

Faculty of Law,
Economics & Finance
University of Luxembourg

SUPPLY CHAINS, SUSTAINABILITY & DISRUPTIONS
Prof. Dr. Dirk A. Zetsche, LL.M. (Toronto)
ADA Chair in Financial Law



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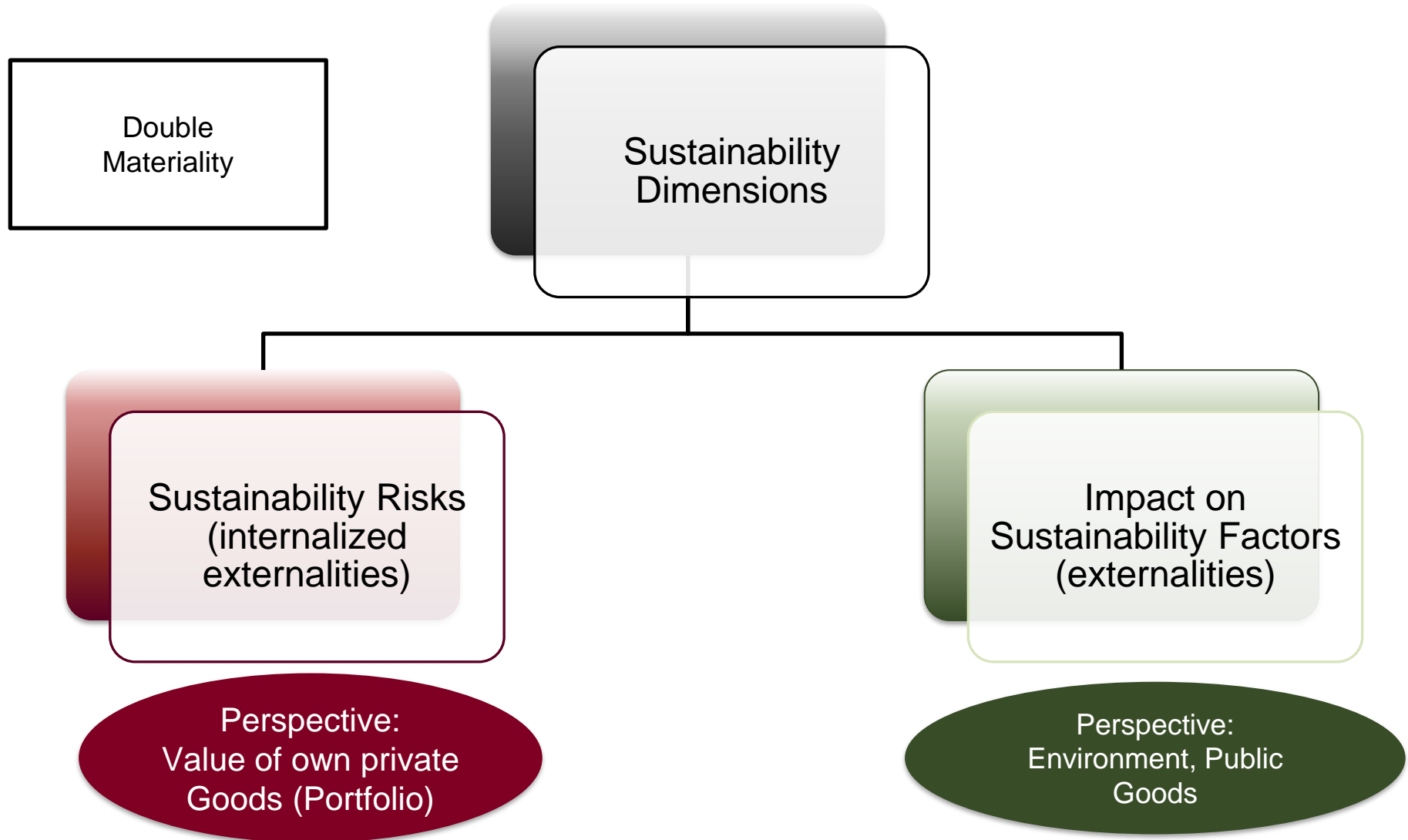


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Based on the Working Paper 'Building Blocks of a Green FinTech System',
www.ssrn.com/abstract=4163002 (with Dr. Anker-Sørensen)

- Sustainability Risks & Impacts as Source of Disruption
- Enhancing relevance of Law (so far (-))
- Green FinTech & DLT as Solution
- What can law do to Sustainable Supply Chain Solutions?

