

# Funds & FinTech

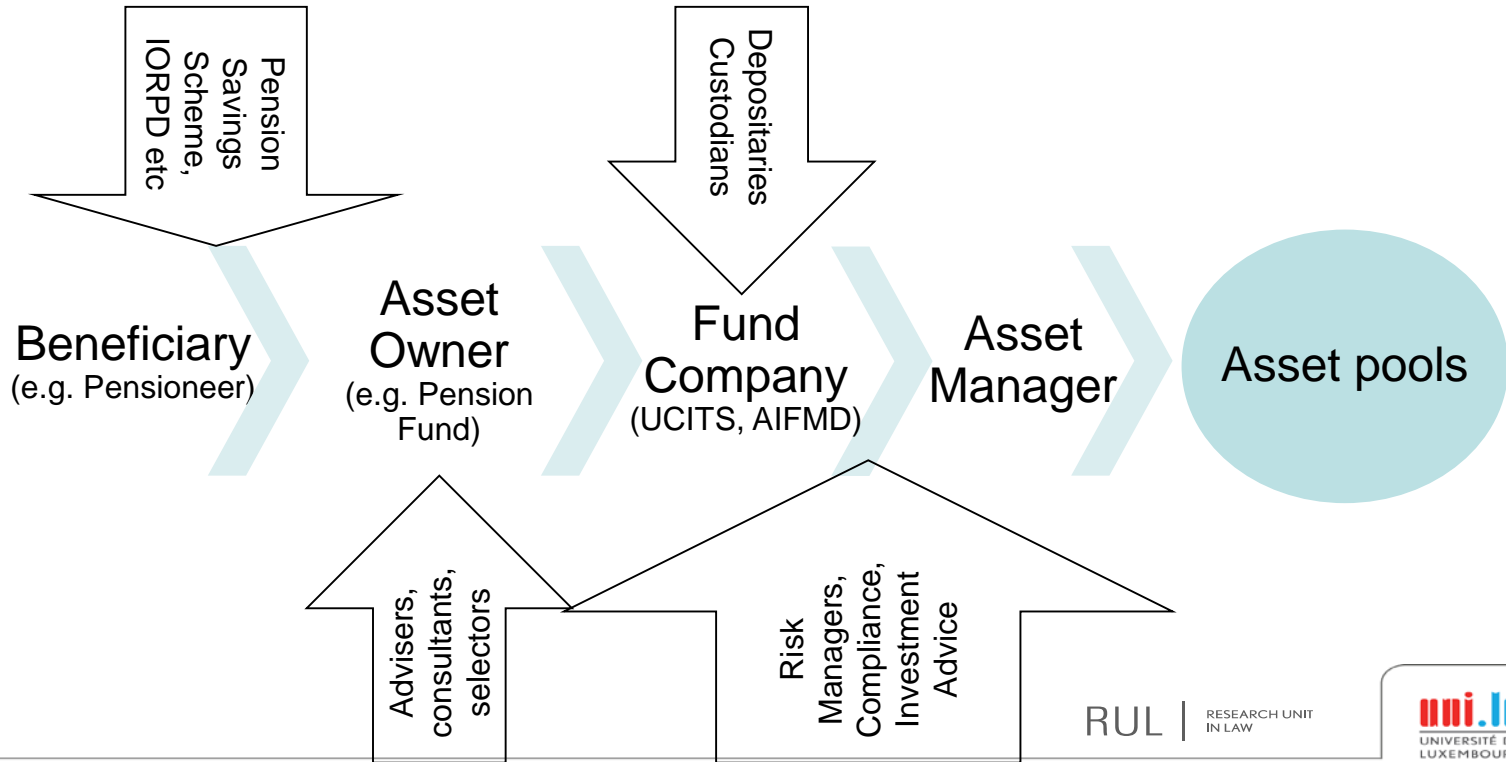
– How Big Data, Blockchain, RegTech, Smart Contracts & Digital Identity Solutions Transform Collective Investment Schemes –

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ADA Chair in Financial Law  
(Inclusive Finance)

