

International Conference on FinTech Law and Regulation

From FinTech to TechFin: The Regulatory Challenges of Data- Driven Finance

October 9, 2017

University of Luxembourg

Ross P Buckley

**King & Wood Mallesons Professor of
International Finance Law, UNSW Sydney**



Overview

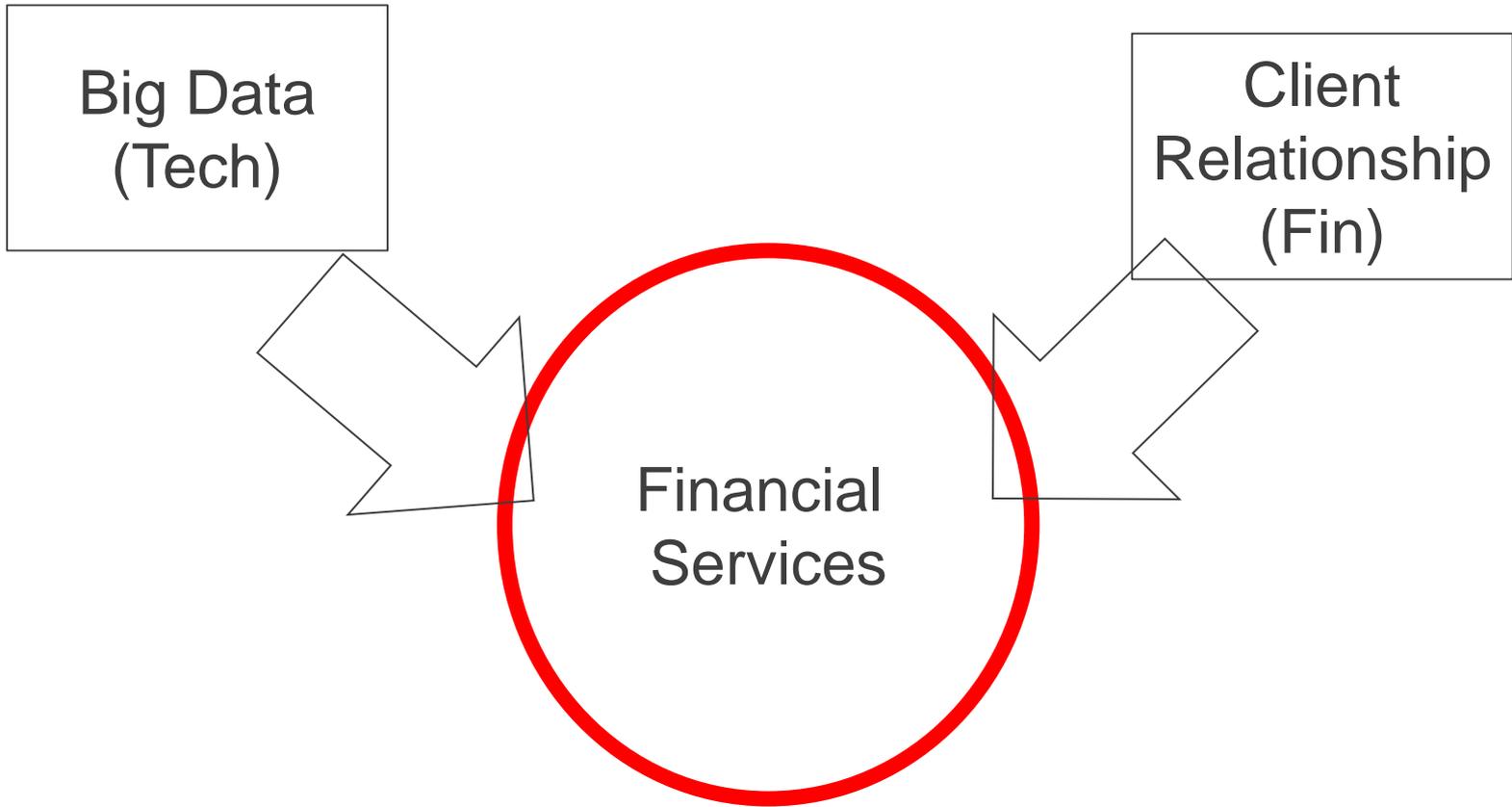
Organising idea – The entity that knows the most about you is best placed to price credit or insurance for you. Traditionally that has been your bank.

Increasingly this will not be the case unless banks change their entire relationship with data.

In this sense mandating open banking (over their objections) may save the banks lives – more on this later.

