Executive summary

C system with deeper capital markets and more

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Capital markets union (CMU) is a agship EU initiative to strengthen capital markets in the EU. e expression was rst used by European Commission president-elect Jean-Claude Juncker when outlining his policy agenda in mid-2014 (Juncker, 2014). A recent mid-term review of the CMU project called for reinforced action, including accelerated action by EU member states (European Commission, 2017).

Complementing Europe's bank-based system with both deeper capital markets and more cross-border nancial integration promises bene ts[1]. Deeper capital markets that diversify the nancial system and reduce its reliance on banks are empirically less prone to nancial crises, and can also be associated with higher growth (Lang eld and Pagano, 2016). Greater cross-border integration has the bene t of increasing the size of markets, enabling more liquidity and e ciency. Integration can also increase cross-border risk-sharing, in particular if cross-border equity ownership increases. Empirical studies show that deep and integrated capital markets can play a significant role in absorbing country-specific shocks (Allard *et al*, 2013).

Despite long-standing debate, the nancial intermediation landscape in Europe is changing slowly and remains dominated by traditional banking. e 'Lamfalussy' report in 2001, for example, highlighted that the EU could gain from constructing integrated nancial markets; somD 71 6 Tm(r)dang 8Sl mtrelichanpmeliutat

Source: Bruegel.

In the EU context, the important question is whether ntech can disrupt Europe's nancial system in a way that promotes CMU, helps integrate the nancial system across borders and increases its stability and e ciency. European nancial ecosystems have grown over centuries within national and even regional borders. As the ntech sector disrupts this system, the question will be whether it does so at the EU level or whether the disruption will again follow national patterns. In other words, will ntech companies immediately harness the bene ts of the entire European single market in capital markets and also banking, or will their activi

capital markets (Figure 3). In the US, where the capital market is the largest and most mature, the capital market expanded by only 1 percent in 2015, compared to a 248 percent growth in

I di e e E , ea c ie , he ech a ke e ai e all. If we exclude the UK, the total volume of alternative nance in the EU was $1 billion in 2015, and compared to 2014 the growth rate was less than 100 percent (Cambridge Centre for Alternative Finance, 2016). Within Europe, France and Germany are leading (Figure 4). Volumes are very low in central and eastern European countries and other countries, although growing fast.

Source: Cambridge Centre for Alternative Finance (2016). Notes: 1. Fintech as expressed here encompasses all lending and crowdfunding activities reported by the Cambridge Centre for Alternative Finance. For a taxonomy of included categories, see Cambridge Centre for Alternative Finance (2016) 2. EU excluding the UK includes the following non-EU countries – Albania, Armenia, Belarus, Bosnia & Herzegovina, Georgia, Kosovo, Macedonia, Moldova, Montenegro, Serbia, Ukraine, Iceland, Russia, Norway and Turkey. The distinction of EU from non-EU countries is not possible given data availability restrictions. However, the size of the outside of the EU countries is deemed to be low given the small number of surveyed platforms in these countries.

Robo-advice can expand access to financial services to previously under-serviced clients, and can improve on human advice. It is still small-scale in Europe and consumer protection needs to be taken into account in future developments. Robo-advice encompasses algorithm-based online services ranging from financial advice, portfolio management or contract brokering across the securities, banking and insurance sectors[16]. The Financial Stability Board (2017) highlights the main benefits of robo-advising as improved access and convenience of financial services, reduced information asymmetries, more stock market participation by private households and more competition for incumbents resulting in reduced costs.