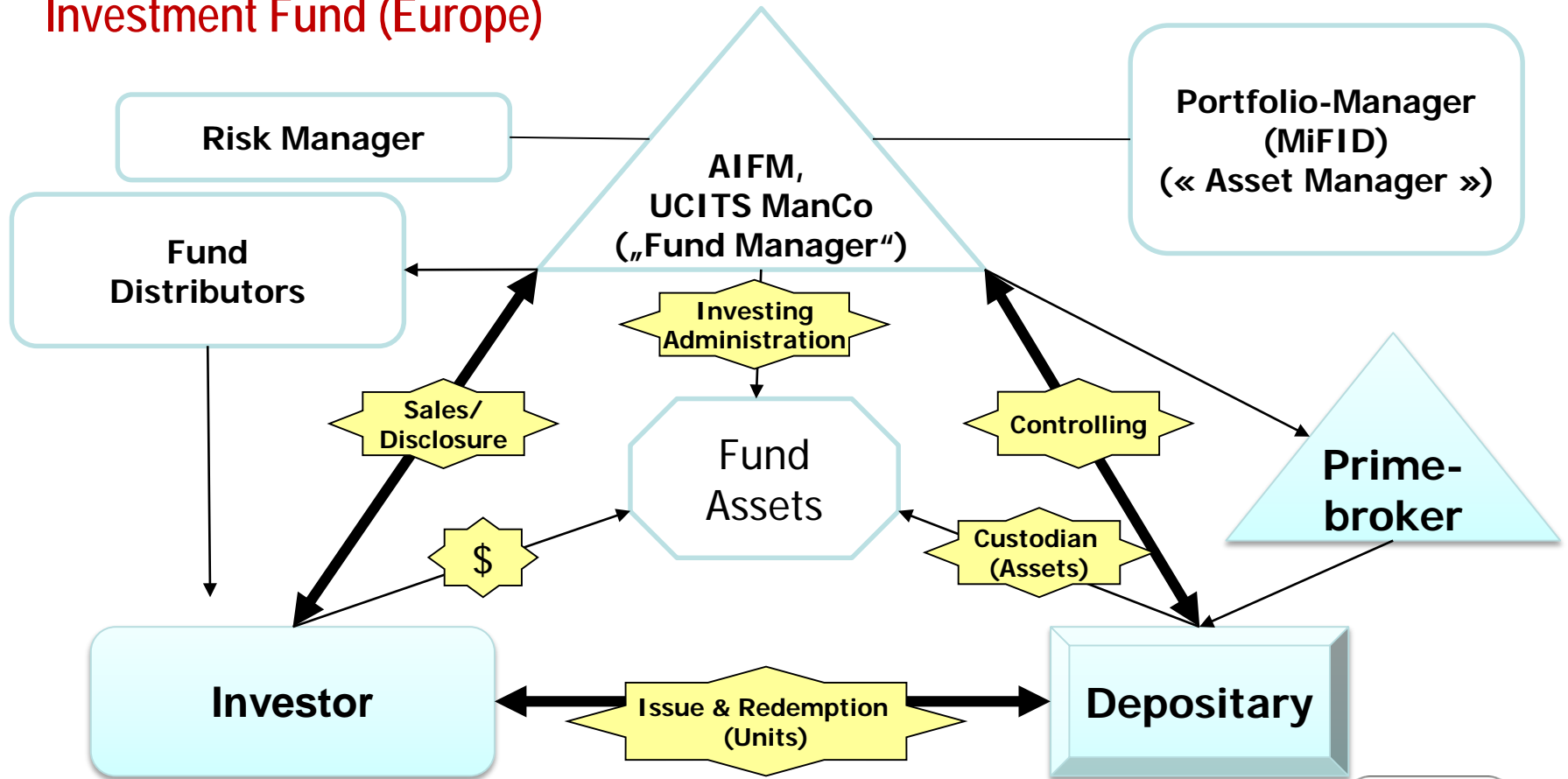


## *The CIS Alignment Issue*

# The Institutional Investment Chain



# Investment Fund (Europe)



# The CIS Alignment Issue

- Multiple intermediaries
- Multiple interests
- All paid by investors

⇒ How to ensure alignment with investor interests?

⇒ Fintech help- or harmful?



## *FinTech & the Alignment Issue*

# FinTech & its five 'associates'

- Big Data
- RegTech
- Smart Contracts
- Blockchain & DLT
- Digital Identity

## Impact of FinTech on the Fund Industry

- Big Data to erase informational advantages of intermediaries.
- RegTech & Smart Contracts to streamline, facilitate or even substitute processes.
- DLT & Digital Identity to erase / mitigate information asymmetry.
  - ⇒ Overhaul of all informational or procedural service providers: distribution, administration etc.
  - ⇒ Significant disruption likely.



