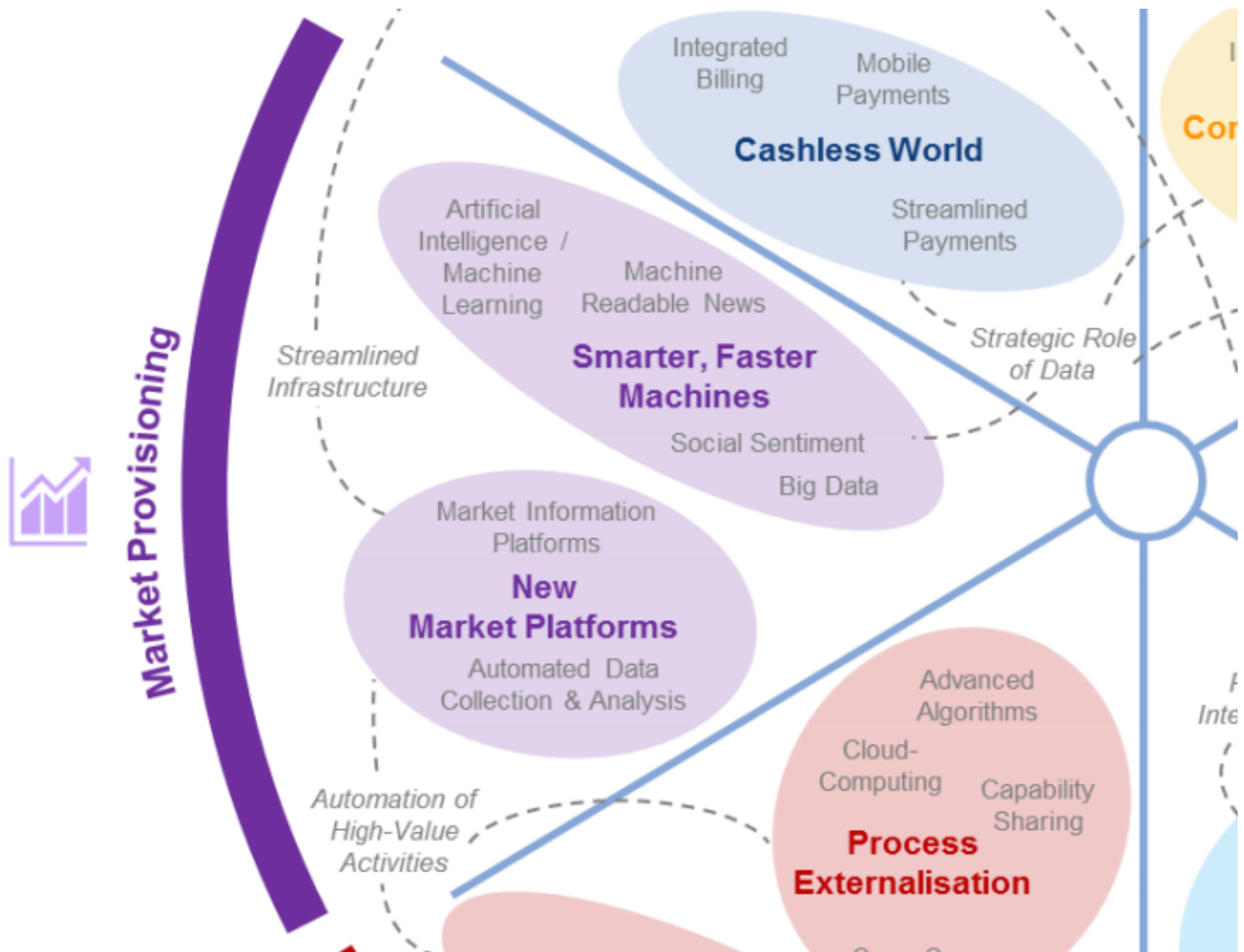


FinTech:

