

Regulatory and Supervisory Technology and the Role of AI: Evolution of Monitoring, Supervision and Enforcement

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RegTech / SupTech?

- Use of technology – particularly IT – for regulatory implementation, compliance and monitoring, by regulators, supervisors, market participants, infrastructure providers and others
- A subset of Fintech? No – uses across all sectors
- Vs Suptech? Two sides of the same coin, focusing on supervisory uses
- Regtechs? Startups not the major industry players eg IBM Promontory, LSE Refinitiv, NASDAQ, Amazon ...

The RegTech Continuum



Taxonomy

- Start ups / incumbents / BigTechs / supervisors / individuals
- Efficiency / stability / integrity / sustainable development-inclusion / innovation / competition
- Market integrity / conduct: AML/CFT, reporting, monitoring, enforcement etc
- Financial stability: macro/micro pru – reporting, risk management
- Sustainable development and inclusion: infrastructure
- TechRisk: data / cyber / infrastructure
- Internal / external systems

Origins

- 1980s: Finra, Edgar, etc
- 1990s: VaR

Finance in the 2010s

- Crisis
- Regulation
- Technology

Drivers 2008-2020: Regulation

- Post crisis regulatory changes
- AML
- BCBS 239
- Mifid, Mifid 2 etc
- GDPR

EU Big Bang II?

- MiFID 2: Markets in Financial Instruments Directive 2 – transparency across markets
- GDPR: General Data Protection Regulation
- PSD 2: Payment Services Directive 2 – open API banking
- eIDAS Regulation

The Future of Data Drive Finance and RegTech: Lessons from EU Big Bang II

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3359399

COVID-19 and Digital Financial Transformation: Building Better Financial Systems

[Digital Finance, COVID-19 and Existential Sustainability Crises: Setting the Agenda for the 2020s by Douglas W. Arner, Ross P. Buckley, Andrew M. Dahdal, Dirk A. Zetsche :: SSRN](#)

- Digitisation
- Payments / CBDCs: [Sovereign Digital Currencies: Reshaping the Design of Money and Payments Systems by Ross P. Buckley, Douglas W. Arner, Dirk A. Zetsche, Anton N. Didenko, Lucien van Romburg :: SSRN](#)
- RegTech / SupTech
- AML / market integrity
- BigTech / data: [Towards an Inclusive, SDG-Aligned Governance of Global FinTech Platforms \(BigFintechs\) | United Nations Development Programme \(undp.org\)](#)

[Enabling Ecosystems: How To Boost Fintech Innovation and Financial Inclusion During and After COVID-19 – NextBillion](#)

- Building the infrastructure of finance
- Designing appropriate regulatory approaches
- Supporting the wider ecosystem

Financial Stability Board (Oct. 2020)

- <https://www.fsb.org/2020/10/fsb-report-highlights-increased-use-of-regtech-and-suptech/>
- BIS (Dec. 2021):
- [Suptech tools for prudential supervision and their use during the pandemic \(bis.org\)](#)
- <https://www.bis.org/fsi/publ/insights37.htm>

RegTech and regulators

- Enforcement: GS / UBS, Citi
- Areas: AML / KYC, Digital regulatory reporting, risk management / data aggregation / analytics
- MAS
- US: SEC, Finra, CFTC, Fed
- UK: FCA, BoE
- EU: ECB, ESMA
- BIS
- HK: SFC, HKMA, HKEx
- China: Ant

Characteristics

- Data
- Storage
- Communication
- Computing power
- Analytics

Strategy Lessons

- High level commitment
- Digital first: Internal / external
- Digitization of everything: Digital regulatory reporting, System design
- Tech
- HR
- Datafication

EU DFS

- removing fragmentation in the Digital Single Market
- adapting the EU regulatory framework to facilitate digital innovation
- promoting a data-driven finance
- addressing the challenges and risks with digital transformation, including enhancing the digital operational resilience of the financial system

- HKU-edx Introduction to FinTech – now in English, Chinese, Russian and coming soon in Arabic, with FinTech Saudi!
- [Introduction to FinTech | edX](#)
- <https://www.edx.org/course/introduction-to-fintech>
- RegTech / SupTech Strategy, Arab Monetary Fund and Asian Development Bank: Douglas Arner, Musheer Ahmed, Nouran Yousef, Sangita Gazi