## Trajectory of Disruption: Concentration & Integration

- Economies of scale
- Network effects
  - ⇒ Horizontal & vertical integration of functions in one platform.
  - ⇒ Market concentration.
  - ⇒ Larger units.
  - ⇒ Less competition & choice.
  - ⇒ **Greater need for regulation** in lieu of market forces & diversification across the financial system.

# Horizontal integration: Blackrock's Aladdin

(see <https://www.blackrock.com/aladdin/offerings/aladdin-overview>)

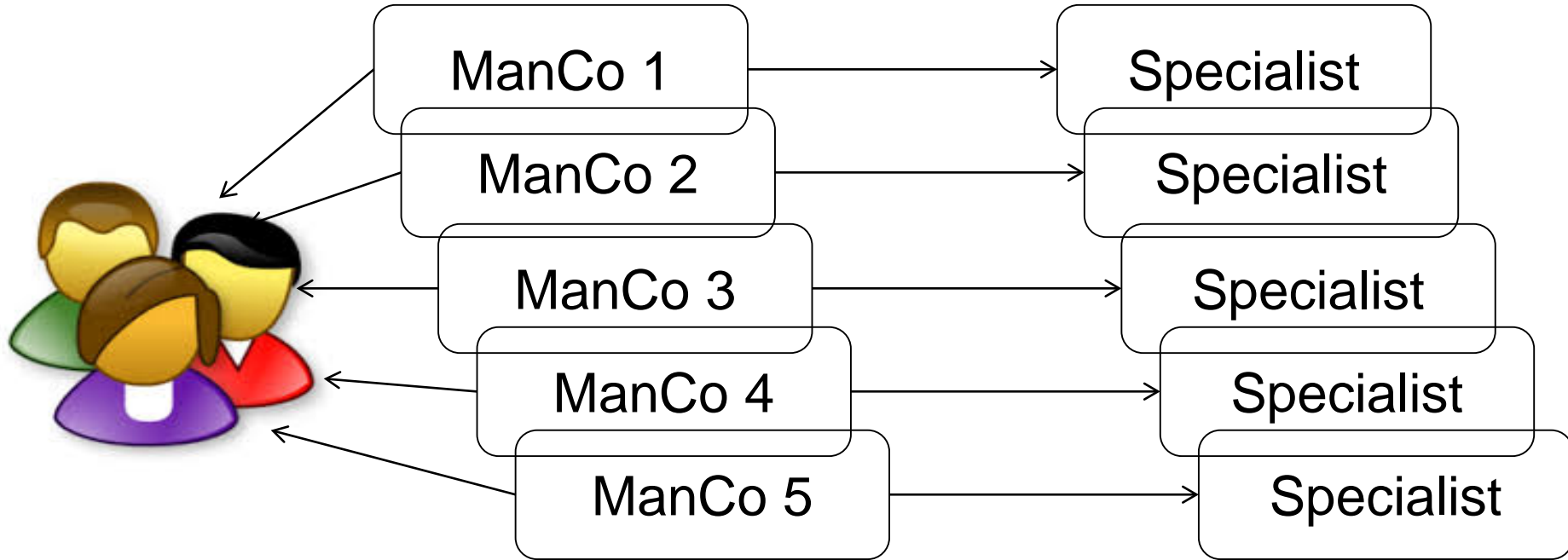
## Aladdin – Uniting People and Processes