1. Definition FinTech ↔ TechFin

- FinTech: the application of technology to facilitate the delivery of financial services – starting point is the customer (client/investor) relationship with the financial service provider
- TechFin: the application of financial services to technology – starting point is the tech and associated data
- So TechFins are data-rich companies – data obtained thru selling us things (such as Amazon) or thru providing tech services (such as Google or Facebook or ...)



Big Data
(Tech)



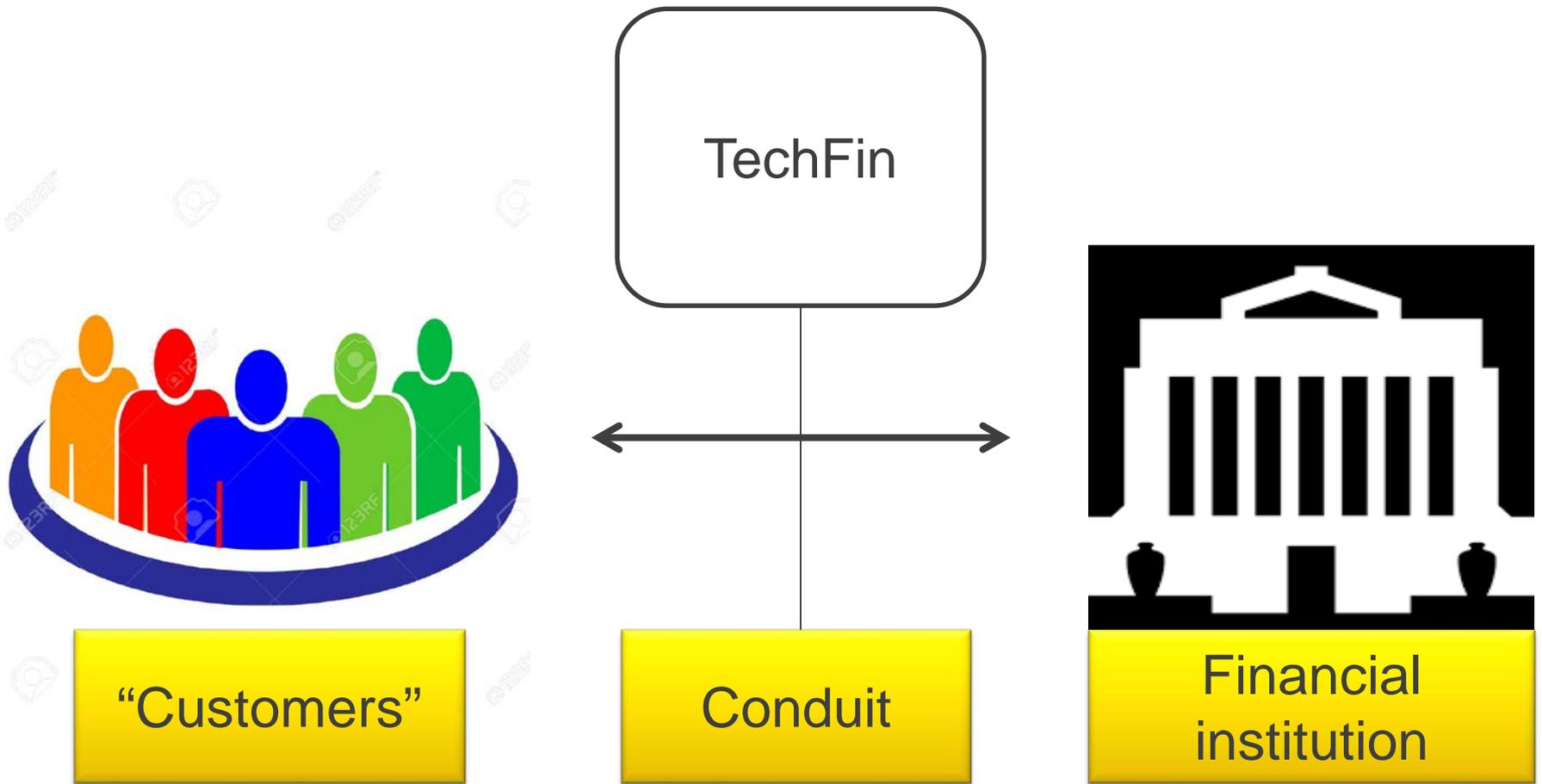
Client
Relationship
(Fin)

Client Relationship
WeBank
(Fin)

Financial
Services



TechFin Model Stage One



Knowing your preferences from multiple sources...

