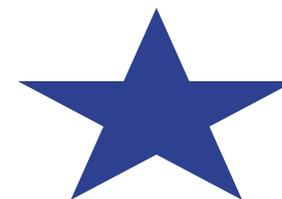




ESMA work on digital finance

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ESMA work on Digital Finance Agenda

- Monitoring innovation trends and risks in the EU
- Broad range of initiatives in the EU to address issues related to digital finance
- Call for Advice on Digital Finance
- SupTech/RegTech current workstreams



1. Monitoring innovation trends and risks in the EU

Financial innovation: Growth momentum prevails

Inflows in AI and FinTech funds



Note: Total AuM, 12-month rolling average, EUR bn, and monthly net flows, EUR mn, for selected EEA-domiciled funds (n=28) whose name includes reference to AI, automation, FinTech or robotics.
Sources: Morningstar Direct, ESMA

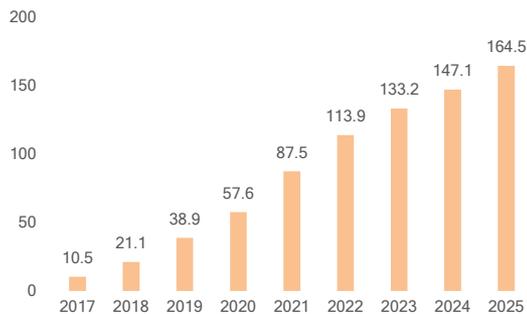
Digitalization topical for both firms and investors

- Fintech funding: Rebound in 1H21 (EUR 48bn); Continuous interest in Fintech ETFs
- EEA AI and Fintech funds: Steady inflows (EUR 1.5 bn in 1H21, a tenth of their AuM)

Growing use of online platforms

- Roboadvisors: Developing quickly but from a low basis (c. 88 bn estimated end 2021); Estimated growth in the EU: 17% expected annual growth until 2025 but starting from a low base
- Fund distribution platforms: growing and highly concentrated market (4 main platforms in the EU); On-line distribution channels, mostly B2B in the EU – allow investors to purchase, hold and sell funds and receive information on their performance

Growth of roboadvisors from a low basis



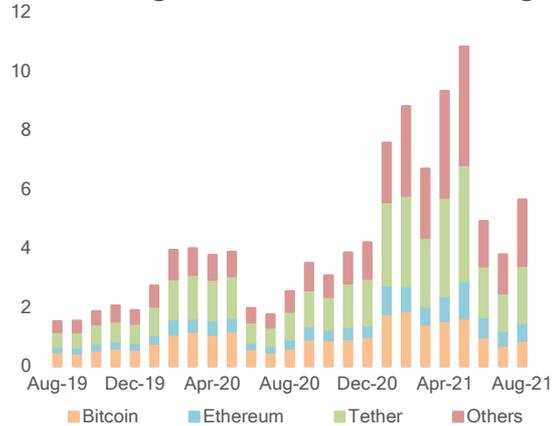
Note: Estimated Assets under Management in the robo-advisors segment in the EU-27 (in billion euros).
Sources: Statista, ESMA



1. Monitoring innovation trends and risks in the EU

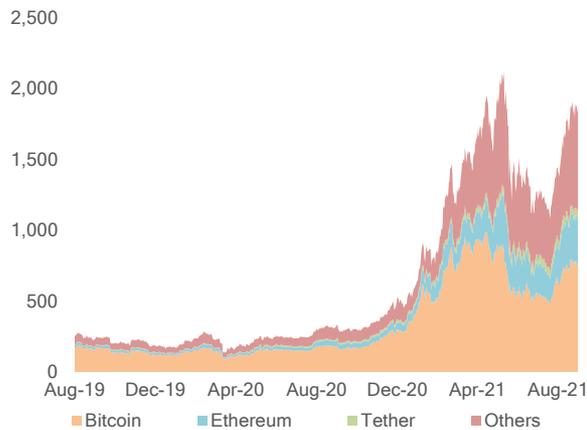
Crypto assets: high trading volumes, huge volatility

CA trading volumes at record highs



Note: Trading volumes of Bitcoin, Ethereum, Tether and other crypto-assets, in EUR tn.
Sources: CoinMarketCap, ESMA.