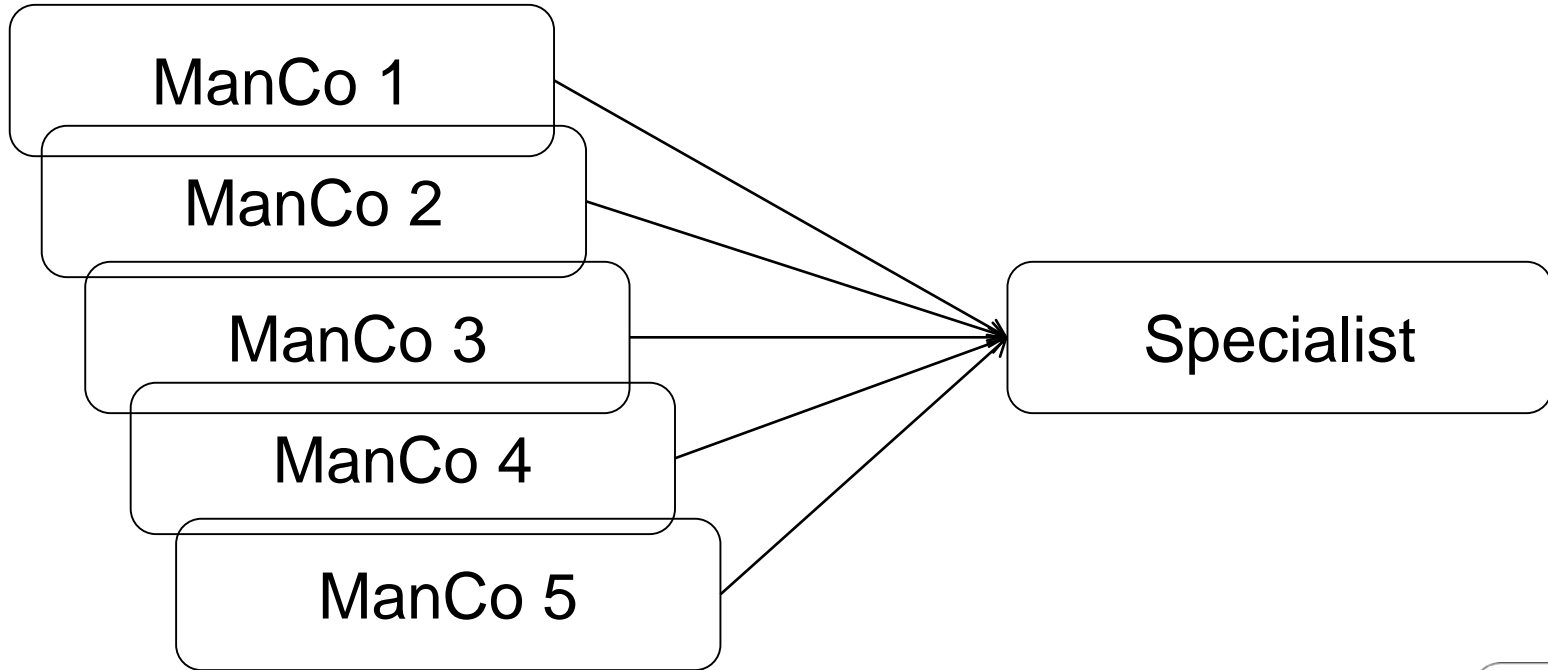
- 25,000 investment professionals
- + 1,000 developers
- hosted service, including technical infrastructure, system administration and interfacing with data providers and industry utilities.
- data and analytics "factory" with 800+ professionals focused on creating and quality controlling data and analyses for clients
- full investment process across asset classes.