Double Materiality: Sustainability Risks & Impacts



Sustainability Impacts on Supply Chain

Risk	Impact on Supply Chain	Risk Management
Rising sea level, more severe storms	Unreliable transportation	More stock, „make“ > „buy“, but: supply of raw ingredients?
Droughts: Shortage of water supply for farmland and population	Unreliable production	Irrigation systems; new wells; desalination OR more stock, „make“ > „buy“ (s.a.)
Social crisis, political instability	Coup d’etat, Strikes => unreliable production and transportation	Reallocation of production OR More stock, „make“ > „buy“ (s.a.)
Health crisis (Covid)	Unreliable transportation	More stock, „make“ > „buy“

All RM measures capital intense =>
Consumer prices? Competitiveness?
Supply of raw ingredients=

§ 1 – Introduction (+)

§ 2 – Core Issues of Sustainable Finance

§ 3 – How can FinTech assist in addressing these issues

§ 4 – How law can support Green FinTech

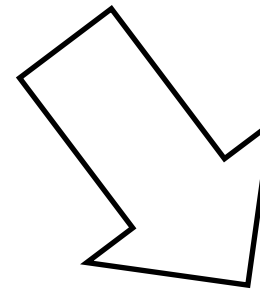
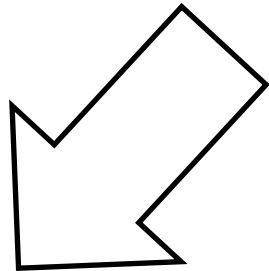
§ 5 – Conclusion: Building Blocks of a Green FinTech System

§ 2 - Core Issues of Sustainable Finance

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Information asymmetry:
Who delivers truly on the Green promise?

**Oversupply of Capital seeking
Green cash-flows**



Enhanced Agency Conflicts
(Greenwashing, variance of issuer-paid
Sustainability Ratings etc)

Asset Price Bubble

§ 2 - Regulatory Response to Core Issues

- Develop Uniform Standards
- Enhanced Disclosures
- Prudential Requirements
- Better Oversight: Rating Agencies, Indices, Audits
- Towards 'double materiality'

⇒ Enforcement ⇔ Agency Conflicts

⇒ No Word on FinTech

§ 3 - How can FinTech assist in addressing these issues?

What is FinTech?

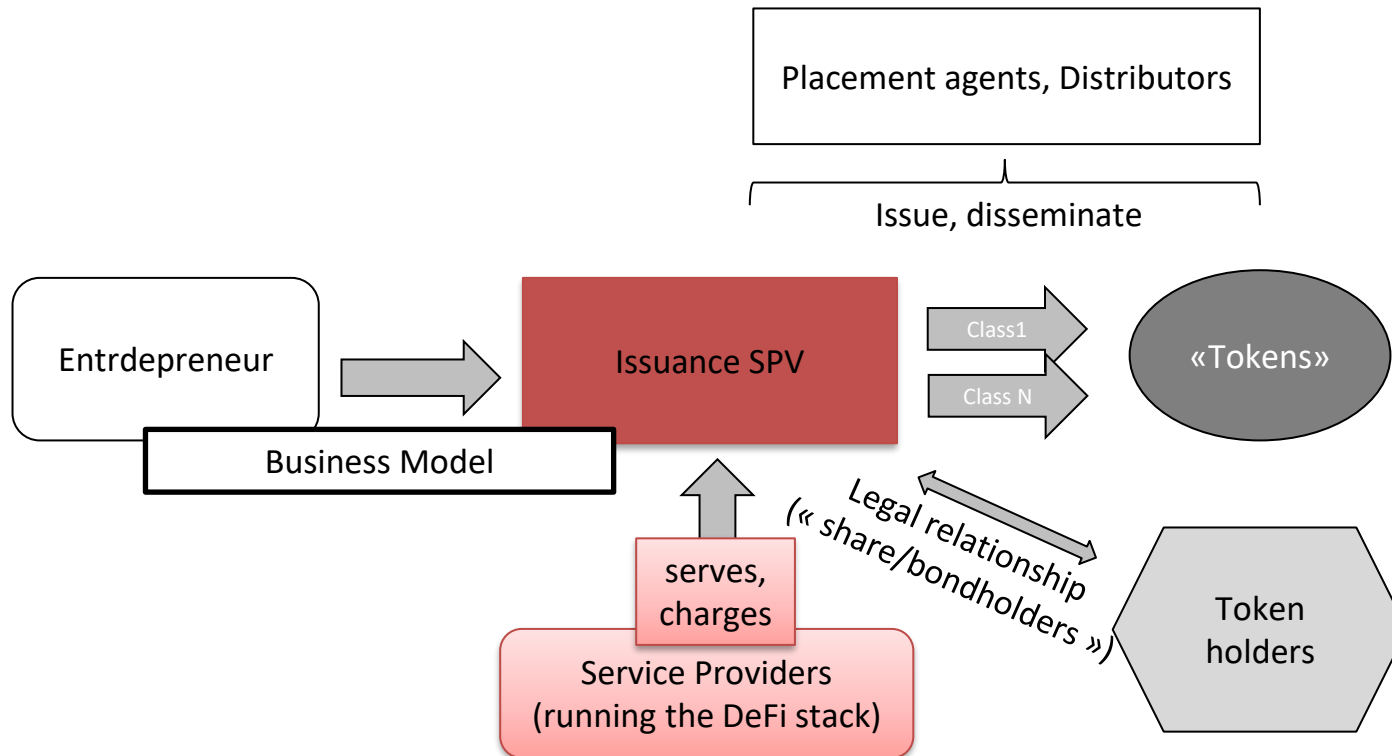
- A - Algorithms
- B - BigData
- C - Cloud
- D – Distributed Ledgers (with Blockchain&Smart Contracts)