While promising, robo-advising is still at a development stage, particularly in Europe. Assets under management (AuM) in Europe amount to only 5-6 percent of those in the United States (Kaya, 2017). In Europe, there is evidence of very high growth rates but of a small magnitude relative to traditional players[17]. The scope for growth might be limited given consumer preferences: approximately two in five (36 percent) of European respondents to an ING Groep International Survey on Mobile Banking rejected outright the possible use of automated financial activities and 26 percent were willing to use this type of platform to make(ur)156.9 (m (Tel)1 (y t)-1e

Fintech can profoundly change nancial intermediation in its current form, by lowering the cost of nancial intermediation. In general, ntech promises to provide nancial intermediation at a lower cost and to a greater number of customers, who might currently not be included. A substantial body of work has shown that the cost of nancial intermediation has hardly changed and remains quite high, suggesting that signi cant cost-saving

lending and some types of crowdfunding, could become more quickly relevant in some parts of the market[25].

So overall, the significance of Fintech for European financial markets over the next 10 years is difficult to gauge because its impact depends on consumers, technology, business decisions and also on regulators. In our view, European policymakers need to consider four issues in particular:

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The first question is whether European policymakers would like to encourage European or national fintech markets. Harvesting the full potential of fintech will require scale and the fintech industry will likely only become significant in Europe if it can scale-up across the entire EU/EEA. At the same time, there may be some reasons to promote local fintech markets. For example, crowd-funding might in some circumstances best work at city level[26].

e second important issue deserving discussion is what regulatory approach should be taken. Early decisions could shape European ntech and nancial intermediation for a long period. Experience suggests that regulatory decisions can have long-lasting impact on an industry when it is young, and are di cult to reverse[30]. It is thus important to identify the right regulatory framework early in order to allow the industry to grow and enjoy consumer trust.

Much of the current regulatory discussion is on the question of the level playing eld. For example, the European Parliament calls for the *"same service, same rules, same supervision"*. is call sounds good in theory but it is unclear what it means in practice. Much bank regulation or capital markets regulation is centred on institutions and not on services. But ntech is often an industry that o ers new services or existing services with a di erent institutional set-up, for which the existing regulatory framework may be ill-suited. e current solution to this problem is to o er regulatory 'sandboxes' to allow supervisors and ntech actors to experiment and learn without having to apply the full set of regulation used for larger players[31]. While this may be a short-term solution, it is not a strategy for developing a stable and long-term regulatory vision, especially if the relevant markets are to grow signi cantly. Moreover, proportionality should be an important consideration in de ning the regulatory and supervisory approaches to ntech rms. is also means that large and more systemic players face di erent scrutiny and higher requirements than smaller and less systemic players. In short, not all of ntech can be subsumed under existing capital markets regulation such as MIFID and new regulatory approaches will be needed in some segments of the markets. is in turn will raise demand for regulatory change among tradim[mor)153 (ul)1 (a)7 (t)1 (

If the EU is to exploit fully the opportunity of ntech, it will need to put an institution in charge of the le. It is striking to observe the large number of institutions currently commenting, regulating, drafting consultations and exchanging ideas on ntech. Numerous national regulators and supervisors feel responsible for aspects of ntech. e EBA has developed a comprehensive mapping exercise of ntech in more than 24 EEA countries (EBA, 2017). e European Commission has set up an internal task force and has undertaken a public consultation on various aspects of ntech. us, a multitude of organisations analyse and make recommendations and a number of institutions also regulate and supervise. ere are already overlaps at European level, but more importantly there is already substantial regulatory and supervisory divergence between EU countries. Deciding earlier rather than later whether or not a European market would t the sector better would be decisive in identifying what supporting institutions should be put in place[32].

A single European market for ntech would bene t from a single European institution to supervise it. To avoid a further fragmentation of the European ntech market, EU leaders could discuss which EU institutions should be in charge of supervision of ntech capital market activities. Because consumer concerns are particularly important in the context of nancial services and ntech, it might be useful to give the European institution a mandate for prudential and for conduct supervision. e institution would also be in charge of monitoring the markets, and collecting and publishing data.

