Digital Economy Outlook

December 2017



Digital markets are those in which digital products and services are transacted

There are three broad categories:



and the structure of digital markets:

madness or vision?

Investor



DIGITAL INTERMEDIARIES **Key features** that have important implications for the competition dynamics



These features of digital MANY OF THESE MARKETS ARE MULTI-SIDED markets lead to market concentration, PRESENCE OF INDIRECT NETWORK EFFECTS



startups based on the sale to investors of a percentage of proprietary cryptographic tokens issued by the company usually in exchange for

An ICO is a funding method for new blockchain

another cryptocurrency, such as ether or bitcoin Market share, ethereum is the leading blockchain platform for ICOs

Investor's

Wallet



Company uses total

sum raised from sale to



Investor buys

cryptotokens with bitcoins/ethers

Crypto tokens issued through ICOs have gone from being below the radar at the end of 2016 to becoming the asset class with the fastest growth rate

in investment volume in the history of the financial markets



Q3 2017

Q1 2017 Q2 2017 Equity funding ICO funding

and digital environment

130

ICO Funding evolution

Overall, ICO funding has also surpassed global early-stage funding (Angel and

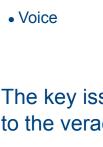
Seed VC) for start-ups since June 2017

e.g. e.g. e.g. e.g. Age Password Access badge Motor skills

knows

 Addres PIN Security token Gestures Fingerprints Sequence Mobile phone Keystrokes • ID document Applications use Face

Smartcard



Challenges:

Gender

Irises

The key issue to operate with our digital identity is the validity that others give to the veracity of the attributes of our digital identity

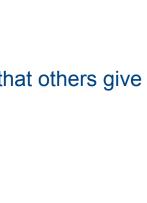
The number of actors in the market

New technologies and IoT phenomenon

setting a record in the US

Passphrase

The user is not always fully in control of his digital identity



Handwriting

Legal certainty Data protection

Security. In 2016, reported data breaches increased by **40%**,



2016

development of digital identity

on the financial sector

work of several standard-setting bodies

2017 2017 Internal Task FSB Report inancial stability implications rom Fintech on Fintech nore competitive and innovative inancial sector

2017

2017 2017

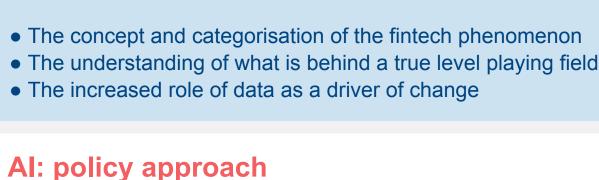
guaranteeing safety and

promoting innovation

Defining their role: seek to find Assessing the the right balance between adequacy of

Aug-Oct

2017



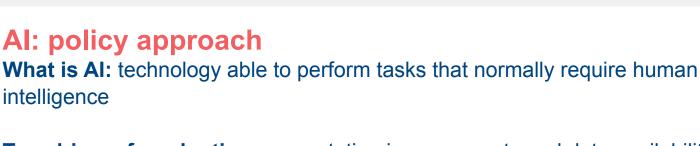
intelligence

Understanding

the change: risks

and opportunities





BUT, HOW TO APPROACH AI?

opportunities

cooperation

Balance promotion and control

International and multistakeholder

Understanding the impact: Challenges vs

FIRST STEPS TAKEN:

- don't be reactive
- FINANCIAL REGULATION Robo-advisor
- Open Banking
- Financial Stability www.bbvaresearch.com

National strategies (funding + research) Pioneering regulations:

- data privacy and availability, transparency, liability, market functioning
- Tip: avoid technologyspecific regulations,

Working Groups

existing regulatory frameworks

 Automatic trading Consultations on big data and Al

Towards a new digital identity: Identification systems OECD defines Identity Management "as the set of rules, procedures and technical components that implement an organisation's policy related to the establishment, use and exchange of digital identity information





Three are three main areas that deserve deep reflection:

Two drivers for adoption: computation improvements and data availability Open debate: 'Rise of robots' vs 'Life of leisure'