⇒ General trend: decentralized finance, disintermediation

DeFi



§ 3 - Tokenized Assets

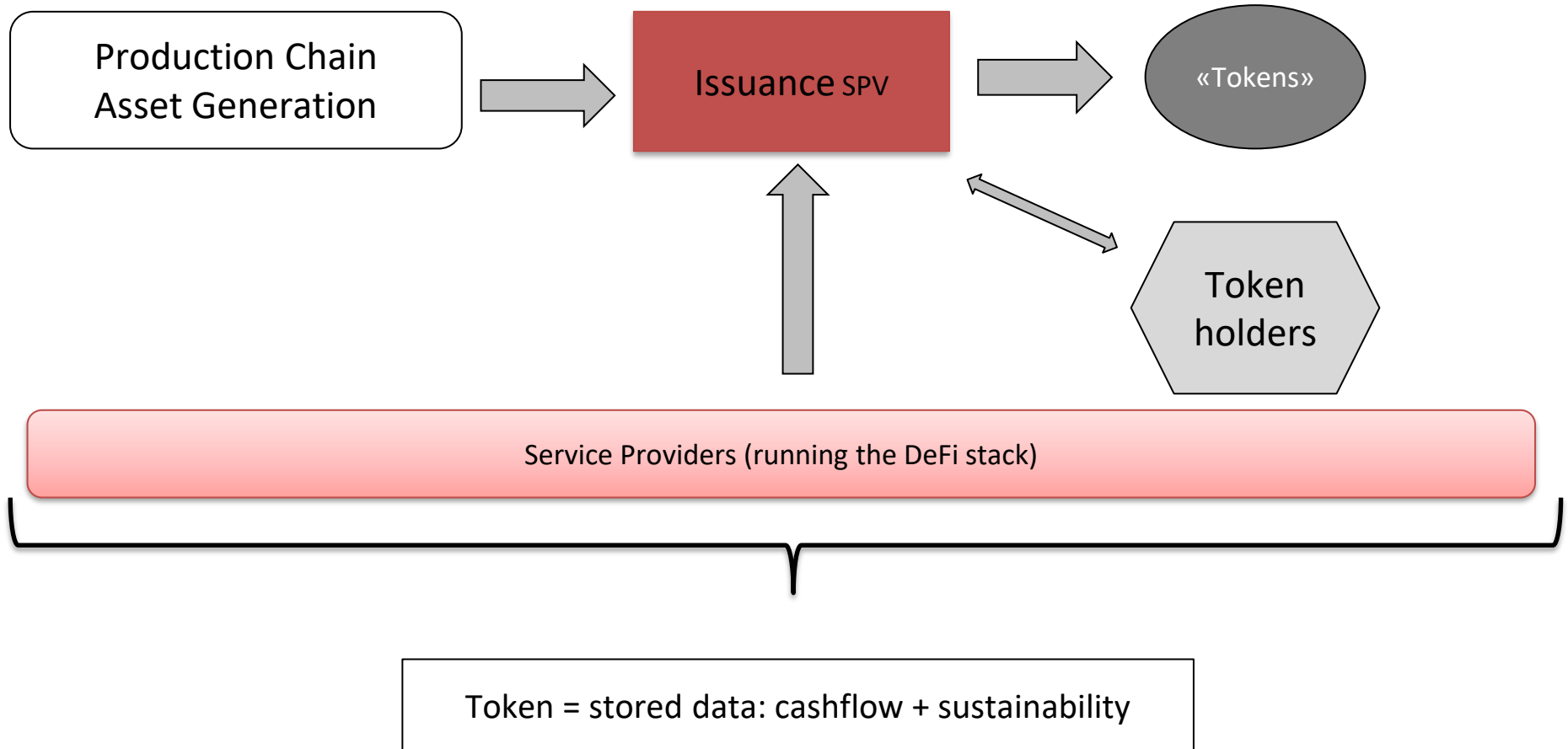