**What if Aladdin is wrong?  
Which regulator is in charge of Aladdin?  
Where is Aladdin located?**

## Vertical Integration: The KYC-AML Hub

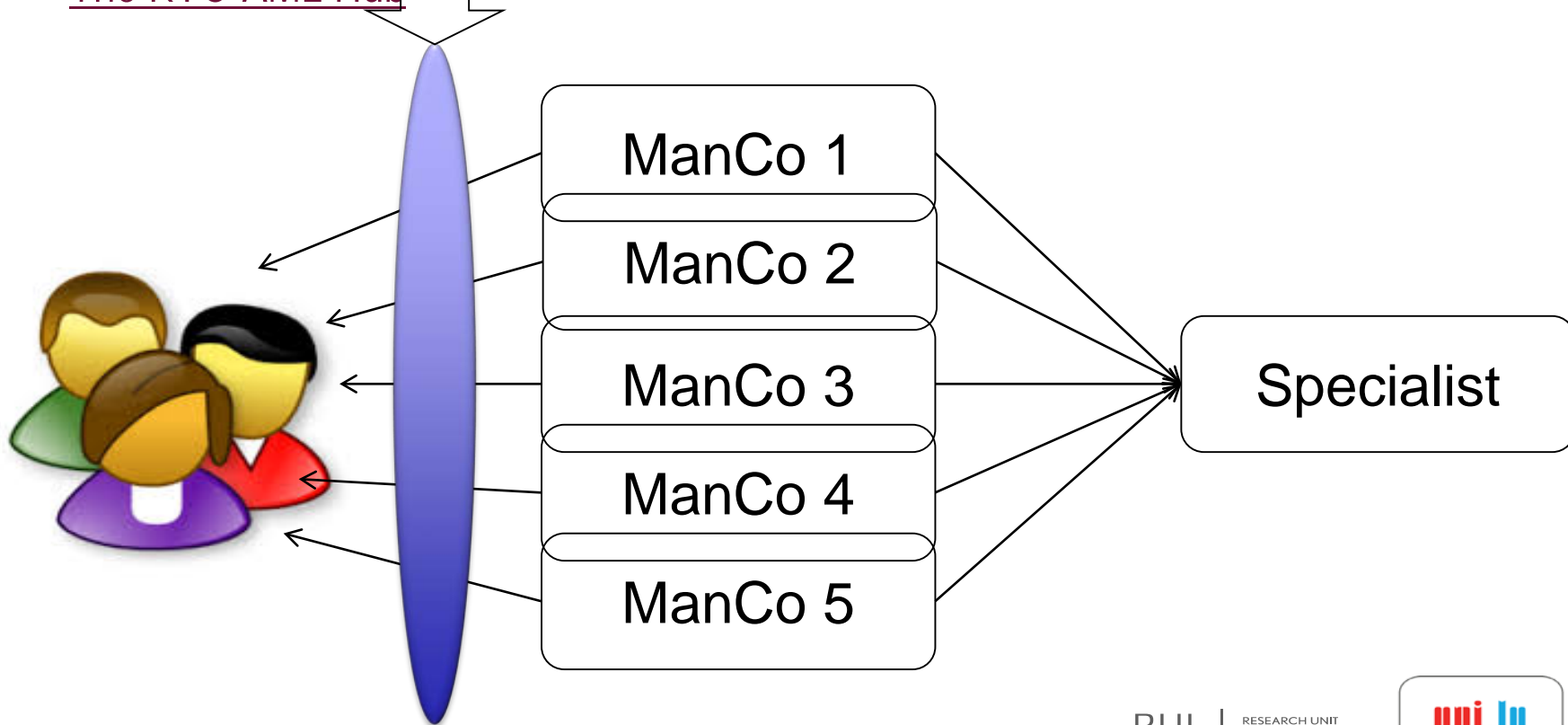


## The KYC-AML Hub



# Distribution Platform

The KYC-AML Hub



# Distribution Platform

The KYC-AML Hub



ManCo 1

ManCo 2

ManCo 3

ManCo 4

ManCo 5

Specialist