A natural candidate for this role would be ESMA, whose role as a conduct supervisor should be strengthened[33]. is would enhance the importance of the markets' supervisor by granting it authority over most aspects of the protection of investors' and savers' interests, which are crucial for ntech. Direct ESMA supervision of EU-based ntech companies and third-country ntech rms with EU operations should become the default mode for all ntech segments, because such rms are expected to have cross-border business models. In other words, starting from national supervision should be considered ine cient until proven otherwise, not the other way around. ESMA's conduct supervisory role would then also extend to ntech rms that are comparable to banks. ESMA's existing direct supervisory capacity (supervision of credit rating agencies, trade repositories and the proposal from June by the EC for CCPs) makes it a natural candidate for this enhanced role as a conduct supervisor of ntech. Scaling it up would probably require adapting ESMA's governance and funding[34]. On the prudential side, existing institutions such as the ECB's SSM should continue to play their role and might also increasingly become involved in ntech supervision to the extent that the respective ntech company becomes bank-like. In the short term, ESMA could also play some role as the prudential supervisor in certain ntech sub-sectors, but ideally a separation between the functions should be considered in the medium-term.

European institutions should also usefully take care of big picture issues such as data protection, data privacy, cybersecurity and competition policy concerns. In particular, ntech companies could signi cantly change the competitive nature of markets with access to large data and the EU's competition authority would be best placed to assess this. Standards to limit operational risks arising from cybersecurity threats and ensure data privacy are best regulated and supervised at European level if one wants to avoid fragmentation of the market.

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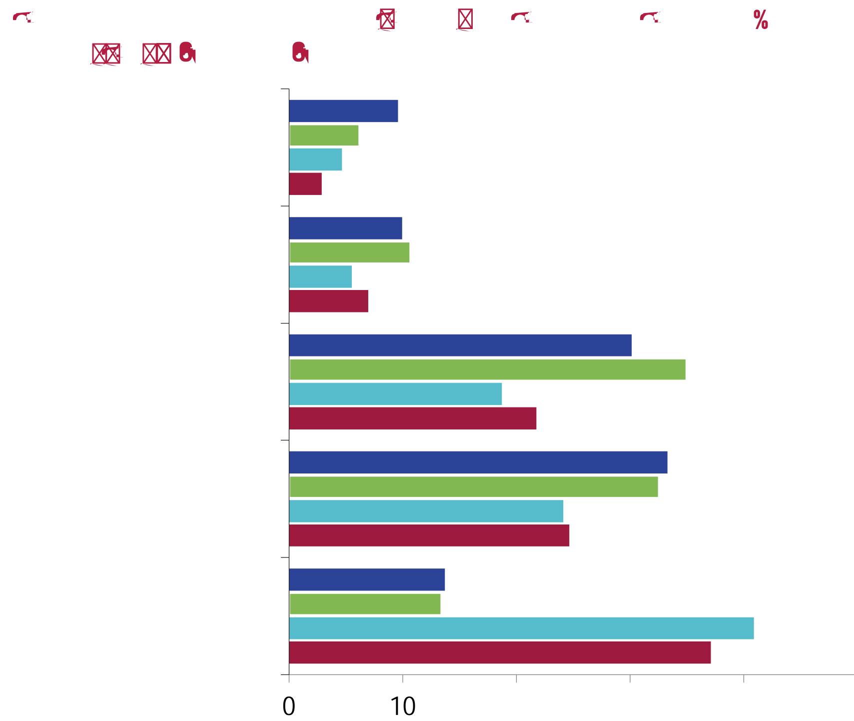

Source: OECD, *National Accounts at a Glance*.

Source: Cambridge Centre for Alternative Finance.

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Source: coinmarketcap.com, which lists 579 cryptocurrencies that have a market capitalisation above $1,000.

Distributed ledger technologies (DLT), of which blockchain is an example, have been generating great interest in the nancial sector. e attention has spread from bitcoin to the underlying technology and its possible applications beyond the realm of cryptocurrencies.

DLT allow the secure record of data across a shared network with decentralised validation. Blockchain is a sub-category of DLT in which this network is public and the register of trans-