§ 3 - Bundling Cash-flow and Sustainability Data

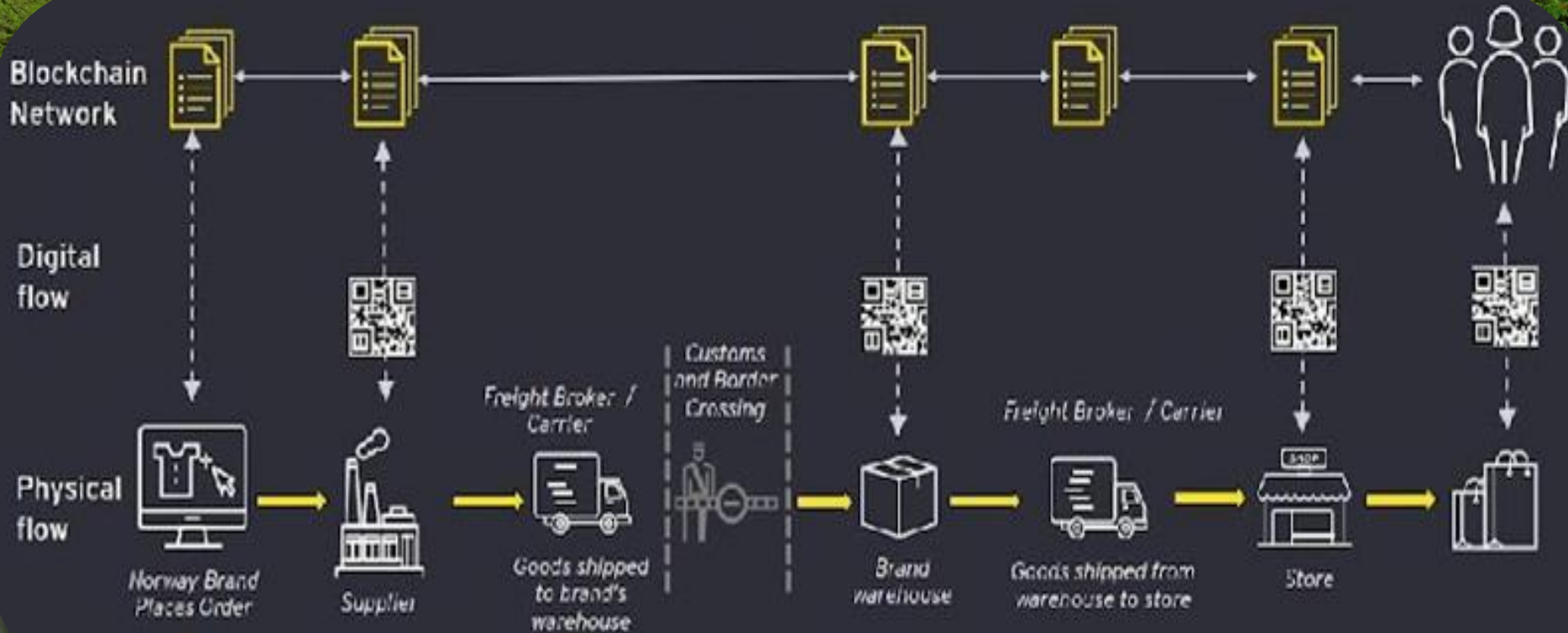
- FinTech: automatization of all issuance elements
 - Disintermediation
 - Immutability