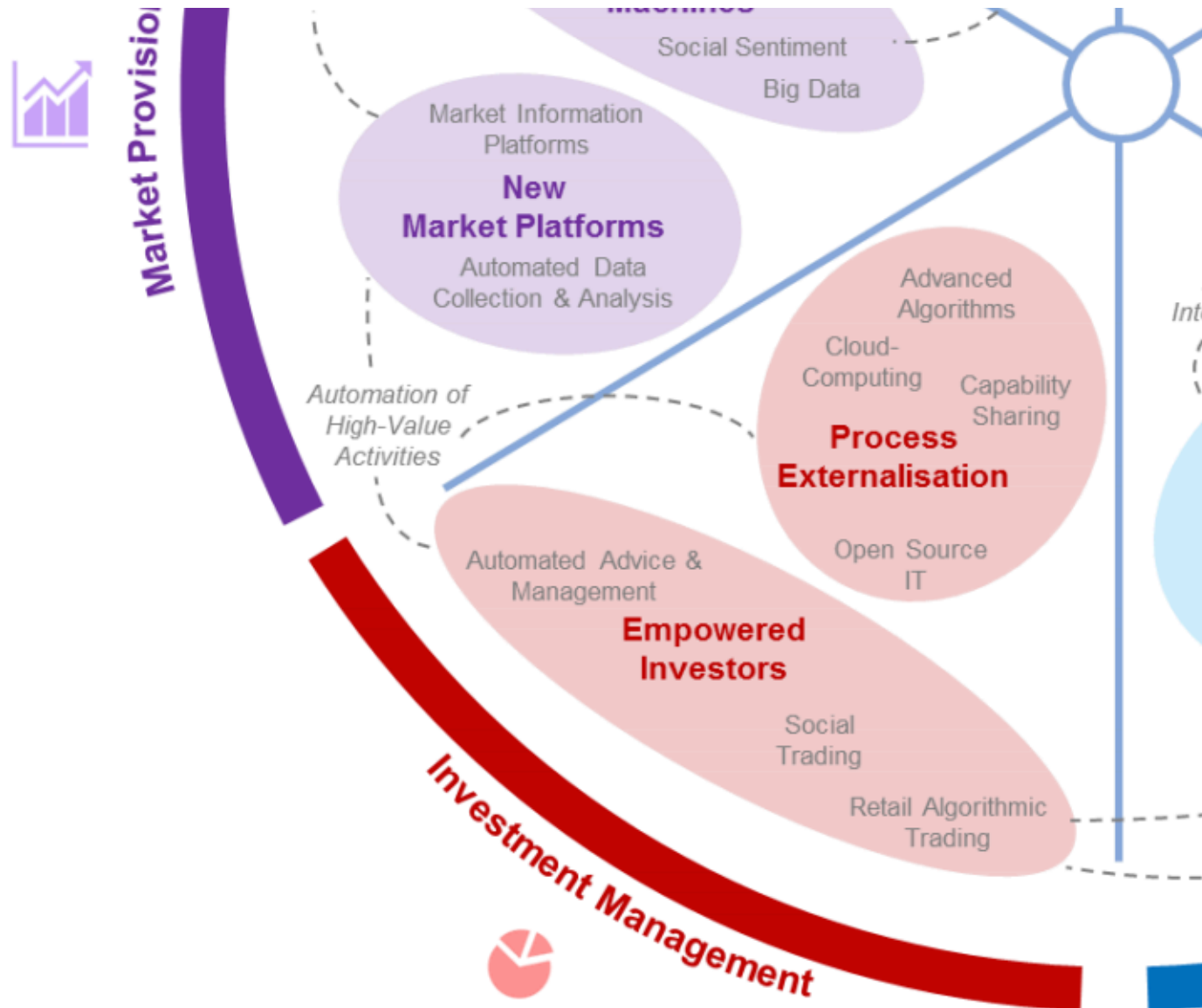
Investment Management

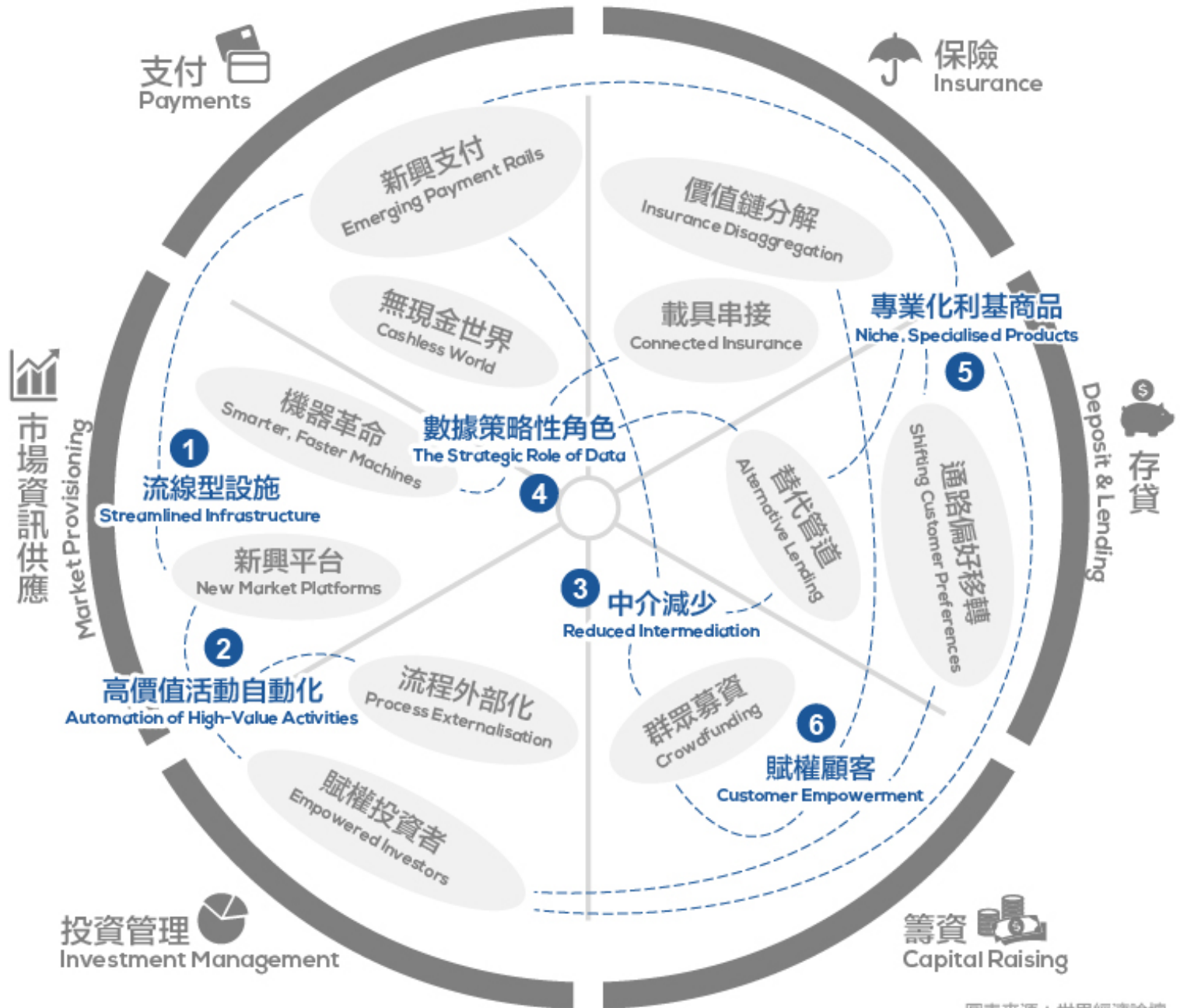
Market Provisioning

FinTech: Market Provisioning









FinTech: Investment Management





圖表來源：世界經濟論壇

FinTech

功能	創新項目
 支付 Payments	無現金世界 (Cashless World) 新興支付 (Emerging Payment Rails)
 保險 Insurance	價值鏈裂解 (Insurance Disaggregation) 保險串接裝置 (Connected Insurance)
 存貸 Deposit & Lending	替代管道 (Alternative Lending) 通路偏好移轉 (Shifting Customer Preferences)
 籌資 Capital Raising	群眾募資 (Crowdfunding)
 投資管理 Investment Management	賦權投資者 (Empowered Investors) 流程外部化 (Process Externalisation)
 市場資訊供應 Market Provisioning	機器革命 (Smarter, Faster Machines) 新興平台 (New Market Platforms)

圖表來源：Fugle團隊整理

FinTech: Market Provisioning

Smarter, Faster Machines

市場資訊供應



創新

關鍵趨勢

機器革命
Smarter, Faster
Machines

機器易用數據 (Machine Accessible Data)、人工智慧 / 機器學習、大數據

新興平台
New Market
Platforms

固定收益商品平台 ALGOMI、基金 / 組合型基金平台 NOVUS、私募 / 創投平台 BISON、未公發股權平台 LIQUITY、原物料商品與衍生性合約平台 ClauseMatch

圖表來源：Fugle團隊整理

FinTech: Investment Management

投資管理



創新

關鍵趨勢

賦權投資者
Empowered
Investors

社群交易、機器推薦與財富管理、零售演算法交易 (Retail Algorithmic Trading)

流程外部化
Process
Externalisation

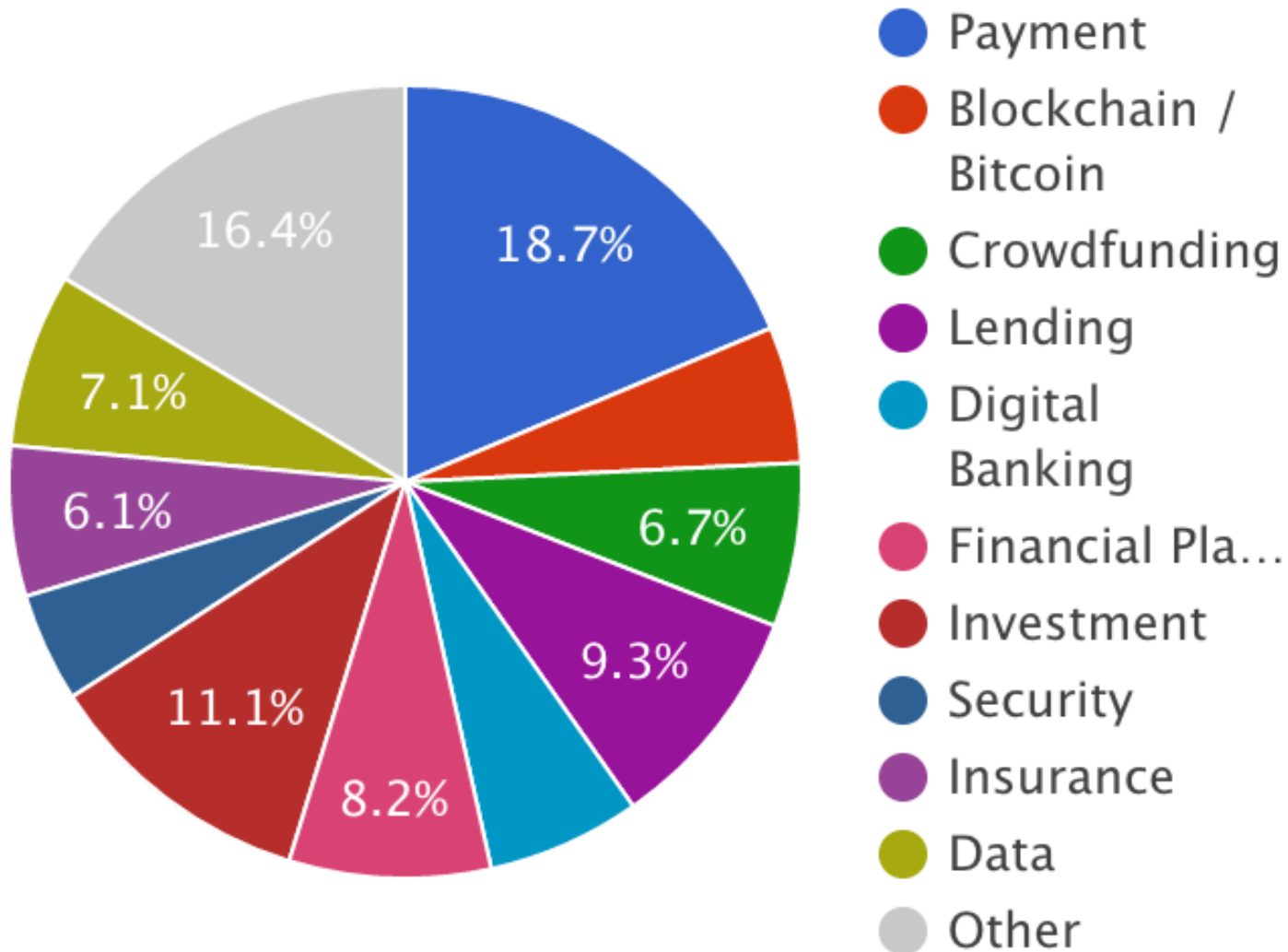
流程即服務 (Process-as-a-Service, PaaS)、能力共享 (Capability Sharing)、進階分析、自然語言