CA mkt cap rebounding



Note: Market capitalisation of Bitcoin, Ethereum, Tether and other crypto-assets, in EUR bn.
Sources: CoinMarketCap, ESMA.

Crypto-asset prices hugely volatile

- Market cap: EUR 1.3tn in 1H21 (up from EUR 500bn in 2H20)
- Prices highly volatile: Bitcoin all-time high (EUR 53k) in April, followed by 40% collapse
- Peak trading volumes: highest daily average in May 21 (EUR 360bn), before dropping again in June 21
- Drivers: Positive newsflows; interest for Decentralised Finance (DeFi); search for yield

Defi growing rapidly, from low basis

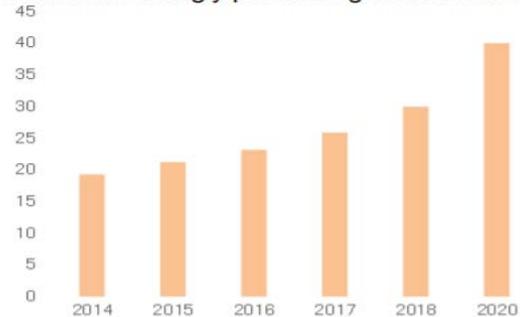
- Most popular DeFi activities: Lending, trading (through decentralised exchange platforms) and asset management.
- Growing interest: estimated at EUR 47 bn at the end of 1H21 (it was EUR 3.5bn in July 20)



1. Monitoring innovation trends and risks in the EU

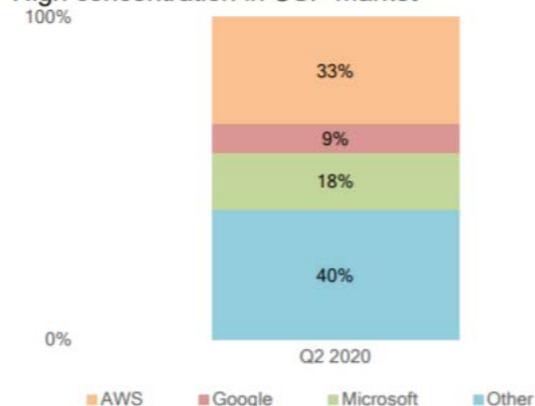
Digital raises needs for operational resilience

RA.1
Percentage of EU firms purchasing cloud services
Firms increasingly purchasing cloud services



Note: Percentage of businesses purchasing cloud computing services by year in 22 EU countries, %. Countries included: AT, BE, CZ, DE, DK, EE, ES, FI, FR, GR, HU, IE, IT, LV, LT, LU, NL, PL, PT, SI, SK, SE. Firms across the economy with at least 10 employees were surveyed.
Sources: OECD, ESMA

RA.2
Global market share of cloud infrastructure services
High concentration in CSP market



Note: Global market share of cloud infrastructure services in Q2 2020, by vendor
Sources: Synergy Research Group

Increasing use of cloud

- Spending for cloud services continues to grow and reached about EUR 35 bn in 1Q21 globally (+ 35 % yoy)
- Many benefits associated to using cloud computing in the financial system
- Raise challenges at firm level in terms of governance, data protection and information security
- Three large tech companies: 67% of the market in 1Q21

Digitalisation raises needs for cyber resilience:

- Increase in the number of cyberattacks and scams
- Forms of cybercrime also continue to evolve



2. Broad range of initiatives to address issues related to digital finance

EC Digital finance Package covers measures to 2024

Digital Finance Package (DFP) provides measures to:

- Tackle fragmentation in Digital Single Market
- Adapt regulatory framework to facilitate digital innovation
- Promote innovation via common financial data space
- Address risks from digital transformation

Includes a digital finance strategy and legislative proposals:

- Markets in Crypto-Assets (MiCA) to address risks from unregulated CAs. Plus DLT Pilot Regime to clarify treatment of CAs that are in scope of existing rules
- Digital Operational Resilience Act (DORA), to strengthen and harmonise ICT security across financial sector

DFP is an important initiative, which sets out new tasks and responsibilities for ESMA.