- Website / data: google (interest preferences), facebook (social media preferences) etc
- Shopping: amazon, woolworths/coles delivery (shopping preferences)
- Phone: m-pesa (communication preferences)
- Payment: alipay, visa/mastercard (shopping, travel preferences)

Allows Algorithms to determine a tremendous amount about you.

Data analytics rules!

Walmart – choker chain for dog, or stopper for a door. Multiply these correlations by tens of thousands!

TechFin

The monetization of Data

Important – most of this presentation anticipates a future we are strongly on track for, but have not yet reached except in China.

Our Eureka Moment

Money has been Digitized and Now Data is Monetized

FinTech Today

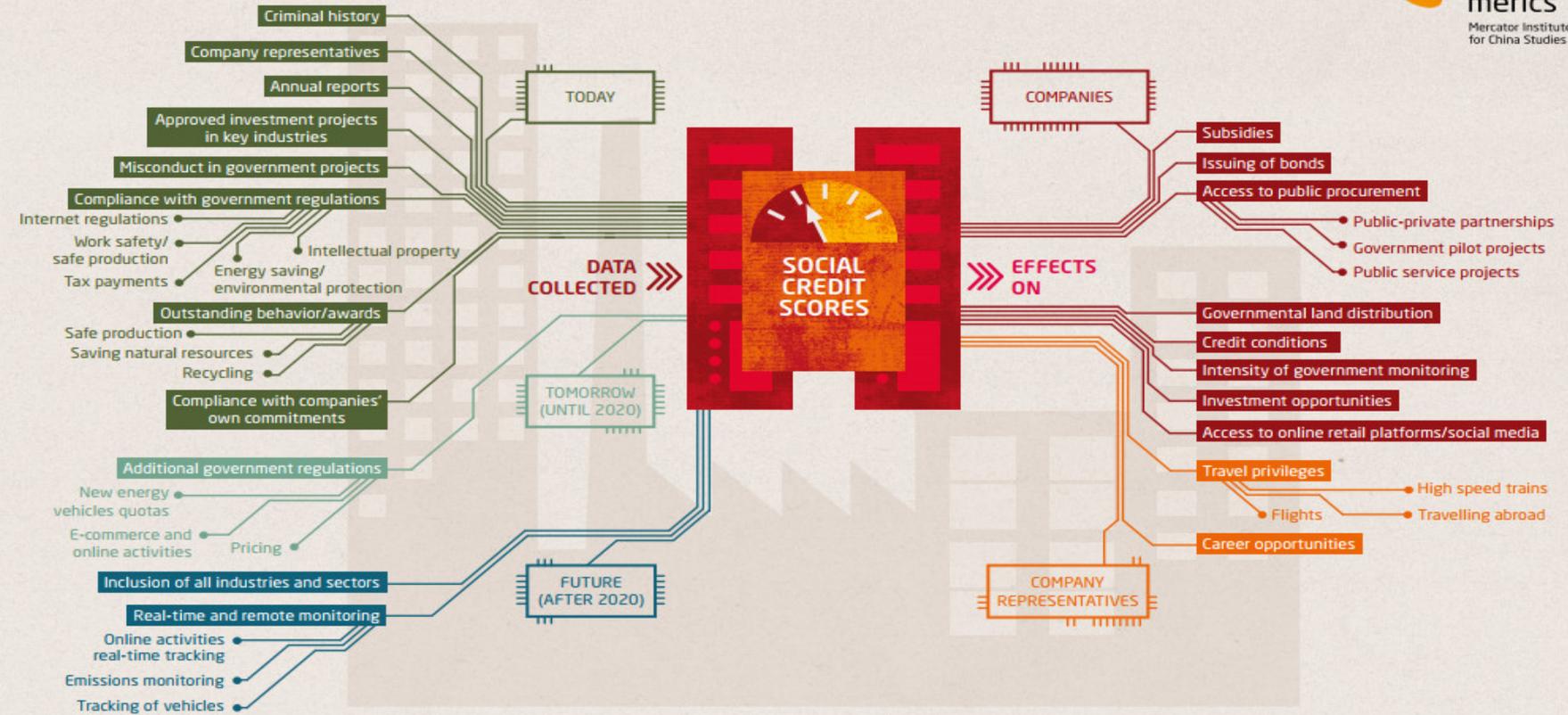
TechFin Tomorrow



China Influencing Business Decisions via Social Credit Scores

China's tight grip on enterprises

Influencing business decisions via Social Credit Scores*



*Selection of data collected and exemplary effects of Social Credit Scores.
Source: Policy documents and regulations released by the Chinese central government since 2014.