圖表來源：Fugle團隊整理

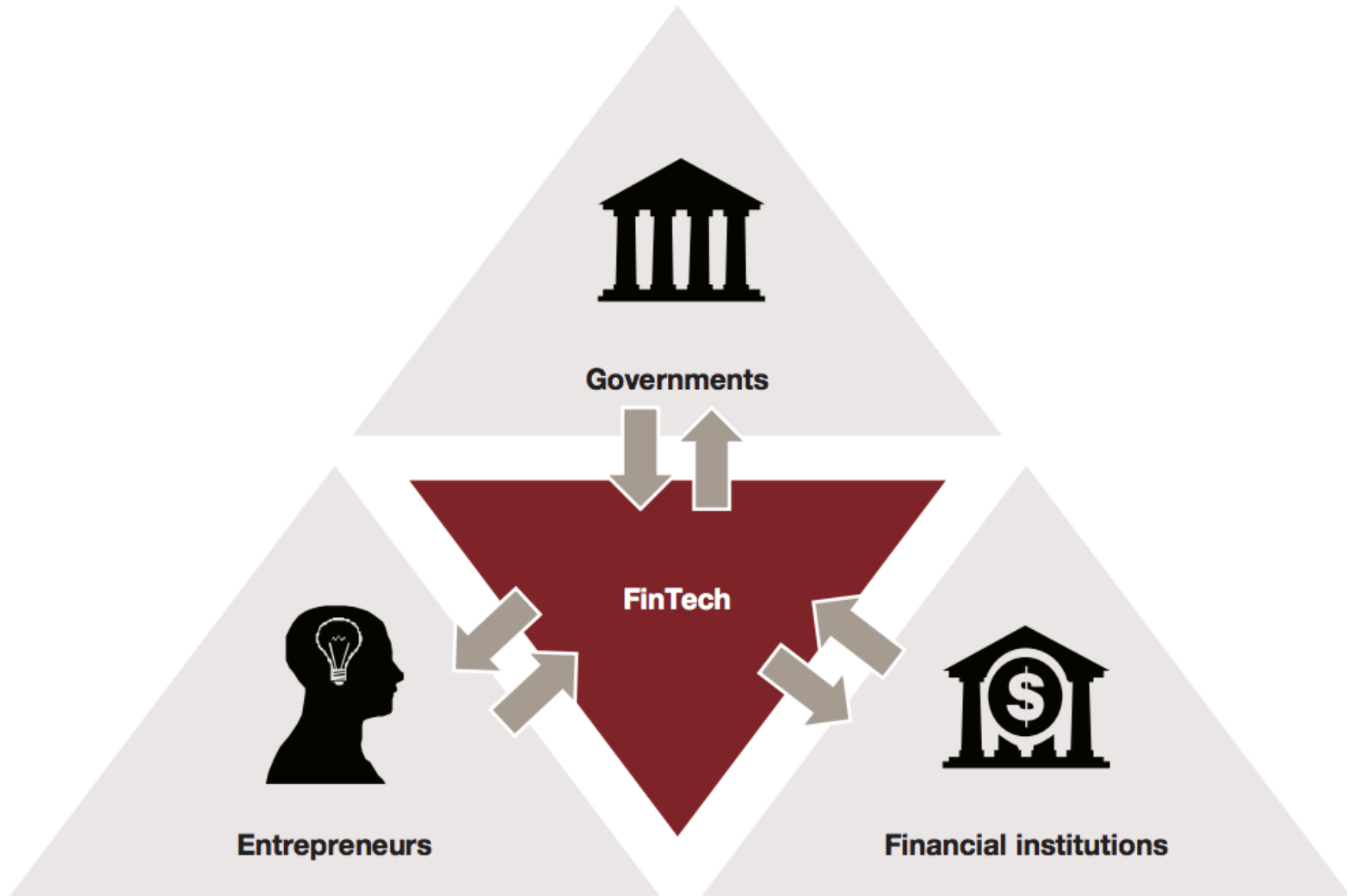
FinTech for Financial Services

- Retail Banking
- Lending and Financing
- Payments and Transfers
- Wealth and Asset Management
- Markets and Exchanges
- Insurance
- Blockchain Transactions