## *The Limits of Disruption*

## Limits of Disruption I

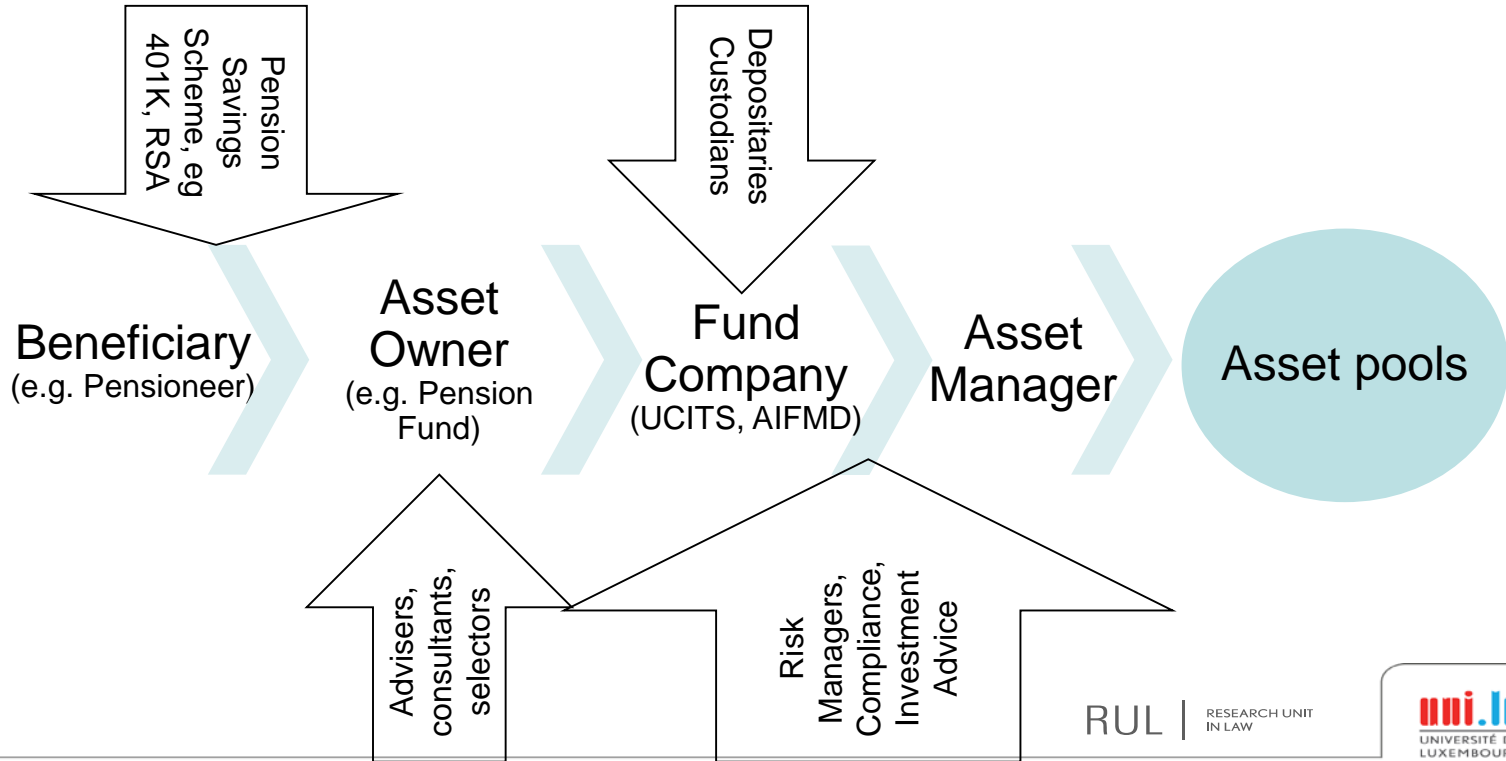
- Disappearance of additional intermediary who provides the function does not make the function itself superfluous or less important
- Security, stability, innovation and permanent adjustments to functions remain important
- Competition of service providers to fewer entities likely to remain.