2. Broad range of initiatives to address issues related to digital finance

DORA proposal to address ICT risks

Background: Part of EC digital finance package. Builds on 2019 ESAs joint Advice

Objective: Coherent, harmonised, robust rules to ensure digital operational resilience across EU financial sector

Broad scope: 14 types of entity in ESMA remit

Main chapters:

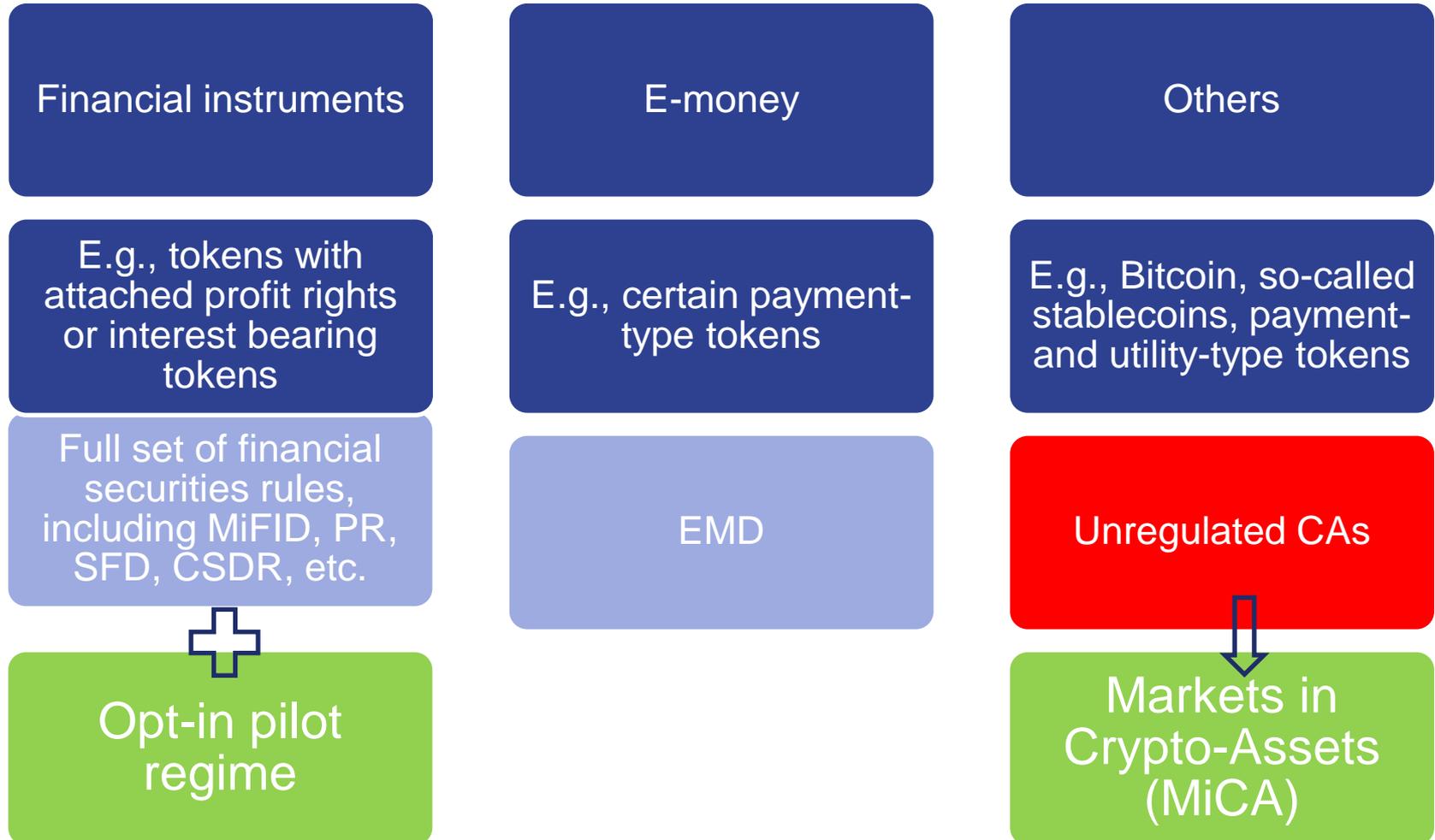
- **ICT Risk Management**
- **ICT-related incidents:** management, classification and reporting
- **Digital operational resilience testing**
- **Managing of ICT Third-Party risk**
 - **Key principles** for a sound management of ICT third party risk
 - **Oversight framework** for critical ICT third-party service providers