Fintech Companies



Major Participants in the FinTech Ecosystem



FinTech Ecosystem Development Framework

1. Business environment/access to markets

Cost advantages

Labor availability and know-how

Degree of clustering & integration

Infrastructure quality & access

2. Government/regulatory support

Policy setting

Land ownership & development

Ease of doing business

Taxes & work permits

3. Access to capital

Governmental funding

Bank funding

PE/VC funding

Incubators / accelerators

4. Financial expertise

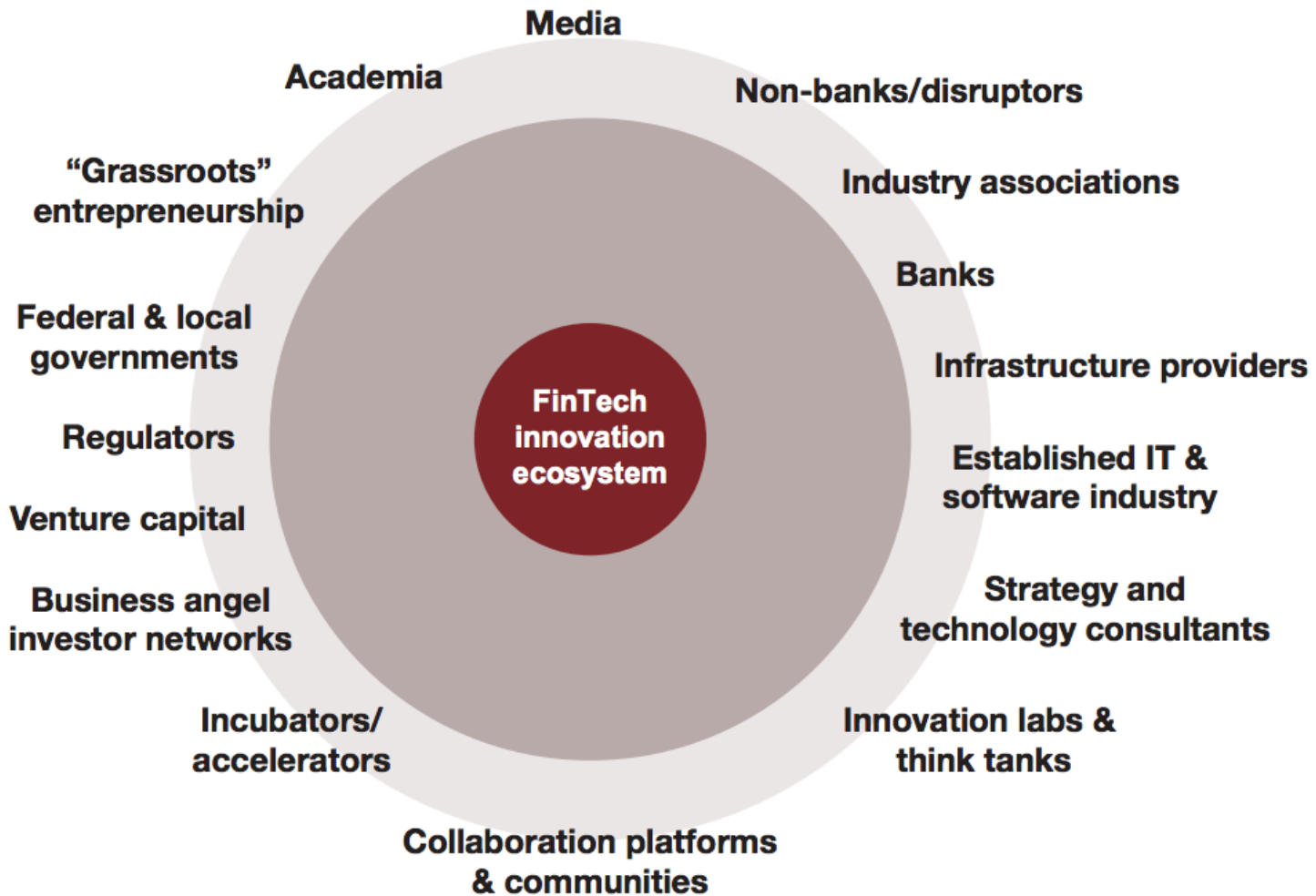
Funding strategies

“Know your customer” & regulatory requirements

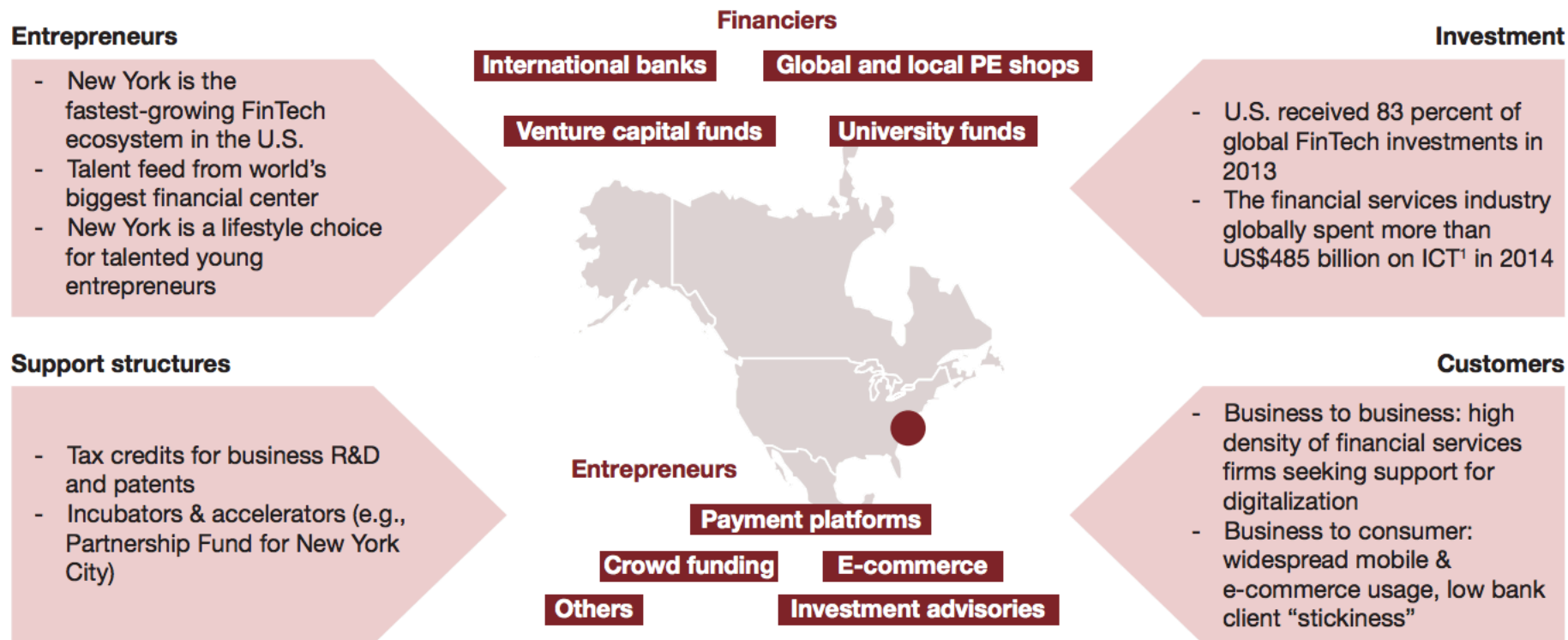
Deals structuring

Due diligence

The FinTech Innovation Ecosystem



The U.S. FinTech landscape



Fintech Startups

















USA Fintech Ecosystem

+ ADD STARTUP

Startups (74) | News (11)

Crowdfunding

STARTUP	DESCRIPTION	LINKS	STATUS	MONEY RAISED
 Crowdera				-
 AngelList	Community of start-ups & investors who make fundraising efficient	cb tw f	alive	\$24.1M
 CircleUp	Online marketplace that links accredited investors with consumer product and retail companies.	cb tw f	alive	\$53M
 Early Shres	Real estate crowdfunding platform	tw f	alive	
 Indiegogo	Crowdfunding platform	cb  tw f A	alive	\$56.5M
 Kickfurther	Businesses finance inventory. Backers earn returns.	tw f	alive	
 Kickstarter	Crowdfunding platform	cb  tw f A 	alive	\$10M
 Local lift	Brings crowdfunding to your local area.	cb tw f	alive	\$160k
 Onevest (Rock The Post)	Equity crowd-funding platform	cb  tw f	alive	\$2M
 Quirky	Community-led invention platform	cb tw f	alive	

FS

Fintech Startups WorldWide



✉ Subscribe to our Newsletter

🐦 fstartupsco

📧 fintech@startups.watch

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Financial Technology (Fintech) Categories

1. Banking Infrastructure
2. Business Lending
3. Consumer and Commercial Banking
4. Consumer Lending
5. Consumer Payments
6. Crowdfunding
7. Equity Financing
8. **Financial Research and Data**
9. Financial Transaction Security
10. Institutional Investing
11. International Money Transfer
12. Payments Backend and Infrastructure
13. Personal Finance
14. Point of Sale Payments
15. Retail Investing
16. Small and Medium Business Tools

FinTech Ecosystem (April 2015)

Lending

OnDeck, LendingClub, Kabbage, PROSPER, gorefi, wonga, Orchard, zest finance, Affirm, borro, earnest

Personal Finance

Credit Karma, mint.com, playmoolah, BillPin, OnTrees, BILL GUARD, CoverHound, HelloWallet, planwise, smartasset, wallaby

Payments

Square, stripe, PayPal, Paydiant, protean, WEPAY, GC, ReadyForZero, iZettle, Loop, BrainTree, venmo, BillMeLater, fuzenetwork, argo pay, Currency, CardFlight

