



Faculty of Law,
Economics & Finance

GAMIFICATION OF FINANCE
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UNIVERSITÉ DU
LUXEMBOURG

Based on the Working Paper 'Gamification of Finance'
(co-authored with D. Arner, R. Buckley)

- First inquiry into 'Gamification' from a legal perspective
- Reviewing Finance Literature on Investor Herding
- Considering Legal Remedies

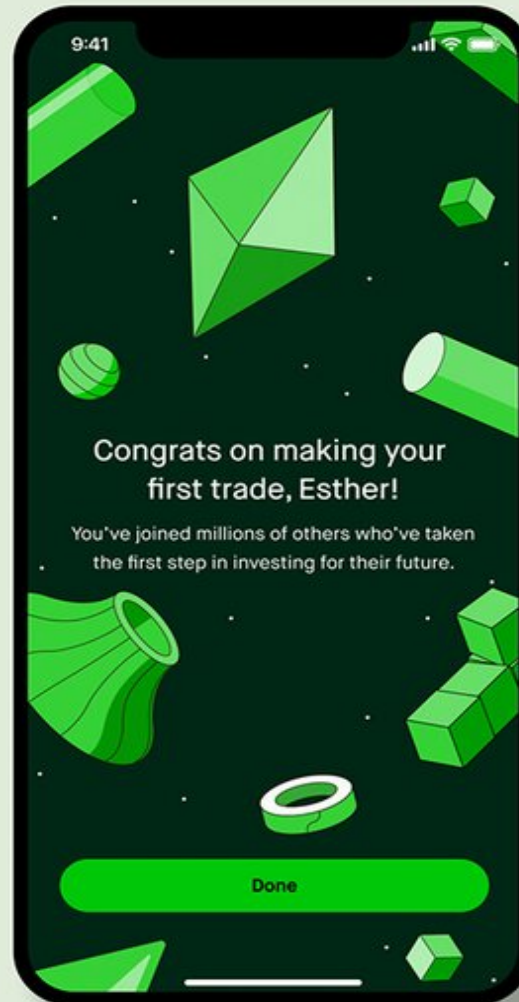
Combination of some type of financial service with game elements known from online gaming and loyalty programmes.

- a progress sheet,
- a ranking list,
- quests to enhance ranking positions,
- some transparency of results to other users,
- community collaboration through creation of tribes or other distinct social groups,
- often paired with some wider purpose or objective, including ,feeling well‘.

Defining 'Gamification'

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'Confetti Design'



§ 1 – Introduction (+)