2. Broad range of initiatives to address issues related to digital finance

MiCA and Pilot address two sets of issues related to CAs

No one size fits all for Crypto Assets





2. Broad range of initiatives to address issues related to digital finance

Innovation facilitators are considered efficient

EU NCAs engage with FinTechs through their innovation hubs and regulatory sandboxes

- All MS have an innovation hub (sometimes even more than one per jurisdiction if the hubs are sector specific).
- Regulatory sandboxes remain a less explored area, with only eight currently operating in the EU, and some being still very recent

European Forum for Innovation Facilitators (EFIF) supports coordination and cooperation:

- Most enquires refer to AI/ML and Big Data analytics; tokenisation and DLT; open finance and APIs; platforms facilitating the provision of financial services (retail and institutional) and digital finance; RegTech; and the use of innovative technology for customer due diligence (CDD).
- Growing interest from firms in 'Green' or 'Sustainable'



2. Broad range of initiatives to address issues related to Digital Finance

Horizontal initiatives to be considered

- **EC Proposal for the Digital Markets Act (DMA) and Digital Services Act (DSA):** safer digital space and level playing field for digital services, aims to address some consumer protection and competition issues arising from the use of online intermediaries and platforms, but focus is not on financial services.

- **EC Proposal on Artificial Intelligence (AI):** address risks generated by specific uses of AI not covered by existing national and EU legislation. It includes one direct link to the financial sector via specifying one high-risk use of AI systems for credit scoring of natural persons or creditworthiness assessment.

- **AMLR:** To clarify responsibilities between tech providers and their customers when they are obliged entities from an AML perspective and addition of new crypto-assets services providers among these obliged entities, notably crypto-assets exchange platforms.

- **EC's retail investment strategy:** the technical advice of EIOPA and ESMA will be a key input to the EC's work to develop a strategy for retail investments and to make appropriate adjustments to the legislative framework



3. Call for Advice on Digital Finance

Value chains – Increased fragmentation and complexity

Growing interactions
between incumbents,
Fintech and
Bigtechs/MAGs

Increased dependency
on third-party providers

New business models,
including data centric and
added-value services
ones

Expanding range of
products/services, cross
border dimension

Phenomenon not new, but accelerating with digitalisation and technological innovation:

- Cloud outsourcing for data storage and data processing
- Use of tech for specialised services, e.g., client on-boarding, compliance checks, risk analytics, regulatory reporting
- Use of wider range of alternative/non-financial data, e.g., behavioural, IoT, social media and ESG data



3. Call for Advice on Digital Finance

Growing in use of platforms, varied business models

Search for **convenience**, on-line solutions to access products and services

Broader range of products/services available to **wider consumer base**, **cross-border**