Retail Investments

Robinhood, motif investing, KAPITALL, FutureAdvisor, tradier, SigFig, wealthfront, Bettermint, Personal Capital, TaskHero, LV

FinTech

1,072 Companies

Contact
info@venturescanner.com
 to see all companies

Institutional Investments

ADDEPAR, QUOVO, StockTwits, SumZero, KENSHO, Hedge, LUCENA RESEARCH, finalta, CONTIX

Equity Financing

CircleUp, gust, Sharesport

Remittances

XOOM, WorldRemit, azimo, CurrencyFair

Business Tools

xero, zen payroll, free

Crowd-funding

KICKSTARTER, Quirby, INDIEGOGO, tilt, LOCAL LIFT, neighbor.ly

Consumer Banking

SIMPLE, Cardlike, vobu, Moven

Financial Research

Seeking Alpha, COSEER, STOCK TAGON, Q

Banking Infrastructure

ploid, Bank Solar, DemystData, STANDARD TREASURY, spout

Financial Technology (FinTech)

THE FINTECH ECOSYSTEM

ROBO-ADVISORS & PERSONAL FINANCE



BLOCKCHAIN & BITCOIN



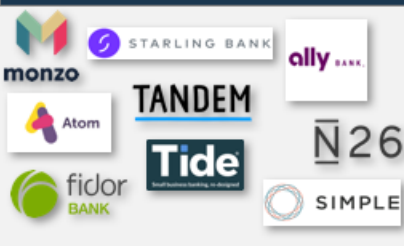
INSURTECHS



REGTECHS



DIGITAL BANKS



ALTERNATIVE FINANCE



PAYMENTS & REMITTANCES



BI INTELLIGENCE

Source: Company websites, BI Intelligence

Financial Technology (FinTech)

THE FINTECH ECOSYSTEM

Payments & Transfers



Lending & Financing



Retail Banking



Financial Management

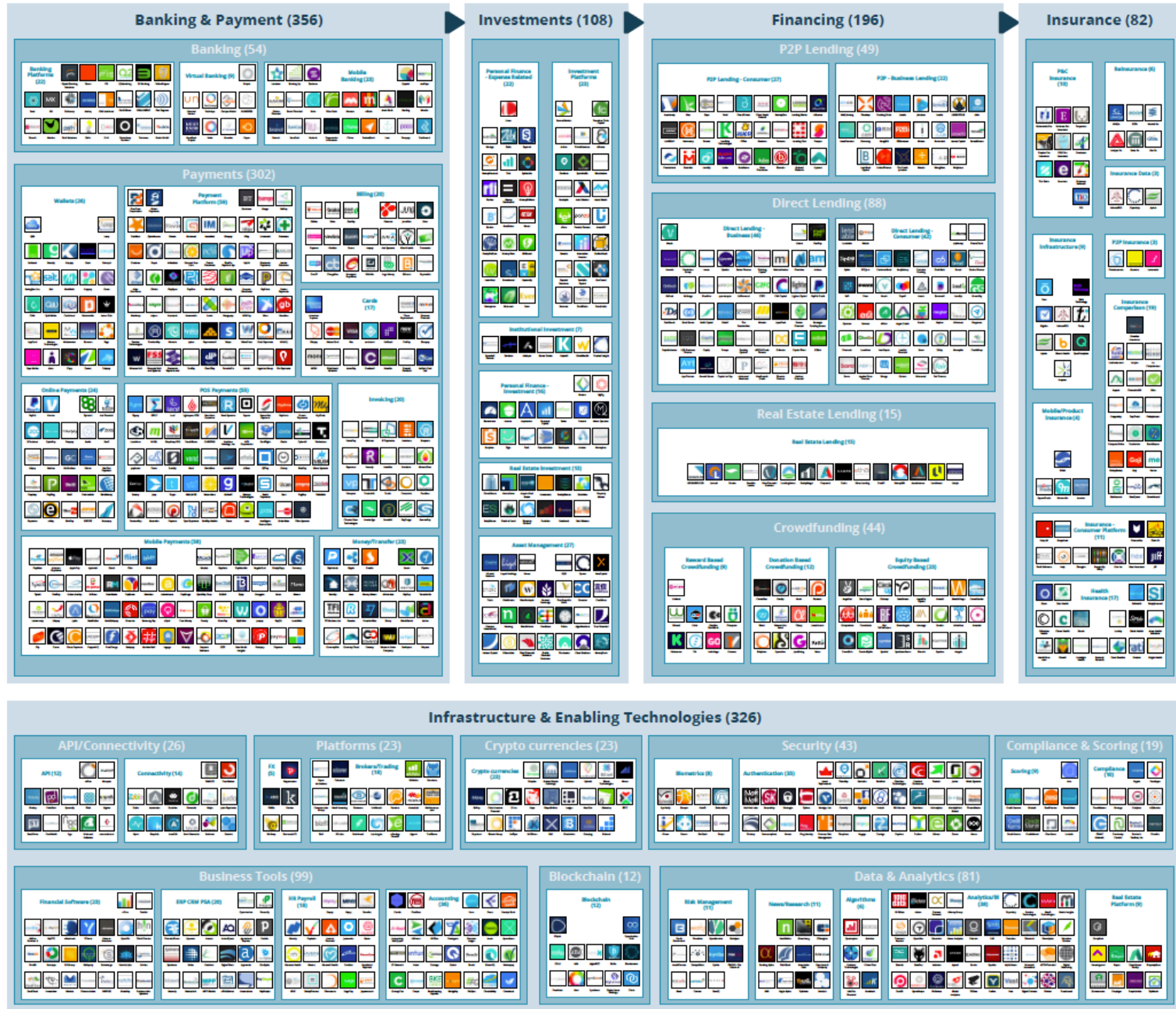


Insurance



Markets & Exchanges





FinTech Landscape Enabling Technologies

Data & Analytics

Technologies (326)

Security (43)

Biometrics (8)



Authentication (35)



Compliance & Scoring (19)

Scoring (9)



Compliance (10)



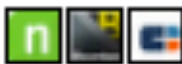
(12)

Data & Analytics (81)

Risk Management (17)



News/Research (11)



Algorithms (6)



Analytics (38)



Real Estate Platform (9)