[China's Social Credit System: AI-driven panopticon or fragmented foundation for a sincerity culture?](#) – Masha Borak

FinTech to TechFin represents a seachange, a paradigm shift that China is making right now

The Industrial Epochs by Professor Klaus Schwab*

Automation

1784
Steam Engine
Mechanical Prod

Industrialization

1870
Electricity
Labor Division

Communication

1969
Communication
Electronics

Smart Automation

2016
Big Data & AI
CyberPhysical

Source: [The Fourth Industrial Revolution: what it means, how to respond](#) – Klaus Schwab

Start



Source: [Study: less than 1% of the world's data is analysed, over 80% is unprotected](#) – J. Burn-Murdoch

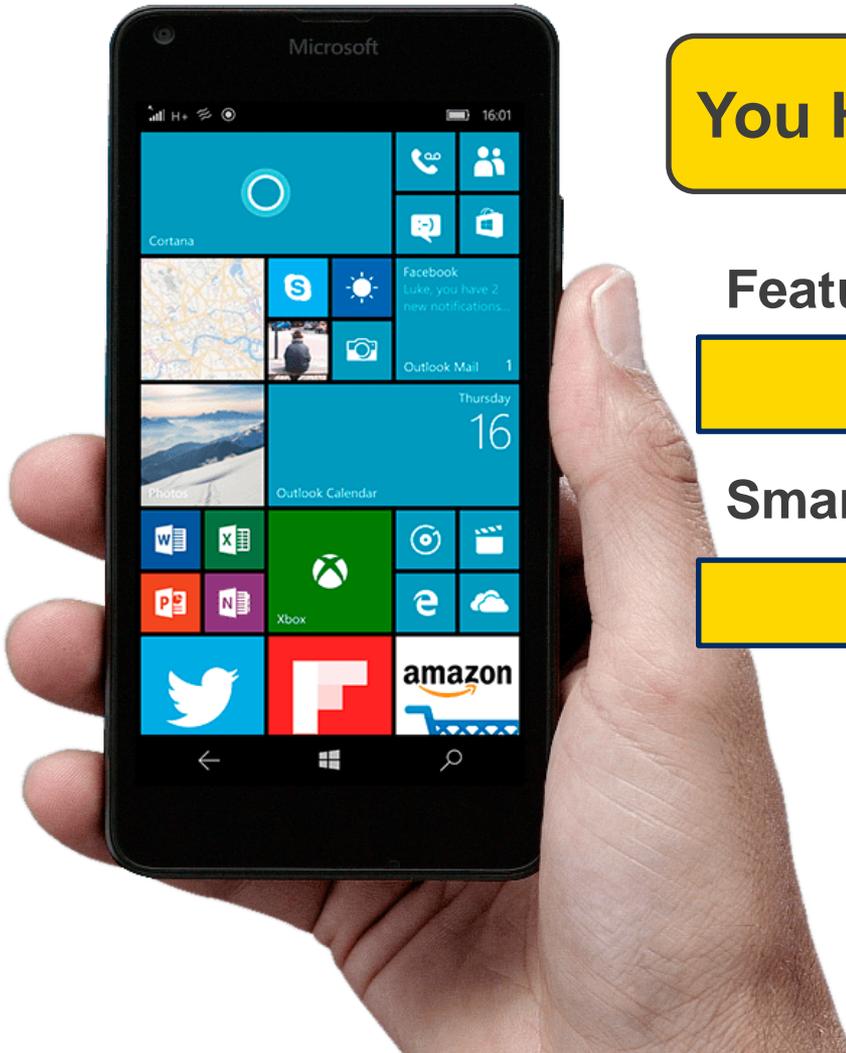
Privacy

Computers are better at working with meta-data than they are handling conversational data. [...] Computing power is still doubling every eighteen months, while our species' brain size has remained constant. Computers are already far better than people at processing quantitative data and they will continue to improve

Bruce Schneir, *Data & Goliath* (2015) page 35

But note my daughter's spectacles story while communicating verbally over Facebook messenger with a friend speaking with an accent

Phone



You Hold The Shift In Your Hands

Feature Phone → Communication

3rd Industrial Revolution

Smart Phone → Information

4th Industrial Revolution

When does a TechFin become a Financial Institution?