§ 2 – Gamification as Tech-driven Phenomenon

§ 3 – Gamification: Opportunities & Issues

§ 4 – Policy Considerations

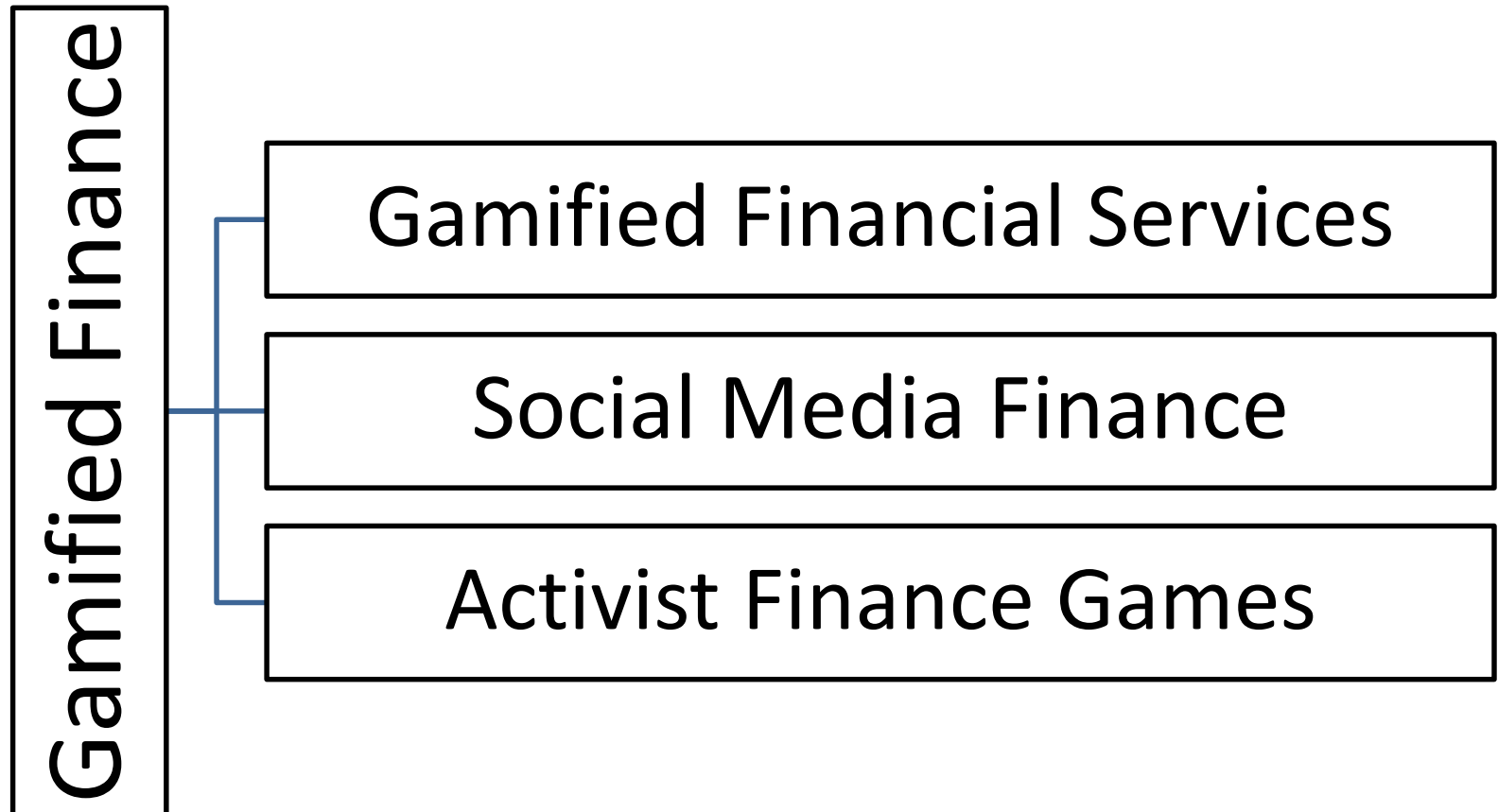
§ 5 – Conclusion

§ 2 Gamification as Tech-Driven Phenomenon

- Gamification as such nothing new
 - « chain letters » etc
- New?

FINANCE + PLATFORMS + SOCIAL MEDIA

A 3-fold Classification of Gamified Finance



A 3-fold Classification of Gamified Finance: „Gamified Financial Services“



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“The investor in my head was someone who wore a suit and a tie. Robinhood *changed* that for me.”

Angelina, 25



- game elements to encourage clients to enter into financial transactions.
- increase number of transactions.
- transaction data sold to 3rd party (e.g. data analytics firms)

A 3-fold Classification of Gamified Finance: „Social Media Finance“

Stoxx 600 **448.75** 1.60% ▼

Nikkei **27528.87** 1.05% ▼

U.S. 10 Yr **-3/32** Yield **1.556%** ▼

Crude Oil **78.65** 0.35% ▼

Euro **1.1544** 0.47% ▼

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- Financial activity as side effect of social media events.
- “non-investors” get active following social media posts
- „FINFLUENCERs“ speculating on value of crypto-assets.

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MARKETS

Elon Musk Tweet Prompts Bitcoin Selloff

Recent moves in price of bitcoin highlight Tesla chief's ability to shift sentiment

<https://googleads.g.doubleclick.net/pcs/click?xai=AKAOjsuR6FY095Vm2oeNWqwPCLbviNVMQvT9jnmHZyuOcDCQaATTRq...ps://partners.wsj.com/amazon-business/reshape-buying/intelligent-procurement-is-key-for-compliance/&nm=2>

A 3-fold Classification of Gamified Finance: “Gamified Activism”


← → ↻ <https://www.reuters.com/article/us-gamestop-activist-idUSKBN2B019T> ☆

GameStop jumps more than 40%, other 'meme stocks' rally on stimulus hopes

By Sinéad Carew, Manas Mishra 4 MIN READ f

(Reuters) - Shares of GameStop jumped more than 40% on Monday and other called meme stocks rallied, lifted by news from the video game retailer and expectations that investors may plow funds from coming stimulus checks into equity market.

