

International Conference on FinTech Law and  
Regulation

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

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University of Luxembourg

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# Overview

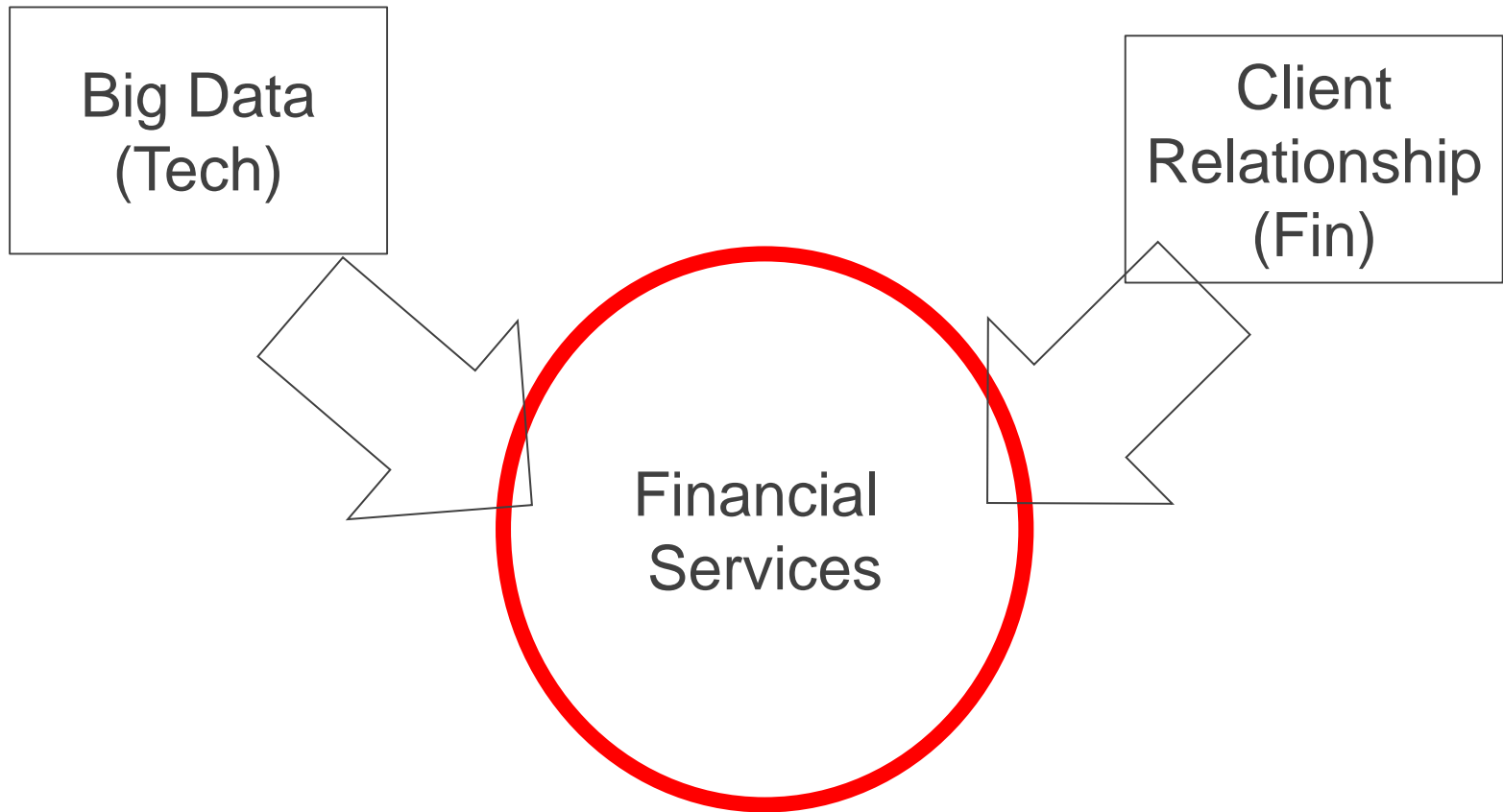
**Organising idea – The entity that knows the most about you is best placed to price credit or insurance for you. Traditionally that has been your bank.**

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.