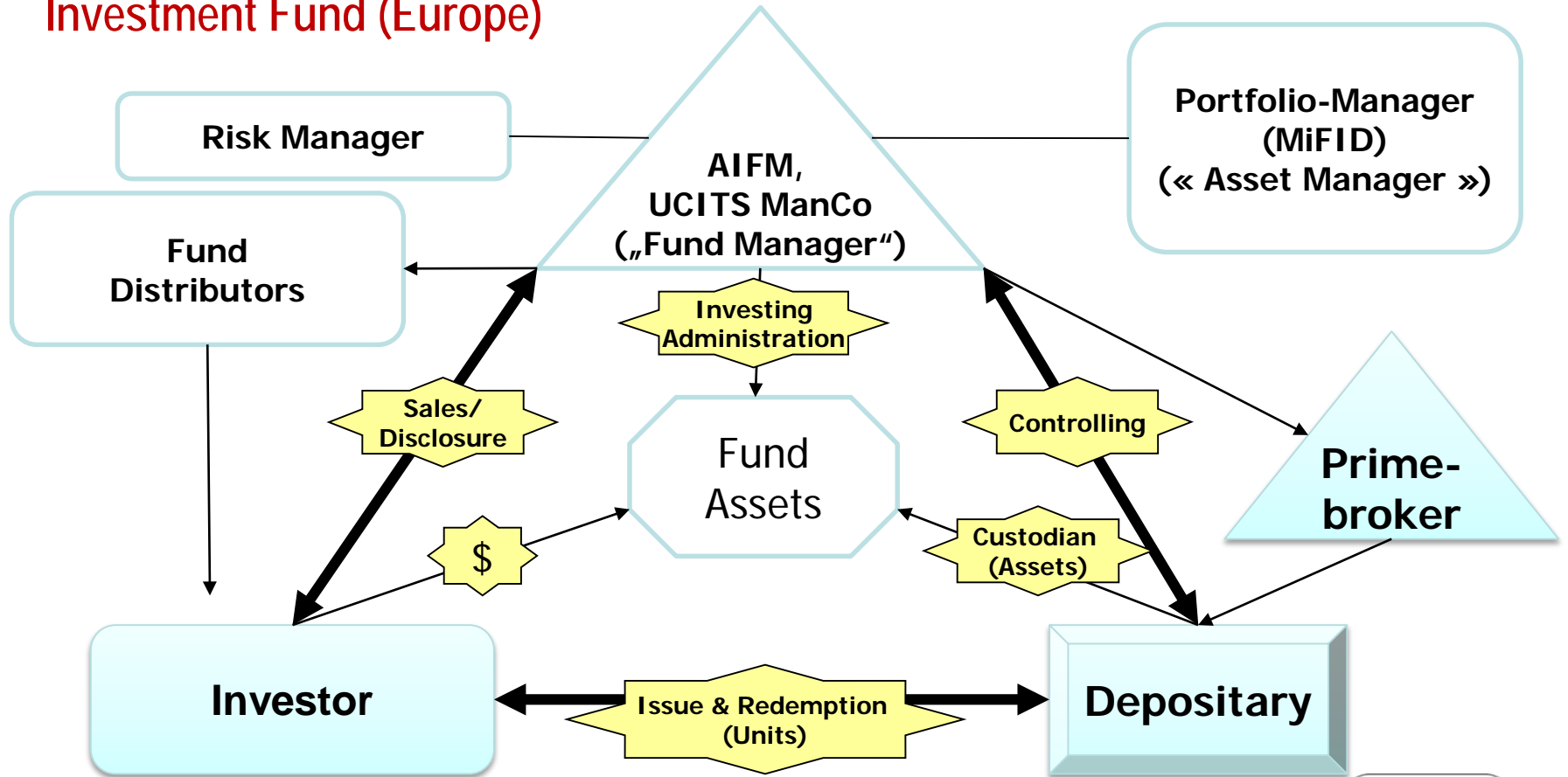
## Limits of Disruption II: The Role of Law

- Market forces press for almost *unlimited* concentration.
- Law to define limits of concentration & disruption.
- Indispensable core functions under the law:
  - Client Intermediary ('Which fund is the best for me?')
  - Fund Manager
  - Depositary / Custodian (limits exposure to FM's insolvency risk)
- But larger, more integrated units than today.
- **Impact on the value chain?**

# The Institutional Investment Chain



# Investment Fund (Europe)



## Limits of Disruption: The Role of Law

- Market structure, competition & antitrust concerns to be added to / are likely to become core functionrole of financial regulators
- Part of the systemic risk parameter.

# IV.

## Conclusion & Theses

## Funds in the FinTech World

- Lesser degree of human intervention
- Reducing settlement time & risk
- Enhance data flow & transparency
- Further concentration
  - ⇒ Higher profit per client or lower costs for clients.
  - ⇒ Better risk management?
  - ⇒ Better enforcement (?)

## Theses

1. Big Data, DLT, Smart Contracts & RegTech together will transform most the fund value chain, disrupt existing value propositions while rebuilding new ones in a very short time.
2. Law defines limits of disruption by requiring certain functions to remain in separate entities.
3. Legal challenges prompted by the FinTech associates include
  - clarify which legal standards apply to which tech-based process and service,
  - ensure robustness of IT processes => regulators to focus on server infrastructure, redundancy, access rights, server location.
  - ensure 'correct' results of algorithms => regulators to require test routines, documentation, data interfaces and access rights from intermediaries
  - clarify liability and responsibility for failure of IT systems and algorithms used.
4. Markets will be more concentrated than today. Systemic risk correlates with market structure; competition/antitrust concerns to be emphasized by financial regulators.
5. Digitalization will further *some*, although not perfect alignment (lower fees). Remaining un-alignment defines minimum agency costs in a world with insolvency risk.

# Thanks!

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<https://ssrn.com/author=357808>

e.g. **Regulating a Revolution: From Regulatory Sandboxes to Smart Regulation**  
(with Ross Buckley, Douglas W. Arner, J.N. Barberis).

Available : <https://ssrn.com/abstract=3018534>

e.g. **Funds & FinTech: How technology will impact on the CIS alignment issue**  
(with Ross Buckley, Douglas W. Arner) - forthcoming

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