- “Harming the Evil Hedge Funds”
- “Revenge for the financial crisis”
- Hottest & most visible “meme stocks” followed on social media sites.



Windows Taskbar: Type here to search, e, f, , , , , , , , , , 11:28 AM 10/6/2021

- **data + liquidity** as ultimate success factors
 - Networks effects, scale economies
- **only a handful of platforms will survive.**
⇒ game elements to win the race

Drivers of Gamification: Supporting Factors

- crypto-assets as new asset class: new entrants,
 - innovative platforms often brokers and marketplaces rather than investment advisers: more risky assets
 - COVID 19 lockdowns,
 - money provided by government support looking for investments,
 - **Zero interest rates made traditional investments unattractive, Zero commission trading** as convenient way to make use of the opportunities at the financial markets;
 - Many retail investors bored at home: **opportunistic maximization of fun** – the antithesis of the fun-hating banker in dark suits?
 - Social media platform looking for content
- ⇒ Increasing number of retail clients entering financial services through innovative finance platforms, often linked to social media

§ 3 – Benefits of Gamification

- world without transaction costs as ideal of **strong-form market efficiency**: lower valuation differences can be balanced with trading, allowing one stop closer to the Miller-Modigliani Hypothesis.
- Enhanced **product choice**.
- Enhancing **financial inclusion**. (50% of Robinhood are first time customers, many minority groups present, more reflective of society in general. No minimum price, up from 1 USD. Small investments, but full KYC. Easy to understand language plus pictures)
- Pressuring **incumbents to adjust, lower their prices, enhance product choice, innovate**.
- Tutorials for clients and other information enhances **financial literacy** and furthers investor education.
- Opening alternatives to Zero interest investments: potential portfolio optimization

§ 3 – Issues of Gamification

- Gamification furthers the **extrinsic motivation** through task-based benefits, ie. you act because you get some type of external reward in form of community recognition or small widgets, like a crown or special avatar that you may use when dealing with other community members .



Finance: rational, information and calculus-driven method of investing.

§ 3 – Issues of Gamification: Market Efficiency

- Game elements may exacerbate existing **issues of bounded rationality**: Irrational, emotional investment behavior at odds with definition of finance.
- From perspective of informed traders enhanced degree of **noise trading**. The lower pricing quality at financial markets will then result in large-scale asset misallocation.
- **Herding of retail investors** can create **structural over- or underpricing of assets and asset classes**. This may harm (1) informed traders that have invested in knowledge gathering, (2) the counterparties of the informed traders. Both may be regulated financial institutions of national importance.

⇒ Potential negative impact on market efficiency

§ 3 – Issues of Gamification: Client/Investor Protection

- „pump and dump“, „market abuse“
- exploitation of information asymmetry between promoters, „finfluencers“ and retail clients.
- „Fear of missing out“ [FOMO] concerns – exploited

⇒ Potentially large losses of retail investors

§ 3 – Issues of Gamification: Financial Stability

- **Use of leverage** (debt or margin) potentially hurts the counterparties. Socialization of losses.
- **Its collective influence** the platforms paired with social media **creates new forms of influence over the capital markets.**
Overnight effects on any asset or asset class potentially harmful for financial or real economy markets.
- May even trigger, if directed against a bank or money market funds – a bank run or other asset crisis.
- Regulators have Zero access to the driving factors: social media, Finfluencers, Retail Clients

⇒ Potential risk for the Financial System

§ 3 – Policy Considerations: Investor Protection

- Extending/clarifying/streamlining the definition of investment advice and financial promotion to include new asset types and new (like social media) forms of offerings
- Prohibit/limit use of leverage by retail investors (like in derivatives)
- **Cooperation of financial regulators with internet, gaming and data protection regulators.**
 - ⇒ allows financial regulators access to data flows, enhances transparency, reduces fraud, facilitates regulatory action.
 - ⇒ brings crypto-asset servicing firms as much as social media BigTech firms within the regulatory perimeter.
 - ⇒ Enhances accountability and responsibility

§ 4 – Policy Considerations: Market Efficiency

Address herding prompted by „Finfluencers“, game elements in finance and activist efforts by

- stronger enforcing of licensing rules on investment advice and financial promotion,
- where necessary extending acting in concert and beneficial ownership rules, and
- rigorous enforcement of anti-market manipulation, anti-fraud and anti-insider trading rules against platform providers (social media platforms as „agents“).