Our thesis is that most TechFins will begin serving as a conduit connecting their customers with financial service providers

- Ant Financial <> Alibaba
- Tencent <> WeBank
- Google pay
- Vodafone <> m-pesa

⇒ Large size, international / cross-border activity

⇒ Network fully developed

⇒ Enormous access to data

? : Conduit / front-end only?
Data delivery & analytics?

(+): money on balance sheet;
discretion over client money;
solicitation, pooling

When does a TechFin become a Financial Institution?

- We foresee TechFins initially mostly serving two functions:
 - 1. connecting their customers to financial institutions
 - 2 providing data to those institutions either raw or processed with analytics
 - If they grow large enough, those roles could be systemically significant (ie. There is only one Facebook).
- ⇒ **Stage Two**, obviously, is providing financial services themselves, as is happening today on a major scale in China.

First two functions will stop being novel. Remember e-commerce – who engages in it anymore? When I buy my business shirts and suits these days I simply tell my wife “I bought a new suit today”

TechFin Benefits For Society

- Reduction of transaction costs & enhanced market efficiency
- Enhanced business decisions, risk management
 - Front-end of business transactions not back-end like banks, and based on more comprehensive data set: social media and general economic data
- Financial inclusion
 - **Better SME & consumer credit**
 - DFS in developing countries

TechFin Risks to Society

- TechFins have better data than traditional banks: more comprehensive front-end data, more data points, more reliable, cross-checked data
- But: no level playing field with existing institutions, and a risk the triggers for existing regulation won't be activated in time
- Correlation vs Causation: False Predictions; unknown effects of Artificial Intelligence / Data Analytics
- Protected Factors at Risk? Upholding Civil Society Values (for instance, enforcing anti-racism, anti-gender discrimination etc)

More Risks

- Antitrust: risk of oligopoly (natural monopoly)
- Data protection: who owns the data? Right to be forgotten? Enforcement? Tinder story
- **Our entire consumer consent model for provision of data is deeply flawed – it is an unreal fiction from a bygone age that has passed!**
- Tech companies such as Google or Facebook are natural monopolies due to network effects, and are essential infrastructure for modern living – opting out is not an option.

Should Regulators Care if TechFins Only Provide Data Gathering & Analytics?

- If TechFins are essential to banking stability regulators should care.
- If TechFin is essential for one or more important banks (eg main data analytics provider)
- If TechFin is main front-end channel to customers, similar to new operating strategy or new risk model, or if a TechFin serves this role for multiple providers.
- Furthermore, if individuals are being harmed by analytics that produce damaging results, regulators should care.
- So there is a case here for public regulation of TechFins.

Open banking and data analytics

- Open banking is the idea that a customer has the right to share their banking data with other providers (thru APIs)
- Best perhaps not to get into issues of title or ownership – cleaner if one deals with rights to use and share
- Australia has an Open Banking Review underway now following on from a Productivity Commission Report into data earlier this year
- Europe has mandated Open Banking to promote competition
- One issue is the quality of the data and the analytics about it

**Widen mandate of financial regulator:
Financial data analytics as regulated activity!**

Theses

- 1) TechFins have their origin in BigData (“Tech”) rather than customer relationship (“Fin”). Many may well avoid financial regulation until too late.
- 2) For TechFins, formal financial regulation may be triggered too late. Triggers linked to taking deposits, soliciting customers or handling client funds are likely to not be triggered. Regulators may therefore be unable to a) enforce customer protection measures and b) monitor and mitigate systemic risk.
- 3) TechFins may compete unfairly therefore since they a) are unrestricted by risk & compliance considerations in their build-up phase, b) do not bear compliance and capital costs.
- 4) TechFins’ data analytics will require regulation at some stage. Perhaps “follow the data” will have to replace financial law’s “follow the money”.
- 5) Regulation of TechFin for now should focus on: a) information gathering, b) review of algorithms for false predictions and protected factors, and c) systemic risk prevention.

The Full Paper...

Please see our TechFin paper below for further details:

Dirk A. Zetsche, Ross P. Buckley, Douglas W. Arner & Janos N Barberis

“From FinTech to TechFin: The Regulatory Challenges of Data-Driven Finance,” *forthcoming New York University Journal of Law and Business*, <https://ssrn.com/abstract=2959925>.

And a big thanks to Dirk and Janos for permission to use many of their slides, today.

Thank you.

Ross Buckley

ross.buckley@unsw.edu.au