Interconnectedness with social media

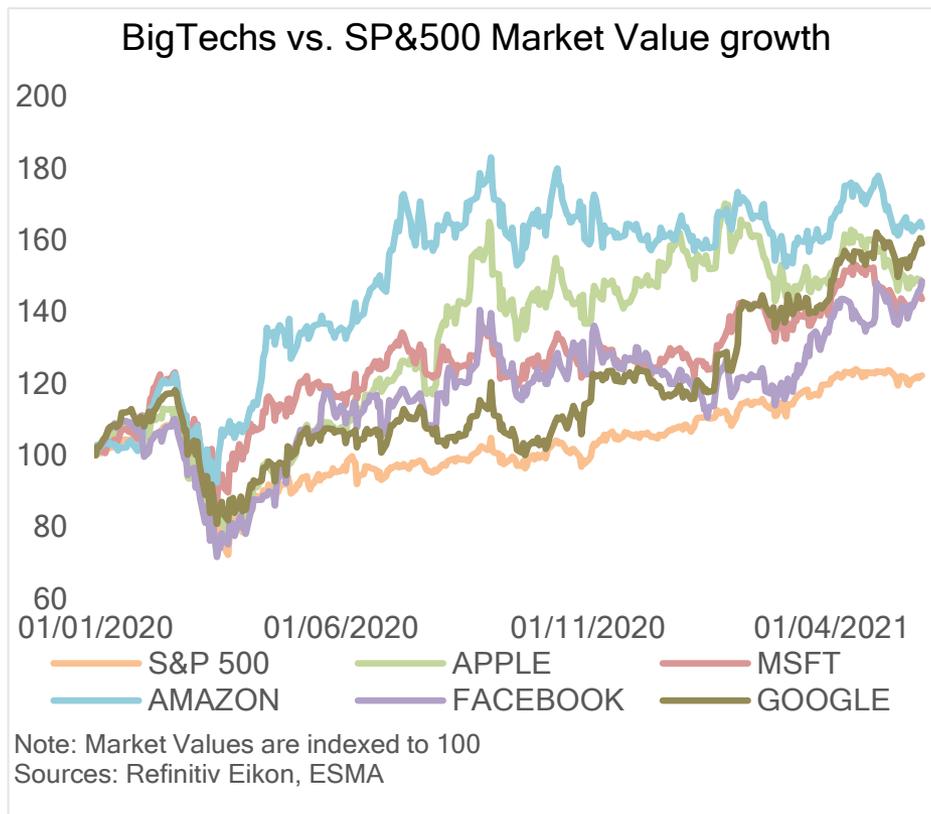
Bundling of different products/services

- ❑ Again, not new but accelerating with new technologies and digital transformation
- ❑ Incumbents under market pressure to adapt or be left behind
- ❑ Different business models for B2B and B2C environments
 - One-stop shops
 - Neo-brokers
 - Robo-advisors
 - Fund distribution platforms
 - Etc.



3. Call for Advice on Digital Finance

The entry of large Tech companies is still limited



Limited **direct provision** of FS in the EU

Multiple factors possibly withholding MAGs/BigTechs

But requires **monitoring** (data and network effects)



3. Call for Advice on Digital Finance

A host of opportunities

Value chains

Enhanced efficiency and flexibility at financial firms

Digital platforms

New distribution channels, efficiency gains in distribution

MAGs/BigTechs in finance

One stop shop for consumers

- Greater **convenience** and enhanced access for users of financial services
- Accelerating **innovation** and shorter time-to-market in financial services
- Increased competition, enhanced **Digital Single Market**, open finance
- Better financial products and services at potentially lower costs
- Enhanced **financial inclusion**



3. Call for Advice on Digital Finance

Potential new sources of risks

Value chains

High dependency on third party providers

Digital platforms

Certain platform features may raise investor and consumer protection issues

MAGs/BigTechs in finance

Potential for uneven playing field between MAGs and financial groups

- New forms of ICT and operational resilience risks
- Potential for consumer detriment (e.g., not clear with whom customers are contracting, aggressive sales techniques, insufficient financial/digital literacy on the part of customers)
- Risks in relation to the access and use of customer data
- Possible concentration and interconnectedness risks (dominant position of certain providers)
- Competition and level-playing field issues
- New forms of ML/TF risks



4. Other pieces of work related to digitalisation

SupTech/RegTech current workstreams

- SupTech is relevant for all ESMA activities: Direct Supervision and Supervisory Convergence mandates; single rulebook and risk assessment

- Ad-hoc workshops with NCAs to disseminate knowledge (4 organised this year); SupTech is a recurring item at the Financial Innovation Standing Committee; RegTech recurring item at the EFIF

- Example ongoing projects involving text mining and/or machine learning
 - Information extraction on PRIIPs KIDs across EU languages
 - Assess impact of & compliance with ESMA Guidelines to CRAs on ESG disclosures in press releases
 - Text mining of other regulatory documents
 - Topic modelling and classification of emails received by ESMA



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