§ 4 – Policy Considerations: Financial Stability

- Gamified finance as intransparent, unregulated market segments. Subject any institution with large impact potential to regulation, in line with G20 Pittsburgh summit (2009): every significant actor to be regulated.
- Disclosure unfit to address systemic risk measures
- **Limit links between regulated and unregulated sector;** can be achieved through capital surcharges that penalize links to unregulated forms of finance more than already today; and make channeling funds and order flows from one sector to the other difficult;
- **Introduce Risk limits for** overall retail exposures

Gamified finance

- potentially provides asset diversification, enhanced financial literacy and financial inclusion, competition
- but exacerbates issues of investor herding, prompting concerns for all types of financial regulation objectives: investor protection, market efficiency, financial stability.

The issues may be addressed by way of

- Clarifying / streamlining investment advice, financial promotion
- Thereby enhancing the scope of financial regulation and transparency, accountability, responsibility
- Strict enforcement of beneficial ownership, anti-fraud, anti-market abuse and anti-money laundering rules

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

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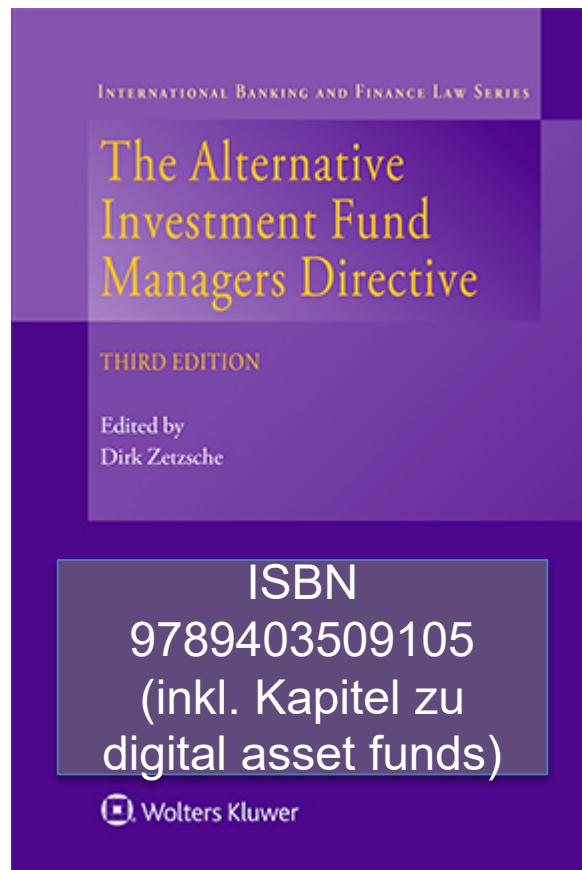


Zetzsche/Woxholt, DLT & PilotR, www.ssrn.com/abstract=3833766

Zetzsche/Annunziata/Buckley/Arner, The Draft MiCAR and the DF Strategy, www.ssrn.com/abstract=3725395

Anker-Sørensen/Zetzsche, Regulating DLT (Working Paper, 2021)

Thank you!



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Some FinTech Readings

TechFin / Data-driven Finance

www.ssrn.com/abstract=2959925



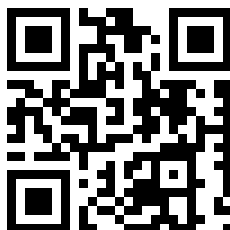
FT4FI Roadmap

www.ssrn.com/abstract=3245287



Corporate Technologies (AI etc.)

www.ssrn.com/abstract=3392321



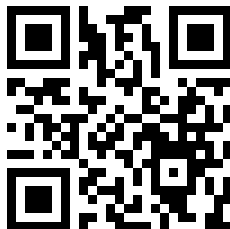
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Future of Data-Driven Finance

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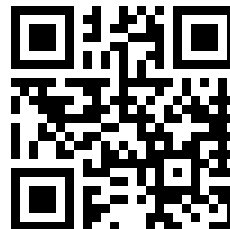
Rise of Tech Risk

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