FINTECH | LANDSCAPE

everisDigital

Digital & Mobile payments



Bitcoin & Cryptocurrency



Capital Markets & Investing



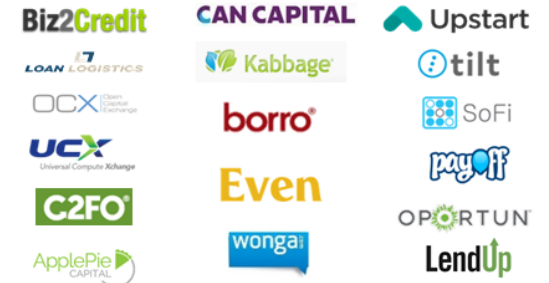
Banking & Corporate Finance



Big Data & Analytics



Financial platforms



Crowdfunding & peer-to-peer lending



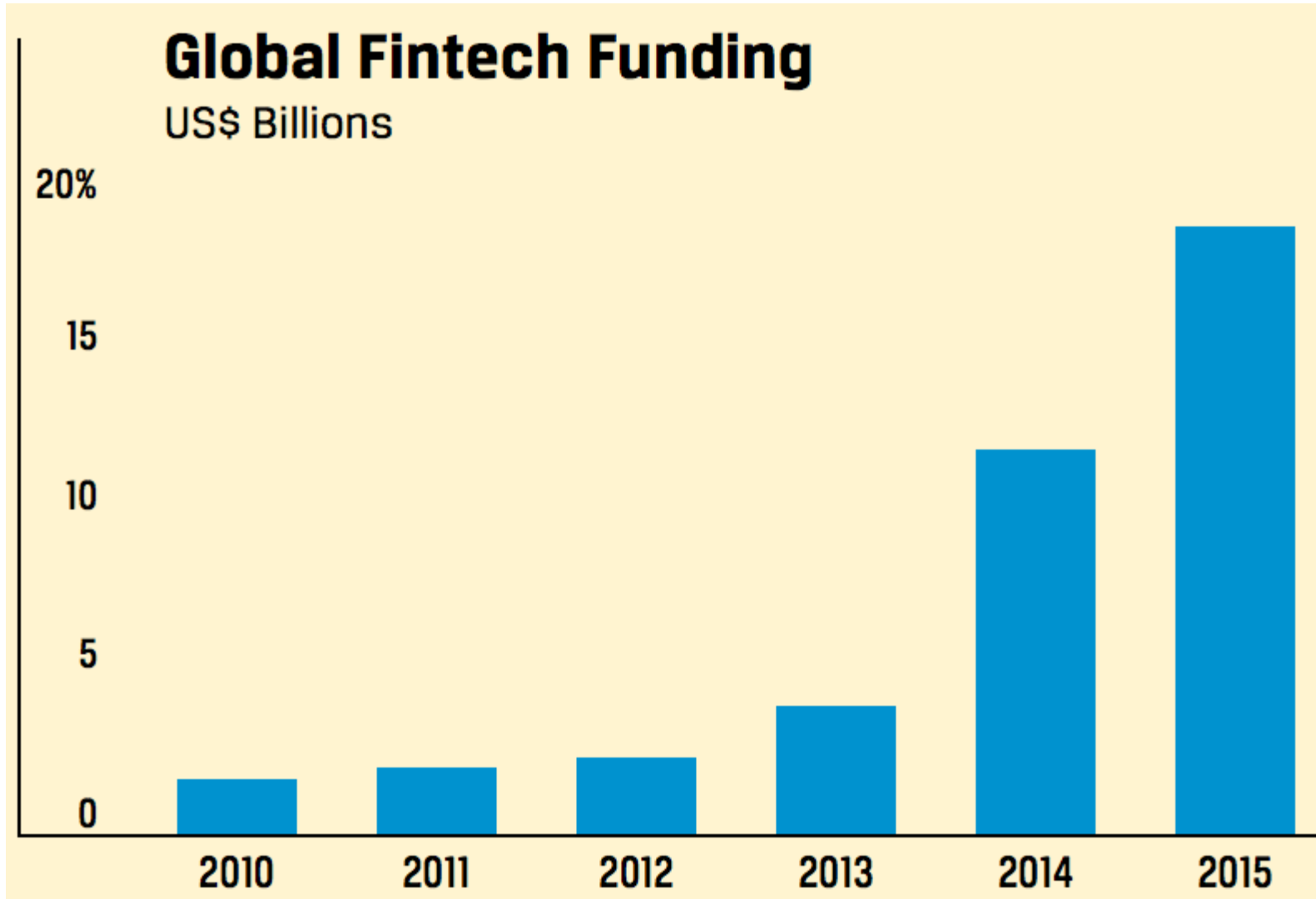
Personal financial management



Blockchain technology



Global Fintech Funding



Source: Rubino, J. (2016). My Favorite Robot. *CFA Institute Magazine*, 27(3), 43-46.

Fintech Startups WorldWide

Bankcard Organization



Acquiring Service Provider



Prepaid Card Issuer



Software, Hardware and Device Provider



Telecom Operator



City Commercial Bank



Online Payment Company



Mobile Payment Company



State-owned Bank



Joint-stock Bank



Fintech: Financial Technology

Disrupting Banking: **The Fintech Startups** **That Are Unbundling** **Wells Fargo, Citi and** **Bank of America**

Fintech: Unbundling the Bank

Unbundling of a Bank



Fintech: Unbundling the Bank

Wealth Management: Wealthfront



Fintech: Financial Technology

Disrupting

European Banking:

The FinTech Startups

That Are Unbundling

HSBC, Santander, and

BNP

Unbundling of a European Bank

The image illustrates the unbundling of a European bank into various fintech services. The central focus is the CB Insights website, which is surrounded by numerous fintech logos. The website screenshot shows a navigation menu with categories like 'Personal', 'Business', 'Everyday banking', 'Borrowing', 'Investing', 'Insurance', and 'Planning'. Below the navigation, there are several promotional banners and a grid of product categories. The logos are connected to the website by yellow arrows, indicating their integration or relationship with the bank's services.

Unbundling of a European Bank

Top Navigation (HSBC Personal/Business):

- Personal | Business
- Search
- Internet Banking | Log on | Register >

Main Categories:

- Everyday banking (Accounts & services)
- Borrowing (Loans & mortgages)
- Investing (Products & analysis)
- Insurance (Property & family)
- Planning (for now & the future)

International Money Transfer Banner:

Send money overseas in a few clicks
 It's secure, quick and easy. See just how much we could save you.
 Fees may apply. Payments may also incur agency and/or beneficiary bank fees. [Find out more](#)

Service Links:

- Find a mortgage
- Our lowest ever loan rate
- Save Together offer
- International money transfer

Business Banking Section:

- Business Banking (Turnover up to £2m)
- Commercial Banking (Turnover £2m to £30m)
- Corporate Banking (Turnover in excess of £30m)
- International Business
- Online Services

Logos and Services:

- ffrees, osper, CENTRALWAY, SQUIRREL, nutmeg, wikifolio, eToro, tink, CAPITAL, Money Dashboard, moni, transferGo, worldremit, azimo, CurrencyFair, Klarna, adyen

The **New Alpha**: 30+ Startups Providing Alternative Data For Sophisticated Investors

New sources of **data mined** by startups like **Foursquare**, **Premise**, and **Orbital Insight** are letting investors understand **trends** before they happen.

The New Alpha: 30+ Startups Providing Alternative Data For Sophisticated Investors

Alternative Data Sources



From Algorithmic Trading To Personal Finance Bots: 41 Startups Bringing AI To Fintech

From Algorithmic Trading To Personal Finance Bots: 41 Startups Bringing AI To Fintech

AI in Fintech

41 Startups Bringing Artificial Intelligence To Fintech

General Purpose/ Predictive Analytics



Market Research & Sentiment Analysis



Search Engine



Quantitative Trading



Blockchain



Debt Collection



AI Assistants/Bots



Fraud Detection



Credit Scoring



Personal Banking



Artificial Intelligence (AI) in Fintech

General Purpose/ Predictive Analytics



Market Research & Sentiment Analysis



Search Engine



Artificial Intelligence (AI) in Fintech

Quantitative Trading



Blockchain



Debt Collection



AI Assistants/Bots



Fraud Detection



Credit Scoring



Personal Banking



Fintech: Wealth Management

Company	Select Investors
Wealthfront	DAG Ventures, Index Ventures, Greylock Partners, The Social+Capital Partnership
Betterment	Bessemer Venture Partners, Athemis Group, Menlo Ventures
SigFig	Doll Capital Management, Union Square Ventures, Bain Capital Ventures
Aspiration	Renren, GSV Capital, Capricorn Investment Group, IGSB
Bloom	Commerce Ventures, DST Systems, Hyde Park VP, QED Investors, UMB Financial
Rebalance IRA	N/A
Hedgeable	SixThirty
WiseBanyan	VegasTech Fund
Personal Capital	Institutional Venture Partners, Venrock, Crosslink Capital

Fintech: Personal Investing

Company	Select Investors
eToro	BRM Group, Ping An Ventures, Spark Capital
Openfolio	FinTech Collective
DriveWealth	Route 66 Ventures
Tip'd Off	Raj Parekh, Bill Crane, Shaun Coleman
Kapitall	Bendigo Partners, Linden Venture Fund
Stash	N/A
Stox	SingulariTeam
Robinhood	Google Ventures, Index Ventures, Andreessen Horowitz, Ribbit Capital, NEA
Motif Investing	Norwest Venture Partners, Foundation Capital, Ignition Capital, Goldman Sachs
Loyal3	DNS Capital

FinTech Trends



Capital One **Mashable**

FINANCIAL TECHNOLOGY

PREDICTIONS & TRENDS

- More than **50%** of respondents predict that by **2030**, most payments will be cashless and non-paper based.
- Respondents cited big data analytics and alternative payment forms as the two innovations that are likely to have the greatest impact on the financial services space in the next **3-5 years**.