 - Inseparable link [cash-flow + sustainability data]
 - Less information intermediation
 - Reliability of 'ultimate data provider' essential
- ⇒ Disintermedation

§ 3 - Sustainability Certificate of Origin



Norwegian Fashion-Hub Sustainability Chain



Sustainable raw material production

Measurement of CO2 emissions and other parameters real time

Increased security and reliable verified data

Complete clothing cycle history

§ 4 - How law can support Digital Sustainable Finance

- Uniform categories of sustainability risks + factors (taxonomy)
⇒ Sectorial to comprehensive
- Enabling approach to data transmission
- Accountability and liability of the 'data originator'

§ 5 – Building a Digital Sustainable Finance

- Tokenization => FT disintermediation
 - Inseparable link sustainability data \Leftrightarrow asset
 - Data Straight-through-processing (STP)

- Potential effects
 - lesser intermediary and agency costs
 - facilitating suitability tests
 - limiting substitutability of cash: separating economy into Green/Brown
 - targeted subsidization (tax rebates, capital surcharges, etc.)

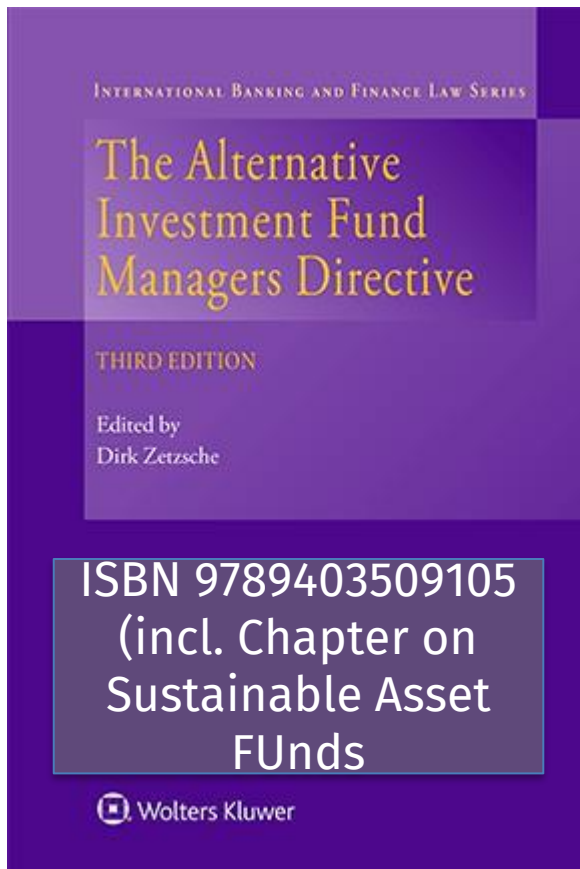
- Legal preconditions
 - Uniform Taxonomy (encodement via ISO standards)
 - Enabling approach to data STP
 - Reliable 'ultimate data providers': enforcement re asset + data

Please find our latest work at SSRN: www.ssrn.com/author=357808

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Thank you!

Prof. Dr. Dirk Zetsche, LL.M.
ADA Chair in Financial Law / Inclusive Finance
Coordinator, House of Sustainable Governance & Markets
Faculty of Law, Economics & Finance
University of Luxembourg

Dirk.Zetsche@uni.lu

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Some readings on FinTech

TechFin / Data-driven Finance

www.ssrn.com/abstract=2959925



FT4FI Roadmap

www.ssrn.com/abstract=3245287



Corporate Technologies (AI etc.)

www.ssrn.com/abstract=3392321



Regulatory Sandboxes

www.ssrn.com/abstract=3018534



Regulating Libra

www.ssrn.com/abstract=3414401



Future of Data-Driven Finance

www.ssrn.com/abstract=3359399



Rise of Tech Risk

www.ssrn.com/abstract=3478640



ICO Gold Rush

www.ssrn.com/abstract=3072298



Distributed Ledgers / Blockchain

www.ssrn.com/abstract=3018214



eID / KYC Utilities

www.ssrn.com/abstract=3224115

