Building Better Financial Systems: Regulatory and Supervisory Technology – An Ecosystem Approach

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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
The Evolution of FinTech:
Finance in the 2010s

• Crisis
• Regulation
• Technology
Drivers 2008-2020: Regulation

• Post crisis regulatory changes
• AML
• BCBS 239
• Mifid, Mifid 2 etc
• GDPR
Regtech and compliance

• Compliance evolution / topology: Legal, hr, FCPA / bribery / corruption, AML, financial regulation pre / post 2008, tax, data
• Biggest growth area of finance
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

RegTech 1.0 – 1987-2008
- Internal Risk Management
- EDGAR
- Quantitative IT

RegTech 2.0 – 2009 - 2019
- Risk Aggregation
- Know Your Customer
- Artificial Intelligence
- Authentication
- Conduct Risk
- Repeated Process Automation (RPA)
- Sandbox

RegTech 3.0 – 2020-2025
- Full Digital Onboarding
- Data Standardization
- Real-Time Reporting
- Dynamic Surveillance
- Blockchain
- Open Banking/ API Driven
- Know Your Data

RegTech 4.0 beyond 2025
- Embedded RegTech
- Programmable CBDC
- Open-Source Compliance
- MetaVerse
- Trustless
- Neural Networks
The REGTECH Book
THE FINANCIAL TECHNOLOGY HANDBOOK FOR INVESTORS, ENTREPRENEURS AND VISIONARIES IN REGULATION
JANOS BARBERIS
DOUGLAS W. ARNER
ROSS P. BUCKLEY

**RegTech encompasses industry and regulators**

<table>
<thead>
<tr>
<th>Financial institutions and industry</th>
<th>Regulators</th>
<th>Start-ups</th>
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<tr>
<td>• Major drivers of RegTech development</td>
<td>• Lag in regulator adoption relative to private sector</td>
<td>• Incentives to trade off-data for faster market entry</td>
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<td>• Demand efficient tools to deal with regulatory and compliance demands</td>
<td>• Yet need to develop systems to deal with rivers of new data and cybersecurity</td>
<td>• Automation of reporting and compliance more aligned with lean business model</td>
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<td>• Global firms developing centralized risk management</td>
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The RegTech Opportunity

• USD 300b: fines 2008-2019
• USD 300b: approximate financial sector IT spending (2019)
• USD 300b: approximate financial sector compliance spending (2019)
RegTech and the Reconceptualisation of Regulation

RegTech digital disruption is not just about greater efficiency in existing processes but new processes altogether.

RegTech and the Reconceptualization of Regulation
SSRN: http://ssrn.com/abstract=2847806
Finance in the 2020s: Pandemic Impact

- Technology
  - Digitisation: track / trace / test / ecommerce etc
  - BigTech / scale
  - Infrastructure
  - CBDCs
  - Techrisk

- Sustainability
  - Development
  - Travel
  - Small businesses
  - Future crises: resilience? (jared diamond): digital ID / simplified account opening / eKYC / electronic payment (CBDCs?)

- Globalisation / fragmentation
  - Trade patterns
  - Movement
  - Finance / money
  - Geopolitics
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. Zetzsche :: SSR

- Digitisation
- Payments / CBDCs: Sovereign Digital Currencies: Reshaping the Design of Money and Payments Systems by Ross P. Buckley, Douglas W. Arner, Dirk A. Zetzsche, 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/
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
Strategy Lessons

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

• Drivers: regulators, regulated institutions, startups, techs

• Providers: systems, tech, data, analytics, outsourcing
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
Market Integrity

• Analog framework: FATF
• “recommendations”
• Soft law / hard law
• AML / CFT / KYC / CDD
• Onboarding / Monitoring / STR
• Internal / compliance: “risk-based”
• Digitisation / datafication / regtech
Framework

• Digital ID: sovereign, non-sovereign?
• Simplified account opening: low risk, government payments
• Cf India / Aadhar
• eKYC: linking golden source government data
• Cf MyInfo (Sg)
• RegTech / SupTech
• Invest in infrastructure for future financial inclusion and sustainable development
• Individuals / companies
Regional role

• Cf EU
• Sovereign digital ID cross-recognition
• LEIs / corporate data: CRS / beneficial ownership transparency
• RegTech / SupTech standards
Thank you