FinTech

Big Data Analytics

WHICH INNOVATION WILL HAVE THE GREATEST IMPACT ON THE FINANCIAL SERVICES SPACE IN THE NEXT 3-5 YEARS?



27%

Big data analytics

26%

Alternative forms of payments/lending

19%

Blockchain

17%

IoT

9%

AI

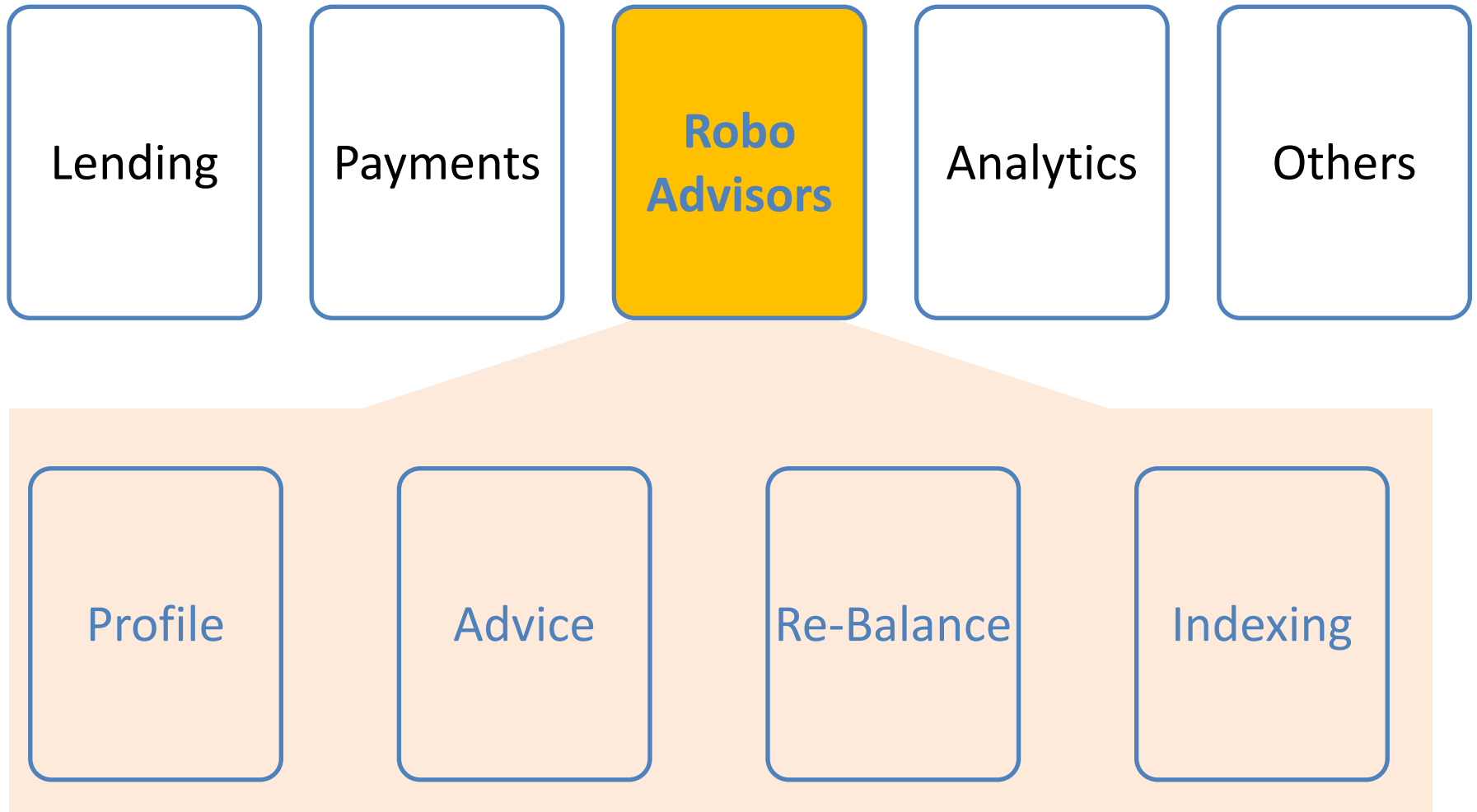
2%

Other

Fintech Robo Advisors

Big Data Driven Disruption: Robo-Advisor

FinTech high-level classification



Wealthfront: Fintech Robo Advisor



Why Wealthfront ▾

Products ▾

Who we are ▾

Help Center

Blog

Log In

Invest now

The most tax-efficient, low-cost, hassle-free way to invest

Invest with Wealthfront

See Our Journey

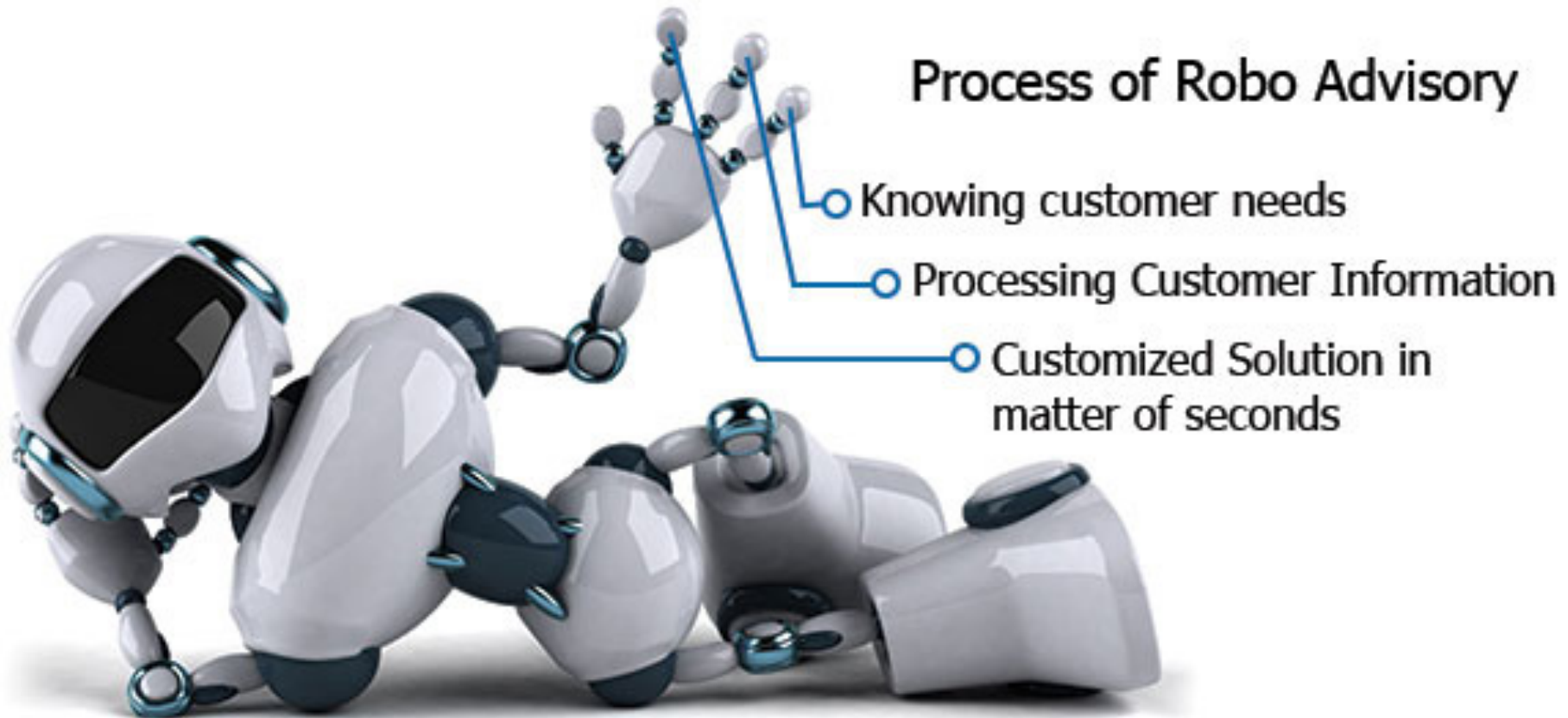


Do you have the time to invest well?