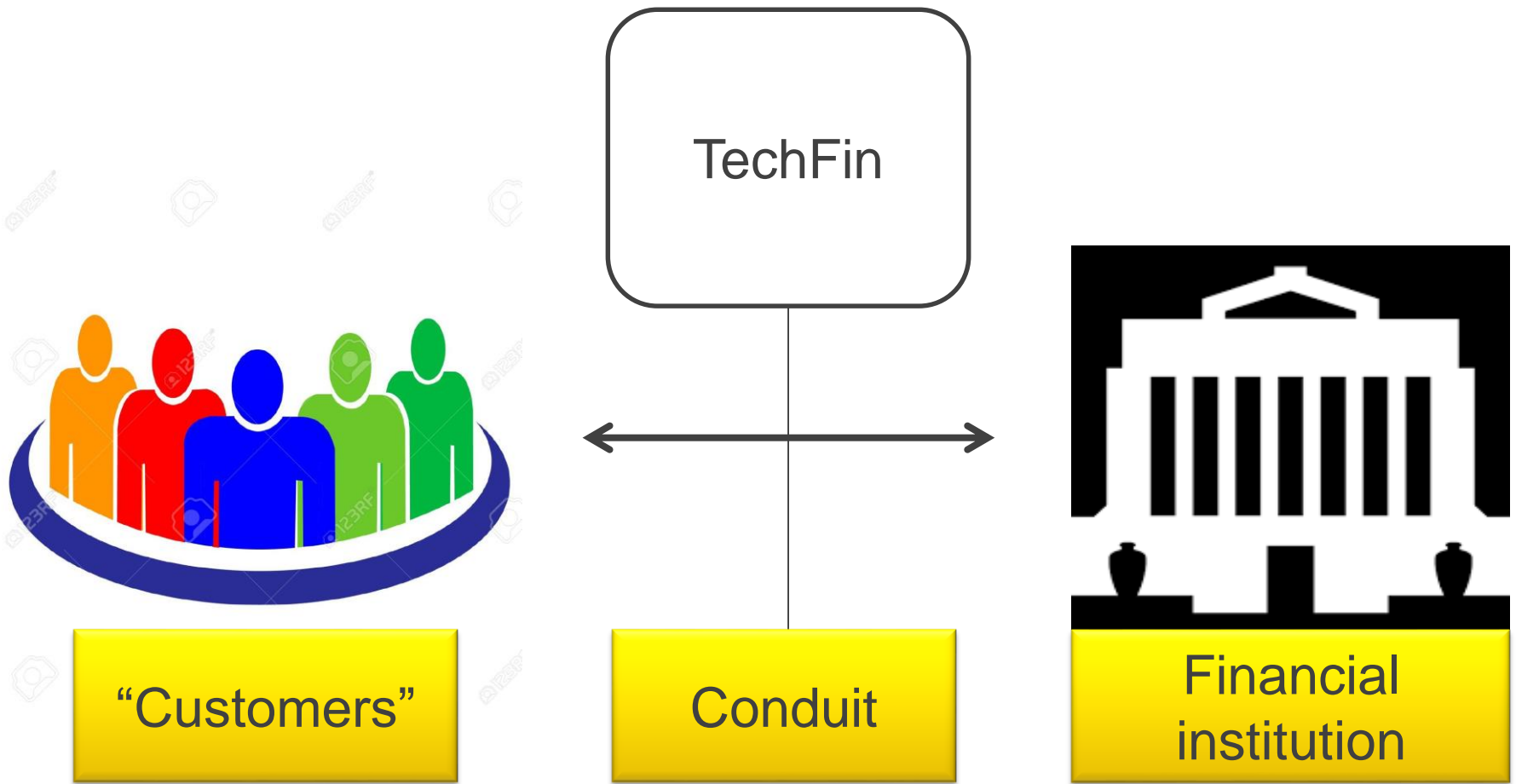
# 1. Definition FinTech ⇔ TechFin

- 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 ... )





# 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.***



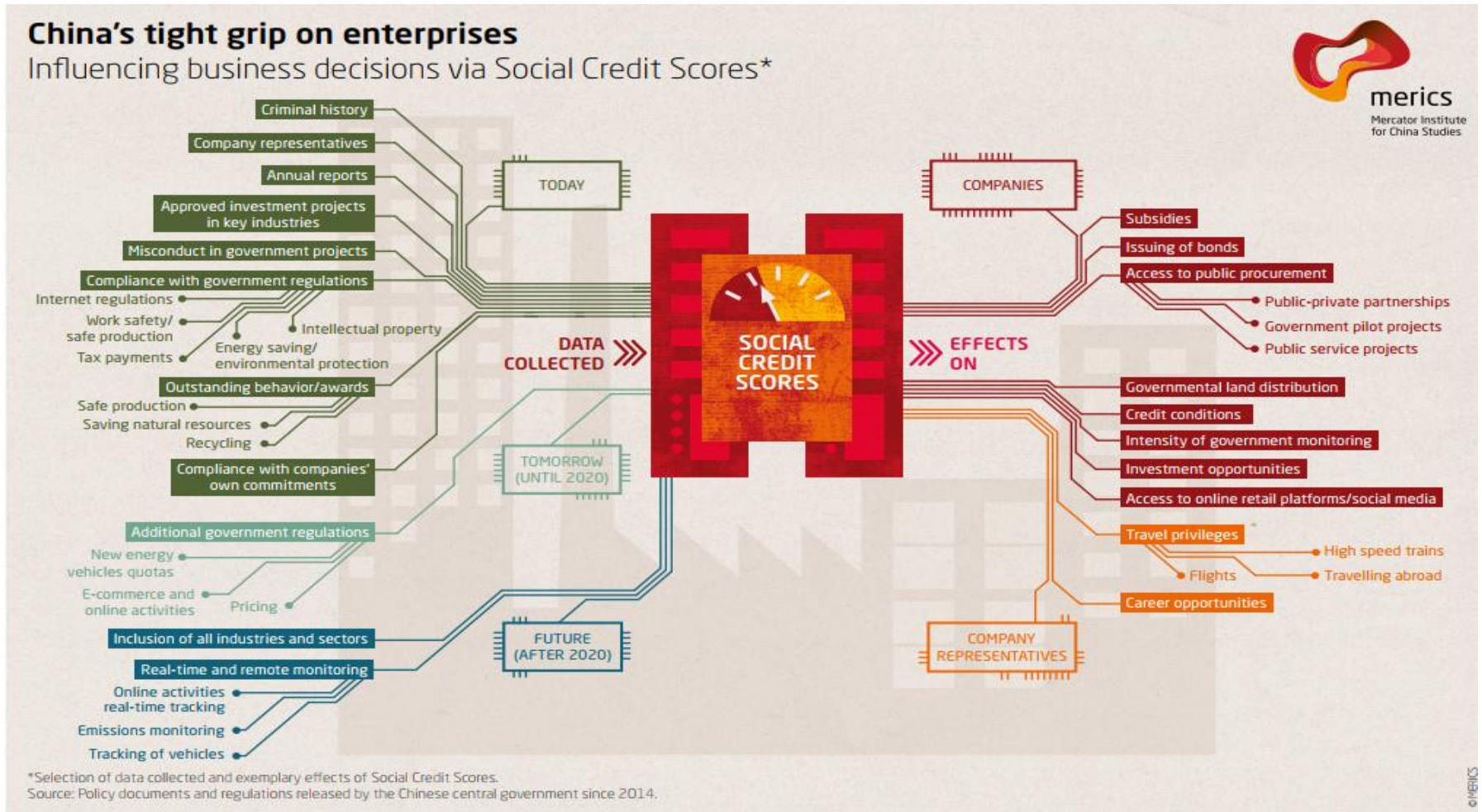
# Our Eureka Moment

**Money has been Digitized and Now Data is Monetized**

**FinTech Today**

**TechFin Tomorrow**

# China Influencing Business Decisions via Social Credit Scores



[China's 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

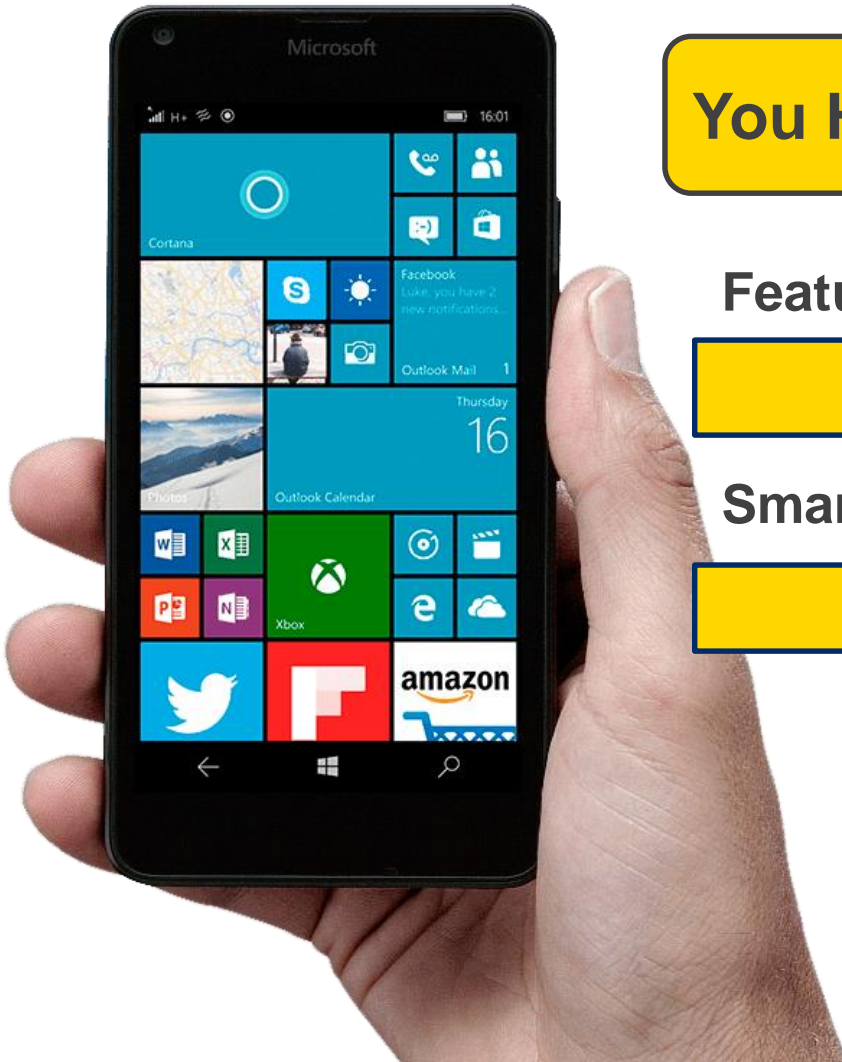
Computers are better at working with meta-data than they are handling conversational data. [...] Computing power is still doubling every eighteen months, while our species' brain size has remained constant. Computers are already far better than people at processing quantitative data and they will continue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

**3<sup>rd</sup> Industrial Revolution**

**Smart Phone → Information**

**4<sup>th</sup> 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.

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