Wealthfront invests your money for you with a minimal amount of work. We monitor your portfolio every day to look for opportunities to rebalance or harvest tax losses. Are you doing the same?

<https://www.wealthfront.com/>

Process of Robo Advisors



Benefits of Robo Advisors

Benefits of Robo Advisors

- Unbiased Advice —
- No minimum Investment required —
- Low Charges —
- Transparency —
- Customised Solutions —



Robo-Advisor Business Models

- **Full service online Robo-advisor**
 - 100% automated without any human element
- **Hybrid Robo-advisor model**
 - being pioneered by firms like Vanguard & Charles Schwab
- **Pure online advisor**
 - primarily human in nature

Usecases of Robo-Advisors

1. Determine individual **Client profiles & preferences**
2. Identify **appropriate financial products**
3. Establish correct **Investment Mix** for the client's profile
4. Using a **algorithmic approach**, choose the appropriate **securities** for each client account
5. Continuously **monitor the portfolio & transactions** within it to tune performance
6. Provide **value added services**
7. Ensure the **best user experience** by handling a whole range of financial services

Business Requirements for a Robo-Advisor (RA)

1. Collect Individual Client Data
2. Client Segmentation
3. Algorithm Based Investment Allocation
4. Portfolio Rebalancing
5. Tax Loss Harvesting
6. A Single View of a Client's Financial History

Algorithms for a Robo-Advisor (RA)

- Leverage **data science** & **statistical modeling** to automatically allocate client wealth across different asset classes (such as domestic/foreign stocks, bonds & real estate related securities) to **automatically rebalance portfolio** positions based on changing market conditions or client preferences.
 - These investment decisions are also made based on detailed **behavioral understanding** of a client's **financial journey metrics**
 - Age, Risk Appetite & other related information.

Algorithms for a Robo-Advisor (RA)

- RA platforms also provide 24 × 7 tracking of **market movements** to use that to track **rebalancing decisions** from not just a portfolio standpoint but also from a taxation standpoint.

Algorithms for a Robo-Advisor (RA)

- A **mixture** of different **algorithms** can be used such as **Modern Portfolio Theory (MPT)**, **Capital Asset Pricing Model (CAPM)**, the **Black Litterman Model**, the **Fama-French** etc.
 - These are used to allocate assets as well as to adjust positions based on market movements and conditions.

SAS 第六屆大數據資料科學家競賽

FinTech 預測未來挑戰賽



最新消息

大賽起源

活動辦法

我要報名

常見問題



SAS 與 玉山銀行

第六屆 大數據資料科學家競賽

校園競賽

FinTech

數據分析培訓專業課程資格

SAS 與玉山銀行 優先面試與招募

挑戰 **\$300,000** 總獎金

預測未來 挑 · 戰 · 賽

主辦單位



玉山銀行 E.SUN BANK

FinTech 預測未來挑戰賽

在這個巨量資料的時代，懂得巨量分析的專業人才「資料科學家」

(Data Scientist) 將成為未來炙手可熱的明日之星。SAS 希望學生以創意無限及發掘新商機的角度出發，搭配巨量資料分析實例主題，鼓勵全國大學以分組專案及簡報競賽方式，分析高達兩千萬筆的巨量資料，親身體驗巨量分析的神奇魔力！

早鳥報名 · 優惠方案

報名成功者，並於**2017年3月5日前匯款完畢**

即享有**八折早鳥報名優惠!**

(原報名費每隊1000元，早鳥優惠價每隊800元)

我要報名

<http://saschampion.com.tw/>

SAS 第六屆大數據資料科學家競賽

FinTech 預測未來挑戰賽



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活動時間與地點:

1. 報名日期：2017年2月20日（一）至2017年3月10日（五）額滿為止
2. 起跑說明會：2017年3月17日（五）下午六點半至八點半止（每組皆須指派隊員出席，須事先報名）
3. 玉山銀行玉山人力發展中心1樓 登峰廳（台北市中山區撫順街41巷13號1樓）
4. 初賽資料分析訓練課程(Enterprise Guide)：2017年3月20日（一）至 3月26日（日），
每梯次為期1天(每梯次名額有限，依名額順序額滿為止，活動執行單位將通知參賽者可參加場次)

初賽【EG個人能力檢測】：2017年4月22日（六）下午一點半至四點止

入圍複賽公布日期：2017年4月26日（三）

複賽密集實戰課程(SAS密集實戰課程)：2017年4月28日（五）及4月29日（六）共2梯次，於台北大學資訊中心教室舉辦，每梯次為期1天，時間由主辦單位安排並通知，若該堂時間無法參與，請於收到通知後二天內提出相關證明，以利其他課程之安排與協調。

***備註：入圍複賽之隊伍方可參加**

複賽比賽日期：2017年5月01日（一）~ 2017年5月19日（五）下午五點止

入圍決賽公布日期：2017年6月2日（五）下午五點

決賽日期：2017年6月9日（五）賽仕電腦軟體股份有限公司（台北市中山區民生東路三段10號3樓）

公布得獎名單日期：2017年6月9日（五）晚上九點

頒獎典禮：2017年6月27日（二）

<http://saschampion.com.tw/detail.php>

AI and Big Data Analytics in Finance

- 財務金融大數據分析
 - Big Data Analytics in Finance
- 投資大數據分析
 - Big Data Analytics in Investment
- 人工智慧與財務應用
 - Artificial Intelligence and Financial Application
- 人工智慧與投資分析
 - Artificial Intelligence and Investment Analysis

財務金融大數據分析

Big Data Analytics in Finance

投資大數據分析

Big Data Analytics in Investment

人工智慧與財務應用

**Artificial Intelligence and
Financial Application**

人工智慧與投資分析

**Artificial Intelligence and
Investment Analysis**

Summary

- This course introduces the **fundamental concepts** and **research issues** of **Financial Technology (Fintech)**.
- Topics include
 - Evolution of Fintech: Money and Financial Services
 - Fintech: Technology Innovation in Financial Services
 - Fintech and Financial Services Value Chain
 - Fintech Business Models Innovation
 - Consumer Psychology and Behavior on Financial Services
 - Blockchain Technology
 - Finance Big Data Analytics with Pandas in Python
 - Artificial Intelligence and Deep Learning for Fintech
 - Robo-Advisors for Wealth Management in Fintech
 - Portfolio Optimization and Algorithmic Trading
 - Intelligent Question Answering System for Fintech
 - Case Study on Fintech

Contact Information

戴敏育 博士 (Min-Yuh Day, Ph.D.)

專任助理教授

淡江大學 資訊管理學系

電話：02-26215656 #2846

傳真：02-26209737

研究室：B929

地址：25137 新北市淡水區英專路151號

Email：myday@mail.tku.edu.tw

網址：<http://mail.tku.edu.tw/myday/>

